

Critical Resource Management Using the UNRMS in UK: Best Practices & Lessons Learnt

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Met4Tech

NI^{ER} PROGRAMME

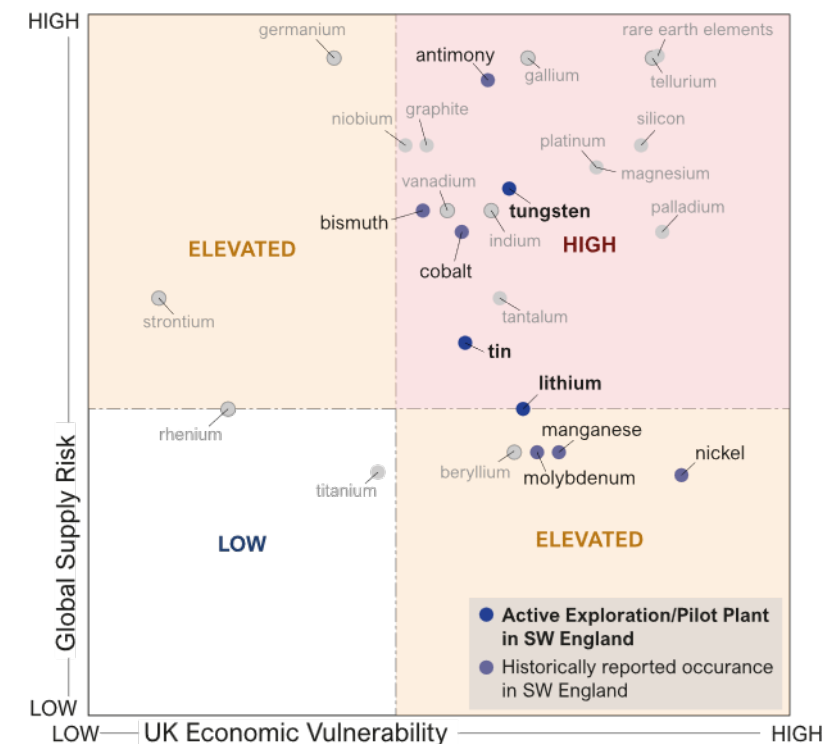


UK Research
and Innovation

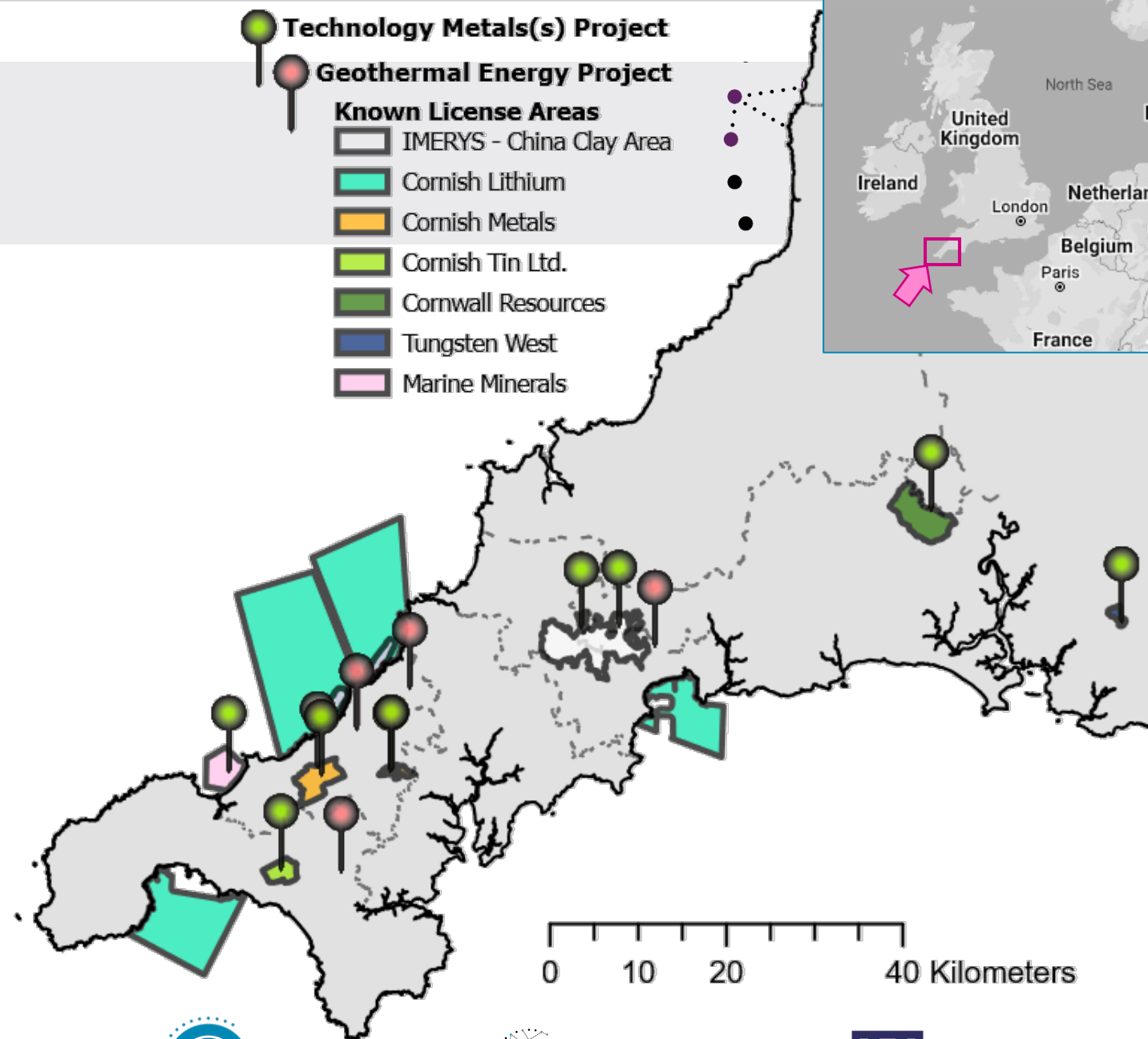
Context



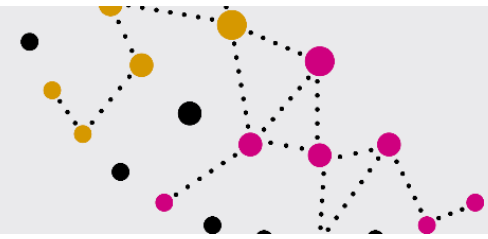
- ❖ **Met4Tech: Interdisciplinary Circular Economy Centre for Technology Metals (2021-24) – Circular Economy Geomodels, Cornwall Case Study**
- ❖ Briefing note: UNFC application to SW England’s Critical Metal Resources (May 2022)
- ❖ Secondment to Cornwall & Isles of Scilly Local Enterprise Partnership (April 2022-ongoing): Technology Metal Advisor, using the UNRMS as a framework for sector recommendations
- ❖ UK Critical Minerals Strategy (September 2022) – *“Ensure UK domestic mining complies with permitting and planning regulations, and encourage the proportionate use of globally recognised frameworks and guidelines for responsible mining and investment where applicable – for example EITI standards, - Initiative for Responsible Mining Assurance (IRMA), ICMM principles, the Equator Principles, and **UN Resource Management System (UNRMS)** – that protect the interests of communities and our natural environment.”*



Cornwall Case Study



Geo-Resources



Local Skills and Expertise: Sustainability, Circular Economy, Responsible Mining and Exploration, Mineral Processing, Environment, Social and Governance (ESG), Nature Regeneration, Renewable Energy, Blue and Green Economy

UNESCO World Heritage Site: Cornwall and West Devon Mining Landscape

Surface Quarrying: Kaolin, Lithium, Tungsten, Rubidium, Caesium, Potassium

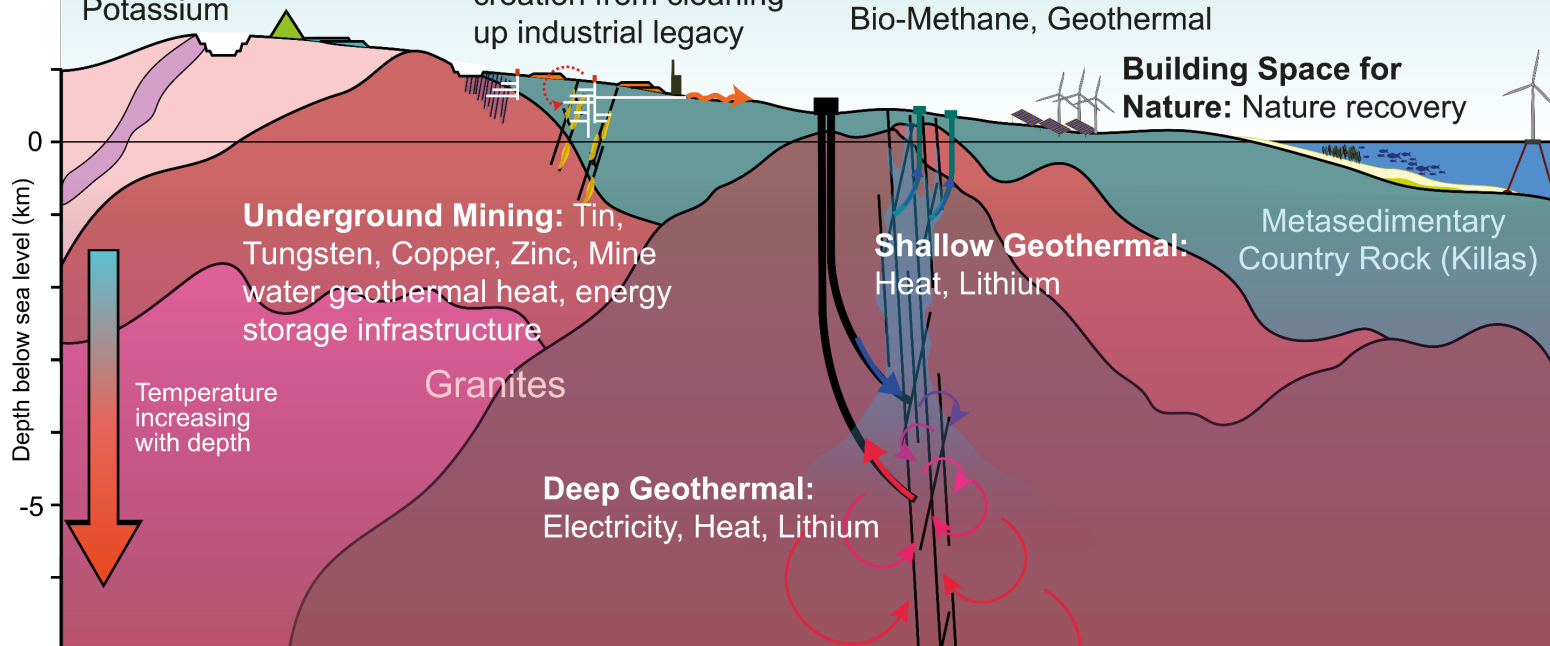
Agri/Aqua-Culture: Sustainable agriculture, aquaculture, and water resourcing practices

Remediation: Value-creation from cleaning up industrial legacy

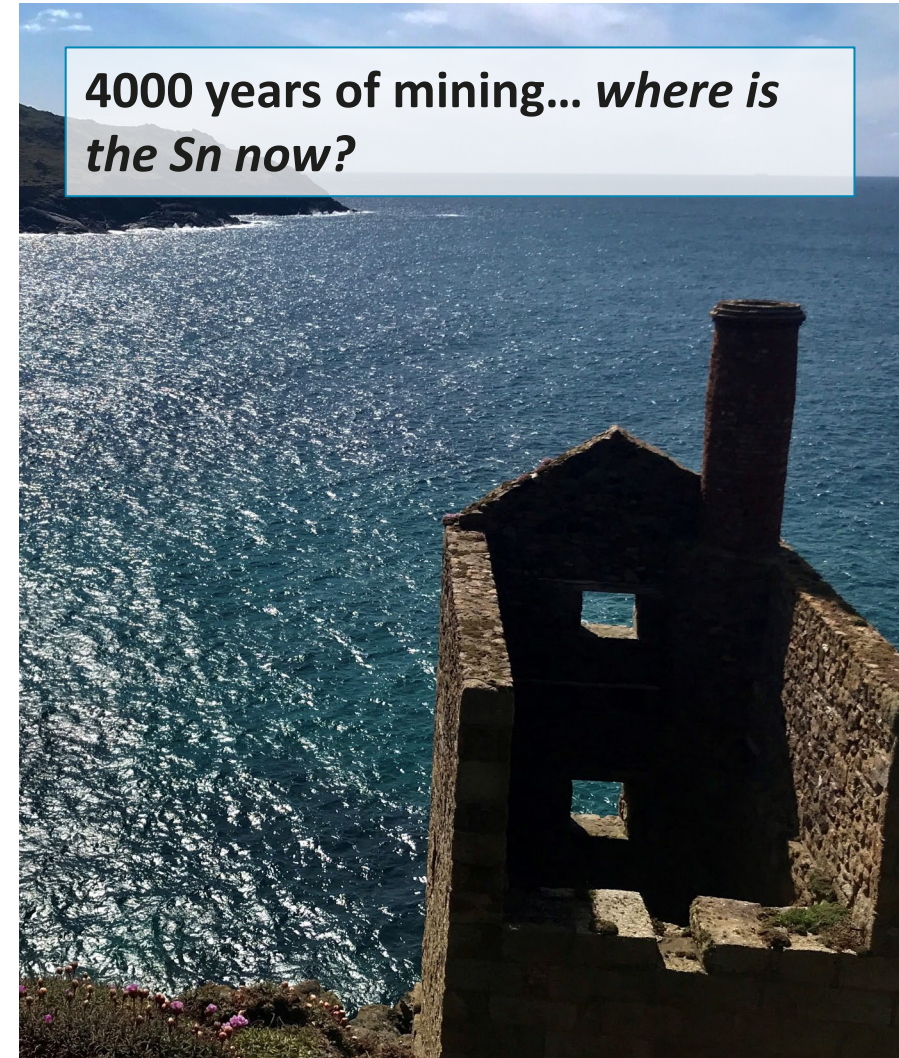
Exceptional Natural Spaces: 250 km Heritage Coast, 167 SSSI, 12 Special Conservation Areas, 498 County Wildlife Sites, 9 Marine Conservation Areas, 20% UK's designated bathing beaches

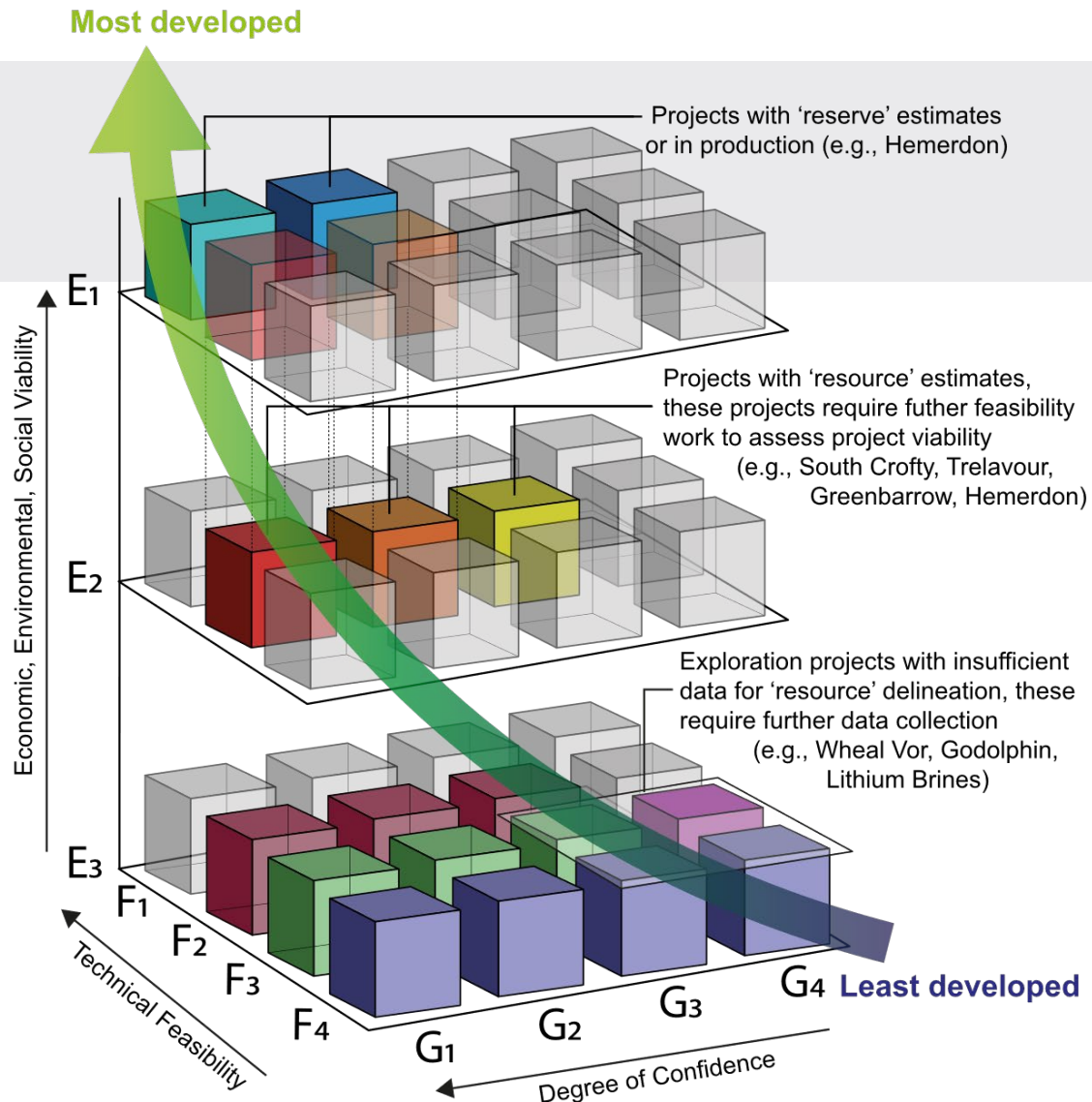
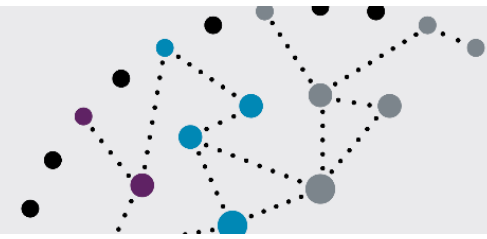
Renewables & Clean Energy: Floating Offshore Wind, Onshore Wind, Solar Photovoltaics, Bio-Methane, Geothermal

Building Space for Nature: Nature recovery



4000 years of mining... where is the Sn now?





United Nations Resource Classification Framework (UNFC)

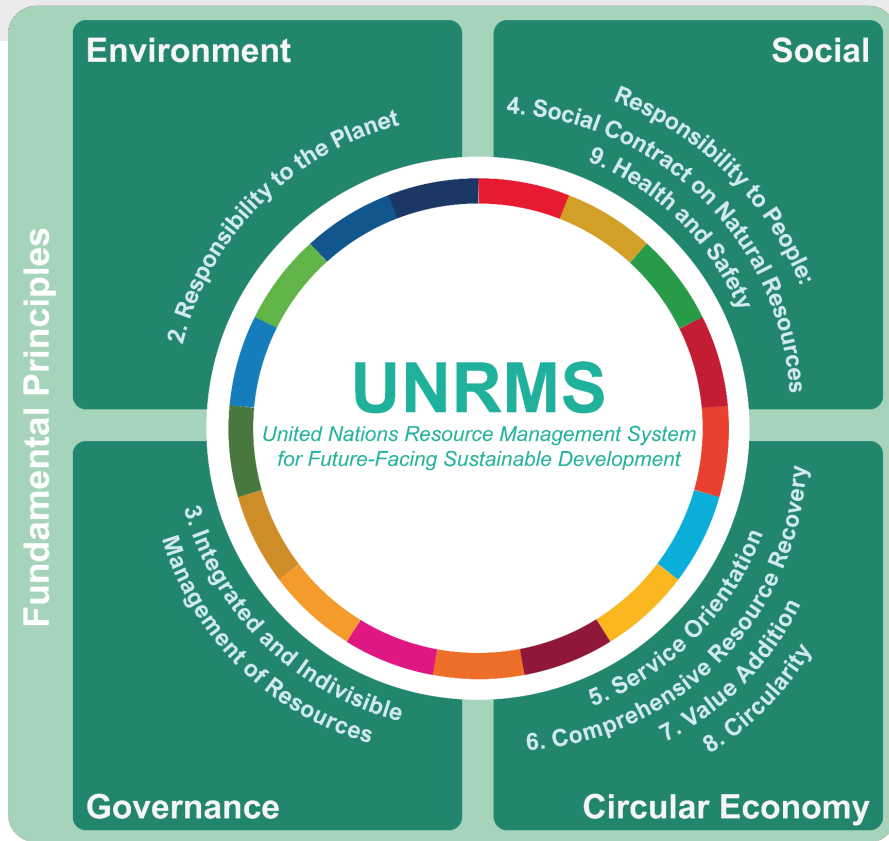
- Proved Reserve
- Probable Reserve
- Measured Resource
- Indicated Resource
- Inferred Resource
- Previously Commercial Projects
- Previously Potentially Commercial Projects
- Exploration Target
- Additional Quantities in Place





Priority Determination

1. State Rights & Responsibilities in the Management of Resources



Articulating the UNRMS

12. Competency & Capability

11. Transparency

Collaboration

10. Innovation

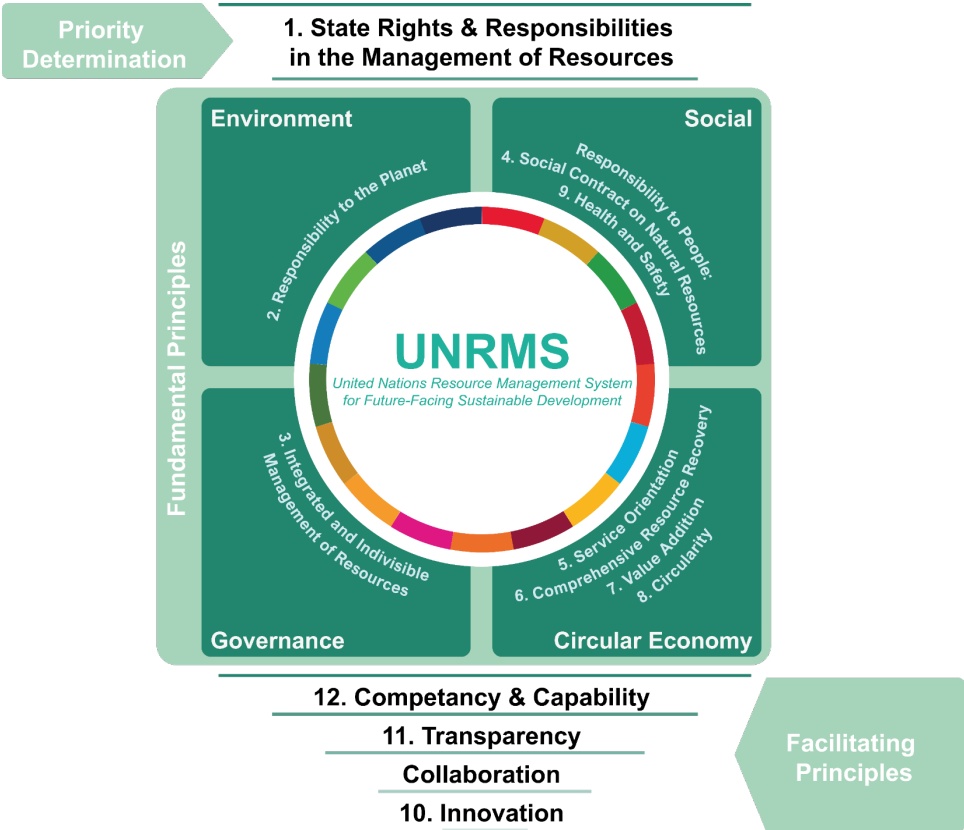
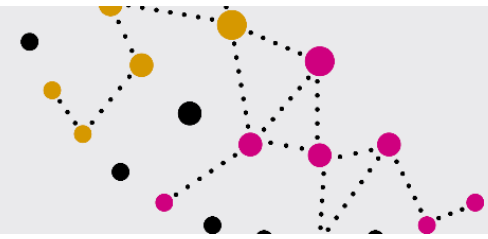
Facilitating Principles



Priority Determination



Cornwall and Isles of Scilly Industrial Strategy Vision: "In 2030 the Cornwall and Isles of Scilly creative and carbon-neutral economy will be realising opportunities for its people, communities and businesses to thrive, benefiting the environment and providing an outstanding quality of life for all."



Top-Down to Bottom-Up Approach

Pump-prime funding; cluster-development; education pathways; enabling good-practice; Best Available Technique (BAT) development; R&D opportunities *etc.*

Facilitating Actions

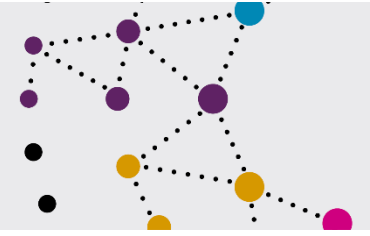




Initial matrix for action development

	Environment Responsibility to the Planet	Social Responsibility to People	Governance Integrated and indivisible resource management	Economy Service orientation and circularity
Innovation	Become a leader in environmentally sustainable resource stewardship through development and adoption of new Best Available Technique's (BAT)	Developing BAT for community engagement. Fostering and enabling innovation through signposting to funds, enabling microbusinesses to develop into SMEs.	Development of BAT for planning and permitting portal for effective, integrated, and strategic resource management	Business models for circularity/service orientation
Transparency	Ensure that both the local (e.g., EIA) and global (e.g., LCA) environmental impacts are assessed during project development - companies with good ESG track records are increasingly attracting investment from responsible/ green financiers but accountability/ transparency is necessary for this to continue.	Decision making, multi-stakeholder groups, NGOs – what are you doing with a region's resources and why? How is this of benefit to populace... Create a positive environment for discussion through development of citizen council/groups.	Collection and analysis of regionally/ nationally important datasets for both pre-competitive datasets, strategic short-, medium- and long-term planning, and ensuring best practice. Develop strategic Environmental Assessment (SEA) for all clusters.	Transparency around business activities, upstream and downstream value chains, to find synergies with other industries/ SMEs etc.
Competency and capability (capacity building)	Systems thinking to ensure that sustainable development and responsible innovation is integrated and implemented in training programs to enable business/best practice development.	Up/Re-Skilling - Building a talent pipeline. Developing projects that meet the requirements of local communities needs for sustainable and equitable living.	Training in systems thinking and capacity building in key planning activities. (Building upon the Cornwall Decision-making Wheel). Infrastructure development necessary for various sectors (e.g., electricity network).	Training in systems thinking and integrated supply chain management In-county accredited laboratories.
Collaboration	Ensure there is collaboration at project/ program/ governance level between environmental stakeholders-companies-council. Undertake regional Strategic Environmental Assessment (SEA).	Ensure there is collaboration at project/program/governance level between societal stakeholders-companies-council.	Ensuring that there is a multi-stakeholder input in decision making and enabling comparison of all resource projects/ programs. Infrastructure planning – linking up sectors.	Networking and development of strategic partnerships , horizontal, and/or vertical integration for supply chain management and critical path tasks.

Observations & Recommendations so far...



- ❖ UNRMS has been useful for developing an integrated set of recommendations for regional activities and coordinating multiple resource projects.
- ❖ ... however, at a first pass the UNRMS can seem quite overwhelming. For articulation to non resource management experts we have:
 1. Developed a simplified diagram to aid articulation;
 2. Done initial streamlining to identify and refine priority principles requiring action at a national level;
 3. Applied a 'top down – bottom up' approach for regional-level mapping of activities to further develop local to regional resource management in accordance with the underlying principles.

Sidenote: UNRMS principles are not directly mapped to SDGs, this could be better highlighted to illustrate the need for UNRMS application in aiding SDG achievement





THANK YOU & QUESTIONS

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