

Human and National Security in Bahrain, Qatar and the United Arab Emirates – Should Climate Change Matter?

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ABSTRACT

This PhD thesis examines the Gulf monarchies of Bahrain, Qatar and the United Arab Emirates as they strive to transform their political economies away from dependency on hydrocarbon revenues into more diverse sectors of economic activity. In particular, the research attempts to forecast the monarchies' chances of achieving the transformation into principally private sector-led economies, while maintaining absolute rule and excluding those outside the circle of the ruling élites from political power or influence. The central research question guiding the study is 'Human and National Security in Bahrain, Qatar and the United Arab Emirates – Should Climate Change Matter?' The effects of climate change provide a useful lens through which to examine each of the states' policies and actions as they attempt to cope with the physical degradation of an already water and heat-stressed environment, coupled with declining oil and gas revenues from the West as a result of international climate change agreements.

The thesis applies a ten question research framework to each of the entities to produce individual case studies for comparison. The research finds that climate change is acknowledged as an issue by each of the states, but is not at the top of their list of priorities. Rather, measures to improve human security are aimed at maximising the economic productiveness of each country to make up the deficit caused by decreasing hydrocarbon revenues and enable the monarchies to maintain the high level of free and subsidised state services they currently provide to their populations. They believe the effective maintenance of services directly contributes to political stability which assures the continuance of their current system of governance where political power lies solely with the rulers and their close advisors. Essentially, the priority for each of the ruling families is not climate change, but regime survival, preferably in its current form.

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In mid-2013, a year after retiring from nearly 37 years in the military and having just completed a part-time, distance-learning Masters degree, attempting a PhD seemed the next logical step, although if I am honest I had no real idea what that would entail. The last three years has been an interesting journey into many areas that I knew very little about and which were both contentious and complex. Although the uncertainty and excitement I had become used to in the military was no longer present, there was still the requirement for focus and application as I laid down my own schedule and, at times, challenging deadlines to complete the study. Completing a PhD is reputed to be an insular activity and I would not disagree with that, having spent many solitary hours researching, writing and re-writing this thesis. However, it would not be possible without the superb support of people who understand what you are trying to achieve and who wish you every success in your endeavour.

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1. INTRODUCTION



Map 1. The Arabian Peninsula - <http://www.sitesatlas.com/Maps/Maps/604r.gif>

1.1. Context

This thesis considers the impacts and relevance of direct and indirect climate change effects on the policies and strategies of the monarchies of Bahrain, Qatar and the United Arab Emirates (UAE). It focuses on their transformation from hydrocarbon dependency into diversified economies and the prospect for accompanying political reforms, including the likelihood of a move away from absolute monarchy towards popular participatory forms of government. With its emphasis on human and national security, and the relationship between them, the effects of climate change will be explored to assess whether they are a significant driver of change in their own right, or just another factor to be considered and mitigated as the monarchies manage their economic diversification. In parallel the rulers will also have to cope with the attendant multiple external pressures that potentially threaten their cultural, religious and national identities.

The thesis's contribution to knowledge is an assessment of the monarchies' trajectories towards a sustainable future with assured human and national security provision, divorced from reliance on hydrocarbons. That assessment is based upon analysis of each of the monarchies' national vision statements and other official documents in the public domain, augmented and triangulated by academic, media, Non-Governmental Organisation (NGO) and pressure groups' commentaries. It also assesses each of the three monarchies' prospects for regime survival, especially as national and regime security are often synonymous in the Gulf (Ulrichsen 2012b). Recognising this contextual underpinning, the central proposition of the study is that good economic security enables successful delivery of the ruling bargain, which in turn assures national security by providing political and social stability. This stability guarantees the current system of governance remains in place and the resulting political continuity enables high levels of human security and development to be achieved. As a consequence, there is a feedback mechanism between human security and economic security; a safe and secure population is much more likely to be economically productive than not. However, the direct and indirect effects of climate change could have significant potential to affect various aspects of human and national security if not addressed effectively.

The monarchies of Bahrain, Qatar and the UAE are well established. The rulers of Abu Dhabi, the al-Nahyans who are also the principal ruling family in the UAE, assumed power in the 1760s; the al-Khalifas established their rule in Bahrain in the late eighteenth century; and the al-Thani took control of Qatar in 1868 (Abdulla 2012). All three families successfully transitioned through independence in 1970-71 after the British withdrawal from east of Suez and remain in power to this day, with their political economies based principally on hydrocarbon revenues. Babood says Gulf societies remain mainly tribal and the ruling families' basic legitimacy stems from a combination of tribal authority and Islamic precepts. He believes the regimes, empowered by oil wealth, have been largely successful in bringing Islam and tribalism under control as institutional and ideological supports (2005). At the heart of the governance system of each of the monarchies sits the ruling bargain or social contract, where in exchange for no reliance on taxation the governments see no reason

to allow citizens to influence national policies (Power 2012). The population effectively gives up its right to political influence in exchange for free or subsidised access to a wide range of government funded goods and services.

Luomi (2012) has previously covered the climate change and energy security issues faced by Abu Dhabi and Qatar in detail. However, since publication of her research there have been significant changes in power structures and political constructs in the Middle East. As a result, the Gulf monarchies face new challenges. The Arab Spring has stalled following repression of the Shia majority in Bahrain, the removal of the Muslim Brotherhood from power in Egypt, the outbreak of civil war in Syria and the emergence of so-called Islamic State (ISIS) as a significant destabilising force in the region. However, Bowen (2012) says no-one saw the Arab Spring was likely to be as successful as it was and believes the increased prominence of political Islam was the principal achievement of the revolutions; the spread of potent political Islam could pose a serious if not existential threat to the absolute monarchies if not contained. Bowen also says the schism between Sunnis and Shias is likely to throw up the greatest problems for future peace and stability (2012). Arguably this schism is as bad as ever in 2016, following the lifting of sanctions against Iran¹, which has resulted in vociferous competition and rhetoric between Iran and Saudi Arabia as they struggle for regional supremacy. This is compounded by Saudi² and Bahraini³ actions against their own Shia populations and the war against the Shia Houthis in Yemen, prosecuted by Saudi Arabia, Bahrain and the UAE⁴; none of these makes a Sunni-Shia rapprochement conceivably likely.

The rise of ISIS since 2014 also brings concerns for the monarchies, especially given reports of its religious extremism, brutality and mass killings in the areas it controls⁵; even al-Qaeda has been attacked by ISIS, much to their chagrin⁶.

¹ <http://www.bbc.co.uk/news/world-middle-east-35335078> accessed 7 June 2016.

² <http://foreignpolicy.com/2012/03/07/saudi-arabias-shiite-problem/> accessed 7 June 2016.

³ <http://shiapost.com/2016/06/02/bahrain-extension-of-salmans-jail-term-political-repression-un-expert/> accessed 7 June 2016.

⁴ <http://www.ibtimes.co.uk/yemen-conflict-saudi-arabia-led-coalition-fighting-alongside-al-qaeda-taiz-1545406> accessed 6 June 2016.

⁵ <https://www.middleeastmonitor.com/news/middle-east/22546-report-daesh-executed-3590-in-syria-since-declaring-caliphate> accessed 1 December 2015.

⁶ <http://edition.cnn.com/2015/09/11/middleeast/al-qaeda-isis-bickering/index.html> accessed 16 September 2015.

While ISIS is unlikely to find a huge amount of popular support in Bahrain, Qatar and the UAE, it is present in some strength in Saudi Arabia where it finds natural supporters from amongst adherents of Salafi and Wahhabi ideology⁷. The risk of deliberate expansion of ISIS terrorist cells and attacks into the more religiously moderate Gulf States is something that should concern the ruling élites, especially as Bahrain⁸ and the UAE⁹ have been active participants in anti-ISIS air strikes in Syria.

There have also been less violent but equally problematic changes in the region around the oil price and hydrocarbon exports. Ghafouri believes the GCC states were increasingly looking towards Asian markets to sell their products and services with reciprocal investment between Chinese and Gulf States' oil-refining and petrochemical industries and upstream oil exploration. China saw mutual investments as a tool to create interdependencies and more secure oil supplies (2009). Held and Ulrichsen said the Gulf had become the centre of gravity for economic affairs in West Asia and commercial ties with South and East Asia had been strengthened (2012a); notably, Asian markets were increasingly important for Qatar with long term bilateral agreements for gas supply with South Korea, Taiwan and Japan signed in 2011-12 and a 25 year trade agreement with China initiated in 2009 (Ulrichsen 2012a). However, falling oil prices in 2015-16 have adversely affected the economies of the Gulf States¹⁰ and led to falling revenues, while the concurrent downturn in the Chinese economy¹¹ potentially compounds the wider economic slowdown and creates greater pressures on the monarchies' revenue streams¹². Furthermore, the international commitment to reduce greenhouse gas (GHG) emissions and limit global warming to 1.5-2°C, agreed during the Paris Conference in

⁷ <http://www.theguardian.com/world/2016/jan/21/saudi-arabia-isis-riyadh-terror-threat> accessed 7 June 2016.

⁸ <http://english.al-akhbar.com/node/23797> accessed 7 June 2016.

⁹ <http://www.theguardian.com/world/2014/oct/30/uae-united-arab-emirates-leading-player-opposition-isis-middle-east> accessed 7 June 2016.

¹⁰ <http://www.economist.com/news/middle-east-and-africa/21695539-low-oil-price-manageable-short-term-gulf-states-must-make> accessed 7 June 2016.

¹¹ <https://www.theguardian.com/business/2016/mar/01/chinese-manufacturing-decline-sharp-global-downturn-factory-output-china-uk> accessed 6 June 2016.

¹² However, the Institut Français des Relations Internationales says Gulf States' oil and gas exports to Japan, South Korea, China and India are three times larger than to the US and EU and, despite the slowdown, predicts they are set to grow over the next decade. *The Gulf*, 9 May 2016, 9:159, p48.

December 2015¹³, will require countries to reduce carbon emissions significantly. This will put extra downward pressure on demand for oil and gas internationally, thus further reducing potential hydrocarbon revenues for the monarchies and placing their ruling bargains in jeopardy.

With such an array of challenges potentially undermining national and regime security, it is probable climate change of itself is not seen as the most pressing problem the monarchies currently face. However, it does provide a useful lens through which to look at the three states as they endeavour to execute their national visions and other policies and strategies to deliver economically diversified and sustainable political economies. This delivery will take place concurrently with the regimes counteracting the challenges described above, while dealing with the concomitant risks that globalisation inevitably poses to Arab, Islamic and tribal identity, values and culture. However, to diversify successfully the monarchies will have to be more interconnected and interdependent, in order to compete successfully in the highly complex international twenty-first century business environment.

1.2. Thesis Focus

As will be seen in Chapter 3, it is the expectation of the majority of scientific opinion and the United Nations (UN) that climate change is an inescapable reality which will have severely detrimental physical consequences for the planet. Specifically, the Arabian Gulf area will suffer direct physical effects that increase throughout this century, including rising sea levels, reduced air quality, increased day and night time temperatures all year round, less frequent precipitation, increased desertification and more frequent extreme weather events such as storms and heat waves. Each of these effects, individually, has the capacity to affect the human security of the resident populations adversely, with commensurate potential reductions of economic productivity in each state affected, unless mitigated effectively. However, the effects will not occur individually, but simultaneously, potentially creating a synergy where the cumulative consequences will be greater than the sum of the effects of the individual parts.

¹³ <http://www.theguardian.com/environment/2016/apr/22/un-climate-change-signing-ceremony>
accessed 7 June 2016.

The indirect effects of climate change will also affect the monarchies, as signatories to the 2015 Paris Agreement¹⁴ take action to reduce their carbon emissions to keep global warming to below 2°C. Some of these indirect effects had been seen following the 1997 Kyoto Protocol¹⁵, as western industrialised nations had already moved to reduce their dependency on oil. However, the Paris Agreement is the first legally binding international agreement and so far has been ratified by 115 of the 197 parties to the agreement¹⁶. There is therefore significant potential for global demand for hydrocarbons to reduce in the coming decades, which could severely inhibit the monarchies' capacity to provide for their citizens in the long term as government revenue streams decrease as a result.

However, as will be seen in the case studies, Bahrain, Qatar and the UAE have already embarked upon a process of economic transformation as they recognise their hydrocarbon reserves are finite resources and that alternative sources of revenue must be developed before the economically viable reserves are expended. National visions have been written that lay out the paths for transformation from hydrocarbon dependency to diverse economies, built around knowledge-based services, tourism, construction and specialist industries such as aerospace, aluminium and agro-chemicals. It will be seen that the monarchies face something of dilemma; on the one hand they welcome the benefits that economic diversification will bring, but on the other they believe such transformation will bring risks to their Arab-Islamic identities, culture and values as globalisation exposes their citizens and residents to ideas and information that could be in conflict with the intentions and wishes of the ruling élites. For example, as state revenues decrease, the requirement to tax the citizenry or require them to pay directly for services will rise and this may bring concomitant risks of citizens demanding a greater say in what services are provided, and also about how they are ruled and the political and economic policy decisions made on their behalf. Such discussions are inconsistent with absolute monarchic rule and would pose a very significant threat to the security and longevity of the current regimes. As the following section on methodology

¹⁴ http://ec.europa.eu/clima/policies/international/negotiations/paris_en accessed 30 November 2016.

¹⁵ http://unfccc.int/kyoto_protocol/items/2830.php accessed 30 November 2016.

¹⁶ http://unfccc.int/paris_agreement/items/9485.php accessed 30 November 2016.

explains, the implicit assumption behind this research is that regime survival is the paramount objective of each of the ruling families.

Therefore, regime survival is the principal motivation behind the monarchies' policy decisions on all aspects of life within their sovereign territories. Climate change is recognised by each of them as an issue, but is not the most important problem they face as they grapple with the contradictions of diversifying their political economies, while retaining absolute control and preventing their citizens becoming tainted with popular notions of political reforms and other incompatible ideas. However, economic diversification strategies cannot be carried out in isolation of the likely effects of climate change. Revenue reductions, as a result of foreign decarbonisation policies, are likely to be felt first and certainly before hydrocarbon reserves are exhausted. Diversification underpinned by the cushion of healthy revenues is the best they can hope for, but if those revenues are diminishing, the pressure to diversify quickly is increased if a shortfall of government income over expenditure is not to arrive sooner than anticipated. Secondly, while the direct physical effects are being felt in the region now, their impact on human security will be much greater in years to come, which could lead to the population becoming less economically productive, putting further pressure on national revenues and potentially damaging national security. If the monarchies are to be ready for that time, they should be putting mitigation strategies in place now to move critical infrastructure, such as desalination plants and power stations, industrial and commercial complexes and domestic housing away from areas likely to be affected by rising sea levels or flash floods. They must also be prepared for loss of agriculturally productive land, salination of aquifers and other groundwater supplies and loss of biodiversity on land and in the sea. All of this takes foresight, time and money, but the monarchies could be mistaken if they believe time is on their side and money will not be an issue. While there are various drivers determining regime policies, it is probable climate change will be of increasing importance and therefore should matter to the monarchies.

1.3. Methodology

This research is, of necessity, multi-disciplinary and cross-cutting as it does not sit comfortably within the individual disciplines of environmental science,

strategy and security, politics, or economics. Furthermore, and according to Baabood (2005), political scientists cannot agree on policy theory at state level, so a proposed hypothetical governance model has been avoided in favour of the reality that each state is subject to differing multiple and complex internal and external drivers. The absolute monarchies in Bahrain, Qatar and the UAE, claiming the sole legitimate right to make decisions on state business (Held 1995), do not respond to these pressures uniformly by use of commonly applied algorithms or decision-making processes, but instead react subjectively, dependent on their political and economic aims, rationality and self-interest. Therefore, this research does not start with a hypothesis that the direct and indirect effects of climate change will lead to the inevitable collapse of the Arabian Gulf monarchies, or that a Western form of representative democracy is the only legitimate form of governance in the world in the twenty-first century. Rather a critical-realist approach (Robson 2002) has been taken, based on pragmatism that recognises causation is subject to contextual forces operating in the relatively open and complex systems and social relationships pertaining within Gulf societies, albeit characterised by rigid horizontal strata based on social hierarchy, and subject to multiple internal and external forces over which the hierarchies may exert varying degrees of control. Much of the élites' policy and decision-making is based on human emotion, survival instinct influenced by personal and collective experience, habitual practice, historical precedent and pragmatism, often guided by interpretations of Islamic texts, culture and values. The high level of complexity combined with the dynamics of the interplay of these factors probably makes it unlikely that for any given situation a simple model could be propounded, tested and then repeated. The research is therefore inductive in approach (Bryman 2008) as its findings have driven the forecasts relating to the likelihood of success in transforming the economies and survival of the monarchies in power. Although the research was conducted with the implicit assumption that regime survival was paramount to each of the ruling families, it was not afforded the significance of a hypothesis as it was felt to be an inescapable reality.

The research is founded on the use of primary official documents released into the public domain by the monarchies. The documents forming the spines of the case studies are the national vision statements. The original research

design included a programme of élite interviews with Gulf officials based in their UK embassies and in the countries concerned, but unfortunately the three states were largely uncooperative in this respect, as discussed in more detail below. A qualitative approach was utilised as the research deals principally with policy responses to the impacts of climate change that are often rooted in human emotion, principle, culture and values which are difficult to quantify in any meaningful sense. As in other supposedly rational choice situations, individual factors, emotions and different temperaments are in play; rationality is outweighed by passion and behaviours differ from expectation (Victoroff 2005). Simple word counts were undertaken early in the process of examining the national vision statements, but the results gained were largely inconclusive and offered little insight into the intent of the ruling élites. The results of the word counts are contained at Appendix 1.

At the outset it was decided to compare Bahrain, Qatar and the UAE for a variety of reasons. They are similar in that they are all members of the GCC, low-lying littoral states with conservative, authoritarian Sunni monarchies, relatively moderate in religious terms, have similar sized populations, achieve similar scores in the United Nations Human Development Index, have very high dependency on expatriate labour to sustain their economies, and national visions aimed at successfully diversifying out of hydrocarbons by 2030. The dissimilarities are also important. Bahrain is politically very unstable with a Shia majority in an almost permanent state of active dissent or worse, very limited oil revenues and dependency on the Saudis for regime survival. Qatar has a largely homogeneous, politically apathetic population, is hugely wealthy per capita and has massive gas reserves. The UAE is a federation of seven emirates with significant social and economic disparities; it has huge oil reserves, an active political opposition and a highly efficient and repressive security apparatus. Of the remaining GCC states, Saudi Arabia was not examined because it is so much bigger than its partners¹⁷; Kuwait was excluded because of the role of its National Assembly in law-making and

¹⁷ <http://www.saudinf.com/main/a1.htm> accessed 8 June 2016.

approval of the state budget¹⁸; and Oman was discounted due to its lack of hydrocarbon reserves and its apparent political stability¹⁹.

A case study was developed for each of the three entities because each is a focus of interest in its own right, requiring detailed examination to produce contextual descriptions of the situation in each state and allow predictions about likely outcomes to be made. The countries were subjected to an examination of particular issues to identify and compare human and national security strategies, draw inferences and predict the most likely outcomes (Landman 2006 and Bryman 2008), especially with regard to the interdependencies and interrelationship between human and national security, and the likelihood of political reform and regime survival. The case studies start with analysis of the vision(s) appropriate to that state to provide a baseline of national intent and then move into the ten questions framework described below to make an assessment of progress and draw conclusions.

Prior to the start of primary research a literature review was conducted to understand the context and identify the existing body of knowledge and perceived gaps. As a result, the ten subsidiary questions listed below were generated to provide the analytical framework for the primary research:

- Do the monarchies recognise climate change as a pressing issue?
- Is there evidence of intent to embrace sustainable, alternative technologies in the monarchies?
- Do the monarchies intend to reform their political governance away from 'ruling bargains' towards popular participatory politics?
- Is there evidence of intent to carry out economic diversification and reduce dependency on hydrocarbon revenues?
- Is there evidence of intent to improve education and skills amongst citizens to increase their employability?
- Is there evidence of intent to reduce dependency on expatriate labour?
- Is there evidence of intent to guarantee and improve human security?
- Is national or regime security a cause for concern in the monarchies?

¹⁸ <http://kuwaitembassy.us/kuwait/polsys/assembly.html> accessed 8 June 2016.

¹⁹ <http://www.mei.edu/content/can-oman%E2%80%99s-stability-outlive-sultan-qaboos> accessed 8 June 2016.

- Are the monarchies taking steps to strengthen their security structures?
- To what extent will the monarchies collaborate with partners and allies in the future?

1.3.1. Documentary Analysis

Each of the states has published national visions: ‘Our Vision: From Regional Pioneer to Global Contender, The Economic Vision 2030 for Bahrain’ published in 2008; ‘Qatar National Vision 2030’ also published in 2008; and ‘UAE Vision 2021’ published in 2010. However, the executive summary of ‘The Abu Dhabi Economic Vision 2030’ published in 2008 was also analysed, as it complements the UAE Vision and extends the Federation’s strategic horizon to 2030, and because Abu Dhabi is the strongest economy in the UAE since the global economic downturn of 2008. It was decided to focus on the executive summary as this is comparable in length and detail to the other three documents and therefore a fairer comparison may be made. The vision documents bear all the hallmarks of western business consultancies and were almost certainly conceived and written in English for an external audience with the intention of attracting foreign direct investment (FDI) into each of the monarchies. Each of the documents is a primary source, as are subsequent national official policies, strategies and government departmental progress reports. The content analysis of the four visions was necessarily detailed in case examination of publicly available government papers and reports was the only official source of primary research available. This was due to concern about possible political sensitivities within the establishments of Bahrain, Qatar and the UAE about the outcomes of the research; the UAE has previously denied entry to foreigners accused of criticising the regimes^{20&21}.

Importantly, all four vision documents remain extant. Each of the monarchies also has a number of national policies and strategies focused on specific issues such as development, education and healthcare, but these have not been subjected to content analysis as such detailed plans are outside the scope of this research. However, certain of these have been read to provide

²⁰ <http://www.thenational.ae/news/uae-news/politics/why-london-academic-was-banned-from-uae> accessed 8 December 2014.

²¹ <https://freedomhouse.org/article/uae-restricts-entry-critics-bahrain-regime#.VIXLr9KsWSo> accessed 8 December 2014.

background on how the visions were to be executed, or to provide information on progress. The main body of the Abu Dhabi Economic Vision 2030 was treated in the same way as these plans and strategies.

Each of the visions can claim to be strategic given how far into the future they look from the time they were published. However, and of note, none of the documents appear to have been revised since publication, at least no later versions have been identified during internet searches. This may be indicative of the monarchies holding their nerve and exercising strategic patience, i.e. resisting the temptation to make sudden changes in response to unforeseen global and regional political or economic events. If this is the case, the rulers are to be applauded for their determination to ignore short term disruptions and see their plans through to completion. Yet, there is also the possibility the visions lie unread on shelves as though writing them was the end in itself, rather than execution of a strategic plan. It was hoped elite interview subjects would provide evidence of progress, but this was not achievable.

Although a qualitative approach was adopted, as previously mentioned a simple word count exercise was applied to the visions. This looked for individual key words and pairs of key words derived from the ten research questions. The results table is at Appendix 1. The subsequent qualitative analysis deconstructed the documents to answer the ten research questions, concentrating on context with regard to key words and their synonyms, looking for both 'witting and unwitting statements'. 'Witting statements' are those the author intends to impart and unwitting is everything else that may be gleaned from the document or inferred (Robson 2002:351). The aim of the content analysis was to identify whether there was recognition by the ruling élites that change is necessary and a stated intent to deliver. Implicit in this was the requirement to make an assessment of the lengths to which the monarchies are prepared to go in order to retain their families' hold on power. Another purpose of the content analysis was to identify areas of the ten questions framework that merited further exploration through elite interviews with officials from the monarchies, especially with regard to future policies on hydrocarbon dependency, national and human security issues, and the direct and indirect impacts of climate change.

The analysis of each vision was undertaken in the following sequence. Firstly, it was read through in one session to get a feel for the document. No notes were made as a sense of overview was thought necessary to subsequent understanding. The second step was to conduct a simple word count exercise as described above. Following this, some general impressions were drawn about the content and weighting of each document. The third step involved detailed deconstruction of the documents to identify explicit or implicit answers to the ten research questions and to draw conclusions. The final step was to produce an overall view of what the vision was actually saying. Finally, internet searches were conducted to find progress reports or other documents relating to the execution of the visions. As a result an assessment of the progress towards achievement of each vision has been made. In the absence of élite interviews, reports in academic and professional journals, opposition and human rights groups' publications, NGO reporting and news media were used to augment and triangulate official progress reports as described below.

1.3.2. Élite Interviews

Letters were written to the London embassies of Bahrain, Qatar and the UAE on 10 March 2015, asking to interview three officials from each delegation with specialist knowledge of politics, economics, environment and climate, and national security. It was requested these interviews be carried out before Ramadan started on 18 June 2015. The letters also asked for access to officials based in each country, who were closely involved in environmental and climate policy, human security and national security. It was hoped to conduct these interviews in September – October 2015. The interviews were to be semi-structured and based around the findings of the vision analysis and the ten questions framework.

Only the Ambassador of Bahrain replied, but said there was no-one on her staff in London qualified to speak on the subject. She gave two names of officials in Bahrain who could be contacted. Only one replied to my approach and wished to be interviewed in the UK. The official also wanted to remain anonymous and selected a very public restaurant for the interview. It was a wide-ranging discussion, although the ten questions were used as a framework. It was not possible to record the interview because of background noise. Some written

notes were made during the course of the discussion, but these were not verbatim. The official did offer that direct quotes could be attributed, but wished to clear them on a case-by-case basis. It turned out this was not necessary as the interview provided background briefing to material already gleaned from Bahraini government documents and, as expected, was entirely on message about the progress being made in Bahrain, which the interviewee described as an open and progressive society.

At the outset it was decided to conduct élite interviews only, because of the instinctively secretive nature of the monarchies and the exclusion of the great majority of the population from political life or the business of government due to the extant ruling bargains; it was felt that there was little to be gained from interviewing ordinary citizens about policy and strategy. Ordinary citizens could have been approached by travelling unofficially to the Gulf as a tourist and then by spending time trying to meet and persuade individual English-speaking citizens to take part in interviews. Without a mutually trusted intermediary it was felt this would have been extremely difficult, as Gulf citizens would be wary of giving their personal views on government policies to an unknown westerner. It was felt this posed problems for my personal security as there was significant scope for official misinterpretation of the purpose of the research, namely it was either investigative journalism aimed at criticising the monarchies²² or worse still, espionage²³. This latter possibility was compounded by the fact I had previously visited each of the countries officially as a senior British military intelligence officer. The decision was therefore made early in designing the research methodology that the purpose of the interviews and travel to individual states must be completely transparent to, and authorised by, the countries concerned. Authorisation was not forthcoming.

In September 2015, Gulf-focused groups based in London were approached to gather their views, noting as they generally oppose the regimes their 'evidence' is biased, but nonetheless providing an alternative perspective to the views and information contained within official documents and the news media. After lengthy internet searches it was decided to approach Bahrain Watch²⁴ and the

²² <http://www.bbc.co.uk/news/world-middle-east-32775563> accessed 19 May 2015.

²³ <http://7daysindubai.com/british-plane-spotters-held-spying-charges> accessed 31 March 2015.

²⁴ <https://www.bahrainwatch.org/> accessed 14 September 2015.

Emirates Centre for Human Rights²⁵. Unfortunately no credible Qatari opposition organisation could be identified, the closest being a blogger, Khalid Al-Hail²⁶, whose blogs are intermittent and lack real coherent messages; it was decided to omit Qatari opposition from the research. As with the Embassies, neither Bahrain Watch nor the Emirates Centre for Human Rights replied to requests for assistance, despite using my university email address and attached ethical clearance, interview information and consent forms. It is difficult to know why they chose not to reply, but as human and national security are contentious issues in Bahrain and the Emirates, it is probable opposition groups will talk only with those they know, or who have been introduced by trusted third parties, for their own safety and security.

The interview phase of the research therefore yielded only one government servant who stuck closely to the official line and would meet only in the UK. Without interview material the research had to fall back on contemporaneous official documents, with open source publications, websites, articles and news media used as a means of triangulation.

1.3.3. Documents, Articles, Websites, Media Reports

Aware that élite interviews might not be granted due to sensitivities surrounding criticism of the regimes^{27&28}, it was decided to conduct parallel research using contemporaneous official documents, articles published in academic and professional journals, opposition websites, and news media, using the ten research questions as the framework of analysis. Each of the sources is potentially flawed, as official documents may contain an acceptable version of the truth and deliberately exclude anything that may contain bad news or criticism of government policies; academic and professional journals are often secondary sources whose primary research may have been affected by bias or misinformation; opposition and human rights groups have a special interest to promote; and news reporting can be inaccurate, or deliberately misleading where there are hidden agendas in play. However, it was felt that by combining

²⁵ <http://www.echr.org.uk/> accessed 14 September 2015.

²⁶ <https://khalidalhail.wordpress.com/> accessed 14 September 2015.

²⁷ <https://www.insidehighered.com/news/2015/03/18/nyu-professor-denied-entry-uae-where-university-has-campus> accessed 31 March 2015.

²⁸ <https://storify.com/mattjduffy/uk-academic-denied-entry-to-uae-set-to-deliver-tal> accessed 31 March 2015.

a spectrum of sources the advantages should outweigh the disadvantages and give a degree of triangulation and verification of the data. Also, in the absence of interviews these sources provided the only means of gaining a view of how the monarchies are coping with the implications of climate change for human and national security. From April 2015 multiple sources (see bibliography) were checked regularly for items relevant to the ten research questions. These sites were selected because all are in English and available online; they include official government websites, a cross section of regional, British and American news media, and opposition/human rights regime watchers.

1.4. Structure

The structure of the thesis is logical and straightforward. Following this introduction, the Literature Review (Chapter 2) focuses on material covering multiple aspects of the political economies of the three monarchies, including environmental factors, published mainly in 2010-13, although some exceptions fall outside that bracket. Chapter 3 reviews the climate change science and evidence at a global and regional level, taking the majority perspective that anthropogenic factors are the main cause of warming; the arguments of climate change sceptics were discounted at the outset in favour of this majority view. The primary research for the thesis is then organised into case studies for Bahrain (Chapter 4), Qatar (Chapter 5) and the UAE (Chapter 6). Each starts with an analysis of the relevant national vision. As described previously, in the UAE case study two complementary visions are analysed, United Arab Emirates Vision 2021 and Abu Dhabi Economic Vision 2030, to cover the same timeframe as the visions for Bahrain and Qatar. The research then moves on to other primary sources including publicly accessible official documents and a range of other published material. Regrettably, no primary data was gathered from interviews for reasons described above. Chapter 7 is the final substantive chapter and makes comparisons between the monarchies and forecasts likely outcomes, including the prospects for regime survival in each state. A short conclusion wraps up the thesis and reiterates the likelihood of success and survival of the ruling élites.

2. LITERATURE REVIEW

2.1. Overview

There is no shortage of literature on the politics and economics of the Arabian Gulf monarchies and recently there has been more commentary concerning the potential direct and indirect effects of climate change on the states and the regimes that rule there. This review therefore concentrates on recent writings, published mainly in the years 2010-2013, to provide a relatively contemporary synopsis of current thought on the potential survivability of the ruling families of Bahrain, Qatar and the UAE. The review focuses in the main on a select group of writers who represent a cross-section of European and Arab perspectives and a range of opinion from highly optimistic to very pessimistic. Abdulla and al-Suwaidi, both Gulf Arabs, are very positive about the regimes' futures, with some minor qualification, but that is probably unsurprising as they are residents of the UAE and working in positions where any form of criticism could be seen as dissent and liable to sanctions. Forstenlechner and Rutledge, and to a certain extent Ulrichsen, occupy the middle ground and suggest the regimes can survive in power if they are prepared to take significant steps towards political and economic reform, although they question the ability of the ruling families to do that. Ehteshami is of a similar view, and although based in the UK brings an Iranian perspective to the situation. Luomi is generally critical of the regimes' performance and her writings focus on the effects of climate change and the need for sustainable economic diversification. Davidson, probably one of the most vocal Western critics of the Gulf monarchies' rentier governments, predicted most of the regimes in their present form will disappear in the 2014-17 timeframe. Furthermore, he believes 'traditional monarchy as a legitimate regime type in the region is going to reach the end of its lifespan, especially as most of the Gulf States are now caught in a pincer movement of pressures between unsustainable wealth distribution mechanisms and increasingly powerful "super modernising forces" that can no longer be controlled or co-opted by political élites' (2013:vii). Echoing 1960s concerns about communist revolutions in the Far East, he sees the potential for a domino effect if one of the apparently stable Gulf monarchies was to fall and says 'Even the wealthiest and most confident of rulers would find their positions, or at least their legitimacy, under threat' (2013:2). Davidson appeared to believe collapse

was inevitable, even without the potential effects of the 2011 Arab Spring, although he accepted revolutions in other Arab states could have a catalytic effect for political dissent and unrest within the monarchies. However, by 2016 the Arab Spring was over and had been replaced by major instability in Libya, a grinding civil war in Syria, the establishment of ISIS's 'caliphate' with all its extremism in Iraq and Syria, and retrenchment under the old guard in Egypt. There is not much left to commend popular uprisings after the heady days of 2011.

Writing just after the Arab Spring revolts of 2011, Abdulla (2012) says the political strength of the monarchies is accepted by many who do not dispute their legitimacy; some even regard them as more powerful than previous generations. The monarchies continue to depend on Islam, tradition, charisma and tribalism for legitimacy, but also rely upon hydrocarbon revenues plus socio-economic improvements, modern bureaucracies and highly efficient security structures to retain power. However, arguably this is not the situation for Bahrain where the al-Khalifas remain in power only because of the intervention of Saudi and UAE forces during the 2011 Shia rebellion. Davidson believes this greatly damaged the al-Khalifas' legitimacy, potentially irrecoverably (2011). The danger here is of comparing two opposing perspectives rooted in different cultural backgrounds. For Abdulla political legitimacy is vested in the mainstays he describes, whereas Davidson, from a Western democratic culture, sees legitimacy as only possible through popular consent. However, in Abdulla's calculation just the consent of tribal leaders and power-brokers is sufficient, rather than the agreement of the majority of the people. The legitimacy of the al-Khalifas, from an Arab standpoint therefore, rests upon their ability to wield force, supported by their Sunni brethren in Saudi Arabia and the UAE, rather than the consent of the Shia majority who are unable to depose them.

The monarchies go so far as to claim democracy is inconsistent with Arab tradition and culture and Islam. They see Iran and Kuwait as failing democracies in the region and they fear that so-called Islamist extremists may win any elections (Davidson 2013), such as the Muslim Brotherhood's success in Egypt's presidential elections in 2012. Davidson (2013) says the view that Islamic culture is inherently undemocratic is convenient for the monarchies, but

does not explain the lack of political reform in the Gulf States. In doing so he demonstrates again a Western perception about what constitutes political legitimacy and ignores the reality that in traditional tribal cultures the right to rule is usually exercised by the person able to gather the greatest strength around him. In forming any view about the potential longevity of the monarchies it is essential the platform adopted is culturally sensitive to local norms and trends.

Forstenlechner, Rutledge and Alnuaimi (2012) say there are two dominant viewpoints about the prospects for survival of the GCC monarchies: the first is the monarchies are supported by tribal, clan and familial allegiances which do not doubt legitimacy; the second is the ruling bargain works and, along with some adjustments following 2011, has ensured the population is catered for. They believe that if the regimes are to survive, which is very possible, they need strategies for negotiation and handling dissent, alongside policies for education and economic reforms. Neither of these viewpoints is radical, but suggest the status quo is sustainable with some fairly sensible changes to ensure the population feels it is being treated well. Again, this is not a model that would sit easily with Western electorates, but it could fit well into the traditional, religious and cultural norms of the Gulf. A combination of guaranteed economic well-being, better education to permit economic advancement and more freedom of expression could be a highly effective substitute for full-blown democracy.

However, there is a view that the political economy of the Gulf is likely to shift decisively toward post-rentier structures of governance. Held and Ulrichsen (2012a) believe changing demographics are stressing redistributive practices, but the labour market is incapable of absorbing large numbers of citizens. Their standpoint recognises change is necessary, but is more aligned with Forstenlechner et al than with Davidson's almost apocalyptic vision. Interestingly, they do not regard the need for greater freedom of expression as significant, but see the practical effects of increasing numbers of citizens to feed, combined with the relatively poorly educated and unskilled populations of the states, as forcing the need to change upon the monarchies. Certainly, economic and social exclusion could lead to political dissent if it became

widespread, suggesting it is in the monarchies' interests to make the reforms Forstenlechner and his colleagues identified.

From the optimist's perspective, Abdulla believes the monarchies are now highly open, modern and globalised entities because of forces of change resulting from huge oil wealth. He says change occurred on a massive scale and at significant pace with oil and globalisation causing major socio-economic impacts (2012) that turned the Gulf monarchies into modern states instead of traditional tribal societies. Somewhat at odds with some of his comments suggesting traditional conservatism has prevailed, he describes how this has been replaced by a more modern, urban and affluent society and says relatively diversified economies with wide links to global markets give better quality of life to burgeoning populations. Perhaps this is indicative of a dual polarity within the monarchies; on the one hand a degree of economic freedom, diversification and global connectedness is positively encouraged as a means of bringing rewards of wealth to the citizenry, a sort of post-modern rentierism. On the other hand real political power stays tightly held in the hands of a clique that remains firmly ensconced in the traditional, conservative tribalism of the past. This is not at odds with Forstenlechner, Rutledge and Alnuaimi's proposal, nor with Held and Ulrichsen's view. It suggests the future in the Gulf is not going to be Western-style democracies, but will actually resemble traditional styles of Arab and Islamic governance, with some degree of greater political freedom, better education and guaranteed economic well-being for the citizens. The consensus that appears to be forming in the literature is more in favour of this outcome than Davidson's pessimism.

Underpinning this is the reality that the Gulf monarchies have relied principally upon hydrocarbon revenues since the 1970s to sustain their regimes and, arguably, keep their citizens politically apathetic; but the oil and gas cannot last forever. According to Reiche, working on 2007 production rates, it was estimated in 2010 Qatar had 62.8 years of oil remaining; the UAE had 91.9 years and Kuwait more than 100 years. 95 percent of fossil fuel reserves in the UAE are in Abu Dhabi; Dubai's oil is expected to run out by 2020 and her gas by 2030. However, 70 percent of Abu Dhabi's government revenue in 2010 was from oil and natural gas, while Dubai received only 5 percent of government revenue from hydrocarbons, showing it had diversified successfully

into other revenue streams. Meanwhile, Qatar has the highest natural gas reserves in the GCC, ranked third in the world. Of note, six of the seven emirates and Bahrain do not benefit as much from hydrocarbons as they did, nor anywhere near as much as Qatar and Abu Dhabi (2010). Bahrain is most at risk of economic hardship unless alternative revenue sources can be exploited, while Abu Dhabi will have to subsidise the other six emirates to a greater or lesser degree if intra-federation discord is not to surface. While Qatar and Abu Dhabi appear to have a cushion of decades, because of their reserves, they cannot ignore international climate change agreements leading to decarbonisation policies that will reduce their revenues as consumption decreases. Despite the size of their reserves time is pressing.

So, why does climate change present a problem for the monarchies over and above that which demands for political reform might ordinarily bring? According to Luomi, the Gulf monarchies have natural unsustainability determined by three features: strong rentier systems; persistent authoritarianism; and inefficient social contracts. These characteristics have created an 'illusion of abundance' leading to wasteful energy and water consumption and disregard for environmental sustainability (2012:3). In essence, short-term decision making at national level is being driven by the demands of regime survival, irrespective of the longer term implications for economic and environmental sustainability. Therefore, if Luomi's analysis is correct, the monarchies are storing up greater problems for the future by refusing to deal with them as they appear. Davidson sees these problems as inevitable and an existential threat to the monarchies, while others see the issue as manageable providing sensible action is taken in a timely fashion; whether that need is recognised and acted upon is discussed below.

2.2. Rentierism

Much is made of the Arabian Gulf monarchies being 'rentier states' and in many cases this is pejorative. The concept of 'rentierism' is based on Marx's 1860s notion of a class deriving income from property rents but producing

nothing itself, according to Davidson (2013). He quotes Hazem Beblawi's²⁹ view that a rentier state is one where relatively few people are involved in wealth creation, but where the majority are involved in the redistribution of that wealth. Philosophically one could question the application of this definition to the Gulf monarchies. Marxism is predisposed towards despising the landlord class, assumed to be exploiting poor workers who cannot afford to buy their homes and are forced to rent. This is not true of the monarchies, although it is only the ruling élite involved in the generation of wealth, but that is because of an assumed conflation between state and regime; where all natural resources are owned by the state, inevitably they are controlled by the monarchy.

Davidson expands upon this stating it is usual for rulers and their relatives to own most of the country's land and natural resources and it is difficult to separate what is owned by the state from what belongs to the ruling family. As with wastage on prestige projects such as airports, airlines and skyscrapers, this has become a cause of criticism amongst citizens, especially where the ruling clique is accused of being predatory such as in Bahrain. In 2010, the al-Khalifas were accused of illegally appropriating one tenth of Bahrain's scarce public land (2013). However, it is also important to recognise it is incumbent upon the leadership in traditional tribal society to look after the welfare of the tribe. By redistributing 'rents' derived from hydrocarbons the monarchies are doing exactly that, although their growing family wealth cannot be denied either.

It is said the Arab monarchies survive by exploiting 'rent' revenues from the oil industries. Rents allow the regimes to provide their subjects with substantial material benefits without the need for taxation. Rentierism describes a distributive social contract on which the government's legitimacy is based. The state provides free medical care and education, low income housing and high paying public sector jobs, in exchange for the population's compliance and acquiescence (Reiche 2010). There is an interesting potential anomaly to be considered. Is the revenue obtained from the sale of hydrocarbons rent, or is it the just proceeds of sale of a national natural resource and does it make a

²⁹ Hazem Abdel Aziz Al Beblawi is an Egyptian economist and politician who was interim Prime Minister of Egypt from 2013 until 1 March 2014. Previously he served as deputy prime minister and minister of finance in 2011.

difference? It appears from the perspective of assessing regime legitimacy the 'rentier' label can suggest the state is less legitimate than another state that relies on more than a single commodity for its revenues. Perhaps this is another occidental viewpoint based on the inherently diverse nature of Western economies.

Luomi seems to suggest there is an inversely negative relationship between legitimacy and rentierism. She believes the rulers allocate a large percentage of the external rent to their citizens in exchange for the surrender of a significant proportion of their demands for political rights, although she acknowledges there is a debate to be had about whether rentier theory is right to explain relationships and the capacity for change in the region (2012). She says rentier structures influence economic, political and social outcomes and reinforce the position of the ruling élite. As revenues have increased, so the monarchs' power has extended through redistributive practices and control of societal relationships by supporting, co-opting and coercing groups and individuals. The rulers have maintained traditional structures and relationships within authoritarian frameworks, but tribes have been co-opted and autonomy contained as the rulers have maintained strong vertical power linkages. The legitimacy strategy of the rulers sees the extension of the ruler's network across society where all relationships culminate at the top. However, leadership still has to respect the values and moral codes of the local majority, especially when dealing with religious issues (2012). Whether the structures are truly rentier or not, it is not necessarily the case they are illegitimate if they comply with societal and religious norms prevalent in the region and are consented to by the tribal élites. In effect it is a pragmatic relationship based on a reconciliation of power and resource sharing.

From another writer's perspective the lack of political liberalisation in the Gulf is primarily shaped by the redistributive systems they have. Power (2012) says these weaken demand for political representation because the state, with no need for taxation, sees no reason to give citizens influence over national policies. The middle class has effectively been bought off and given up its right to political influence in exchange for economic wealth. For others the incentive to work is minimal, unless in government jobs, as the state provides through benefits and disbursements. However, Power (2012) believes the rulers

recognise rentierism is not a viable long term model, especially as potentially reduced revenues from hydrocarbons inhibit the ability of the state to provide for its citizens, threatening the social contract. The crucial point is not whether rentierism is a legitimate form of government if it denies political expression, but whether a regime can survive if it fails to provide for its citizens in the way the social contract demands. Citizen acquiescence is based upon the assumption of provision of goods and services; failure to provide could lead to economic and social hardship, exclusion and then political discontent. In a bargain both parties must honour their side for it to work.

2.3. Politics

The ruling bargain so much of the literature criticises is not an oil-era, Arabian Gulf construct. According to Bowen, secular Arab rulers in the 1960s created a social contract where the regime would provide for their citizens' needs in return for the people staying out of politics (2012). That this form of governance has survived so long, especially after adaptation to the monarchies' needs, suggests it could be an instinctively ideal political system for Arab states whose populations remain traditional and tribal in outlook and Islamic in religious tradition, both of which are not inherently in favour of Western-style popular democracy. The breakdown of these contracts in Tunisia, Libya, Egypt and Syria emphasises the bargain is a two-way street and both sides must live up to their obligations, reinforcing the perception the monarchies must be alive to the pressures their citizens face and proactive in taking measures to alleviate economic and social hardship or exclusion.

Abdulla believes (2012) a key consequence of the significant flow of oil revenues into the Gulf States in the 1970s and 1990s was consolidation of the socio-political status quo. Traditional, conservative forms of governance conditioned political relationships and determined how society and business worked. This continues until now where, despite globalised pressures for change and modernity, continuity has remained the main driver of ensuring the survival of conservative, religious regimes, contrary to predictions of their impending demise. He further declares (2012) that the states are essentially benevolent and paternalistic and contends the largely obedient tribal culture is unlikely to disappear any time soon, as it is relied upon heavily by the

monarchies to preserve political loyalty to the ruling élites. However, Abdulla is a significant academic within the Emirates University, so it would not be in his interests to point out potential vulnerabilities within the monarchies, or suggest that fundamental political and societal change is imminent. Essentially, the ruling bargain is such that the state provides for a life of leisure in exchange for complete political control (Forstenlechner and Rutledge 2011). This appears to suit the majority of the Gulf's citizens, unless the government fails to deliver its part of the bargain. The key question therefore is whether the monarchies can keep ahead of the game and continue to provide for their people, despite potentially reducing hydrocarbon revenues, economic downturns, or even a more politically aware and demanding population.

The absence of the need to tax the citizenry, because of the redistributive nature of the regimes, leads to a lack of ruler accountability and reinforces the political system's authoritarianism Luomi (2012) believes. She says the monarchies also exhibit Karl's paradox of plenty³⁰, where oil rents create unstable political economies and produce a barrier to change because the required reforms are not in the interests of the leaders. Linked to authoritarianism and change resistance, she finds civil society organisations have been silenced, co-opted, or simply do not exist; she notes there are few environmental NGOs in the GCC states and they are all non-controversial (Luomi 2012). Whether the lack of a Western-style civil society along with special interest pressure groups is a bad thing or not, the way Arabs voted in their millions for Islamists since 2011 suggests many of them do not share the same aspirations for democracy as Western liberals. They see their best choice as religion in the form of political Islam (Bowen 2012). As seen previously, Davidson believes the notion of Islam being anti-democratic is a convenient excuse for lack of reforms, but this appears not to be borne-out by the results of the polling booth.

Abdulla believes the prevailing view is there is no real domestic demand for political reform in the Gulf States with most people preferring the status quo. In his view the states can postpone democracy as long as they continue to deliver in socio-economic terms and in welfare benefits. He says it is widely believed

³⁰ Karl, Terry Lynn (1997) *The Paradox of Plenty: Oil Booms and Petro-states*. Berkeley and Los Angeles, University of California Press.

in the Gulf that democracy is divisive and destabilising, prompting questions about the need for change if the system works and prosperity, security and stability are maintained (2012). Perhaps key to this perception is Kuwait where democracy appears to have failed due to endless internal squabbling, divisions and lack of economic progress. Additionally, Kuwait has become far more socially conservative, sectarian and tribal than in the 1970s. It is said parliamentary process has been used to promote vested interests rather than national priorities and this has made democracy appear perplexing to other Gulf monarchies (Abdulla 2012). Davidson (2011) also describes Kuwaiti politics as a mix of deeply entrenched vested interests and says it is unlikely reforms could be achieved in Kuwait without some degree of instability. This is an interesting paradox, as the one GCC country where democracy exists alongside monarchy, underpinned by huge hydrocarbon revenues and reserves, is unable to use that democracy to good effect. Potentially the nature of tribalism, which is essentially about tribes achieving the best for themselves and their kin rather than collaboration, is counter-democratic as a form of governance and so any Arab foray into democracy is doomed to failure unless tribalism is fatally undermined.

De Haas (2011) believes the case of the Gulf demonstrates that a lack of political freedoms does not lead to large outward migration to more liberal countries, as long as the economic benefits and prosperity are perceived to outweigh the disadvantages of restrictions on political expression. Despite Davidson and Luomi wishing it were not the case, it appears the citizens of the Gulf monarchies are content to be bought-off and gladly trade political freedom for guaranteed economic well-being, social welfare and healthcare. Perhaps it is also the case for the majority of the monarchies' populations that political disenfranchisement is a small price to pay to avoid the dysfunctionality of Kuwait's democracy.

However, according to Lambert most states in the region allow for some form of electoral politics, although this is sometimes used to avoid proper democratisation, or to keep authoritarian rule secure; any political activity can create a space for the formation of political associations, if not parties, and can influence decision making. Kuwait, however effective its democracy is, started holding regular elections in 1992, while Oman held a consultative council in

1991 in which districts made suggestions for membership. In 2003 universal suffrage was granted to all Omanis, although the Sultan reserves the right to approve each representative elected. Bahraini women won the right to vote and run for office in 2002, followed by Kuwaiti women in 2005 (2011). But, as shall be seen later, real power has been retained at the core of the ruling élites in Bahrain, Qatar and the UAE, exemplified perhaps by the fact that these countries are in the top fifty in the 2010 Human Development Report, but in the 2010 Freedom House report are not classified as free states in terms of political freedom (Abdulla 2012).

Ulrichsen brings the traditional tribal and Islamic governance model into the sharp relief of the 21st Century, stating that in today's intensely globalised environment, influence is projected through multiple channels and is less reliant on territorial size than ever before. A combination of resource riches and a highly centralised decision making process allows ruling élites to operate with greater freedom than those countries with participatory democracy, such as Kuwait (2012a). Ulrichsen, as said before, sits close to the middle ground of this debate, but his view of the nature of Gulf Arab *realpolitik* would suggest the existing ruling bargain system of government is exactly right for the citizens who get their needs catered for and the monarchies who can rule, create wealth, exert influence and even become players on the global stage, unimpeded by the 'drag' of a domestic electorate.

2.4. Economics

As discussed previously, redistributive states are vulnerable to weakening of the ruling bargain and loss of legitimacy if mechanisms for co-opting support and depoliticising society start to break down, according to Kumetat. He believes GCC states have systemic economic problems including bloated public and weak private sectors; poor education systems that hinder diversification; stratified labour markets; and large numbers of migrant workers. He is concerned multiple sources of human insecurity may interact with growing resource scarcities and unequal patterns of resource availability, especially food and water security (2009). This destabilisation of human security for largely economic reasons could be exactly the catalyst to create demands for political reform, if the ruling élites are too slow or ineffective in

addressing them. Furthermore, Ulrichsen says globalisation adds another potentially destabilising dimension to interdependencies linking Gulf States to the international community. Increasingly, new relationships avoid state structures and controls and constitute both a philosophical and material threat to governments. They are essentially different to earlier interdependencies based on hydrocarbon exports that shaped the particular characteristics of the redistributive states and connected the Gulf globally (2011). The monarchies must therefore conduct a sophisticated twin-track approach in order to reconcile internal economic pressures with external globalising drivers that have their economic components outside the control of the ruling élites. An active policy of economic diversification to ensure financial risk is spread geographically through a variety of business and industrial sectors would seem to provide the best insurance policies for the monarchies to protect their wealth from depletion.

Held and Ulrichsen take this theme further, saying Gulf policy makers are aware of 'the urgency of moving beyond a culture of citizen entitlement' while 'embedding notions of productivity and value creation in the strategies of economic diversification' in order to change the current structures. This seems to be at odds with Davidson's assessment of the situation, but they concur with him that the centrality of the rentier system to the social contract magnifies the difficulties for the monarchies that lie ahead, noting the vulnerability of states in transition to political challenge and accusations of lack of regime legitimacy (2012a: loc 798). Certainly, without an attitudinal change on the part of their citizens there can be no shift in patterns of work and productivity in the way the ruling élites desire; the ruling bargain in this instance could be under severe threat. Add to this the fact Gulf States share many of the characteristics of Arab Spring countries, such as increasing populations and a youth bulge; high unemployment; unbalanced labour markets that cannot absorb the citizenry, many of whom are not educated and skilled enough to work; and an institutional opposition to meaningful political reform, as in Egypt and Tunisia (Held and Ulrichsen 2012b). This all suggests a necessary realignment of the social contract, but raises the question of how it can be achieved other than consensually through consultation and political and economic reform, if it is to have any chance of success; mere imposition of change as a *fait accompli*

could very possibly lead to some form of open political dissent or even political violence.

Above and beyond amassing money for its own sake, the wealth directly or indirectly accrued as a result of oil revenues has enabled the globalisation of some Gulf countries and their emergence as relatively significant actors on the international political scene. The impact of this greater role on the world stage must be examined in the context of rapid changes in the 21st Century set against the fundamental norms and values still prevalent in the region; this makes the issue of identity politics in the Gulf a critical variable in any future political development (Ehteshami 2013). With greater interrelatedness and complex relationship networks being prevalent, change is ever present even in societies where traditional forms of governance remain. Global forces interact with domestic pressures in the Gulf States causing shifts in power relationships, which lead to new drivers in economic and foreign policies and result in a situation of flux. Traditional governance concepts and structures must coexist alongside newer obligations and demands for reform. At the centre of the global changes impacting the region are the monarchies' hydrocarbon and financial reserves (Held and Ulrichsen 2012a) which, depending on the levels held, either cushion the countries where reserves are extensive, or exacerbate a worsening situation where reserves are low or nearing depletion. It is these latter countries, arguably deeper in transition than their hydrocarbon and financially richer neighbours, which are the most vulnerable to political instability and demands for reform.

The increased sophistication of the regimes that will be necessary in the future is already visible, with GCC states demanding a greater voice in world affairs in exchange for increased funding of International Monetary Fund (IMF) rescue packages in 2008. There has been a re-alignment of geo-economic global power eastwards as the Gulf countries, India and China become more economically powerful (Ulrichsen 2012a). In Qatar and the UAE new foreign policies are being developed which project global reach and influence and are underpinned by exploitation of domestic resources (Held and Ulrichsen 2012a). All of this suggests a willingness on the part of some Gulf monarchies to tie themselves into the matrix of international political interdependencies in order to improve their chances of regime survival in a modern world. Admittedly,

comparatively higher levels of resources and smaller populations give the rulers of Qatar and the UAE greater insulation from domestic social actors and economic interests than other GCC states. Although as has been seen, even in Kuwait where ratios are similar, the ruling family is unable to exercise the same level of power because of a vocal political class and effective parliamentary opposition. Political power and authority in Qatar and the UAE has remained concentrated in a small circle around the senior members of the ruling élite (Ulrichsen 2012a).

Mohamedi, in Kern et al (2010), is optimistic about the future and says all GCC countries had managed their economies extremely well over the preceding ten years, with unprecedented economic stability giving oil consumers confidence and contributing to political stability. He claims an economic revolution took place over that time. However, Mohamedi is a partner in PFC Energy, a global consulting firm specialising in hydrocarbons³¹. It would therefore be surprising if he did anything other than talk up the economic situation in the Gulf in the two years immediately following the economic downturn.

According to Ghanem and Elfakhani (2011), GCC states still need to relieve the financial burden of capital expenditure each of them currently bears. The financial strains on state budgets adversely affect the revenues reserved for the ruling families, because if unemployment and rising prices are suffered by the general population, but the ruling élite continues to maintain or increase their share of state revenues, there could be severe political backlash. Similarly, if the ruling élites step out of the responsibility of running business they could be alienated from their natural support base. They also contend it appears some of the ruling élites appear to forego their total control of economic power in order to encourage participation of the private sector in wealth creation. The élites are performing a delicate balancing act; they need to be seen to be sharing the pain of economic stringency, while remaining engaged in the business of commerce and wealth creation, and at the same time divesting themselves of the real financial risk of ventures by encouraging the private sector to hold that risk.

³¹ <https://www.pfcenergy.com/About-Us> accessed 10 December 2013.

As suggested previously, the trading status quo may not survive far into the future as trade focused partnerships with Asian countries offer GCC states plausible alternatives to dealing with the more politically interventionist EU and US. China is especially attractive because of its inherent pragmatism and its focus on non-intervention and the centrality of state sovereignty. There are thus potentially significant implications for accepted concepts of global governance as developing nations join together to counterbalance the traditional Western view of what constitutes good governance (Held and Ulrichsen 2012a). Although China signed the Paris Agreement in April 2016 with 174 other countries³², the fact it does not insist on Western-style democratisation or corporate social responsibility policies offers the Gulf States the opportunity to maintain high levels of hydrocarbon revenues while leaving their governance structures free from criticism. A shift of focus to the East would provide the monarchies with a credible survival strategy and the time to carry out political and economic reforms deemed necessary for regime sustainability.

Winder says one of the strategies pursued by the monarchies has been the creation of sovereign wealth funds spread over a wide geographic area. Despite political concerns within the US, it remains the biggest recipient of these and Western financial institutions received over US\$40 billion up to 2008, which helped greatly during the global economic downturn. The funds are generally opaque with little transparency on investment strategies and control tends to be over-centralised. There is a view the funds could play a greater entrepreneurial role in the Gulf, through investing in domestic economies and thus reducing the potential of major unemployment as Gulf populations increase. Investments in industries that complement development efforts could pay dividends in terms of job creation, while diversifying investments could boost returns and kick-start certain sectors of the domestic economy, where workers might do more than just menial jobs. Of course, this requires the workforce to be educated and qualified appropriately for the sectors and to have the motivation required to work (2010). That returns to the issue of the citizen perspective of entitlement and the need for consensual change to the

³² <http://www.un.org/sustainabledevelopment/blog/2016/04/parisagreementsingatures/> accessed 29 June 2016.

ruling bargain, if citizens are to be expected to work in real jobs in the private sector.

The Gulf States started to invest in overseas sovereign wealth funds and other assets because of the inability of their domestic economies to absorb the massive oil revenues they were earning (Bahgat 2012). This investment led to oil exporting countries becoming major creditors globally and to industrialised countries specifically. The large current account surpluses enjoyed by oil exporters are in stark contrast to the deficits normally seen in the US and Europe. It can be argued that without oil exporters acting as major creditors to the larger international financial institutions, the recession in the West would have been much deeper and longer (Bahgat 2012). The growth of GCC sovereign wealth funds is a key indicator of the global power shift taking place between emerging markets and the developed world, as described by Ulrichsen above. Gulf sovereign wealth funds are buying into Western companies, causing global interconnectedness and greater interdependencies; in essence stakeholders now have too much invested to be the cause of problems (Winder 2010). Of course investments can be moved and with closer connections to a more politically neutral East it is conceivable the sovereign wealth funds' strategies could be to transfer investments into large Asian concerns over time, which could lead to economic problems in the West. The economic downturn in China in 2015 caused some to predict the end of the remarkable growth that had been seen there for a number of years, but by the end of the first quarter of 2016 optimism had returned³³, so the Chinese market remains an attractive investment opportunity.

However, it has not all been good news. The monarchies accumulated their rent in sovereign wealth funds but, as Luomi says, these were also hit by the financial downturn of 2008. The crisis was a reminder of the vulnerability of diversification attempts into non-oil sources of rent. Dubai, believed to be the most diversified of the Gulf economies, was the worst hit due to the collapse in real estate, tourism, shipping and the global economy in general. However, its future strength may be its low dependence on fossil fuel revenues (2012). Without doubt the investment advisors will have learned from the 2008

³³ <http://www.focus-economics.com/countries/china> accessed 21 April 2016.

experience and done what others have done and diversified their holdings still further. Although the funds were hit badly, they remained strong enough to bail out Western institutions and then recovered relatively quickly as the global economy picked up again. Globalised interconnectedness by its very nature prevents insulation from the global effects of bad things that happen to others, but the levels of wealth invested in the sovereign funds are so high that a catastrophic collapse on a global scale would be the only thing to destroy them. However, the challenge for the monarchies is how to use these funds to offset the changes that will be effected by a global low carbon era and in the longer term by eventual depletion of hydrocarbon reserves across the region.

2.5. Social and Cultural

The impacts of globalisation are being felt strongly in the Gulf States.

According to Held and McGrew (2003:4)

'Globalisation denotes the expanding scale, growing magnitude, speeding up and deepening impact of interregional flows and patterns of social interaction. It refers to a shift or transformation in the scale of human social organization that links distant communities and expands the reach of power relations across the world's major regions and continents'.

Ariely (2012) believes globalisation undermines national identity because governments cannot control cross-border information flows which dilute cultural and national characteristics. He admits his findings are inconclusive due to the multi-dimensionality of national identity, but, despite globalisation, it appears people can retain their sense of national identity, although their willingness to fight for it can be diminished. Partrick says the Gulf States have a narrow conception of national identity; sub-state tribal and sectarian loyalties are strong, but loyalty to a larger national entity is lacking. Gulf Arabs do not usually construct their national identity as a result of hostility to a neighbour and tribes are still fundamental to the national leadership and construct (2012). Hobsbawm suggested globalisation was leading to the 'astonishing cosmopolitisation of great cities in the wealthy countries' (2008:87) and cited Benedict Anderson's assertion that, as a result of increased labour mobility and dual nationalities, a nation-state's birth certificate had been superseded by the passport as the key document in establishing an individual's national identity.

Identity issues concern the monarchies greatly and, as will be seen, significant efforts are devoted to maintaining Arab and Islamic traditions, culture and values to prevent their dilution.

However, strong national identity does not necessarily imply strong civil society. Newell says there is a long history of civil society organisations holding national governments to account for their failures to meet climate change commitments. Civil society techniques include accessing negotiators, lobbying, demonstrations, media releases and acting as oversight bodies to expose non-compliance (2008), but Davidson says the Gulf monarchies traditionally lack civil society organisations, relying on the distribution of largesse derived from hydrocarbon rents to stifle the formation of social opposition, rather than obvious repression (2013). It is the tribal nature of the Gulf that effectively prevents the development of a coherent civil society which, by its nature, must be socially cross-cutting if it is to achieve any degree of political traction. While the absence of a coherent civil society is strange to Western eyes, its absence is natural as tribal and clan leaders have responsibility for the tribe's welfare as well as the right to exercise authority over it. This is the result of tribal sociological development rather than monarchist conspiracy to prevent political reform.

This traditional, tribal nature of Gulf populations has already been mentioned in terms of how it affects governance and citizen expectation through delivery of the social contract. However, a number of pressures are becoming stronger as a result of the increased effects of globalisation and the inability of regimes to control access to information effectively. Held and Ulrichsen believe the inter-generational gap between elderly leaderships and younger, more empowered populations is likely to intensify because measures to integrate young people into political and economic structures are lacking (2012b). Yet Abdulla (2012), while acknowledging the impact of the new middle class, believes ultimately it is the monarchies that shape the future of their states and remain the guardians of continuity rather than change in the region. Whether the monarchies are actively shaping the future or not, Held, Ulrichsen and, implicitly, Abdulla recognise inherent tensions between the expectations of a modernised youthful population and the change resistance of the ruling class. Whether this

manifests as a call for greater access to information and economic prosperity, or significant political reform remains to be seen, but it is arguable the former will inevitably lead to the latter as expectation will be increased by greater knowledge and wealth.

Ulrichsen (2011) says Gulf polities contain many fissures including ethnic, sectarian and tribal, citizens and expatriates, and between different classes of citizens. He believes they heighten regime vulnerability to future politicisation and contestation, should resource scarcities develop and persist, leading to erosion of political legitimacy and the breakdown of the social contract. As a consequence, reduced social cohesion will jeopardise social networks linking many different groups within already highly stratified Gulf societies. Ulrichsen notes internal tensions reduce the ability of states to withstand exogenous shock and failure to revise social contracts when times are good means it must happen when times are bad. This in turn increases the chances of violent, contested change, rather than an ordered and consensual evolution to a new social contract. Unlike Davidson's prediction of multiple regime failures, Ulrichsen appears to be pointing out the potential for failure without seeing it as inevitable, warning the regimes there is still time to act in order to forestall political catastrophe and ensure continuance of the ruling bargains. How much time there is will vary from state to state. In Bahrain, where hydrocarbon revenues are all but exhausted there is very little time to waste, while the UAE and Qatar could measure their decision horizon in terms of decades, if based purely upon revenue streams. This ignores internal factors such as rising populations and exogenous factors, such as possible ISIS interference in the near term, and the potential direct and indirect effects of climate change within the next twenty to thirty years.

The population of the Arabian Peninsula rose from eight million in 1950 to 58 million in 2007. It is projected to reach 124 million by 2050 due to falling death rates and increased numbers of expatriate workers (Ulrichsen 2011). Rapid population growth and increasing unemployment amongst citizens represent long-term key challenges to the monarchies, especially as those under 40 years of age take redistribution of wealth for granted (Ulrichsen 2012b). Additionally, demographic shifts due to the youth bulge working its way through the population coincide with the necessity to move away from hydrocarbon

dependency towards wider economic diversification. This will require the social contract to be redesigned and an implicit shift from 'perverse incentives' created by rent seeking activities, towards productive notions of work and reward (Ulrichsen 2011:85) among the citizens of the Gulf. However, Forstenlechner and Rutledge say even so, the Gulf States cannot diversify and develop knowledge-based and innovative competitive economies while relying on a third world labour market. They need to move away from labour-intensive work towards a more professionally developed workforce. Furthermore, they will need to re-examine and reframe the social contract especially around public sector jobs for citizens. Quick fixes made as a result of the Arab Spring, where new public sector jobs were created to forestall potential discontent over unemployment, means there is even more to be reversed or undone (2011). Even the UAE and Qatar cannot afford to waste too much time before addressing their domestic issues as, even with significant wealth, the amount required to be spent domestically to maintain the social contract will increase rapidly as the population expands. A move from reliance on state jobs to a more sustainable, productive and economically viable private sector appears to be vital to the chances of ensuring the political constructs in the monarchies remain largely unchanged. As discussed above, this will potentially increase citizen expectation about their participation in political affairs, especially if they have to do serious work to earn money and may even be paying taxes along with the true market rate for petrol and state services.

Ghanem and Elfakhani identified increasing interest amongst Gulf nationals in the economy and financial markets and say it is notable Gulf investors are moving from rentierism to entrepreneurship (2011). Abdulla appears to confirm this (2012) and believes there is a new middle class which barely existed in the pre-modern phase and is concrete proof of structural change. Change acts as a driver for modernisation, democratisation, social mobility, globalisation and entrepreneurial talent, and provides political stability to support economic prosperity. However, he says 80 percent of the Gulf States' citizenry are now salaried government bureaucrats and technocrats, enjoying status and privilege while taking job security and prosperity for granted. He believes these people are as politically loyal to the ruling regime as the older tribal class and are therefore indispensable to the monarchies' legitimacy (2012). This appears at

odds with his assertion that the presence of the middle class is a modernising force; rather this reinforces the view that an efficient social contract is guaranteeing political legitimacy for the rulers, while avoiding the need for citizens to become engaged in economically productive work rather than relying on public sector jobs. In effect it is a middle class made up of public servants rather than being merchants and entrepreneurs.

However, the Gulf middle classes believe they are well off, are satisfied with the services they receive and exhibit a high sense of national, rather than tribal pride. They tend to associate more closely with their countries than with an Arab or Muslim identity. In particular, the Emirati middle class exhibits the greatest satisfaction and social recognition from government employment, believing hard work can bring career advancement. The Bahraini middle class is less well satisfied and more concerned about their position than their contemporaries in other Gulf States (Abdulla 2012). In Bahrain this almost certainly reflects the dual pressures of the 2011 uprising and continued dissent, alongside quickly depleting hydrocarbon rents and reducing standards of living, plus increased dependence on Saudi financial assistance. Bahrain's need for a solution is pressing, as there must be a question as to how long Saudi Arabia can afford to prop up the Bahraini regime, given its own internal demographic pressures. The Emirati middle class cited by Abdulla exemplifies the Gulf citizens' view of the value of work and their implicit reluctance to enter the private sector, preferring the security of well paid government posts.

The Gulf has become a destination of choice for expatriate workers because of its rapid economic growth. In the 1970s expatriates came mainly from the poor South Mediterranean region. This unprecedented migration was triggered by an economic boom as a result of significant development programmes within the Gulf States, which could not be serviced by indigenous labour (de Haas 2011). The expatriate workforce in the UAE grew from 15 percent of the population in 1965 to 84 percent in 1975 (Ehteshami 2013). However, the 1990-91 Gulf War saw the monarchies move away from Arab expatriates to workers brought in from Sub-Saharan Africa and Asia. These were seen as more docile and reliable and less politically challenging than Arabs, especially Palestinians, could be. After the war, Arab migration to the Gulf increased again, but probably never reached the pre-war levels (de Haas 2011). In

Bahrain, Qatar and the UAE the national populations are considerably outnumbered by expatriate workers. Economic activity and industrial production would not be sustainable without their presence. As shall be seen this brings other internal pressures to the states including the question of political rights, rates of pay and working and living conditions of these foreign workers.

As the need for change and diversification in the Gulf States becomes more apparent, it is clear the monarchies are re-evaluating their relationships on a global scale and refocusing their connections more to the East and less to their traditional Western protectors and clients. Foley says a common faith connects Southeast Asia to the Middle East, comprising of individuals who are members of the global Islamic community, even though not from the heart of the Muslim world. Gulf governments have reoriented their economic and strategic interests in the 21st Century to find new markets for their hydrocarbons and their capital, with higher returns than are achievable in the West. They also want world-class education, leisure and medical care at cheaper prices than the West can offer (2012). For their part, Southeast Asian leaders hope the Gulf presence will counterbalance China's growing influence in the region. Links are not just at the élite level, but include networks of ordinary people spanning both regions, reflecting connections made through centuries of intellectual exchange and travel between Southeast Asian countries and the Middle East (Foley 2012). This has implications on a number of levels including the potential waning of influence of the US and other Western powers within the region. Although this shift in orientation coincides with increased climate change concerns that led to the signing of the Paris agreement in April 2016, demand for oil and gas in China and the Pacific Asian countries has been increasing. It is therefore possible the reductions in occidental hydrocarbon demand as a result of adherence to the Kyoto³⁴ and Paris agreements will be offset by increased rents from a much larger market in the orient, which will give the monarchies time to adjust their economies and the social contracts with their people.

³⁴ http://unfccc.int/kyoto_protocol/items/2830.php accessed 29 June 2016.

The demand for greater access to and inability of regimes to control the flow of information in and out of their countries has already been touched upon. Ulrichsen says linkage between territorial size, power and influence for sovereign states has eroded as a new global political network has become established with greater interconnectivity and interdependencies in transnational issues and frameworks. Following the Arab Spring, the power of highly advanced communications tools that had assisted the rise of Qatar and the UAE on the world stage became apparent. A combination of new social media and technologically aware young people allowed instantaneous transmission of ideas and news at the same time as undermining state control of information flows. It also made governments more vulnerable to the new desire for transparency and public accountability (2012a). Here lies the paradox between monarchies wanting to limit the information available to their citizens, so as to limit the potential spread of politically reformist ideas, and the absolute necessity to be connected into the global information super highway, 24 hours a day, if the Gulf States are to become global economic players. It will be a severe challenge for the monarchies to see how they can manage this. Censorship will not work and will be seen for what it is. Rather a proactive strategy for coping with the information deluge is required to ensure the monarchies stay ahead of the game. However, the governments of technologically advanced Western democracies struggle in this area as the flow of opinion and perception becomes increasingly influential and powerful. This could be the greatest threat to the regimes.

2.6. Security

2.6.1. Human Security

How the Gulf States approach human security and its interrelationship and interdependencies with national security could be critical to perceptions of regime legitimacy or even survival, particularly if regime security and national security have been conflated to mean the same thing as Ulrichsen believes (2012b). At its most fundamental, an understanding of what constitutes human security is perhaps what Giddens (1991) called 'ontological security'. By this he means the confidence most humans have in the continuity of their self-identity and the constancy of the surroundings of social and material

environments of action. This appears to be consistent with Alkire's view that the objective of human security therefore is to 'safeguard the vital core of all human lives from critical pervasive threats, in a way that is consistent with long-term human fulfilment' (2003:2). Human security is people-centred not threat based and is a condition that is derived from an effective political, economic, social, cultural and natural environment, rather than from carrying out a list of pre-ordained administrative procedures. Barnett and Adger quote Alkire, saying human security is the situation where people individually and collectively have the capacity to mitigate stresses applied to their needs, rights and values (2007).

Gregory, Ingram and Brklacich say individuals and societies are used to adapting to a range of environmental and socio-economic stresses. In many areas there is accumulated experience with phenomena such as drought. To reduce vulnerability of food systems to climate change requires identifying appropriate adaptation mechanisms while recognising and learning from mitigations used currently and in the past by groups whose regular food supply is at risk. It is also necessary to reinforce the capabilities of communities and countries to adapt as effectively as possible and identify the most suitable level for each strategy to be implemented (2005).

According to Hanjra and Qureshi, by 2025 three billion people will live in water-stressed or water-scarce countries. Scarcity and declining water quality leads to: increased competition within and between sectors with water transferred from agriculture; increased inequities in access to water perpetuating poverty and further widening the inequalities of access to food and water; a potential surge in water-borne diseases affecting human health; deterioration of freshwater ecosystems critically impacting ecosystem health and services; and increased tension over control of water resources leading to potential conflict at multiple levels. Furthermore, reduced rainfall and enhanced vulnerability to extremes of weather lead to potentially reduced crop yields, cause short term crop failure and decline in long term food production. The decline in global per capita food production threatens future food security and this is exacerbated by the resulting constraints they place on human capacity to design mitigations to respond to future challenges (2010).

Barnett believes it is unlikely there will be conflict between states over environmental issues, even in the case of shared water catchments or disagreements over GHGs, although he does see the potential for new inter-state rivalries as a result of changes in the political economy of energy. He sees the greatest scope for conflict with environmental issues as a major factor within single states, rather than between states. The political and economic strength of the state concerned will be critical, with strong states, characterised by effective bureaucracies and legitimate control of force, less prone to internal conflicts. Wealth allows for the creation and maintenance of institutions to provide stability and resilience; weak states or those undergoing transition are relatively more prone to the possibility of violent internal conflict (2001).

Burroughs concurs with Barnett, predicting weather induced price rises could be a factor in causing social unrest, but noting other political and social factors, likely to be greater contributors to discontent, will also have to be present. However, he points out that prolonged extreme weather events have the effect of disrupting agriculture, which together with increasing populations could cause food shortages unless there is timely government intervention to manage agricultural policy and markets (2007). Given the absolute nature of the monarchies in Bahrain, Qatar and the UAE, they will be completely responsible for initiating policies designed to mitigate the political, social, economic and physical effects of climate change on the human security of their respective populations, while endeavouring to ensure illegal inward migration is prevented. Their national visions and development strategies will be instrumental in deciding the way forward to meet the challenge over the next twenty to thirty years. How these challenges are met will be critical to the maintenance of human security which in turn will contribute to the level of national security each state achieves.

2.6.2. Internal Security and ISIS

The security paradigm in the Gulf changed markedly with the appearance of ISIS. There is now a significant question for dissidents in the monarchies: why would you oppose the current system if its collapse gives way to a violent

extreme fundamentalist Islamic government? If the dissidents are Shia the question is even more apposite³⁵.

According to Cockburn the Gulf Sunni monarchies joined the US in air attacks on ISIS in Syria because they felt it posed a greater threat to their survival and the political status quo than anything since the invasion of Kuwait in 1990. However, he said the coalition's political weakness was plain to see as Saudis, Emiratis and Turks were as hostile to Assad's government, Syrian Kurds and other groups fighting ISIS as they were to ISIS itself. He claims the original sponsors of ISIS and other Sunni jihadist movements in Iraq and Syria were the Gulf monarchies and Turkey. Saudi and Qatari aid was primarily financial, usually through private donations, which enabled the takeover of Sunni provinces in northern Iraq and Saudi policy was driven by fear of jihadists operating within the Kingdom and a desire to use them against Shia powers abroad. Cockburn claims an implicit intention behind American insistence that Saudis, the UAE, Qatar and Bahrain take part or assist in the air strikes in Syria was to break their connection with the jihadis there (2015). However, while Burke believes ISIS has received funds from Saudi Arabia, Qatar and the UAE in the past, he says there is no proof the monarchies have condoned private giving and says Western intelligence organisations believe such donations are now negligible in ISIS's total income (2015). Cockburn (2015) contends that Sunni powers including Bahrain, Qatar, and the UAE have different agendas to the Americans and destroying ISIS is not their top priority. He says the Sunni monarchies may not like ISIS, which threatens the political status quo, but are pleased ISIS creates more problems for the Shia than it does for them.

According to Bowen, following the 2003 invasion of Iraq the Shia increased their strength across the Arab world to the consternation of Sunni rulers. After the First World War, the British in Iraq preferred to deal with the Sunni élite minority rather than the majority Shia population. The Shia gained power in Iraq through the American organised elections post-invasion in 2003, switching the regional balance of power out of the hands of the Americans' Sunni friends in the Gulf into the hands of Shia Iran, which was implacably hostile to them. Shia resurgence worries the Sunni dynasties as it changes the region's

³⁵ <http://www.bbc.co.uk/news/world-middle-east-34954233> accessed 30 November 2015.

sectarian balance and threatens traditional Sunni dominance. King Abdullah II of Jordan has spoken of the dangers of a 'Shia Crescent' and subsequently suggested that the schism between Sunni and Shia runs from Beirut to Bombay, saying it has the potential to cause catastrophe. Bowen believes the Sunni-Shia schism is already causing the next major problem for the region and thinks Saudi Arabia could be the focus, either because of continued sectarian tensions in Bahrain, Iranian intentions, or internal sectarian problems in the Kingdom (2012).

Stern and Berger agree ISIS is spreading sectarian and ethnic conflict in the Gulf, with Yemen vulnerable to exploitation and Gulf jihadist organisations switching allegiance from al-Qaeda to ISIS. They claim ISIS has established a new *wilayat* or province in Saudi Arabia and cite Hassan Abbas, an expert on jihadi movements, who believes ISIS is deliberately trying to start a Sunni/Shia war to bring about the end of days that are central to their ideology; Abbas has said ISIS is exploiting apocalyptic expectations fully which is why it is so important a caliphate is established. Stern and Berger agree, describing ISIS as a millenarian group which aims to return Islam to an imaginary ideal of original purity while creating a worldwide caliphate. They also quote King Abdulla of Jordan who believes the war against ISIS is a generational conflict, but as threatening as it is to the West, more than anything else he says it is an existential threat to Sunni Islam (2015).

Whatever the monarchies' relationship with ISIS, it is clear it remains largely focussed on Iraq, Syria and to a lesser extent Libya, as it seeks to preserve its initial gains and protect the so-called caliphate. Rather, it is the case that the Arabian Gulf lies at the heart of a region that is inherently unstable for a variety of political, social and religious reasons and so there is always the chance of some spill-over into the three monarchies. However, to suggest that they are vulnerable to an all out attack by a single transnational Islamist organisation with the aim of overthrowing the state is fanciful, especially as their populations would be unlikely to support extremists who are confessionally opposed to them in the case of Bahrain's Shia, or who would remove the comforts and economic security they are accustomed to in the case of the citizens of Qatar and the UAE.

2.6.3. National and Regime Security

As seen above, Ulrichsen believes regime security and national security are often conflated in the Gulf States to mean the same thing (2012b). As they appear to be indivisible from the rulers' perspectives they are covered together in this review. According to Ehteshami, the question of long-term sustainability is central to the monarchies' security concerns, specifically: citizen employment; expatriate dependency; inefficient use of resources and factors of production; uncontrolled growth of the public sector; reliance on hydrocarbon revenues to support huge pay rises; and lack of transparency and accountability. He says this raises questions about 'the resilience of monarchical government in the Arab world and the Gulf monarchies' ability to manage the necessary transition from ruling to reigning'. He says securitisation can cause retrenchment at a time when monarchies should be exercising flexibility and responsiveness (2013:257). This is the conflation of regime and national security to the point of indivisibility.

There are also traditional risk factors for the Gulf States according to Russell, e.g. population growth, unemployment, social movements and urbanisation. Market pressures, like reduced demand and a requirement that oil producers should pay part of the costs of Western decarbonisation, could drive down revenues and thus reduce the regimes' abilities to mitigate these traditional risks. If states cannot maintain the levels of subsidy then the rentier system of governance will fail, as domestic populations would no longer be willingly co-opted (2009).

Unfortunately, there are no international networks working on collaborative solutions to energy shortages, but rather a tendency to seek gains nationally, even if this harms the interests of other nations, including partners, say Toke and Vezirgianniden. Renewable energy is a threat to the revenues of the hydrocarbon exporters and thus a threat to their energy and economic security; differences in understanding between national energy security requirements and energy policies therefore have an effect on international negotiations (2013). Where energy and economic security are threatened a country's national security must also be at risk, even more so if, as Ulrichsen contends,

regime security is conflated with national security and based upon a ruling bargain of the sort found in the Gulf monarchies.

Sowers et al say climate change acts as a threat multiplier for vulnerable countries and populations in general (2011). They are referring to human, energy, water and food security, as opposed to national security, but it can be legitimately argued that without those four elements being in place national security could be said not to exist in any meaningful way, unless through the imposition of draconian security structures. King and Gulledge note many politically volatile areas such as the Middle East are already experiencing climate changes in temperature and precipitation that could exacerbate extreme weather events or droughts, and could worsen historical and current levels of internal conflict, competition for scarce resources and income inequalities within oil producing nations (2013).

From Ulrichsen's perspective it can be argued Bahrain, Qatar and the UAE are states in transition as they move from hydrocarbon dependency towards more diversified economies. He believes states in transition are vulnerable to sub-state contestation and outbreaks of political violence and notes the conduct of foreign and security affairs in oil monarchies is restricted to a small element of the ruling élite, hence national security really meaning regime security (2012b). Held and Ulrichsen say transitional states also have a heightened vulnerability to exogenous shocks and this is increased in the Gulf monarchies by 'the historical length and institutional breadth' of their reliance on hydrocarbon rents (2012b: loc 9027). Ulrichsen believes redistributive states are vulnerable to regime collapse if the means of co-opting support and depoliticising society, i.e. revenue streams, are removed (2009). This makes it all the more important the Gulf States recognise the dangers their legitimacy faces and work towards mitigation strategies.

Iran is a focus of Chinese attention as it has large oil reserves and could be an ally against US influence in the region. The relationship is symbiotic, like China's with the monarchies, as Iran needs a powerful ally to develop its economy, especially its oil industry, and wants to improve its diplomatic and military status in the region. In the medium term Iran and China share common aims in the economic and geopolitical spheres (Ghafouri 2009:86). China's

close economic and political affiliations with the GCC states show another aspect of this relationship as the monarchies may have seen engagement with China as a useful way of moderating Iranian intentions and ambitions in the region, without relying on US support which only antagonises the Iranians.

Turner says China has been a net importer of oil since 1993 but has other concerns in the region too. It sends workers to the Gulf which reduces domestic employment pressure and earns foreign exchange. However, China has its own Muslim population demanding secession in Xinxiang region, so does not want to get caught up in religion, nor be seen supporting Shia Iran against its mainly Sunni neighbours in the Gulf. China has successfully avoided showing preference to either Saudi Arabia or Iran and has avoided contesting US presence in the region openly, preferring regional stability to guarantee its oil and other economic interests remain undamaged. In sum, China's foreign policy in the Gulf has been characterised by promoting peaceful coexistence, self-determination of political systems and no external intervention. Russia also prefers stability, but sees the interconnectedness of Middle Eastern problems and the possibility of them spreading to its own Muslim population it does not want aggravated. Russia cannot afford to be seen as hostile to Islam, as it regards Islamic extremism as a security threat not only on its borders but also right in the centre of Moscow (2012).

2.7. Bahrain

Bahrain has marginal oil supplies, occasionally high unemployment and is relatively poor by Gulf standards. Economic diversification started towards the end of the 1970s against the backdrop of political strife between the majority Shia, around 70 percent of the population, and the ruling Sunnis. The al-Khalifas introduced a constitution in 1973 to legitimise their rule and held elections for the National Assembly in December 1973. However, it was dissolved in August 1975 because of challenges it presented to the ruling élite's authority, especially its rejection of a plan for special powers to arrest those believed to hold views considered to be a threat to the state. The constitution was suspended at the same time (Power 2012).

In 1992, after economic pressures caused by falling oil prices and a population rise of 3.5 percent per annum, around three hundred prominent Sunni and Shia

Bahrainis petitioned for the reinstatement of the 1973 parliament and release of political prisoners. An advisory council was set up as a political gesture to limit discussion, but several activists were also detained. This caused further disaffection leading to the so-called 'Bahraini Intifada' in December 1994, mostly concentrated in Shia villages but with support from leftist Sunnis. It was heavily suppressed and three Shia clerics were deported resulting in mass demonstrations. Detentions and releases of Shia clerics followed but demands were unresolved and several leaders were rearrested. Violent unrest increased and in June 1996 the regime claimed to have uncovered a coup backed by a Bahraini offshoot of Iranian Hezbollah. There followed the imposition of draconian state security laws leading to detention without trial. Forty activists are believed to have died or disappeared before 1999 when Sheikh Issa died and was succeeded by his son Sheikh Hamad bin Issa al-Khalifa (Kinninmont 2011).

In November 2000 now-titled King Hamad initiated political reforms; a National Charter was created which was supposed to form the basis of a new political system, but it was vague on the National Assembly's role. The National Charter went to referendum on 14-15 February 2001. Ninety percent of the eligible electorate voted, with 98.4 percent of voters in favour of the proposed changes. The King had said the elected *Majlis al-Nuwab* would be the sole legislative body, but the new framework created a second, appointed, legislative chamber, the *Majlis al-Shura*; the President of this body had the casting vote if there was deadlock between the two *Majlis*. The opposition saw this as an attempt to prevent an effective, elected legislative chamber being established. They said the King had reneged on his promise about status of the *Majlis al-Nuwab* and regarded this as implementation of the ruling élite's agenda against the majority of Bahraini society. Importantly, the 2002 constitution also reaffirmed and safeguarded the perpetuity of the role of the al-Khalifas as the hereditary royal family (Ehteshami 2013). The February 2002 implementation showed the elected *Nuwab* was a pale shadow of the 1973 parliament, especially as in the event of a disagreement the appointed *al-Shura* would have the final say. The King also reserved certain powers for himself including full control of the government and the right to dismiss parliament (Power 2012).

The 2002 municipal elections were conducted on the basis of universal suffrage, but no women were elected despite 52 percent of the electorate being female. The elections were a major victory for the Islamists principally from the Shia al-Wefaq National Islamic Society. However, the municipalities have no political role; they are responsible only for the provision of social services to the communities they represent (Ehteshami 2013). Al-Wefaq an umbrella organisation for Shia groups, headed by Sheikh Ali Salman, presses for better Shia housing, fights against discrimination and corruption, and calls for more powers for elected members of parliament. It works with Sunni members of parliament on morality issues such as restricting the sale of alcohol and is particularly concerned with naturalisation of foreign Sunnis in order to change the Sunni/Shia balance in Bahrain (Kinninmont 2011). Al-Wefaq boycotted the 2002 parliamentary elections because of changes in the legislative system they said undermined the legitimacy of the electoral process. Also, constituency boundaries had been gerrymandered to ensure the influence and effect of Shia and other opposition voters were minimised. In some constituencies there were only 500 voters while others numbered over 10,000. Where political reforms were made, they were done in such a way as to ensure no changes to existing social and political structures could be enacted and so the new National Assembly elected in 2002 was to all intents and purposes politically ineffective (Ehteshami 2013).

Al-Wefaq took part in the 2006 parliamentary elections, but Sunni groups and independents took the majority of the seats. On this occasion voter turnout was 72 percent which gave the poll its required legitimacy. The Shia continued to suffer discrimination in employment opportunities in key government institutions such as the judiciary, defence and the Ministry of Interior. The 2010 elections were different as al-Wefaq and its close ally Haq called for another electoral boycott, but its leaders were arrested on terrorism charges. Arrests of other political dissidents were also made and some websites closed down, but campaigning went ahead and the election was well contested with al-Wefaq taking part so as not to leave a political space to be exploited by others. They won eighteen seats, but 22 were won by a combination of seventeen pro-government independents, the Muslim Brotherhood and salafists, which gave

the government the majority it required. Turnout was around 65 percent so the election was again legitimised (Ehteshami 2013).

Power says the al-Khalifa's style of government, almost directed democracy, has three main characteristics: manipulation of the electoral system, harassment of opponents and restricting civil society activity. As well as gerrymandering, one of the most contentious issues, the government has granted citizenship to Jordanian, Yemeni, Iraqi, Syrian and Saudi nationals in an attempt to increase the number of Sunnis within the electorate; an estimated 65-100,000 naturalisations in 2000-2010 according to the Shia opposition (Power 2012). Kinninmont says the Prime Minister (the King's uncle) is credited with much of the success in developing Bahrain's economy, but is regarded as an impediment to political reform. The Crown Prince (the King's son) is Deputy Commander-in-Chief of Bahrain's forces, Chairman of the Economic Development Board, a relative reformist and also probably involved in a power struggle with the Prime Minister. After the Arab Spring it is thought the regime's hard-line element increased its power and influence. Yet, it could be argued Bahrain is closer to reform than some other Gulf States in that it permitted political societies, but definitely not parties, to form in 2006. However, they have to be licensed and the law restricts their activities, so not all political groups have registered (2011). With the need to move towards a post-oil economy becoming ever more pressing, the need to separate and simplify the state-business relationship in Bahrain is at the centre of the reshaping of the state-society relationship and the processes that underpin Bahrain's rentierism (Held and Ulrichsen 2012a).

Bahrain is perceived to be the centre of the Arabian Peninsula's sectarian disenfranchisement. The Shia majority are believed by the rulers to have close links with Iran, while the Sunni al-Khalifas have obvious strong links to Saudi Arabia. Although the strength of the links between the Shia and Iran is questionable, Saudi Arabia believes it has to act on the premise that they are close given Iranian historical claims, rhetoric and clerical linkages (Mabon 2012). Sectarian fault-lines in Bahrain, which is already facing a future without oil and gas income post 2025, complicates state-society relations and sharpens the contest for access to resources and services (Kumetat 2009). In the past social tensions were ameliorated by redistribution of oil revenues, but as these

have diminished so tensions have resurfaced. The reduction in oil rents has also made the al-Khalifas more economically dependent on the Saudis and there are concerns about Iran's geopolitical intentions in the Gulf and a Saudi desire to prevent Iran from gaining a foothold in Bahrain. The Saudis see the stability of the al-Khalifa regime as vital and believe an empowered Shia in Bahrain would lead to increasing demands for political power amongst the Shia in the east of their Kingdom (Mabon 2012).

The presence of Islamists is also not helping the process of reform in the region as ruling regimes play on popular fear of these movements. However, Islamists benefit from political liberalisation in Bahrain as they also conduct extra-parliamentary activity such as providing support and welfare services to the poorer areas. Islamists provide the main opposition as secular groups are often overlooked because their messaging has to be subtle to avoid government accusations they are opposed to the state itself. The Islamists are not demanding a republic, rather a constitutional monarchy in Bahrain and could play a key role in the development of parliamentary institutions (Power 2012).

Meanwhile, the security services have targeted human rights groups and in 2004 the Bahrain Centre for Human Rights was abolished after a series of critical reports. Journalists have been arrested and international organisations prevented from operating there. Reports of intimidation and severe harassment of the opposition were rife in the 2006 and 2010 elections. There are suggestions King Hamad is a genuine reformer, but must placate more conservative elements in the Royal Family, especially the Prime Minister. Hamad is probably also under pressure from the Saudis who supply Bahrain with 140,000 barrels of oil per day and do not relish the prospect of an increased Shia political presence there. Bahrain appears to be in a cycle of repression which peaks during election campaigns and eases off while parliament is sitting. The opposition is fragmented and the King has successfully exploited the gaps between his opponents (Power 2012).

To summarise, the situation in Bahrain is that of a monarchy that has almost depleted its hydrocarbon reserves, is not yet sufficiently economically diversified to sustain its ruling bargain, is dependent on Saudi generosity for

survival, and is faced by a majority population that is confessionally and increasingly politically opposed to the ruling family. The monarchy stays in power through severe repression ordered by the hardliners in the regime, who are in the ascendancy, and enforced by its highly effective security forces. Without the guarantee of GCC support Bahrain's monarchy might well have gone under already. The challenge for King Hamad now is to find a consensual way forward to achieve political stability, while maintaining regime security and the ruling family's hold on power. These are almost certainly mutually exclusive aims unless serious political reform is agreed and enacted.

2.8. Qatar

Following British withdrawal from the region, Saudi Arabia became Qatar's de facto guarantor and also the lead in the region for foreign policy. The 1979 Iranian revolution and the Iran-Iraq war of 1980-88 focused Qatari minds on the security of the regional oil supply routes and so a close relationship with the Saudis and the rest of the GCC was the most pragmatic strategy. However, autonomy and regime security remained the central pillars of the ruling élite's objectives (Wright 2012). The notion of Qatari autonomy developed as exemplified by Qatar's 1991 decision to refer its territorial disagreements with Bahrain to the International Court of Justice rather than Saudi mediation. This reflected Crown Prince Sheikh Hamad bin Khalifa al-Thani's new approach to foreign policy which saw the international rule of law and the UN as critical. He sought an independent country that conducted its foreign affairs under the aegis of internationally agreed legal frameworks. Hamad took power from his father in a bloodless coup in June 1995 and survived a counter-coup in February 1996 (Wright 2012).

Qatar saw generational change and élite-led reforms being the way ahead, according to Ehteshami, but Qatar's social makeup has helped the reform process rather than hindered it. Sheikh Hamad's coup followed calls for greater political freedoms in a petition from 52 prominent Qataris. They asked for elections, a wider role in legislation for the Advisory Council, set up in 1970, freedom of expression in the media and clarity on citizenship laws. In March 1999 the first national poll for the 29-member Central Municipal Council (CMC) was held attracting a turnout of 80 percent. In April 2003 a draft constitution

was put to the electorate with 97 percent voting in favour. As in Bahrain, the constitution enshrined the perpetual hereditary role of the monarchy, in this case the al-Thani. It also created a unicameral legislature (the Qatari Consultative Council) composed of thirty elected and fifteen appointed members which would have greater powers than Bahrain's National Assembly. Elections to the legislature were planned for 2004, but then delayed until 2007. Meanwhile elections to the CMC that covers the whole of Qatar were held again in 2003, 2007 and 2011. In 2008, when elections for the Consultative Council had still not been held, it was announced that they would take place in 2010, but these were again delayed until late 2013. Ehteshami believes Bahrain's experience in 2011 encouraged the al-Thani to take positive steps towards more open and liberal government, noting reforms were driven top-down as there was little pressure from the citizens to do anything. He says this is prudent activity to prevent external pressure and control the speed and process of change. Essentially, the élite wished to increase its political legitimacy without jeopardising its traditional power-base, at the same time as it improved and strengthened its regional and international standing (2013). Subsequently, Sheikh Hamad abdicated in favour of his son Crown Prince Tamim in June 2013 and put the Consultative Council elections on hold³⁶ with no indication as to when they might be rescheduled.

The US claims political changes in the Gulf are the result of external factors and pressures, says Lambert, but this is not the case in Qatar where reforms started before 9/11 and were driven by Sheikh Hamad and his political élite. Similarly there were no domestic threats to the regime that triggered reforms, but it is arguable the reforms themselves open up the regime to regional and domestic opposition unnecessarily. There are suggestions other Gulf States tried to persuade the Sheikh not to adopt a constitution for fear of the effect it would have on traditional forms of governance (2011) and probably because the other states feared some sort of domino effect.

Lambert believes the reforms were initiated because it was the right thing to do at the time and because greater public participation would be required in the future. The Qatari regime made a conscious decision to adopt the political and

³⁶ <http://www.ft.com/cms/s/0/595fa8a8-dd9d-11e2-892b-00144feab7de.html> accessed 11 March 2014.

electoral norms widespread outside the Arabian Gulf including universal suffrage for all citizens alike. The regime has done this to bolster the external legitimacy of the regime and the state and to increase Qatar's international image, even at the expense of possibly angering traditionalists at home. She quotes a member of the Royal Family who said 'people come to the defence of "good" states' (2011). It is certainly true that if the current rentier system fails to fulfil the ruling bargain to the expectation and satisfaction of the citizenry, a proactive political reform agenda could take the sting out of the tail when it becomes necessary for ordinary Qataris to do proper jobs to earn a living.

However, Lambert believes it is questionable whether Qatari élites fully support the new norms they claim to be committed to, especially as they appear not to be above 'non-norm-consistent behaviour' to ensure their reforms are carried through (2011). This does not seem counter-intuitive to having a positive reform agenda, as sometimes it is necessary to do some engineering and exert positive control to ensure that the best outcome is achieved. Why would Qatar want a parliament that is as obstructionist as that of Kuwait? Without doubt, Qatar's reformist agenda makes it look progressive and modern and raises its kudos with the international community, thereby increasing its potential security support in difficult times.

Wright says Qatar developed a view of its role in the world, especially as having a proactive global role as a mediator in international disputes. The aim was to have complete freedom of action in order to pursue an independent foreign policy. Qatar's unique international position is down to it holding the world's third largest reserves of natural gas and the fact it is the leading global producer and exporter of liquefied natural gas (LNG) and Gas to Liquid (GTL) fuels. It saw that position as the means of achieving its place on the global stage and to guarantee its security by entering into a strategic relationship with the US, including hosting the forward headquarters of US Central Command. Meanwhile, Qatar's relationship with Tehran is based upon pragmatism as its economic strength is founded upon the North Field/South Pars natural gas field it shares with Iran. Qatar and Iran's mutual economic interests in this field have developed progressively since the mid-1980s and Qatar's willingness to deal with Tehran is at odds with the other GCC states. Linked to this, Qatar's energy policy is based on the principles of supply and demand with contracts

going to the most lucrative markets. Therefore Qatar is building a network of stakeholders who rely on Qatar for their energy needs and thus also building its security guarantee network, although these guarantors may be influence and diplomacy stakeholders rather than possessors of hard military power. Although not directly linked with Qatar's foreign policy, it does provide a supplemental strand to their foreign engagement and security agenda. Qatar is looking at increasing gas supplies to the UK and Europe, East Asia and to other GCC partners such as the UAE and Oman. Qatar therefore has greater importance in energy security terms at both the regional and international levels and creates wider influence and has diversified its security relationships through the creation of a wide range of stakeholders, who are part of a matrix of foreign powers having a vested interest in Qatar's security (2012).

Qatar also attempts to exert soft power indirectly, Wright believes, for example by allowing al-Jazeera to operate from its territory on the basis of freedom of speech and editorial independence. However, while it increases Qatar's standing, al-Jazeera is not linked directly to Qatari diplomatic objectives in the region or with its main strategic partner, the US. Al-Jazeera can therefore hamper Qatari desired foreign policy outcomes through its independence (2012). This should be regarded as one of the strengths of the regime in that, unlike other countries in the region, they are prepared to host a news channel that exercises freedom of speech, is controversial and even inconvenient or obstructive at times. However, it is difficult to gauge how much independence there really is, given that continued operation of the station from Qatari soil must depend on official agreement. Davidson (2013) reports suspicions about the regime's manipulation of the network to repair relationships and its use as a political tool. Certainly it appears the closure of al-Jazeera's Egyptian channel was politically directed as part of Qatar's December 2014 rapprochement with President al-Sisi of Egypt and the return of Saudi, Emirati and Bahraini ambassadors to Qatar, following earlier political disagreement over Qatar's perceived support for the Muslim Brotherhood³⁷.

Qatar is in a very different position to Bahrain having: no internal threat to regime security; no real demand for political reform; a sustainable long-term

³⁷ <http://www.al-monitor.com/pulse/originals/2015/01/al-jazeera-egypt-suspension.html#> accessed 12 December 2016.

economy built on significant gas reserves and its position as the leading producer and exporter of LNG and GTL fuels; a secure monarchy; and a complex network of international relationships which guarantee its external security. Furthermore, Qatar's monarchy appears to understand the importance of promoting and executing a reform agenda and has the political time and space to carry it out. Short of a 'Black Swan'³⁸ event it is difficult to see Qatar succumbing to political revolution any time soon.

2.9. The UAE

Al-Suwaidi writes that Abu Dhabi, as the largest and richest emirate, became the natural leader of the new UAE in 1971. The other six emirates³⁹ saw it was in their interests to join as Abu Dhabi was providing the majority of the federal budget and a good proportion of those of the individual states. Al-Suwaidi claims the absence of a democratically elected government has not resulted in a despotic regime and that legitimacy rests on the explicit and implicit consent of the citizens, with universal acceptance of the social contract implied. He argues the UAE combines different elements essential for political legitimacy: rentier status, where there is a social contract between the rulers and the ruled, augmented by social openness, a tolerant version of Islam, widespread modernisation and exposure to regional and international influences. In this way the UAE has preserved its traditional heritage and Islamic character, but has modernised in parallel (2011). Al-Suwaidi is the Director General of the Abu Dhabi National Oil Company (ADNOC) and therefore unlikely to see the UAE as anything other than a model Gulf State.

An opposing view is taken by Luomi who says rentierism in Abu Dhabi has created a system founded on: high dependency on hydrocarbons and other external revenues for economic stability; growing population; ineffective management of human capital; high natural resource consumption; weak environmental credentials; and domestic energy and water crises, all of which will be exacerbated by climate change impacts. She says Abu Dhabi's ability to adapt depends on maintained levels of global demand for oil or diversification into new economic sectors and sources of external rent (2009). It is potentially

³⁸ <http://lexicon.ft.com/Term?term=black-swan>

³⁹ Dubai, Sharjah, Ras al-Kaimah, Ajman, Fujairah and Um al-Quwain.

here where the Chinese, South East and Pacific Asian markets could provide the safety net the Gulf States need as they increase their demand for hydrocarbons and take up the slack caused by Western decarbonisation policies.

However, there are other issues too. Large numbers of disenfranchised and disempowered nationals exist in the poor northern emirates according to Held and Ulrichsen (2012b), while Luomi says energy shortages are an issue for the poorer emirates, but also for Abu Dhabi. It is deeply tied in to a federal rentier bargain with the other emirates, excluding Dubai, which depend on Abu Dhabi for infrastructure development and key natural resources. Duplication of official bodies has caused problems within the energy sector as each emirate retains sovereignty over its natural resources and fiscal policy. The existence of multiple agencies in charge of environmental governance has led to deficiencies and tensions in policy-making and coordination (2012). Therefore, while Abu Dhabi leads on policy within the Federation there are potential schisms centred on economic and political exclusion that could be worsened by economic hardship, or exploited by those with political agendas contrary to the ruling families' view of how the UAE should be governed.

However, Abdulla says there is little demand for political reform in the UAE so the government does not take democratisation seriously. In fact the younger generation of Gulf monarchs feels secure enough to ignore any moves towards democratisation (2012). Furthermore, Abu Dhabi's rulers enjoy very high regime autonomy due to large fiscal surpluses and a small population which has been bought off and does not demand a say in policy. It has one of the lowest levels of formal democracy and highest levels of regime stability in the region (Hertog and Luciani 2012). Therefore the status quo, underpinned by enormous hydrocarbon wealth, appears to be holding up well, as in Qatar, although the UAE is not characterised by the same level of homogeneity comprised as it is of seven different emirates, each of which has its own ruling family, loyalty structures and challenges.

Certainly, the UAE has focused on economic development without commensurate political reform, and even Abdulla admits its Federal National Council is the weakest legislature in the Gulf. However, for most Gulf States it

is the UAE and not Kuwait that is the preferred model of governance, showing that the economic benefits of modernisation and globalisation trump the attractions of political reform (2012). Ehteshami says the UAE has sought to become a major regional hub for service industries, financiers, architects, education and tourism, and also to fill knowledge economy niches in the Information Technology, health and environmental sectors. The UAE has also tried to move into Biotech and renewable energies as a major player, with the Dubai Biotech and Research Park as part of that plan (2013), and has attempted further diversification through privatisation of some utilities companies (Ghanem and Elfakhani 2011). While political reform may be lacking, this economic strategy appears to show the ruling élite is well aware of the need to diversify the basis of the economy before hydrocarbon rents are outstripped by burgeoning populations, or eventually cease, although resource depletion is potentially 80-90 years away.

However, according to Davidson, the need for a roadmap of political reform in the UAE is all the more pressing after the Arab Spring. Amongst the pressures he identifies at play are an increasing indigenous population, increasing urbanisation, increased female economic participation, reduced numbers of large extended families, and old informal connections being placed under greater strain. If, as a result, citizens find it increasingly difficult to access the traditional forms of legal and political governance, something will need to take its place if stability and order are to be maintained. Economic disparity between the Emirates exacerbates these pressures and so perhaps it is no coincidence that many of those who signed a 2011 petition calling for political reform, and two of those subsequently arrested, were members of the largest Ra's al-Khaimah tribe (2011). Whether the Arab Spring was a factor is open to question as those revolts were against secular governments outside the Gulf. In Bahrain the 2011 revolution may have been inspired by events in Tunisia, but probably owed more to decades of brutal sectarian repression of the majority of the population than the causes of revolution in North Africa and Syria. However, Davidson (2011) does cite the twin challenges of changing demographics and disparities in access to wealth between the seven members of the Federation as potential causes of political discontent, and these must be taken seriously by the rulers.

It is also argued that there is a greater need for transparency within the UAE's governing structures as a few men effectively control the country's natural resources, its economic wealth and, of course, its future economic prosperity. The majority of investments, which are technically controlled by the Abu Dhabi Investments Council, are thought to be under the full control of the ruler, one of his half-brothers, and a long serving French banker (Davidson 2009). There is a growing sense these men should submit to greater scrutiny from their domestic population. This demand for greater transparency is further reinforced by the UAE's ever greater penetration of the financial institutions and major corporations of other countries and the strongly held view the UAE should submit to more thorough external scrutiny and investigation (Davidson 2011). Essentially, the wealth of the state is held by the ruling family which begs the questions: do the citizens recognise and are they content with this state of affairs, are the ruling family and the state acknowledged as synonymous, and are regime security and national security the same thing in the minds of the rulers?

Forstenlechner, Rutledge and Alnuaimi are generally upbeat about the UAE's future. They say the changes most economists and social scientists consider to be essential, whether they hail from the 'pejorative and deterministic "rentier-state" school', or from less dogmatic standpoints, include the need for education reforms; greater financial accountability; transparency about wealth preservation strategies; assisting the poorer Emirates with economic diversification; and transformation of the labour market. They believe Islamist opponents cannot be regarded as realistic alternatives as they are likely to reverse progress especially in education, religious tolerance, attitudes to women and such things as the knowledge-based economy. In essence they consider the structure appears as strong and popular now as it was before the Arab Spring (2012:64). This optimism may be well founded, but the necessary changes are fundamental in character and it is difficult to see how they could be achieved without opening the door to demands for commensurate political reform, to which the rulers are not prepared to accede. To suggest reforms in education and transparency of economic governance can be enacted in isolation of wider political reforms seems somewhat naïve.

The UAE sits between Bahrain and Qatar in the spectrum of potential instability, although it is probably considerably closer to the latter than the former. While the UAE does not have the ongoing sectarian conflict Bahrain endures, it is also not as homogeneous as Qatar and there has been political discontent emanating from the poorer Emirates. Where the UAE is very similar to Qatar is in the hydrocarbon revenue earning potential it has, which could last for another 80-90 years and provide the breathing space the UAE needs to diversify its economy and strengthen its political and economic sustainability. Western-style democracy in the UAE is not necessarily inevitable, but some form of political liberalisation may well be necessary if the ruling families are to retain their grip on power after economic transformation is achieved.

2.10. The Effects of Climate Change

This section looks at implications of climate change agreements on the Arabian Gulf monarchies. Chapter 3 examines climate change on a global and regional scale and considers the direct and indirect consequences for the Gulf in much greater detail. However, it is of note that relatively little is written about the political, national security and socio-economic ramifications for the Gulf States, apart from by Luomi, as most papers focused on the region are written from a scientific or agricultural perspective. However, Chapter 3 will look at such effects as water scarcity, food security and migration as well as the physical effects including increased temperatures, rising sea levels and loss of biodiversity.

From the outset it is necessary to recognise that the Gulf regimes' hold on power depends largely on hydrocarbon revenues and the commensurate global demand for oil and gas, according to Luomi. She suggests prevailing natural resource consumption patterns have placed unprecedented stress on the Gulf's fragile desert environment, which are likely to intensify if the projected effects of climate change come about (2012).

At the turn of the millennium the G7 countries⁴⁰ earned 70 percent more income from oil taxes than OPEC countries earned from their exports and it was thought a combination of reduced demand, reduced price and reduced market rent would lead to reduced oil revenues. OPEC countries therefore

⁴⁰ USA, Canada, Japan, Germany, Italy, UK and France.

believed that policies brought about by adherence to the Kyoto Protocol in developed countries e.g. the imposition of carbon taxes, would reduce the revenues they received from oil and therefore they should be compensated for their losses (Barnett and Dessai 2002). If OPEC countries were compensated, the developed world would effectively be subsidising the rentier states, thus maintaining absolute monarchies at the possible expense of political reforms.

Article 4.8 of the UN Framework Convention on Climate Change (UNFCCC) is explicit about the requirement for developed countries to meet the needs and concerns of states whose incomes are highly dependent on revenues generated from production, processing and export of hydrocarbons and associated energy-intensive products. Fundamentally, Article 4.8 was the price that had to be paid to win OPEC's support for the Convention (Barnett and Dessai 2002). To overturn this principle could be problematical as it was built in to the UNFCCC at the outset by the OPEC countries. Any attempt to declare the principle invalid could leave the developed Western nations open to claims that, having damaged the environment through their heavy industries and rampant consumerism, they are leaving it to the developing world to pick up the bill by reducing their revenue earning capacity and thus potential for development.

Barnett and Dessai say while Article 3.14 of the Kyoto Protocol specifically requires developed countries to take action to minimise the adverse effects of climate change legislation on developing countries, neither this Article nor Article 4.8 of the UNFCCC specifically mentions monetary compensation. Furthermore, it is questionable whether compensation exists as a general principle of international law. Were monetary compensation to be seriously considered it would be impossible to work out how much income the OPEC countries would have lost, because it is not known how the hydrocarbon market would have worked if Kyoto had not been in being. Of note, in addition to compensation, the OPEC countries also wanted investment to help exporting countries diversify their economies away from high dependency on hydrocarbon exports (2002). Some six years after Barnett and Dessai were writing, the issue of monetary compensation had still not been resolved, but was overtaken by events as the 2008 global economic downturn took hold and the Gulf States, in particular, found themselves bankrolling a much damaged

Western economic system. This could be said to have subverted the moral strength of the OPEC claim, once it became known how strong were the significant sovereign wealth funds at least some and arguably the most vocal of them possess.

Saudi Arabia deliberately aimed to slow down climate change negotiations to secure the role of oil in the global energy economy and generally opposed all attempts to move away from fossil fuels says Luomi⁴¹. However, the potentially negative effects of international mitigation measures on the demand and price of fuel and oil are less important for a country like Bahrain which has limited reserves. Indeed Bahrain could arguably benefit from the advancement of the broader climate negotiations agenda than from ensuring there is a compensation mechanism for any future loss of revenue. Conversely, Abu Dhabi and Kuwait, with their significant reserves, depend more crucially on the status of oil and gas in the global energy economy, although the UAE, led by Abu Dhabi, was the first to step forward with a more balanced agenda. In the largest Gulf oil exporting monarchies global energy transition is seen as a greater threat to stability than climate change itself and the imminent shift away from hydrocarbons requires oil-dependent rentier states to speed up their domestic economic diversification (2012). This in itself provides an interesting context to the climate change debate in the Gulf as the rulers see the indirect effects of climate change, leading to loss of rents, as much more pressing than the direct physical effects which could include loss of territory and increased air and sea temperatures. This may be because of the timescale involved, as the indirect effects are likely to be felt first.

Qatar became the first GCC country to establish a climate change agenda that does not necessarily and automatically follow the Saudi position which is founded upon obstructionism (Ulrichsen 2012a). Meanwhile, Abu Dhabi's leadership has devised some of the most innovative domestic approaches and proactive responses to environmental stability and climate change in the region to date. Abu Dhabi faces the same pressures as other Gulf States including high population and resource demand growth and has the additional pressures

⁴¹ Of note Saudi Arabia has signed the Paris Agreement of April 2016, https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&lang=en accessed 29 June 2016.

of leading the UAE (Luomi 2012). Abu Dhabi's long term economic strategy relies extensively on a combination of overseas investments and industrialisation in the energy-intensive and hydrocarbon sectors. It has arguably been the most successful in the Gulf at making the most of the opportunities presented by the rise of climate change on the international agenda, having taken a proactive domestic approach rather than becoming overly concerned with the effects of falling oil and gas revenues (Luomi 2009). Abu Dhabi is therefore arguably at the forefront of climate change mitigation in the region.

2.11. Implications

Within the literature there is general consensus that some political, economic and societal reform within the monarchies is necessary if they are to survive the move out of hydrocarbon dependency into more diverse political economies. Davidson is the most pessimistic about the chances of success, closely followed by Luomi, while the remainder see change is possible given sufficient vision and motivation at the top. What appears very unlikely is that this change will produce anything similar to Western-style democracies. Instead it is more likely there will be an evolution of traditional governance that will seek to protect the current power bases, while concurrently accepting modernising influences and allowing more political freedom for the populations, who will have to play a significant role in wealth creation in the future and maybe pay taxes.

Rentierism is not necessarily a bad thing if it is economically sustainable and both sides agree to the social contract it requires. Certainly the strength of some sovereign wealth funds will provide cushions against the potential reduction in hydrocarbon revenues. Rentierism appears to be a good fit for Middle Eastern societies who seem to have little appetite for Western-style democracy, preferring when they have voted in recent years to install forms of political Islam which are arguably inherently undemocratic. Perhaps the example of Kuwait's democracy, frustrated by self interest at every turn, has convinced many it is a political system they wish to avoid. What is clear is increasing exposure to a globalised world by new middle class Gulf Arabs, outside of the ruling cliques, could lead to demands for greater access to

information and transparency regarding the systems of governance that rule and regulate their lives.

The economies of the monarchies are accused of being bloated, stagnant and overly dependent on hydrocarbon revenues. These economies could well be under threat within a matter of a few years if global demand for hydrocarbons decreases in line with Kyoto and Paris targets. The Asian market for oil and gas could provide the capacity to take up the slack created by Western moves away from carbon, but this is by no means guaranteed. Insufficiently diversified economies will suffer if their revenues are reduced and this could impact directly on ruling bargains, perhaps causing real threats to human security if accessibility to food is limited through rapidly increasing prices due to shortages. At this point the economies and the social contracts that underpin them become unsustainable. The general view is that this is not inevitable if the rulers take steps to improve the skills, education and training of their burgeoning populations and diversify into knowledge-based, innovative services. However, most authors agree that will require a change of culture amongst the indigenous populations from one of entitlement, to an expectation of doing real work, for real money, which may take a generation to achieve.

Bahrain is the monarchy most at risk because its hydrocarbon reserves are essentially exhausted and because it is in a state of almost permanent insurrection as a result of the political and economic marginalisation of its Shia majority. This ongoing internal security crisis has necessitated active support from Saudi and Emirati allies, with the insufficiently restructured economy being supported by Saudi money. Meanwhile, Qatar has hydrocarbon riches for years ahead and benefits from widespread political apathy at home; reform in Qatar is driven top down and the population appears content with the ruling bargain as it is. The UAE has similar hydrocarbon wealth, but is not as homogeneous as Qatar. Political discontent emanates from the smaller emirates who are jealous of Abu Dhabi's wealth and power and feel similarly about Dubai. If Bahrain is most at risk, the UAE comes second but has the advantage of being able to buy-off dissenters with government jobs and other benefits. Qatar seems least at risk.

There are, however, two wild cards. The first is the presence of huge numbers of migrant workers whose numbers dwarf the indigenous populations. Often these workers are at the bottom end of the human security ladder with low wages, poor food and accommodation and no access to political or legal rights. They suffer worst in downturns and this has manifested as serious discontent in the past. If the rentier system starts to atrophy because of international climate change agreements, the migrants could be the first to react violently which would cause significant problems for the monarchies' security forces. Secondly there are the direct effects of climate change which are already being felt. These will be dealt with in the next chapter, but as an example increased day and night time temperatures will increase demands for desalinated water and air-conditioning, which will further stress domestic power supplies already close to or in deficit.

The monarchies therefore face a complex problem as direct and indirect effects of climate change appear with adverse results on their political economies. Even in Qatar and the UAE hydrocarbon resources are finite and become more difficult and expensive to extract as levels deplete. Globalisation and the freedom of access to information and knowledge compounds these issues as expectation amongst the indigenous and migrant populations increase, potentially leading to demands for greater access to the political and economic levers of power. The results of global compliance with the Kyoto and Paris agreements could start to affect the monarchies within a few short years while the physical effects of climate change, already being seen in the Gulf, will inexorably increase until the end of this century with potential consequences for sovereignty, human security and political legitimacy unless effective mitigation strategies are in place.

3. CLIMATE CHANGE - Impacts and Implications

3.1. The Global Level

Climate change is a high profile issue and there is general consensus it exists and anthropogenic causation lies at the root of it, alongside natural and cyclical climate variability. There is little doubt climate change is having adverse effects upon the planet and the Royal Society⁴² says climate change will affect the severity and frequency of extreme weather; climate change mitigation and societal adaptation to climate change will be necessary in parallel, if the exposure and vulnerability of people is to be reduced in future. Barnett (2001) says it is a truism of contemporary climate change science that the faster the rate of change the less time there is to adapt and the more dangerous the impacts of climate change are likely to be. Burroughs (2007:ix) concurs and says ‘the subject of climate change has grown from just one of a number of pressing environmental issues to being seen as comparable with terrorism and nuclear proliferation as one of the greatest threats to humankind’.

The Intergovernmental Panel on Climate Change (IPCC) 2013 ‘Summary for Policymakers’ says warming of the climate system is unequivocal and many of the changes observed since the 1950s are unprecedented over millennia. The atmosphere and oceans have warmed, snow and ice have diminished, sea levels have risen and concentrations of GHGs have increased. The report says, with medium confidence, the period 1983-2012 was likely⁴³ the warmest period of the last 1400 years. However, noting sceptics’ criticisms that the years 1998-2012 show less warming than might have been expected, the IPCC agrees that in addition to robust multi-decadal warming, global mean surface temperature exhibits substantial decadal and inter-annual variability. The IPCC

⁴² ‘Resilience to Extreme Weather - Executive Summary’, The Royal Society, London, November 2014.

⁴³ The degree of certainty in each key finding of the assessment is based on the type, amount, quality, and consistency of evidence (e.g. data, mechanistic understanding, theory, models, expert judgment) and the degree of agreement. The summary terms to describe evidence are: *limited*, *medium*, or *robust*; and agreement: *low*, *medium*, or *high*. Confidence in the validity of a finding synthesizes the evaluation of evidence and agreement. Levels of confidence include five qualifiers: *very low*, *low*, *medium*, *high*, and *very high*. The likelihood, or probability, of some well-defined outcome having occurred or occurring in the future can be described quantitatively through the following terms: *virtually certain*, 99–100% probability; *extremely likely*, 95–100%; *very likely*, 90–100%; *likely*, 66–100%; *more likely than not*, >50–100%; *about as likely as not*, 33–66%; *unlikely*, 0–33%; *very unlikely*, 0–10%; *extremely unlikely*, 0–5%; and *exceptionally unlikely*, 0–1%. Unless otherwise indicated, findings assigned a likelihood term are associated with *high* or *very high confidence*.

states that due to natural variability, trends based on short-term records are sensitive to beginning and end dates and do not generally reflect long-term trends (2013:SPM-3). The IPCC says while warming does not follow a consistent upward trend it is nevertheless a reality.

The IPCC has high confidence that some decades during the so-called 'Medieval Climate Anomaly' (950-1250 AD) were as warm in some regions as in the late twentieth century, but these regional warm periods did not occur as coherently across regions as the warming in the late twentieth century has done. They state it is virtually certain the troposphere has warmed globally since the middle of last century. They claim with medium confidence that precipitation, averaged over global land areas, has changed since 1951 and with high confidence that it has increased in mid-latitude areas of the northern hemisphere, although with less confidence about other latitudes. Changes in many extreme weather and climate events have been observed since about 1950 and it is likely the frequency of heat waves has increased in large parts of Europe, Asia and Australia. It is also likely there are more land regions where the number of heavy precipitation events has increased rather than decreased. Furthermore, on a global scale, ocean warming is largest near the surface and the upper 75 metres warmed by 0.11°C in the same period (2013:SPM-4). It is very likely that regions of high salinity where evaporation dominates have become more saline, while regions of low salinity where precipitation dominates have become fresher since the 1950s. Regional trends in ocean salinity give medium confidence that evaporation and precipitation over the oceans have also changed (2013:SPM-5). Other changes in the global water cycle in response to warming over the 21st Century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions. In many mid-latitude and sub-tropical dry regions, such as the Arabian Peninsula, mean precipitation will likely decrease (IPCC 2013:SPM-16).

The report continues with high confidence that over the last two decades the Greenland and Antarctic ice sheets have been losing mass, glaciers have continued to shrink almost world-wide and Arctic sea ice and northern hemisphere spring snow cover have continued to decrease in extent. The average value of ice loss from the Greenland ice sheet has very likely

substantially increased from 34 gigatons (Gt) per year in the period 1992-2001, to 215 Gt per year in 2002-2011. One hundred Gt of ice loss per year is equivalent to about 0.28 millimetres rise in global mean sea level per year. The average rate of loss on the Antarctic ice sheet has increased from 30 Gt per year in 1992-2001 to 147 Gt per year in 2002-11 (IPCC 2013:SPM-5). There is also very high confidence northern hemisphere snow cover has decreased since the mid-twentieth century and high confidence permafrost temperatures have increased in most regions since the early 1980s. Observed warming was up to 3°C in parts of Northern Alaska (early 1980s to mid-2000s) and up to 2°C in parts of the Russian European North (1971-2010). The IPCC says there are multiple lines of evidence to support very substantial Arctic warming since the middle of the last century and over the period 1901-2010 global mean sea level rose by 190 millimetres with the fastest rate being 3.2 millimetres per year in 1993-2010 (2013:SPM-6).

The Summary for Policymakers says atmospheric concentrations of Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O) have increased to levels unprecedented in the last 800,000 years. CO₂ emissions have increased by 40 percent since pre-industrial times, primarily from fossil fuel emissions and secondarily from net land use change emissions. The oceans are estimated to have absorbed about 30 percent of the emitted anthropogenic CO₂, causing ocean acidification, and the IPCC says all atmospheric concentrations have increased since 1750 due to human activity (2013:SPM-7), although this is hotly contested by climate change sceptics. However, the great majority of scientific opinion lies with the IPCC.

Meanwhile, the IPCC says with high confidence that annual CO₂ emissions from fossil fuel combustion and cement production were 8.3 Gt of Carbon (GtC) averaged over the years 2002-2011 and 9.5 GtC in 2011, 54 percent above the 1990 level. Annual net CO₂ emissions from anthropogenic land use change are estimated at 0.9 GtC on average in 2002-2011, while from 1750 to 2011 anthropogenic emissions of carbon from fossil fuels, cement production, deforestation and other land use has released 545 GtC into the atmosphere. Of this, the IPCC reports 240 GtC of CO₂ emissions have remained in the atmosphere, while 155 GtC have been absorbed by the oceans and 150 GtC

has accumulated in natural terrestrial ecosystems such as residual land sink (2013:SPM-7 & SPM-8).

The Summary for Policymakers says GHGs continue to accumulate in the atmosphere and radiative forcing, used to measure energy flux caused by a driver in the form of watts per square metre (Wm^{-2}), has been shown to be 43 percent higher in 2011 than in 2005. The IPCC says this is due to anthropogenic factors including continued growth of most GHG concentrations and improved estimates of aerosols in the atmosphere. The IPCC believes it is clear human influence on the climate is evident from the increasing GHG levels, positive radiative forcing, observed warming and understanding of the climate system. They say human influence has also been detected in the warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise and in changes in some climate extremes. It says evidence for human involvement has grown since its last major report (4th Assessment Report in 2007) and it is extremely likely⁴⁴ human influence has been the dominant cause of the observed warming since the mid-twentieth century (2013:SPM-9 to SPM-12).

In reporting climate model projections the IPCC made certain forecasts of how the climate would change in decades to come, stating continued emissions of GHGs will cause further warming and changes in all components of the climate system. They estimate the global mean surface temperature change for the period 2016-2035 relative to 1986-2005 will likely be in the range of 0.3°-0.7°C, assuming no major volcanic eruptions or secular changes in total solar irradiance. Relative to natural internal variability, near-term increases in seasonal mean and annual mean temperatures are expected to be larger in the tropics and sub-tropics (e.g. around the Arabian Gulf area) than in the mid-latitudes. It is virtually certain there will be more frequent hot and fewer cold temperature extremes over most land areas on daily and seasonal timescales as global mean temperatures increase. It is very likely heat waves will occur with a higher frequency and duration, but occasional cold winter extremes will continue to occur (2013:SPM-14 & SPM-15).

⁴⁴ 95-100 per cent chance in IPCC scale of likelihood.

The strongest ocean warming is projected for the surface in the tropical and northern hemisphere sub-tropical regions. Based on models that most closely reproduce the climatological mean state and 1979-2012 trend of the Arctic sea ice extent, a nearly ice free Arctic Ocean in September each year before mid-century is likely⁴⁵. Global mean sea level will continue to rise during the 21st Century and the rate of rise will very likely exceed that observed during 1971-2010 due to increased ocean warming and increased loss of mass from glaciers and ice sheets. Depending on which model is used, the global mean sea level rise for 2081-2100 relative to 1986-2005 will likely be in the range of 260-980 millimetres with a worst case rise of 8-16 millimetres per year over that time. Sea level rises will not be uniform and about 70 percent of coastlines world-wide are projected to experience sea level change within 20 percent of the global mean. It is virtually certain the global sea level rise will continue beyond 2100 (IPCC 2013:SPM-16 to SPM-20).

3.1.1. Migration as a Consequence?

Along with the immediate physical effects of climate change such as rising sea levels flooding coastal areas and increased temperatures and reduced rainfall causing wider desertification, one of the oft cited second order consequences is the potential for mass migration to escape the physical effects. However, according to Lilleør and Van Den Broeck there is a lack of empirical evidence and rigorous research about the likelihood and potential effects of environmental migration. Despite predictions of up to 200 million environmental refugees by 2050, they say 'the debate has been flawed by vague terminology, lack of empirical evidence and absence of links to theoretical models of migration'. They contend the two main drivers of migration, as stated in economic literature, are income differentials between the point of origin and the intended destination, and income variability at the point of origin (2011:S70). Potential migrants make an assessment of how much their family's income fluctuates in their present location and whether migrating would make them financially better off. If moving does not necessarily lead to greater economic benefit it is pointless to do so, unless of course some other

⁴⁵ Nearly ice free is when the sea ice extent is less than one million square kilometres (10^6 km^2) for at least five consecutive years.

driver comes into play, such as the need to avoid life threatening situations. However, economics alone does not explain migration either.

The typical migrant from a less developed country (LDC) is often skilled and migrates to places where those skills are economically more valuable in terms of potential earnings. A lack of skills acts as a barrier to migration, both internally and internationally. Migrants can be deterred by the costs of migration and resettling, unless there is already a large migrant and support network in place in the destination. Potential migrants can also be put off by physical distance, cultural differences, strict immigration controls, local exit barriers preventing migrants from leaving, shortage of land in the destination and opposition of the indigenous society to certain groups (Lilleør and Van Den Broeck 2011). It is therefore clear the decision to become a migrant can be multi-stranded and complex, unless life is threatened in the present location.

Lilleør and Van Den Broeck suggest that while there is an assumption that climate change and variability could act as positive effects on migration drivers, stimulating increased migration flows, they reiterate there is a lack of empirical evidence this is the case. They say studies do show reduced rainfall leads to increased migration, both internal and trans-border, but internal migration is the much greater part. There seems to be no evidence pointing towards future mass migration; a strong effect of climate change or variability on a migration driver does not automatically produce a strong effect on migration. Even if migration does increase it is most likely to be internal and also produce migrants who intend to return home in due course (2011). Similarly, Black et al note debates on climate change seem to view environmental migration as a problem or a threat, but despite some strong predictions, including one of 50 million environmental refugees by 2020, the evidence base is thin and there is an absence of frameworks for testing hypotheses on climate change and migration linkages (2011). They believe assertions, apparently based on commonsense analysis that rising sea levels or increased land degradation will force human migration, do not tell the whole story. In fact climate or environmental change is merely one of a series of factors that can prompt migration, or directly or indirectly impact on other factors. Generally, there are multiple factors that lie behind a decision to migrate, so it will be rare that environmental migrants will be specifically identifiable (2011).

Essentially, there are five drivers of migration: economic, e.g. opportunities for employment or better pay elsewhere; political, including security and safety, laws on land ownership, or forced relocation policies; demographic, e.g. the size and structure of populations, rates of morbidity and mortality; social, such as familial and cultural practices; and environmental pressures like exposure to hazards or access to ecosystem services. These drivers rarely act in isolation and it is the interrelationship between drivers and the varying weight of emphasis of each that determines whether migration is triggered or not, the scale of movement and whether it is internal or cross-border migration (Black et al 2011). Prime examples of the drivers in action can be seen in Syria where the civil war has caused mass international migration because of the significant danger to life, while repetitive droughts in Sub-Saharan Africa tend to lead to smaller, more local moves from rural to urban areas. This is presumably because the people aim to return home when the drought is over.

Findlay says immobility or very short distance migration are the norm and agrees there is no evidence-based research to support the notion environmental change is leading to mass migration from the global south to the global north. He goes further and refutes the suggestion that environmental change will result in mass migration from many parts of the majority world to the wealthier countries in the decades ahead. Instead, he believes the most likely effect of climate change over the next 50 years will be to 'amplify and modify' pre-existing migration channels and this will shape the pattern of migration selected by those affected. The movement will often be by only one member of the household, in the first instance at least (2011). However, this could suggest the pattern of migrant worker employment in the Gulf from countries in Sub-Saharan Africa and Asia could be strengthened as climate change affects those places, but is likely to be limited to the workers only and not their families. This potential for migration will depend on continued demand for expatriate labour in the Gulf and in increasing numbers.

These views are reinforced by de Haas who says that where environmental stresses have undermined traditional subsistence-based livelihoods, there tends to be internal migration to urban centres rather than international migration, as the hungry and desperate usually lack the social, economic and human wherewithal necessary to undertake long migration journeys. He

believes climate change could lead to increased external migration from climate-stressed rural areas, but it is most likely to be mainly of a relatively short distance and internal in character. It is not plausible that climate change will lead to a massive displacement of populations, since people whose livelihoods have been critically damaged by environmental change will generally lack the resources to migrate internationally (2011). De Haas reinforces this point, noting climate change effects, such as over-use of water resources due to excessive pumping and lack of government policies to promote water saving irrigation techniques, will marginalise rural agrarian livelihoods. This will lead to limited internal moves, but not international, migration because those affected will not have the capability or capacity to carry out such journeys (2011).

The Foresight Report takes a slightly different view stating environmental change will affect migration now and in the future through its influence on a range of economic, social and political drivers which themselves affect migration. However, the report says the range and complexity of the interactions between these drivers means it will rarely be possible to distinguish individuals for whom environmental factors are the sole driver. Powerful economic, political and social drivers mean migration is likely to continue regardless of environmental change, although that may affect people's livelihoods prompting a traditional response to migrate. Environmental change could also expose people to greater natural hazards and migration may be the only mitigation for this, e.g. for the 17 million people displaced globally by natural hazards in 2009 and the 42 million in 2010 (2011). Putting aside natural disasters and hazards that leave people no choice but to move if they are to survive, this all begs the question as to whether there really is such a thing as an environmental migrant, or whether it is the case all migration hinges on social and economic factors which are the principal reasons for moving, even if they are exacerbated by the climate. Foresight acknowledges estimates of numbers of environmental migrants are methodologically unsound because migration is the product of multiple causes and environmental change cannot be separated out. They also ignore the human capacity to adapt to climate or environmental change and other barriers that are in place. However,

the report does conclude some migration in the context of global environmental change is inevitable in the future, even if its nature is uncertain (2011).

From this it is clear migration is the product of a range of drivers which combine to form pressure on individuals, groups and communities to migrate. This migration is unlikely to be triggered by one single driver unless there is a concomitant threat to human survival by remaining in place. It is clear people will move if the land becomes untenable for climate reasons, but in most cases migration will be over short distances and often accompanied by a desire to return home if and when things improve. Coastal flooding and increased desertification will force people to move, but if people are able to remain in their homes, make a living and bring up their families, it is more likely they will stay put. Increased numbers of migrant workers may leave families behind in climate-stressed regions of the world, but their migration will be economically-based and ultimately temporary as they will intend to return to their homes. Widespread migration as a result of climate change therefore appears unlikely.

3.2. The Regional Level

In this section the direct and indirect consequences of climate change in the Middle East and North Africa (MENA) region will be examined in more detail, before looking in the next section at how these effects impact on the Gulf and Bahrain, Qatar and the UAE in particular. In terms of the monarchies it is difficult to find first order climate change predictions for them specifically, because data is collected and interpreted on a more geographically widespread basis, i.e. for the whole of the MENA region.

Charney (1975), commenting that the albedo or heat reflective qualities are much higher in dry, sandy or rocky soil than where ground is covered with vegetation, observed that while heat is reflected upwards from a desert there is a feedback mechanism that causes the air to descend, reduce the relative humidity and enhance its own dryness. According to Burroughs (2007) there is consensus that there is a drying of the northern sub-tropics between 10 degrees and 30 degrees North which is where most of the Arabian Peninsula lies. While the Saudi Arabian desert reflects as much as 40 percent of the incident solar radiation it receives, increasing desertification and desiccation leads to a reduction in vegetation which reduces the amount of water vapour

released into the atmosphere by the process of evapotranspiration. This will increase the albedo of the terrain, altering the radiative properties of the air and reducing the possibility of cloud formation (Burroughs 2007). Once turned to desert, exposed soil or sand is at high risk of becoming dust in the atmosphere, especially during the dry season or droughts. There is the potential for increased dust storms as a projected increase in temperatures will probably lead to greater soil erosion and more frequent and intense wind storms. The fine particles of dust kicked up will contribute to air pollution and negative health impacts (Elasha 2010:17). Burroughs says there is some question over whether desertification can be reversed or whether increased albedo resulting from removal of vegetation leads to permanent desert. Studies have shown vegetation does regenerate after rain and 20 percent more rain falls when land is covered in vegetation, but when the land is severely desiccated there is little chance of cloud formation to create that rain. It is now recognised desertification is a complex process where climatic change rather than human activity, such as over-grazing or inappropriate farming methods, is to blame. The fact remains though that the increasing size of the world's deserts, due to drought, leads to increased long-range atmospheric dust transport which modifies the Earth's radiative properties and water cycle leading to potentially global consequences (2007).

According to Harmeling and Eckstein, until 2012 the Arabian Peninsula was not regarded as particularly susceptible to the impacts of climate change and Middle East countries featured in low ranking positions on the Climate Risk Index. However it is now thought slow onset effects of climate change will threaten the region. An expected decrease in precipitation, along with a projected temperature increase, threatens to worsen the already high level of desertification, increasing the lack of arable land and water resources. Gulf countries rely on imports of up to 90 percent to feed their rapidly growing populations, plus they possess the lowest renewable water supplies per capita in the world, while still having an extremely high consumption rate. Additionally, rising sea levels threaten the low lying coastal areas of places such as the UAE, Bahrain and Qatar who have concentrated much of their industry in these zones and on man-made islands. However, it is difficult to assess the indirect impacts of deteriorating food and water security with

sufficient reliability within the data that provide the basis for the Climate Risk Index. The appearance of Oman in 2007 and 2010, Yemen in 2008 and Saudi Arabia in 2009 in the 'DOWN 10' list of the Climate Risk Index (which lists the ten most affected countries of the year) as a result of severe floods, indicates an increased and accelerating relevance of climate change for the whole region (2013).

While Syria's Arab nationalist autocracy is fundamentally different to the Gulf monarchies, it is useful to look at Femia and Werrells' (2011) contention that a significant number of social, economic, environmental and climatic changes have eroded the social contract between Assad's government and the Syrian people, strengthened the opposition cause and reduced Assad's legitimacy. Due to drought causing crop failures and loss of up to 85 percent of livestock in the northeast of the country, 1.3 million people were affected and over 800,000 lost their entire livelihoods. Estimates suggest about one million people were made extremely 'food insecure' and many more driven into extreme poverty, perhaps 2-3 million. This resulted in 50,000 families migrating to the cities in 2010. Femia and Werrell (2011) cite the regime's mismanagement and neglect of Syria's natural resources which have led to water shortages and greater desertification. Farmers facing climate and human-induced water shortages turned to the aquifers, causing groundwater levels to plummet in many parts of the country and raising significant concerns about the quality of the remaining groundwater. Over-grazing and increasing population have compounded the desertification process, meaning farmers and herders have to move to areas that remain fertile, starve or demand change. These movements have caused tensions within the economically depressed cities where poor competed with poor for scarce employment and also access to water. Femia and Werrell (2011) conclude by saying the continuing instability makes it difficult to study the degree to which rural displacement has contributed to the civil war in Syria. They argue that available evidence suggests the influence of the phenomenon may not be insignificant. While the social structures of Syria before the civil war were significantly different and the population and landmass much greater than Bahrain, Qatar and the UAE, the lessons of poor governance, mismanagement and neglect of natural resources still apply. As coastal areas are endangered by rising sea levels and groundwater becomes salinated at the same time,

there could well be resulting severe social and economic effects that could contribute to demands for political reform, unless the rulers are proactive in planning for and adapting to the effects of climate change within their own countries.

3.2.1. Water Scarcity

The Middle East region, along with Southwest Asia and the Mediterranean littoral, is regarded as a water-stressed area, i.e. where run-off is less than 1000 cubic metres per capita per annum. In 1995 nearly 1400 million people globally lived in water-stressed areas and, depending on the climate change model used combined with different population assumptions, this is expected to increase by a further 670 – 2761 million people worldwide by 2050 (Arnell 2004; Arnell and Lloyd-Hughes 2013). The economic and social costs of increasing water-stress are likely to outweigh the economic and social benefits of other people ceasing to be water-stressed, as will happen in some areas, although it is accepted this needs further investigation (Arnell 2004). Even without climate change the Arabian Peninsula will suffer increased water-stress as its population increases. In 1995, 29.4 million people were suffering and by 2025 it is predicted this will have risen to somewhere between 90.7 and 131.8 million people. By 2050 this could have risen further to between 146.9 and 308.7 million (Arnell 2004). Once climate change predictions are added to population predictions it is estimated up to eighteen million extra people will have moved into water-stress in 2025, rising to a possible further maximum of 23 million in 2055. However, climate change also brings relief in other parts of the Arabian Peninsula with increased run-off meaning up to 125 million may cease to be water-stressed in 2025, rising to a possible 305 million moving out of water-stress in 2055 (Arnell 2004). Arnell acknowledges (2004) that the accuracy of these predictions is difficult to verify as climate change models were few at the time and run-off estimates were based on simulation and not observation. Similarly, population predictions were based on assumptions about fertility, mortality and migration rates, while sensitivity analysis was carried out by simply increasing or decreasing the population by 10 per cent consistently across the globe. Future water management will also have a significant influence on the effects of water scarcity and will be dependent on

future prosperity and attitudes towards environmental management and protection.

The combination of a stressed water resource, arid to semi-arid climate and rapid population growth substantially increases the vulnerability of the region to future climate change according to IPCC Special Report on Emissions Scenario (SRES) A2, which assumes business as normal, i.e. no mitigation for climate change is enacted. Simulation is difficult due to high inter-annual variability, the topography including mountains, inland seas and a slight cooling trend in recent decades (Evans 2009). However, models show the Arabian Gulf, like the Red Sea, warming considerably more than other water bodies such as the Eastern Mediterranean and the Black Sea (Evans 2009). Additionally, water scarcity threatens food security by reducing agricultural productivity and hinders economic and human health development. It can lead to additional environmental stress and increase tension within and between nations sharing water resources (Elasha 2010).

According to Frederiksen (2009:80), 'the Arab countries have the least renewable water supply per capita of any region in the world'. Sowers et al agree saying climate change and increasing populations will seriously affect accessibility to water in the region, while acceleration in the hydrological cycle will make droughts longer and rainfall events more variable and intense leading to probabilities of increased flooding and desertification. The Middle East is already suffering from deteriorating water quality, rising sea levels, demographic growth, over-extraction of groundwater aquifers and their contamination, salination of agricultural land and urban water shortages. They believe this has caused some policy reforms and adaptive measures to be enacted, although done under conditions of crisis management rather than prior planning (2011).

As an example, Sowers et al say that unless there is significant investment in Egypt to counter rising sea levels of one metre, approximately six million people, or 10 percent of the population, will be affected with 10-12 percent of the agricultural land in the Nile Delta lost to inundation. Even if this flooding is avoided there will be a change in the freshwater/saline interface which will make some land, currently fertile, increasingly difficult to cultivate. Climate

change interacting with ongoing coastal erosion will also affect Egypt's cities adversely. Egypt is the most vulnerable of all MENA states to sea level changes, closely followed by the UAE and Qatar (2011). All of this points to the possibility of triggering internal and external migration and the potential for subsequent displacement of populations not directly affected by the flooding in the first instance.

Sowers et al recognise worsening drought conditions are forcing countries in the MENA region, including the Arabian Peninsula, to consider costly efforts to counter the effects of climate change. However, most countries have continued to emphasise large scale technical responses to increase water supply from other sources, rather than trying to implement water conservation. They identify the need to engage societal actors in climate change adaptation, especially concerning the role of civil society and the effects of population growth, and say a primary challenge remains convincing political leaderships of the urgent need to prioritise adaptation methods (2011). Community based environmental organisations are tolerated on the understanding they focus on a narrow range of issues, but when they expand that focus to include demands for rights, reforms or accountability, they run up against the law and explicit coercion designed to contain civil society more broadly (Sowers et al 2011). In countries where the ruling bargain underpins the whole political legitimacy and system, it is not in the regimes' interest, or part of the deal, to have their decisions questioned by quasi-political parties or civil society organisations in general. Yet, here is an instance where climate change impacts directly on human security, through accessibility to water, which is intrinsically linked to national security and, therefore, regime survival.

The impacts of climate change will be mixed for the MENA region with increased precipitation for some and less rainfall for others. There will be increased temperatures and bigger deserts. Sea levels will rise and coastal areas will be inundated including agricultural land, industrial areas and housing, all of which could prompt population movements to safer areas which may, in turn, lead to competition for resources, conflict and displacement of those already there. The example of Syria's drought and mismanagement of resources shows what could happen and may have been a factor contributing to the current civil war. The need for positive action by the governments of the

MENA region to mitigate the potential consequences of climate change is clear. That may necessitate some political reform including the creation and empowerment of civil society organisations, maybe even new political parties.

3.3. The Arabian Gulf

3.3.1. Water, Temperatures and GHGs

The Arabian Gulf countries are likely to witness strong direct and indirect impacts of climate change in the coming decades, which will impose additional stress on already fragile political systems and intensify the need to diversify their technology and industry and search for renewable sources of energy (Kumetat 2009). The IPCC AR4 report predicted an overall temperature increase in the Middle East of around 1.4°C by the middle of the 21st Century, rising to 4°C towards the end of the century. It was also predicted the southernmost portion of the region would experience a small increase in precipitation due to the northerly move of the Inter-Tropical Convergence Zone (ITCZ), but across the Middle East it is expected there will be a reduction of over 170,000 square kilometres of rain-fed agricultural land by the end of the century, with an associated reduction in grazing land as well (Evans 2009). Narrowing down to the Arabian Gulf, this means that by 2045-2055 the UAE could be receiving over 15 millimetres more precipitation per annum than in 2000-2010, while Bahrain and Qatar could receive 5-15 millimetres more. By 2090-2100 all three countries could be getting more than 30 millimetres more rainfall than in 2000-2010. However, these tiny increases in precipitation are very unlikely to alleviate the increased water scarcity that will be brought about by other environmental factors and the increased size of populations. Even with the northwards move of the ITCZ, precipitation totals will still be below the 200 millimetres of rain considered to be the annual minimum for rain-fed agriculture in the region (Evans 2009).

Lelieveld et al say climate models consistently predict an overall drying of the region with impacts on rivers, downstream water resources and food production. Areas of agricultural and grazing land may decrease as may overall crop yields, along with an increased risk of vegetation fires and other air pollution aggravating environmental stress. This leads to concerns about the societal and environmental effects of climate change, especially as the region

is diverse and fractious. Water scarcity is a major issue as demand will continue to increase due to population growth and economic development. It could be the first region in the world to run out of fresh water, as climate change may also intensify heat waves with additional consequences for human health, energy use and economic activity (2012). The Gulf currently has over 300 days a year where rainfall is less than one millimetre a day, effectively nothing; this may decrease by up to ten days a year, but increased rainfall projected for the Gulf is insignificant overall (Lelieveld et al 2012). The ground water availability on the basis of cubic metres available per person, per annum, was estimated in 2000 at 299 for the UAE, 111 for Qatar and 132 for Bahrain. The same estimation carried out for the year 2025 saw this fall to 164 cubic metres for the UAE, 75 for Qatar and 81.8 for Bahrain. Sowers et al say a situation of water stress exists when there is less than 500 cubic metres, per person, per annum (half of Arnell and Lloyd-Hughes' threshold) but the figures for the UAE, Qatar and Bahrain do not include water that is derived from desalination or from imports (2011).

In the Gulf the increasing use of hydrocarbons for industry, motor vehicles, air-conditioning and desalination is producing CO₂ and other pollution contributing to environmental and climate change. Energy use for air-conditioning will grow in parallel with water deficits; this will further stress energy production, because of increasing demands for energy to run desalination plants, which will compete with domestic requirements for power. Fresh water will also be competed for across and between the domestic and industrial sectors (Lelieveld et al 2012).

According to Lelieveld et al, models showing increased precipitation around the Arabian Gulf region must be used with caution because of the large temporal variability of rainfall and the inherent limitations of both global and regional climate models to simulate the hydrological cycle. The Gulf currently experiences three to four months of tropical nights per annum, i.e. where the minimum night time temperature is greater than 25°C. It is predicted that this will increase gradually to more than six months per annum. However, the Gulf is not likely to see an increase in the number of hot days, i.e. greater than 35°C, but as hot and humid conditions already prevail here the overall heat stress can be very large. Tropical nights also tend to exacerbate the effects of day time heat stress, so an increase in tropical nights is a major cause of

concern and will lead to increased energy demands to support air-conditioning and refrigerators (2012).

There will be increasing hot extremes by up to 5-6°C by the end of the century. The extremely high temperatures, e.g. 47°C in Riyadh and 51°C in Kuwait City that have occurred albeit infrequently in the recent past are expected to become the norm by 2070-2099. The coolest summers in the years 2070-2099 could be warmer than the hottest summers of 1961-1990. This change in climate will have major negative consequences for humans and ecosystems as a result of heat stress and water shortages. Population growth and economic development may aggravate the situation still further. Air quality is expected to become poorer as emissions in the region increase, affecting ozone and particulate pollution leading to excess mortality and morbidity. Summer heat-waves will produce the most casualties, with excess mortality greatest amongst the sick, elderly, children and the general urban population. There will be undetermined synergistic effects between air pollution and water scarcity, and vector-borne parasitic and viral diseases spreading into the region must also be considered with the potential spread of mosquitoes and ticks (Lelieveld et al 2012). Additionally, concern has been expressed by environmentalists at the rapid urbanisation of Bahrain, Qatar and parts of the UAE, with increasingly grandiose projects and ever-taller buildings. This will result in localised effects of increased temperatures and reduced wind speeds and visibility within the cities, due to petrochemical fumes and particulates released into the atmosphere (Burroughs 2007).

3.3.2. Sea Levels

Sea level rises could result in loss of productivity, salt water intrusion, loss of valuable biodiversity in wetlands, salination of groundwater aquifers and population migration. Bahrain will potentially lose fifteen kilometres of its coastline, which is almost 11 percent of its land mass, due to a sea level rise of 50 centimetres if no action is taken for protection. In the wider Gulf area underground water salinity will increase, more land degradation will occur and biodiversity on land and in the Gulf will be affected. A half metre rise in sea level is at the lower end of the scenarios modelled and would also place the low-lying areas of Kuwait, Qatar and the UAE at risk (Elasha 2010).

Kumetat is more pessimistic and says there is a projected sea level rise of between 90 and 880 millimetres by the end of the 21st Century and demand from rapidly urbanising and industrialising populations will have outstripped supply from fossil water and local aquifers. Currently more than half the freshwater used originates from desalination or wastewater treatment. Desalination plants have adverse environmental effects such as releasing gases, hot brine, treatment chemicals and other trace elements. In 1990 Bahrain acquired 54 percent of its water from desalination, while Qatar relied on desalination for 98 percent and the UAE for 63 percent of their freshwater. By 2005 these figures had risen to Bahrain 92 percent, Qatar 99 percent and the UAE 85 percent. Kumetat also says sea level rises could threaten up to 15 kilometres of Bahrain's coastline and endanger man-made and reclaimed islands and buildings in the UAE and says this will cause further stress on socio-economic and demographic fault lines in the region. Furthermore, while increased wadi flooding is not a concern, locally contained floods might still occur, particularly if oceanic changes lead to more frequent and intensive storms in the coastal regions (2009).

Similarly, Janardhan (2007) reported an interview conducted with Mohammed Raouf, a senior environment researcher then at the Gulf Research Centre, Dubai. He said Gulf States are in a difficult position as they depend upon fossil fuels, but these are the major source of CO₂ emissions. Raouf noted the pace of development in the monarchies was high, but the lack of arable land and water resources prevent the development of carbon sinks, such as forests and green areas, and forecast higher sea levels would lead to the disappearance of the man-made islands. Raouf also said while the Gulf will likely be spared extreme events such as tsunamis, sea level rises will be dangerous as biodiversity on land and at sea will be affected and destroyed. Another interviewee told Janardhan rising sea levels will also affect the desalination plants as their efficiency will be reduced by the increased salinity of the sea water, just as rising temperatures are making the demand for fresh water greater. Janardhan also highlighted the resulting coastal erosion, noting this affects Dubai at the rate of 50 metres every two years, and said half a million tons of sand had been poured along the shore in 2006 to try to stem the erosion. The outlook for the physical effects of climate change is therefore not

a good one and suggests that unless mitigation is taken seriously there is the real potential for serious changes to the environmental integrity of the Gulf States.

3.3.3. Migration

Migration was discussed in general earlier and the IPCC has highlighted internal and cross-border migration as a potential response to climate induced stress, noting the possible severe impacts of migration such as escalating conflicts, pressure on natural resources and loss of biodiversity. Certainly, where political instability exists, climate change could act as a threat multiplier aggravating water scarcity and tensions within and between nations sharing hydrological resources, geography and political boundaries. At national level there is no real external competition for water resources for Bahrain, Qatar and the UAE, but increased in-migration would place extra stress on domestic supplies, especially if aquifers have been polluted, while expensive and energy-intensive desalination plants become the only real source of freshwater (Elasha 2010). Of note, Russell (2009) believes more socially relaxed Bahrain, Qatar and the UAE could be preferred destinations for migrants or refugees, rather than stricter Saudi Arabia which might only attract Muslim religious refugees. While it is recognised there are many drivers that cause migration, its effects on receiving countries must be factored in if it does occur. While immigration controls can prevent migrants arriving by legal means, the porosity of the monarchies' land borders and coastlines means illegal immigration is a real challenge from neighbouring poor and climate-stressed countries in MENA, the Horn of Africa and the Makran Coast. With Qatar and the UAE especially attractive because of their wealth, the increased pressure on freshwater and food supplies could have significant consequences for wider human security.

3.3.4. Vulnerabilities, Lifestyles and Mitigations

The GCC region falls into the high category for vulnerability to the effects of climate change. Reiche cites Janardhan on two major and immediate consequences of climate change, population growth, rapid urbanisation and wasteful consumption for the Gulf States. Firstly, rising sea levels will severely affect coastlines and marine life and could impact desalination plants that are the main source of freshwater in the region. Secondly, rising temperatures will

mean increasing water demand. With falling freshwater levels and increasing salinity in seawater, which affects the efficiency of desalination plants, water scarcity becomes a very serious and worrying prospect. Desalination plants are costly to use as they consume large amounts of fuel with related damage to the environment. Using renewables such as wind or solar to power the desalination process could be a viable alternative to the fuel and environmental costs (2010). Linked to rising temperatures the greatest potential negative aspects of climate change for the monarchies are resource scarcity and insecurity, particularly with regard to water, food and energy. Energy demand will increase as the requirement for more air-conditioning and desalination increases, but this will not be as critical as water and food security as, apart from Bahrain, the energy requirement could be met in the last resort by domestic oil and gas reserves (Luomi 2012). Luomi identifies pressing environmental issues for the GCC states including: increasing water scarcity; land degradation and desertification as a result of population growth and urbanisation, overgrazing and the intensification and expansion of agriculture; marine biodiversity constantly endangered by oil spillages, human settlements in coastal areas and seawater desalination; air pollution because of high CO₂ emissions per capita; and solid waste management problems due to population growth, high consumption patterns and very limited recycling. Energy, water and food-related unsustainabilities are not the only visible downsides in the Gulf States, but arguably they could pose the greatest challenge to the business as usual model and ultimately to regime survival (2012).

Without doubt, the level of oil and gas revenues for GCC countries has enabled exceptional, accelerated development in all aspects of life. However, the scale of oil and gas production and use has also led to severe environmental problems. Traditional and emerging environmental threats are all interlinked: desertification leads to loss of biodiversity; livestock increase and overgrazing contributes to desertification; waste dumping releases methane which adds to global warming, which in turn leads to desertification, water scarcity and other ecological disasters. If sea levels rise man-made islands will disappear; Bahrain will lose up to 15 kilometres of coastline; underground water salinity will increase; more land degradation will occur in the region; biodiversity on the land and in the Gulf will be affected. Yet these ecological impacts are small

compared to other parts of the globe that will suffer catastrophic disasters from hurricanes and tsunamis, but the social and economic impact will be severe as many workers will lose their jobs in agriculture, fishing, and some oil-related industries because of a world shift to renewable energy and reducing hydrocarbon revenues as a result (Raouf 2008). This latter effect will fundamentally threaten the whole rentier system and political legitimacy of the ruling families.

Most of the Gulf monarchies' populations do not think about the environmental consequences of their lifestyles and everyday choices, due to poverty, lack of education, different cultural backgrounds, lack of financial, infrastructure and legal incentives to curb consumption, waste and pollution, and lifestyles that emphasise Western-style consumerism and materialism (Luomi 2012). Per capita, the GCC states are amongst the top contributors to pollution in the world. On a global scale all the GCC countries fall within the top 25 producers of CO₂ emissions, with the UAE and Kuwait leading, according to the UN's Statistics Division in 2007 and the Climate Analysis Indicators Tool used by the World Resources Institute in 2009 (Reiche 2010). Projections show carbon emissions will grow in Abu Dhabi by 85 percent in the next decade compared to a 2009 baseline. A more economically optimistic growth scenario will see emissions more than double. Increasing taxes will have little impact on energy consumption as it does not increase awareness of scarcity. Increasing user costs to approach the market value will raise awareness and enable a more efficient and effective allocation of energy to those who assign the highest value to it. Even modest behavioural change by consumers can have major impacts on their carbon footprints, while a liberalisation of utility prices can have a significant impact in reducing emission levels. These policies would have a direct impact through the price elasticity of demand and an indirect effect through changes in behaviour. Complementary policies would help, such as education and awareness programmes, bonuses for efficient practices and good behaviour, or alternative initiatives (Smeets and Bayer 2012).

Pollution threats to the UAE come from Abu Dhabi's large scale desalination dependency which stems from policies that encourage high consumption accompanied by adverse effects on the marine environment. There is also associated over-pumping of remaining groundwater aquifers, high production

costs and high energy consumption leading to high emissions. Other energy could be used such as cleaner fossil fuel-based products, nuclear or renewables. Simulations show improvements would have a significant impact on overall emissions as the desalination sector is such a substantial consumer of energy. Renewables or cleaner energy could also be applied to other industrial sectors, although modelling shows a 59 percent efficiency gain is required in order to control emissions at their current levels (Smeets and Bayer 2012). The first renewable energy policy in the region in January 2009 called for 7 percent of Abu Dhabi's energy to come from renewables by 2020. The energy crisis in the Gulf emphasises the need for diversification of the energy portfolio, in particular power generation, to enhance a switch towards less energy intensive technologies. The UAE's energy crisis is caused primarily by excess demand for gas due to sharp increases in demand for electricity and desalinated water over the last 20-30 years; alternative energy is a rational choice (Smeets and Bayer 2012).

The UAE is one of the wealthiest countries in the world, but the environmental footprint per capita also ranks among the highest in the world. Abu Dhabi has a particularly poor track record on environmental issues especially GHG emissions and sustainable water management. High emissions are driven by high energy intensity in the industrial sector and abundant residential consumption of energy commodities. Unsustainable water policy is driven by climatological conditions combined with very high consumption levels. Abu Dhabi is dependent on seawater desalination at a large scale which is energy intensive and makes another contribution to the carbon footprint (Smeets and Bayer 2012). Several Gulf countries and individual emirates face energy shortages due to very high gas consumption. Pollution from heavy industry and large scale desalination has adverse effects on the local environment and threatens the health of citizens. Improvements will depend on reductions in energy consumption which will require significant changes in behaviour as both the population and economic growth are expected to remain high for the next decade. Exploiting renewable energy sources could be significant in sustaining the position Gulf countries play in global energy policies (Smeets and Bayer 2012). Low energy prices imposed by government controls help explain high energy consumption and thus high emissions as consumers have a mindset

that fails to recognise the scarcity of energy and water. The access to low cost energy for citizens is an essential ingredient of the social contract between the Gulf States' governments and their citizens. Modifications to this arrangement are therefore a very sensitive topic in the public discourse (Smeets and Bayer 2012). The efforts of the Gulf States to rebrand themselves as world leaders in renewables and alternative energy research stand in direct contradiction to their environmentally unsustainable policies for development and their obstructionist position in climate change negotiations. The GCC states have an enormous vested interest in attempting to steer and shape international negotiations on energy policies because of their rentier state status. There is a considerable inherent tension in trying to portray the states as responsible actors in global energy governance, while at the same time they attempt to minimise the threats caused to their domestic interests by international pressure on climate change issues (Ulrichsen 2010).

The effects of climate change in the Gulf could also have second order consequences for countries that are geographically distant from the region. There is the potential for pressure on water-short riparian countries (i.e. living alongside rivers) from wealthy foreign non-riparian states wishing to acquire land and water resources needed to produce food for their domestic consumption. Land is often leased or bought in poor riparian countries that already have insufficient water to meet their own domestic needs (Frederiksen 2009). Millions of hectares of land have already been acquired with associated risks of social, economic and political destabilisation of the host countries. Examples are Kuwait leasing land in Cambodia, and Saudi Arabia raising US\$100 million of cereals in Ethiopia whilst the World Food Programme was implementing a food campaign for that country at a cost of US\$116 million. Cash-rich governments are moving to secure food for themselves while offering little expertise or trade in return; some indigenous farmers have been forced off their land and have ended up in urban slums (Frederiksen 2009). Unsurprisingly, this could create favourable conditions for rebellion in host countries and cause disruption over a long period which could seriously destabilise the food security the cash-rich countries want to guarantee. This could then lead to civil unrest in the monarchies if there are resultant food shortages. Madagascar's citizens overthrew its government in 2009 when they

tried to do such a deal, showing that such arrangements risk provoking instability in already climate-stressed regions, especially if the water supply is decreasing as a result of climate change and an increasing population (Frederiksen 2009). This raises the spectre of the potential for instability within the monarchies if food security cannot be guaranteed and suggests that if the monarchies wish to outsource their food production, they must find countries with sufficient water and agricultural capacity to meet their demand, although that will inevitably come at increased cost in terms of transport and refrigeration etc.

In the domestic agricultural sector there is the potential for a move away from crops with a relatively high amount of water per unit of value-added, to higher value crops like fruit and vegetables in combination with upgraded greenhouse and irrigation systems, but this will result in a necessary rise in the import quotas of staples for the population, such as wheat. In 2009 the UAE imported 80 percent of consumables, but with its currency pegged to the US dollar suffered when the dollar was weak, which led to price rises for imported food. Such rises in basic food prices hit low income groups such as the already under-privileged expatriate blue-collar workers forming the majority of the inhabitants of the small Gulf States. This can lead to major unrest if food becomes unaffordable as such a high proportion of income has to be spent on it. Therefore, states negotiated food and water security strategic partnerships with countries in Africa and South East Asia. Billions of dollars are invested in the agricultural sectors of countries such as Sudan, Pakistan, Burma, Vietnam, Uganda, Ukraine and Brazil (Kumetat 2009). A prime example is that of Saudi Arabia which has always been dependent on food imports and is developing strategic partnerships with Sudan, Ethiopia, Vietnam, the Philippines, Mozambique and Ukraine, amongst others, in order to achieve its food security requirements. In a food security initiative announced by the King, an investment fund worth US\$800 million was created to support private Saudi investment overseas as part of a policy designed to utilise resources in cash-poor/land-rich countries to grow food for the Kingdom and provide a strategic reserve for times of hardship. This has awakened fears of a quasi-colonial attempt to take control of land, especially in poorer countries that already have to import food, and the prospect of political tensions with indigenous peoples.

However, Saudi Arabia claims the relationship will be mutually beneficial as some of the food will go to local people and the aim of the programme is to produce food for the world not just the Kingdom (Lippman 2010). It is important this supposed altruism of solving a global food shortage is not overplayed; it is clear Saudi Arabia and other GCC states, recognising the competition for food between countries is already underway and will become more intense, have moved early to exploit their immense wealth to secure land rights overseas. While this gives the Gulf States increased food security in theory, it does not guarantee there will be acquiescence in the producing countries, as in the case of Madagascar above, especially if their populations are experiencing food shortages; the likelihood of violent conflict cannot be discounted.

However, some progress has been made as the UAE and Qatar have taken their reputations on environmental issues and turned them around making them strengths rather than liabilities. Their initiatives aim to not only remedy past actions, but also to promote research into cleaner sources of energy and other environmental issues. The environment has been used to enhance the ruling élites' image. For example the Qatar Environment and Energy Institute is directly overseen by the wife of Qatar's former ruler, Sheikha Mozah. The Environmental Agency of Abu Dhabi is strongly linked to the Crown Prince, as is carbon neutral Masdar City, built by the Abu Dhabi Future Energy Company, a subsidiary of the Mubadala Development Company which is also owned by the Crown Prince. Masdar aims for a development that will allow 1500 renewable energy and other internationally environmentally related companies to locate themselves in Abu Dhabi or have their corporate headquarters there. Amongst other things they will focus on carbon capture technologies with the hope of exporting to nearby countries (Davidson 2013).

Qatar's al-Shaheen Oilfield Gas Recovery and Utilisation Project became the first Clean Development Mechanism (CDM) to be registered in the Gulf in May 2007. However, official and public opinion in the GCC views environmental and climate security dimensions as secondary when compared to the main task of maintaining intact their major source of revenue (Ulrichsen 2011). The key energy security concern for the Gulf States apart from the duration of their domestic reserves and their availability for domestic use is the stability of international demand and price stability of fossil fuels (Luomi 2012).

Sustainable and secure energy supplies have been a central concern of international politics since the first shocks in the 1970s. From around 2003 increasing oil prices led to a significant increase in the global importance of energy security as countries realised the need to integrate energy policies with climate change mitigation. In consequence energy security and climate change have become inseparable issues, intimately intertwined with foreign policy; the price of oil is the greatest external instability factor in the six GCC economies (Luomi 2012).

3.4. The Kyoto Effect

On the international stage, those Gulf monarchies that have large reserves of oil, i.e. Saudi Arabia, Kuwait, Abu Dhabi and Qatar, face potentially negative consequences from a global shift to lower carbon emissions as already discussed. The aim of international climate change policies to drastically reduce GHG emissions requires a shift away from oil and natural gas, which are the main exploitable natural resources available, the principal exports and key internal stability resources for the ruling élites. The monarchies' environmental sustainability is eroding fast, but this is the symptom not the source of the problem (Luomi 2012). Russell agrees a sudden drop in demand or a sustained drop in price will negatively affect the Gulf States' abilities to continue their environmental adaptation and mitigation efforts (2009). It is assumed that by the time climate change effects are felt in the next decades, hydrocarbon rents could be on the decline for the GCC states due to depletion of their reserves or a move away from fossil fuels by their current customers (Kumetat 2009). However, this does not recognise the increasing hydrocarbon trade taking place with Asian countries who could easily take up any slack demand, caused by Western moves towards cleaner technologies, and thus maintain rents. However, the uncertainties of international trading interdependencies would suggest there is a potentially strong nexus between environmental sustainability, internal stability and the maintenance of regime and national security, which could be seriously threatened by international climate change agreements, unless the monarchies take the necessary mitigation measures before their revenues are seriously affected.

Barnett and Dessai say it was thought a carbon tax would be the only way to reduce emissions to the levels in the timeframe demanded by the Kyoto Protocol and this tax would raise the cost of oil and associated products in developed countries and so reduce demand. In theory if tax is used in this way it increases the 'rent' governments in energy importing countries have in the oil market and effectively transfers wealth from producers to consumers. Perhaps understandably the OPEC countries were opposed to any significant reductions in revenues and demanded mitigation measures, but also demanded progress on such negotiations should take place at the same rate as another Article 4.8 clause which looks at the effect of mitigating the effects of climate change on such places as small island developing states (SIDS) and LDCs. The effect of this has been that OPEC has also obstructed the adaptation needs of all developing countries including those prone to natural disasters, drought, desertification and fragile ecosystems etc. Most of the countries of the G77/China fall into this category, but they support OPEC's stance with the direct consequence that they lose potential funding and technology to assist with adaptation (2002). While this support for the much richer OPEC countries may seem counterintuitive, it perhaps reflects a more fundamental issue than climate change i.e. the political polarisation that exists between the developed world and the developing. The latter feel excluded from wealth and resources and see OPEC's stance as a means of making the former pay more than otherwise would be the case.

All the GCC countries ratified the UN Framework Convention on Climate Change (UNFCCC) between 1994 and 1996, and Qatar and the UAE ratified the Kyoto Protocol in 2005 with Bahrain ratifying the Protocol the following year. All the GCC member states have created administrative capacities dealing with climate change issues, e.g. the Public Commission for the Protection of Marine Resources, Environment and Wildlife in Bahrain, the Supreme National Council for the Environment and Natural Reserves in Qatar and the Federal Environment Agency and the Ministry of Environment and Water Resources in the UAE. However, they often suffer from weak capacity and low levels of influence on domestic policy (Reiche 2010).

Ulrichsen believes the political economies of the oil monarchies render them vulnerable to any shifts in demand for, or perceptions of, fossil fuels. In a

climate-stressed world, where alternative and renewable forms of energy assume greater importance, it is therefore in their interests to take proactive steps to shape the regulatory forms of global energy governance that emerge (2010). Unfortunately, their stance has been regressive and obstructionist, almost denial of the need for a change of policies, rather than progressive and proactive by taking the opportunity to lead the way in the development of alternative and renewable sources of clean energy. Ulrichsen confirms this stating that with the exception of Oman, the GCC states developed a reputation for obstructionism at successive rounds of climate change negotiations. They focus on what they see as the negative economic aspects of a climate-changed world, rather than focusing on the impacts of climate change itself. Within the Gulf States, low public awareness of adaptation and mitigation strategies is underpinned by political and institutional policies that support the unsustainable and environmentally destructive use of their natural resources (Ulrichsen 2010). This opposition has generally been led by the Saudi delegation to the UNFCCC.

3.5. Climate as Threat

The effects of climate change could cause massive destabilisation to the fragile economies and states of North and East Africa leading potentially to violent conflict and mass migration. For example, in Egypt a possible increase in average temperature of 3-4°C would raise sea levels by one metre and displace up to six million people (Kumetat 2009). However, Lewis (2013) says few climate security scenarios have been developed to date, but all those included in her research come to very similar conclusions despite the differences and variations of conditions in each country, differing regional effects of climate change and responses to those effects. She contends scenario planning is used to study the implications of a range of plausible futures, without assigning probabilities or being overly constrained by uncertainty. Thus they can be used as a decision support tool or as a means of understanding interdependencies, causes and effects. She believes isolating climate change from other changes or events is impossible and probably not very valuable for policy makers, stating climate security scenarios are unusual because they combine natural and social science inputs to reach conclusions (2013). However, it is worth noting that, like many other modelling and

simulation tools, a climate security model can only be as good as the assumptions that underpin it and the quality of the data entered. Care must be taken to critically analyse any results obtained and to test them for effects of bias at the input stage.

Climate change is regarded as a threat multiplier in the West, and the Middle East is considered to be one of the regions in the world most vulnerable to climate change. The Gulf monarchies' vulnerability is a result of their already hot, desert-like climate and their concentration of population and infrastructure in low-lying coastal areas (Luomi 2012). Furthermore, many analysts believe climate change will 'trigger, amplify or perpetuate' humanitarian crises, displacement, extremism and violent conflict in the same regions where most peace-building takes place (Matthew 2013:1). South Asia, the Middle East and Sub-Saharan Africa are more vulnerable to the impacts of climate change than other parts of the world because of geographical location, poverty, poor infrastructure and inadequate or under-developed governance. These regions face the possibility of increased frequency of extreme weather events such as drought, floods, storms and heat waves (Matthew 2013). These are, of course, the inherently unstable places on the planet which suggests that while climate change is a contributing factor, there are also many other pre-existing issues which are the main cause of instability, similar to the root causes theory proposed in terrorism literature^{46&47}. This implies climate change will not help an already poor situation, but begs the question as to whether, of itself, it would cause a situation to become unstable.

Matthew believes isolating climate change as a driver of violent conflict or other instability effects is not straightforward, but it is likely it plays some role, although he says there is a lack of empirical evidence in academic literature to prove this (2013). Meanwhile, Lewis's review shows common key threats across almost all the scenarios she examined. These include food security, access to water and weather related disasters, which in turn affect economic

⁴⁶ Newman, E (2006) 'Exploring the "Root Causes" of Terrorism'. *Studies in Conflict and Terrorism*, 29:8, 749-772.

⁴⁷ Taylor, Max and Horgan, John (2006) 'A Conceptual Framework for Addressing Psychological Process in the Development of the Terrorist'. *Terrorism and Political Violence*, 18:4, 585-601.

prosperity, migration and energy security, which in combination increase the potential for violent conflict (2013). This analysis suggests an inevitability not borne out by other research where places suffering the same combination of factors do not descend into violent disorder. This also mirrors the root causes of terrorism debate where identical factors do not necessarily determine identical human responses occur.

Unsustainable agricultural production has resulted in the over-exploitation of fossil water on the Arabian Peninsula and depletion of the aquifers. The unilateral draining of shared aquifers could become a source of friction or conflict as water scarcity increases. States that follow a policy of overseas land acquisition and agricultural investment, in order to grow their own food, raise issues of internal security and sovereignty for Pakistan, Sudan, Egypt and other recipient nations. The attempts to acquire foreign farmland have reshaped the GCC states' international relations policies and also placed them in competition for farmland acquisition with China (Ulrichsen 2011).

3.6. The IPCC Fifth Assessment Report (AR5) 2014

The IPCC states (IPCC 2014) in the Summary for Policymakers that the AR5 report draws on a substantially larger knowledge-base than has hitherto been the case. Examining relevant scientific, technical and socio-economic literature, the IPCC report is more focused on risk than previous reports and this can be used to support decision-making in the context of climate change and associated issues. However, the IPCC acknowledges risks and benefits may be assessed differently by individual people and societies based on their cultural diversity and differing values. This therefore means international agreements on climate change mitigation, such as the Paris agreement, may run counter to perceived community or national interests and values in different parts of the world. What is also interesting is that in the description of adaptation measures being proposed for each region in the Summary, the Middle East/Arabian Peninsula does not get a specific mention. Africa and Asia each have their own chapters in the main report, but the Middle East, arguably the geographical, religious and cultural bridge between the two, does not sit comfortably in either. A word search using the terms 'Middle East', 'Arabian Gulf' and 'Arabian Peninsula' in AR5 Chapter 22, Africa, found only

two mentions, both of the Middle East, in the references. A similar search conducted in AR5 Chapter 24, Asia, found only one mention of the Middle East in terms of the effects of rising food prices on the urban poor in 2007-8. Similarly, only one mention of the UAE was found in this chapter to do with avoidance of heat stress amongst outdoor workers and there were no specific mentions of Qatar, Bahrain, Oman and Kuwait. Saudi Arabia achieved only two mentions, one in the context of malarial mosquitoes and the other in the references. Rulers and peoples in the Gulf could therefore be forgiven for believing they have been largely ignored, while at the same time being targeted by internationally agreed decarbonisation policies that will remove their hydrocarbon incomes and could fatally undermine the existing ruling bargains.

While specific findings for the Gulf area are not included, Chapter 21, the Regional Context, says West Asia will very likely see an increase in hot days with a decrease in cool days more likely than not. There is a projected likely increase in warm nights and a decrease in cool nights, with heat waves and warm spells being projected as likely more frequent and longer. There has been an observed increase in heavy precipitation events, but there is an inconsistent signal about the future patterns of precipitation, dryness and drought. The Working Group (WG) II Summary for Policymakers notes that in presently dry regions drought frequency will likely increase by the end of the 21st Century and raw water quality will be reduced with risks to the safety of drinking water. They assess with very high confidence that sea level rises will lead to submergence, coastal flooding and erosion exacerbated by population growth, economic development and urbanisation. There is also very high confidence that heat stress, extreme precipitation, inland and coastal flooding, landslides, air pollution, drought and water scarcity will pose risks in urban areas for people, assets, economies and ecosystems. In the already heat-stressed, low-lying Gulf States, suffering rapid population growth and urbanisation, these effects could combine synergistically to overwhelm systems of health, welfare and security, creating real problems for the ruling élites as their ability to maintain the social contract is eroded by falling oil revenues as a result of decarbonisation policies.

In terms of human security, the Summary says climate change is predicted to increase population displacement, but there is low confidence in quantitative

projections of changes in mobility due to its complex multi-causal nature. It states that climate change can indirectly increase risks of violent conflict by amplifying well-documented drivers such as poverty and economic shocks. Furthermore, there is medium evidence and medium agreement that the impacts of climate change on the critical infrastructure and territorial integrity of many states are expected to influence national security policies; for example rising sea levels which threaten coastlines and shared resources such as freshwater and pelagic fish stocks could increase the risk of violent conflict between states or communities. Finally the Summary sees climate change as the cause of a reduction in economic growth, which in turn makes poverty reduction difficult and reduces food security for the poorest in society. This plays back into the root causes of conflict described above, where increasing marginalisation of a segment of the population leads them to resort to violence in protest or as a solution.

Chapter 12 of the WG II report deals with Human Security specifically, which it regards as a condition that exists when the vital core of human lives is protected and when people have the freedom and capacity to live with dignity. However, it does not state whose measure of dignity is used as the yardstick, ignoring perhaps that cultural diversity can lead to varied perceptions of what entails dignity. However, Chapter 12 says there is high agreement and robust evidence that human security will be progressively threatened as the climate changes, as a result of the interaction of multiple factors which will combine to undermine livelihoods, compromise culture and identity, force migration and change the ability of states to provide the conditions necessary for human security. The report says the evidence about the effect of climate change and variability on violence is itself contested. It says there is little evidence about direct causality, but the root causes factors combined with climate effects become more relevant in increasing the potential for violent conflict. Poor adaptation and mitigation strategies can increase the risk of violence and people living in already active conflict zones are particularly vulnerable to climate change. Climate change will therefore pose new challenges to affected states in terms of national security and the policies that underpin it, especially where infrastructure, territorial integrity and resources are placed under stress.

Chapter 12 also states that because of the many and complex links between climate change and human security, and the research uncertainties that surround the linkages between biophysical effects and social science, highly confident statements about the influence of climate change on human security are not possible. However, there is good evidence about many of the discrete links in the chain of causality. Nonetheless, it concludes more interdisciplinary research is required because the security of the state directly impinges on human security and because it reflects how the state protects its citizens. FAQ 12.1 is worth quoting directly as an excellent synopsis (Chap 12:24):

“What are the principal threats to human security from climate change? Climate change threatens human security because it undermines livelihoods, compromises culture and individual identity, increases migration that people would rather have avoided, and because it can undermine the ability of states to provide the conditions necessary for human security. Changes in climate may influence some or all of the factors at the same time. Situations of acute insecurity such as famine, conflict and socio-political instability almost always emerge from the interaction of multiple factors. For many populations that are already socially marginalised, resource dependent and have limited capital assets, human security will be progressively undermined as the climate changes.”

The 6th Assessment Report is awaited following the election of the new bureau of 34 members in October 2015⁴⁸.

On a very positive note, at the December 2015 Paris Conference of Parties (COP21), 195 countries adopted the first universal, legally binding global climate deal⁴⁹. The agreement set out a global action plan to avoid dangerous climate change by limiting global warming to well below 2°C, preferably to 1.5°C, as well as ensuring global emissions peak as soon as possible and then reduce rapidly thereafter. The agreement was signed on 22 April 2016 by 175 countries at the UN Headquarters in New York⁵⁰, including Bahrain, Qatar and

⁴⁸ http://www.ipcc.ch/news_and_events/docs/ipcc42/151008_pr_election_of_new_bureau.pdf accessed 9 March 2016.

⁴⁹ http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm accessed 25 April 2016.

⁵⁰ <http://www.cop21.gouv.fr/en/a-record-over-160-countries-expected-to-sign-the-paris-agreement-in-new-york-on-22-april-2016/> accessed 25 April 2016.

the United Arab Emirates. Saudi Arabia is the only GCC state not to sign the agreement⁵¹ which comes into force in 2020.

3.7. So What?

As stated above, the Middle East is already suffering from deteriorating water quality, rising sea levels, demographic growth, over-extraction of groundwater aquifers and their contamination, salination of agricultural land and urban water shortages. Some policy reforms and adaptation have been carried out, although under conditions of crisis management rather than prior planning. As water stress and scarcity increase, climate change will impact directly on human security and this is intrinsically linked to national security and, therefore, regime survival. Furthermore, in an effort to secure food supplies the Gulf States are entering into arrangements with other countries to gain exclusive access to the produce of their land. However, this potentially creates conflict in the poorer host countries which could prevent the guaranteed supply of food the Gulf States require. This again undermines the human security of their populations, especially the most marginalised, and could lead to the potential for violent conflict at home.

The ruling élites' prior continued reluctance to move away from hydrocarbon dependency has eased and economic diversification into non-hydrocarbons is becoming their top priority, albeit to maintain their rentierist regimes. The monarchies may well feel their concerns for the future have been largely ignored by the international community, while at the same time they are being targeted by decarbonisation policies that will fatally undermine their regimes if alternative revenue streams are not exploited. This could lead to non-cooperation between the rulers and the West, despite the Paris agreement, as they turn towards hydrocarbon markets in Asia to make up any revenue shortfalls before sustainable economic diversification is achieved.

The monarchies therefore face two distinct threats: the direct physical effects of climate change on their countries and the second order consequences of the physical effects of climate change in the wider region and globally; and the potential reduction in hydrocarbon revenues as a result of internationally

⁵¹ <http://www.un.org/sustainabledevelopment/blog/2016/04/parisagreementsingatures/> accessed 25 April 2016.

agreed decarbonisation policies, with the concomitant effect that will have on their individual ruling bargains. The ruling élites therefore require a twin track approach to mitigate these threats in the short, medium and long terms. As the physical effects of climate change are being felt in the region now they must move quickly to ensure their water, food and energy supplies are sustainable for the future to ensure human and national security. They must also take steps to ensure their means of production, other economic activity, agriculture and domestic housing are safe from the risk of inundation. This will require a cross-cutting strategy within each state. It must also be linked to the activities of their regional neighbours, to ensure coherence of mitigation strategies and the avoidance of misunderstanding as each state attempts to secure its sources of supply. Perhaps more challenging is the second track which will require political, economic and social reform. This will enable the monarchies to move away from dependency on hydrocarbon revenues and diversify into wider economic activity, involving more of the indigenous population, probably in return for more political freedom and access to information. It is worth noting the coincidence of the forecast worst effects of climate change and the exhaustion of even Qatar and the UAE's hydrocarbon reserves in the last quarter of the 21st Century. To have both occurring simultaneously increases the demand for early action to create sustainable long-term mitigation strategies. This does not necessarily mean an end to rentierism or the monarchies, but probably requires a mix of traditional governance along with more transparent and accessible policy-making.

4. BAHRAIN – A Case Study



Map 2. Bahrain - <http://media.web.britannica.com/eb-media/84/62384-004-E4CF98E4.jpg>

4.1. Introduction

Bahrain was once Dilmun, a major Bronze Age trading hub between Mesopotamia and the Indus Valley. Around 2000 BCE the Indus Valley civilization collapsed causing a parallel decline in Dilmun. Subsequently, little is recorded until the archipelago's inhabitants converted to Islam in the 7th Century. Bahrain was then ruled by Islamic caliphates based in Damascus and Baghdad, Persians, Omanis and the Portuguese from 1521 until 1782, when the Persians took control for a year before being expelled by the Bani Utbah tribe, led by the al-Khalifas who rule Bahrain today (Katzman 2015a; Teeple 2002).

During Persian rule, Bahrain was Iran's fourteenth province. This still causes the Bahrainis anxiety over Iran's intentions and adversely affects the relationship between the Sunni élites and their Shia majority, due to concerns about Shia loyalty as they seek religious guidance from Iraqi and Iranian clerics

(Kinninmont 2011). The al-Khalifas' legitimacy as rulers is disputed as the Shia consider they are the true owners of Bahrain. The Shia are closely linked with their co-religionists in eastern Saudi Arabia and both populations are suspected by their rulers of supporting Iran. However, ethnic divisions between Arabs and Persians probably outweigh the confessional commonality that exists between Iranians and the Saudi and Bahraini Shia (Mabon 2012).

In 1830 the al-Khalifas signed a treaty establishing Bahrain as a protectorate of Britain which dominated the Gulf until 1971. This protected Bahrain from external threats, but also prevented it from recapturing land once held on the Qatari peninsula (Kinninmont 2011; Teeple 2002). Just before independence, Bahrain's ruler agreed to lease the former British military facilities to the US Navy, effectively changing one protector for another, although the external threat had reduced as Iran gave up its claim to Bahrain during the independence process (Kinninmont 2011). In 1970 a UN survey determined Bahrain's inhabitants did not want union with Iran and this was endorsed by UN Security Council Resolution 278 and ratified by Iran's parliament. Nine Gulf emirates entered negotiations to form a federation, but Bahrain and Qatar decided on independence, which Bahrain declared on 15 August 1971. The USA opened an Embassy immediately afterwards. The seven remaining emirates subsequently formed the UAE (Katzman 2015a).

Following its 1979 revolution, Iran restated its claim to Bahrain and accused Bahrain's rulers of abusing its Shia citizens. Demonstrations and protests followed until 1981 when 73 members of the Iranian Front for the Liberation of Bahrain were arrested. Consequently, political opposition was muted for much of the 1980s, although émigré opposition groups coalesced around the Bahrain Islamic Freedom Movement in Damascus, Tehran and London (Kinninmont 2011).

From the 1990s tensions arose around differences in access to resources and employment. Economic deprivation and government discrimination against the Shia form the basis for recurrent periods of unrest until today. Economic decline, inequality of oil wealth distribution and a marginalised Shia population also concerns the Saudis lest the discontent should spread to their Eastern province, accounting for the very high level of support the al-Saud give the al-

Khalifas and their determination the al-Khalifas should survive at any cost (Ulrichsen 2011). This was amply demonstrated during the 2011 Arab Spring risings, which led to the deployment of Saudi and UAE forces into Bahrain under PENINSULA SHIELD⁵².

Noting national and regime security are habitually conflated by the monarchies, the proposition is that good economic security assures national security by providing political and social stability through successful delivery of the ruling bargain. This guarantees the future survival of the current governance system and the consequent political continuity enables high levels of human security and development to be achieved. There is a resulting feedback loop between human security and economic security; a safe and secure population is much more likely to be economically productive than not.

However, Bahrain's challenges are real: very rapid depletion of its hydrocarbon reserves with significant loss of government revenue; direct and indirect effects of climate change; and constant political discord emanating from its marginalised majority. Government policies designed to promote sustainable economic diversification, strong human security, an engaged civil society, and protection of the environment for future generations would indicate the monarchy understands its predicament. Perhaps recognising the seriousness of its situation, and coincident with the global economic downturn, Bahrain's vision was published in 2008. This describes the Kingdom's strategy for dealing with the multiple challenges it faces and is an ideal baseline from which to assess Bahrain's economic transformation, its approach to climate change and its appetite for political reform.

4.2. Bahrain Economic Vision 2030 (BEV2030)

4.2.1. Word Counts

A word count exercise was carried out before detailed examination of BEV2030 to identify obvious areas of emphasis and omission in the document; full results are at Appendix 1. Unsurprisingly, 'economic' is by far the most common word, achieving 44 mentions not including the footers. The next highest score at 18 is 'environment', but only five of these refer to the natural environment, the majority concern the business or economic environments. Next at 17 is

⁵² <https://www.alarabiya.net/articles/2011/03/14/141445.html> accessed 4 February 2016.

'education', but this is not linked to the word 'skills', although 'skills' is the highest of the single digit counts with nine. 'Oil' appears 15 times and is linked with 'revenues' on six occasions, while 'national' achieves twelve counts but is not linked to 'security' at any point. 'Sustainability' occurs ten times and 'sustainable' six, but is not linked at any point with 'technology' which is mentioned only once. 'Climate change' is not mentioned at all, with each word scoring only one and three counts respectively; the same is true of 'human development' with each word scoring three and four counts respectively. 'Political reform' is mentioned once, but there is no mention of 'national security' or 'human security'.

The word count suggests the document is mainly concerned with the economy, business and education. References to climate change are completely absent as are mentions of human security and national security. This could mean all three topics are out of scope for the Vision, or the terms do not translate directly from Arabic. While the word count gives indications of the document's emphasis it does not give much more.

4.2.2. The Background

BEV2030 is well written and bears the hallmark of a major consultancy's expertise. It is short at only 22 pages, excluding cover, photo page and closing exhortation. It is concise and easy to read in straightforward language, containing many 'buzzwords' that would be familiar to those who have attended leadership, business and management courses in the West. The photographs of the King, the Prime Minister and the Crown Prince leave the reader in no doubt they are reading the rulers' explicit intent for the future of Bahrain. With this imprimatur the provenance and authority of the document is unquestionable.

The preamble says the Vision had input from a variety of external contributors, so it should not suffer accusations of introspection. It describes how the Vision extends to government and society as well as the economy, while being founded on the principles of sustainability, competitiveness and fairness. This is significant as it explicitly highlights the importance of sustainability at the outset, which is critical to the guaranteed longevity of the Kingdom's political economy. The ability to compete globally is also fundamental to Bahrain's

economic success, so it is unsurprising 'competitiveness' should be on a par with 'sustainability'. However, it also implies, through using 'fairness' in the same sentence as 'society', that all sectors of the population will be treated equally. However, this is not the general experience of the Shia, especially since 2011, due to lack of political reform, their economic marginalisation and harsh repression by Bahraini security services. It continues that collaboration will take place across the spectrum of national life to achieve the Vision's aspirations through a whole of government approach. However, it cites the participants as the legislative body, which is essentially toothless, civil society, which is severely restricted in its permitted activities, and the private sector which is attempting to take up slack caused by reduction of hydrocarbon revenues. So, while the preamble appears to be a worthy statement of intent, it actually ignores the reality for many outside the circle of the ruling élite.

There follows a quasi mission statement explicitly talking of Bahrain's intent to move away from oil dependency towards a more diversified and productive economy, driven by the private sector and able to compete globally. Yet, this says the economy will be shaped by the government, suggesting that centralised, directed economic development may be the only reform allowable. It further states the aspiration to create a broad middle-class with a good standard of living and high wages, made possible by increased productivity. This is noteworthy as it will require the workforce to be educated and trained sufficiently to take on these new jobs, as well as having the desire to do economically productive work in the private sector. Given that around 70 percent of Bahrain's population is Shia, it is implicit they must be well represented within the new middle-class if that is to be achieved. However, experience since the 2011 uprising, and Saudi interest in ensuring a Shia power-base does not appear close to their Eastern border, suggests the creation of this new middle-class is still some way off. This section concludes that the principles of sustainability, competitiveness and fairness apply to the government and society, ensuring every citizen can live a secure and meaningful life and achieve their potential. In 2008 this was an explicit declaration of the intent to guarantee and improve levels of human security, although this appears to have stalled as a result of the Arab Spring uprisings.

Resurgent oil prices were critical to Bahrain's economic improvement in the five years before 2008, according to the introduction, along with FDI flows that increased by 550 percent in 2003-6. It is claimed this improved living standards, with adult life expectancy up from 68 to 75 years and infant mortality down from 23 to fewer than ten deaths per thousand. The introduction declares the aim of achieving a fairer and more prosperous society through increased global competitiveness, resulting in higher levels of employment and wages and a safe and secure environment; yet another indication of serious intent to improve Bahrain's human security.

4.2.3. The Aim of BEV2030

This is reinforced by the Vision's declaration that the ultimate aim is to at least double the disposable income of every Bahraini family in real terms by 2030. However, there is no mention of political or social reform, or the need for climate change mitigation; all effort appears to be focused on perpetuating the current political model based on the social contract between the monarchy and its citizens. Admittedly it is implied that the benefits of redistributive practices will give way to higher earnings as a result of productive work in the private sector, albeit a sector that appears destined to be under some form of government direction. Arguably this is a continuation of rentierism with government funding provided by third parties, in exchange for official permission to trade and a supply of citizens prepared to carry out productive work. This is reiterated in the final paragraph exhorting the private sector and civil society to work with government to enable better living standards through higher productivity and wages. The inference is that the government intends very much to remain in control of the national economy.

4.2.4. The National Context

BEV2030's section on the need for coordinated reforms is split into the national, regional and global contexts. The national reforms focus on improving education and skills and the creation of well paid private sector jobs for citizens. It recognises that many Bahrainis with university degrees are unable to find work appropriate to their level of education. However, there is also recognition that many citizens lack the qualifications necessary to do the medium to high wage jobs that already exist, or are being created in the private sector, because

the education system does not provide citizens with the skills and knowledge needed to do these jobs. Noting the solution has been to provide well-paid public sector jobs funded by hydrocarbon revenues, it accepts the public sector is too big and unsustainable, given declining oil reserves will lead to revenue reductions. The national section concludes the only sustainable way forward is through transformation of the economy, driven by a dynamic private sector engaged in high net-worth activities, providing attractive employment to its citizens.

Implicitly, quality jobs currently done by expatriates will in future be done by Bahrainis, leading to a reduction in dependency on foreign labour. What is notable by omission from the reform agenda is any mention of political or social reform. Apparently the government assumes the economy can be transformed in isolation of other aspects of societal activity. Perhaps the élite hopes the ruling bargain will be sustained by the availability of better jobs and wages in the private sector. However, this ignores the possibility that widespread better education may well lead to demands for greater political involvement in the state's affairs, calls for more transparency regarding the nation's economic activities, and the creation of a civil society unwilling to be directed by the monarchy. A different issue not addressed is the cultural change necessary to persuade people traditionally occupying under-employed public sector posts to transfer into private sector appointments, where they will have to work for their money. Rejection of this change could cause failure of the economic reforms.

Finally, there is no suggestion how this will be achieved in practice, although earlier parts of BEV2030 suggested it will be centrally directed through the cross-cutting National Strategy. However, such a document appears to be unavailable through internet searches, but the Bahrain Economic Development Board⁵³ (BEDB), chaired by the Crown Prince, appears to have a significant role to play. According to its website, the BEDB is a 'dynamic public agency with overall responsibility for attracting inward investment into Bahrain and supporting initiatives that help enhance the investment climate in the country'. Again this supports the notion that transformation is focused on the economy to the exclusion of other areas of public life and reflects the centrally directed

⁵³ <http://www.bahrainBEDB.com/en/about/Pages/default.aspx#.VCLa3pRdWa8> accessed 24 September 2014.

nature of that economic transformation. Further examination of the BEDB website led to the Bahrain National Economic Strategy⁵⁴, but as the name suggests this is focused totally on the economy and is more of a public relations briefing than a plan of how the Vision will be executed.

4.2.5. The Regional Context

The section on the regional context driving Bahraini reforms gives an optimistic impression of the Kingdom. Under the heading 'An exceedingly favourable business environment' there is a statement about the advantageous taxation system that exists for those wishing to do business in Bahrain, or to base their businesses there. However, there is nothing about how this might change in the future as oil revenues decline and the state demands more in taxation in order to provide the services its population requires. This inconvenient possibility is ignored throughout the Vision. The next heading 'A progressive stable government' emphasises strong rule of law and stability, and claims Bahrain is inclusive, cohesive and supports ambitious programmes aimed at economic and social change through enacted political reforms. It talks about a commitment to democracy and openness that has preserved the all-of-one-family spirit. This was patently untrue at the time the Vision was written, given the long history of stifled democracy, and has become worse with the subsequent repression of the Shia since 2011. The final heading in this section 'An ambitious multicultural society' extols the welcome awaiting foreigners wishing to do business in Bahrain and describes its population as diverse and living and working together peacefully. Again, this is another piece of wishful thinking unsupported by the facts of history. This part concludes reforms need to be accelerated to capitalise on opportunities, despite not having previously identified what these reforms may be.

4.2.6. The Global Context

The Vision's global context begins significantly by stating reliance on cheap expatriate labour to provide a competitive edge is unsustainable, because other parts of the world manufacture the same products more cheaply. This indicates the move of employment away from expatriates to citizens, although there is no suggestion roles will be the same. Instead, it appears the aim is to

⁵⁴ <http://segib.org/actividades/files/2012/10/Anwar-Zibaoui.pdf> accessed 25 September 2014.

reappraise Bahrain's place in the global value chain and replace manufacturing with higher yield productivity, perhaps financial services, which would be more palatable work for citizens to do. BEV2030 recognises Bahrain must increase its levels of innovation and productiveness if it is to compete globally. Logically it concludes this will require the workforce to be equipped with the right skills to achieve improvements, which is an important recognition of the requirement to prepare its citizens to diversify into other areas of revenue generation, in order to sustain the Kingdom's economic viability on the global stage.

4.2.7. Guiding Principles

The Vision's next section describes its guiding principles: Sustainability, Competitiveness and Fairness. It claims these have been derived from consultation with the whole of society, informed by internationally recognised best practice, which has confirmed the three principles are correct and must be weighted equally in effort. 'Sustainability' recognises the government's redistributive practices are not viable in the longer term and the private sector must take on the burden of creating wealth for the nation. In future the government will stick to a stable, financially sustainable model and will invest in the Kingdom's human capital through education and training, particularly in the applied sciences. It concludes innovation and entrepreneurial skills will be vital to economic sustainability, but the environment must also be protected at all costs, along with the long term well-being of the population and the nation's cultural heritage. This is, arguably, the most important and 'visionary' part of the document so far. It identifies the need to move away from a rentier political economy; the need to diversify the economy to create wealth; the need to educate and train the population to do the jobs required in the future; the requirement that human security must be assured; and the importance of preserving the quality of the environment in which everyone must live. While it is long on intentions and has no detail how they will be achieved, it is a worthy aspiration to have as one of the three guiding principles. Some of this carries over into the 'Competitiveness' section, where constantly increasing productivity with appropriately skilled and educated workers is firmly in the forefront. Having said in the global context low-skilled expatriates will be reduced in numbers, this section identifies the continuing need for expatriates who have skills lacking amongst the population, although it is fair to assume

this should be a temporary solution until citizens have reached the required skills levels. The explicit aim is to make Bahrain the location of choice for business by providing good public services, infrastructure and living conditions, again reinforcing the commitment to modernise and diversify the state. The last principle, 'Fairness', is the one most open to scepticism. It starts by stating the need for a broad base of prosperity and the transparency of all transactions, including private and public activities and land sales. It emphasises the role of government in providing the legal and regulatory framework, preventing corruption and ensuring laws are enforced justly. It further declares all must be treated equally in law and in accordance with international human rights, with equal access to health, education and welfare services provided by the state. These are laudable statements, probably designed for external consumption, but again not borne out by the Shias' experience.

4.2.8. Aspirations

4.2.8.1. Economy

BEV2030's final section is concerned with establishing aspirations for the economy, government and society. At first glance each of these 'dimensions' is given equal weight, although society is the longest and the last substantive part of the document. The economy dimension is founded on three interrelated aspirations: growth through increased productivity and skills; diversification into existing potentially high-value sectors; and longer-term transformation focused on seizing opportunities. The first aspiration, productivity and skills, describes an intention to shift from low-wage expatriates to high-wage Bahrainis who have become employees of choice for high-value companies. The Vision specifically identifies the success of the financial sector, in terms of productivity and salaries, as the benchmark for all other sectors to follow. Importantly, the government has four actions it must carry out to enable this: leadership through improved governance and management of state-owned companies; provision of incentives to promote private sector activity; deregulation of Bahrain's domestic markets to allow in examples of innovation and best practice; and attracting FDI into Bahrain as a financial driver. The aim is to create better jobs for Bahraini citizens through sustainable economic growth, leading to a bigger

middle class with a better quality of life. It claims economic growth will be distributed fairly and the government will monitor this to ensure all segments of society benefit. Immigration and employment laws will be reformed to enable fairer access to jobs for citizens supported through lifelong training. The success of this aspiration will be measured through increased GDP, FDI, productivity, citizen employment levels and the number of citizens engaged in medium to high-paid jobs. There is certainly much evidence here of an intention to diversify the economy, improve education and skills among Bahrainis and move away from expatriate labour. Again, there is recognition of the need to create a fairer society with a larger middle-class and generally better standards of living. All of these support the notion of improved human security for Bahraini nationals. However, if the bulk of national revenue is to be created through the private sector, it follows rentierism may have to cease as the national governance model; what is lacking is any detail of future taxation arrangements needed to ensure the government can supply the education, health and other services a modern functioning state requires.

The second aspiration for the economy concerns diversification into high-value sectors, already covered in some detail by the first aspiration. However, of particular note is the stated intent to strengthen the non-oil GDP sector, principally through a move into the financial services sector regarded as Bahrain's future economic priority. The reduction of dependence on oil will be based upon attracting FDI and developing tourism, business services, manufacturing and logistics, as well as financial services, to create a strong diversified and globally competitive economy. Success will be measured in terms of increased GDP and employment levels in high-potential sectors. It is encouraging the ruling élite publicly acknowledges a move from oil dependency is required, but it is arguable this is the result of *force majeure* and would not have occurred had hydrocarbon reserves been plentiful. However, to its credit the government is pointing towards sectors it wishes to expand and, according to its website, the BEDB will be working to encourage training and FDI.

The final economy aspiration is focused on taking opportunities as they arise, specifically in the knowledge-based sector and by increasing the productivity of high-value goods and services. Success depends upon a partnership between government and the private sector, where the former will be responsible for

creating the right economic and regulatory conditions to allow growth of indigenous and foreign companies, encourage entrepreneurial activity and innovation, and help companies get innovative products to global markets. Again, success will be confirmed by increased GDP and employment levels. Essentially, this aspiration is an extension of the first two and is concerned with diversification, productivity and jobs. Implicitly it reinforces the intention to move away from oil dependency and increase the numbers of highly paid jobs for citizens. However, although all three aspirations show coherence running through the whole dimension, there is a lack of strategic detail about how the aspirations are to be achieved. This may be a cultural issue as perhaps the King, Prime Minister and Crown Prince see no obligation to explain to their citizens how it would be enacted, or it may be that when the Vision was published the strategies were still being formulated.

Certainly the National Economic Strategy referred to above expected a range of strategies to be in-place by 2014. This appears to have started well. In 2011 the BEDB published its annual report (BEDB 2011) announcing the start of the second National Economic Strategy 2011-2014 and including an operations review. This confirmed that the National Higher Education Strategy had been published in 2010; an Agenda for Schools, with associated literacy and numeracy strategies, a Healthcare Agenda and a Housing Strategy were all published in 2011. It also listed the various legal and governance reforms relating to business, the economy, investment and other regulations achieved by the end of the first National Economic Strategy in 2011. Unfortunately, the BEDB has not published a strategic report since 2011⁵⁵, so there is no official recognition of progress since then. However, the national labour fund, Tamkeen, has published its strategy for 2015-2017. This has specific aims of strengthening the economy, boosting labour efficiency and increasing employability of citizens through training and education. Tamkeen's target is the private sector and Bahraini individuals, but not the public sector, social societies or NGOs (Tamkeen 2015-2017). This is consistent with the government's intention to move the emphasis from public to private sector jobs.

⁵⁵ As of June 2016.

4.2.8.2. Government

The second dimension is about efficient and effective government and has five interdependent aspirations. The Vision recognises the need to look forward and create high quality national policies across the spectrum of modern state activity, including the environment, security and social justice, as well as the economy, health and education. Out-sourcing of some government activities and public-private partnerships was forecast, as was the need to ensure privatisation was conducted within an effective regulatory framework including rigorous supervision after the event. Higher rankings within the World Bank's league tables for efficiency and accountability would demonstrate success. This is all laudable and unsurprising, reflecting a recognition by the monarchy that modernisation of the state was required if Bahrain was to have the role it desired in an increasingly globalised world. Seeking the approval of the World Bank is a public expression of the commitment to do better.

The second aspiration is a strong indicator of the desire to move away from rentierism, as it focuses on increasing government efficiency through restructuring and reducing public sector employment. It highlights the need to remove inefficiency and duplication while increasing productivity through the delivery of high quality services. It aimed to improve human resources management, strengthen governance, improve transparency and introduce performance related pay for public sector employees. Again, the World Bank's ranking of the reformed public sector would be a measure of success as would the proportion of GDP spent on it. This tells Bahrainis the days of redistributive practice are over and citizens should expect to work hard in the private and public sectors and be rewarded according to their performance. This will require a significant cultural shift for those who have grown up with an expectation of almost unconditional entitlement.

A predictable, transparent and fair regulatory system promoting economic growth is the third aspiration for government. This is further recognition that if Bahrain wants to be a global trader it must offer the same legal protections and freedoms available elsewhere in the international markets, especially competition law. BEV2030 recognises fairness and openness are necessary to attract FDI, as are consistency of regulation, improved enforcement and

consequence management, zero-tolerance of corruption and favouritism, and how quickly the legal process can resolve disputes. The World Bank's approval is again the desired benchmark. This is unsurprising and the logic is infallible. If Bahrain is to have a credible economic future it must operate in a way consistent with international norms. The legal reforms, detailed in the BEDB operations review (BEDB 2011), demonstrate the government's commitment to this.

The fourth aspiration is another statement of intent to move away from an oil-based rentier political economy, although it could be argued there is no choice as hydrocarbon reserves are close to depletion. The recognition of the need for a sustainable financial model effectively underpins the whole of BEV2030, but is explicitly stated here. Most interestingly it identifies the need to remove subsidies on water, gasoline, electricity and food from all but the most needy, to reduce government costs and overconsumption. Here the bulk of the population is being given notice they will have to pay for what they use at a market rate. Yet there is no mention of taxes, perhaps because it says oil revenues will be used to benefit future generations through provision of education, healthcare and a better living and working environment. The measure of success will be government expenditures balanced by government revenues, something rarely achieved in developed countries, but it omits to suggest taxation could be a vital source of government revenue, if Bahrain does not want to become dependent on borrowing.

The government dimension's final aspiration is that Bahrain should be linked to the global economy by world-class information technology by 2030, using public and private sector money to build and run the infrastructure. This will improve effective transport links, ensure access to electricity, water and gas, and provide logistics and telecommunications services, all at competitive prices. Improved land use planning processes and increased private sector participation in major infrastructure projects will be vital. Success will be gauged by Bahrain's position in the World Economic Forum's infrastructure ranking. This aspiration is also unsurprising and logical. What is notable about all five aspirations seen together is the explicit recognition that reform of governance structures is required, involving a move from hydrocarbon dependency, a reduction in the public sector with an associated increase in

efficiency, deregulation where it will ease the flow of business, but with appropriate supervisory processes in place, and a modernisation of the systems, infrastructure and processes of the state. Obviously the need for guaranteed access to water, electricity and gas is critical for Bahrain's national and human security, as are food supplies although that is not mentioned. What is glaringly omitted is any suggestion reforms will be accompanied by greater political freedom or participation for the bulk of the population; this is potentially the Vision's Achilles heel, especially if income, purchase or corporation taxes are necessary to sustain the government's future income, and could lead to political discontent founded on the spirit of 'no taxation without representation'⁵⁶.

4.2.8.3. Society

The Vision's third and final dimension is a just, thriving society and has five aspirations. The first is Bahrain has high standards of social assistance placing all citizens on an equal footing; this implies Shia and Sunni alike. Explicitly it describes a future where meritocracy rules and there is equal opportunity for all Bahrainis. Specific focus is placed upon ensuring the most needy have the housing support and subsidies they need, and the education system brings out the full potential of talented youth, while encouraging private philanthropy and other charitable support. Success will be measured by the number of households earning above the national minimum income. Thus it appears in 2008 there was a genuine intention to create a fairer and more inclusive society, while improving educational and living standards. However, the reality is far from the Vision for the ordinary Shia, especially after 2011.

Access to quality healthcare for all Bahraini nationals and residents is the second aspiration. This is notable as the first explicit mention of non-national residents benefiting from other than improved access to Bahrain's markets and wider economy. It foresees a mix of private and public healthcare facilities offering choice, recognised as meeting high quality international standards, and becoming a sustainable regional centre of modern medical practice. Noting the dual pressures of a growing and aging population, it describes how government

⁵⁶ <http://www.parliament.uk/business/publications/parliamentary-archives/archives-highlights/archives-stamp-act/> accessed 1 February 2016.

will promote healthy lifestyles, provide easy access to healthcare, ensure oversight through a regulator, attract and retain high-calibre healthcare professionals, and nurture best practice. Success will be demonstrated through life expectancy and performance indicators laid down by the regulator. This is entirely consistent with what is expected of a modern developed state and reflects a key aspect of improved human security through reducing the potential for premature death or morbidity. Its accessibility by residents as well as citizens shows a realisation that the health of expatriate workers is vital to Bahrain's economic success and security, and may also reflect a natural desire to prevent disease spreading from unhealthy migrant workers to citizens. While it does not reiterate that low-skilled expatriates will be significantly reduced in favour of fewer, highly educated migrants filling Bahraini shortfalls, it is probable the government expects the healthcare burden of residents to reduce over the years until 2030. Whatever the motivation, it is a positive aspiration in support of both national and human security objectives.

The intention of creating a first class education system is the third aspiration and recognises the need to educate and train citizens to be the leaders, entrepreneurs and employees of the future. Education appropriate to the Kingdom's and individuals' future needs will be available to all citizens based on ability and merit, and achieved by a strategy focused on universities, schools and vocational training. This will concentrate on developing teachers, providing high quality training in relevant applied and advanced skills, setting standards and oversight mechanisms, and encouraging research and development (R&D) in universities, creating the foundation for a knowledge-based economy. Independent assessments of educational establishments, achievement of international standards, and exam results will be used to assess progress. Raising citizens' education and skills is a consistent theme throughout BEV2030, confirming acceptance that without major improvement Bahrain will be unable to diversify and compete successfully in such areas as financial services and knowledge-based industries.

The fourth aspiration is one of the least detailed in BEV2030, but is arguably critical to its success as it deals with safety and security. This lack of detail probably reflects a degree of uncertainty as to how the future would develop, given prior unrest and security concerns since the 1994 'Bahrain Intifada'. Or it

is indicative of a culture of secrecy concerning security in the Kingdom; most likely it is a combination of both. Predictably it states the intention to establish an integrated security strategy. This will counter all risks, threats, crime and vulnerabilities through technology, modern police services and community policing, plus an increased awareness of the need for crime prevention. This conveys the very strong impression that security is solely the government's business and not for public discussion. The heavy-handed response in 2011 and subsequent harsh repression of Shia communities certainly reinforce the view little modernisation has taken place within the security services and sophistication is lacking at the highest levels when dealing with a discontented majority. Nearly eight years after BEV2030's publication it is difficult to see any sign of political reform that will remove the root causes of grievance stemming from perceived political, economic and social marginalisation. Arguably the failure to understand the importance of getting this right could undermine the entire Vision, by creating conditions where revolt permanently simmers below the surface and deters foreign investors from crossing Bahrain's shores.

The Social dimension's final aspiration aims to ensure a sustainable and attractive living environment for all citizens and residents. A sceptic could say this is the ideal way to conclude BEV2030 as it focuses on climate change mitigation and environmental sustainability, while being positive, uplifting and demonstrably aimed at making Bahrain a better place in which to live. All of this is good strategic messaging at the international level. Stressing the rich and ancient culture of Bahrain, BEV2030 says this will be delivered through: conservation of natural spaces; implementation of energy efficiency measures; and directing investment towards technologies that reduce carbon emissions, minimise pollution and provide sustainable energy. This is all highly commendable in terms of the international climate change agenda and is the first and only recognition within BEV2030 that investment in alternative energy technologies will be required to achieve environmental protection and mitigate further climate change effects, which already threaten 15 kilometres of coastline. These measures will deliver a greater number of attractive public areas; provide modern sporting and cultural facilities; enforce laws on cultural preservation; make archaeological and Islamic sites a greater part of the cultural landscape; and encourage future generations to understand more

about the heritage and culture of Bahrain. This all suggests the Bahrain of the future will be a better place to live, but also implicitly reinforces the notion of Bahraini nationhood through concentration on culture, history and heritage. This emphasis on national identity could be seen as promoting pride in the Kingdom and creating an all-of-one-family spirit among the population, Shia and Sunni alike. However, any mention of political reform is notable by its absence, leaving the perception that the rulers appear to believe society can be kept happy and quiet by providing a pleasant environment in which to live and work. This probably reflects a traditional rentier view of governance where population contentment is maintained through redistributive practices, but is naïve in expecting that with a history of severe social unrest the majority Shia will be placated by a few parks, gyms and museums. It is claimed success will be measured through Bahrain's ranking in the Economist Intelligence Unit's Liveability Index and also by levels of air and water pollution around the Kingdom. More likely, success will be calculated by the international community's impression of social cohesion, stability and adherence to the rule of law by both the people and the security forces.

4.2.9. Achieving the Vision

Understandably, analysis of BEV2030 identifies priority for reform lies almost exclusively within the economic sector. Sustainability and competitiveness are regarded as vital to the long-term viability of Bahrain within the global economy, but there are repeated inferences that the monarchy intends to retain its strong grip on the country and direct the future economic reforms, mainly through the BEDB. Despite fairness being a guiding principle, there is little sign in the Vision of an intention to conduct future political or social reform, while there is strong external evidence life has got worse for the Shia who continue to experience marginalisation in the political, social and economic spheres of life.

In pursuing economic reform to the apparent exclusion of many other areas, there is a stated intention to reduce the number of low-skilled expatriate workers and increase the number of Bahrainis employed in good private sector jobs. However, the move of citizens from a bloated and unsustainable public sector into productive work will require an improved strategy for education and skills; this is a constant and important theme throughout the document.

Similarly, human security is a real concern for the rulers who intend to improve it significantly, but national security is not discussed substantively. Experience over the last twenty years shows the Shia do not get a good deal on either.

It is clear the monarchy recognises redistributive practices cannot continue and a move away from oil dependency is vital, but vestiges of a rentierist mindset appear to persist, albeit with the private sector taking up the funding gap. Innovation, entrepreneurship and environmental protection are key characteristics of the future economy, with diversification into financial services and knowledge-based industries leading the way. As part of this transformation, subsidies will be removed from all but the neediest, healthcare will be improved and climate change mitigation and alternative technologies will be adopted. However, the prospect of taxes to pay for future government services is not mentioned. Perhaps it is hoped FDI, the residue of oil revenues, and income from sovereign wealth funds will pay for these, but the long-term sustainability of that arrangement may be questionable. Nor is international collaboration mentioned in any way, although it is assumed Bahrain will remain an integral part of the GCC.

Without doubt BEV2030 is well crafted and demonstrates awareness at the very highest levels that change is necessary. It is debatable whether this change would be considered if Bahrain had levels of hydrocarbon reserves like Qatar or the UAE, but, facing the unsustainability of Bahrain's political economy, the monarchy has taken a bold step in defining a realistic vision through its guiding principles, dimensions and aspirations. The next stage is to examine whether the strategies supporting the Vision are being executed effectively.

4.3. Evidence of Transformation

4.3.1. The Significance of Climate Change

There appears to be little published in the public domain by the Government of Bahrain about its climate change concerns and challenges, or its mitigation strategies. Having failed to obtain cooperation in my research from the

government⁵⁷, or to discover any significant national policy documents or other official commentary during internet searches, I approached the Tyndall Centre for Climate Change Research at the University of East Anglia for assistance. The Tyndall Centre is a leading authority on climate change effects. Unfortunately they suffer from the same limitations in trying to obtain insight into official policy on climate change in Bahrain and commented that 'this region is not known for openness and transparency'⁵⁸. A search of the Kingdom's official website on climate change issues⁵⁹ revealed large amounts of data for many places, but nothing on Bahrain. A climate change conference held at the Arabian Gulf University in May 2015⁶⁰ included mention of the Government Action Plan for 2015-18⁶¹, but while this has an environmental perspective, it is far more concerned with economic development and diversification issues. The plan does not appear to be available in the public domain, although a synopsis is available from the Citizens for Bahrain website⁶², which appears to be an official or officially condoned outlet. This confirmed the chances of finding a single, major official policy document describing Bahrain's climate change mitigation plans were unlikely, although there are some very limited references to climate change in other documents.

According to the BEDB, climate change challenges and volatility of agricultural supply and prices make food security a high priority in Bahrain's development agenda (BEDB 2014a). Arable land and fisheries degradation has reduced the capacity for local production, while global climate change and natural disasters have prompted many food exporters to consider export bans to guarantee local supply. This makes importing food more difficult due to growth in the global population increasing competition and could lead to changes in agricultural production trends as local and regional markets sensibly try to establish self-sufficiency. Water and land scarcity account for the limited capacity of Bahrain's agricultural sector, which also suffers from low productivity (BEDB

⁵⁷ Apart from a discussion with an expatriate senior official who was very much on message, would only meet in a restaurant in the UK and imparted little real information.

⁵⁸ Email from A.Minns@uea.ac.uk 16 December 2015.

⁵⁹ http://knoema.com/search?query=climate+change&utm_source=searchbox&utm_medium=browser accessed 1 February 2016.

⁶⁰ <http://bna.bh/portal/en/news/670451> accessed 9 February 2016.

⁶¹ <http://www.bna.bh/portal/en/news/648496> accessed 9 February 2016.

⁶² <http://www.citizensforbahrain.com/index.php/entry/what-the-new-government-action-plan-means-for-bahrainis> accessed 9 February 2016.

2014a). With insufficient land and water resources Bahrain is unable to produce enough food for its growing population, so faces a major problem if climate change is as bad as some models predict, especially in terms of territorial loss and because productivity is lower than it should be. It will therefore need to look overseas to guarantee its food supplies

As seen above, one of the predicted global climate change effects is increased extreme weather events. At the end of November 2015 Bahrain suffered chronic flooding, so the government now plans to invest in rain drainage networks and has earmarked US\$21.9 million to tackle rain drainage problems in 55 locations across the country. A similar initiative already underway in 55 other locations was due to be completed in April 2016, with work at 45 of those already finished⁶³. The irony is that in water-stressed Bahrain most of the floodwater was wasted as there is currently no artificial means of capturing and storing it and future projects appear concerned only with drainage rather than water conservation.

4.3.2. Sustainability and Alternative Technologies

As part of any climate change mitigation strategy some move towards the use of alternative technologies to enable sustainable development of the economy could be reasonably expected. The King Hamad Prize for Agricultural Development has a US\$212,200 budget to improve shortcomings, support private sector agricultural growth, and encourage R&D. Governorates will compete to establish modern irrigation systems and technology intensive planting projects. The National Initiative has also allocated US\$79,600 for R&D and extended funding to the Arabian Gulf University to produce animal feed from locally available agricultural remains. Other R&D by the private sector includes hydroponics systems, vertical farming and water preservation. Currently, only 0.52 percent of agricultural GDP is allocated to R&D (BEDB 2014a). Food and water security are significant components of the wider human security agenda and the initiatives described here demonstrate a willingness to embrace new technologies in agriculture and use water and land

⁶³ <http://www.gdnonline.com/Details/47458/BD8m-earmarked-for-rain-drainage> accessed 1 December 2015.

resources to produce food more effectively. It is interesting it is recognised that public money is needed to energise a programme that might otherwise be unattractive to the private sector, because of the time taken to yield worthwhile returns. This demonstrates a willingness to work with the private sector and maybe to hand the programme over to them. Whether that will be cost free, with the government renouncing its supervisory role completely remains to be seen, but with human security as a vital part of national security it would be logical for the government to retain some oversight to ensure programme success and continued improvement.

In May 2015 plans were announced to increase the adoption of renewable energy in Bahrain as an alternative to traditional power sources and the Electricity and Water Authority had been directed to conduct studies⁶⁴. There was also a proposal to establish a National Renewable Energy Regulatory Authority which would be independent from the Ministry of Energy and pave the way for investment in solar power and wind farms. Bahrain already has a renewable energy project with a solar power plant producing five megawatts (5MW) of electricity near Manama⁶⁵ and work on another project to produce 5MW of electricity using both solar and wind power was due to commence in mid-2015. The government's planned energy expenditure for 2015 and 2016 was US\$2.25 billion. Despite the public announcement of the new body and the new project there is little visible evidence of any progress being made; a search on the Electricity and Water Authority website⁶⁶ gave information on only one project from 2011.

4.3.3. Political Reform

The most significant political reform for Bahrain would be a change from the ruling bargain to a diversified and private sector dependent political economy with greater popular political participation. Taleb and Treverton (2015) describe Bahrain as an extremely fragile state mainly because of its repressed Shia

⁶⁴ <http://www.evwind.es/2015/05/12/bahrain-government-pushes-for-solar-energy/52045> accessed 1 February 2016.

⁶⁵ http://www.pv-magazine.com/news/details/beitrag/bahrain-unveils-5-mw-smart-solar-project_100006877/#axzz2s7PEdhIX accessed 1 February 2016.

⁶⁶ <http://www.mew.gov.bh/default.asp?action=category&id=93> accessed 1 February 2016.

majority, but a rapprochement between the two sides seems highly unlikely in the foreseeable future.

However, the BEDB is encouraged; it says growth in Bahrain's economy has become increasingly reliant on the private sector. In marked contrast to 2012, when the public sector expanded by 12.1 percent, it now accounts for a modest proportion of overall growth, namely 2.1 percent in 2013 and 2.8 percent in 2014 (BEDB 2015a). The implication is that the private sector is overhauling the public sector as the wealth creator, which could lead to structural reform and a move away from rentierism to a tax based economy, where citizens pay more for services as their earnings increase. However, there is no evidence that decisions on political reform or taxes are imminent.

Katzman, writing for the US Congressional Research Service in December 2015 (2015b), said some believe a political settlement between the ruling élite and the Shia remains possible, but cautioned about Saudi agreement to concessions to the Shia in the light of the mid-2015 nuclear agreement with Iran which they opposed. However, Katzman said it could be argued current conditions favour a settlement, because the opposition and government appear to realise neither side can win, but he noted that hard-line Bahraini Sunnis would continue to urge the Monarchy not to give concessions and to continue with the suppression of dissent. His words regarding the Saudis proved to be prophetic, as their execution of a prominent Shia cleric in the first week of 2016 led to the present diplomatic rift between Iran and the Gulf Arabs; this will be discussed later. As a result the likelihood of any political concessions soon appears remote.

4.3.4. Economic Diversification

As seen from BEV2030, economic diversification is the government's main priority in its drive for sustainable economic security to underpin its national and human security agendas. BEDB (2013) says growth in Bahrain's economy has been driven by four main sectors: manufacturing; finance; telecommunications and transport; and personal and social services. Manufacturing achieved average growth of 6.5 percent in 2000-12, and peaked at 16 percent in 2005. It provided 18 percent of GDP growth and led the process of economic diversification in Bahrain. It is one of the largest employers of citizens.

Financial institutions exploited the availability of skilled citizens and government liberalisation with annual growth in the financial sector in 2000-12 of 7 percent. Similarly, transport and telecommunications emerged as one of the most dynamic sectors mainly due to privatisation and liberalisation initiatives. Its share of GDP increased from 4 percent in 2000 to 7 percent in 2012. Although the pace of growth subsequently slowed, the sector was still responsible for 9 percent of GDP growth in 2012. The social and personal services sector had the highest average annual growth in 2000-12 at 14.3 percent. Importantly, this successful diversification happened in parallel to a significant decline in the hydrocarbon share of GDP (43.6 to 19 percent in 2000-12). The sector had a negative contribution in 2012, mainly due to maintenance in the Abu Sa'afah oil field. BEDB's assessment is full of optimism and while it may be driven by the pragmatism of declining hydrocarbon revenues, it does reflect a genuine desire to diversify and liberalise in an attempt to maintain a sustainable national economic model. Bahrain's strong financial infrastructure is seen as the backbone of the national economy and is said to have made Bahrain a pivotal centre, by transforming it into a regional⁶⁷ financial hub. Certainly the figures support the notion that Bahrain's newly diversified economy is doing well and this improved economic security has positive human and national security consequences for the Kingdom.

The December 2014 Bahrain Economic Quarterly (BEQ) said the global backdrop had become more challenging. It forecast oil markets were likely to be characterised by volatility and said 'this underscores the importance of the ongoing efforts toward economic diversification' (BEDB 2014b). This was prescient as by the beginning of 2016 oil prices had slumped to their lowest since the Second World War according to some commentators⁶⁸. The implications are mixed for Bahrain's economy. The volatility of the oil price means the government cannot guarantee its hydrocarbon income streams, but as its reserves reduce this becomes less crucial as it has diversified into other sectors as seen above. However, it must continue to look for other sustainable sources of government revenue if rentierism is to continue as the basis of its political economy.

⁶⁷ <http://www.gulf-daily-news.com/NewsDetails.aspx?storyid=399806> accessed 14 April 2015.

⁶⁸ <http://www.theweek.co.uk/oil-price/60838/oil-price-could-still-be-as-low-as-25-in-a-years-time> accessed 19 January 2016.

The same BEQ forecast significant strength in regional tourism and investment, with regional governments redoubling their economic diversification efforts. It was predicted this would continue to create new opportunities for Bahrain-based companies (BEDB 2014b). The BEDB saw the regional economic situation as highly beneficial to Bahrain's economy, especially in supporting its own diversification efforts through parallel diversification in other GCC states. This confidence appears to have been well placed, as although the oil price remained lower than expected for longer than expected, December 2015's BEQ reported that growth across the GCC was still being led by the non-oil sector, with states running significant infrastructure programmes, such as Qatar and the UAE, having the greatest non-oil momentum. Growth had reduced over 2015 and was forecast to shrink further over 2016, but a net increase is expected nonetheless (BEDB 2015b).

In 2014 all parts of the non-oil sector had a significant increase in growth. This was very obvious in the Construction sector, which quadrupled growth over two quarters making it the fastest growing sector of the economy. This reflected the activation of a large infrastructure project pipeline worth more than US\$22 billion. Hotels and Restaurants, which had consistently been the fastest-growing sector, experienced a shallow trajectory but nonetheless posted robust growth of 7.4 percent. The only other sector to grow significantly faster than the non-oil economy taken as a whole was Social and Personal Services, mainly composed of private health care and education. This sector, with its significant human security aspects, has emerged as one of the most dynamic in Bahrain. By contrast, public sector growth remained moderate and was in line with aspirations to put the private sector at the forefront (BEDB 2014b). All of this is good evidence of sustainable economic development in the non-oil sector and a positive demonstration of diversification into a wide range of business areas. Also, rather than being transfixed by a single focus such as financial services, which may seem an easy option, the government appears to have recognised it cannot put all its economic eggs in one basket.

However, BEDB reported that hydrocarbons had performed strongly in 2014 and both the onshore Bahrain (Awali) field and the offshore Abu Sa'afah saw sustained output gains. Production from the Bahrain field rose from 48,758 barrels per day (b/d) to 49,187 b/d over two quarters, and Bahrain's share of

Abu Sa'afah's output rose from 158,278 b/d to 160,385 b/d in the same period (BEDB 2014b). Abu Sa'afah is a Saudi oilfield, but the Saudis share its production with Bahrain (Katzman 2015a). That oil revenue is obviously very welcome to Bahrain, both in financially underpinning its economic diversification policies and also providing economic stability to a monarchy that otherwise might have toppled, were it not for Saudi and UAE support. Nevertheless, this should not be interpreted as Bahrain clinging to its hydrocarbon past; the weight of evidence, especially in BEQ December 2014, shows the government is clearly focused on serious economic diversification and understands the need to establish a sustainable economic model, if only for national security reasons.

In March 2015, economic confidence throughout the GCC was assessed as holding up well with key indicators pointing to very good results. Bahrain, as the self-proclaimed most regionally integrated GCC economy, saw this as advantageous as most of its businesses continued to grow, creating new opportunities and supporting the offshore banking sector. Regional tourism looked good and Bahrain was well-positioned to benefit from an increase in Saudi visitors. There were also indications that regional investors were turning to Bahrain's property market for good deals (BEDB 2015a). This upbeat synopsis of the GCC's economic effects on Bahrain is indicative of the Kingdom's view of its own centrality in GCC economic activity, but also appears to prove that it is becoming more of a financial hub in the Gulf, which is reflected in the economic aspirations of BEV2030.

Necessarily, sustainable economic diversification has to go much wider than the large national and foreign corporations based in Bahrain. Support to small and medium enterprises (SMEs) comes through the government's Tamkeen labour fund, which finances and guarantees loans from commercial and Islamic banks. Tamkeen guarantees 50% of the value of SME loans. Total loans disbursed by the end of 2012 amounted to around US\$17.2 million for 4,764 enterprises. An additional US\$132.6 million was allocated to further extend the Tamkeen guarantee scheme. Tamkeen also funded start-ups as part of its support scheme, including pre-seed grants and feasibility and incubation support (BEDB 2013). The SME start-up programme has developed with loans available and support from initiatives such as the Bahrain Business Incubator

Centre, which provides start-ups with a full spectrum of consultancy services⁶⁹. Other new initiatives were also underway as Tamkeen signed agreements with Khaleeji Commercial Bank and Bahrain Development Bank to expand low financing options and the number of incubators as part of its support programme. The expanded SME support infrastructure, along with strategic refocusing by key national support institutions, aimed to put more local companies on a growth trajectory (BEDB 2015a). This is a critical path as it spreads and embeds diversification across the economic spectrum and also provides a range of potential employment at a variety of skills and educational levels to citizens, deepening their involvement in the economic health of the country.

In early 2015, BEDB continued its optimism. Significant activity was underway in a range of infrastructure projects funded by the Gulf Development Fund and other sources, including private investors and government-related entities. Even though the infrastructure projects would result in an influx of foreign labour, as well as increased revenues, it was assessed to have a pronounced multiplier effect across the rest of the economy by boosting investor and consumer confidence and creating more credit opportunities for the financial sector (BEDB 2015a). There is significant evidence of economic diversification across the spectrum of business, from large infrastructure projects to SMEs, which reinforces the importance of Bahrain's move away from hydrocarbon dependency towards an economically secure future. However, the necessity for foreign labour to work on infrastructure projects is seen as a disadvantage, to be balanced against the positive aspects of economic growth the projects will generate. Expatriate labour therefore appears to be a necessary evil discussed later.

The effects of diversification were also felt on the Bahrain stock market which continued to rise because of limited exposure to hydrocarbon price fluctuations. Bahrain Bourse emerged as one of the region's resilient stock markets, when other regional bourses experienced far greater volatility. Although there was a significant slowdown in early 2015, it remained as one of only two GCC

⁶⁹ http://www.bbcbahrain.com/about_us.php accessed 8 June 2015.

exchanges (along with Saudi Arabia's Tadawul) to have posted positive growth in the first quarter. The investment sector led the Bahrain All-Share Index in 2014, growing by 29.4 percent, outpacing the commercial banks sector which had led the way in 2013. It was followed by the Services and Hotels & Tourism sectors which gained 14.9 percent and 12.4 percent respectively (BEDB 2015a). This again demonstrates that greater economic stability has been achieved because of a reduced reliance on oil revenues. This should lead to more assured political stability as the population is not adversely affected by major falls in the price of oil like those experienced at the turn of 2015-16, which in turn gives greater human and national security. The inescapable interdependencies of a healthy economy, political stability and human and national security are therefore writ large.

Although in December 2015 BEDB acknowledged historically low oil prices had adversely affected growth in the GCC, Bahrain was still forecasting real GDP growth of 3.2 percent for 2015, although down on 2014's figure of 4.5 percent. This is expected to stabilise with estimates for 2016 and 2017 showing 3.2 and 3 percent respectively. There was also a significant change in the forecast balance of the Bahrain economy; in 2014 non-hydrocarbon growth was 1.63 percent higher than its hydrocarbon equivalent, but in 2015-17 this is forecast as being between seven and eight times more (BEDB 2015b). BEDB also said performance of GCC economies had been very stable in the closing months of 2015. Despite signs of a more conservative fiscal approach, estimates of economic activity continued to point to expansion. BEDB claims this provides a favourable backdrop for 'Bahrain's highly regionally integrated economy', with visitor flows likely to remain robust and continued investor interest in real estate and infrastructure projects, due to the relative value of Bahrain's market (BEDB 2015b).

However, in May 2016 it was claimed Bahrain's economy was now the most vulnerable in the Gulf due to the recent drop in oil prices. It was estimated Bahrain would have a deficit in 2015 of US\$5.3 billion rising to US\$7.9 billion in 2016. The government had undertaken cost-cutting and subsidy reduction and imposed a 60 percent rise in the price of petrol in January 2016, the first rise for 33 years. There had also been government restructuring including rationalisation of ministries, although multibillion dollar projects to upgrade the

energy infrastructure and large real estate schemes continued as planned⁷⁰. Yet, despite current low oil prices, the overall picture suggests Bahrain's proactive policy of diversifying from hydrocarbons is continuing successfully and enabling a potentially improved economic situation in the monarchy. Whether this would have happened so quickly without the depletion of Bahrain's oil reserves is moot, but the fact remains Bahrain is moving towards a future sustainable economic model, albeit with Saudi support at present. Whether the current rentier system is survivable is still very questionable and will depend on how the government finesses the issue of taxation to take up the economic burden left by the reduction in hydrocarbon revenues. As seen previously there are very little signs of political reform any time soon.

4.3.5. Education and Skills for Citizens

As BEV2030 stresses, appropriately educating and training Bahrain's citizens is critical to the development of a vibrant and diversified private sector-based economy. According to the 2010 Census, Bahrain's population was fairly young with 42 percent under the age of 20 and just 4.1 percent over 65. The dependency ratio, commonly used to compare the size of the working age population to the 'dependent' population, decreased during 2001-10, as more young people entered the potential workforce. The non-Bahraini population was overwhelmingly in the working-age category with 88 percent aged between 20 and 64 in 2010 and characterized by a low dependency ratio. Non-Bahraini males outnumber females by 2.6:1. This reflects the significant number of low wage expatriate workers who are mainly employed in labour-intensive sectors such as retail and construction (BEDB 2013). It also reflects Bahrain's shortfall of citizens willing or capable of doing labour-intensive jobs, which will have to be rectified if expatriate dependency is to be reduced.

The Bahraini workforce participation rate stood at 58.4 percent in 2010 (BEDB 2013). This is relatively low compared to developed countries e.g. the USA, where the participation rate for the age group of 20–64 stood at 78.7 percent in the same year. According to BEDB the lower participation rate is largely reflective of a significant, albeit diminishing, gender differential in participation among Bahrainis, with participation by Bahraini women just over half that of

⁷⁰ The Gulf, 9 May 2016, 9:159, p42.

men. However, female participation rates have been rising and to suggest lack of participation in work is entirely due to lack of female workers may be tenuous. Total civilian employment in the Kingdom more than doubled during 2002-13, but as expatriate employment outpaced citizen employment, Bahraini share of total employment fell from 34 to 23 percent. By sector, over one-third of civilian Bahraini employment was in government, with retail and manufacturing being the next largest employers. While the public sector continues to account for a large share of overall Bahraini employment, it is markedly lower than in other GCC states. Among migrants, 63 percent are employed in construction, retail, or domestic work, again the labour-intensive and more manual or menial sectors.

It was inevitable the dependency ratio would reduce, given the large youth bulge moving into the working population. The challenge for the government is to provide sufficient work its young citizens are prepared to do. The reduction in the dependency ratio amongst migrant workers probably reflects a deliberate policy to prevent low or no-skill workers from bringing their dependants into Bahrain; but key questions are whether citizens would really want to do migrants' jobs; and could the government afford large numbers of unemployed nationals if they will not take on the labour-intensive work? It is unlikely the public sector will be able to increase and soak up excess labour, given the declining relative value of the hydrocarbon industries which are still the main source of government revenue. The closing of the gender gap in the workforce may reflect greater citizen participation in work, but it will almost certainly be work confined to non-manual sectors. In other sectors Bahrainis may be excluded because they lack skills, or the willingness to do what a job entails. Realistically there are not enough Bahrainis to do all the jobs that need doing, so dependency on expatriates will continue even if full-employment is achieved among nationals.

Bahrain was the first Gulf State to introduce formal education in 1919 and in 1928 girls' schools were established to provide equal access opportunities (BEDB 2013). Currently, education is compulsory for all students until 15 years of age in both public and private institutions. More than 265 primary and secondary schools operate in the Kingdom, including 65 private schools with curricula from the UK, US, France, India and Pakistan. Bahrain also has

sixteen public and private universities. The sector has experienced significant growth, expanding 205 percent in 2000-12 and its GDP contribution rose almost threefold to US\$1.2 billion. Growth in private education has outpaced state education over the same period; state education increased by 130 percent, but private education grew 5.5 times faster, mainly due to the establishment of private universities and institutions. Women are the clear majority of teachers, with an average of 65 percent employment in education in 2001-10. Teacher numbers grew 74 percent during the same period, with the majority employed in state institutions; approximately 80 percent of state school teachers are Bahrainis, but in private schools the share of nationals is less than 20% (BEDB 2013).

The growth in both state and private education sectors is vital for Bahrain's future, to ensure citizens are sufficiently skilled and educated to take on work in a diversified economy with less expatriate workers. With education compulsory for all until the age of 15 it appears a good basis of literacy and numeracy should be present in the national population. In fact literacy rates in Bahrain are relatively high by international standards and have increased in recent years. The most common measure of literacy is the percentage of population above 15 years who can read and write. According to the United Nations Development Program (UNDP) the literacy rate in Bahrain increased from 86.5 percent in 2001 to 91.9 percent in 2010 (BEDB 2013). In 2014/15, 33,398 Bahrainis were enrolled in higher education institutions⁷¹, but in 2013/14 only about one seventh of that number (4685) achieved Bachelors' degrees or above. Unfortunately those statistics do not show how many are citizens, but they confirm that women exceed men in each category and substantially in Bachelors' and Masters' degrees⁷². It therefore appears degree level education for nationals is unusual and the majority of higher education facilities reside within the private sector and are mainly run and staffed by non-Bahrainis, suggesting insufficient numbers of Bahrainis are able to teach at that level.

⁷¹ http://moedu.gov.bh/hec/UploadFiles/Final_HEIs_Enrolled%20Students%20by%20Nationality-2014-2015-EN.pdf accessed 20 January 2016.

⁷² http://moedu.gov.bh/hec/UploadFiles/Final_HEIs_Graduates%20by%20Level%20of%20Education%20a nd%20Areas%20of%20Study-2013-2014-EN.pdf accessed 20 January 2016.

To improve employability and efficiency and cater to the needs of the job market, reforms were introduced in the education sector in 2001-12. These included a teacher training programme, a new polytechnic college for technical and vocational training, an improved secondary vocational programme, and a quality assurance initiative. New support and accountability systems were introduced to measure school performance and national numeracy and literacy strategies were implemented. According to the World Economic Forum's Global Competitiveness Report 2013–2014, Bahrain's global educational ranking had improved to 48th compared to 56th in 2008 (BEDB 2013). Bahrain is making progress in educating its population and 29.8 percent of young people are entering tertiary education, comparing favourably with the UK's 2013 figure of around 40 percent⁷³. However, as seen above the majority are not taking Bachelors' degrees or equivalent courses, but where they are, increasing the numbers of Bahraini graduates can only be good for the Kingdom's economic diversification, sustainable development and reduction of individuals' dependency on the state for life support.

As part of its 2012 'Skills for the 21st Century' campaign, Bahrain's Higher Education Council (HEC) held workshops led by the Massachusetts Institute of Technology and the UK's Queen Margaret University focused on how to embed entrepreneurship and stimulate innovation by improving university curriculums. Higher education institutes had independently recognised the importance of entrepreneurial education; it was added to the University of Bahrain's strategy in 2009 and the Royal University for Women entered into an agreement with the United Nations Industrial Development Organization to build a training centre offering entrepreneurship courses and general business incubation to new companies (BEDB 2013). During Global Entrepreneurship Week in Manama in November 2014, the Industry and Commerce Minister affirmed that entrepreneurship is critical to any economy and said BEV2030 sees a crucial role for the private sector to drive growth and productivity; entrepreneurial activity and a dynamic private sector are key strands of Bahrain's national economic strategy⁷⁴. This commitment to developing entrepreneurship is demonstrated through the establishment of such bodies as the Bahrain Institute

⁷³ <http://www.bbc.co.uk/news/education-25432377> accessed 5 June 2015.

⁷⁴ <http://www.moic.gov.bh/En/Main/News/Pages/Global-Entrepreneurship-Week.aspx> accessed 8 June 2015.

of Entrepreneurship and Technology (BIET). BIET's 'key objective is to provide innovative training techniques, competent faculty support, consultancy, and quality teaching that will maintain steady economic growth and strengthen [the] Kingdom's vision of 2030'⁷⁵. This further reinforces the Bahraini government's commitment to economic diversification through the development of entrepreneurial skills among its nationals and sits well alongside the financial and incubation support offered to SMEs as mentioned above.

Tamkeen also supports entrepreneurship through a programme providing entrepreneurial skills to secondary school students who are placed in groups and asked to develop their own company. Institutions cooperating with Tamkeen assist with initiatives that aim to foster an entrepreneurial culture among citizens by providing the skills needed to create and sustain a business. Partners include the Ministry of Industry and Commerce, the Supreme Council for Women, the Bahrain Development Bank and private institutions (BEDB 2013). This is a superb initiative as it starts early and aims to develop the entrepreneurial spirit of students still at school which will help the aspiration to create a diversified and sustainable economy.

Bahrain is therefore making significant efforts to educate its citizens, from ensuring basic levels of literacy and numeracy through to developing a culture of higher education. Admittedly the numbers of students taking degree level courses is still low, but the fact that nearly 30 percent of students choose to remain in education beyond secondary school is a good sign for the future. The initiative to develop entrepreneurial and business skills alongside more traditional subjects is also indicative of a forward looking agenda, and catching students at secondary school will help to embed a culture of private sector work early and counteract the sense of entitlement to public sector work, or that the private sector is of less value. All of this contributes positively to future economic security and thus improves human and national security.

4.3.6. Expatriate Dependency

As seen in the previous section, migrants occupy jobs in almost every sector of the economy, including government, mainly because of a lack of indigenous

⁷⁵ <http://www.bit.com.bh/about-us.php> accessed 8 June 2015.

skills, capacity or willingness to do labour-intensive work. Agriculture and fisheries are estimated to have employed around 6,950 workers in 2013, mainly in the private sector and 94 percent of that was low wage expatriate labour. Presumably the reason the great majority of agricultural and fisheries workers are not Bahrainis is because the work is too arduous or dirty for citizens to consider it worthy of them. While this reflects the situation across the Gulf in similar manual industries, it could have an adverse effect on food production and thus human security should expatriates find better work outside Bahrain.

According to the Ministry of Labour, job creation in Bahrain accelerated markedly towards the end of 2014. While Bahraini employment grew by 2.5 percent year-on-year, the growth of expatriate labour saw an even faster increase of 3.2 percent as a result of several labour-intensive infrastructure projects launched in the second half of the year. The private sector is driving growth in the Kingdom's labour market, accounting for 90 percent of the increase in total employment, reflecting the significant pick-up in activity in the non-oil economy over the preceding twelve months. The official unemployment rate was 3.8 percent at the end of 2014, a significant improvement on 4.8 percent a year earlier (BEDB 2015a). So, the number of Bahrainis entering work is increasing, unemployment is down and the private sector is leading the way in growth, but care must be taken about drawing conclusions based on comparative percentages for indigenous and migrant workers as there are more migrants than Bahrainis⁷⁶. However, the greater the number of Bahrainis in paid employment, the less the support burden placed on the Kingdom by unproductive citizens and their families.

In the healthcare sector, a key objective of reforms has been to improve the quality of the human capital available to the health facilities. The Royal College of Surgeons – Medical University of Bahrain was established in 2004 to provide world-class training for future doctors and nurses. The College of Health Sciences is increasing its training capacity for nurses which in 2013 was 300 students per year. Nursing has the greatest potential to create citizens' jobs due to the high number of expatriate workers in the field; Bahrainis employed in nursing stood at 50 percent in 2009, compared to 80 percent for physicians.

⁷⁶ http://www.indexmundi.com/bahrain/demographics_profile.html accessed 20 January 2016.

This could be indicative of a real difference between the genders when it comes to employment, if women are under-represented in the workforce and Bahraini men see nursing as beneath them. Although growth in the number of healthcare practitioners has mirrored the increase in population, Bahrain continues to lag behind advanced economies in terms of physician to population ratios. In 2010 Bahrain had 1.4 doctors per 1,000 people, compared to the OECD average of 2.8 (BEDB 2013). The explicit intent to reduce dependency on expatriate workers in healthcare theoretically offers skilled professional employment for men and women within an important and valued sector. However, whether the work is considered of sufficient value to be taken up by Bahraini citizens, or whether there are enough people with the right education to undertake the training remains to be seen. In human security terms, Bahrain would be better served by having a significant proportion of these posts occupied by its nationals to guarantee an acceptable level of dedicated healthcare provision and to place its citizens in productive and well-paid employment.

SMEs provide around 77 percent of jobs in Bahrain's private sector, but only 13 percent of these are held by Bahrainis. This shows the relative dominance of labour-intensive activities in the SME space where companies contain costs by recruiting low-cost expatriates. 29 percent of SME jobs in 2012 were in the construction sector followed by trade (26 percent) and other services (18 percent). The proportion of citizens tends to be more significant in larger companies, but whereas 39 percent of the workforce of large private companies is Bahraini, the corresponding share for medium-sized companies is 28 percent and for small companies 24 percent. By contrast, the proportion of Bahrainis employed in micro enterprises is significantly lower at 9 percent. Most Bahraini employees are concentrated in service activities, particularly trade and finance (BEDB 2013). Despite the relatively greater proportion of nationals employed in the larger companies, well over 50 percent of all employees in all private sector concerns are expatriates. Again, it appears to be because the majority of jobs are in labour-intensive activities, almost suggesting that such employment is too menial or too physically demanding for most Bahrainis to consider doing.

The growing pipeline of infrastructure projects along with generally favourable non-oil growth has provided a benign setting for job creation. As has been seen, private sector employment has continued to increase at a healthy pace. According to the BEQ for December 2015 (BEDB 2015b) official indicators for mid-2015 showed total employment in the Kingdom had enjoyed an annual increase of 6.5 percent. However, the average wages of Bahrainis increased by 3.5 percent in the private sector and 5.1 percent in the public sector which could act as a disincentive to private sector employment, although relative pay rates are not given. Consistent with positive momentum in job creation, overall unemployment had declined to its lowest level in several years. This is good news on two fronts. It shows Bahrain's economy is healthy and there is sustainable economic and development activity taking place. It also means more Bahrainis are employed in the private sector which reduces the dependency on the state for either public sector jobs or unemployment and other benefits. All of this is good in human and national security terms and makes transforming Bahrain from rentier state to economically productive economy more achievable, providing the political will exists.

4.3.7. Human Security Measures

As described in Chapter 2, human security is multi-dimensional and encompasses food, water, health, public safety and even education as an enabler of future potential. Bahrain's approach to human security appears strong when viewed statistically through the yardstick of the Human Development Index (HDI)⁷⁷. In 2012 Bahrain's HDI score was 0.796, in the high human development category, positioning the country 48th of 187 countries and territories. This is above the average of 0.758 for countries in the high human development group and well above the average of 0.652 for Arab States, where the closest countries in rank and population size are Qatar and the UAE, ranked 36th and 41st respectively (UNDP 2013a).

⁷⁷ The HDI is a measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. To ensure as much cross-country comparability as possible, the HDI is based primarily on international data from the UN Population Division, the UN Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS) and the World Bank. <http://hdr.undp.org/en/content/human-development-index-hdi> accessed 4 February 2016.

Bahrain's 2013 HDI value increased to 0.815, now in the very high human development category, positioning it 44th of 187 countries and territories. This is below the average of 0.890 for countries in the very high human development group, but again well above the average of 0.682 for Arab States, where the countries closest to Bahrain in rank and population size remain Qatar and the UAE, which were ranked 31st and 40th respectively (UNDP 2014a). So, in 2013 Bahrain's HDI increased sufficiently to take it into the lower part of the very high human development category, while Qatar and the UAE also improved their rankings commensurately.

By 2014, Bahrain's HDI score had reached 0.824, still in the very high human development category, and 45th of 188 countries and territories. This is still below the average of 0.896 for countries in the very high human development group, but above the average of 0.686 for Arab States, where the countries closest to Bahrain in rank and population size are still Qatar and the UAE, which are ranked 32nd and 41st (UNDP 2015a). In 2014 Bahrain maintained its approximate ranking in the World, although it improved its HDI value. Notably it maintained its position relative to Qatar and the UAE which both also dropped back one position in the global rankings. On the three measures laid down by UNDP, Bahrain is still improving and is significantly better than the Arab States average, although the inclusion of Iraq, Syria and Libya must have a detrimental effect on that average value.

According to BEDB, Bahrain faces unique food security challenges because of resource-related factors that limit production, including land and water scarcity and climate conditions, combined with a growing population and increasing urbanization that magnifies demand. Bahrain has good food affordability, mainly because of low percentage spending on food relative to total household expenditure, as well as its universal subsidy program which stabilises the prices of essential foods. All social classes benefit from this subsidy, but low income households spend a much larger proportion of income on food and remain vulnerable to price changes of non-subsidised items. Bahrain has sought to control prices through low agricultural tariffs and broad-based funding for smallholders. It achieves a food supply of 2,829 kcal per capita per day, significantly above the UN Food and Agriculture Organisation's (FAO) recommended average of 2,300 kcal. Although agricultural production remains

constrained by social, climatic, and geographic realities, Bahrain has secured imports through strategic trading links with surplus food producers and established an effective delivery and distribution infrastructure. Food safety is widely monitored to ensure the implementation of stringent standards, but the absence of large-scale food storage facilities may become an issue in the long term, should the need arise to increase shelf life (BEDB 2014a). So there are significant food security challenges facing Bahrain and the gap in the market must be filled. It also shows the importance of food subsidies, especially for poorer families, coupled with price controls and low agricultural tariffs designed to keep food cheap while making farming a sustainable livelihood. As seen previously, the Gulf States are moving to secure supplies of food from overseas, but this strategy has severe human and national security implications if the supply fails. There is also recognition that storage and shelf-life is an issue and food safety must be continuously monitored. All of this indicates an active food security policy designed to benefit the whole population, thus raising the level of human security within Bahrain. However, its critical weakness is the lack of domestic production capacity coupled with dependency on overseas sources that can be disrupted by indigenous or geopolitical events.

BEDB says expenditure by income segment suggests the lowest 73 percent of the population, in terms of household income, spend a higher proportion of their money on food products, at an average of 28 percent. This makes these people more vulnerable to food price shocks because they have less ability to maintain a nourishing diet if prices of food or other essentials rise. For these categories, the share of income spent on food is equivalent to that of food insecure countries like Niger (BEDB 2014a). It is surprising that BEDB is admitting that nearly three quarters of its population is theoretically on a par in food security terms with a central African nation, although subsidies and tariffs currently mitigate that. To make this comparison publicly shows a level of real concern within government circles about the extent of possible food insecurity that exists. As around 70 percent of the population is Shia it is fair to assume they are the most affected, potentially leading to further political disaffection.

Food subsidies stood at US\$137.6 million in 2012, a 461 percent increase since 2004. Universal subsidies are probably unsustainable given the growing

population and heavy reliance on oil revenues for government income. The launch of an initiative to refocus subsidies towards low income households is essential to ensure they remain a source of social safety without compromising the food security of high income households, where food spending is below 22 percent (BEDB 2014a). The potential financial problems that Bahrain faces as oil revenues fade out are obvious for all to see. The fact subsidies are spread across the entire population means even the richest benefit. The conundrum for the government is how to remove subsidies from the well-off, whose food prices will then increase, while maintaining the subsidies for low income groups who need assistance to buy good and nutritious food. The government's desire to maintain the rentier system is obvious, but it also appears to recognise it is unsustainable in its current form. Whether the wealthy 27 percent will be happy with that is questionable, especially as they almost certainly wield some influence, as mostly they will be Sunni and have access to individuals within regime circles.

Encouragingly, most of Bahrain's domestic agricultural production goes to the local market, while a negligible amount, mainly seasonal fruits and vegetables, is exported. Bahrain has eighteen main trading partners for food items supplying 84 percent of imported food products. Saudi Arabia and Australia are the main suppliers, followed by India, the UAE and the USA. Most trading partners are politically stable, have clear legal property rights, and rank in the upper half of indexed countries for availability, so are unlikely to experience export disruptions in the event of shocks (BEDB 2014a). The government is therefore following a sophisticated human security agenda by ensuring its food supplies are sourced from wealthy and politically stable countries, whose own food supplies appear to be assured, and are therefore less likely to stop food exports than other, less stable countries might be in times of crisis. However, that does not preclude those suppliers suffering exogenous shock, or the supply routes becoming untenable because of geopolitical events. Such a high level of food dependency on external sources is a critical vulnerability in Bahrain's human and national security architecture.

Another factor impacting food availability is agricultural R&D, which is vital to Bahrain with its inherent climate and resource challenges, which will only get worse as climate change effects adversely impact the region. Bahrain achieved

important milestones in promoting agricultural R&D with the establishment of the National Initiative for the Development of Agriculture. This is an independent body led by the King's wife and tasked with supporting implementation of the National Agricultural Strategy. The aim is to enhance agricultural industry and promote its contribution to economic, social and environmental welfare. The initiative aspires to modernise agriculture through use of technologies, a sound regulatory framework, training to enhance productivity and promoting awareness of agricultural issues. These are long-term initiatives to influence local production and make the country less vulnerable to future supply shocks (BEDB 2014a). The intent to 'future-proof' the sector is clear and is particularly significant as it involves the potential for new and emerging technologies to enhance agricultural production in an era of climate change. Meanwhile the involvement of the King's wife indicates the probable involvement of some elite women in high level policy making around human security issues.

In order to achieve any progress in food security, it is vital for Bahrain to improve its water security or introduce farming methods that recycle water, to improve local food production. Bahrain faces rising challenges in water preservation, while local climate conditions require consumption of exorbitant amounts of water to grow crops, in addition to ever increasing population demand. Water consumption increased by 57 percent in 2003-13 alongside a population increase of around 86 percent. Domestic water consumption grew slowly, but commercial and industrial consumption grew at 200 percent and 112 percent respectively in the same period. Projected economic growth will prompt similar increases in the next decade, with high potential to increase water stress in a country increasingly dependent on distilled water production. Groundwater depletion is also evident with a 34 percent decline in production in 2003-13; its contribution to local consumption contracted by 63 percent in the same period. Currently, Bahrain's developed infrastructure supplies the whole population with potable water (BEDB 2014a). The links between climate, food security and water supplies are inescapable and there is a pressing need for Bahrain to find more efficient ways of preserving existing supplies, while recycling and producing fresh water. Without effective water security

measures, alternative technologies to increase food output, such as those involving vertical hydroponic agricultural production, will not be feasible.

Public healthcare services are provided free of charge to all Bahrainis and are heavily subsidised for expatriates through Ministry of Health hospitals, maternity units and primary healthcare centres. Non-Bahrainis employed in corporations with more than 50 employees are covered under a mandatory health insurance scheme. Private healthcare has become an increasingly important sector in the Kingdom and today there are twenty private hospitals⁷⁸. The healthcare sector had strong growth in 2006-12 due to expansion of both public and private healthcare facilities; further growth is expected from a comprehensive healthcare reform agenda. The development of Bahrain's healthcare sector over the past three decades is reflected in the steady improvement in key indicators, especially life expectancy as shown by the HDI. Positive progress is demonstrated by the 50 percent increase in the number of hospital beds per 1,000 people upon completion of the King Hamad General Hospital (BEDB 2013). Healthcare and thus human security has improved, but it is difficult to get more recent information concerning Bahrain's healthcare system as the government's own website is dated⁷⁹ and contains little information from after 2012. Whether this is for security reasons, bureaucratic inefficiency, or because little development activity has taken place is difficult to assess. Of note, the key source for this, the Bahrain Economic Yearbook, has not been updated since 2013⁸⁰.

4.3.8. National and Regime Security

If official information is difficult to glean in other areas, it is virtually impossible in the area of national security. A search of the government website⁸¹ using the term 'security' reveals two items on food security, but little more of interest. In keeping with the lack of transparency that exists in the region concerning national security issues generally, gaining a credible insider's view of Bahrain's

⁷⁸ http://yp.theemiratesnetwork.com/browse/hospitals_and_medical_centers-private/bahrain/-/-page-number-/ accessed 21 January 2016.

⁷⁹ <http://www.bahrain.com/en/bi/key-investment-sectors/Pages/Healthcare.aspx#.VqC55pqLSt8> accessed 21 January 2016.

⁸⁰ <http://www.bahrainedb.com/en/resources/Pages/document%20library.aspx#.VrBv2NKLSt8> accessed 2 February 2016.

⁸¹ <http://www.bahrain.com/en/search/pages/Results.aspx?k=security#.VqC915qLSt-> accessed 21 January 2016.

national security concerns is most difficult to achieve as nothing is published for public consumption.

Bahrain follows a strategy of engaging with a variety of significant partners to assure its national security interests are protected. The Defence Cooperation Agreement signed with the USA in 1991 and Bahrain's subsequent designation as a "major non-NATO ally" is a very good example of its success at this. According to Katzman (2015a) there are routinely around 7,000 US military personnel stationed in Bahrain and the US has attempted to exert pressure on Bahrain and persuade it to limit its use of force against protesters. The US has also held back some arms from Bahrain that could be used against its people, implemented wider limitations on arms sales and reduced financial assistance to its military. However, Bahrain appears to play its ally well and the political opposition claims the US prefers to understate the government's human rights abuses in the interests of their bilateral security relationship. That relationship is active and mutually beneficial, as exemplified by Bahrain's participation in US-led air strikes against IS in Syria⁸².

One of Bahrain's primary foreign policy concerns remains Iran's historic claim to its territory, perhaps exacerbated by the recent nuclear agreement, rehabilitation of Iran into the international community and lifting of sanctions. Bahraini leaders have, with some support from the US and others, blamed Iran for providing material support to the opposition in Bahrain. Furthermore, Bahrain has supported Saudi and Emirati criticism of Iran for its support of Shia movements and governments in the region. Bahrain also supported Saudi Arabia's drive to increase the GCC's political unity and generally defers to the Saudis and other GCC states over political crises in the region e.g. Libya and Yemen. However, and unlike Qatar, the UAE and Saudi Arabia, Bahrain has not backed any opposition groups in the Syria conflict (Katzman 2015a). Arguably Bahrain is pursuing a very sophisticated security strategy here. Through exploitation of their foreign policy relationships and concerns they are simultaneously deferring to the US over the use of force at home, while maintaining an American defensive umbrella over them. Arms sales restrictions may be inconvenient, but not critical when the global superpower

⁸² <http://www.centcom.mil/en/news/articles/military-airstrikes-continue-against-isil-terrorists-in-syria-and-iraq> accessed 8 February 2016.

bases itself on your territory. The Bahrainis are also playing on their concerns vis-à-vis the threat from Iran which ties them closely into the USA's containment strategy and also reinforces links with the GCC states. So, the Bahrainis have achieved a multi-layered security structure that protects them from external aggression, but also, as seen in 2011, provides them with internal security guarantees under PENINSULA SHIELD⁸³ too.

After the announcement of the deal in April 2015 where Iran agreed to curtail its nuclear program significantly in return for sanctions being lifted, President Obama hosted a GCC summit at Camp David with the aim of reassuring GCC states and discussing ways of reinforcing the US's security relationships with those countries⁸⁴. For Bahrain, which fears Iran's territorial claims and suspects Iranian interference in their domestic affairs, this will have provided welcome reassurance, as it will to the other GCC states given Iran is regarded as the main regional threat. The USA will also have wished to make it clear to Iran and Israel that they are not disengaging from the Gulf region just because this deal is being struck, as both are capable of acting as wild-cards if they felt US interest had waned. However, the Saudis undermined any sense of rapprochement and strengthened anti-Iranian sentiment within the Gulf by precipitating violent demonstrations in Iran following the execution of prominent Shia cleric Nimr al-Nimr in Saudi Arabia on 2 January 2016⁸⁵. After attacks on the Saudi Embassy in Tehran, Saudi Arabia broke off diplomatic relations with Iran and was swiftly followed by Bahrain⁸⁶, the UAE and other Sunni states. Whether Bahrain had a real option is debatable, but tying herself to her major regional benefactor will have done Bahrain's national security no harm politically and economically. However, Iran appears to have had the last laugh as it was announced on 16 January 2016 that she had achieved IAEA conditions⁸⁷ and sanctions were lifted allowing Iran to export her significant oil reserves once again, in competition with the Gulf Arabs who were already suffering record low oil prices.

⁸³ <http://www.globalsecurity.org/military/world/gulf/gcc.htm> accessed 2 February 2016.

⁸⁴ <http://english.alarabiya.net/en/News/middle-east/2015/04/07/U-S-to-defend-GCC-against-any-Iranian-threat.html> accessed 7 April 2015.

⁸⁵ <http://www.bbc.co.uk/news/world-middle-east-35213244> accessed 21 January 2016.

⁸⁶ <http://www.theguardian.com/world/2016/jan/04/bahrain-cuts-diplomatic-ties-with-iran-in-row-over-saudi-execution-of-shia-cleric> accessed 21 January 2016.

⁸⁷ <https://www.iaea.org/newscenter/statements/iaea-director-general%E2%80%99s-statement-iran> accessed 22 January 2016.

Bahrain has reinforced its links with allies by taking part in limited military operations as with its airstrikes in Syria. Bahrain has also agreed to continue its military presence in Saudi-led Operation DECISIVE STORM against Shia Houthi rebels in Yemen, at the request of the Saudi and Yemeni governments. The Bahrainis claim they are doing this to prevent a regional power, presumably Iran, from turning an Arab country into a satellite state⁸⁸. The Washington Post⁸⁹ disputes that the civil war in Yemen is sectarian in nature and says Houthi Shia are as different to Iranian and Iraqi Shia as they are to Sunnis. It alleges the Houthi are described as Shia proxies by Saudi Arabia and Israel alike, because both wish to cast Iran as the villain in this for their own geopolitical reasons. Arguably, Bahrain can do little but assist their Saudi benefactors, as the al-Khalifas remain in power only because of Saudi and Emirati support. However, it almost certainly suits Bahrain's monarchy to see the hand of Iran in the Yemen crisis, as it allows them to justify repression against elements of their own Shia population, claiming Iran has mobilised them to undermine the Sunni regime in Bahrain.

In early November 2015, the regional security conference organised annually in Bahrain by the International Institute of Strategic Studies, the Manama Dialogue, was concerned about events in the Middle-East. Reportedly the region is yet to come to terms with what are seen as the unwelcome consequences of the 2003 invasion of Iraq which severely disrupted local power politics. Iraq's Shia-led government is seen by many Sunni Gulf Arabs as Iran's proxy and it is believed the subsequent marginalisation of Iraq's Sunnis gave rise to the violent jihadist group ISIS. Bahrain's national security has not remained untouched and it recently announced it had identified 70 of its citizens fighting with ISIS and another 24 individuals have been charged with trying to establish an ISIS cell in Bahrain⁹⁰.

In terms of internal security, according to Katzman (2015a), some experts have expressed pessimism about the possibility of a political settlement in Bahrain, suspecting the Shia rebellion might be evolving into a much more organised insurgency. One hard-line group, the 14 February Youth Coalition, claims to be

⁸⁸ <http://www.gulf-daily-news.com/NewsDetails.aspx?storyid=399432> accessed 7 April 2015.

⁸⁹ http://www.washingtonpost.com/blogs/worldviews/wp/2015/04/07/forget-what-youre-hearing-the-civil-war-in-yemen-is-not-a-sectarian-conflict/?tid=pm_world_pop accessed 7 April 2015.

⁹⁰ <http://www.bbc.co.uk/news/world-middle-east-34692140> accessed 6 November 2015.

inspired by the protests in Egypt; the government has declared it a terrorist organisation aiming to overthrow the state. The Youth Coalition's claim of responsibility for an explosion in the Financial Harbour district in April 2013 gives credence to the government's assertion. In September 2013, fifty Shia were sentenced to up to fifteen years in jail for alleged involvement in the organisation. Other violent opposition groups that have claimed responsibility for terrorist attacks in Bahrain include the Sayara al-Ashtar (Ashtar Brigades)⁹¹, the Popular Resistance Brigades which openly affiliates with the Youth Coalition and the Sayara al-Mukhtar (Mukhtar Brigades).

Unsurprisingly perhaps, with the emergence of violent terrorist groups, the manufacture, storage, and use of explosives against Bahraini security forces appears to be increasing. The government discovered bomb-making materials in several locations and claims to have uncovered an arms warehouse used by oppositionists. In October 2013 nine Bahraini Shia linked to bomb-making facilities were convicted and jailed, and in December 2013 a ship bound from Iraq was seized, allegedly carrying Iranian weaponry and bomb-making material for the Bahrain opposition. The government claims the bombings show the opposition intends to overthrow the state by any means; meanwhile the main opposition political societies insist they have no connection to violent underground groups (Katzman 2015a), but efforts to distance themselves and avoid the attentions of Bahrain's security apparatus will probably be in vain.

Violent extremists are present in Bahrain and have posed a security threat, despite repression by the Bahraini security forces. Despite some low-level political reforms, discontent among some of the Shia remains strong and deep-rooted, further suggesting the monarchy's survival could be in danger unless continuously supported by powerful allies. The sudden appearance of ISIS on the regional stage in mid-2014, along with its virulent anti-Shia ideology, may have made the overthrow of the Sunni monarchy in Bahrain a less appealing proposition to Bahrain's Shia. The risk is that the collapse of the al-Khalifa monarchy could open the door to a branch of ISIS and the atrocities against Shia that would inevitably ensue. There is also probably suspicion in Shia minds that if the al-Khalifas' position became untenable the Saudis would

⁹¹ <http://jihadintel.meforum.org/group/93/saraya-al-ashtar> accessed 8 June 2015.

switch sponsorship to ISIS, who share their anti-Shia views, in the mistaken belief they could control a part of the caliphate that was contiguous with Saudi Arabia.

However, terrorist planning and operations seem to continue. One example is a terrorist plot by a militant cell supposedly trained in Iraq which was foiled in early 2015 according to the government. It said the arrested individuals were suspected of terrorism as part of Saraya al-Ashtar. In late 2014 the group allegedly sent recruits to Iraq to receive military training from the 'Hezbollah Brigades'⁹². This is politically convenient for the monarchy as it suggests a nexus between Shia inside and outside Bahrain, and any form of Hezbollah is seen as being closely tied to Iran, implicating the Iranians in sponsorship of terrorism in Bahrain.

Towards the end of 2015, the Interior Minister outlined the incidents Bahrain had witnessed since 2011. He said Bahrain continues to face foreign interference and organised terrorism; he described the seizure of military-grade shipments from Iran, including weapons and explosives, and ongoing anti-Bahrain propaganda by Iranian-backed media organisations. He said:

'I am deeply concerned about how to protect our youth, both from extremism and political violence, and from crime in general, including the use of drugs. Extremism is a growing threat to all of us - not just young people. Whether it is religious extremism, which hijacks our faith for political goals – or ideological extremism, which aims to overturn the established political order, there is no doubt that extremism is the root of today's terrorism'⁹³.

The Interior Minister's comments represent an unequivocal statement of the Bahraini government's intent to maintain and strengthen its security apparatus. Conflating external aggression with alleged foreign support for dissidents, domestic opposition groups and terrorism, alongside countering organised crime, is an ideal way of ensuring the security forces have the authority and powers they need to conduct a full-spectrum security clampdown on any form of civilian non-compliance. Effectively this gives the security forces *carte blanche* to arrest and detain whoever they wish.

⁹² <http://english.alarabiya.net/en/News/middle-east/2015/06/07/Bahrain-says-foils-terror-plot-by-Iraqi-trained-cell-.html> accessed 8 June 2015.

⁹³ http://www.policemc.gov.bh/en/news_details.aspx?type=1&articleId=27609 accessed 30 November 2015.

4.3.9. Reinforcing Security Structures

Having suggested Bahrain is strengthening its security forces and powers, the Kingdom publishes very little about its security operations, so it is difficult to gain a view of whether force levels have been increased or deployments altered, especially since the events of 2011 caused such a major security surge. However, what is clear is that repression continues to be the major security tool used by the authorities to maintain their hold on power and minimise vocal dissent or active opposition. Some specific examples demonstrate this very clearly.

In June 2015 Sheikh Ali Salman, the leader of the main Bahraini Shia opposition group, al-Wefaq, was jailed for four years for inciting hatred, promoting disobedience and insulting public institutions. Al-Wefaq has accused the Sunni-led government of aggravating the country's crisis with Salman's sentencing⁹⁴ and demanded his release⁹⁵. This was reported objectively in the Qatar-based Gulf Times which has a record of open reporting of human rights violations in other Arab states, generally supporting what it sees as the oppressed, probably to the great annoyance of Bahrain's rulers and perhaps reflecting the periodically fractious relationship between Qatar and Bahrain over the years^{96,97,98}. On 30 May 2016 the Sheikh's sentence was extended by an appeal court to nine years causing al-Wefaq to warn of the potential for a still worse political crisis⁹⁹ in the country. This was subsequently followed by a government suspension of al-Wefaq to 'safeguard the security of the kingdom' on 14 June^{100 & 101} and al-Wefaq's spiritual leader, Sheikh Isa Qassim, being stripped of his Bahraini nationality on 20 June following accusations of collusion with foreign enemies, presumably Iran, and promoting

⁹⁴ <http://www.bbc.co.uk/news/world-middle-east-33147198> accessed 17 June 2015.

⁹⁵ <http://www.gulf-times.com/Mobile/Region/216/details/443602/Bahrain-court-jails-opposition-leader> accessed 17 June 2015.

⁹⁶ http://news.bbc.co.uk/1/hi/world/middle_east/131227.stm accessed 8 February 2016.

⁹⁷ <http://www.telegraph.co.uk/news/worldnews/middleeast/qatar/10678644/Saudis-UAE-Bahrain-withdraw-envoys-from-Qatar-in-security-dispute.html> accessed 8 February 2016.

⁹⁸ <http://www.aljazeera.com/news/middleeast/2014/11/gulf-leaders-reinstate-ambassadors-qatar-20141116202842331341.html> accessed 8 February 2016.

⁹⁹ <http://www.bbc.co.uk/news/world-middle-east-36411342> accessed 31 May 2016.

¹⁰⁰ <http://www.bbc.co.uk/news/world-middle-east-36528013> accessed 15 June 2016

¹⁰¹ <http://www.aljazeera.com/news/2016/06/bahraini-court-suspends-al-wefaq-opposition-group-160614133354700.html> accessed 16 June 2016.

sectarianism and violence¹⁰². It appears Bahrain's government is intent on inflaming¹⁰³ rather than defusing an already restless and fragile situation.

In September 2015 a report by Americans for Democracy & Human Rights in Bahrain (ADHRB) claimed the government of Bahrain was committed to dismantling its opposition, exemplified by al-Wefaq Secretary-General Ali Salman's prison term detailed above, plus al-Wahdawi leader Fadhel Abbas' sentence of five years detention and the re-arrest of National Democratic Action Society (Wa'ad) Secretary-General Ebrahim Sharif only weeks after his early release from a sentence for allegedly inciting the overthrow of the government, violence, hatred and sectarianism¹⁰⁴. It claims suppression of the cross-sectarian opposition aims to prevent the Shia from working with Sunni oppositionists to reduce the marginalisation of the majority. ADHRB cites negative media reporting, destruction of Shia heritage sites and economic and political disenfranchisement¹⁰⁵ as evidence of the government's campaign of oppression. ADHRB's reporting is widely corroborated through other human rights sources and the regional and international news media.

In late November 2015 photographer Sayed Ahmed al-Mousawi was sentenced to ten years in prison and had his nationality revoked, along with 12 others, after reporting a series of demonstrations in early 2014. Security forces detained Al-Mousawi for over a year without trial or official charges, accused him of being a part of a terrorist cell and subjected him to torture. Bahrain then tried al-Mousawi under its anti-terrorism legislation. A judge later accused him and his brother of membership in a terrorist cell, which al-Mousawi denied. ADHRB says Bahrain's continued arrest of journalists and photographers for exposing human rights violations reflects a systematic campaign by the authorities to quell freedom of expression and the press. Bahrain is ranked 163 out of 180 in the 2015 World Press Freedom Index according to Reporters Without Borders. In 2014, a court convicted another renowned photojournalist,

¹⁰² <http://www.bbc.co.uk/news/world-middle-east-36578000> accessed 20 June 2016.

¹⁰³ <http://www.middleeasteye.net/news/bahrain-strips-most-senior-shia-cleric-citizenship-93656087> accessed 21 June 2016.

¹⁰⁴ <http://www.gdnonline.com/Details/13564/Opposition-leader-is-arrested-again> accessed 13 July 2015.

¹⁰⁵ <http://www.adhrb.org/2015/09/adhrb-releases-part-2-of-shia-discrimination-report/> accessed 30 November 2015.

Ahmed al-Humaidan to 10 years in prison under similar charges. ADHRB says Bahrain has revoked the citizenship of more than 130 individuals since 2012¹⁰⁶.

Following the murder of two French journalists in Mali in 2013, the UN proclaimed 2 November the 'International Day to End Impunity for Crimes Against Journalists'. The day is dedicated to all press who have suffered violence and condemns the imprisonment, torture, and murder of journalists. In 2015, the Bahrain Centre for Human Rights (BCHR), ADHRB and Bahrain Institute for Rights and Democracy (BIRD) marked the day, expressing severe concern over Bahrain's repression of freedom of speech by commentators using both traditional and social media. They accused the government of criminalising freedom of expression through systematic prosecution of journalists and bloggers; they noted the 2015 Freedom House annual report rated Bahrain "Not Free" and ambiguities in Bahraini law allow journalists to be detained for criticising the King or Islam, or threatening national security. They claimed at that time the Bahraini authorities held at least ten journalists and photographers on such charges¹⁰⁷. Again, there is sufficient contemporaneous reporting to back-up the claims of the human rights lobby and strongly support the view that freedom of political expression by the opposition in Bahrain is severely limited.

This is by no means an exhaustive list, but clearly shows the Bahraini government is engaged in an active campaign to silence the spectrum of opposition it faces. Furthermore, the government is not averse to using torture and other non-judicial methods to achieve its aims. These examples of clear repression of critics of the regime serve only to aggravate the mainly Shia opposition and prevent any chance of a meaningful dialogue or a political agreement any time soon. This makes BEV2030's claims of Bahrain as one nation look hollow, if not disingenuous.

4.3.10. International Collaboration

Bahrain maintains close links with many partners to achieve its national goals, but, while it hosted a climate change conference at the Arabian Gulf University

¹⁰⁶ <http://www.adhrb.org/2015/11/ngos-condemn-imprisonment-and-nationality-revocation-of-photographer-sayed-ahmed-al-mousawi/> accessed 25 November 2015.

¹⁰⁷ <http://www.adhrb.org/2015/11/violence-against-journalists-in-bahrain/> accessed 4 December 2015.

in May 2015, where regional and especially GCC cooperation on climate change was on the agenda¹⁰⁸, no obvious collaboration on specific climate change issues has been discovered. Of course, Bahrain openly nurtures relationships designed to protect its national security. For example, in February 2015 it was announced Bahrain was lending military support to Jordan to help combat ISIS, as part of the Gulf Kingdom's commitment to 'the efforts of the International Coalition to eradicate terrorism'. News reporting said the decision was in line with bilateral ties between the two countries and the 'solid brotherly ties of kinship and solidarity bonding the two kingdoms throughout history'¹⁰⁹.

In October 2015, the Minister of Foreign Affairs reiterated Bahrain's readiness to cooperate with all efforts aimed at eliminating the threat of terrorism, as he received the US Special Presidential Envoy for the Global Coalition to Counter ISIL (ISIS) on a visit to the Kingdom. The US Envoy praised Bahrain's role in the fight against terrorism and its efforts to prevent money reaching ISIS. He emphasised the close Bahraini-US relations and the level of progress and development they are undergoing¹¹⁰.

A curious web of collaborative relationships is highlighted through a targeted digital attack on members of the Al-Wefaq political society living outside Bahrain in October 2015, although there appears no direct evidence this was an official state attack¹¹¹. However, Wikileaks published a searchable database following a cyber attack against 'Hacking Team', an Italian spyware company, showing over a million emails which were leaked from the company's servers. More than 1300 emails mention Bahrain and reveal how its government obtained Hacking Team's Remote Control System (RCS) in 2014. A Dubai-based IT company, MidworldPro, acted as an intermediary between Bahrain's Ministry of Interior (MOI) and Hacking Team. MidworldPro paid Hacking Team US\$227,650 for a one-year pilot of RCS to be tested by the MOI's Cyber Crime Department. The emails also reveal that an Israeli surveillance company, NICE Systems, was acting as another intermediary

¹⁰⁸ <http://bna.bh/portal/en/news/670451> accessed 9 February 2016.

¹⁰⁹ <http://english.alarabiya.net/en/News/middle-east/2015/02/15/Bahrain-sends-military-aid-to-help-Jordan-fight-ISIS.html> accessed 1 December 2015.

¹¹⁰ <http://www.mofa.gov.bh/Default.aspx?tabid=7824&language=en-US&ItemId=5601> accessed 24 October 2015.

¹¹¹ <https://bahrainwatch.org/blog/2015/10/18/urgent-security-alert-for-bahraini-activists/> accessed 24 October 2015.

between Hacking Team and Bahrain's National Security Apparatus and the Bahrain Defence Force¹¹². So it appears Italians, Israelis, Emiratis and Bahrainis were all working together to hack into the emails of Bahraini nationals, although this is not publicly avowed and could cause the monarchy problems with loyalists because of Israeli involvement.

Less suspiciously, in November 2015 the UK Foreign Secretary was present at the start of construction of HMS Juffair at Mina Salman Port in Bahrain. The establishment is being developed for Royal Navy deployments in the Gulf to support the security of allies in the region¹¹³. Similarly, Bahrain says the very strong relationship between it and Saudi Arabia demonstrates a firm resolve to strengthen ties 'for the best interest of the two brotherly countries and their peoples... based on cooperation, friendship and joint destiny'¹¹⁴. This does not suggest any major political reform or change of Shia circumstances can be expected soon.

So, it appears Bahrain is executing a sophisticated strategy of tying itself into ever-closer, multiple collaborative agreements, all of which makes their national security very much stronger. It also has the added bonus of making their collaborators appear to condone repression against their effectively marginalised majority, despite the public protestations of senior American and British politicians. Current events in the Middle-East make a change of tack by their allies unlikely.

4.4. Reflections on Bahrain

It is probably fair to say that climate change is not seen by the al-Khalifas as their most pressing problem. Despite the threat of losing fifteen kilometres of coastline due to rising sea levels and other first order consequences such as increased temperatures, more extreme weather, poor air quality, vector-borne diseases and increased mortality and morbidity, most of those effects will not become severe until 2050-2100. That timescale may seem short strategically,

¹¹² <https://bahrainwatch.org/blog/2015/11/13/how-the-government-of-bahrain-acquired-hacking-teams-spyware/> accessed 25 November 2015.

¹¹³ <http://www.bbc.co.uk/news/uk-34690895> accessed 6 November 2015.

¹¹⁴ <http://www.mofa.gov.bh/Default.aspx?tabid=7824&language=en-US&ItemId=5752> accessed 1 December 2015.

but when placed in the context of the significant development Bahrain has seen in the last 45 years, since independence in 1971, it must seem there is ample time to deal with the projected climate change effects once other, more pressing problems have been resolved. Those problems are two-fold: firstly, the hydrocarbon revenue dependency era is effectively at an end for Bahrain, even with Saudi handouts from Abu Sa'afah; secondly, the majority of Bahrain's citizens are Shia who are politically, socially and economically marginalised, disaffected with the ruling Sunni minority, and require more sophisticated handling than mere repression if there is not to be a sustained and determined backlash that topples the monarchy. Both problems have direct consequences for human, national and regime security in Bahrain.

To be fair, and as seen earlier, BEV2030 identified the need to change from a rentier political economy; the necessity of economic diversification to create wealth; the importance of educating and training citizens to do the jobs required in the future; the requirement that human security must be assured; and that preserving the quality of the environment in which everyone must live and work is essential. However, there is little doubt the direct relationship between economic and national security focuses the monarchy's mind more than anything else. A rentier state with a highly effective security apparatus is very expensive to maintain.

The demise of oil revenues makes the Kingdom's economic security and sustainability precarious and directly affects the monarchy's ability to maintain its status as a rentier government. Its challenge is to diversify the economy to provide globally profitable productive activities across a wide range of sectors. To do this the government must attract FDI and domestic investment and make Bahrain a place people choose to do business. However, businesses need educated and skilled workers, with a desire to perform productive work. If the public sector is to shrink those workers must be Bahraini citizens, not expatriates, but citizens' work culture may not be compatible with private sector expectations. As government revenue from oil falls, so it must be replaced from other sources. Taxation seems the obvious solution, but that would almost certainly require commensurate popular political participation; at present that seems unlikely as it is at odds with the principle of rentier government. However, without tax revenues replacing oil revenues, it is difficult to see how

public services will be maintained; the sustainability of rentierism is very doubtful once citizens have to pay tax or the market rate for goods and services that are currently free or highly subsidised.

The Shia problem is historical, emotive and probably beyond the monarchy to resolve, given the intractability of hard-line Sunni establishments in Bahrain and neighbouring Saudi Arabia. Despite much reporting about oppression and human rights violations, Bahrain's diplomatic skill at making itself regionally indispensable makes Shia marginalisation and repression something countries like the US and UK appear willing to tolerate privately, while making occasional, critical statements for public consumption. However, national or regime security enforced by authoritarianism can only endure so long as the state is strong enough to maintain the pressure; maintenance of that strength depends on good economic security.

So, Bahrain is a paradox. The government recognises the interdependencies of preserving the environment and cultural heritage, alongside all aspects of human security. BEV2030 and subsequent development agendas continue to stress the importance of education, healthcare and food and water security, all of which directly contribute to the human security of the nation. A population enjoying high levels of human security is more likely to be economically productive and politically stable; the resulting economic security and stability is essential for the maintenance of effective national security. The government appears to understand all of those linkages and professes to be working to make them stronger in each area for all of its citizens. Yet, it arrests critics, it abuses human rights, and it increases the political, social and economic marginalisation of the Shia; in Bahrain and other places these are the root causes of insurrection. The outcome for Bahrain's monarchy is uncertain; it can survive in its current form as long as it has support from its Saudi and Emirati allies, but a sustainable future must lie in a strong economy, political reform and an accommodation with the Shia that allows all citizens to share the future prosperity of the Kingdom. That is much more pressing than climate change.

5. QATAR – A Case Study



Map 3. Qatar - <http://media.maps.com/magellan/Images/qatarrap.gif>

5.1. Introduction

Qatar occupies the small peninsula bordering Saudi Arabia and the UAE that extends north into the Arabian Gulf. It has been continuously but sparsely inhabited since prehistoric times. As Islam became established and expanded, Qatar became subject to Islamic caliphates and then was later ruled by a number of local and foreign dynasties, before falling under the control of the al-Thani tribe in the 19th century. The al-Thani sought British patronage in 1867 following a conflict with Bahrain over territory which saw Doha almost destroyed. However, subsequently the Emir invited Ottoman forces to establish a garrison there which remained in place from 1871 to 1913. Then in 1916, in exchange for protection, Qatar signed a treaty with the UK which took control of Qatar's foreign policy until the latter's independence in 1971^{115&116}. The territorial dispute with Bahrain, which included sporadic skirmishes and attempts at mediation by Saudi Arabia and the UAE, continued until an International Court of Justice ruling on 16 March 2001 that gave pragmatic

¹¹⁵ <http://www.britannica.com/place/Qatar> accessed 7 March 2016.

¹¹⁶ <http://www.bbc.co.uk/news/world-middle-east-14702609> accessed 7 March 2016.

concessions to both sides^{117&118}. However, minor incidents have continued between the two countries to the present, mainly involving arrests of Bahraini fishing vessels considered to be illegally operating in Qatar's territorial waters^{119&120}. Interestingly, and unlike other Gulf States, Qatar maintains generally cordial relations with Iran and is often thought to have used this to counterbalance Saudi influence within the GCC arena. However, the tension between Iran and the GCC since the execution of Shia cleric Nimr al-Nimr by Saudi Arabia in January 2016 has made Qatar's position somewhat uncomfortable¹²¹.

Politically, Qatar is stable and most changes are initiated from the top. Lambert (2011) writes that the new Qatari constitution was approved by referendum on 23 April 2003 with 98 percent of voters in favour. It replaced the appointed Advisory Council with a Consultative Council consisting of 45 members, 30 of whom were directly elected. The constitution guaranteed the rights of women to vote and stand for office. The Consultative Council can pass laws subject to the Emir's approval, question ministers and approve state budgets. The constitution became law in 2004. However, elections are yet to take place as the Advisory Council was extended for a further three years the day before the abdication of Sheikh Hamad in favour of his son Sheikh Tamim¹²² in June 2013. Lambert says there are suggestions Qatar is keen to avoid the political obstructionism that characterises Kuwait's parliamentary process and that Qatar's ruling élite wants to have all permitted political reforms in law before the Consultative Council is permitted to stand up (2011).

Noting national and regime security are habitually conflated by the Gulf monarchies, the proposition remains that good economic security assures

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<http://faculty.wcas.northwestern.edu/~kal438/NewTerrainFromDepot/docs/BahrainvQatarTerritorialDispute.pdf> accessed 7 March 2016.

¹¹⁸ <http://www.icj-cij.org/docket/index.php?sum=443&p1=3&p2=3&case=87&p3=5> accessed 7 March 2016.

¹¹⁹ <http://www.thenational.ae/news/world/middle-east/troubled-waters-between-bahrain-and-qatar-bring-suspension-of-bridge-project> accessed 7 March 2016.

¹²⁰ <http://thepeninsulaqatar.com/news/qatar/348214/seven-bahrain-fishermen-arrested-with-two-boats> accessed 7 March 2016.

¹²¹ <http://www.al-monitor.com/pulse/originals/2016/02/qatar-balancing-act-saudi-arabia-iran-risk.html#> accessed 7 March 2016.

¹²² Reported by Sultan Soond al-Qassemi 8 July 2013 in www.opendemocracy.net/sultan-soond-al-qassemi/qatar-s-incomplete-example accessed 11 December 2013

national security by providing political and social stability through successful delivery of the ruling bargain. This guarantees the future survival of the current governance system and the consequent political continuity enables high levels of human security and development to be achieved. There is a resulting feedback loop between human security and economic security; a safe and secure population is much more likely to be economically productive than not. As has previously been remarked, the citizens of Qatar appear to be politically apathetic and most change is driven top-down. Reflecting this, and as part of its national development reform agenda, Qatar's vision was published by the government in 2008, coincident with the start of the global economic downturn and the publication of similar policies in Bahrain and the UAE; it provides the ideal aspirational baseline from which to gauge Qatar's success in achieving its development goals.

5.2. Qatar National Vision 2030 (QNV2030)

5.2.1. Word Counts

QNV2030 is a national vision produced by the General Secretariat for Development Planning (GSDP), so it is unsurprising the key word with the highest count at 67 is 'development', especially as the four pillars of the Vision are Human, Social, Economic and Environmental Development. The next highest scoring word is 'economic' with 51 counts, followed by 'national' with a score of 30, although sixteen refer to the 'National Vision' itself.

'Environmental' scores 24 counts, but all of these refer to the natural environment as do the seventeen counts for the word 'environment'. Grouping these two scores together gives 41 mentions about the natural world. The only other words achieving double digit counts are 'international' with seventeen, 'education' twelve and 'citizens', 'expatriate' and 'human' all achieving scores of eleven. In the count of paired words 'human development' is well ahead with seven, 'expatriate workers' scores three, 'climate change' two and 'national security' one. From this simple analysis there is little to surprise, as QNV2030 concerns development and the economy will be a significant part of this. The natural environment and climate change, when grouped together, score highly, but the environment is one of the four developmental pillars of the Vision so this

should be expected. Most notable by their absence are specific mentions of reforms, whether economic or political.

5.2.2. The Context

The Vision runs to 36 pages excluding the cover and publisher's information. Like BEV2030 it is well written in straightforward language and benefits from a concise, logical flow. After a single read at one sitting, one is left with the impression of a sophisticated and forward looking vision that puts sustainable development alongside the desire to protect the environment and look after the population.

The foreword by the Heir Apparent, who subsequently replaced his father on abdication in June 2013, declares monarchic intent and is the authority for the Vision. It recognises the need to balance current requirements with the interests of future generations and describes a society in which there is economic and social justice and where man and the environment co-exist in harmony, all underpinned by strong Islamic and family values. It identifies the need for investment in infrastructure, diversification, dynamism, transparency and accountability, and concludes by exhorting all sections of society to play their part in achieving the national destiny. The foreword is exactly what one would expect from a future ruler introducing his country's national vision until 2030.

The main body of QNV2030 starts with a quote from the Emir about the importance of comprehensive development and sets the tone for the document. This is followed by an introductory piece claiming political progress has been made through the ratification and subsequent enactment of the constitution in 2005. It says despite political, economic and social changes, the family remains at the centre of Qatari society as the country, led by the Emir, develops its capacity and takes on a key role in the international community. Implicit in this statement is the centrality of the monarchy to the future success of the nation. The introduction concludes by saying the aim is to transform Qatar into an advanced, sustainable nation, where all of its people enjoy a perpetually high standard of living.

5.2.3. Challenges

The Vision moves on to discuss challenges, but specifically not threats. The first of these challenges is the inherent tension between greater freedoms and choice that inevitably accompany social and economic progress, and the deep-rooted traditional social values cherished by society. It says other societies have achieved this balance successfully, but the implied message is that culture, traditions and especially governance are not giving way to modernity any time soon.

The second challenge identifies the need to balance the interests of the current population with those of future generations. It specifically counsels against inept use of hydrocarbon revenues yielding low returns, wasteful prestige projects and overly aggressive economic development plans that over-stress the economy and damage the environment. These concerns are indicative of sound financial prudence and the desire to ensure current incomes are preserved for the benefit of future generations. This probably suggests further investment in new industries, capabilities and sovereign wealth funds. Potentially, such investments could support the continuance of a form of the ruling bargain if done wisely.

The next challenge highlights the need for managed growth rather than uncontrolled expansion. It identifies the potential of reduced public service efficiency, low productivity and late delivery of projects, environmental damage, and population disparities leading to social tensions. QNV2030 declares the need for control and for development to be sustainable. This is clearly linked to the second challenge, but again shows the rulers' caution in approaching Qatar's modernisation. Centralised control exercised by the monarchy is implicitly vital, as in Bahrain.

The future dependency on expatriate or migrant labour is the fourth challenge. The Vision says Qatar is experiencing high population growth due to major urban development and investment projects, and increasing government expenditure. This has led to a sharp rise in the ratio of expatriates to locals and a very large rise in the number of unskilled migrant workers. QNV2030 explains Qatar must weigh the risk to national identity against the economic benefits derived from these expatriates; Qatar must determine the expatriate

skills required and the broad range of costs associated with recruiting them. The inference is that Qatar aims to reduce numbers of unskilled or low-skilled migrant workers and ensure those who work there in the future are thoroughly vetted for suitability. It is likely the eventual aim is for high-skill jobs to be done by Qataris, reducing the need for expatriate labour still further.

The final challenge concerns harmonising competing demands between economic growth, social development and environmental management. The Vision recognises environmental damage may be inevitable as a result of some economic projects and the hydrocarbon and other heavy industries, but says mitigation through advanced technologies must be emplaced to improve the environment and compensate for damage elsewhere. It says Qatar has already signed up to international environmental protection agreements on industry and intends to abide by these. Thus the monarchy explicitly recognises the need to mitigate environmental damage and this explains why environmental development is one of the four pillars of the Vision. The challenge is widened into a regional issue and recognises the Gulf is one ecological system; it says it will be necessary for Qatar to encourage and work with all Gulf States to preserve the environment. This very strong message recognises climate change is real and something must be done to prevent further degradation in the interests of Qatar's future. It also specifically demonstrates Qatar's intention to collaborate with allies and partners in the future.

5.2.4. Guiding Principles

The next part of QNV2030 is about meeting these challenges by combining the Guiding Principles of the Permanent Constitution with Royal direction and wide consultation. Sheikha Mozah, the Emir's wife, has a role alongside the Emir and the Heir Apparent and while this prominent and public involvement of a woman in Gulf State politics is highly unusual, it reflects the part played by Qatar's leaders in promoting some reform including political rights for women. Citing Qatar as a society that promotes justice, benevolence and equality, the Vision says the guiding principles protect personal and public freedoms, promote religious values and traditions, and guarantee security, stability and equal opportunities, thus reinforcing the need to retain the fundamental

characteristics of traditional Qatari life. QNV2030 then turns to look at its four pillars of Human, Social, Economic and Environmental Development in detail.

5.2.5. Four Pillars of Wisdom

5.2.5.1. Human Development

The Human Development pillar explains hydrocarbon revenues are limited as resources are depleting; therefore a sustainable future will require Qataris to adapt to a new international, knowledge-based, competitive system. Citizens will be prepared for this through improved education and healthcare and by adopting a meaningful role in the workforce. It acknowledges there will be need of qualified expatriates in all fields, reinforcing the intention to change the nature and size of the migrant workforce. Qataris will be educated and trained to take part in increasingly complex technical tasks requiring analytical and critical skills, plus creativity and innovation. However, this modernisation will be tempered by the promotion of social cohesion through national values; undoubtedly this is designed to help the ruling élite maintain its grip on the transformation process. Encouragingly, there is also the intention to engage actively with other nations, which perhaps reflects Qatar's worldview and its aspirations for a substantial role on the global stage. This is reaffirmed subsequently by the stated aim of becoming an active centre for scientific research and intellectual activity, signalling an aspiration others will invest in, or relocate to Qatar for these purposes. Aligned closely is the goal of creating a world-class healthcare system accessible to the entire population, presumably including expatriate workers. QNV2030 sees a clear relationship between educational attainment, personal and public health and the aspiration that Qataris will become productive workers. However, there is again recognition of the indispensability of expatriates to make up the skills shortfall created by transformation to a larger, diversified, technologically sophisticated economy. There will be recruitment and retention incentives and expatriates' rights and safety will be protected. As well as economic necessity, this reflects an intention to assure human security at the higher end of the spectrum, through education and healthcare and guaranteed rights for all residents. There are three key components to this pillar.

'An Educated Population' builds on matching the needs of the labour market, but also talks of matching opportunities to individual aspirations and abilities and providing life-long learning opportunities. This will be achieved through a variety of learning techniques designed to enable a positive contribution to society, underpinned by reinforcement of Qatari moral, ethical, cultural, traditional and, implicitly, religious values. Innovation and creativity will be promoted and citizens' sense of belonging will be reinforced while they are encouraged to take part in sporting and cultural activities. Qataris will also work with international partners on scientific research, cultural and intellectual activities, but while educational institutions will have some latitude, their activities will be centrally directed. There is, therefore, an inherent tension within the education component as modernisation and broader, advanced education could lead to the spread of ideas contrary to those of the leadership. The rulers obviously want to control the process of modernisation through reinforcement of traditional religious and cultural values; how successful they can be at limiting the spread of ideas in an increasingly interdependent, globalised and digitised world remains to be seen. Physical barriers placed on electronic communications will almost certainly deter potential international partners from collaborating with Qatari entities. The monarchy will have to resolve this contradiction.

The health component is not contentious, reflecting the expected norm in any modern developed state. Two points are of note: firstly, the aim of creating a national workforce capable of delivering healthcare; this will require Qataris to train in the full spectrum of medical roles from porters, auxiliaries and orderlies, through nurses and paramedics to doctors and consultants. Persuading citizens to take jobs at the lesser end of the scale will require a significant culture change, unless they remain the domain of low-skilled expatriates who do jobs Qataris will not. The second point is a reference to the principle of partnership in bearing the costs of healthcare. It is clear the government does not see itself funding healthcare alone. This suggests that in the absence of national taxation, citizens and private sector institutions will have to bear the costs of health insurance for themselves and their employees. This would neatly transfer current government costs into the private sector and avoid the

unpleasantness of imposing income tax upon the citizenry, thereby maintaining an illusion of the government providing for its people.

The third component concerns 'A Capable and Motivated Workforce'. This could be one of the most challenging areas, given notions of entitlement to public sector jobs some citizens hold. It focuses on professional and management roles in business, health and education, along with individually tailored high quality training. Women are specifically targeted for increased opportunities and vocational support. This could be seen as an implicit aim to segregate women into lower paid, 'vocational' roles like lesser healthcare jobs, while men take more senior managerial and professionally qualified roles. While QNV2030 does not state that as policy, it would conform to traditional and cultural views of the role of women prevalent in Gulf societies. The final element of this section concerns targeted recruitment of expatriates with the right skills, protection of their rights and safety, and the retention of the most talented of them. There will be gaps at the lower end of the labour market if low-skilled expatriates are reduced in numbers. Perhaps Qatari women are thought to be the natural candidates to fill these roles, although the most menial and dirty jobs will almost certainly continue to be done by unskilled migrants.

5.2.5.2. Social Development

'Social Development', the second pillar, is intrinsically linked to 'Human Development' through interdependencies and interactions that naturally occur between the two pillars. This pillar talks of nurturing citizens to ensure they can live effectively in a modern world while retaining traditional values and lifestyles. It also says women will assume a more important role in society through participation in economic and political decision-making; this would appear to place women in higher value roles than the human development pillar might have suggested. The pillar's description reaffirms the importance of Qatar's Arab and Islamic identity at the core of national life, but declares its determination to promote tolerance and understanding of other cultures, no doubt as part of ensuring Qatar is seen as a welcoming place for international business. It continues with an assurance that basic needs will be provided for and equal opportunities for all citizens will be guaranteed. It concludes by declaring Qatar will live up to its international obligations and play a role on the

regional and international stage in promoting peace and security, again reaffirming Qatar's view of its place in the world. The term 'political reform' is never used in QNV2030 and there is no suggestion of political change as part of social development, or a recognition that increased economic activity or interaction with foreigners by its citizens may lead to a demand for such. The emphasis remains on preserving Qatar's traditional way of life, which appears to mean traditional governance structures too.

The Social Development pillar is based on outcomes in three sectors. The first of these, 'Social Care and Protection', is covered with a pithy statement about maintaining moral and religious values, family unity and humanitarian ideals. Civil rights, valuing individuals' contributions and having enough money for health and dignity are covered in a second sentence. These are laudable human security aims, but again the priority appears to be the maintenance of the status quo in terms of societal order and traditional governance, without admitting to the possibility that some political reform may be necessary.

The outcomes for 'A Sound Social Structure' are in five bullets supporting a statement advocating effective public institutions and a strong and active civil society. The first bullet says Qatar's national heritage will be preserved while Arab and Islamic values and identity are enhanced, but it is obvious civil society activity will be regulated along traditional lines rather than allowing the presence of active political parties. The remaining bullets emphasise the need for high quality services; maintenance of the rule of law, justice and equality; the future role of women in economic and political decision-making; and the need for tolerance and cooperation at national and international level. Quite how women will play such a part in national life or how increased contact, cooperation and openness at the international level will be achieved without modernisation or adjustment of the traditional governance model remains unanswered. It would seem inescapable that those engaged in such activity will demand greater empowerment and authority, unless they are already part of the established ruling élite. If this is the case, there will be no greater role in national decision-making for any outside that circle.

The pillar's final set of outcomes are concerned with 'International Cooperation'. This is bland and unsurprising, although it does demonstrate

Qatar's global aspirations. It wants increased regional collaboration through the GCC, the Arab League and the Organisation of Islamic Conference. It aims to promote international peace and security through cultural exchanges, the promotion of co-existence between nations and cultures, and using political, developmental and humanitarian tools. It makes no mention of the UNFCCC or the Kyoto Protocols, but it is fair to assume Qatar takes its international obligations seriously in the climate change arena. During Sheikh Hamad's reign Qatar took on a greater international and regional role through mediation and active military support; it continues to be involved in Libya¹²³, Gaza¹²⁴ and the ISIS insurgency¹²⁵, although in this latter intervention there is a degree of confusion over the role of the Qatari state as opposed to the independent actions of some wealthy Qatari individuals¹²⁶.

The second pillar is an interesting mix of human security, human development and national security and interests, demonstrating Qatar's rulers are serious about raising its profile and position in international affairs, and strengthening and improving Qatari civil society. However, the omission of any suggestion of political authority being devolved outside the circle of the ruling élite, even if wholesale political reform remains anathema to the monarchy, indicates a certain naïveté or wishful thinking about the future. It is true reforms in Qatar have so far been driven from the top down, but it would seem very likely any greater exposure of citizens to the wider world will promote a desire for political and social change.

5.2.5.3. Economic Development

'Economic Development' is the third pillar of QNV2030 and focuses on preservation of wealth for the future, careful management of remaining hydrocarbon reserves, and economic diversification. The pillar's introduction identifies the role hydrocarbon revenues will play in ensuring a sustainable future through providing the means to invest in infrastructure, build public

¹²³ <http://www.telegraph.co.uk/news/worldnews/middleeast/qatar/11110931/How-Qatar-is-funding-the-rise-of-Islamist-extremists.html> accessed 13 October 2014.

¹²⁴ <http://www.theguardian.com/world/2014/oct/12/gaza-rebuild-international-donors-israel-hamas-qatar> accessed 13 October 2014.

¹²⁵ <http://online.wsj.com/articles/u-s-qatar-alliance-strains-coalition-against-islamic-state-1412983181> accessed 13 October 2014.

¹²⁶ <http://www.bbc.co.uk/news/world-middle-east-29004253> accessed 13 October 2014.

services, transform Qatar's citizens into productive workers, and support development of innovation and entrepreneurial skills. The aim is to make Qatar a regional hub for knowledge and high-value services. It is acknowledged the private sector must be enabled to participate; this will be achieved by entrepreneurial education and training for individuals and providing financial and other support to SMEs. Interestingly, it is claimed the political and organisational climate has already been improved to support business, but more needs to be done to improve competitiveness and attract investment if success is to be achieved in an increasingly globalised business environment. Another challenge identified is the need to control and balance economic growth to avoid inflationary pressures, or to risk overstressing public services which could lead to a breakdown of social cohesion. QNV2030 says the solution will be foresight, economic management and institutional agility. There is a suggestion free market dynamics will be constrained by centralised direction. The introduction concludes by saying the best way ahead lies in open, flexible markets alongside affordable social protection and strong financial reserves. The compatibility of these aims will almost certainly determine the success of Qatar's economic diversification and sustainability, especially if foreign investors believe too much government control is imposed upon markets.

'Economic Development' is also supported by a series of outcomes. 'Sound Economic Management' outcomes are similar to those espoused by developed nations, the IMF and the World Bank. They include sustainable growth for current and future generations; financial stability, low inflation, sound policies and a secure financial system; an attractive business environment for investors and technology; structures that permit fair competition in a globalised market; and trading and financial cooperation with international partners. These outcomes demonstrate Qatar's rulers appreciate the urgency of diversifying their economy and reinforce the perception that Qatar sees international collaboration as vital for its future sustainability.

The second batch of outcomes concerns 'Responsible Exploitation of Oil and Gas' and starts by acknowledging the requirement to establish balance between production levels and maintaining reserves, and between economic diversification and resource depletion rates. With about a century's worth of

gas reserves at current production rates, it is nonetheless reassuring to see Qatar's rulers are already pushing ahead with policies designed to maximise the life of those reserves and remove their dependency on hydrocarbon incomes. However, the importance of oil and gas is not underplayed, as the Vision is clear the sector contributes to technological innovations and the development of human and economic resources. It also sees the role of gas as critical in the provision of clean energy to Qatar and the world and identifies the centrality of hydrocarbon reserves to Qatar's national security and its sustainable development. Qatar appears to be content to acknowledge it still has huge economic potential as a hydrocarbon producer and is not shy about pointing out the benefits derived by Qatar and other nations, while pushing on with wider economic diversification.

The final outcomes for this pillar are grouped under 'Suitable Economic Diversification'. It explicitly states the intention to reduce hydrocarbon dependency in parallel with economic diversification and private sector enhancement to enable effective competition. This will be achieved through the competitive advantage the hydrocarbon sector provides to expand other industries and services. It is not clear how much Western decarbonisation policies and reductions in demand were driving diversification, but previous statements about international obligations and organisations suggest they were motivational factors for early change. The Vision says it will determine where it can make a difference and develop its human and technological capacity to meet the needs of those economic activities. The aim is to establish a knowledge-based innovative economy, with entrepreneurship, educational excellence, modern, highly efficient infrastructure, effective public services and transparent and accountable governance. Here is the first suggestion of political reform to accompany the major economic and social changes the Vision describes. Quite how transparent and accountable to whom the government will be is not stated, nor whether it is the whole government or just the part dealing with the economy. Yet, here is an acknowledgement that if Qatar is to compete on a level playing field its governance practices must be more transparent than has hitherto been the case. Again, it is hard to assess whether the rulers understand this could be the thin end of the wedge; once people realise they have greater access to the processes of government they

could demand more, perhaps even delegation of powers to sections of civil society outside the ruling circle.

5.2.5.4. Environmental Development

‘Environmental Development’ is the final pillar and appears to have Sheikha Mozah, the second wife of the Emir at the time, as its key proponent. The pillar’s introduction reflects her opening words and stresses the environment was given by God and if humans respect and care for the environment it will repay them. It continues with a pragmatic view of likely climate change effects on Qatar’s territory, including reduced freshwater supplies, pollution, environmental degradation and rising sea levels affecting coastal urban development, alongside the reality of the depletion of Qatar’s hydrocarbon reserves, albeit not for many decades. It asserts mitigation of these challenges will require coordination of effort and mobilisation of capabilities. Here is compelling evidence of the recognition at the highest level that Qatar has to act early to offset expected and potential physical climate change impacts. With this level of commitment well in advance of the most severe effects being felt, there is a good chance Qatar can take the necessary steps to put effective mitigation measures in place.

‘Environmental Development’ has only one set of outcomes: achieving ‘A Balance between Development Needs and Protecting the Environment’, covering the air, land and water environments and biodiversity. The title explicitly recognises other development must take place to make Qatar sustainable, which is important, but acknowledges the environmental impact of this development has to be considered fully. This almost certainly reflects the underlying tenet of Sheikha Mozah’s message that the environment is given by God; this can be logically extended towards an implicit message that its protection is therefore an Islamic duty. Given the Vision’s stress on preserving Qatar’s religious, cultural and traditional heritage this is unsurprising, especially as the outcomes require an educated population that identifies the value of preserving Qatar’s natural heritage and that of its neighbours. QNV2030 says there will be responsive and agile legal environmental protections designed to meet developing challenges. Environmental institutions will raise public awareness and encourage environmentally friendly technologies, while also

conducting research and employing environmental planning tools. This will create a comprehensive sustainable urban development plan based on valid policies. Regional cooperation will assist in mitigating the effects of pollution resulting from development elsewhere and will develop a significant role in assessing the impact of climate change on the Gulf States and mitigating its effects. Qatar says it will also work with the wider international community to mitigate the effects of climate change outside the region. It is therefore clear climate change is seen as a real challenge by the ruling élite and they are developing domestic, regional and global perspectives to mitigate its effects on Qatar and also be seen acting responsibly on the international stage.

5.2.6. Achieving the Vision

The final part of QNV2030 is 'Achieving the Vision' which describes the intention for GSDP to develop a national strategy. This was to articulate and prioritise goals, along with timelines, stakeholders and performance standards and be drafted after consultation with civil society, the private sector and government ministries. It would provide a medium-term framework of coordinated programmes and projects. The Vision says achievement of its aspirations is a national responsibility and recognises greater capacity across all sectors is needed, as are transparency, partnerships, an energetic business environment and more involvement for civil society; there is no mention of political reform. In March 2011, the Qatar National Development Strategy 2011-2016¹²⁷ was released under the signature of the Heir Apparent. Detailed analysis of the Strategy is outside the scope of this research, but a general inspection reveals a 270 page comprehensive and detailed planning document, complete with many supporting figures, tables and statistics, and lists of those responsible at each level for delivery. 'Developing modern public sector institutions' is at chapter seven, but again there is no mention of political reform; rather it appears centralised control is at the heart of delivering QNV2030, with no plans to change that.

QNV2030 is all about development and it appears the four pillars are afforded equal status. Within this there are several key themes, the most significant being the centrality of the monarchy in directing development. This reflects

¹²⁷ http://www.gsdp.gov.qa/gsdp_vision/docs/NDS_EN.pdf accessed 14 October 2014.

their determination to maintain their grip on control and reluctance to countenance any serious political liberalisation or reform. The position of the al-Thani monarchy, enshrined in the constitution, is central to Qatar's traditional governance model. Elements of the Vision indicate they aim to perpetuate the ruling bargain, even when hydrocarbon 'rents' cease to be the country's main source of income and the private sector has taken the lead in revenue generation. This position would be strengthened by the absence of meaningful popular political engagement, outside of voting for the Central Municipal Council, which has no national role, and infrequent consultation of an essentially compliant and non-political civil society. However, the challenge for the al-Thanis may be how to control the influence of new ideas when more citizens are involved in globalised economic activity. If wider economic participation is really the aim, it would seem inevitable that calls for greater political engagement or freedom would arise. If more Qataris engage with foreigners, especially non-Muslims from the West, it is inevitable notions of democracy and freedom of speech will spread. Would the monarchy try to control news media and the internet? The hypocrisy of hosting al-Jazeera, while limiting information for internal consumption, would be obvious to potential investors, who may choose to keep their money and technology off Qatar's shores. The Vision's aim is to develop in a way consistent with Qatar's Arab and Islamic identity and to maintain traditional, cultural and family values at the centre of Qatari life. This will help to preserve Qatari national identity and maintain support for continuance of traditional governance. However, the Vision recognises it will be hard to achieve that while embracing the globalised, knowledge-based enterprise of the future.

Another significant factor is the Vision's emphasis on sustainability through preserving wealth and resources for future generations. This is most evident in the aspiration to diversify the economy into high-value sectors, even when decades of exploitable hydrocarbon reserves remain. The emphasis on education, training and healthcare to prepare citizens for this, and the importance assigned to ensuring development is balanced by environmental protection is further evidence. Yet, there are key omissions here, as QNV2030 contains no specific mention of water or food as part of its human security agenda. It is probable improved education, healthcare and guaranteed

protection of rights implies these aspects, but their absence is surprising given Qatar's water-stressed climate. However, official acceptance that climate change is real and mitigation must start now is a clear indication QNV2030 is really looking generations ahead and this has major implications for Qatar far beyond 2030.

The aspiration to diversify Qatar's economy through knowledge, innovation, entrepreneurial skill and world-class infrastructure, in harmony with environmental development is praiseworthy. Whether citizens can make the cultural shift to the required work ethic remains to be seen and will determine whether Qatar's aspiration to reduce numbers of low-skilled expatriate workers is achieved. The same will be true of citizens' abilities to take on high-skilled posts in the coming years, reducing expatriate dependency still further. The expectations of Qatari women in the workplace may be critical; it remains to be seen in what numbers and at what level they find employment. Successfully 'Qatarising' the workforce would support the preservation of national identity and reduce external and un-Islamic influences.

International collaboration is a strong theme in QNV2030. Qatar is determined to have a role on the world stage far in excess of what its size would naturally suggest. However, it is very wealthy, at the heart of the Gulf, and works hard to promote its worldview and national interests; it is the only GCC state that has amicable relations with Iran¹²⁸, it hosts Headquarters US Central Command and also al-Jazeera. Qatar recognises the inevitability of globalisation and knows it must be engaged economically to remain sustainable, but it also sees engagement on climate change and other environmental issues, both regionally and wider, as non-discretionary. Linked to Qatar's self-image as a world player is recognition that its national security guarantees are significantly enhanced through political, economic, environmental and security partnerships with a wide range of partners, some of whom are not well-disposed to each other.

¹²⁸ Qatar condemned the attacks on the Saudi Embassy in Tehran in January 2016, but is too economically interdependent with Iran to break off diplomatic relations as other GCC states did. <http://dohanews.co/qatar-condemns-attack-saudi-embassy-tehran/> accessed 17 February 2016.

5.3. Evidence of Transformation

5.3.1. The Significance of Climate Change

At the UN Climate Change Conference in Durban in 2011 (COP 17) it was announced that Qatar had won the bid to host COP 18 in November 2012¹²⁹, making it the first climate change conference to be held in the Middle East¹³⁰. The bid was won despite Qatar being a major hydrocarbon exporter with one of the world's highest per capita emission levels. However, the Qatari government had already committed to emission cuts and had invested significantly in supporting the development of low carbon technologies. The UN also took into account that Qatar had stated an intention to support developing countries and small island states to adapt to climate change effects such as flooding and drought¹³¹. The principal objective of COP 18 was to work towards a universal and legally binding climate change agreement to be adopted by 2015 and covering all countries by 2020, and also to find ways to accelerate efforts before 2020, beyond the existing pledges, to curb emissions and keep global warming below 2°C^{132 & 133}. COP 18 was regarded as a success and resulted in the 'Doha Climate Gateway'¹³⁴ which extended the life of the Kyoto Protocol and set the conditions for the achievement of the Paris 2015 agreement at COP 21, as well as enhancing Qatar's reputation as a Gulf State with serious green credentials.

In May 2015 Qatar hosted the 35th meeting of GCC environmental affairs representatives. The meeting discussed cooperation with the UN Environment Programme for West Asia, the Regional Organisation for Protection of Marine Environment, the World Bank, Turkey, Jordan and Morocco. It also discussed establishing the GCC Environmental Monitoring Centre and developments regarding UNFCCC, Kyoto Protocol, the Vienna Convention for Protection of the Ozone Layer, and the Montreal Protocol on Substances that Deplete the

¹²⁹ <https://www.theguardian.com/environment/2011/nov/29/qatar-bid-2012-climate-talks> accessed 1 December 2016.

¹³⁰ <http://www.feem.it/getpage.aspx?id=5237> accessed 1 December 2016.

¹³¹ <https://www.theguardian.com/environment/2011/nov/29/qatar-bid-2012-climate-talks> accessed 1 December 2016.

¹³² http://unfccc.int/key_steps/doha_climate_gateway/items/7389.php accessed 1 December 2016.

¹³³ <https://www.theguardian.com/environment/2011/nov/29/qatar-bid-2012-climate-talks> accessed 1 December 2016.

¹³⁴ http://unfccc.int/key_steps/doha_climate_gateway/items/7389.php accessed 1 December 2016.

Ozone Layer¹³⁵. Qatar's public commitment to environmental protection and its willingness to collaborate internationally were clearly demonstrated by hosting such a high profile meeting and are consistent with the environmental emphasis within QNV 2030.

In June 2015 it was announced Qatari company Amlak had signed a memorandum of understanding with the Qatar General Electricity and Water Corporation (Kahramaa) under the National Programme for Conservation and Energy Efficiency (Tarsheed). The agreement strengthens cooperation in preserving natural resources, especially conservation and efficient use of water and electricity. Kahramaa says it has implemented conservation, energy and efficiency measures through initiatives including renewable energy technology¹³⁶. While energy and water conservation were not explicitly mentioned in QNV2030, the existence of Tarsheed shows the government's commitment to ensuring human security and environmental considerations are harmonised to minimise climate change effects and to conserve energy.

According to GSDP (2012a), Qatar's development has been unprecedented; its rapid economic growth, urban spread, use of natural resources and exceptional population growth have caused environmental stress. It says Qatar's future development will be compatible with sustainable development by ensuring effective environmental policies and regulations, the best technology, strong environmental institutions and advocacy to change behaviours. This appears to be the space in which civil society will be allowed to operate freely as environmental protection is high on the monarchy's list of priorities, so politically uncontroversial.

Like Bahrain, Qatar has already suffered extreme weather in the form of flooding which prompted an inquiry into poor construction standards. In November 2015 more than a year's worth of rain fell in a few hours. Hamad International Airport terminal suffered water ingress after 80 millimetres of rain fell in the area and many of the capital's streets were flooded, closing schools

¹³⁵ <http://thepeninsulaqatar.com/news/qatar/339030/qatar-to-host-gcc-meeting> accessed 20 May 2015.

¹³⁶ <http://thepeninsulaqatar.com/news/qatar/344264/kahramaa-in-deal-on-energy-conservation> accessed 17 June 2015.

and shops¹³⁷. Other structural damage was reported leading to threats of prosecution of construction companies not meeting building standards. An event of this sort raises issues for the government extending beyond climate change mitigation. Much of its diversification is dependent on real estate development, so shoddy building standards exposed by increasingly frequent extreme weather will cause severe reputational damage to the country's aspiration to be seen as progressive and technologically advanced. Interestingly, reporting always mentions the 2022 World Cup and expatriate labour in the same reports, both of which are sensitive issues for Qatar because of allegations of corruption and human rights abuses respectively.

5.3.2. Sustainability and Alternative Technologies

The Qatar Green Building Council (QGBC) launched the Qatar Green Directory in April 2015 at the inaugural Qatar Green Building Conference, with more than 500 delegates from Qatar and around the world taking part. The directory is part of the commitment to deliver sustainability goals set out in QNV2030 by raising awareness and promoting best practices in Qatar's green building sector¹³⁸. Qatar's commitment to sustainability and the environment is highly visible and it appeared to be providing regional leadership by hosting an international conference on cutting edge design and technology. The linking of the QGBC initiative with QNV2030 emphasises the importance placed at national level on the environment and the centrality of the government in driving the campaign forward.

RasGas¹³⁹, a Qatari company launched by Qatar Petroleum and ExxonMobil in 2001, has initiated a series of projects aimed at reducing GHG emissions through new technologies. Qatar claims to be continually striving to be a leader in conducting operational activities with minimum environmental impact. The projects are an integrated programme which will eventually reduce CO₂ emissions by up to 2.5 million tonnes per year, roughly the equivalent emissions of 500,000 cars. RasGas is also working on the evolving role of LNG as a fuel across many industries that currently consume hydrocarbons

¹³⁷ <http://www.bbc.co.uk/news/world-middle-east-34931199> accessed 26 November 2015.

¹³⁸ <http://www.gulf-times.com/Mobile/Qatar/178/details/436724/Forum-launches-Qatar-Green-Directory> accessed 27 April 2015.

¹³⁹ <http://www.rasgas.com/> accessed 18 February 2016.

and says LNG usage significantly reduces CO₂ emissions by up to 20 percent and SO₂ by up to 100 percent, when compared against marine diesel or petrol. RasGas is an active member of the International Gas Union, a leading organisation in the promotion of natural gas and LNG use globally¹⁴⁰. The desire to protect the environment by promoting LNG is admirable and Qatar is a strong advocate. However, this is not just altruism as Qatar holds the third largest reserves of natural gas in the world with ninety years-worth at current exploitation levels. It is also the world's leading producer of LNG, so championing a switch is very good for Qatar's revenue stream.

GSDP reports other initiatives to reduce carbon emissions including legislation, investment in cleaner technologies, and improvements in industrial processes. As part of the National Flaring and Venting Reduction Project, formal reporting and voluntary reduction targets were introduced. Furthermore, complementary research is taking place on new carbon capture and storage (CCS) technology in partnership between Imperial College, London, and the Qatar Science and Technology Park (GSDP 2012a). Qatar appears serious about climate change mitigation and the need to reduce carbon in the atmosphere; also about establishing its credentials as a technological leader in the field. Such a reputation for innovation would assist its diversification effort by attracting like-minded investors and businesses to the country.

Meanwhile, Qatar's air quality management project (GSDP 2012a) aims to increase regulatory compliance on air quality. Air quality management uses an integrated network of monitoring stations, validation exercises, enhanced modelling, and regional cooperation on cross-border concerns. Increased dialogue and sharing of data, including with national stakeholders and other GCC states support these activities. It is hoped the national air quality management project will reduce air pollution, high asthma rates and other respiratory illnesses; research is underway to examine the relationship between air pollution and respiratory diseases. The project links QNV2030's human security and environmental protection strands with clear recognition of cause and effect between increased pollution associated with climate change and

¹⁴⁰ <http://thepeninsulaqatar.com/business/qatar/341885/rasgas-shares-green-efforts-at-paris-meet> accessed 4 June 2015.

increased mortality and morbidity, especially in vulnerable segments of the population.

Qatar is taking other steps in sustainability through monitoring its land and marine designated reserves to avoid increasing numbers of threatened species. Qatar acknowledges threats to marine biodiversity are largely of human origin, so environmental sustainability relies on designating protected areas, impact assessments, effective regulation of sustainable fishing, and rehabilitation projects. A new National Biodiversity Database enables identification of species and areas in greatest need of protection and rehabilitation, which leads to new, targeted protection and conservation laws. According to GSDP a national policy is being developed for sustainable resource use in all new projects influencing the marine environment and the sustainability agenda is being pursued in other areas too. A solid waste management plan is focused on recycling practices, including for hazardous waste, and waste reduction (GSDP 2012a). Here Qatar is making a very strong connection between sustainability and environmental protection, seeing the two as indivisible. With this principle at the core of national development, Qatar could emerge as the leader of the sustainable development movement in the region, which fully supports the monarchy's aspiration for Qatar's place in the world.

Reinforcing its reputation for supporting technological innovation, Qatar hosted the World Robot Olympiad during 6-8 November 2015¹⁴¹. Around 2,000 young delegates from 48 countries attended the event. It was considered a great success and showed interesting new technologies¹⁴². Qatar wishes to be seen as innovative and progressive and hosting events such as this enable it to maintain visibility with potential international investors and partners who have an interest in developing sustainable alternative technologies. That is good for economic diversification too.

¹⁴¹ <http://portal.www.gov.qa/wps/portal/media-center/news/individualnews/qatartohostglobalroboticscompetitionnextmonth/> accessed 12 October 2015.

¹⁴² <http://www.wroboto.org/successful-wro-2015> accessed 22 February 2016.

5.3.3. Political Reform

Qatar's National Strategy 2011-16 declares all hydrocarbon reserves are state property, so the government is obliged to maximise revenues gained from their exploitation. It says the state will endeavour to collect all the 'rents embodied in the mineral assets it owns', while reassuring private investors they will achieve their required return on investment, acknowledging some flexibility in the framework will be required (GSDP 2011:7). This would suggest no intention to change the political governance of Qatar any time soon, rather a determination to perpetuate the status quo for as long as possible, perhaps with some minor modifications. The Strategy says while the state aims to eliminate sources of risk within its control, it must not dilute incentives for the private sector to participate. However, where hydrocarbon rents have to be shared with private investors the government will aim to achieve material compensation through such things as new technology, infrastructure, knowledge and skills. Therefore, the maintenance of rents, in cash or in kind, remains a government priority and if income levels and public services are maintained there will be no political reason to change Qatar's governance.

In June 2013 it was reported Qatar's promised legislative elections may not happen until 2016, as Sheikh Hamad had decided to extend the existing Advisory Council's term for another three years¹⁴³. Its term had already been extended in 2010 until 2013 on the constitutional basis it was in the public's best interest. Sheikh Hamad had promised elections would happen in 2013 during his inaugural speech at the Consultative Council in November 2011¹⁴⁴. The 2016 elections were subsequently delayed to 2019¹⁴⁵, although Central Municipal Council (CMC) elections were held in May 2015¹⁴⁶. As seen previously the CMC has no real role at the national level and could be seen as an empty gesture towards democracy. The Emir's reluctance to permit Consultative Council elections indicates very strongly he has no intention of

¹⁴³ <http://dohanews.co/advisory-councils-term-extended-until-2016-amid/> accessed 10 December 2015.

¹⁴⁴ <https://www.ndi.org/qatar> accessed 22 February 2016.

¹⁴⁵ <https://dohanews.co/legislative-elections-in-qatar-postponed-until-at-least-2019/> accessed 12 December 2016.

¹⁴⁶ <http://gulfnews.com/news/gulf/qatar/two-women-win-qatar-s-municipal-elections-1.1511230> accessed 22 February 2016.

ceding any legislative authority to an elected body. Political reform therefore remains a very distant prospect.

Lambert says suggestions some previous reforms were triggered by population growth, better education, greater sophistication and demands from below for political change are not supported by the evidence. Qatar's population growth is comparatively modest and the youth bulge is the lowest in the region with 39.3 percent under the age of 24. There was no evidence at that time that the pressure for reform was bottom up given top down implementation, no contested female election victory (although two women were elected in the 2015 CMC election) and general apathy by Qatari voters, with Qatari academics believing political consciousness is low (2011). This all appears to support the assumption Qatari citizens are content with their version of the ruling bargain, although this contentment could be the result of ignorance or political apathy. The apparent lack of coherent opposition in or outside Qatar would suggest there is little popular desire to change things, although government failure to provide free or highly subsidised services and plenty of well-paid public sector jobs would undoubtedly alter that.

Perhaps an anomaly in all this is al-Jazeera, which is encouraging Qatari youth to get involved in regional political and social dialogue. It targets people aged eighteen and above and aims to have a presence on social media platforms and in forums and conferences where young people from different Arab countries and political and intellectual affiliations can work towards building a better future (GSDP 2012b). GSDP's commentary indicates al-Jazeera's activity is officially permitted; so, domestic politics may be off limits, but participating in the political affairs of other countries in the region, no doubt in support of the Qatari government's world view, is definitely acceptable and encouraged. It would interesting to know if the government has completed a risk assessment on the danger of politicising its youth to comment on other Arab states' affairs and the chances of that politicisation being turned against the monarchy and Qatar's system of governance.

5.3.4. Economic Diversification

According to Ehteshami (2013), Qatar has linked its wealth to domestic development and is aiming for a knowledge-based economy by partnering with international educational institutions, while encouraging tourism, banking and industrial sector growth. In Forbes' 2015 list of the richest countries per capita, Qatar was placed first and the UAE sixth¹⁴⁷ mainly because of their hydrocarbon revenues. However, Australia could threaten Qatar's primacy in LNG¹⁴⁸ as it could become a big producer with over 70-80 million tonnes of gas a year, which could change the Asia-Pacific equation as countries there could become dependent on sources of production within their region (Kern et al 2010:8). That would have a very significant impact on Qatar's revenues, especially as Asia-Pacific has been the fastest growing market for oil and gas, despite the current economic slowdown.

Qatar's National Strategy 2011-16 recognises a diversified economy is inherently more stable, offers more opportunities and is less vulnerable to commodity price fluctuations than an economy dependent on one principal output. It acknowledged entrepreneurship and innovation must be learned and embedded in education and culture, and supported through progressive policies and regulations. It agreed the private sector would need strengthening through support and incentives, while artificial constraints should be removed. It said Qatar's efforts to diversify to an economy where productivity and innovation underpin prosperity requires fundamental policy shifts to alter incentives for its citizens; Qatar must transform itself into a high-wage private sector economy (GSDP 2011). This drive towards diversification includes the strong recognition citizens must go out to work and the incentives for doing such work must be developed. In parallel there will have to be a cultural shift away from the notion of entitlement that many Qataris feel, although that could lead to demands for a greater political voice.

By 2020, it is planned Qatar will have more than 8,500km of highways, 200 new bridges and 30 new tunnels. Qatar has allocated 95 percent of its infrastructure investments to road transport, adding to existing and recently

¹⁴⁷ <http://www.forbes.com/pictures/egim45egde/1-qatar/> accessed 22 February 2016.

¹⁴⁸ <http://www.appea.com.au/oil-gas-explained/operation/australian-lng-projects/> accessed 22 February 2016.

completed transport facilities including Hamad International Airport and Hamad Port. An expressway will eventually link Doha to all the major centres and preparations are being made to link Qatar to the GCC rail network¹⁴⁹, although that was put on hold in March 2016 as a response to the economic slowdown caused by low oil prices¹⁵⁰. Qatar is cushioned from the full impact of low oil prices but is looking for economies¹⁵¹, although major tenders for the al-Shaheen offshore oil extraction facility are expected in the second half of 2016 with completion due in mid-2020 at a value of US\$500 million¹⁵². This surge in construction projects shows Qatar's commitment to modernisation and diversification as it creates the infrastructure necessary to support the businesses it hopes to attract.

GSDP says Qatar is also taking steps to create an enabling environment by encouraging investment and providing opportunities for the private sector. Laws and regulations affecting banking, customs, commerce, FDI and majority foreign ownership have been liberalised. Entrepreneurship and innovation are being encouraged in schools, colleges and research centres; 'Enterprise Qatar' has been established to offer a range of services to prospective entrepreneurs. The Qatar Development Bank has introduced new products and services, including credit and export guarantees, insurance products and incubation services for start-ups. An Information and Communications Technology (ICT) strategy is being implemented to support the establishment of ICT focused businesses and the Qatar Science and Technology Park is working with private sector partners on cutting-edge R&D initiatives, particularly around green technology. The Qatar National Research Fund is helping create a national research culture and a National Research and Development Strategy has been established to align research initiatives with QNV2030's goals and objectives (GSDP 2012a). This demonstrates serious commitment and effort to ensure diversification is fully supported in every way possible. The Qatari desire to be seen as innovative and entrepreneurial is very powerful and undoubtedly designed to lure FDI and foreign businesses to the Emirate.

¹⁴⁹ <http://thepeninsulaqatar.com/news/qatar/352556/qatar-to-have-8-500km-of-highways> accessed 16 September 2015.

¹⁵⁰ The Gulf, 9 May 2016, 9:159, p14.

¹⁵¹ Ibid, p43.

¹⁵² Ibid, p38.

The Ministry of Development Planning and Statistics (MDP&S) estimates continued robust expansion in Qatar's non-hydrocarbon activities is expected in 2015–16, bolstered by production from the Barzan Gas Project¹⁵³.

Hydrocarbon output will expand by a modest 0.3 percent as gas production from Barzan offsets the expected decline in oil output, but this growth will diminish in 2016 as oil production continues to decline at a higher rate. By 2015 the non-hydrocarbon sector is expected to account for more than half of GDP, rising further in 2016. Financial services, real estate, transport and communications, and business services will all benefit from the large infrastructure projects and property development. Demand for services from the trade and hospitality sector was also predicted to pick up in line with forecast population growth and rising numbers of visitors to the country. Government services are expected to expand in keeping with population and economic growth in the wider non-hydrocarbon economy (MDP&S 2014).

Subsequent MDP&S forecasts predicted Barzan would add around 21 percent to pipeline gas production and strong growth in the non-hydrocarbon sector would be supported by capital spending on infrastructure and by relatively strong population growth. In 2016 and 2017 real growth is expected to ease¹⁵⁴ to 6.6 and 6.0 percent respectively, still very high performance in the prevailing global economic climate, although this was subsequently revised downwards when 2015's GDP forecast was halved to 3.7 percent by MDP&S as a result of the global economic downturn¹⁵⁵. Financial, real estate, transport, communications and business services will benefit from infrastructure projects, while trade and hospitality expect strong growth from regional clients. Barzan's output will support an increase in production of refined products, fertilisers and petrochemicals; greater demand for cement and metals for construction and infrastructure is expected to sustain other manufacturing activities. Finally, a new condensates refinery, Laffan 2, is set to come on stream in the fourth quarter of 2016 and is expected to stimulate vigorous manufacturing growth in 2017. Laffan 2 will produce jet fuel and gas oil to be sold domestically and will export diesel and other products to Asian markets (MDP&S 2015).

¹⁵³ <http://www.rasgas.com/Operations/BarzanGasProject.html> accessed 22 February 2016.

¹⁵⁴ from just over 7 percent in 2014

¹⁵⁵ The Gulf, 9 May 2016, 9:159, p43.

There can be little doubt Qatar's commitment and drive to diversify its economy and break into the non-hydrocarbons sector at a regional and international level is very serious. Their ability to achieve this is based on two key characteristics not available to their neighbours in Bahrain: vast hydrocarbon reserves giving a guaranteed revenue stream; and political stability as a result of a largely homogeneous¹⁵⁶ and politically apathetic national population. The citizens have a vested interest in safety, stability and enrichment and are therefore an ideal people for the monarchy to rule. However, it is open to question whether acquiescence, derived from a sense of entitlement inflated by the ruling bargain, would survive a new policy requiring the majority of citizens to work gainfully in the private sector.

5.3.5. Education and Skills for Citizens

According to GSDP, public service employment is so entrenched in family traditions most Qatari youth seldom give serious consideration to other options (GSDP 2012b). Seventy percent of young Qataris who responded to a Ministry of Economy and Commerce survey said they wanted to take up public sector employment after graduation. However, 55 percent also want to run their own businesses with retail and food, construction and financial services being the preferred sectors. A new law on establishing commercial companies has removed the minimum capital previously required for setting up limited liability companies¹⁵⁷ making it an easier process for aspiring entrepreneurs. Although there seems to be some contradiction in the percentages, it is clear a safe job in the public sector immediately after graduation is the preferred option for young Qataris. However, it is encouraging many of them see the potential for private sector enterprise as well, although most who replied in the affirmative see themselves as the owner of the company rather than a private sector employee.

GSDP says the aim of Qatar's education and training system is to prepare young people for success in an increasingly complex world. It enables social and economic transformation while giving young Qataris intellectual and practical development to achieve their potential. The desire is to motivate

¹⁵⁶ <http://www.state.gov/documents/organization/208620.pdf> accessed 8 March 2016.

¹⁵⁷ <http://thepeninsulaqatar.com/news/qatar/344261/70pc-of-qatari-youth-keen-on-public-sector-jobs-after-graduation> accessed 18 June 2015.

Qataris to use their knowledge and skills in the interests of society by encouraging analytical and critical thinking, creativity and innovation (2012b). Whether the monarchy has understood the potential implications of having a more analytical, critical and pioneering citizenry could be questioned, as such personal development must inevitably lead to questions about the political role of society in Qatar and the how the ruling élite reserves decision-making powers for itself.

However, this may not be a pressing issue. GSDP reports that although it is necessary to build human capital for a more productive, skilled and motivated workforce, many Qataris who wish to pursue tertiary education are not qualified to enter university so require foundation courses to prepare them. The foundation courses suffer high dropout rates and among those who start degree courses some do not complete them. Some graduates who pass then cannot get jobs because they have inappropriate qualifications, so it is recognised good career advice is required for young people choosing courses at secondary school, entering tertiary education and joining the workforce for the first time. This is made more important by new and more rigorous standards for public sector employment and many private sector career opportunities. As if to acknowledge the potential drawback of increasing Qatar's human capacity, GSDP says the development of a greater global role will challenge Qatari society's resilience as well as its values and identity. It recognises the likelihood of impacts on the perspectives of individuals, especially the young, as well as families and communities (GSDP 2012b). This is perhaps a warning to government that the population cannot be educated and enlightened without a commensurate increase in their curiosity about how Qatar is governed. This echoes comments in QNV2030 about the need to preserve Qatari, Arab and Islamic traditions and values to ensure society remains stable.

There have been tangible improvements in education over the last twenty years; there is now universal elementary schooling and literacy rates for the 15-24 age groups are nearly 100 percent. However, GSDP acknowledges the quality of education up to secondary level does not meet international standards, especially in maths and science. It also notes the need to concentrate on soft skills to improve employment potential and says enrolment in tertiary education could be much higher, especially among men. At tertiary

level GSDP claims improvements to Qatar University and the establishment of Education City universities have significantly increased opportunities and choice for Qatari youth. It says almost all programmes are internationally accredited and are designed to equip and prepare graduates to operate in a knowledge-based economy. However it admits there is much scope for improvement in participation and performance (GSDP 2012b). As with other areas of Qatar's development agenda, the government's serious commitment to education and training is not in doubt. What remains doubtful is the capacity or willingness of the majority of the indigenous population, especially men, to take part in the educational process. This may be a prime example of the culture of entitlement, reinforced by the government's rentier practices, actually subverting the government's long-term policy aims and objectives.

Qatar is proud of its links with overseas educational institutions. GSDP states that in 2011 the Qatar National Research Fund awarded 58 research grants worth US\$53 million to scientists at four Qatar Foundation universities: Texas A&M University-Qatar; Weill Cornell Medical College-Qatar; Carnegie Mellon University-Qatar; and Virginia Commonwealth University-Qatar. This is part of a programme to encourage young Qataris to become accomplished researchers. In parallel the Qatar Science and Technology Park aims to promote private sector research, technological development and commercialisation by engaging with international partners to encourage technology production and investment in innovative R&D and increase education and employment opportunities for young people (GSDP 2012a & 2012b). This expansion into R&D combined with greater collaboration with international partners does much to raise Qatar's profile outside the region, while assisting the diversification and wider development agenda within the country. However, it still requires the population to step up and play its part in achieving the Vision.

The government recognises not everyone has the capacity to work at the cutting-edge and realises student motivation is essential to success in education, training and at work. As part of this, GSDP says best practices for teaching languages, maths and science are being adopted, along with extra support for low achievers. The delta between what education produces and what the economy needs is being addressed and attendance on more relevant

courses is being encouraged. Also, technical and vocational education and training are provided as alternative pathways for young people for whom universities are not the right learning environment (2012a). Again this is innovative on the part of the government, but relies on the less capable citizens wanting to take up technical trades or vocational work in the private sector. Some may feel it is beneath them. This may suggest some form of compulsion will be required; that could be counter-productive and lead to a backlash against the monarchy

As part of its workforce strategy, the government is reforming labour legislation and introducing opportunities for life-long development in the hope of raising the number of Qataris in work. Furthermore, an initiative to encourage citizens to participate in private sector work is being established, including entrepreneurship opportunities for youth and women, and changing established attitudes to women's employment (GSDP 2012a). This combination of measures is interesting as it signals some change is possible. The reform of legislation is easily portrayed as making Qatar an easier place to do business and benefitting the nation's economic well-being. Suggesting traditional conservative views on the place of women in work can be altered must allow the possibility that other long-held beliefs about the role of women in society as a whole, or the value of the family as an indivisible unit can be challenged. It may also cause resentment amongst the most conservative elements of society who are perhaps most fearful of modernity. The monarchy may find it difficult to reconcile or even promote some changes to traditional life without opening a wider societal and political debate.

However, the ratio of Qatari women employed in the private sector rose more than six times in 12 years, from 2.1 percent in 2001 to 14.7 percent in 2013. Conversely, their ratio in public sector jobs decreased from 89.1 percent in 2001 to 68.2 percent in 2013. MDP&S's 'Report on Qatar's National Human Development 2015' said the increased representation of Qatari women in the private sector is part of the government's Qatarisation policy¹⁵⁸. Whatever the potential for starting societal debate, the fact is Qatari women are working. However, the available statistics give no indication of whether the overall

¹⁵⁸ <http://thepeninsulaqatar.com/news/qatar/345134/more-qatari-women-in-private-sector> accessed 22 June 2015.

number of women in employment has increased, or whether a large number of working women have transferred from government service to the private sector.

5.3.6. Expatriate Dependency

With the rapid expansion of the economy the demand for migrant workers has increased commensurately and the number of citizens in the workforce has declined significantly. GSDP says there are fewer new Qatari entrants to the workforce annually than the economy needs. Qatar saw heavy investment in infrastructure during 2000-2010 and 'multiple megaprojects' required a major influx of mainly young migrant workers. More than a million people were added to the population during 2004-2010 when Qatar grew from 0.7 to 1.7 million people. As a result Qatari youth is a minority in the total population, the education system and the workforce. GSDP acknowledged this required citizens to adapt to the rapid modernisation taking place in a traditionally conservative culture and to changing demographic dynamics, saying this called for intercultural understanding and tolerance, as well as intergenerational dialogue (GSDP 2012b). Here is the basic paradox of Qatari society; the economy and its development cannot function without the presence of huge numbers of expatriates, but the migrants bring the threat of cultural dilution and modernisation that may be at odds with the traditions and heritage the Vision seeks to preserve at the core of Qatari society. This population imbalance could be the greatest threat to the monarchy's longevity, especially if the treatment of migrant labour falls short of internationally recognised norms and expectations. For example, rights groups have criticised some Qatari companies for not paying workers on time, or not paying them at all. Aware of the attention surrounding the 2022 World Cup, the government says it aims to introduce reforms and compel companies to pay workers via direct bank transfers¹⁵⁹.

The government is touchy about adverse reporting concerning its migrant workers and has arrested journalists attempting to expose poor living conditions. The BBC's Middle East business correspondent and his three-man team were held for almost two days in May 2015 and their phones, cameras

¹⁵⁹ <http://www.gulf-times.com/qatar/178/details/434681/industrial-area-restaurant-lets-poor-workers-eat-for-free> accessed 14 April 2015.

and equipment confiscated. A team from West German Broadcasting investigating the circumstances of migrant workers was arrested in March 2015. Qatar has been widely criticised in the press for its handling of expatriate labourers, many of whom work on World Cup construction projects, and rights groups allege many workers are housed in poor and often unsanitary conditions¹⁶⁰. Qatar is incapable of hosting the World Cup without employing significant numbers of migrant workers, but despite this dependency the workers appear to be subjected to abuse by their employers, about which the Qatari government is hugely and understandably sensitive.

MDP&S's report on Human Development 2015 covered the sponsorship and exit rules for migrant workers. It reminded readers that the existing 'kafala' system¹⁶¹ was due to be replaced with an easier and better arrangement. The report also identified the need for better regulation for domestic workers, as a wide range of rights abuses were not infrequent. Domestic workers were excluded from the 2004 Labour Law and had no access to the Ministry of Labour and Social Affairs to make complaints and seek redress of grievance. The report quotes UN estimates showing Qatar has the highest share of foreign population relative to total population in the world. Non-Qataris account for about 87 percent of the total population. It says most non-Qataris are expatriate workers 'whose very presence indicates the significant contribution they make to economic growth and to national development'¹⁶². Demand for skilled expatriates is increasing, so Qatar says it is creating incentives through improved working and living conditions, including the provision of appropriate schooling. The government is also reviewing recruitment and retention policies, including its sponsorship system (GSDP 2012a). With non-Qataris making up 87 percent of the population it is difficult to see a future where Qataris exist in sufficient numbers to do all the jobs that need doing; Qatar is not sustainable in its current form without foreigners to do the work. The disparity in treatment between skilled and non-skilled migrants can only increase as the government

¹⁶⁰ <http://www.independent.co.uk/news/media/tv-radio/qatar-claims-bbc-journalist-was-arrested-for-trespassing-while-reporting-on-migrant-workers-10258955.html> accessed 20 May 2015.

¹⁶¹ A system of sponsoring individual foreign workers where the employer has the legal right to prevent workers leaving the country without permission. <http://www.out-law.com/en/articles/2015/september/changes-agreed-to-qatars-kafala-system-for-foreign-workers-says-report/> accessed 7 March 2016.

¹⁶² <http://thepeninsulaqatar.com/news/qatar/345134/more-qatari-women-in-private-sector> accessed 22 June 2015.

tries to attract those necessary to build and sustain its knowledge-based economy. Yet, Qatar cannot do without the unskilled labour either, so further reform like that proposed for domestic workers could become necessary if Qatar is forced to attract even unskilled workers. Cynically, Qatar could be hoping economic necessity will continue to force workers from the sub-continent and South-East Asia to accept the poor pay and conditions it offers them.

5.3.7. Human Security Measures

As seen previously, human security is multi-dimensional and encompasses food, water, health, public safety and education. Qatar's approach to human security appears very strong when viewed statistically through the lens of the Human Development Index (HDI)¹⁶³. In 2012 Qatar's HDI score was 0.834, in the very high human development category, positioning the country 36th of 187 countries and territories. This is below the average of 0.905 for countries in the very high human development group, but significantly above the average of 0.652 for Arab States, where the closest countries in rank and population size are the UAE and Bahrain, ranked 41st and 48th respectively (UNDP 2013b).

Qatar's 2013 HDI value increased to 0.851, still in the very high human development category, placing it 31st of 187 countries and territories. This is below the average of 0.890 for countries in the very high human development group, but again well above the average of 0.682 for Arab States, where the countries closest to Qatar in rank and population size remain the UAE and Bahrain, which were ranked 40th and 44th (UNDP 2014b).

By 2014, Qatar's HDI score had reached 0.850, still in the very high human development category and 32nd of 188 countries and territories. This is still below the average of 0.896 for countries in the very high human development group, but above the average of 0.686 for Arab States, where the countries closest to Qatar in rank and population size are still the UAE and Bahrain, ranked 41st and 45th (UNDP 2015b). In 2014 Qatar maintained its approximate

¹⁶³ The HDI is a measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. To ensure as much cross-country comparability as possible, the HDI is based primarily on international data from the UN Population Division, the UN Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS) and the World Bank. <http://hdr.undp.org/en/content/human-development-index-hdi> accessed 4 February 2016.

ranking in the World, despite a very slight reduction on the previous year in its HDI value. Notably it maintained its position relative to Bahrain and the UAE which both also dropped back one position in the global rankings. On the three measures laid down by UNDP, Qatar is doing well and is significantly better than the Arab States average, although the inclusion of Iraq, Syria and Libya must have a detrimental effect on that average value.

MDP&S data showed the population totalled over 2.412 million in October 2015, up 8.8 percent compared to the previous year¹⁶⁴. During 1980-2014, Qatar's life expectancy at birth increased by 5.6 years, mean years of schooling increased by 4.7 years and expected years of schooling increased by 1.9 years. Qatar's GNI per capita decreased by about 14.6 percent during the same period (UNDP 2015b) despite the huge gas reserves they hold and exploit. However, GSDP recognises (2012a) Qatar will not be able to improve its HDI score significantly, relative to other countries, without major educational improvements, as nationals will not play a significant role in developing Qatar without attaining the necessary educational qualifications and associated skills. It says Qatar continues to prioritise human development and is investing heavily in social sectors, to achieve the highest global standards in health and education, and so its people can participate fully in social, economic and political life nationally, regionally and internationally. This is an interesting official line given the apparent political apathy of the population and the continued absence of elections for the Consultative Council.

The government is engaged in more realistic development, such as potentially future-proofing electricity and water supplies, exemplifying the government's desire to reduce dependency on oil and gas for electricity generation. A US\$608 million contract to build reservoirs, pumping stations and infrastructure as part of a Kahramaa project has been awarded¹⁶⁵. This is a key contribution to the human security agenda as energy consumption will increase as temperatures rise with climate change. Qatar is already water-stressed, a

¹⁶⁴ <http://thepeninsulaqatar.com/news/qatar/360443/qatar-population-rises> accessed 1 December 2015.

¹⁶⁵ <http://www.gulf-times.com/qatar/178/details/434209/%24608mn-deal-for-mega-reservoirs-> accessed 9 April 2015.

position that will not be improved by increased temperatures, less precipitation events and a growing population.

GSDP reports a campaign for public awareness to reduce water use, emphasising the importance of civic responsibilities for natural resources, the need for water-saving technology and sustainability. A management plan is being established to monitor groundwater, conserve fresh water aquifers and eliminate excess water usage. Effective management of water resources is a declared national priority to meet basic future needs. Recycled water and treated sewage effluent are the only water sources in surplus and will play a larger role in non-potable uses (GSDP 2012a). This may well be one of the social sectors the government is investing in heavily. Placing responsibility for protection of natural resources and sustainability on the population may be seen as a way of engaging them in Qatar's development without delegating any political authority to them. Whatever the motivation, the logic of such a campaign is obvious given the water scarcity Qatar suffers.

According to Abrahams, linking solar energy, seawater desalination and agricultural development to improve food and water security will make Qatar a leader in sustainable agriculture in arid states. The reliance on food imports for 90 percent of its needs is a potential human security challenge, so the Qatar National Food Security Programme (QNFSP) takes a holistic approach to food security through expansion of four related sectors including: renewable energy; desalination and water management; agricultural production; and food processing and transport (2013). Food security is critical for the al-Thani's continued hold on power, as however politically apathetic the population might be, discontent over food scarcity and the inevitable accompanying food-cost inflation could rapidly lead to active and violent protest. As it is always the socially and economically marginalised section of a population that suffers first, this discontent could manifest quickly among unskilled migrant workers who have little vested interest in the al-Thanis or Qatar.

The Qatari Farms Development Programme envisages modernised irrigation, improved practices and expansion of greenhouses. The government is also raising awareness and increasing levels of education and engagement on such things as food supply and diversity, nutrition, lifestyle and overall sustainable

food consumption patterns. QNFSP aims to increase production sustainably while preserving ecosystems and using environmentally appropriate technologies and practices. It aims to secure availability and safety of food supplies through an increase in domestic production, which will reduce price and quality variability and overall dependence on imports (Abrahams 2013). The desire to reduce dependency on food imports is understandable and logical, but its achievability may be questionable. According to the FAO, Qatar's land area is 1.161 million hectares (11,610 km²), but only 17,610 hectares were cultivated in 2013, equivalent to 1.5 percent. Similarly, in 2014 only eight in every thousand people were economically active in agriculture i.e. 0.8 percent¹⁶⁶. With such low percentages involved it is difficult to see how a significant improvement in domestic production could be achieved as the population rapidly increases beyond the 2.5 million mark. As with migrant workers, Qatar is inescapably dependent on very significant food imports to remain sustainable.

GSDP says substantial investments in healthcare and vaccination have reduced childhood mortality rates and the levels of most communicable diseases. Interventions are being targeted at young people before they acquire unhealthy habits and lifestyles, to improve their chances of good health later in life. The National Development Strategy 2011–2016 incorporates the National Health Strategy and identifies the need to change behavioural patterns through strong prevention and robust primary care. GSDP recognises that establishing healthy behaviours during childhood and youth will contribute to achieving higher human development (2012b). This is entirely consistent with improving human security, recognising the health of the population is intrinsically tied up with its potential economic productivity and also reduces the burden an unhealthy population places on healthcare services. Good public health also contributes to Qatar's image as a progressive place in which to do business and so has economic security advantages too.

Qatar's National Health Strategy describes fundamental reforms across the whole of healthcare. The paradigm is being shifted from hospital-based care to a full spectrum of care including improved primary and community-based

¹⁶⁶ http://www.fao.org/nr/water/aquastat/data/cf/readPdf.html?f=QAT-CF_eng.pdf accessed 1 March 2016.

services. The focus of healthcare is increasingly shifting to prevention and early intervention for serious disease and illness. Affordable health services through partnerships in meeting costs are being established as are budget strengthening, private health insurance, transparent management of capital expenditures, and improved health infrastructure planning (GSDP 2012a). Five new hospitals will open in 2016 as part of a major expansion of healthcare facilities, including three hospitals for single workers in the Industrial Area, Mesaieed Industrial City and Ras Laffan, a communicable diseases hospital and new health centres and other services. It is claimed the National Health Strategy 2011-2016 has completed 71 percent of 37 projects and a second strategy will be launched in early 2017¹⁶⁷. This is of particular relevance to economic diversification as the inference is that the hospitals for single workers are primarily for expatriates as so few Qataris are classified as economically productive¹⁶⁸ by the UN. Skilled workers will not be attracted to work in Qatar unless they are certain they can have access to good healthcare among other services.

5.3.8. National and Regime Security

In common with other states in the region, it is very difficult to gain insight into Qatar's national security aims, objectives or strategy because of their preoccupation with secrecy. However, some of its actions are indicative of a sophisticated approach that aims to tie in multiple partners to a collaborative network. For example, Ulrichsen believes Qatar's natural gas exploitation has geostrategic implications. It exports to leading industrialised and emerging countries, including the US, UK, South Korea, Japan and China, as well as the UAE, thus increasing its network of relationships and building interdependencies with powerful partners who have a vested interest in Qatar's national security (2011). When this is combined with Qatar's increasing prominence in regional affairs and its financial investments and interests in highly developed countries, it is evident that a complex matrix of bilateral

¹⁶⁷ <http://thepeninsulaqatar.com/news/qatar/360838/five-new-hospitals-next-year-to-expand-healthcare-facilities> accessed 4 December 2015.

¹⁶⁸ http://www.fao.org/nr/water/aquastat/data/cf/readPdf.html?f=QAT-CF_eng.pdf accessed 1 March 2016.

relationships exists that could be called upon for support should Qatar feel it faces an exogenous threat.

Although there is apparent widespread political apathy in Qatar, there are isolated incidences of what the government regards as dissent being punished. In October 2015, UN human rights experts called for the release of Qatari poet Mohammed al-Ajami, on the second anniversary of his sentencing. Al-Ajami is serving fifteen years in prison in Doha for the contents of his poetry. The UN has expressed concern that his arrest and detention may have been 'solely related to the peaceful exercise of his right to freedom of opinion and expression' and 'the peaceful exercise of his fundamental human rights'. There were also concerns the criminal process did not meet all the judicial requirements of a fair trial. ADHRB followed up the UN statement claiming human rights violations in Qatar go beyond migrant rights abuses and include criminalisation of free speech and artistic expression¹⁶⁹. In November 2015, Amnesty International followed up the case saying it 'considers Mohammed al-Ajami a prisoner of conscience, held solely for peacefully exercising his right to freedom of expression'. Amnesty called for his immediate and unconditional release and for his conviction to be quashed¹⁷⁰. He remains in jail.

The government obviously has concerns about the behaviour of its migrant workers, as it was reported in October 2015 authorities had drawn up plans to tighten security in the Industrial Area where thousands of low-income migrant workers are housed. Public security offices have been set up in the Labour City in the Industrial Area and an awareness campaign has been launched among the migrants covering Qatari laws, customs and traditions. Inspections were carried out to catch workers violating Qatar's laws and security forces are coordinating their efforts to catch runaway workers¹⁷¹. That this is reported in an English language newspaper freely available online is surprising, as it paints a picture of migrants working under very close supervision of the security forces in an atmosphere that is similar to incarceration. This is almost a tacit

¹⁶⁹ <http://adhrb.org/2015/10/un-experts-condemn-detention-of-qatari-poet/> accessed 24 October 2015.

¹⁷⁰ <https://www.amnesty.org/en/press-releases/2015/11/qatari-authorities-must-free-poet-serving-15-year-jail-sentence/> accessed 1 March 2016.

¹⁷¹ <http://thepeninsulaqatar.com/news/qatar/356034/extensive-security-plan-in-industrial-area> accessed 24 October 2015.

acceptance that human rights of low-skilled expatriate workers come second to the perceived threat posed to Qatari national security by foreigners with different customs and traditions. This attitude is consistent with the QNV2030 objective of preserving traditional national life within Qatar in the face of external pressures.

In respect of Islamist extremism and transnational terrorism, Qatar appears to have been on high alert since before the ISIS attacks in Paris and Beirut in November 2015, following bombings of two Shia mosques in Saudi Arabia and another in Kuwait City in the preceding summer. In spite of threats to the 2022 World Cup on ISIS forums, a foreign policy analyst said it is unlikely Qatar would be attacked, because it has a low profile in the ongoing military campaign against ISIS and al-Jazeera does not criticise the group. However, he admitted westerners in Doha could be a target as Gulf States are viewed as decadent by ISIS; he believed there is definitely reason for Qatar to be on its guard¹⁷². There have been rumours of Qatari private individuals providing financial support to ISIS¹⁷³, although hard evidence is difficult to find. The same reporting suggests Qatari private individuals have funded other terrorist organisations too. This could be another explanation why the risk of ISIS attack is considered low, although ISIS opportunism in the event of Qatar becoming politically unstable, however remote that may be, cannot be ruled out.

5.3.9. Reinforcing Security Structures

GSDP says the public safety and security sector has a key role in enhancing and improving the quality of life and well-being of all citizens. It noted safety and security initiatives were being undertaken as a priority to include improved crime management through better knowledge management, improved building safety, and a high-level coordinated approach to national disaster management (2012a). Part human security initiative and part national security the government seems to be strengthening its oversight of many aspects of Qatari

¹⁷² <http://dohanews.co/how-safe-is-qatar-from-an-isis-attack-experts-weigh-in/> accessed 1 December 2015.

¹⁷³ <http://www.washingtoninstitute.org/policy-analysis/view/qatar-and-isis-funding-the-u.s.-approach> accessed 1 March 2016.

life. However, the inquiries launched into building construction standards after the floods at the end of 2015 suggest this oversight is not yet fully effective.

When states are reinforcing security structures there are invariably opportunities for arms sales. In October 2015 the British Ambassador said Typhoon was the right aircraft for Qatar to defend its borders and ensure it can respond efficiently to regional crises like Syria and Yemen. The Ambassador said he was proud of the bilateral relations between the UK and Qatar, their growing ties, cultural and commercial events and the fact British imports to Qatar had increased by 74 per cent in the last year and trade exchanges had grown. He described Qatari-British relations as “strong and deep-rooted” and based on “trust and mutual respect”¹⁷⁴. However, in January 2016 the UK’s new ambassador to Qatar said he was still hopeful the Qataris would purchase British Typhoons despite plans to order 24 French jets. Commentators said although Qatar is reducing spending because of declining government revenues it does not appear to be cutting defence spending¹⁷⁵. Whatever the Ambassador’s hopes, it is likely Qatar will continue to purchase arms from the British and the French, again reinforcing its security relationships with the two European powers capable of projecting military force into the region and useful friends to have in a crisis.

5.3.10. International Collaboration

According to GSDP, Qatar makes a significant contribution to the global partnership for sustainable development through international cooperation, including bilateral and multilateral development assistance, promoting South-South relations, and supporting countries with complex humanitarian issues, such as natural disaster and conflict. This provides the rationale for proactively engaging with numerous regional and international agencies of the UN, including hosting of major international conferences in Doha, and for being a signatory to international treaties and protocols. The Qatar Foundation is sponsoring large-scale job creation, entrepreneurship, and access to capital and markets in countries with very high rates of youth unemployment. Reach

¹⁷⁴ <https://www.middleeastmonitor.com/news/europe/21454-qatar-uk-discuss-typhoon-purchase-deal> accessed 12 October 2015.

¹⁷⁵ <http://dohanews.co/uk-ambassador-qatar-still-considering-buying-british-fighter-jets/> accessed 1 March 2016.

Out to Asia works with local and international communities to support children in crisis and less developed countries by giving them access to basic education and by promoting and building educational and social infrastructure. Qatar Charity works in international partnerships to support disaster relief and emergency response and is regarded as a pioneering Islamic institution combining originality, creativity and professionalism in development and humanitarian assistance (GSDP 2012a). Here is Qatar emphasising its international aid and sustainability credentials and demanding to be regarded as a serious player on the world stage. Without doubt it is highly visible in many charitable and environmental activities, all of which project its image as a progressive and stable Gulf State.

In a more interventionist stance, in October 2015 Qatar's Foreign Minister said his country had not ruled out military intervention in Syria, if Saudi Arabia and Turkey proposed it, pointing out Qatar has no geopolitical interests or agendas there. The minister accused the UN Security Council of not providing enough protection for the Syrian people which is why Qatar and its allies had become involved directly in Syria. He then defended the Ahrar Al-Sham Islamist militant group which Qatar and its allies have been supporting, denying they are allies of Al-Qaeda, but rather a Syrian group fighting to liberate their country¹⁷⁶. So, Qatar is prepared to be seen to be participating in military operations overseas, but again goes to lengths to justify its participation, this time by making up for the failings of the UN Security Council and supporting honest Muslims fighting against an oppressive regime.

In a prime example of Qatar acting as a regional diplomatic interlocutor, it was announced in December 2015 that Qatar and Turkey had signed fifteen cooperation agreements in various fields, including training and education between their respective interior ministries. The signing followed the first meeting of the Qatar-Turkish Supreme Strategic Committee in Doha chaired jointly by Qatar's Emir, Sheikh Tamim, and Turkey's President Erdogan. The Emir said 'the establishment of the Supreme Strategic Committee represents a quality leap in relations between the two countries', while Turkey considers Qatar an important ally and views its relationship with Doha as means to

¹⁷⁶ <https://www.middleeastmonitor.com/news/middle-east/21830-qatar-has-not-ruled-out-military-intervention-in-syria> accessed 24 October 2015.

strengthen its relations with the GCC States¹⁷⁷. Qatar has effectively taken the lead in GCC collaboration with Turkey, which again raises its international and regional profile and standing and reinforces the complex matrix of security relationships it values so highly.

5.4. Reflections on Qatar

The Emirate of Qatar is perhaps best described as a place of political stability and social homogeneity underpinned by enormous wealth. This gives the ruling élite a free hand to lead a contented population towards the vision of a progressive and diversified state, founded on the principles of Arab, Islamic and national heritage, traditions and customs. It is a place of largely benign autocracy, but the little dissent that exists is not tolerated. This means there is virtually no indigenous internal security problem, although very large numbers of poorly treated low-skilled migrant workers retain the capacity to create serious disorder should they become sufficiently disgruntled about living and working conditions.

Qatar is making significant strides towards sustainability through economic diversification, environmental protection, climate change mitigation, alternative technologies and human security measures, all of which contribute to enhanced national security. Its political and economic stability means it can focus on these areas because it is not distracted by internal security issues, or the need to secure future income streams. This gives Qatar a major developmental advantage compared to its regional neighbour Bahrain. Yet, although human security is a major component of its sustainable development agenda, low-skilled expatriate labour does not get a good deal generally, which may be storing up domestic stability problems for the future.

Qatar's view of its place in the world is striking. It has deliberately set about making itself a regional and international player, particularly in the areas of climate change, overseas aid, development and mediation. The Emirate has pursued an intelligent and sophisticated strategy of building economic and security relationships with many countries on a bilateral basis. The diversity of

¹⁷⁷ <https://www.middleeastmonitor.com/news/middle-east/22630-turkey-and-qatar-sign-development-agreements> accessed 4 December 2015.

these countries, with sometimes competing national interests, means Qatar is supported by a complex web of partners, each of whom has a vested interest in its security and stability in the long-term.

At the heart of everything is the perpetuation of the ruling bargain and absolute monarchy, as enshrined in the constitution i.e. regime security. There is little to suggest this will change soon unless the élite miscalculates in areas such as the continued compliance of migrant labour, or the effects of greater exposure to globalised knowledge and ideas in a population increasingly forced into productive work in the private sector. As an insurance policy, setting a date for Consultative Council elections and ensuring they take place freely and fairly to produce a legislative body with real powers could be a smart way of pre-empting potential future criticism and calls for political reform.

6. The UAE – A Case Study



Map 4. The UAE - <http://www.stampworldhistory.com/wp-content/uploads/2015/04/United-Arab-Emirates.png>

6.1. Introduction

The UAE was formed as a six-member federation on 2 December 1971 following the UK's decision to withdraw from east of Suez. The seventh emirate, Ras al-Khaimah joined the UAE the following year, after some persuasion. Abu Dhabi became the capital city as it possessed most of the oil reserves and its ruler became the UAE's first president. The Supreme Council of Rulers of the seven emirates retains oversight of the federal government, but the presidency remains with Abu Dhabi's ruler and the vice-presidency with Dubai's, emphasising their relative power compared to the other five (Davidson 2011). Davidson notes that today's seven ruling families are the same who negotiated successive treaties with the British in the nineteenth and twentieth centuries when, in exchange for preventing piracy against British interests, the British guaranteed protection against external threats and domestic dissent (2011).

A National Federal Council (NFC) of 40 members was established soon after the inauguration of the federal state, although it has always been a technocratic rather than political institution. In 2006 the first elections to the NFC were held with under 7000 people, i.e. less than one percent of UAE citizens, entitled to

vote. The next elections followed in September 2011 when the electorate comprised 129,274 voters of about a million citizens. However, although the Arab Spring was underway, turnout was only 27.75 percent, possibly because of anxiety over such events (Ehteshami 2013).

As has been seen, national and regime security are habitually conflated by the Gulf States. Therefore, the proposition remains that good economic security enables successful delivery of the ruling bargain, which assures national security by providing political and social stability. This guarantees the existing system of governance remains unchanged and consequent political continuity enables high levels of human security and development to be achieved. There is a direct relationship between human security and economic security; a safe and secure population is much more likely to be economically productive than not. However, climate change has the potential to affect many aspects of human and national security if not addressed effectively.

In 2010 the UAE published its vision, albeit two years later than Bahrain and Qatar. The UAE's planning horizon extended to 2021, coinciding with the golden jubilee of the Federation, but in 2008 Abu Dhabi produced an economic vision with the same time-frame as the Bahrain and Qatar visions. The UAE's vision has been analysed in the same way as those of Bahrain and Qatar, but is augmented in this case study by an analysis of the executive summary of Abu Dhabi's vision, reflecting its position as the clearly dominant emirate since Dubai's economic reverses in 2008, with the assumption that as leader of the Federation Abu Dhabi will effectively dictate the development agenda until 2030. Only the executive summary has been analysed to permit focus on the main issues and prevent the UAE's vision being submerged in a mass of detail specific to Abu Dhabi.

6.2. United Arab Emirates Vision 2021 (UAEV2021)

6.2.1. Word Counts

UAEV2021 has none of the high scores seen in the Bahrain and Qatar visions. The highest word count recorded was 21 for 'national' and the next highest score with 18 counts was 'citizens'. 'Environment' scored 17 and environmental three, but only eight of these referred to the natural environment.

'Economic' comes fourth with 15 counts, but this is significantly less than the 44 scored for Bahrain and the 51 for Qatar in similarly sized vision documents. The only other words to achieve double digit scores with ten each are 'development' and 'international'. Of the single digit scorers both 'education' and 'sustainable' scored nine, but 'diversification' scored only once and 'climate change' was the only word pair to occur with two counts. Neither 'political' nor 'reform' scored at all, which perhaps gives a clue about the future intentions of the UAE's ruling families.

6.2.2. The Context

UAEV2021, known as the National Agenda, appears blander than its Bahraini and Qatari counterparts and seems to focus more on cultural aspirations and national identity than how to achieve specific social or economic outcomes. It is presented jointly by the rulers of Abu Dhabi and Dubai, the Federation's President and Vice President respectively, which gives it authority.

Interestingly the rulers of the five minor emirates are not mentioned by name, which is probably indicative of the relative weight their opinions hold in directing the UAE's future. By 2010 Dubai had suffered a significant economic downturn in its real estate and prestige projects sectors and had been bailed out by Abu Dhabi; this left Abu Dhabi as the main source of economic power in the UAE as well as holding the vast majority of its hydrocarbon reserves. For this reason ADEV2030 may be the most authoritative document about the UAE's future trajectory. However, UAEV2021 merits analysis as it claims to be inclusive of all seven emirates in the Federation.

The document is a well produced piece, again bearing all the hallmarks of business consultants. It runs to 36 pages but a significant number of them contain little information, if any at all, being devoted to pictures of Emiratis or serving as section dividers. After two such cover pages there is a page bearing photographs and statements of the President and ruler of Abu Dhabi, Sheikh Khalifa bin Zayed Al Nahyan, and the Vice President and ruler of Dubai, Sheikh Mohammed Bin Rashid Al Maktoum. The President emphasises that work is the mark of true citizenship, sincerity and loyalty and reminds citizens they share responsibility for guarding UAE sovereignty. The Vice President says there is no challenge that cannot be overcome through strong faith,

determination and resolve. Here then is the basis of the Vision highlighting loyalty, responsibility, faith and determination as essential to the UAE's future success.

There follows a preface signed by the Vice President who personally launched the Vision¹⁷⁸. It acknowledges the debt citizens owe to the 'founding fathers' of the Federation for using UAE resources wisely to create a modern, progressive state where all citizens share the benefits of development. It is claimed this has placed the UAE 'among the most advanced nations in the world', while successfully maintaining its traditional way of life, culture and society. It says the Vision is based on the principles of the founding fathers and Presidential guidance and has been adopted by the Federal Supreme Council, suggesting, perhaps, the role of the other five rulers in authorship was limited, or that it has been presented as a *fait accompli* by the two more advanced and economically powerful emirates.

The Vice President highlights various challenges: to strong family ties that underpin a cohesive society; to the UAE's economic competitiveness; to national identity; and to health, education, the environment and well-being. To overcome these challenges, he says citizens will have to work harder and be more innovative, organised and aware of potential risks. Citizens are reminded they are responsible to future generations for what they leave behind. He characterises the founders' legacy as 'defined by prosperity, security, stability and a life filled with dignity and respect' and calls upon Allah to help guide the current generation. Although the Preface contains much of what would be expected in such an introduction, it is marked by a lack of detail with regard to the aims of UAEV2021. The suggestion is that development will continue, but there is little to indicate the UAE's future will be significantly different, given the emphasis on maintaining national identity, culture and traditions alongside essential services.

6.2.3. The Aspiration?

However, two pages later, and without specific attribution to the President or Vice President, there is a striking statement standing alone on a page: 'we want to be among the best countries in the world by 2021'. Perhaps it was

¹⁷⁸ <http://www.vision2021.ae/en/our-vision> accessed 20 October 2014.

considered inappropriate for this statement to be contained within the preface, but finding it seven pages into the Vision is surprising and eye-catching, if somewhat disconnected from what has been written before. As a statement of intent it is very powerful, but is not augmented by any further detail. Its impact is therefore lost as two pages later, on what is officially page one, there is the Vision Summary which does not follow up the statement; instead the summary returns to the comfort zone of 'a strong and safe union', 'knowledgeable and innovative Emiratis', 'a competitive and resilient economy', a 'cohesive society', and a 'nurturing and sustainable environment'. This suggests maintenance of the status quo, rather than political, social or economic change. Given the hydrocarbon reserves UAE holds, perhaps there was no sense of an impending threat requiring radical change before the Federation's 50th anniversary.

6.2.4. United in Responsibility

Without preamble UAEV2021 moves to its first section, 'United in Responsibility'. The brief introduction talks of ambitious, responsible citizens successfully developing a strong socio-economic environment, while maintaining traditional lifestyles, moderate Islamic values and cohesive families and society. The first part of the section is called 'Confident and Socially Responsible Emiratis'. It is interesting this is the first subject under discussion, rather than economic diversification or education and skills for the future. Admittedly, it encourages citizens to take charge of their 'path through life' and show professional commitment, motivation, entrepreneurial spirit and self-reliance, but this is followed immediately by a reminder that every Emirati's duty of loyalty includes moral and social responsibility. It warns citizens to be alert to challenges the UAE faces and to shape the nation through proactivity and persistence, but says success must not be viewed solely in terms of wealth or social standing; for stability there must be spiritual gratification too. Prominent Emiratis are encouraged to show moral leadership as role models for society. This could be interpreted as an attempt at emotional and spiritual blackmail from the outset, to ensure duty to the state and loyalty to traditional governance is pre-eminent amongst all other citizens' obligations. This would discourage calls for meaningful reform towards wider participatory politics and decision-making, which could be viewed as disloyal. It suggests the rulers believe

increased prosperity and spiritual reinforcement will be sufficient to maintain the ruling bargain.

The next part is 'Cohesive and Prosperous Families' regarded as the cornerstone of society. The detail encourages Emiratis to have large families as the nucleus of society, discourages divorce and reaffirms the positive role of strong family ties in national life. This is taken further to place responsibility on all members of extended families for nurturing and educating children and enabling them to play a full role in society. Intergenerational dialogue will pass on traditions and culture and maintain national identity. It emphasises the exemplary role of family elders as guardians of tradition and claims tradition will be at the heart of empowering Emirati women to 'gain greater opportunity to combine full participation in active life with the joy and fulfilment of motherhood', while protecting them from discrimination in the workplace and society. This builds naturally upon the first part and is primarily concerned with maintaining and improving the current fabric of Emirati society, based upon familial ties, loyalty, tradition and duty. Again this would appear to be consistent with a future governance model that is not much different from when the Vision was written. Constant reiteration of the values of tradition, national identity and loyalty do not allow much space for alternative viewpoints on political or social reform and therefore bolster the position of the ruling élite.

The theme continues in the third part of this section, 'Strong and Active Communities', which seems at first sight to suggest the creation of strong civil society; the summary talks of a well-knit bond of solidarity amongst citizens, but with a spirit of openness to residents. This is expanded upon with a reiteration of the centrality of tightly-knit communities to the bedrock of society. It is claimed these communities prevent social exclusion and help youngsters develop their full potential within a safe environment, while their Emirati identity is strengthened and they engage fully in society. It says there will be a lively social scene comprising charitable works and volunteering to increase social awareness and ensure the most vulnerable are integrated into a cohesive society. Outside of their communities Emiratis are encouraged to reinforce their national identity and see themselves as part of a citizenry where mutual trust is essential and all can learn from each other in a harmonious society based on solidarity of purpose. It extends the harmony to resident expatriates,

encouraging dialogue with other cultural groups to enhance mutual understanding in society. It appears to be in favour of a very strong civil society, but one that is constrained to actively supporting the traditions, values and cohesion of the existing social structure; again there is no room for an alternative point of view, let alone political disagreement or opposition.

The final part of this section is 'Vibrant Culture', founded upon progressive and moderate Islamic values and a rich Arabic language, celebrating and reinforcing national traditions and identity. It says the UAE's Arab-Islamic roots are 'treasured as a profound and sacred element' of national heritage and proclaims Islam's progressive, moderate values will support traditions of respect and openness, while religious tolerance ensures mutual understanding and respect amongst the UAE's diverse population. Furthermore, the core tenets of Islam will prevent 'the homogenising effects of globalisation' from eroding moderate religious values, while Arabic will become a dynamic and vibrant language and a symbol of the UAE's progressive Arab-Islamic values. UAEV2021 sees the UAE as a centre of excellence for the study of Arabic and promoting the translation of international literary and scientific works into the language. Once more there is reaffirmation of the centrality of tradition, heritage and culture to Emirati national identity, to be preserved in the face of increasing multiculturalism as 'a crucial matter of national pride and social stability'. It will be hard to balance the competing pressures of religious tolerance and openness with resistance to the modernising and homogenising forces of globalisation; there would appear to be a mutual exclusivity at the heart of the two agendas, unless what is actually meant is foreigners will be free to carry on their lives as they would in their own countries, providing it is either invisible to, or does not impact upon Emirati citizens.

The key messages in the first section of UAEV2021 concern preserving national identity through reinforcement of religious, traditional and cultural values and the strengthening of familial and societal bonds to reinforce loyalty to the state, and therefore implicitly to the Emirs and their families. There appears at this point no suggestion of a reduction in the number of expatriates, no real shift of Emiratis into the high-value workforce, no major attempt to educate and train Emiratis to do high-value work and, importantly, no suggestion of any political, economic or social reforms, or even an extension of

civil society outside of a narrow band of activity. Instead, it would seem that by placing 'United in Responsibility' as the first section it is regarded as the most important; it is primarily about the responsibility the individual has to be loyal to the state and to take their place in a society that is determined not to change the way it is governed, controlled or regulated. It is as though by placing this section first, the intention is to set the context in which the following sections must be read.

6.2.5. United in Destiny

The second section's short introduction describes an integrated and resilient federation achieving balanced development throughout the country. The heading 'Upholding the Legacy of the Founding Fathers' gives the impression it will dwell once more on tradition, heritage and individual duty to the state, but its summary talks of ensuring nationwide balanced development as the result of an integrated strategy and good cross-government coordination. The main text opens with an honorific to the founding fathers before proposing the Federation is the 'defining point of allegiance for all Emiratis', thus reiterating the loyalty messages propounded in the first section. The aim is to build a national future supported by a common destiny. It declares the intention of closing the gap between citizens' living standards and promoting social and economic development of each of the Emirates to prevent isolation and marginalisation. It says this will be achieved by building world-class transport and infrastructure to enable utilities and services and encourage development. This development will be sustainable, balanced and efficient, leading to an inclusive society with equal opportunities and a growing sense of national unity. This is very aspirational and laudable as with most of what has gone before, but with little hint as to how it will be achieved in practice, apart from personal commitment and loyalty on the part of individual Emiratis. While cross-government coordination and an integrated strategy were trailed in the summary there is no further mention of either, or detail as to how they will be achieved.

The next part is headed 'Safe and Secure Nation' and summarised as the government's responsibility to provide safety, security, economic stability, resilience, justice and welfare services, to permit citizens to make a positive contribution to society. This involves protecting citizens from internal threats

through protection from crime and maintenance of internal stability, and blocking external threats, including mitigating the effects of disasters and epidemics. It aims for all Emiratis to lead a secure and dignified life, with basic needs provided, uncertainty removed and able 'to achieve well-being through work and merit'. It states security will be strengthened by an effective, impartial justice system to uphold individual rights, while the government exercises the necessary controls and guidance to ensure protection of a stable economy. There will be a sustainable welfare system to build capabilities and enable the most vulnerable to participate and contribute effectively. While this ostensibly plays well to both human and national security agendas, it reinforces the perception that there will be a strong centralised apparatus controlling most aspects of life and citizens will be able to achieve all they can, providing they conform to the model laid down by the government. There appears to be no suggestion of a move away from the ruling bargain; the government will provide in return for political acquiescence.

The final part of this section is 'Enhanced International Standing' which confirms the UAE's desire to improve its international reputation and become a role model for other nations. Specifically, the UAE aims 'to resist the value-flattening effects of globalisation' by maintaining national traditions and tolerance, but also wants to enhance its role as a regional business hub with international linkages. It wants to build on its perceived international successes in diplomacy, developmental and humanitarian assistance, and improve its economic and government spheres to capitalise on competitive advantage. UAEV2021 exhorts every citizen to become a champion and promote the national reputation abroad. There exists a potentially paradoxical situation: welcoming business and the economic effects of globalisation, while concurrently striving to control its impacts on indigenous political and social spheres. Great store is placed on Emiratis remaining content to conform to traditional Arab-Islamic governance structures, but there is little acknowledgement that this may not be enough for those outside the ruling élite's circle. Exposure to foreign cultures must pose the danger of erosion of national culture and traditions, unless exposure is limited to a privileged few which seems implausible given the Vision's aspirations. The second section therefore follows logically on from the first in that loyalty, tradition and duty

remain at the forefront of UAEV2021's message. Again there is little to suggest significant economic diversification, preparing citizens to take their place in high-performing workforces, or a decentralisation of any political decision-making. At this point in the Vision it appears to be business as usual.

6.2.6. United in Knowledge

The third section appears to herald a change of tack; 'United in Knowledge', is defined as 'a diversified and flexible knowledge-based economy powered by skilled Emiratis and strengthened by world-class talent'. Here UAEV2021 becomes innovative with diversification from hydrocarbons to a knowledge-based economy. Emiratis are to be sufficiently educated and trained to take their place within high-value businesses, but with expatriate labour still present, albeit at the higher end of the skills spectrum. The first part of the section reinforces this perception. 'Harness the Full Potential of National Human Capital' aims to maximise citizen participation, encourage entrepreneurs, develop public and private sector leaders and attract and retain the best talent. Emiratis are urged to build knowledge and apply their talent to contribute to national growth. It is predicted more Emiratis will enter higher education to achieve the necessary skills for work in knowledge-based industries, and universities will align their curricula to national needs. Encouraging citizens to enter productive work, UAEV2021 promises high achievement for industry leaders bringing innovative products to the marketplace, and for senior public officials controlling and steering economic change. Here, at the centre of a debate about economic regeneration and reform is the first allusion to a centrally directed economy where innovators and entrepreneurs will be controlled by government officials. Yet, there seems no apparent recognition of the inherent paradox of free-flowing and vibrant innovative businesses being constrained and directed by public officials following a predetermined government policy. It concludes with confirmation that highly skilled expatriates will be required in the future and will be attracted and rewarded appropriately. Apparently, there is no timeline by which the government aims to have 'Emiratized' the majority of the workforce, signalling perhaps a realisation that Emiratis will never be motivated or capable of doing many of the jobs a knowledge-based economy requires. Maximisation of Emirati participation may not be that high a percentage of the population after all.

'Sustainable and Diversified Economy' talks of adopting new economic models, capitalising on partnerships and guaranteeing long-term prosperity. It states the intention to move away from reliance on oil revenues and the desire to move into other sectors where the UAE can exploit its competitive advantage. It says growth must be matched by a range of sustainable energy sources and suggests renewable and alternative options including nuclear power.

UAEV2021 recognises the requirement for a more flexible economic model and the need to be networked to meet the demands of complex international trade. It claims sustainable, responsible growth and prosperity will be initiated by Emirati entrepreneurs and FDI, and says the economy will be ready to take advantage of changing circumstances and stronger international partnerships to exploit trade opportunities. This is all logical and unsurprising; the challenges will be to achieve flexibility and agility while being centrally directed by government officials; and to protect traditions and culture from external influences as Emirati business entities become more entwined in the globalised, interconnected, interdependent marketplace that develops as enduring international trading partnerships are established.

The final part is 'Knowledge-Based and Highly Productive Economy' and describes how innovation, research, science and technology will form the pillars of the economy, with entrepreneurs pushing it forward; national economic growth will be driven by knowledge, innovation and investment in scientific and technological R&D in which the UAE will be a world leader. All will be achieved through modern communications infrastructure, networking UAE businesses to give them a global competitive edge. UAEV2021 says citizens will benefit from greater access to digitised services to 'search online for knowledge' and fulfil their intellectual curiosity. This is an interesting statement as it implicitly allows the unrestricted spread of ideas, which may subvert the government's need for a politically acquiescent population. Whether general freedom of access to information is actually intended is not clear from the document, but it would pose significant risks to the absolute monarchy and its ruling bargain.

Notwithstanding, the Vision says transformation of business is only achievable through a suitable environment that promotes entrepreneurs and creativity. This environment will be created through help with start-ups and cultivation of 'a healthy risk-taking culture' rewarding those who work hard and are bold and

innovative. To facilitate this, the government says it will establish a regulatory framework to enable businesses to compete fairly and there will be increased public-private partnerships to promote growth and opportunities. It concludes saying 'The UAE will become one of the best places in the world to do business'.

The third section is a step change and allows insight into what may be the government's true intent, i.e. a nation with a fully modernised, diversified economy competing effectively at the upper end of the high-value business sector and able to offer its citizens a high standard of living supported by efficient government services. However, the fact remains of the paradox that seems to run through the section: a free market economy able to make innovative and entrepreneurial choices with an appetite for healthy risk on the one hand; and the suggestion of a directed economy where government officials are in control on the other. Add to this the desire to prevent erosion of traditional Arab-Islamic-Emirati values and culture, while allowing ordinary citizens to surf the web and access whatever information they choose and it can be seen there are real challenges lying in wait.

6.2.7. United in Prosperity

The fourth and final section of UAEV2021 is 'United in Prosperity' which has the strap-line 'A nurturing and sustainable environment for healthy living' and covers both the natural and social environments in which Emiratis live. 'Long and Healthy Lives' says all citizens are entitled to a range of high quality basic medical services, but notes there is a desire to build these into world-class services to cope with future requirements. It claims every citizen will be given access to improved health and personal care services, alongside increased funding of research to counter prevalent and genetic illnesses. Prevention will be achieved through fighting lifestyle illnesses by changing citizens' habits and also by providing better public health and sanitation. This is entirely consistent with what a developed nation should provide its citizens and contributes positively towards the upper end of the human security spectrum. It is interesting that the inference, by omission of any reference to payment or health insurance, is that medical and health services will be free for citizens. A

reinforcement, perhaps, of the social contract allowing the monarchy to rule without popular political participation.

'First-Rate Education' may have sat more comfortably within 'United in Knowledge'. However, it is included here and seeks to enable every citizen to achieve their educational potential and, of course, contribute positively to society. This places on schools the responsibility for preparing well-rounded and confident young people, but also specifically requires them to instil the values of moderate Islam and the Emirati national identity; each generation will emerge as self-directed and responsible citizens ready to contribute to society. The government appears to want to control all aspects of people's lives, even to the point of political, cultural and religious indoctrination of children. UAEV2021 affirms an ambition of ever-increasing educational targets alongside a progressive national curriculum including critical thinking and practical skills on a par with the most advanced nations. The aspiration is for more students to enter higher education with many going on to postgraduate study. Those who choose to leave education before university can receive vocational training, which from the way it is written does not appear optional. The aim is to provide 'equality of opportunity and balanced outcomes' for all students, including those with special needs guaranteed fair access to education. Putting the potential indoctrination to one side, this is entirely logical policy, consistent with the desire to move to knowledge-based services with greater numbers of Emiratis employed; it also contributes to the higher end of the human security spectrum. However, there is again the potential for friction between acceptance of the UAE's political and social status quo and the desire to have students educated in critical thinking and with an informed worldview. The two may well be mutually exclusive.

'Well-Rounded Lifestyles' is concerned with ensuring a high quality of life supported by world-class public infrastructure, services and leisure resources. Public authorities will provide high-quality cultural, sporting and recreational activities, in parallel with privately organised events. High quality government services, utilities, communications infrastructure and transport will be responsive to citizens needs, available online where practical, and provide interconnectivity for business; utilities will deliver reliable supplies of energy and

water, both vital to the UAE's human and national security agendas. Again the stated aim is to make the UAE attractive to business and a good place to live.

The final part of UAEV2021 concerns a 'Well-Preserved Natural Environment'. The summary proclaims the UAE, surprisingly as it is one of the global major per capita polluters, 'as a leader of the green revolution' and affirms the Federation's responsibility to safeguard the environment for future generations. The Vision declares the UAE's intent to vigorously support international environmental initiatives as part of its worldwide responsibility. It declares its desire to embrace alternative technologies and decrease its carbon footprint to reduce the country's 'environmental deficit' and promote responsible behaviour by its citizens. It says it will mitigate the future effects of climate change; the environment will be protected from anthropogenic impacts, locally and globally, through reducing CO₂ emissions and designing regulations to protect fragile ecosystems from development. Citizens will be guarded from natural or man-made environmental emergencies, guaranteed access to clean air and water, and protected from environmental health hazards, all good human security measures. UAEV2021 concludes that anticipation of problems, combined with initiative and awareness of national responsibilities is the only way to preserve and enhance the Emirati way of life. This is a strong piece for the Vision to finish with, as it leaves the sense that something must be done to preserve the environment at all costs. Perhaps it is the last topic for that very reason. Proof of intention is through action and while Emiratis are amongst the worst polluters per head, the reality of the UAE's intention is perhaps demonstrated by the building of Masdar City and its use of alternative technologies to make it carbon-neutral¹⁷⁹. The UAE seems strongly committed to the need to mitigate the effects of climate change, but its challenge is to deliver on its promises.

This last section is something of a catch-all, bringing seemingly unrelated aspects together under prosperity while ignoring each has a human security dimension. The health measures are predictable but worthy; the education measures show an intention to improve citizens' capabilities, albeit with an element of indoctrination included, to enable them to enter productive work more widely; the lifestyle measures, while undoubtedly reinforcing traditional

¹⁷⁹ <http://www.thenational.ae/business/masdar> accessed 17 March 2016.

values, aim to improve public services and infrastructure and specifically address energy and water security which have national and human security implications; the environmental measures demonstrate a high level commitment to improve the UAE's record and addresses human security issues revolving around guaranteed access to clean water, fresh air and minimisation of risks to health from environmental degradation or emergency. This final section is therefore about the benefits that achieving the Vision will bring to the population as a whole.

6.2.8. Achieving the Vision

Although apparently somewhat bland and lacking emphasis on any specific development area, on closer scrutiny UAEV2021 reads like a manifesto for social engineering with its focus on the behaviours of the citizenry. Its main concerns are preservation of national identity, protection of Arab-Islamic values, reinforcing obligations of loyalty, duty and faith, and resistance to the socio-cultural forces of globalisation. The Vision demands a strong civil society to nurture its citizens and support traditional governance and the national way of life, but sees no scope for it to advocate an alternative political point of view. It aims to achieve social cohesion and reduce the chances of marginalisation, which in turn reduces the likelihood of dissent. However, there are some inherent tensions in what UAEV2021 proposes. Education will be one of the tools used to promote Arab-Islamic values and culture and the obligations of the individual to society, but it will also be vital in the preparation of citizens to take their place in a workforce focused on knowledge-based activities. Encouragement of critical thinking, innovative and entrepreneurial actions, and participation in the digitised interconnected world, with unrestricted access to information and opinions, is probably at odds with an expectation of political acquiescence in a regime where popular participation in the nation's affairs is actively discouraged.

UAEV2021 predicts improvements in infrastructure, transport and communications, with balanced development across social and economic sectors. It aims to diversify from reliance on oil revenues and move into the knowledge-based sector. Alternative, renewable energy sources will be examined and utilised, as in Masdar, and nuclear power is a possibility.

Innovation and entrepreneurship will be critical as will moves into the science and technology sectors and R&D. Expatriates will continue to be a significant feature of business in the UAE, bringing skills Emiratis do not possess until education and training fills the capability gap. Yet, in this highly flexible and fast moving future where the business and economic effects of globalisation are welcome, there is repeated mention of centralised control by government officials to harness the rate of development and also prevent erosion of traditional and cultural norms and values. There appears no recognition of the paradox between a desire for a free market economy and the imperative to constrain its impacts on society. This control will be complemented by a strong regulatory framework and the suggestion of a strong internal security apparatus.

Human security measures are in place throughout the Vision. The aim is to close the earnings gap, prevent marginalisation, guarantee access to energy, clean air and freshwater, prevent citizens coming to harm from environmental hazards and improve healthcare and education; all have positive human security effects. This also positively contributes to the maintenance of national security by ensuring the population is kept healthy, happy and safe. Finally the environment is considered too, with a stated intent of reducing CO₂ emissions, a move to renewable energy sources and a determination to live up to international environmental obligations and protect the climate for future generations. One thing missing is any suggestion of a change of governance model from absolute monarchy towards a system with greater public participation or representation. Whatever is heralded in areas like the economy, education or environment, there is no intention to relinquish absolute control of the UAE's political economy.

6.3. Abu Dhabi Economic Vision 2030 (ADEV2030)

6.3.1. Word Counts

In the executive summary of ADEV2030 the highest word count achieved is 'economic' with a score of 113, which is unsurprising given the document is an economic vision statement. The next highest score is 'development' with 43, followed by 'environment' with sixteen. The only other words to achieve double digits are 'international' and 'oil' with eleven and 'human' scoring ten.

'Sustainable' scores the highest single digit count with nine, but is not linked with 'technology' which fails to score once. Of the word pairs only 'human development' and 'oil revenues' occur scoring just once each. 'Political reform' is not mentioned, suggesting it is not on the agenda.

6.3.2. The Context

Although ADEV2030's Executive Summary is only nine pages in length, it contains greater detail than the other visions analysed, which are more akin to 'PowerPoint' presentations than policy documents. The Summary of Mandate on page one gives the authority to develop a long-term economic vision. This authority was the Crown Prince of Abu Dhabi, acting on behalf of the ruler, who is also President of the UAE. The Mandate clearly sees the economic vision as a cross-government initiative. It includes the private sector and was formulated by a multi-stakeholder task force supported by external institutions. 2030 was selected as the target date as it was believed Abu Dhabi could achieve sustainable economic diversification by then. It is therefore made clear from the outset that this initiative comes from the ruler himself and the aim is to ensure Abu Dhabi moves away from hydrocarbon dependency by diversifying its economy in a credible and sustainable fashion; the current basis of Abu Dhabi's wealth will be changed substantially by 2030.

6.3.3. The Issues

ADEV2030 launches straight into the issues by reinforcing that the government is driving the Vision by executing a 22 year strategy, assisted by the private sector. Progress is to be made as part of a socio-economic policy agenda implicitly confirming the élite's intent to ensure the government retains its undisputed place as provider for its population and keeper of political decision-making powers. The government's stated primary objectives are ensuring a safe and secure society alongside a dynamic open economy. So, at the very start of the document is an explicit link between strong economic development and assured human and national security. ADEV2030 declares the policy agenda is built around nine pillars that will shape Abu Dhabi's future. Two of these are striking: complete international and domestic security; and a significant and ongoing contribution to the Federation. Once again the importance of national security is prominently stated, while assuring the

maintenance of the UAE could be seen as the same thing; the implication is that Abu Dhabi will use its wealth to ensure the Federation is a cohesive and secure entity. The resulting perception gained is that strong national security is a very high priority in this economic vision document. The executive summary does not break out the pillars into more detail, but does explain the four key priority areas.

6.3.4. Economic Development

Given this is an economic vision it is unsurprising 'Economic Development' is the first priority area covered. However, as it is not stated whether the four areas have been listed in priority order it is assumed each has equal standing. The first statement is that economic diversification underpins all aspects of the government's policy agenda; the government wishes to see high value jobs becoming increasingly accessible to nationals with the role of women maximised in the workplace. This suggests entrepreneurs will be encouraged to invest through a new permissive regulatory framework brought about by legislative reform. The aim is to embed Abu Dhabi deeper in the global economy by targeting FDI and local investment, while enabling the outflow of investment capital to international partners. As do Bahrain and Qatar, and the Federation it drives, Abu Dhabi recognises the importance of embracing globalisation to enable diversification, but does not explicitly acknowledge globalisation will bring things other than investment opportunities, although it sees increasing need for nationals to take on productive private sector work instead of relying on state-sector jobs or government largesse. If the private sector rather than the government generates wealth as a result of diversification, the monarchy will have to tax the private sector to obtain the money it needs, unless it draws on its sovereign wealth funds, to provide security, health and education services etc. This prospect is not mentioned explicitly, although it may be an implicit part of the legislative reforms.

6.3.5. Social and Human Resources Development

'Social and Human Resources Development' is covered next, which the policy agenda defines as the 'pre-eminent objective and driving motivation' behind all policies. It identifies high quality education and health services as the priorities for residents and aims to develop the workforce to ensure sufficient, qualified,

high quality workers are available for the economy. It also wants to encourage full employment amongst its nationals. This will necessitate upgrading the education and training levels of its citizens, a change in the citizens' work ethic towards seeing private sector work as of acceptable status, and a reduction in expatriate workers as nationals become capable of doing high-value jobs. It also confirms Abu Dhabi's commitment to ethical and safe management of its workforce from wherever they originate, through Federal laws and international agreements. The rulers probably see a permanent requirement for expatriates, presumably because the indigenous population is too small to sustain a diversified economy of the scale to which they aspire.

6.3.6. Infrastructure Development and Environmental Sustainability

The next priority area is concerned with developing appropriate national infrastructure while preserving the environment. The government wishes to develop well-managed urban environments with world-class transport infrastructure to realise economic diversification benefits. It also reaffirms its commitment to security, ostensibly to make Abu Dhabi a safe place to live and work. The piece concludes by observing that an urban structure framework plan has been developed to mitigate the potential stresses caused by the economic growth envisioned; this will be rolled out across the whole Emirate. So, infrastructure development is well covered and security gets a mention. Yet, despite the title of this priority area and the early statement about preserving the environment there is no further mention of it. Where a statement about environmental protection policies being applied to infrastructure development plans might be expected there is none. While an executive summary is exactly that, it is logical to expect some detail to be included on how environmental preservation and sustainability will be achieved within this key priority area.

6.3.7. Optimisation of Government Operations

The final priority is 'Optimisation of Government Operations' and covers increased efficiency and transparency of government machinery including streamlining services, outsourcing to the private sector where appropriate and a move towards e-business. The government states its intention to review and improve the legislative framework and processes to guarantee greater

efficiency, but does not say how this will be done. The inference is, therefore, that the current law-making system will remain and there is no intention to delegate legislative powers to any entity outside the circle of the ruling élite any time before 2030. Government processes could be more effective in future, but still as tightly controlled as at present.

6.3.8. Economic Vision Imperatives

The section on 'Economic Vision Imperatives' starts with a reminder that Abu Dhabi's Policy Agenda is focused on ensuring the economic well-being of the Emirate's residents. It confirms the desire for a more sustainable, diversified economy based on the imperative to move away from hydrocarbon dependency and oil price fluctuations. It declares the need of the burgeoning young national population for attractive high-value jobs; the challenge for the economy will be creating them. It recognises the need to improve and upgrade the education system to allow nationals and expatriate workers to attain higher standards, thus enabling a more productive economy. As part of modernisation, Abu Dhabi will have to accept more globalisation and see its international partners as necessary to achieving this successfully. It claims Abu Dhabi's geo-political status will help harness the processes of technological change, innovative R&D, and future competitiveness, but recognises it must do more to adopt modern business practices, integrate globally and make the Emirate an easier place in which to do business. This is a laudable aspiration and mirrors the visions published by the other states. However, it appears to suggest this can be achieved without some change to the current system of governance. There appears to be no recognition that a better educated citizen workforce, with greater access to globalised information and a potentially more sophisticated worldview will demand a greater say in their country's governance. Perhaps the recognition exists, but is held close to the rulers' chests and implicitly reflected in the emphasis the Vision places on ensuring domestic security.

6.3.9. Achieving the Vision

A task force has been set up to bring about ADEV2030 which comprises: the Department of Planning and Economy, a government body which sets policy and gathers data; the Abu Dhabi Council for Economic Development (ADCED),

a public-private advisory body to support the Department for Planning and Economy; and the General Secretariat of the Executive Council (GSEC), a government body overseeing the development and coordination of all policies across government. Much is made of the role of private sector stakeholders in ADCED and how they will influence future policy, but it remains a fact the government is heavily involved in directing the economy, especially with oversight exercised by the GSEC that serves Abu Dhabi's equivalent of the cabinet chaired by the Crown Prince. Any progression towards a diversified economy fully integrated into the globalised marketplace will be closely monitored and controlled by the ruling élite, who will most likely reserve the right to prevent any activities that could be a threat to their continued status and hold on decision-making.

ADEV2030's 'Objectives and Framework' covers the process of identifying the best economic areas in which to achieve diversification, sustainability and distribution throughout the Emirate. It discusses how to identify strengths to be enhanced, weaknesses to be improved and considers legal and regulatory instruments that could be reformed to make business easier. Lastly it considers how best to utilise the resources of Abu Dhabi, both human and financial, to ensure future growth is enabled and infrastructure is fit for purpose. All of this contributes to the creation of a comprehensive action plan that charts progress towards objectives and measures overall effect, ensuring the development strategy is not based upon false assumptions. Three benchmark countries have been selected for comparison, namely Norway, Ireland and New Zealand, all of which it is claimed have direct relevance for Abu Dhabi's economic development. While there are undoubtedly some economic similarities, it is notable all three countries have long-established representative democracies with no restrictions on political freedoms, complete open access to the globalised information space and free-market economies; Abu Dhabi cannot argue similarity. It is questionable whether that is important to the potential success of Abu Dhabi's economic development. Internet searches reveal as many proponents of the view that democracy is necessary for economic success as those who disagree with the premise. The example of China's economic rise set alongside that of India shows it is achievable in non-democratic and democratic nations. However, China also prevents unrestricted

access to the internet whereas Abu Dhabi appears not to have that as an intention. So, while lack of political reform may not harm Abu Dhabi's push towards successful economic diversification, the necessary embedding of the Emirate's newly educated workforce in the global information superhighway may increase demands for some form of popular participation in the political decision-making processes.

As if to forestall such potential concerns the document includes a short paragraph called 'Leading International Status' where it aims to benchmark itself against thriving transformation economies identified as Norway, Ireland, New Zealand and now, Singapore. Singapore cannot be described as democratic in the truest sense, but is economically successful, although it occasionally experiences the sort of civil discontent that could come Abu Dhabi's way if its citizens become more politically aware and active¹⁸⁰. However, it may be that economic transformation without a change in political governance is an achievable reality for Abu Dhabi, as long as services continue to be provided for the population in the spirit of the ruling bargain and attitudes towards traditional forms of governance do not change.

ADEV2030 explains how it looks at macro- and socio-economic targets and goals, including resource development and core policy reforms, to create a series of five-year economic plans to manage the economy in the medium term and identify necessary adjustments, under oversight of GSEC. GSEC is responsible for ensuring the economic strategy is joined-up with other government strategies, emphasising the central role the ruling élite will play in directing Abu Dhabi's economic transformation. This means the monarchy will guarantee its hold on the levers of power is maintained throughout the whole process.

6.3.10. Highlights of the Vision

In its final section the Executive Summary describes the 'Highlights' of ADEV2030 stating Abu Dhabi's core commitment is 'to build a sustainable and diversified high value-added economy by 2030'. It claims this will be achieved through economic transformation, global integration, growing external markets

¹⁸⁰ <http://www.eastasiaforum.org/2014/10/08/why-singapore-will-not-replicate-hong-kongs-pro-democracy-protests/> accessed 18 November 2014.

and improving productivity and competitiveness. It reiterates the need to spread growth across the Emirate by ensuring its nationals, especially women, are prepared to enter the workforce, recognising a skilled expatriate workforce will be required to ensure faster growth in regional areas. While the aspiration to improve productivity is certainly there, it is tempered by realism about how quickly this can be done, hence the sustained need for foreign labour.

It recognises none of this will be possible without changes to regulatory frameworks; global best practice will be imported and applied, but only after application of the local context, suggesting there will not be complete economic freedom of action for foreign businesses setting up in the Emirate. It talks of ensuring the necessary infrastructure and human and financial capital is put in place to guarantee the business climate is strong enough to support envisaged growth and transformation. ADEV2030 declares Abu Dhabi will be modern, transparent, streamlined and globally integrated, with an efficient labour market and economic stability. This would certainly put it amongst the leading countries as a place to do business in the 21st Century.

ADEV2030 describes how the Emirate's resources and financial markets will be improved and growth enabled through strategic sectors, seen as 'engines of growth and diversification' including: energy; petrochemicals; pharmaceuticals, biotech and life sciences; tourism; education; media; financial services; and telecommunications. Some such as petrochemicals are unsurprising, but others, including education and media, are not sectors normally associated with Abu Dhabi. This demonstrates real determination to diversify from hydrocarbon dependency and extend economic activity into a wider, more sustainable base. Also, Abu Dhabi may not see itself as a global education and media provider, but may be content with serving the Islamic world, which estimates placed at some 1.6 billion people in 2013¹⁸¹, a sizeable market in anyone's book. Therefore while Abu Dhabi may seek to be global in financial services, petrochemicals and pharmaceuticals, it may see regional markets as equally worthy and more dependable in certain circumstances, especially where common cultural and religious values apply.

¹⁸¹ <http://www.pewresearch.org/fact-tank/2013/06/07/worlds-muslim-population-more-widespread-than-you-might-think/> accessed 24 November 2014.

ADEV2030 provides a brief description of targets driving Abu Dhabi's economic development, which it sees as being ambitious and measurable. It stresses the need to combine human, physical and financial capital, operating in concert with productivity and competitiveness, picking up on a recurring theme in the document. The targets to be met are economic development and stability, and stakeholders are warned these targets will be reached only if everyone does their bit, including an average of 7 percent growth in 2008-2015, and 6 percent per annum thereafter. At these rates the document proclaims Abu Dhabi will grow faster than its selected benchmarks, but still sustainably. This is expanded upon by stating the non-oil sector will grow faster in GDP terms than hydrocarbons, with the aim of reaching balance between oil and non-oil sectors by 2028 to show the extra depth instilled in the economy.

Economic stability will be critical throughout and the aim is to reduce the non-oil deficit significantly, but not specifically enumerated, over the period of the Vision, while ensuring inflation is kept under control. Unemployment is also targeted with an intention to reduce it to 5 percent of the national population, what is described as effectively full employment. Lastly, the government intends to have increased GDP more than five-fold by 2030. Despite the rising population it says this will result in healthy growth in income and wealth for all residing in Abu Dhabi. Also planned to see a five-fold increase are national assets which comprise exports and investments; this will be mirrored by the creation of consistently high national savings levels from both the public and private sectors which can be used for further investment and wealth creation. Such specific economic targets are unusual when compared to the other visions analysed and could be considered rash given global economic unpredictability. However, their inclusion shows a commitment by the rulers to produce quantifiable change in terms of the Emirate's sustainable development and, arguably, could help reassure citizens the future will be stable, safe and secure, which bolsters the position of the monarchy.

The Executive Summary concludes by noting the aspiration that Abu Dhabi should confirm and enhance its status as a 'globally relevant destination'; a position it believes it has already achieved through its wealth and natural resources, but which it recognises could be strengthened by improved business methods and better economic competitiveness. Thus the Emirate intends to

become 'a shining example on the international business stage', an aspiration it shares with the remainder of the UAE and with Qatar and Bahrain.

6.3.11. Diversification, but Business as Usual

Although only the executive summary, this document is more detailed than its counterparts from Bahrain, Qatar and the UAE and explains the 2030 deadline as the date at which Abu Dhabi believes it will have achieved sustainable economic diversification away from hydrocarbons. There is much emphasis on the role of the private sector in the economic development strategy, but the controlling function of government is centrally placed too, especially through the oversight exercised by GSEC. This will ensure socio-economic change and development are carefully managed by the monarchy, while retaining their hold on power.

Linked with the emphasis on the government's authority is repeated reference to stability, a safe and secure society, and the maintenance of domestic and international security, both for Abu Dhabi and the wider UAE, linked to economic development. Human security issues are not mentioned in detail apart from healthcare as a priority. Perhaps it is an intrinsic part of the domestic security strand mentioned so often. The message of the necessity of economic diversification underpins the whole of government agenda with more nationals, especially women, represented in the private sector. Globalisation is to be embraced for the inward and outward investment opportunities it will provide, but other potential effects of globalisation, as a result of greater foreign penetration of the Emirate's society, are largely ignored.

ADEV2030 has twin targets of economic development and stability across all sectors. Much is made of the need to upgrade and improve the national infrastructure to provide the means by which business can be conducted in a globalised commercial environment. Security is again prominent in all aspects of this. Yet, what is surprising, given the emphasis on sustainability and the existence and prominence of Masdar, is the little space given to the natural environment in the executive summary. This absence of focus is reflected in the 120 pages comprising the main body of the document where the word 'environmental' occurs only eleven times with ten of those on pages 91 and 92, suggesting economic development has distracted the authors from wider

sustainability issues, although environmental measures are prominent at Federation level.

Legislative reforms are designed to make Abu Dhabi an easier place to do business. However, there is no mention of the possibility of income or corporation tax to fund the services previously paid for by the government out of hydrocarbon revenues. Perhaps the government hopes putting more nationals into the private sector will reduce the state sector wage bill sufficiently to make the savings necessary to fund the essential services they currently provide, without the need for taxation. Also of note, while legislative reforms are discussed there is no mention of changing the way laws are made or widening the national decision-making forum.

Upgrading the education and skills of Abu Dhabi's citizens is mentioned frequently and no doubt there is hope citizens will come to see the private sector as an attractive place to work. However, it is clear the government sees a requirement for highly skilled expatriates stretching some way into the future. While unskilled labour is not mentioned at all, it is likely expatriates from the sub-continent and South-East Asia will continue to do those jobs citizens refuse to countenance.

Finally, there is no apparent recognition that better education and improved access to global information could lead to popular demand for changes in the political system. Maybe the rulers hope a combination of good internal security, little or no taxation and reinforcement of traditional cultural norms and values in the face of globalising pressures will be sufficient to allow the ruling bargain to continue unchallenged.

6.4. Evidence of Transformation

6.4.1. The Significance of Climate Change

The UAE publicly supports international efforts to counteract the effects of climate change. Attendees at the World Green Economy Summit in Dubai in April 2015 were encouraged to move quickly to limit climate change by the director general of the International Renewable Energy Agency (IRENA). He told the conference the IPCC believes it is possible to avoid catastrophic climate change if action is taken quickly and decisively. In particular he

stressed the use of renewable energy to significantly reduce GHG emissions while providing enhanced energy security, more jobs, and a better environment. The conference was opened by the chairman of the Dubai Supreme Council of Energy, and organised by the Dubai Electricity and Water Authority in parallel with the Water, Energy, Technology and Environment Exhibition¹⁸². The UAE appears to have a very clear understanding of how climate change mitigation, human security and national security are interrelated and interdependent and hosting such conferences demonstrates its determination to be at the forefront of discussions and policy making.

The UAE's Ministry of Environment and Water (MEW) has designated five marine and coastal habitat sites¹⁸³ as areas having global significance. They were recognised for their unique biodiversity at a workshop in Dubai discussing biologically and ecologically significant marine areas in the Arabian Gulf and north-west Indian Ocean. The aim is to protect coastal habitats including mangroves, sea-grass, coral reefs and sand flats which support a variety of migratory and endangered species such as dugongs, hawksbill turtles and dolphins. The Ministry hosted the workshop attended by representatives from Kuwait, Oman, Qatar, Saudi Arabia, Iraq, Iran, Egypt, Jordan, Sudan, Eritrea, Pakistan, India and international and regional organisations¹⁸⁴. Again the UAE is seen to be operating at the international level in a matter of global concern. Public stewardship of environmental issues significantly enhances the UAE's ecological credentials and can counteract the bad press that comes from being one of the world's largest per capita emitters of GHGs. That aside, the UAE's commitment to the issue is obviously deep and sincere otherwise it would be recognised quickly by others as a facade.

In June 2015 the UAE achieved a major milestone with the opening of IRENA's global headquarters in Masdar City, Abu Dhabi. The government sees this as recognition of its commitment to sustainable clean energy and renewables. IRENA's director general hopes the new headquarters will provide

¹⁸² <http://www.thenational.ae/uae/environment/irena-chief-warns-dubai-conference-delegates-about-climate-change-threat> accessed 24 April 2015.

¹⁸³ The south-west waters of Abu Dhabi, the Marawah Marine Biosphere Reserve, Jebel Ali, Sir Bu Nair Island and Khor Kalba.

¹⁸⁴ <http://www.thenational.ae/uae/environment/five-uae-marine-and-coastal-sites-named-for-further-protection> accessed 27 May 2015.

a centre from which to monitor the expansion of renewables globally. The opening consolidates the relationship between IRENA and Masdar and raises the UAE's profile according to the heads of both organisations¹⁸⁵. The UAE has campaigned strongly to place itself firmly in the centre of the renewables and green agenda and this is a significant success, having worked hard for seven years to get IRENA into Abu Dhabi despite international concerns about their GHG emission levels.

Abu Dhabi's Environment Agency (EAD) says it has adopted sustainable development as a means of reaching the goals stated in ADEV2030, focused on creating a balance between economic and social development on one hand and environmental protection on the other (EAD 2011). While this specifically refers to Abu Dhabi it is hard to see how they can achieve this and not include the other Emirates in the process, given their close proximity and interdependencies. Meanwhile, UAE Government Strategy 2011-2013 lays down its intentions for preserving and protecting the environment. It says it will mitigate and adapt to climate change impacts, comply with international environmental obligations, respond effectively to the UAE's environmental challenges, and improve food security. It will also adopt a range of measures including conservation of natural resources, promotion of renewable and alternative energy sources, ensuring water sustainability, reducing pollution and encouraging eco-friendly mindsets and practices (UAE Government Strategy 2011-2013). This plays well into the environmental, energy and food security agendas and is strongly supportive of alternative cleaner technologies. It is a clear exposition of intent by the government, but as the UAE has the record of being the greatest per capita polluter on the planet there was probably a certain amount of pressure felt by the Federation to be seen to be doing more in environmental protection terms for the sake of its international reputation. However, as a publicly available document against which its performance could be measured it must be seen as a statement of commendable aspirations.

EAD's 2011-2015 Environment Strategy recognises Abu Dhabi faces considerable challenges: the population is predicted to more than double during 2011-2030; there will be increased demand for building land, energy, water,

¹⁸⁵ <http://www.thenational.ae/uae/environment/uae-celebrates-landmark-irena-launch> accessed 4 June 2015.

food and other products; the growing economy will bring with it a greater demand for energy, water and other raw materials; GHG emissions are likely to increase. The availability of water is a particular and urgent concern; around 65 percent of water used is supplied from groundwater, the remainder being provided by desalination and recycled water. Groundwater renews slowly, causing the supply to diminish, but a growing population will need increased water supplies and more reliance will be placed on energy and carbon intensive desalination processes. Mangrove forests and sea-grass will suffer because of rising sea levels and water temperatures. There will be more cases of coral bleaching as increased temperatures kill algae which give coral its distinct colour. Fish stocks are threatened which will increase if marine habitats deteriorate and a growing population demands more fish products. Abu Dhabi sees the necessity of a strong and effective environmental regulatory framework and partnership between government, NGOs, academia and the private sector to ensure economic growth provides the desired benefits without damaging Abu Dhabi's natural heritage and long-term prospects (EAD 2011). Published four years after ADEV2030 this strategy shows keen awareness of climate change effects and Abu Dhabi's potential impacts on the natural environment. While the sentiment is obviously heartfelt, what will be crucial is taking the next step beyond recognising the problem and actually doing something about it.

Abu Dhabi's Water Resources Management Strategy 2014-18 follows on logically from the 2011 Environment Strategy. It says agriculture is the largest water consumer in the Emirate followed by residential use. Forecasts show demand for desalinated water is expected to almost double by 2030. Enabling economic diversification, whilst reducing commercial, industrial and private water use, will continue to be a major priority for Abu Dhabi (EAD 2014b). Water security will be a pressing problem which has direct human security implications. The remainder of the strategy gives clear objectives and deadlines about water usage, recycling of water with its cultural and religious objections, groundwater reserves and salinity. As with most of the official strategies reviewed, it is heavy on headlines but lacks detail about how objectives will be achieved. Nonetheless it is an example of published government intent which can be monitored and measured by the Emirate's

citizens and others outside their borders. As such it must be considered to show a determination to achieve the goals; if the goals are not achieved the Government could suffer an unacceptable loss of face as a result of failure.

EAD's Annual Report 2013 focuses on the priorities laid out in Environment Strategy 2011-2015. The highlights include advances in strategic planning; establishment of the Marine Water Quality Index; a Wetland conservation award recognising the increase in Marine and Terrestrial Protected Areas; the establishment of a benchmark for GHGs to help meet its international obligations; a 46 percent improvement in particulate emissions in one year; widening of the Sustainable Schools Initiative; and improved Health and Safety training and equipment (EAD 2014a). The highlights and the very detailed report that follows provide clear evidence, publicly stated and open to challenge, of advances and improvements Abu Dhabi has made in its strategy to protect and improve the environment and mitigate the effects of climate change. Again, while this is Abu Dhabi's strategy, it cannot be enacted in isolation of the other six emirates because of the inherent interdependencies of the Federation, nor without the collaboration of partners within the region and other international stakeholders as stated in the 2011 Strategy. Furthermore, given this evidence, it would be difficult to justify a view that Abu Dhabi is not taking environmental protection and conservation seriously, although there are potentially difficult systemic issues around the rapid development of its urban complex, and its burgeoning population that may find employment difficult to obtain in the future, unless it is suitably educated and trained and has an appetite for productive work.

In 2015 the World Bank released The Little Green Data Book which said the UAE had particle pollution levels much higher than the World Health Organisation's (WHO) recommended guidelines. It said the UAE had the most polluted air of any country, which was rejected by the director of air quality at MEW. In September 2015 MEW announced eleven more air quality monitoring stations would be built as part of its UAE Air Quality Network programme. The Ministry already operates 46 monitoring stations across the country, so an accurate picture of air quality can be compiled. The aim is to unify air quality monitoring across the Federation; most of the new stations would be built in Ajman and the Northern Emirates. The government has also taken other

initiatives by launching new projects to improve air quality including regulating quarrying and cement and asbestos production. Sharjah will set up the region's first and the world's largest waste-to-energy facility to recycle 400,000 tonnes of waste a year to generate 85 megawatts of energy^{186&187} as well as reducing landfill. The UAE is working hard to change perceptions about its GHG and particulate emissions and these initiatives, reported fully in the press, publicly demonstrate the government's commitment to improving and protecting the environment while enhancing the UAE's international reputation.

Establishing environmental awareness in people early in life is an effective way of preventing behaviours harmful to the environment before they occur. Dubai schoolchildren are encouraged to take care of the environment by an awareness campaign as part of the 'My City, My Environment' initiative¹⁸⁸. Recycling cubes will be placed in schools and points will be awarded to children on the basis of recycling collected, which can be used to buy a humanitarian or environmental reward online¹⁸⁹. Although limited to Dubai Municipality, this is an excellent step forward in environmental education and linking it to performance-related rewards should ensure children remain motivated to participate. Once positive behaviours have been instilled it is to be hoped they will continue throughout life and be passed on to future generations.

The mangrove is the plant that offsets most carbon in the Arabian Peninsula according to a National Blue Carbon Project report published in October 2015. The director of biodiversity at MEW believes understanding the effects of climate change in the UAE might allow more efforts to be devoted to discovering how large the mangrove carbon offset is and lead policymakers to pass legislation to preserve natural habitats. Destruction of the mangrove carbon sinks that currently mitigate CO₂ emissions would release additional carbon into the atmosphere. It is estimated the UAE's mangroves offset about 600,000 kilograms of carbon per hectare, equivalent to the annual emissions of

¹⁸⁶ <http://www.thenational.ae/uae/uae-ministry-continues-campaign-against-claims-over-air-quality> accessed 16 September 2015.

¹⁸⁷ <http://gulfnews.com/news/uae/environment/sharjah-waste-to-energy-plant-to-divert-all-waste-from-landfill-1.1657165> accessed 21 March 2016.

¹⁸⁸ <http://mycitymyenvironment.ae/en#video> accessed 21 March 2016.

¹⁸⁹ <http://www.thenational.ae/uae/education/schoolchildren-targeted-in-dubai-environmental-awareness-campaign> accessed 16 September 2015.

120 cars; with about 3,000 hectares of mangroves in the UAE the total offset is equivalent to 360,000 vehicles. EAD and MEW are looking to increase the area of UAE's mangroves to complement other climate change mitigation projects¹⁹⁰. The initiative not only recognises the environmental damage done by the destruction of habitats such as mangrove swamps, it also sees the benefits of preserving and extending their range in terms of the carbon sinks they provide. Again this reflects a high level of environmental awareness in the UAE and a publicly stated determination to preserve, maintain and improve the environment for future generations. It is therefore fair to conclude from the available evidence that a wide range of environmental considerations and initiatives are high up the national policy agenda, although there remains the issue of translating policy into execution, but that is evidenced by some of the projects already underway.

6.4.2. Sustainable and Alternative Technologies

The World Green Economy Summit in Dubai in April 2015 was briefed on a report by non-profit environmental organisation, The Climate Group¹⁹¹, that the UAE is leading the way in developing the solar energy sector and pushing down the cost of renewable energy. The Dubai Electricity and Water Authority's (DEWA) 200MW solar plant expects to be producing electricity at the lowest price in the world by 2017. The chief executive of The Climate Group said the UAE was recognised as the world leader in renewable energy and the report cited the Mohammed bin Rashid Al Maktoum Solar Park and Dubai's commitment to investing almost US\$3 billion to increase energy generation capacity from one to three GW as the reasons. He said the UAE is globally recognised for its low carbon leadership and with the government driving green growth plans and incentives there is increased interest from companies. UAE's green economy is expected to provide 160,000 jobs by 2030 and boost GDP by 5 per cent; it is credited as the leader in renewables in the MENA region, especially solar power, and was described as an exemplary international model with strong potential to be a hub of a global energy

¹⁹⁰ <http://www.thenational.ae/uae/environment/mangrove-the-plant-that-offsets-most-carbon-in-the-arabian-peninsula> accessed 12 October 2015.

¹⁹¹ <http://www.theclimategroup.org/who-we-are/about-us/> accessed 21 March 2016.

revolution¹⁹². While this news report was for public and international consumption as a positive news story about the UAE, it does show commitment to alternative sources of energy and a desire to boost the so-called 'Green Economy'. Also, and notably, The Climate Group appears to be entirely independent, so its glowing report of the UAE's low-carbon credentials must be taken at face value as a statement of the facts available. This enhances the UAE's international reputation significantly.

Port operator DP World plans to establish Dubai's largest solar rooftop project in 2016 and will provide energy back into Dubai's electricity grid. It is estimated between 30MW and 40MW will be generated, about one third of the power used by the ports facility, enough to power 30,000 homes for a year. In May 2015, DEWA launched Shams Dubai, an initiative to regulate the generation of solar energy in buildings and their connection to the grid. Under the scheme, businesses and homeowners will be able to install their own solar panels and then feed the energy generated into the grid to reduce their costs¹⁹³. The underlying aim is to diversify Dubai's energy generation into alternative renewable sources and take full advantage of year round sunshine. This will also reduce dependency on gas and oil-fired generation facilities and the emissions associated with them and will augment current production, providing increased energy security for the Emirate.

In November 2015 it was announced Australia and the UAE had finalised an agreement for Australia to supply uranium for use in the UAE's developing nuclear power programme through the Nuclear Cooperation Agreement, which sets out strict conditions for the peaceful use, safeguarding and security of Australian uranium¹⁹⁴. The move into nuclear power generation is a step-change for the UAE which is planning to build four reactors with the first coming on-stream in 2017¹⁹⁵ and will be the first Gulf Arab state to generate nuclear

¹⁹² <http://www.thenational.ae/uae/technology/uae-world-leaders-in-renewable-energy> accessed 24 April 2015.

¹⁹³ <http://www.thenational.ae/uae/environment/dp-world-plans-solar-rooftop-project-that-could-power-30000-homes-for-a-year> accessed 16 September 2015.

¹⁹⁴ <http://www.thenational.ae/uae/government/australia-finalises-uranium-export-deal-with-uae> accessed 25 November 2015.

¹⁹⁵ <http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/united-arab-emirates.aspx> accessed 21 March 2016.

power¹⁹⁶. It should significantly change the UAE's GHG emissions levels as it produces clean energy, although it will require many expatriates to run the power stations unless and until sufficient Emiratis can be trained to do so. The UAE is publicly committed to finding alternative sources of clean, sustainable energy and appears determined to be seen as an international leader within the sector. That will increase its international standing as well as improving its energy security and assisting its efforts to diversify its economy.

6.4.3. Political Reform

Political Reform seems hardly likely in the UAE given the preoccupation in both UAEV2021 and ADEV2030 with maintaining centralised control of economic transformation and the status quo as far as governance is concerned.

However, in November 2015 the UAE appointed a woman as president of the Federal National Council (FNC), a government advisory body formed to represent the general public, making her the Arab world's first woman to be elected to such a role. In October 2015, almost 79,000 Emirati voters, out of a population of around 1.23 million¹⁹⁷ citizens, had elected 20 representatives of the 40-member FNC. The remaining council members were appointed by the seven Emirates¹⁹⁸. The FNC can hardly be considered a democratic institution as only half its members are elected and then by only 6.4 percent of UAE's nationals. While the appointment of a female president to the FNC may be ground breaking in the Arab world it does not signify any important changes are afoot as the FNC has no real power and does not hold the government to account.

In the first week of February 2016 the Vice President announced the largest changes in government structures since the Federation's creation. He said ministries would be consolidated and new entities established in health and education, with most government services being outsourced to the private sector. He noted the need for flexible government capable of handling change. The government now has fewer ministries, but more ministers with strategic

¹⁹⁶ <http://www.gulfbusiness.com/articles/industry/first-reactor-of-uae-nuclear-power-plant-on-track-for-2017-start/> accessed 21 March 2016.

¹⁹⁷ <http://worldpopulationreview.com/countries/united-arab-emirates-population/> accessed 21 March 2016.

¹⁹⁸ <http://english.alarabiya.net/en/perspective/profiles/2015/11/18/UAE-hails-first-woman-in-Arab-world-to-head-advisory-body-.html> accessed 1 December 2015.

national portfolios, including the new Minister of State for Happiness and the Minister of State for Tolerance. Education, skills and happiness for citizens within the context of the family and society are new priorities. A UAE Youth National Council will be established, comprising young people who will serve as advisers to the government on youth issues, led by a female Minister of State for Youth who will be no older than 22. The Ministry of Cabinet Affairs has the specific task of preparing for the post-oil era and will be renamed the Ministry of Cabinet Affairs and the Future. All education will be combined into one ministry responsible for monitoring all stages from nurseries to universities. There will be a greater focus on disease prevention in a restructured Ministry of Health, with an independent entity to oversee and manage public hospitals. The Ministry of International Cooperation and Development will merge with the Ministry of Foreign Affairs, which will handle UAE overseas aid. The Ministry of Labour will become the Ministry of Human Resources and Emiratisation and incorporate Tanmia, the national human resources and employment authority. The Ministry of Community Development is formed from the Ministry of Social Affairs and the Marriage Fund and will focus on citizens' families and community issues. There will be a Ministry of Climate Change and Environment to develop and monitor environmental programmes and legislation, while the National Council of Tourism and Antiquities will merge with the Ministry of Economy and set national targets to boost GNP. The Council of Scientists will be established to review national policies related to science, technology and innovation, and the newly named Ministry of Culture and Knowledge will focus on protecting the Arabic language and increasing knowledge^{199&200}. Government restructuring is not political reform and could conceal a consolidation of real power in ministers, while making the private sector responsible for delivery of policies on the ground. The Ministry of Climate Change and Council of Scientists sound progressive, but the Ministry of Community Development and the Ministry of Culture and Knowledge could indicate retrenchment in tradition and the past. How advisory the Youth National Council is remains to be seen. A sceptic could regard this as 'rearranging the deck chairs' rather than a positive strategy of reform, but until

¹⁹⁹ <http://www.thenational.ae/uae/government/sheikh-mohammed-bin-rashid-announces-major-government-shake-up-to-prepare-uae-for-the-future> accessed 16 March 2016

²⁰⁰ <http://www.thenational.ae/uae/government/changes-to-federal-government-as-announced-by-sheikh-mohammed-bin-rashid> accessed 16 March 2016.

there is evidence either way the verdict on the effects of restructuring remains on hold.

6.4.4. Economic Diversification

In 2009 it was estimated Abu Dhabi had about eight percent of the global oil reserves, at 98 billion barrels, and approximately 94 percent of the UAE's holdings. This should last until the end of the 21st Century (Davidson 2009). Ulrichsen believed that because of the size of its oil reserves there was no real urgency in the UAE to carry out economic diversification and there were also general concerns about the levels of education of GCC nationals, as most lacked the qualifications to gain employment in the private sector (2011). Dubai, lacking oil, had diversified into real estate and other financial and services sectors, but the 2008 global economic downturn affected it very badly and Abu Dhabi stepped in to bail it out at a cost of US\$10 billion^{201&202}. Dubai and the rest of the UAE bounced back and by 2013 commentators were reporting good financial health in the Federation²⁰³, although Abu Dhabi remains the main economic power with a recovering Dubai still in second place.

Published in 2014, Dubai Plan 2021 is far less detailed than ADEV2030 and more like UAEV2021. It aims to establish Dubai among the world's greatest cities and reinforce its place as a pivotal hub in the global economy, as well as a preferred place to live and work for people and visitors alike. It aims to have a resilient and diversified economy, innovative business models, increased productivity of labour and capital, and be the favoured investment destination for foreign capital. There is little to surprise here, but it does reflect restored confidence within the Emirate and probably a determination to recover its former economic strength relative to Abu Dhabi, while contributing to the success of the Federation.

The UAE has continued to show strong economic growth, even though some indicators in 2014 indicated a slow-down in certain areas like real estate. However, the longer-term outlook for the sector remained positive with almost US\$200 billion of real-estate projects underway across the Federation, almost

²⁰¹ <http://www.reuters.com/article/us-dubai-crisis-idUSTRE4AJ65C20081121> accessed 22 March 2016.

²⁰² <http://www.bbc.co.uk/news/business-11837714> accessed 22 March 2016.

²⁰³ <http://www.arabianbusiness.com/the-uae-after-crisis--520680.html> accessed 22 March 2016.

two-thirds of all project spending. Passenger volumes continued to grow with Dubai seeing a 6.1 percent gain in the first ten months of 2014 and Abu Dhabi a 22.6 percent increase. Real growth in the UAE was expected to exceed 4 percent in 2014 and 2015, more or less in line with broader regional trends (BEDB 2014b). Although this is a Bahraini assessment of the UAE's economic performance in 2014, it is worth noting the positive tenor of the reporting and that, despite some cooling in the property sector, significant capital expenditure was underway and real growth on a par with regional trends is continuing. This economic growth should create wealth and therefore reinforce stability within the UAE, both of which are key contributors to human and national security.

The UAE Space Agency was created in 2014 by presidential decree to regulate and support the industry, including existing satellite programmes and a mission to Mars planned for 2020. In May 2015 the UAE laid out a strategy for the Agency to integrate the various components of the Federation's developing space industry. The Agency chairman says the space industry will assist economic diversification and create highly skilled jobs for a growing young population while confirming the UAE's status as a 'space-faring nation'. There are also plans for an academic space programme involving the al-Yah Satellite Communications Company²⁰⁴ and the Masdar Institute²⁰⁵, both part of Mubadala²⁰⁶, and U.S. aerospace firm Orbital ATK, as well as a space research centre. The probe, named 'Hope', is the first Mars mission being attempted by any Arab country and around 75 Emirati engineers are currently working on the project, which officials hope to double by 2020^{207&208}. This is a significant departure for the UAE into real cutting edge technology, building on their current aerospace innovations and developments. However, it will be interesting to see if the educational standards of citizens allow them to take up the skilled jobs created and whether the citizens have the appetite to do the work. If not, the programme will be heavily dependent on skilled expatriate labour as are many other sectors in the Federation.

²⁰⁴ <http://www.yahsat.com/> accessed 22 March 2016.

²⁰⁵ <http://www.masdar.ae/en/city/detail/one-of-the-worlds-most-sustainable-communities-masdar-city-is-an-emerging-g> accessed 22 March 2016.

²⁰⁶ <http://www.mubadala.com/> accessed 22 March 2016.

²⁰⁷ <http://www.usnews.com/news/technology/articles/2015/05/25/united-arab-emirates-launches-national-space-agency-strategy> accessed 27 May 2015.

²⁰⁸ <http://www.thebusinessyear.com/publication/article/23/3824/uae-abu-dhabi-2014/abu-dhabi%E2%80%99s-aviation-cluster> accessed 27 May 2015.

UAE Government Strategy 2011-2013 aims to promote innovation and R&D, strengthen key regulatory frameworks and encourage emerging high value-added sectors to enhance competitiveness, develop the business environment, and ensure consumer protection. Additionally it will increase efficiency, flexibility and productivity within the labour market through development of a national workforce and strengthening its role in the economy. It will also encourage SMEs to start up while reducing marginal economic activities. This all suggests a strong determination to move away from oil dependency and expand into other sectors while the oil cushion is still there. The intention to develop a national workforce and encourage the creation of SMEs perhaps indicates a wish to move from traditional rentierism to a more market oriented economy, but this will not happen overnight as there are cultural issues to deal with surrounding the general work ethic and acceptability of private sector employment.

The UAE has stated its intention to develop a competitive knowledge-based economy and will do this by promoting exports and consolidating the UAE's position in international trade; diversifying trading partners and exports; and encouraging high value-added industrial sectors through policy changes. Research will be enhanced; talents aligned with national priorities will be developed; cooperation with the private sector and international institutions in innovation and applied research will be encouraged; and new funding opportunities for R&D will be explored (UAE Government Strategy 2011-2013). The government's desire to diversify into other potentially high value areas is very clearly stated in its strategy, which stresses the importance of Emiratis in this process, reinforcing the perspective the government wants more of them working and creating wealth for the Federation.

The Khalifa Fund for Enterprise Development, Khalifa University, Tawazun Economic Council and Mubadala Development Company established the Khalifa Innovation Centre in late 2015 to support innovative projects across the UAE. The centre will operate for five years, offering financial and technical support to almost 130 projects, each of which is expected to receive up to US\$82,000. The initiative is intended to strengthen R&D and provide the link between innovation and start-ups with around US\$54.5 million invested in supporting 1,000 innovative Emiratis. Support will also be provided to

transform practical ideas into projects through incubators in the centre, with up to US\$272,000 provided for ten projects each year²⁰⁹. Business incubation and entrepreneurial development are key components of economic diversification as seen in the cases of Bahrain and Qatar. Here the UAE is mirroring its two regional neighbours by providing the support required to help innovative citizens start private sector businesses that can provide employment at the same time as moving into new sectors.

The UAE Annual Economic Report 2013 said there was a substantial improvement in the national economy in 2012, with more stability and diversification underway, driven by tourism, foreign trade, financial services, communications and the recovery of the real estate sector. All non-oil sectors reported strong growth which positively reflected in GDP in both oil and non-oil sectors. The UAE Annual Economic Report 2014 continued previous optimism stating the policy of economic diversification meant the national economy performed strongly in 2013, despite volatile global economic conditions. Real growth was 5.2 percent compared to 4.7 percent in 2012. The Dubai Mercantile Exchange was top of the global stock markets with a growth rate exceeding 106 percent and Abu Dhabi stock exchange market grew by 63 percent. In December 2015 the UAE Minister of Economy said growth of 3-3.5 percent is expected in 2016 if there is a minimum increase in the price of oil. In 2021 only 30 percent of GDP will come from the hydrocarbons sector, as the non-oil economy is progressively expanding due to new businesses²¹⁰. The Lebanon-based Bank Audi agreed that strength persisted through 2013-14 with indicators suggesting continued non-hydrocarbon growth driven by tourism, trade, transportation and real estate for 2015 (Bank Audi 2015). However, in January 2016 it noted the UAE's fiscal position had deteriorated in 2015 with the first deficit posted since 2009 as a result of low oil prices and reduced revenues, leading to a rise in electricity and water tariffs and deregulation of fuel prices in August 2015. On the bright side, Bank Audi believes low oil prices should intensify the drive towards economic diversification in trade, finance, transport and tourism (Bank Audi 2016), although the IMF cut the UAE

²⁰⁹ <http://www.thenational.ae/uae/khalifa-innovation-centre-opens-to-support-bright-emirati-ideas> accessed 25 November 2015.

²¹⁰ <http://www.khaleejtimes.com/business/economy/uae-economy-to-grow-3-35-in-2016> accessed 22 March 2016.

GDP forecast for 2016 from 3.1 to 2.6 percent because of the slowing Chinese economy and the prospect of regional spending cuts²¹¹. Despite the adverse effects of low oil prices, the UAE continued to grow the non-hydrocarbon component of its economy through June 2016, although the Abu Dhabi Commercial Bank reduced growth predictions from 2.5 to 2.3 percent²¹². However, with 90 years of oil reserves the UAE has a good cushion on which to build a sustainable economy and perhaps preserve the ruling bargain.

Whatever the effects of low oil prices, they are unlikely to remain low forever and the UAE maintains its efforts to portray itself as a progressive and modern nation at the leading edge of new technologies and economic diversification. During 22-28 November 2015 the UAE Innovation Week took place and included awards for innovation, an innovation expo, plans for promotion of eco-tourism, a conference on water and energy consumption management, an engineering exhibition and a higher education and research forum²¹³. In this way the UAE enhances its reputation regionally and internationally and makes it more attractive to foreign investors looking for a place to put their money or their businesses.

6.4.5. Education and Skills for Citizens

It is said Emirati youth is bored, rich and workshy. Conversely, it is also claimed young Emiratis are more active and engaged in work due to the improved education system. 95 percent of women graduating from high school go to university and 75 percent of men. Yet, there is still a huge public sector and a culture of entitlement resulting from membership of an affluent minority in a comfortable and heavily state-subsidised society. There is also a belief Emiratis cannot be fired, but 28 percent of young Emiratis are unemployed²¹⁴. The alleged lack of work ethic is not confined to Emiratis as seen in the cases of Bahrain and Qatar, nor is the view that the public sector is where the easy jobs are, or private sector work is demanding or unglamorous. However, if the government is to achieve its diversification agenda it must convince young

²¹¹ The Gulf, 9 May 2016, 9:159, p43.

²¹² <http://www.thenational.ae/business/economy/uae-non-oil-economy-continues-growth-in-june> accessed 12 July 2016.

²¹³ <http://www.uaeinnovates.ae/innovation-week-events> accessed 1 December 2015.

²¹⁴ <http://www.bbc.co.uk/news/world-middle-east-31986652> accessed 7 April 2015.

citizens of the need to gain appropriate education and skills and that economically productive work in the private sector is of higher value than a government sinecure.

The government claims to give special attention to future generations and aims to develop teaching systems, methods and staff to reduce student drop-out rates and contribute to the development of skills. It will develop knowledge, instil learning and work values, and prepare students for college life. The quality of higher education will also be improved to ensure it produces graduates equipped with skills necessary to support national growth (UAE Government Strategy 2011-2013:10). The UAE is clearly determined to ensure it has the right skills and educational standards in its citizens to drive the development of the Federation forward, ensure diversification is achieved and reduce dependency on expatriate workers.

Developing human resources in the UAE's emerging space industry is said to be as important as developing the sector's infrastructure. This can be achieved by ensuring strong relationships between industry and education. Internships, scholarships and training are sound ways to ensure a good supply of indigenous talent. Such programmes offer future engineers and scientists practical experience, furthering their knowledge and engagement while benefitting industry. The UAE's National Space Programme offers high-school pupils and university students a chance to have their projects launched into space. The programme's university level competition challenges students to build a satellite and the winning team travels to the US to see their satellite sent to the International Space Station. Through practical training at Khalifa University's Spacecraft Platform for Astronautic and Celestial Emulation laboratory and field trips to the Mohammed bin Rashid Space Centre, students get real experience, enabling them to develop the skills they need to build and employ satellites. Telecoms company Thuraya²¹⁵ supports the competition by providing internships and facilities for testing²¹⁶. This is imaginative and innovative as it combines government agencies, educational institutions and commercial companies in an education and skills development programme. It

²¹⁵ <http://www.thuraya.com/who-we-are> accessed 22 March 2016.

²¹⁶ <http://www.thenational.ae/uae/science/developing-human-resources-in-uaes-emerging-space-industry-is-important-experts-say> accessed 1 December 2015.

will almost certainly be attractive to young Emiratis and the trick will be to ensure jobs are created across the spectrum of capability rather than focusing on one small group at the top end. However, this is one niche area and the same effort needs to be applied across the range of knowledge-based industries and services the UAE hopes to establish or attract.

6.4.6. Expatriate Dependency

It is said young Emiratis risk feeling lost in their country as they are outnumbered five to one²¹⁷ by mostly low-skilled expatriates. Programmes designed to encourage young Emiratis to work while reducing dependence on migrant workers are said to be of limited value, while expatriate workers are said to have a profound effect on the character of the country with national identity becoming diluted²¹⁸. This has been noted before and will persist as long as Emiratis are not prepared to enter in large numbers into the private sector or take less prestigious jobs. It is highly doubtful whether the Emirates could now function without significant numbers of low-skilled migrants to run its services, especially as they perform many roles that citizens would not deign to do.

It is conceded by some that more needs to be done by the government about badly paid and poorly housed expatriate construction workers, typically earning between US\$130 and US\$380 a month, with free food and accommodation, but often in cramped conditions. In March 2015 Asian labourers protested on a site near the Burj Khalifa in Dubai, despite a ban on protests. The labourers' pay had been significantly reduced after a cut in overtime work²¹⁹. In Ras al-Khaimah in April 2015, labourers set fire to a building site and seventeen cars after a worker fell to his death, possibly a suicide. The local police chief said investigations were underway and urged labourers to obey the law in resolving disputes and warned the public not to spread rumours on social media²²⁰. While these types of incident are not regular they are reported when they occur, although generally there is no sympathy for the expatriates from the authorities and very little from citizens. The government appears to believe

²¹⁷ This is probably a gross underestimate. See <http://worldpopulationreview.com/countries/united-arab-emirates-population/> accessed 22 March 2016.

²¹⁸ <http://www.bbc.co.uk/news/world-middle-east-31986652> accessed 7 April 2015.

²¹⁹ <http://www.bbc.co.uk/news/business-31988871> accessed 14 April 2015.

²²⁰ <http://www.thenational.ae/uae/ras-al-khaimah-labourers-riot-after-apparent-suicide> accessed 14 April 2015.

police enforcement action is enough to keep the problem in check, but with expatriates accounting for 87 percent of a population of around 9.5 million²²¹ this could be an existential threat for the government should they decide to rebel en masse. The police chief's comments about the use of social media are also interesting as they reflect a growing awareness of the power of information not under the control of the authorities.

The British Museum came under fire in 2015 over plans to loan culturally significant artefacts to the Zayed National Museum in the UAE for up to five years in return for a major fee. Human rights groups said the Zayed was being built using a system of 'modern slavery'. Many thousands had been recruited to work on the giant construction project, but it was claimed many were housed in slums or deported for complaining about low wages. The general secretary of the International Trade Union Confederation is reported to have said 'the UAE's medieval labour laws put the migrant workers there totally under the control of their employers, leaving them exposed to death and injury at work, and unable to escape the country'²²². The UAE faces continual criticism about its treatment of migrant workers. Accusations of slavery are strong criticisms, but this appears not to be single source reporting, rather part of a wider campaign against the monarchies to force them to reform their labour laws with respect to migrant workers. Again, it is surprising the authorities do not appear to recognise the potential problems they may face, or perhaps, like other Gulf States, they cynically expect most migrants to be compliant as they need the work desperately for their families to survive.

6.4.7. Human Security Measures

The UAE's approach to human security appears to have been weakening when viewed statistically through the lens of the Human Development Index (HDI)²²³.

²²¹ <http://worldpopulationreview.com/countries/united-arab-emirates-population/> accessed 22 March 2016.

²²² <http://www.independent.co.uk/news/uk/home-news/british-museum-criticised-for-loaning-artefacts-to-abu-dhabi-organisation-accused-of-abusing-rights-of-workers-10293090.html?origin=internalSearch> accessed 4 June 2015.

²²³ The HDI is a measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. To ensure as much cross-country comparability as possible, the HDI is based primarily on international data from the UN Population Division, the UN Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS) and the World Bank. <http://hdr.undp.org/en/content/human-development-index-hdi> accessed 4 February 2016.

Its HDI value dropped from 0.831 in 2005 to 0.818 in 2012, a decrease of 2 percent, although still in the very high human development category, placing the UAE 41st of 187 countries and territories. This is below the average of 0.905 for countries in the very high human development group and well above the average of 0.652 for Arab States, where the closest countries in rank and population size are Qatar and Bahrain, ranked 36th and 48th respectively (UNDP 2013c).

The UAE's 2013 HDI value increased to 0.827, returning to the general upward trend that has prevailed since 1980. This maintains the UAE in the very high human development category, positioning it 40th of 187 countries and territories. UAE remains below the average of 0.890 for countries in the very high human development group, but is still well above the average of 0.682 for Arab States, where the countries closest to the UAE in rank and population size remain Qatar and Bahrain, placed 31st and 44th respectively (UNDP 2014c).

By 2014, the UAE's HDI score was 0.835, still in the very high human development category, and 41st of 188 countries and territories. UAE is still below the average of 0.896 for countries in the very high human development group, but well above the average of 0.686 for Arab States, where the countries closest to the UAE in rank and population size are still Qatar and Bahrain, ranked 32nd and 45th (UNDP 2015c). In 2014 the UAE maintained its approximate ranking in the World, although it improved its HDI value. Notably it maintained its position relative to Qatar and Bahrain which both also dropped back one position in the global rankings. On the three measures laid down by UNDP, the UAE is continuing its upward trend and is significantly better than the Arab States average, although Iraq, Syria and Libya must pull down the average value.

Abu Dhabi completed a major project in October 2015 designed to ensure a 90-day supply of water for the capital and the Western Region during an emergency. The US\$1.5 billion project pumps desalinated water to a freshwater underground aquifer near the Liwa oasis in the Western Region. During an emergency up to 40 million gallons of water can be used from the reservoir in a single day, for up to 90 days. EAD believes this will provide sufficient water for Abu Dhabi in times of severe water scarcity. The total

desalination capacity of the GCC is 30 million cubic metres a day and in an emergency Gulf States have few alternatives and little emergency storage. The increased energy efficiency of Abu Dhabi's new system is expected to save around US\$63 million in electricity costs over its 80-year design life, translating into 346,608 tonnes of GHGs not released into the atmosphere^{224&225}. Abu Dhabi is making great efforts to guarantee water security, although it comes at the cost of energy used in desalination, plus the attendant risk of pollution from the chemicals used in the process. However, EAD claims there are energy, financial and GHG emissions savings as a result of the project. It should be noted this project serves only Abu Dhabi and there is no indication of it being expanded at federal level to support the whole country.

UAE Government Strategy 2011-2013 aims to ensure universal access to healthcare by ensuring availability of services in all regions and developing a health insurance implementation scheme. World-class healthcare services will be achieved by: improving governance and enhancing services; medical diagnosis and operations utilising partnerships; accreditation of UAE hospitals and other healthcare providers; upgrading standards for health professionals; reducing epidemic and health risks; strengthening preventive medicine; and preparedness to deal with health epidemics. Given the probability of increased morbidity amongst Gulf populations as the physical effects of climate change are felt, this aspirational agenda is particularly timely as it gives plenty of opportunity to achieve improved standards of healthcare before the worst effects of higher temperatures combined with reduced air quality are felt in the region.

Food security is a major issue for the UAE. According to a 2011 report the contribution of UAE agriculture to GDP was a mere 0.9 percent. Food consumption was growing at the rate of 12 percent per annum and demand for staple foods had increased by 30 percent, according to the Ministry of Economy²²⁶. The UAE relies heavily on imports for as much as 90 percent of

²²⁴ <http://www.thenational.ae/uae/abu-dhabi-months-away-from-completing-water-infrastructure-projects> accessed 17 April 2015.

²²⁵ <http://www.desertfm.com/abu-dhabi-aquifer-in-liwa/> accessed 22 March 2016.

²²⁶ http://www.gulfood.com/files/essa_al_ghurair.pdf accessed 24 March 2016.

its food requirements according to 2015 estimates²²⁷. It was cited as the world's 15th biggest importer of food by a World Trade Organisation (WTO) International Trade Statistics report in 2013, with imports worth US\$16 billion, constituting 1.1 percent of the world's imports²²⁸. In February 2016, the Ministry of Climate Change and Environment endorsed the National Policy for Food and Agriculture. Devised by the FAO, the policy provides for environmentally sustainable, efficient and profitable agro-food systems; the FAO is assisting in implementing the policy. In March 2016 the UAE agreed to expand its role and cooperation in support of the FAO's office for the GCC and Yemen. The renewed partnership aims to contribute to the elimination of hunger and poverty reduction by improving agricultural and fisheries-based livelihoods in the Near East and North Africa; strengthening sustainability of agricultural and fisheries production in the UAE and sub-region; improving nutrition, food safety and food security; and encouraging innovation, technology sharing and capacity development in the agricultural sector, in line with the leading role the UAE plays in the Gulf and broader Near East²²⁹. The UAE is therefore taking positive steps towards ensuring its food security, aside from significant investments in agricultural production overseas²³⁰, and adopting a leading role in improving the food security of its neighbours.

6.4.8. National and Regime Security

Apparently young Emiratis trust their government and view allegations in the Western press of human rights abuses against dissidents with doubt or indifference. One said: 'We have amazing resources and amazing leadership. We have a happy life'²³¹. This suggests efficient and sophisticated public messaging, along with the provision of goods and services the population wants, where perceptions of safety and well-being are reinforced by a ubiquitous state security apparatus. The lack of sympathy displayed to

²²⁷ <http://www.thenational.ae/business/economy/al-ghurair-adds-to-storage-capacity-with-grain-silos-in-egypt> accessed 24 March 2016.

²²⁸ https://www.zawya.com/story/UAE_is_15th_biggest_importer_of_food_constituting_11_of_worlds_imports_in_2012_WTO-ZAWYA20140402112156/ accessed 24 March 2016.

²²⁹ <http://www.fao.org/3/a-az580e.pdf> accessed 24 March 2016.

²³⁰ <http://gulfnews.com/business/sectors/investment/uae-aims-to-increase-its-investment-in-agriculture-sector-1.1446538> accessed 24 March 2016.

²³¹ <http://www.bbc.co.uk/news/world-middle-east-31986652> accessed 7 April 2015.

dissidents who allegedly are badly treated is unsurprising, as they do not conform to the traditional and cultural norms expected of good citizens.

After the announcement of the nuclear deal reached with Iran in April 2015, in which it agreed to curtail its nuclear programme in return for lifting of sanctions, President Obama invited the GCC states to a summit at Camp David to reassure them and discuss ways of increasing the US's security relationships with the member countries²³². This will have provided some comfort for the GCC which needs to feel safe about Iran as it is believed by them to be the potential regional hegemon. The US will also have wanted to signal to Iran and Israel that they do not intend to disengage from the Gulf just because this deal is being struck. The summit therefore had two tracks, deterrence on the one hand and confidence building on the other.

However, the UAE was not easily mollified about what it saw as a significant threat. According to the Foreign Minister, the Federation is fully justified in dealing assertively with those who deliberately undermine peace and stability in the region. He said the UAE would prefer to have a constructive relationship with Tehran, but cannot ignore Iran's regional ambitions. As Iran's nuclear deal was being finalised, he accused it of continuing to undermine regional security by meddling in other states' affairs, including creating and taking advantage of instability in countries such as Yemen, Lebanon, Syria and Iraq. To prevent Tehran from extending its influence, he said the UAE had chosen to play a leading role in supporting the development of the region, politically as well as economically: in Yemen, the Emirates and other GCC states facilitated national dialogue to enable peaceful transition after President Saleh stepped down; it helped Egypt achieve stability after the 2011 revolution; it is in the front line against transnational extremist groups; and it donates more aid per capita than any other country and encourages sustainable development, education and health initiatives. He concluded the UAE's assertiveness is in the interests of the whole region²³³. The Foreign Minister's tour d' horizon is apparently justification for the UAE's engagement in Yemen by referencing perceived Iranian bad behaviour in the region, but also wraps in ISIS and humanitarian

²³² <http://english.alarabiya.net/en/News/middle-east/2015/04/07/U-S-to-defend-GCC-against-any-Iranian-threat.html> accessed 7 April 2015.

²³³ <http://www.thenational.ae/opinion/editorial/an-assertive-uae-serves-the-whole-region> accessed 10 April 2015.

aid as examples of the UAE's positive contributions to regional peace and stability. It appears to be for domestic consumption as it was published in The National, a government mouthpiece, and was not picked up by international media.

In July 2015, the UAE executed a female citizen convicted of terrorism after killing an American teacher in December 2014. She was sentenced to death for stabbing the woman in a shopping mall and attempting to bomb an American-Egyptian doctor. She was also convicted of setting up a social media account to spread militant ideology with the intention of ridiculing and undermining the government, and giving money to al-Qaeda in Yemen for the purpose of terrorist attacks. Police said the woman was radicalised over the internet and had not been targeting an American in particular, but was simply looking for a foreigner to kill. Attacks against Westerners are rare in the Emirates, but there had been rising concern following Islamist attacks in other Gulf States including Saudi Arabia and Kuwait. The UAE's participation in air strikes against ISIS in Syria could have been the cause, as ISIS has urged Muslims in the Gulf to attack western expatriates in retaliation. The UAE also strongly opposes other Islamist groups including the Muslim Brotherhood^{234&235}. This is an interesting insight into the UAE's internal security strategy. As well as announcing the execution of a convicted terrorist murderer, it shows government concern about radicalisation on the internet, the uncontrolled use of social media to spread information, their overt opposition to Islamist groups and the desire to prevent terrorist financing.

The UAE does not like to be regarded as a police state²³⁶ by the outside world and attempts to improve its reputation abroad by having outsiders speak for it. In October 2015, former Afghan president Karzai praised the UAE's openness, tolerance and innovation, claiming it serves as an example to the Muslim world. He called the UAE a model which fosters inclusive societies, citing its aid to Afghanistan including new homes, roads, schools, hospitals, mosques and a university in Khost province named for Sheikh Zayed, Founding Father of the

²³⁴ <http://www.gulf-times.com/Mobile/Region/216/details/447045/UAE-woman-executed-for-killing-American-teacher> accessed 13 July 2015.

²³⁵ <http://www.thenational.ae/uae/courts/reem-island-killer-executed> accessed 13 July 2015.

²³⁶ An accusation made off the record during an informal conversation with an Emirati citizen on 23 January 2015.

UAE. Karzai said ‘the UAE is the country that has blended modernity and traditional values and has created an open society that is an example to all around the world’²³⁷. While that may be the case compared to Afghanistan, unfortunately the UAE’s record of repressive internal security, human rights abuses against dissidents and lack of government transparency do not meet the standards expected in modern Western democracies.

However, even some Westerners appear to be won over. Joshua Landis, director of the Centre for Middle East Studies at the University of Oklahoma, said during his first visit to Abu Dhabi in October 2015 that the UAE’s model of pluralism, cultural acceptance and religious tolerance must prevail over the region’s extremist ideology²³⁸. However, and despite his academic credentials and expertise, he appears to be very much in the minority, certainly when other academics^{239, 240&241} have been banned from entering the UAE for expressing contentious views on Middle-East politics or the internal affairs of GCC states.

Activists are routinely arrested and imprisoned in the UAE and face the prospect of ill-treatment according to human rights groups such as ADHRB and Amnesty International. For example, Dr. Nasser bin Ghaith, an academic and activist, was arrested by security forces in August 2015 and remains incarcerated^{242&243}. Prominent human rights defender Ahmed Mansoor has faced similar harassment. In October 2015, he was unable to receive the Martin Ennals Award for Human Rights Defenders at a ceremony in Geneva due to a travel ban²⁴⁴. Mansoor was arrested in 2011 along with four other activists after they petitioned the president for legislative reforms. They were convicted by the Federal Supreme Court on charges of insulting the country’s leadership and endangering national security and received sentences of two to three

²³⁷ <http://www.thenational.ae/uae/government/former-afghan-president-says-uaes-openness-and-tolerance-is-an-example-to-all> accessed 12 October 2015.

²³⁸ <http://www.thenational.ae/uae/government/uae-model-of-pluralism-praised-by-us-professor> accessed 12 October 2015.

²³⁹ <http://www.thenational.ae/news/uae-news/politics/why-london-academic-was-banned-from-uae> accessed 23 March 2016.

²⁴⁰ <http://chronicle.com/article/Middle-East-Governments-Are/234143> accessed 23 March 2016.

²⁴¹ <https://www.insidehighered.com/news/2015/03/18/nyu-professor-denied-entry-uae-where-university-has-campus> accessed 23 March 2016.

²⁴² <http://adhrb.org/2015/09/letter-urges-secretary-kerry-to-press-uae-to-stop-persecuting-human-rights-defenders/> accessed 12 October 2015.

²⁴³ <https://www.amnesty.org/en/press-releases/2015/08/uae-press-release-6/> accessed 23 March 2016.

²⁴⁴ <http://www.bbc.co.uk/news/world-middle-east-34459947> accessed 23 March 2016.

years; the next day all five received presidential pardons. The government additionally tried a group of 94 activists en masse in 2013, convicting 69 of the defendants for crimes against state security. Many others have been brought up on security-related charges for documenting the government's human rights abuses²⁴⁵. Three sisters were detained in February 2014 as part of the campaign against political activists. Their brother is one of the UAE 94 mentioned above. They have not been charged and their family has had no contact with them²⁴⁶. The common thread is that each of the people arrested is accused of security offences which appear to involve calls for political reform and criticising the UAE's human rights record. This is the clearest example of conflation between regime and national security. Undoubtedly the continuance of a rentier system underpinned by absolute monarchy would be difficult if there is any form of popular political participation or representation; so there is a threat to regime security. However, it is difficult to make the leap to seeing such reforms as a threat to national security in its conventional sense.

That is not to say there are no threats to national security. Forty-one men are awaiting trial in the Federal Supreme Court charged with belonging to an illegal organisation, Shabab Al Manara. The group aimed to create an ISIS caliphate in the UAE and planned assassinations and bombings at malls and hotels on New Year's Eve 2015^{247, 248&249}. The trial appears to be ongoing²⁵⁰ although was adjourned in February 2016. Other trials connected to terrorism charges involving membership of ISIS, support to Houthis and Hizbollah, or funding terrorists appear to be taking place regularly²⁵¹. These are very different to the human rights and political reform protesters discussed above, but the success of security forces in uncovering such people suggests either the security structures are highly effective, or the would-be terrorists and their sympathisers are inept at their own security, or there are so many plots afoot the police and

²⁴⁵ <http://adhrb.org/2015/10/uae-activist-receives-international-human-rights-award/> accessed 24 October 2015.

²⁴⁶ <http://www.echr.org.uk/?p=1324> accessed 24 October 2015.

²⁴⁷ <http://www.thenational.ae/uae/courts/terrorists-planned-to-bomb-mall> accessed 18 November 2015.

²⁴⁸ <https://www.wam.ae/en/news/emirates/1395288993913.html> accessed 23 March 2016.

²⁴⁹ <https://www.alaraby.co.uk/english/news/2015/12/9/uae-group-planned-new-year-eve-attacks-on-tourists> accessed 23 March 2016.

²⁵⁰ <http://7days.ae/uae-man-admits-fighting-isis-syria> accessed 23 March 2016.

²⁵¹ <http://www.uaeinteract.com/news/default3.asp?ID=443> accessed 23 March 2016.

intelligence services cannot fail to spot some of them. Unfortunately there is no data to confirm which of these options it is.

A fair summary of the UAE's conflated national and regime security environment seems to be the claim by human rights groups that the security forces have perfected the art of silencing critics and created an atmosphere in which nearly everyone is afraid to say anything critical of the government. The country operates like a modern police state, with shadowy security forces that make people disappear. They operate extra-judicially and often detain citizens without charge or notice to families for months at a time. In the interests of stability above all else, the UAE's security forces control any dissenting speech inside their borders; they seem to answer to no one, save perhaps 'the unelected sheikh who rules the country'²⁵².

6.4.9. Reinforcing Security Structures

There is very little discoverable official documentation relating to the UAE's National Security. Al-Rashedi's paper (2005) obviously pre-dates the Arab Spring, the rise of ISIS and the 2015 nuclear agreements with Iran and is of little relevance today. The lack of discoverable official documentation almost certainly reflects the UAE's obsession with secrecy and its desire to stifle any form of opposition. Without doubt, and as seen above, the internal security structures are repressive and powerful, while the UAE's participation in the PENINSULA SHIELD intervention in Bahrain in 2011-12²⁵³ show its willingness to protect other monarchies from internal dissent. With regards to its external defence it remains a big spender on military hardware²⁵⁴, but almost certainly sees its best defence as lying with its American, British and French allies.

In April 2015 the government of UAE introduced nine months compulsory military service for all Emirati males, apparently to reinforce national identity and address perceptions of fecklessness and spoilt youth²⁵⁵. Whether conscription will be successful in instilling discipline, national pride and a work

²⁵² <http://www.al-monitor.com/pulse/originals/2015/06/uae-security-rights-media-free-speech-abduction.html#> accessed 16 March 2016.

²⁵³ <http://www.thenational.ae/news/uae-news/top-gcc-official-defends-troop-deployment-to-aid-bahrain> accessed 24 March 2016.

²⁵⁴ <http://uk.businessinsider.com/why-the-uae-is-the-middle-east-rising-military-power-2014-11?r=US&IR=T> accessed 24 March 2016.

²⁵⁵ <http://www.bbc.co.uk/news/world-middle-east-31986652> accessed 7 April 2015.

ethic in young men remains to be seen. Also there must be a risk the rich will buy themselves out of the scheme as has happened in Western countries in the past.

It was announced in mid-February 2016 that the son of Abu Dhabi's Crown Prince and Deputy Supreme Commander of the UAE Armed Forces, had been appointed as the new chairman of the UAE's State Security Department, a ministerial-level appointment which was part of the government restructuring process described above²⁵⁶. Official information about the State Security Department is difficult to glean, but this appointment very effectively reinforces the ruling family's grip on power and gives little hope to opposition figures of an easing of the repression.

6.4.10. International Collaboration

The UAE is at the head of a global list of donors to development projects abroad. The OECD said the UAE donated US\$4.9 billion, equivalent to 1.17 percent of GNI, in 2014. The Deputy Prime Minister said the UAE's top ranking was evidence of the country's leadership in setting the agenda for international development which it can do as it is not hindered by domestic development challenges²⁵⁷. This may not be collaboration with partners and allies, but it is a clear indication of the UAE's desire to be recognised as a global player within the humanitarian and development sectors, perhaps as a means of deflecting criticism from the repression of dissidents at home.

In April 2015 the UAE Foreign Minister discussing Operation DECISIVE STORM in Yemen said the Houthi coup had forced the UAE to take action to defend Yemeni legitimacy. A geopolitical analyst commented that the UAE plays a vital role in policing, helping to demilitarise factions and delivering humanitarian assistance²⁵⁸. The analyst was effusive in his praise of the UAE's military capabilities, which is perhaps unsurprising given he is based in Dubai.

²⁵⁶ <http://www.gulfbusiness.com/articles/industry/government/uae-appoints-abu-dhabi-crown-prince-s-son-as-chairman-of-state-security/> accessed 16 March 2016.

²⁵⁷ <http://www.thenational.ae/uae/government/20150408/uae-ranked-first-on-global-list-of-development-project-donors> accessed 9 April 2015.

²⁵⁸ <http://www.thenational.ae/uae/uae-plays-a-vital-role-for-regional-stability-in-yemen-analysts-say> accessed 10 April 2015.

However, this again reinforces the perception the UAE is a selfless donor with a special capacity for humanitarian and peacekeeping operations overseas.

The willingness of the UAE to collaborate with international partners was made plain in December 2015 when it announced it was ready to commit ground troops against ISIS in Syria. The Minister for Foreign Affairs said the UAE would 'participate in any international effort demanding a ground intervention to fight terrorism'²⁵⁹. Already a member of the US-led coalition against ISIS and with ground troops involved in operations in Yemen and taking casualties^{260&261}, the readiness of the UAE to take part in military interventions abroad with allies and partners is well known and almost certainly part of their foreign policy strategy to raise the Federation's profile and be seen as actors on the global stage.

Following the November 2015 attacks in France, the UAE's Minister for Foreign Affairs said while no request from Paris had been received, the UAE was ready to offer assistance, including airstrikes against militants, and reminded people the UAE was at the forefront of the war on terror and would continue to be so²⁶². The UAE's government is obviously determined to be seen as a major contributor to coalition operations against ISIS and other terrorist groups. This continues to raise the UAE's international profile and enhance its reputation abroad, countering bad publicity about its repressive internal security regime.

Collaboration may be taking place with unlikely partners too. Israel has opened a diplomatic office accredited to IRENA and the Director-General of the Israeli Foreign Ministry visited towards the end of 2015 for several days. It is known the UAE and Israel have had a discreet relationship for some time despite each country's official stance²⁶³. However, following reporting about the presence of Israeli diplomatic representation in Abu Dhabi, the UAE was keen to point out this did not represent a change in the relationship between the two countries.

²⁵⁹ <http://thepeninsulagatar.com/news/middle-east/360520/uae-says-ready-to-commit-troops-to-fight-isis> accessed 1 December 2015.

²⁶⁰ <http://www.reuters.com/article/us-yemen-security-emirates-idUSKBN0TL14T20151202> accessed 24 March 2016.

²⁶¹ <http://www.telegraph.co.uk/news/worldnews/middleeast/yemen/11845899/United-Arab-Emirates-loses-45-soldiers-in-Yemen-fighting.html> accessed 1 December 2015.

²⁶² <http://www.euronews.com/2015/11/14/exclusive-no-city-is-safe-from-isis-threat-says-uae-minister/> accessed 1 December 2015.

²⁶³ <http://www.ft.com/cms/s/0/7b1193b8-94f1-11e5-b190-291e94b77c8f.html#axzz43pSBedYK> accessed 24 March 2016.

Israel is the only country with a representative in the UAE solely accredited to IRENA²⁶⁴. The UAE is obviously very sensitive about the suggestion it has ties with Israel, but despite their public pronouncements there are some indications discussions have taken place at governmental and non-governmental level.

6.5. Reflections on the UAE

The most striking feature in this case study is the automatic conflation of national and regime security which underpins every aspect of Emirati life. For the majority of the population this does not appear contentious and is reinforced through the continued emphasis placed on loyalty, duty and national identity in government messaging such as UAEV2021. The monarchies obviously recognise traditions, heritage and culture help maintain a sense of national identity, and that civil society can be used in a controlled way to support traditional life without contesting the political space.

Yet, there appears to be a fundamental paradox at play. On the one hand the ruling élite wishes to counter the homogenising and multicultural pressures of globalisation, but on the other the Federation wishes to diversify into globalised knowledge-based industries and services where free flowing information and data is critical to the success of the enterprise. Similarly, the government wishes to direct and control economic development centrally, while aiming to make the UAE the business location of choice for freewheeling entrepreneurs and investors. Add to that the UAE's determination to be recognised as a regional and global player, especially in terms of overseas aid, mediation, countering violent extremism and environmental protection, and it would seem apparent that some sort of conflict between a rigid and repressive security apparatus and a newly educated, informed, digitised and connected population is inevitable.

There is no evidence that political change is on the government's agenda. Environmental protection, alternative technologies, economic diversification and international reputation building are key strands of the strategies until 2030, but the globalising influences of these are to be mitigated by constant reinforcement of Arab-Islamic-Emirati values, traditions and heritage in the home, society more widely and at school. The Federation's wealth, albeit

²⁶⁴ <http://www.theArabweekly.com/?id=3083> accessed 24 March 2016.

mainly Abu Dhabi's, will continue to provide citizens with all they need and ensure the ruling bargain is maintained. This is underpinned by a heavy national security emphasis and strong security forces unafraid to compromise individual human rights in ensuring any threat to the political status quo is neutralised. Unless there is a 'Black Swan' event it appears likely the UAE's rentier system of government could continue for many years, providing the region with an environmentally committed authoritarian state.

7. Comparisons and Further Reflections

7.1. Introduction

It is clear from the case studies that each of the three monarchies faces different challenges as they come to terms with the direct and indirect effects of climate change, but they also have different drivers impacting upon their approaches to human and national security. All three are committed to diversification away from hydrocarbon dependency, espouse strong support for environmental protection and improvement, rely on expatriate workers to maintain their economies, and eschew any suggestion of significant political reform. However, they each have significantly different political contexts: Bahrain's monarchy, with almost depleted hydrocarbon reserves, arguably exists through the generosity of the Saudi ruling family which sustains the al-Khalifas in power despite significant opposition from the Shia majority; Qatar has sufficient gas reserves to provide income for about 90 years, has a homogeneous, politically apathetic and acquiescent citizenry, and sees itself as a key player on the world stage in terms of conflict resolution; the UAE is dominated by Abu Dhabi with Dubai some way back in second place, has five poorer emirates that have little political traction, has 90 years of oil revenues to come, stresses its green credentials and sees itself as a regional leader on the issue, and is essentially an authoritarian state. These similarities and dissimilarities will be explored further below using the ten questions framework and the evidence gleaned during compilation of the case studies.

This thesis contributes to the body of knowledge by providing an assessment of the monarchies' trajectories towards a sustainable future with assured human and national security provision, divorced from hydrocarbon dependency. The assessment is based upon analysis of the monarchies' national vision statements and other official documents in the public domain, augmented by academic, media, NGO and pressure groups' commentaries. It also assesses each of the three monarchies' prospects for regime survival, noting, as has been discussed, national and regime security are conflated habitually by the monarchies to mean one and the same thing (Ulrichsen 2012b). Recognising this contextual underpinning, the proposition is that good economic security enables successful delivery of the ruling bargain, which in turn assures national

security by providing political and social stability. This stability guarantees the current system of governance remains in place and the resulting political continuity enables high levels of human security and development to be achieved. As a consequence there is an interdependency between human security and economic security; a safe and secure population is much more likely to be economically productive than not. However, climate change effects cannot be discounted and have significant potential to affect aspects of human and national security.

In the background there is the matter of identity and its place within individual monarchies. Having seen the Gulf States tend not to create a national identity as a consequence of hostility to a neighbour (Partrick 2012), it is clear each of the monarchies fears erosion of common Arab and Islamic traditions, values and culture. However, in their efforts to diversify economically, each state has to create more permissive business and regulatory frameworks to encourage FDI and domestic investment. In parallel there has to be relaxation on access to and possession of information, so new businesses attracted to base themselves in the monarchies can exploit the globalised interconnected market-place that allows knowledge-based industries and services to develop. It is this unfettered access to information and ideas that probably concerns the security services of each monarchy the most, as their citizens will be exposed to alternative political viewpoints, including the concept of popular political participation in the nation's affairs. None of the monarchies would wish to see universal suffrage as the mechanism for deciding who rules the country, controls its resources and has the monopoly of the legitimate use of force within its borders (Weber 1919). In the visions of Qatar and the UAE there are clear references to the importance of traditional Arab, Islamic and tribal values and culture, and determination to strengthen those aspects of national life to counteract the impacts of globalisation. In Bahrain the situation is more difficult due to the Sunni-Shia schism, but BEV2030 expounds the concept of a Bahraini national identity through its focus on culture and heritage, to promote pride and loyalty in the Kingdom among both Shia and Sunni citizens. Forty-five years after independence the monarchies are at a cross-roads; it will be interesting to watch the monarchies develop over the next 45 years and see

whether globalisation really does homogenise populations and flatten national values, or whether they are successful at maintaining their traditional identities.

7.2. Similarities and Dissimilarities

This section looks at the combination of visions and evidence to assess how the monarchies have tackled the challenges they face and what degree of success each has achieved. It uses the ten questions framework to provide consistency with the three case studies preceding this chapter, but as with the case studies there is some degree of overlap between the questions.

7.2.1. The Significance of Climate Change

Climate change is clearly not Bahrain's most pressing issue, despite the recognised potential loss of 15 kilometres of coastline as sea levels rise. Its hydrocarbon reserves are all but depleted, so Western decarbonisation policies adopted as part of Kyoto and Paris will not significantly affect Bahrain, although perhaps it will lose some of the oil revenues Saudi Arabia shares with it from the Abu Sa'afah oilfield. There is little mention of climate change in official documents in the public domain, although there is an acknowledgement that degradation of Bahrain's agricultural land and fisheries as a result of climate change, combined with already low productivity in both sectors, has diminished domestic food production. There is also recognition that climate change effects in other countries can cause supply chain issues for food imports, especially where food producing countries decide to limit their exports in favour of feeding their own populations. Extreme weather events, notably heavy rainfall leading to flooding, may increase in frequency, but Bahrain's response is to drain the water away rather than conserve it to counteract its pre-existing and increasing water scarcity. Bahrain's Vision does identify the importance of preserving the environment to make the Kingdom a pleasant place in which to live and work for now and future generations and also focuses on climate change mitigation and environmental sustainability. These will be delivered through conservation, energy efficiency and investment in technologies to reduce GHG emissions, minimise pollution and provide sustainable energy. Unfortunately since 2008 when the Vision was written Bahrain has faced considerably greater and more imminent challenges.

Qatar's Vision is strong on the environment and says while other development must take place to make Qatar sustainable, the environmental impact has to be considered fully. It appears implicit that environmental protection is an Islamic duty. QNV2030 identifies the need to raise public awareness, establish a legal framework to meet environmental challenges and to encourage environmentally friendly technologies. It sees the need for regional cooperation to mitigate the effects of pollution and says it will work with the wider international community to mitigate the effects of climate change outside the region. So, in the Vision climate change was identified as a real challenge by the ruling élite and they were determined to develop domestic, regional and global perspectives and to act responsibly on the international stage. Since publication of the Vision, Qatar has demonstrated its willingness to work with international partners on the climate change agenda and this is consistent with Qatar's view of its place in the world and its determination to be seen as a regional leader on environmental issues. It has also taken positive steps to improve domestic environmental conservation, water efficiency and use of renewables as part of its climate change mitigation strategy. However, it too was affected by the flooding that struck Bahrain at the end of 2015 and that exposed weaknesses in its building controls standards which could be indicative of its difficulties in executing the strategy on the ground and ensuring those on whom it depends for delivery are legally and policy compliant. The al-Thanis see climate change as a major issue of international importance and are therefore going to remain engaged and highly active and visible in order to reinforce their international reputation and relationships, which they regard as critical to their national security.

UAEV2021 talks of a 'Well-Preserved Natural Environment' and, similar to Qatar's aims, declares the government's intention to support international environmental initiatives vigorously, as part of its global responsibility. It aims to adopt alternative technologies, decrease carbon emissions and promote responsible behaviour by its citizens. It plans to mitigate the future effects of climate change including protecting the environment from anthropogenic impacts, locally and globally, reducing GHG emissions and providing regulatory protections for development and fragile ecosystems. It also says citizens will be protected from environmental emergencies, given guaranteed access to

clean air and water, and protected from health hazards. The Executive Summary of ADEV2030 also has a priority concerned with developing appropriate national infrastructure while preserving the environment. However, although infrastructure development is well covered and security gets a mention, there is no further detail on environmental protection or the policies that might apply to infrastructure development after the initial statement. Similarly, the main body of the document is light on environmental issues too. However, the UAE has gone to great lengths to reinforce its environmental credentials, including hosting conferences, establishing reserves to protect wildlife and habitats, persuading IRENA to establish its global headquarters in Masdar City and publishing numerous, publicly accessible strategies concerned with sustainable development, water and air quality and environmental protection. It is probable the UAE feels the pressure of being regarded as the world's greatest per capita emitter of GHGs, but there can be little doubt the rulers are committed to improving their image through action and, unusually perhaps, are prepared to release some of their plans into the public domain where they can be scrutinised and it will be recognised if targets are not met.

The UAE probably has the edge over Qatar in being the regional leader on climate change issues, with Bahrain cognisant of the need to do something, but totally preoccupied with much more urgent political issues surrounding regime survival. Both Qatar and the UAE have taken public steps to improve their environmental reputations and are keen to be involved in international climate change mitigation activity; but there is still a long way to go for both, especially in persuading their populations to be more environmentally responsible and less profligate about the way they use natural resources and the emissions they produce. However, the indications are positive and providing there are no serious mishaps to distract them, both Qatar and the UAE appear to be committed to supporting international climate strategies.

7.2.2. Sustainable and Alternative Technologies

While Bahrain's Vision is strong on the need to create a sustainable and diversified economy it contains nothing specific on a move towards sustainable or alternative technologies. It could perhaps be argued they are implicit to the notion of a transformed economy, but that appears to rest on knowledge-based

services rather than a desire to find alternative sources of clean energy or industrial processes that create less GHG emissions. However, there have been subsequent initiatives to move into more sustainable practices as seen with R&D in the agricultural sector including irrigation and hydroponics. The R&D is no doubt driven by pragmatism as these initiatives mitigate concerns about water and food security, but the impact of reducing environmental damage is positive. The establishment of alternative energy sources such as the solar power plant near Manama and the direction to the Electricity and Water Authority to conduct studies into further solar and wind generation capacity is also reassuring, although a further check on the Electricity and Water Authority website²⁶⁵ still shows it has not been updated since 2011, so progress is hard to ascertain. However, given Bahrain's lack of oil and gas it would be a logical step for them to use renewable solar and wind power to generate electricity for domestic use, rather than import hydrocarbons from their neighbours.

Like Bahrain, Qatar's Vision contains no mentions of sustainable or alternative technologies, but does focus on the need for the future economy to be sustainable and founded on knowledge-based services and entrepreneurial skills. Qatar, of course, has very significant gas reserves and is a major exporter of LNG and GTL, so its concerns over domestic power supplies are inconsequential and it sees its hydrocarbon revenues providing the economic underpinning to its sustainable economic development plans. However, Qatar's commitment to sustainability is clear for all to see: it has hosted the international Qatar Green Building Conference on cutting edge design and technology; Qatari company RasGas has launched projects aimed at reducing GHG emissions through new technologies; collaboration with international partners on several projects concerned with air pollution and quality is aimed at reducing morbidity and Qatar's carbon footprint; new infrastructure projects are now scrutinised to minimise environmental damage; and Qatar hosted a robotics competition for young people from around the world. Again Qatar is keen to be seen to be playing a leading role internationally and is likely to maintain its very public interest and support for the development of innovative sustainable and alternative technologies.

²⁶⁵ <http://www.mew.gov.bh/default.asp?action=category&id=95> accessed 10 May 2016.

The UAE's Vision does make mention of alternative and sustainable technologies saying growth must be matched by a range of sustainable energy sources including renewable and alternative options such as nuclear power. The UAE declares its desire to embrace alternative technologies and decrease its carbon footprint; the reality of that intention is probably best exemplified by the building of Masdar City with alternative technologies at its core that make it carbon-neutral²⁶⁶. However, ADEV2030 fails to mention alternative technologies which may be considered surprising considering Masdar City lies within Abu Dhabi's boundaries. Perhaps it was known that UAEV2021 would cover alternative technologies sufficiently to warrant leaving it out of Abu Dhabi's Vision. Since the Visions were written the UAE has launched a number of initiatives aimed at generating electricity from solar radiation at a considerable scale and starting the process of moving towards the use of nuclear energy. These two significant steps will enhance the UAE's energy security and allow it to reduce its GHG emissions and escape its reputation as one of the world's worst polluters per capita. Furthermore, the UAE has been commended for its low carbon leadership which according to one environmental group is globally recognised, providing the UAE with the sort of international recognition it seeks to achieve.

While only the UAE's Vision makes mention of a move toward sustainable and alternative technologies, it is clear all three monarchies are heading in the same direction. Again there is obvious competition between Qatar and the UAE for the role of regional green leader and on this occasion they appear to be evenly matched across the spectrum of green activities, although the UAE is poised to take the lead when its solar and nuclear power generation capabilities come on stream fully. Bahrain is achieving positive progress as well although its political instability means it will not be allowed nuclear power by the international community any time soon. However, its solar initiatives could go a long way to filling the potential energy deficit Bahrain faces and reduce the need to buy oil and gas from its GCC partners. Whatever the scale of alternative technologies achieved, clean energy generation has to be good for the region and will contribute to lower GHG emissions.

²⁶⁶ <http://www.thenational.ae/business/masdar> accessed 17 March 2016.

7.2.3. Political Reform

Political reform is not mentioned in any of the national visions and is obviously not on the agendas of the monarchies in any substantive way. Bahrain may be the first country that has to allow some reform as its hydrocarbon revenues are the most fragile and it is moving towards dependency on the private sector for wealth creation. Unless private sector corporations willingly fund the rentierist system, it is inevitable citizens will be required to pay tax, which could lead to demands for a meaningful role in political life for Bahraini nationals. However, Saudi fear of a Shia dominated Bahrain and the impact that would have on Saudi Arabia's Eastern province probably means the al-Khalifas will continue to be economically and militarily bolstered by the al-Saud for years to come, which will prevent demands for political reform from gaining traction.

Meanwhile in Qatar, the politically apathetic population seems content with the state of affairs there and although a date for Consultative Council elections, promised for 2016, has been delayed again until 2019²⁶⁷, there has been no apparent discontent at the continued delays. Similarly, the UAE looks very unlikely to reform its political system, with the recent restructuring of the government appearing to consolidate power in the hands of the ruling families and their appointed ministers. Even with current relatively low oil prices, revenue streams are not an issue for Qatar or the UAE who can sustain their ruling bargains comfortably²⁶⁸. If the three monarchies have a critical political vulnerability it is most likely to be the result of increased globalisation and interconnectedness giving unrestricted access to ideas and information to their citizens. As well as potentially diluting national identity, increased ideational awareness could lead to demands for political empowerment by otherwise compliant citizens; should it also affect expatriates resident in the monarchies the sustainability of the regimes could be in severe doubt.

7.2.4. Economic Diversification

The Visions are very strong on economic diversification and the need to move away from hydrocarbon dependency. Qatar's Vision, which is perhaps the

²⁶⁷ <https://dohanews.co/legislative-elections-in-qatar-postponed-until-at-least-2019/> accessed 12 December 2016.

²⁶⁸ Although Qatar was reported to be planning to raise US\$5 billion on the international bond market to offset the effects of falling gas prices in The Sunday Times 22 May 2016, Section 3, page 2.

most rounded of the four analysed, is different in that it explicitly states the role that the responsible exploitation of its oil and gas reserves will play in enabling Qatar's business environment to be restructured. Knowledge-based industries and services are seen by all three monarchies as the place to be heading, but there is recognition that diversification needs to be wide in order to avoid the single output dependency that has essentially characterised the last 45 years. All the Visions clearly articulate the need for economies to be diverse, sustainable and supported by permissive regulatory frameworks that encourage FDI and establishment of new businesses, although in all three states there is also an obvious desire to maintain some degree of central control over the economy. How entrepreneurial spirit and innovative, creative R&D will be compatible with the restrictions imposed by government bureaucracies attempting to maintain control of the direction of economic development remains to be seen.

In Bahrain diversification seems to be well underway and the figures quoted in the case study show the non-oil sector is expanding well, albeit supported by a healthier than expected oil sector. Growth has slowed in the last couple of years, but is still positive and achieving rates around double that of the UK²⁶⁹ forecast for 2016. Of note, economic diversification has not been focused solely on knowledge-based services and Bahrain has seen the tourism, construction and leisure sectors perform strongly, as well as a vibrant stock exchange emerge. Bahrain has also launched initiatives and incubators to help SMEs and start-ups to establish themselves, so as to provide diversity in the size of businesses in the Kingdom and persuade its nationals to become involved in the private sector rather than relying on public sector jobs. Interestingly, political instability in Bahrain seems not to be an impediment, perhaps because those who oppose the al-Khalifas also have a vested interest in ensuring the economic health and sustainability of the Kingdom.

Qatar is currently the richest country per capita in the world, but it has said its citizens need to be taught innovation and entrepreneurial skills and also they need to take their place in a sustainable diversified economy. Qatar has embarked on a programme of major infrastructure projects mainly, but not

²⁶⁹ <http://www.britishchambers.org.uk/press-office/press-releases/bcc-upgrades-uk-growth-forecast-but-warns-on-longer-term-outlook.html> accessed 11 May 2016.

exclusively, focused around transportation. Qatar too has established business incubation services and made obtaining finance for innovation and start-ups easier. Qatar's Science and Technology Park is promoting R&D with the private sector especially around alternative and green technologies, with a wide range of non-oil businesses expected to benefit from major infrastructure improvements. Qatar is seriously committed to economic diversification which is made easier by its enormous wealth and compliant population.

The UAE's economic diversification is also strongly underway, but as with most things is mainly focused in Abu Dhabi and Dubai. Dubai started the process first out of necessity, as it lacked the oil wealth of Abu Dhabi. As seen in the case study, Dubai was badly affected by the 2008 economic downturn and bailed out by Abu Dhabi, but since then has bounced back. Significant real estate projects are now underway across the Federation and tourism is growing very quickly. Like Bahrain and Qatar, the UAE is promoting start-ups and SMEs and providing incubator support, along with strengthening the regulatory framework and working to develop the productivity of the national workforce. Trade, finance, transport and tourism are high up the government's agenda as are innovation, R&D and aerospace. The UAE's stock exchanges have grown and performed well and although the end of 2015 saw the UAE post a deficit due to low oil prices, it is expected economic growth will continue as before.

It appears, therefore, all three monarchies are pursuing an economic diversification strategy successfully. Qatar and the UAE, notwithstanding the very low oil price around the turn of 2015-16, have the luxury of a hydrocarbon cushion that enables them to fund the development of their non-oil sectors from their hydrocarbon revenues. Bahrain has its Saudi sponsors that fulfil the same role, although the Saudis also see oil dependency is not sustainable and aim to diversify their economy^{270&271} too. What will be interesting to watch for is the impact of the increased economic importance of the private sector compared to the public sector, especially when the tipping point is reached and private sector wealth creation outstrips what the public sector can achieve. At that point taxation will almost certainly become necessary in the monarchies to fund

²⁷⁰ <http://www.thenational.ae/business/economy/saudi-arabia-has-diversified-but-economy-still-depends-on-oil> accessed 11 May 2016.

²⁷¹ The Economist Special Report: The Arab World, 14 May 2016.

the services the governments currently provide²⁷². If businesses are prepared to accept the full tax burden, a form of the ruling bargain could survive, but if individual citizens find themselves paying direct and indirect taxes there could be a resulting demand for political enfranchisement and a move away from absolute monarchy as a system of government.

7.2.5. Education and Skills for Citizens

BEV2030 has a focus on improving education and skills and the creation of well paid jobs for its citizens in a newly diversified economy. It concluded that many Bahrainis with university degrees were unable to find work appropriate to their qualifications, but also recognised many citizens lacked the necessary qualifications to fill the medium to high wage posts in the private sector. The education system was not then good enough to provide citizens with the skills and knowledge they needed to fill these roles. The Vision said Bahrain would invest in its human capital through education and training, particularly in the applied sciences. It stated that innovation and entrepreneurial skills would be vital to economic sustainability and declared an intention to change the profile of the workforce from low-wage expatriates to high-wage Bahrainis who would be employees of choice for high-value companies. As a result, both the state and private education sectors have seen expansion in recent years, although the private sector has been growing five times faster. Literacy rates are relatively high and have been increasing and the numbers staying on in education beyond the compulsory age of 15 years is increasing, although the majority are not taking degree level courses. Universities and other institutions have started to offer innovation and entrepreneurial skills training and this is mirrored at secondary school level. Development of entrepreneurial and business skills alongside more traditional subjects demonstrates an innovative approach and catching students at secondary school will develop a culture of private sector work early, rather than a culture of expectation and reliance on the public sector for employment.

Qatar sees education as a key part of the Human Development pillar of its Vision, noting citizens will be equipped to undertake increasingly complex technical tasks requiring analytical and critical skills, creativity and innovation.

²⁷² The Economist Special Report: The Arab World, 14 May 2016.

The government intends to match labour-market needs and work opportunities to individuals' aspirations and abilities and provide opportunities for learning throughout life. However, one interesting facet of Qatar's approach to education is the inherent linkage seen with Arab-Islamic-Qatari culture, traditions and values; this is emphasised repeatedly along with an intention that while educational institutions will have some degree of autonomy, they will ultimately be under central control to ensure they teach what is consistent with the Qatari way of life. Potentially this is Qatar's rulers trying to control access to information and ideas that may lead to alternative perceptions of how Qatar should be governed. Meanwhile Qatar has taken steps to make it easier for citizens to set up their own businesses and is increasingly trying to persuade them that the private sector is a good place to work. Literacy rates are improving and more people are getting degrees, although qualifications achieved are not always appropriate for the workplace, so there is a need for better careers advice at an earlier stage in the education of an individual. Qatar has established relationships with prestigious overseas educational institutions, while technical and vocational courses have been designed for those for whom university is not the best learning environment, with entrepreneurial opportunities for young people and women being opened up. Qatar is committed to improving the education and skills of its nationals so they can be economically productive in the private sector. However, the monarchy is obviously determined to ensure Qatari values are not undermined by new ideas and may try to control the information its citizens can access. There is an inherent contradiction between wanting to be part of the globalised knowledge-based marketplace, while concurrently aiming to limit access to the information superhighway.

UAEV2021 urges Emiratis to build knowledge and apply their talents for the national good. The Vision says more Emiratis will enter higher education to achieve the right skills for employment in knowledge-based services, and universities will adjust their courses to meet national requirements. The government wishes to enable every citizen to achieve their educational potential and make a positive contribution to society. This gives schools the responsibility for preparing well-rounded and confident young people, but also specifically requires them to instil the values of moderate Islam and the Emirati

national identity; like Qatar, the government wishes to be in control of what is taught. The Vision says there will be dynamic and evolving educational targets and a modern national curriculum which includes critical thinking and practical skills. The aspiration is for more students to enter higher education with many going on to postgraduate study. Those who choose to leave education before university can receive vocational training; this does not appear optional, which is also similar to Qatar. The Executive Summary of ADEV2030 frequently mentions the need to upgrade the educational system to make Abu Dhabi's citizens more capable of productive work, but does not go into any detail about how that may be achieved. In practice efforts have been made to improve teaching in schools and universities, but Emiratis appear to prefer government posts that are not too demanding, rather than achieve higher qualifications and work in the private sector.

It appears Bahrain is most advanced in educating and skilling its people, although that may be due to necessity brought about by depletion of their oil and gas reserves. There is also little to suggest Bahrain has concerns about dilution of national identity and values as a result of more education, but that could be due to the Sunni-Shia schism that afflicts the Kingdom. In any event educational opportunities appear to be available to both communities. Qatar and the UAE suffer in this instance from their hydrocarbon wealth which has created a culture of entitlement, especially amongst men. A government sinecure historically requiring little educational attainment has always been preferable to working for a living. The significant challenge for both governments is to overcome that culture and change the mindset of its citizens. That could be a generational task as those late in their secondary education careers could already be opposed to private sector work. Finally there is the conundrum of the possibility of a better educated citizenry becoming more politically aware and demanding enfranchisement and a say in how their country is run. That runs contrary to the wishes of the absolute monarchies and is a clear reason for both Qatar and the UAE wishing to control the education systems closely. However, once again it begs the question of whether they can become part of the globalised interconnected knowledge-based market if they are constantly attempting to limit the flow of information and ideas their citizens can access. Similarly, will foreign companies be

prepared to invest in countries where access to information is controlled by the authorities? Admittedly, that has not obstructed FDI in China and Singapore who both control internet access^{273&274}, the latter having been criticised by Qatar-based al-Jazeera for doing so²⁷⁵.

7.2.6. Expatriate Dependency

All four visions contain a similar message about the monarchies' dependency on expatriate labour, i.e. they wish to reduce the numbers needed by getting citizens qualified to do the high value jobs that expatriates currently do. However, it is accepted it will take some time to get citizens to the level of skills and experience necessary to do these jobs, so highly qualified expatriates will be required in the interim. Generally, the high skilled expatriates cause their hosts little or no problems. At the low-skill and menial end of the labour spectrum there appears to be no intent to replace expatriates with citizens, although there is a general concern about the dilution of national identities and values the presence of large numbers of low and unskilled migrant workers can cause. Without these expatriates the monarchies in their current and aspirational forms are unsustainable, so the presence of migrant workers is a necessary inconvenience to be borne. In Bahrain there is little apparent evidence that migrant manual workers have caused trouble or been abused. However, Qatar is highly sensitive to accusations of sexual and other abuse of migrant workers levelled at it, especially concerning allegations around unsafe practices while preparing for the 2022 World Cup. As a country that values its international reputation so highly, criticism of its internal human rights record with regard to expatriate workers is particularly damaging. The UAE faces similar criticisms especially around low pay and poor quality housing for expatriates at the lower end of the skills bracket. Its security forces are also uncompromising in dealing with incidences of civil disobedience or disorder, with jail and summary deportation with loss of pay commonplace²⁷⁶. The UAE also feels the sting of external criticism, like Qatar, which tarnishes its carefully

²⁷³ <http://www.cfr.org/china/media-censorship-china/p11515> accessed 18 May 2016.

²⁷⁴ <https://www.hrw.org/news/2014/10/15/singapore-space-narrows-online-news-media> accessed 18 May 2016.

²⁷⁵ <http://www.aljazeera.com/indepth/features/2013/06/201368112023976117.html> accessed 18 May 2016.

²⁷⁶ <https://www.hrw.org/report/2015/02/10/migrant-workers-rights-saadiyat-island-united-arab-emirates/2015-progress-report> accessed 11 May 2016.

built international reputation as an aid donor and general doer of good in the world.

Whatever the truth regarding the treatment of expatriates, the monarchies could not exist in their present form without them. The 2022 World Cup in Qatar is founded on the labour of migrants from South-East Asia and the Indian Sub-Continent, while the hospitality and health services of all three states would collapse if the expatriate workers who perform a wide variety of roles were to pack up and go home. To a large extent this is a mutual interdependency; the monarchies need the workers to run their economies and services, and the workers need the money to send home to support their families. However, the monarchies would do well to consider the threat such large numbers of expatriates could pose if they were to become even more politically and economically disaffected. At the low skill end they are already marginalised in a foreign country; perceived unacceptable treatment could be the catalyst that provokes a rebellion.

7.2.7. Human Security Measures

The three monarchies are following a generally upward trajectory in terms of their HDI scores and have successfully improved or maintained their relative global rankings for a number of years; all three states are well above the average for Arab countries as a group. This demonstrates that quality of life, health and education is improving in each country as a result of measures taken by the governments to improve human security. This almost certainly reflects a government view that good human security means the citizens remain content and popular contentment leads to political acquiescence which sustains the social contract in place in each country. It is therefore in the rulers' interests to ensure their citizens are generally happy with their lot, although in the case of Bahrain improving the HDI score does not address the political disenfranchisement felt by the Shia, or the economic marginalisation of the poorer Shia villages.

All three countries have issues surrounding food, water and energy security with Bahrain comparing the food security situation of nearly three-quarters of its population to that of Niger; again it is the Shia who will bear the greatest burden which will not reduce their political and economic alienation. The monarchies

lack the arable land, water and agricultural workers to improve their indigenous food production, although they are making efforts to optimise what they have through infrastructure improvements and R&D. However, they remain heavily dependent on imports with all the supply chain issues that go with sourcing, transporting, storing and refrigerating the commodities they require, as well as the potential vulnerability of those supply chains to exogenous shock if the sources of supply lie in politically unstable countries. All seek contractual relationships with politically stable countries with developed agricultural industries, but these could be tempted to extract premium prices from what they see as hydrocarbon-rich Gulf States, with the monarchies having little choice but to pay. This would impose further stresses on their reduced hydrocarbon revenue streams. Successful economic diversification is therefore necessary for guaranteed food security in the future.

Water scarcity is a constant issue for countries in the region and while climate change predictions suggest a possible very slight increase in annual precipitation, it is likely to occur in fewer events, some of which may be extreme, and will still be insufficient to replenish aquifers and groundwater stocks. The monarchies acknowledge this and major infrastructure improvements are underway and planned in Qatar and Abu Dhabi, with desalination still providing a significant amount of the fresh water required. Recycling of waste water provides one alternative, but there are infrastructure and cultural issues to overcome first.

Energy security is a less visible issue, although all three countries are aware of the increased demand for electrical power as a result of refrigeration and air-conditioning needs, which will only grow as mean daily temperatures rise towards the middle of this century. As seen, the UAE imports gas from Qatar and plans to have nuclear power on-stream in 2017; Qatar uses its own gas to fire its power stations; and Bahrain relies on Saudi support. However, the Visions of Bahrain and the UAE identify the need to move into renewable and alternative sources of energy generation and Qatar has subsequently announced the same intention. One thing the region does not lack is sunshine, which gives an infinite source of power generation providing the necessary infrastructure is put in place. Similarly, wind power is potentially plentiful and is

also being considered as part of their plans. Demand reduction schemes would also assist in ensuring energy security does not become a problem.

Healthcare has been a major area of investment for Bahrain, Qatar and the UAE with each of them building new facilities and aiming to ensure universal provision. The private sector is closely involved in building and running some of these facilities and the provision of healthcare insurance. As seen in the case studies, there is recognition that world-class healthcare services could be a useful component of an economic diversification strategy aimed at bringing in people from outside the Gulf to receive high value medical care. The spin-off of such initiatives should feed back into the health services provided to citizens and expatriates. If skilled expatriates know they can access good healthcare they are more likely to go to work in the monarchies, which makes their economies more sustainable in the long-term.

Human security in the monarchies will remain a perennial concern because of the scarcity of fresh water and their limited indigenous food production capacity. Water production capacity could be affected as rising sea levels inundate desalination plants, requiring new plants or alternative infrastructure to be built beforehand. As if a lack of food and water were not enough, the direct physical effects of climate change will increase mortality and morbidity in vulnerable sections of the population through increasing temperatures and poorer air quality; this will place added loading on healthcare services. Increased demand for electricity as a result of the direct effects of climate change will continue unabated unless there are reduction strategies brought in to force in both the commercial and domestic sectors. Alternative and renewable energy sources are potentially plentiful, but again need the strategic investment priority to ensure they are built in time. Human security is nowhere near a lost cause in the three states and directly contributes to economic security; as mentioned above the proposition is that a safe and secure population is much more likely to be economically productive than not. It is therefore in the ruling élites' interests to ensure their populations are looked after.

7.2.8. National and Regime Security

One thing all four visions share in common is an almost complete absence of specific mention of national security concerns or strategies. Qatar identifies its oil and gas reserves as central to its national security and ADEV2030 speaks of the importance of international and domestic security, linked to economic development, for both Abu Dhabi and the whole Federation. Otherwise, national security, like political reform, appears to be outside the scope of the discussion, perhaps reflecting the obsession with secrecy prevalent in the region and the rulers' view that it is not a matter for public debate. However, and as seen in the case studies, there are many areas covered by the vision statements that have implicit national and regime security themes and here again is the obvious conflation of national and regime security to mean one and the same thing in the minds of the ruling élites.

Bahrain's security is dependent upon the support of Saudi Arabia, the UAE and other PENINSULA SHIELD countries. Without GCC intervention in 2011 the al-Khalifas could conceivably have fallen and a Shia republic been declared if the uprising had been sufficiently widespread and determined. That is something the Saudis could not tolerate so their security guarantee looks good for years to come and Bahrain repays that by supporting Saudi anti-Iran rhetoric and actions, and by conducting airstrikes in support of the Saudi-led Operation DECISIVE STORM against the Houthis in Yemen. Bahrain augments and reinforces this security relationship with the permanent presence of US and, once more, British naval bases on its territory, presumably to deter the Iranian regional hegemony it fears. Bahrain's internal security remains problematic and there are regular arrests and trials of Shia 'terrorists' accused of plotting to overthrow the state with Iranian or Hezbollah support. Even an ISIS cell has been discovered and broken up. The Bahraini response to its internal security threats, supported by the Saudis and the UAE, is repressive and the security forces appear to act autonomously in their repression, which makes the prospect of a political settlement highly unlikely, especially following an appeal court decision to extend Shia opposition leader Sheikh Ali Salman's prison sentence from four to nine years on 30 May 2016²⁷⁷.

²⁷⁷ <http://www.bbc.co.uk/news/world-middle-east-36411342> accessed 31 May 2016.

Qatar meanwhile goes about its national security in an altogether different way. There appears to be little external threat to Qatar and because they are in partnership with Iran over gas exploitation there appears no concerns there either. Internal dissent is very limited due to political apathy and what does turn up is suppressed very quickly, especially if it involves expatriate workers. Qatar's monarchy is similarly under no threat and has a very sophisticated strategy of relationship building based on commerce, military linkages, conflict resolution and self-promotion on the world stage. Qatar's aim appears to be to create large numbers of partners who are stakeholders in its security and well-being and it has achieved this by building a network that extends from the Asia-Pacific, through the Gulf, including Iran, and across Europe and the Atlantic to the USA. Currently, even ISIS appears not to take issue with Qatar.

The UAE has a much more assertive national and regime security strategy than either Bahrain or Qatar, which may stem from the al-Nahyans in Abu Dhabi and the al-Maktoums in Dubai being aware the five poorer emirates do not necessarily share the same agenda or trajectory as their two richer Federation partners. Internal dissent is dealt with harshly and, like Qatar, migrant workers are given no leeway in terms of their behaviour. At the same time as repressing its dissident citizens and rounding up suspected terrorist plotters on a regular basis, the UAE also engages in a proactive information campaign to persuade others of its sound human rights credentials and as a model and modern Arab state. As seen, it has some prominent supporters in this regard, but criticism of their internal human rights record probably drowns this out. The UAE also plays its part in military operations in the region and is very active against the Houthis in Yemen and as part of the US-led coalition against ISIS, again activities designed to show the UAE as a state that takes its international obligations to maintain peace seriously. The UAE's leadership is repressive because it fears for its regime survival, but given the enormous wealth it controls, it could soften its approach and concurrently strengthen its support through a more benign form of autocracy.

In national and regime internal security terms Qatar appears to be the most stable with little to threaten the regime domestically, while Bahrain's regime survives because of Saudi and GCC support, and the UAE maintains internal control through a highly effective and uncompromisingly repressive security

apparatus. External security is maintained by all three through a network of often common relationships that include regional and global partners who wish to see the Arabian Gulf remain stable, not least because of the oil and gas exported from there. Furthermore, as all three entities and their populations see ISIS as antithetical to their best interests, it is unlikely that organisation will achieve anything like the Arab Spring might have done in the monarchies if reform had not stalled as a result of ISIS's appearance. At present, because of their evident security strategies and barring a 'Black Swan' event, the monarchies look set to endure for some years yet.

7.2.9. Reinforcing Security Structures

This section follows on logically from discussion of the monarchies' national and regime security strategies. Again there is nothing substantive in the four vision documents although they contain plenty of references and allusions to strong tribal and family societies sharing common values and identities, which gives strength to their nations. That is not to be confused with a strong civil society involved in all aspects of public life in each state, which is definitely not the intention except within severely constrained boundaries. However, it is a fair assumption Bahrain, Qatar and the UAE will be constantly reappraising their security requirements and the threats they perceive they face and will strengthen their security structures unobtrusively but effectively. For Bahrain there is little to see in terms of enhanced security structures, although increasing repression including imprisonment and torture is evident from anecdotal evidence. Qatar appears to be content with strengthening internal regulatory structures to improve domestic security and safety, but is also obviously in the market for new high-end military hardware including jet fighters. Meanwhile the UAE maintains its repression of its dissidents and recently has consolidated security power in the Crown Prince of Abu Dhabi's son. It also continues to buy significant amounts of military hardware, which it appears to be willing to use in overseas interventions in support of its strategic security partnerships. It is in the maintenance and strengthening of such security relationships where the three states probably see their investment as being best placed as collaboration can lead to mutual dependency and resulting security guarantees.

7.2.10. International Collaboration

The three states studied take international collaboration seriously for very similar reasons, mainly revolving around national security considerations, but not exclusively so. Bahrain has engaged in multiple trade agreements to guarantee its food security, relies, as we have seen, on Saudi and Emirati support for regime survival, maintains a strong Defence Cooperation Agreement with the US and hosts a new British naval facility. It also participates militarily in the coalitions against ISIS and the Houthis and is an active member of the GCC. However, apart from hosting a conference at the Arabian Gulf University on climate change in May 2015, which had a strong GCC and regional flavour, there is little evidence Bahrain proactively collaborates internationally on climate change issues. This, combined with the multiple security relationships Bahrain maintains, reinforces the notion that traditional national and regime security threats have far greater prominence in the minds of the al-Khalifas, as they are considered to form the most likely threat to regime survival.

As seen in the Qatar case study, international collaboration is a strong theme in QNV2030 and Qatar works hard to promote its national interests and establish itself as a player on the world stage. It has an amicable relationship with Iran as a result of shared commercial interests, hosts the headquarters of US Central Command and also the al-Jazeera news channel. Qatar sees globalisation as unavoidable and knows it must remain economically connected to be sustainable, so international trade and financial cooperation is a necessity. It also regards international collaboration on climate change as non-discretionary and wishes to be seen as a regional leader, as exemplified by its hosting of climate change conferences. Furthermore, Qatar aims to strengthen its collaborative international relationships in R&D and cultural, educational and scientific matters. Like Bahrain, it has built a complex network of relationships with international partners designed to provide the security guarantees it requires. However, it also works hard to be seen as a global leader in sustainable development, charitable activity and conflict prevention and mediation. Qatar recognises its national security guarantees are significantly enhanced through political, economic, environmental and security relationships with a wide range of partners and is conscientious in maintaining them.

The UAE wants to be seen as a modern and progressive state acting responsibly on the international stage. While both UAEV2021 and ADEV2030 are light on the specifics of international collaboration, it is clear by the UAE's actions and the contents of other strategy documents it releases into the public domain that it sees its international relationships as crucial to its success in establishing and maintaining that reputation. The UAE is clearly committed to international climate change efforts and has hosted multilateral conferences in addition to having successfully campaigned to get the headquarters of IRENA to base itself in Masdar City. It also promotes its own 'green' credentials constantly on the international circuit, probably in an effort to offset the reputational damage it has suffered as one of the world's largest per capita emitters of GHGs. The UAE is active in other international spheres too and is acknowledged as the world leader in aid donations. It also supports wide-ranging development objectives overseas, efforts in aid of the FAO's regional food security campaign and undertakes a wide range of humanitarian and diplomatic activities, all of which bolster its reputation abroad. Like Qatar it has focused on building strong international trading and financial partnerships, although it probably fears the spread of new ideas and information into the Federation as a result of increased interconnectedness more than does Qatar. Like both Bahrain and Qatar it maintains strong external security linkages, especially with the US, UK and France, but also is actively involved in GCC security structures as seen in the Bahrain intervention in 2011, operations against the Houthis and ISIS, and recent rhetoric aimed at Iran.

The three monarchies without doubt recognise the importance of international collaboration across a wide range of activities to their long-term sustainability. International trading and financial partnerships improve their chances of successfully diversifying their economies and that leads to greater economic security within each country which enables political stability to be maintained. The UAE competes with Qatar for the position of regional leader on climate change issues and is probably ahead in most respects, while Bahrain is more focused on its fragile internal instability resulting from the political and economic marginalisation of its majority Shia population. As mentioned above, all three states recognise defence and security relationships with external military powers provide guarantees against exogenous threats and they focus

considerable effort on maintaining those linkages. However, as seen in 2011 in Bahrain, strong defence relationships with western democracies do not necessarily guarantee internal peace and security.

7.3. Should Climate Change Matter?

7.3.1. Direct Effects

It is generally accepted that anthropogenically-caused climate change is real and the direct effects predicted by the IPCC across a range of simulations and models have the potential to impact severely upon the planet and its populations. As seen, the direct effects in the Arabian Gulf will most probably include increased temperatures throughout the year and poorer air quality due to GHG emissions, particulates and blowing dust, which will lead to increased mortality and morbidity amongst the young, the old and other vulnerable groups such as those with chronic respiratory illnesses. Marginally increased precipitation, but in less frequent and sometimes extreme weather events, will not compensate for depletion of groundwater reserves and aquifers, while rapidly growing populations, higher temperatures and increased domestic and industrial demand will aggravate water scarcity. Higher winds and less frequent precipitation will lead to greater desertification, reducing capacity to produce food domestically. Sea temperatures will increase, harming biodiversity and fish stocks, while rising sea levels will flood coastal strips, even depriving Bahrain of up to 15 kilometres of coastline, and require the expensive relocation of commercial and domestic infrastructure and housing, as well as the rebuilding of desalination plants upon which the states depend heavily for their freshwater supplies. Furthermore, rising sea levels will cause groundwater reserves and aquifers to become salinated, render some land unusable for agriculture due to salt contamination and reduce biodiversity on land. Unless current desalination processes are changed, the production of freshwater will require extra energy to be used and release potentially harmful by-products into the environment, further reducing biodiversity and air quality. Higher daily temperatures throughout the year will increase demand for refrigeration and air-conditioning, thus increasing demand for electricity and releasing more GHGs into the atmosphere, unless clean renewable and alternative energy generation methods are adopted.

The direct effects of climate change will impact upon human security significantly unless major mitigation strategies are embarked upon. From this reprise of likely physical effects discussed in more detail earlier, it can be seen that food and water supplies, energy availability and good health and longevity are all under direct threat. The human security of the Gulf populations is therefore at risk and if the populations are not safe and secure, their capacity to be economically productive will be diminished which, in turn, will impact adversely on national and regime security. However, Bahrain, Qatar and the UAE all have the capacity and the time to set their mitigations in place, so can avoid the worst effects with judicious planning, although the cost to their exchequers of such mitigations is probably difficult to over-estimate. In planning their mitigation strategies the ruling élites will have to factor in the need to maintain education and skills provision which also contribute to human security by enabling the population to fulfil its economic potential and achieve a higher quality of life. This reinforces political stability and feeds back into strong national security.

7.3.2. Indirect Effects

The indirect effects of climate change, most notably the international agreements such as Kyoto and the 2015 Paris Agreement, also have the potential to be problematical for hydrocarbon producing countries as decarbonisation targets are set, and hopefully met, in an effort to prevent the worst physical effects predicted. Although Bahrain's dependency on hydrocarbon revenues is all but over, it still receives some income courtesy of the Saudis, while Qatar and the UAE continue to earn significant revenue from oil and gas and probably have the capacity to do so for many decades. However, if decarbonisation becomes widespread and renewable energy sources become credible alternatives, the monarchies will see their revenues decrease which, as discussed several times before, could place their ruling bargains in jeopardy. Encouragingly, we have seen the three states have been making significant efforts to diversify their economies and appear to be achieving success. They recognise the need to diversify into a wide range of services and industries and are adapting their regulatory and legislative frameworks to attract FDI, while developing entrepreneurial and business skills in their citizens in the hope they will enter the private sector and become

economically productive in large numbers, which reinforces political stability and national security. Qatar and the UAE have also identified the positive benefits that can be achieved in terms of their international reputations by being seen to be acting responsibly on climate and environmental issues, so can be expected to remain proponents of support for international agreements.

However, development of a strong private sector through economic diversification may well bring other problems for the ruling élites as a result of the inevitable globalisation that implies. These problems are: the potential erosion of traditional identities, culture and values if the homogenisation of populations really occurs; the spread of information and ideas to better educated and more politically aware citizens; and how to fund and maintain the existing social contracts without recourse to taxing the citizenry, all of which will almost certainly lead to demands for popular political participation. From the monarchies' perspective these problems collectively pose an existential threat to their ruling bargains and maybe even the monarchies themselves. The ruling élites will have to adopt sophisticated strategies to guarantee their regimes survive, including a degree of political reform accompanied by climate change mitigation to ensure a potential human security deficit does not impact adversely on economic development and diversification.

7.3.3. Regime Survival?

Notwithstanding a 'Black Swan' event, of which more below, the survival of the ruling families in power is almost entirely dependent on how they transition their countries away from hydrocarbon dependency into sustainable and diversified political economies. The ruling bargains or social contracts are almost certainly not sustainable once the private sector in each country becomes the main source of wealth generation, as large international corporations are unlikely to subsidise absolute monarchic rule without some very significant guarantees in return, which could breach international anti-corruption and transparency norms and laws²⁷⁸. Sovereign wealth funds could take up some of the slack caused by hydrocarbon revenue reduction, but as these are probably regarded as the monarchies' money rather than national assets, it must be questionable how

²⁷⁸ The UK Serious Fraud Office is already investigating alleged bribery and corruption surrounding Barclays' financial dealings with the UAE and Qatar in 2008, according to The Sunday Times 22 May 2016, Section 3, page 6.

long the rulers would be prepared to draw on those funds. Similarly, taxation of citizens and expatriates to fund government expenditure is likely to bring reciprocal calls for political reform, so would have to be factored into any transformation planning.

Bahrain is dependent on Saudi support, but, as the Saudis move towards economic diversification and decarbonisation effects are felt, it must be questionable how long that support can last. Some commentators believe Saudi oil reserves are not as great as previously thought²⁷⁹, which means such a decision may be closer than expected. Admittedly the Saudi fear of another Shia state in the Gulf probably trumps economic drivers, but the al-Khalifas will have to accept some political reform is required or Shia disaffection could turn into an open and very violent revolution the Sunni security forces would not be able to contain. Lacking any real organised opposition movements, Qatar and the UAE appear to have nothing to fear as long as they take measured steps along a route of controlled transition, but even they must see some form of political easement would be seen positively by their populations and could even strengthen popular support for the monarchies. However, while Bahrain probably has to make some major political concessions within the next five years, it is more likely Qatar and the UAE need to embark on a programme of serious political reforms within 10-15 years. This is not to suggest western democracy is the way ahead, but allowing greater citizen participation in the political life of the three countries through traditional Arab, Islamic and tribal governance structures could be the most culturally appropriate reform to make and guarantee the monarchies remain in power.

Yet, there is always the danger of the 'Black Swan' which by its nature is unforeseen and takes everyone by surprise; the 2011 Arab Spring was exactly that sort of event. With ISIS in play, as said earlier, there is little to encourage serious opposition in the three monarchies because overthrowing the ruling families to have them replaced by the 'Caliphate' is not something any of the Gulf States' citizens would relish. However, should ISIS be militarily defeated and scattered to the winds in the next couple of years then all bets on the monarchies having a relatively long time to achieve political and economic

²⁷⁹ <http://www.middleeasteye.net/columns/collapse-saudi-arabia-inevitable-1895380679> accessed 18 May 2016.

transformation could be off. Without fear of extremists taking power, opposition groups could be tempted into thinking that a rerun of the Arab Spring, and this time in the Gulf, is just what is required. As with all things in the Middle-East, instability is the norm which makes predictions hard to make.

In the end climate change is merely another factor the rulers of Bahrain, Qatar and the UAE have to consider as they design their political and economic strategies for the future. Its physical effects on people and territory cannot be ignored, nor can the reductions in revenues that will result from international climate change agreements. However, the rulers face more pressing questions about the legitimacy of their governance and their rights to absolute and authoritarian rule. As they endeavour to transform their political economies in line with their national visions between now and 2030 it will be managing the consequences of those changes that present the greatest challenge, not climate change *per se*.

8. CONCLUSION

The central research question of this thesis is whether climate change effects should matter in respect of the human and national security policies and strategies followed by the three Gulf monarchies in question. As has been seen, the direct physical effects will require active mitigation if each state's population is to be safe and healthy and contribute effectively to the economic productivity necessary to make the monarchies' political economies stable and sustainable. Similarly, the indirect effects, principally reducing revenue streams from the export of hydrocarbon products as a result of international climate change agreements, will adversely affect the monarchies' abilities to sustain their ruling bargains, unless alternative sources of government revenue can be found to make up the shortfall. Those alternative sources of revenue are likely to include income from sovereign wealth funds and other national investments overseas; taxation of private sector businesses and corporations operating in the newly diversified economies; income derived from operating new public sector-owned goods and service industries; and, potentially, direct taxation of expatriate workers and maybe even citizens. However, the question is still there: should climate change really matter or is it merely one more dynamic that has to be considered and dealt with as the monarchies steer the process of economic diversification and mitigate the many exogenous pressures stemming from globalisation that potentially seriously threaten their traditional Arab, Islamic and tribal identities, cultures and values?

As baseline documents the four national visions share many similarities; in fact none stands substantially apart from the others, although Qatar's could justifiably claim to be more holistic and embrace more areas of government activity more thoroughly. Climate change is recognised as an issue for the future, but none of the visions give it significant emphasis. Environmental sustainability is mentioned in all the documents, but varies in the degree to which it is discussed, while little mention is made of alternative sustainable technologies. However, all the visions are explicit about the need to move away from redistributive economies, reduce their public sectors and move their citizens into well-paid and desirable employment within private companies. They aim to break away from dependency on hydrocarbon revenues and diversify their economies into high value goods and services, especially within

the knowledge and financial sectors. Each vision sees its own government remaining as the key controlling entity in directing the development of the newly diversified economy, thus retaining and consolidating the monarchies' hold on power in each of the three states. This thread runs through the evidence of transformation in each of the case studies, where it is clear there is no intention on the part of any of the rulers to undertake any form of serious political reform. Absolute monarchy, and hence regime survival, remains the preferred governance model of each of the ruling élites.

In executing the national visions and supporting strategies, the monarchies are adopting similar themes. Despite relatively little mention of climate change and alternative technologies in the vision statements, all three states are pursuing policies designed to reduce GHGs through the use of alternative energy generation systems. In addition to being good for the environment in the Gulf and contributing to the Paris 2015 goal of limiting the increase in global temperature to 1.5-2°C, this has the added advantage of increasing energy and human security and reducing dependency on hydrocarbon fuels. In that vein all three states are determined to achieve a high level of economic diversification away from hydrocarbon industries and have invested considerable efforts into achieving that goal, including educating and skilling their citizens. However, the issue of a culture of entitlement among young male citizens, particularly in Qatar and the UAE, has yet to be tackled successfully. The rulers hope their appropriately educated and skilled workforces of the future will allow their dependency on migrant workers to be reduced. Yet, the reality is that at the high skill end of the spectrum it will take several years to get citizens up to the required levels, while at the opposite end of the spectrum there will be very little or no appetite among citizens to do menial or physically demanding work. Expatriates will therefore remain in large numbers to guarantee the newly diversified economies are sustainable in the long-term.

As mentioned several times, human security directly contributes to economic security and thus national security. The proposition is that a safe and secure population is much more likely to be economically productive than not, so the ruling élites must ensure the human security of their populations is catered for within government development policies and strategies. It is clear each of the monarchies is endeavouring to do just that, although even without worsening

environmental conditions, water and food security will remain perennial vulnerabilities for the governments. Direct climate change effects have the potential to cause serious damage to the human security measures in each of the states, but the governments have the time to set mitigations in place, given the worst effects will be felt from the middle of this century onwards.

It is clear that national and regime security are the same thing in the minds of the rulers and remaining in power is the paramount aim of the monarchies. They each adopt a sophisticated and wide ranging collaborative approach to security including multiple military alliances and partnerships at regional and international level; complex trade and financial relationships; taking on regionally and globally significant roles, especially in environmental and humanitarian areas, to enhance their national reputations; and the use of harsh legal codes and repressive security structures at home. Little is available in the public domain concerning their national security structures and intentions, but it is apparent each of them is strengthening their military and security forces and using increasingly robust measures to suppress any political dissent.

Perhaps the most significant question surrounding the future of these Gulf states revolves around a combination of factors concerned with the potential for increasing political dissent, the allegedly value flattening effects of globalisation, the reduction in the ability of the monarchies to sustain their ruling bargains, and the associated inevitability of some form of citizen taxation being required. The level of political dissent will vary from country to country: Bahrain's monarchy, maintained by Saudi money, is most at risk because its hydrocarbon reserves are almost depleted and the Shia are in a state of almost constant revolt. For the al-Khalifas to remain in power, the repression of the majority in perpetuity will be required. That may deter foreign investors from putting their capital into the Kingdom. Qatar is largely politically homogeneous and where political reform has occurred it has been driven by the Emirs. The Qataris are unlikely to want change, unless the al-Thanis can no longer pay their way. The UAE has seven Emirates with significant disparity of wealth and active dissidents, although they are constantly repressed. Each of the poorer five Emirati monarchies wants to stay in power, but if they do it will be because Abu Dhabi, assisted by a recovering Dubai, subsidises them. However, political oppositions have to be wary of what follows if they depose their

monarchs. None of the citizens of Bahrain, Qatar or the UAE would see an uprising that allowed ISIS to gain power as even vaguely attractive, so perhaps political dissent will be muted until ISIS is neutralised.

The increased impact of globalisation on the three states is inevitable as they become part of the complex interdependent and interrelated international marketplace. Whether the impact will automatically flatten Arab, Islamic and tribal values is something that remains to be seen, although the pervasiveness of globalised culture is already apparent in cities in the region. Perhaps more importantly, globalisation and greater connectivity to the outside world will bring new ideas and information that will be at odds with the system of governance in the countries. Those ideas could be secular or an extreme form of Islam, both of which could pose a threat to the monarchies. The problem for the rulers is how to encourage outsiders to establish their businesses in the states, while at the same time preventing what the rulers see as the corrosive effects of a globalised world.

The existing traditional governance structures are a result of the familial bonds, treaties and allegiances that exist between the tribal and clan hierarchies making up each state. These loyalties are perpetuated in the traditional way by redistributing wealth downwards, which relies on the continued availability of funds for the King or Emir to disburse. When those funds in the form of revenue earned from diversified production are going directly into the hands of the owners of private sector businesses, the ruler has to find some way to make up the shortfall or the ruling bargain will collapse. This may mean taxation of businesses, expatriates and even citizens could become necessary, in order to fund public sector services currently provided at a subsidised rate or free of charge. If citizens are involved in economically productive work and taxed on their earnings, it must be doubtful they would waive political participation in exchange for health, education and infrastructure services, because of prevailing traditional, cultural and religious norms. The rulers may well be forced to revisit their system of governance and conduct proactive reform if they are to remain as heads of state.

The problem of looking at the polities of Gulf Arab monarchies through the eyes of Western liberal democracy is that it is hard not to assume their populations

are motivated by the same desires as those in the West, or their leaders have the same drivers and motivations as ours. There are other pressures too; with the Arab Spring neatly subverted by ISIS where is the attraction in political opposition now? For the Shia in Bahrain the entry of ISIS into their country would be disastrous, while sleek and comfortable Qataris and Emiratis would see their lifestyles change for the worse if Sunni-Islamic extremism became the guiding principle to live by. It may seem inevitable that a reduction in hydrocarbon revenues flowing to the monarchies spells the end of rentierism, but it does not mean that the traditional system of political governance cannot adapt to a new order, where the monarch retains power by permitting businesses to operate on his territory and outsourcing government services that the private sector pays for, in exchange for an amenable operating environment. The visions collectively appear to see future governance structures as largely unchanged. Success in maintaining the status quo will require political skill and sophistication on the part of the ruling élites, but they appear determined to remain in power and prepared to adapt to accommodate the necessary effects of greater integration into the globalised marketplace, while mitigating the less attractive effects on their national populations. It will be their performance that will permit them to carry the day, or not.

Climate change is another factor the rulers of the monarchies should consider as they design their political and economic strategies for the future. Its direct effects on the health and welfare of citizens and their economic productivity cannot be ignored and nor can the international climate change agreements that will lead to reduced hydrocarbon revenues. However, there are more urgent issues the governments have to face surrounding the sustainability of their ruling bargains as they diversify and develop vibrant private-sector dominated economies. Within the next five years Bahrain will be forced to make fundamental reforms to its system of governance as the cost of continued repression becomes unsustainable and supporting Saudi revenues reduce as its economy restructures and diversifies. This will be followed in the subsequent ten years by Qatar and the UAE as both economies become private sector driven. A western system of democracy is not necessarily appropriate, but greater popular participation in political decisions while maintaining traditional culture and values could be the best reform to make and ensure the

monarchies continue to rule. Between now and 2030 managing the wider consequences of transformation presents the monarchies' greatest challenge, but the adverse effects of climate change should not be ignored as they will increase markedly over the coming decades. With all that in mind it will be fascinating to observe how religiously and socially more conservative Saudi Arabia addresses the same issues as it embarks upon the transformation and diversification of its own economy.

As stated in the methodology, this study has relied upon the printed word in English, albeit from multiple sources, because the governments in question did not cooperate with the research, so elite interviews were not possible with one exception that was of little value. In hindsight, an earlier approach to the governments asking where they would like the research to be focused could have resulted in practical collaboration. However, there is no guarantee this would have been the case and if it had occurred there is the risk the governments would have attempted to steer the research away from contentious issues, such as the actions of their internal security services. Some significant gaps in knowledge remain, especially around national climate policies, national security strategies and the political vision each monarchy has for the future governance of its state. However, until such time as the ruling elites increase the transparency of their national policy and decision-making, it is likely that examining public domain sources will remain the principal method of monitoring developments and attempting to assess the future.

NATIONAL VISIONS – WORD COUNTS

Individual Word Scores

Key Word	BEV 2030	QNV 2030	UAEV 2021	ADEV 2030
Allies	0	0	0	0
Alternative	0	0	0	0
Change	3	5	2	1
Citizens	2	11	18	1
Climate	1	5	2	2
Collaboration	1	0	0	1
Dependency	0	0	0	0
Development	4	67	10	43
Diversification	0	5	1	7
Economic	44	51	15	113
Education	17	12	9	6
Employment	7	0	1	4
Energy	2	1	3	2
Environment	18	17	17	16
Environmental	0	24	3	2
Expatriate	2	11	0	0
Food	1	0	0	0
Foreign	8	2	1	2
Gas	2	7	0	1
Human	3	11	3	10
Immigrants	0	0	0	0
International	7	17	10	11
Labour	5	1	0	8
Migrant	0	0	0	0
National	12	30	21	4
Oil	15	6	1	11
Partners	2	0	0	1
Political	1	8	0	2
Reform	8	0	0	1
Revenues	8	0	0	1
Security	3	6	4	3
Skills	9	2	2	0
Sustainability	10	0	0	4

Sustainable	6	7	9	9
Technology	1	0	2	0
Unsustainable	2	0	0	0
Water	3	3	2	0
Workers	1	5	1	0

Word Pair Scores

Key Word Pairs	BEV 2030	QNV 2030	UAEV 2021	ADEV 2030
Climate Change	0	2	2	0
Economic Reform	0	0	0	0
Education [and] Skills	0	0	0	0
Expatriate Labour	2	0	0	0
Expatriate Workers	0	3	0	0
Human Development	0	7	0	1
Human Security	0	0	0	0
Oil Revenues	6	0	0	1
Political Reform	1	0	0	0
Sustainable Technology	0	0	0	0
National Security	0	1	0	0

GLOSSARY

ADCED	Abu Dhabi Council for Economic Development
ADEV2030	Abu Dhabi Economic Vision 2030 – Executive Summary
ADHRB	Americans for Democracy and Human Rights in Bahrain
ADNOC	Abu Dhabi National Oil Company
BCHR	Bahrain Centre for Human Rights
BEDB	Bahrain Economic Development Board
BEQ	Bahrain Economic Quarterly
BEV2030	Bahrain Economic Vision 2030
BIET	Bahrain Institute of Entrepreneurship and Technology
BIRD	Bahrain Institute for Rights and Democracy
CCS	Carbon Capture and Storage (or Sequestration)
CMC	Central Municipal Council (Qatar)
CO ₂	Carbon Dioxide
DEWA	Dubai Electricity and Water Authority
EAD	Environment Agency – Abu Dhabi
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FDI	Foreign Direct Investment
FNC	Federal National Council (UAE)
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GNI	Gross National Income
GNP	Gross National Product
GSDP	General Secretariat for Development Planning (Qatar)
GSEC	General Secretariat of the Executive Council (Abu Dhabi)
GTL	Gas to Liquid fuels
GW	Gigawatts
HDI	Human Development Index
HEC	Higher Education Council (Bahrain)
ICT	Information and Communications Technology
IMF	International Monetary Fund

IP	Intellectual Property
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency (based in UAE)
ISIS	So-called Islamic State
Kahramaa	Qatar General Electricity and Water Corporation
LDC	Less Developed Country
LNG	Liquid Natural Gas
MDP&S	Ministry of Development Planning and Statistics (Qatar)
MENA	Middle East and North Africa
MEW	Ministry of Environment and Water (UAE)
MOI	Ministry of Interior
MW	Megawatts
°C	Degrees Centigrade
OECD	Organisation for Economic Cooperation and Development
QGBC	Qatar Green Building Council
QNFSP	Qatar National Food Security Programme
QNV2030	Qatar National Vision 2030
OPEC	Oil Producing and Exporting Countries
R&D	Research and Development
SIDS	Small Island Developing States
SME	Small and Medium Enterprise
SO ₂	Sulphur Dioxide
Tamkeen	Bahrain National Labour Fund
Tarsheed	Qatari Programme for Conservation and Energy Efficiency UAE United Arab Emirates
UAEV2021	United Arab Emirates Vision 2021
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
US	United States of America
WHO	World Health Organisation
WTO	World Trade Organisation

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<http://portal.www.gov.qa/wps/portal/media-center/news/> Government of Qatar official website.

<https://www.bahrain.bh/wps/portal/> Government of Bahrain official website.

<http://government.ae/en> Government of the UAE official website.

<https://www.middleeastmonitor.com/> The Middle East Monitor is mainly focused on the Arab-Israeli conflict over Palestine, but increasingly over the period under observation it carried much wider reporting about the whole region. Anti-Israeli, appears neutral about the West and is very concerned by the appearance of ISIS.

<http://bcsl.org.uk/english/#/ms-1/10> The Bahrain Centre for Studies in London is solely focused on Bahrain and the 'oppression' it sees taking place there against both Shia and Sunni opponents of the monarchy.

<http://adhrb.org/> Website of Americans for Democracy and Human Rights in Bahrain: this is primarily focused on human rights issues in Bahrain, but also covers human rights in other Gulf States including Saudi Arabia, the UAE and Qatar.

<https://www.bahrainwatch.org/> Is wholly focused on Bahrain, but only publishes new online content intermittently.

<http://www.echr.org.uk/> The Emirates Centre for Human Rights, mainly focused on UAE issues, but also comments on Palestinian events. Publishes intermittently.

<https://khalidalhail.wordpress.com/> Self-proclaimed Qatari opposition personality. Posts infrequently and appears somewhat detached from reality. Nonetheless, the only dedicated Qatar watcher found.

http://m.bbc.co.uk/news/world/middle_east The main BBC online news outlet which generally appears objective and even-handed on most issues.

<http://edition.cnn.com/middle-east> CNN's online outlet which is generally objective, but is slanted towards a US audience which is perhaps not well versed in foreign affairs. Some of its reporting therefore appears simplistic.

<http://english.alarabiya.net/> Saudi-owned and based in Dubai, but with good coverage of the Middle-East. Can be controversial, but tends not to stray too far from the mainstream of Gulf news reporting.

<http://www.aljazeera.com/> Based in Qatar and proclaimed as independent by the government there. Has sometimes contradicted Qatari government views, but relies on the support of the government for its presence in Qatar.

<http://www.gulf-times.com/> A Qatari newspaper that appears objective but uncontroversial in its reporting.

<http://www.thenational.ae/uae> An Emirati newspaper based in Abu Dhabi. The National appears to be the official mouthpiece of the government and carries a continuous stream of good news stories.

<http://thepeninsulaqatar.com/> The Peninsula is based in Qatar and appears to be closer to the National in its style than the Gulf Times, i.e. its pieces tend to be very positive about the government.

<http://www.gulf-daily-news.com/>²⁸⁰ This is a Bahraini outlet now only online. It is supportive of the government and carries many official releases.

<http://www.independent.co.uk/news/world/middle-east/> UK newspaper with a left of centre view, but generally objective in what it reports. It is now published only online.

<http://www.washingtonpost.com/> A US newspaper carrying more sophisticated reporting than CNN, probably because of its focus on those within Washington's beltway. Generally objective with an American perspective.

²⁸⁰ The Gulf Daily News became the Gulf Digital News Online with the same URL sometime between 8 and 13 July 2015. It then became a subscription service in early August 2015, although reappeared as a free resource on iPad around mid August for a short period of time, before returning to being a subscription service.