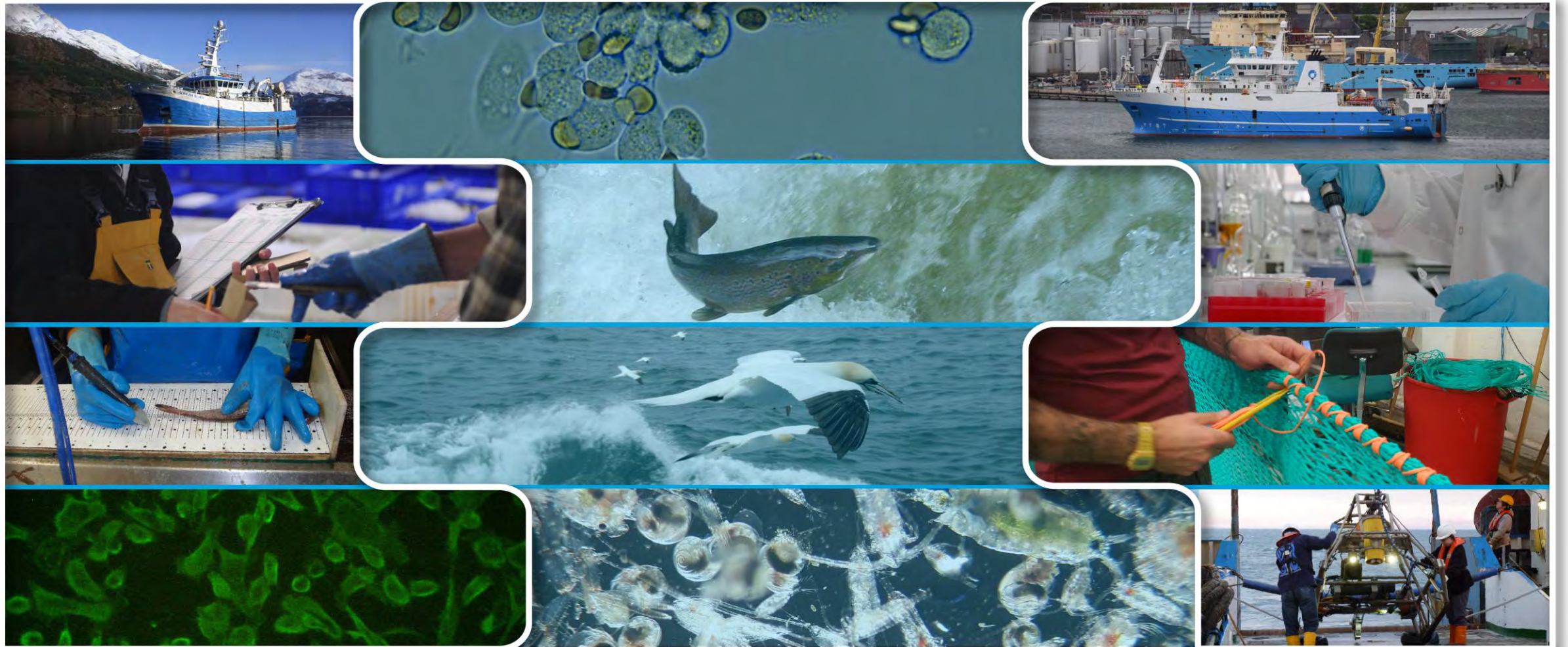
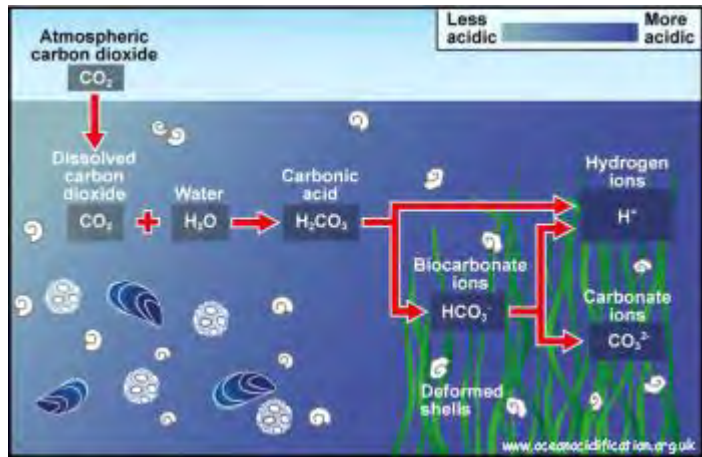


Scottish Government Marine & Freshwater Areas of Research Interests (ARIs)

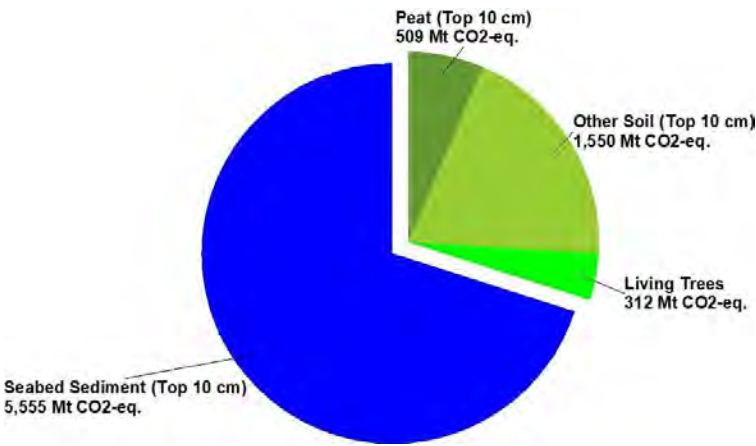


Importance of the Marine Environment in Achieving Net Zero

Ocean Acidification and Warming



Carbon Sequestration

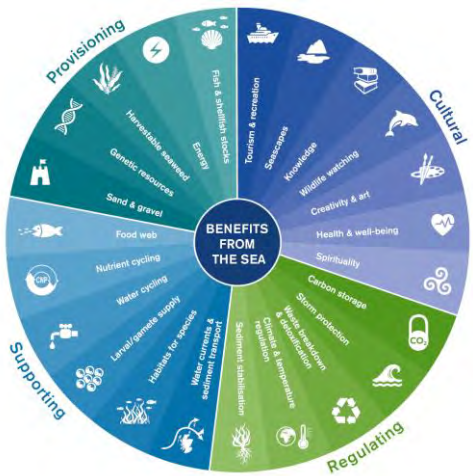


Ecosystem Resilience

Marine Directorate

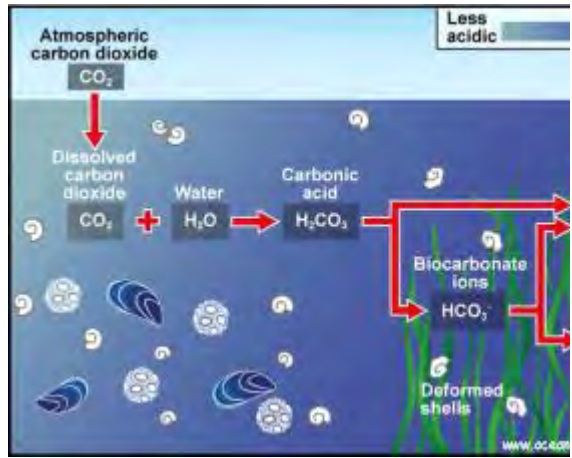


Nature-based solutions and Ecosystem Scale Change

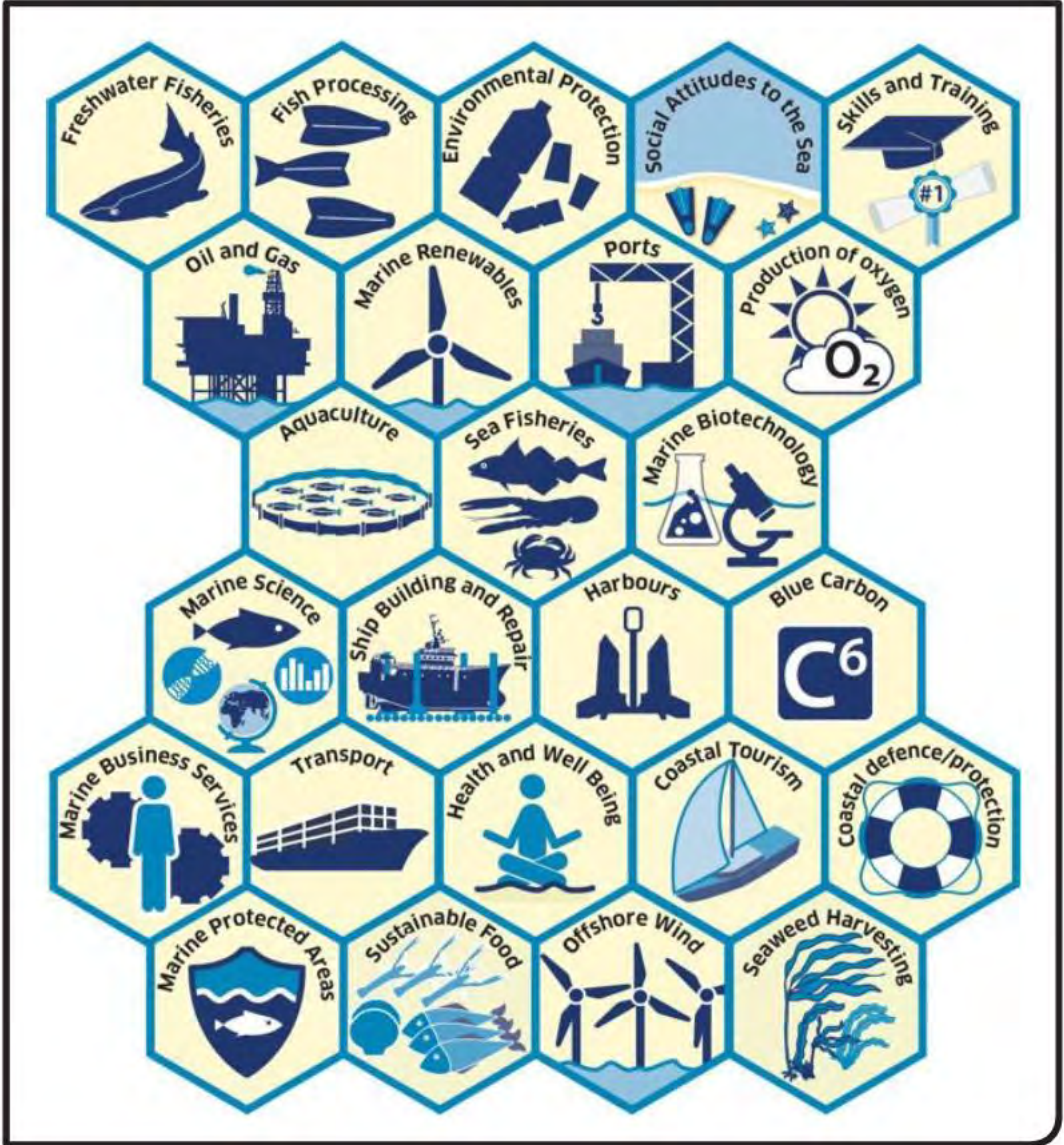
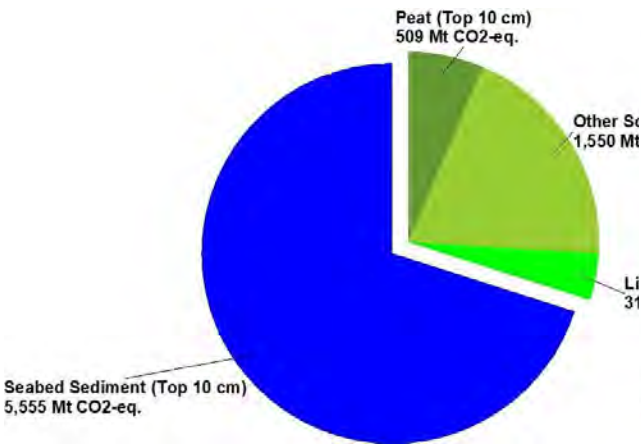


Importance of the Marine Environment in Achieving Net Zero

Ocean Acidification and



Carbon Sequestration



Our

Marine Directorate



Solutions and Change



ARI development

- Identifying policy evidence needs
- Refined through consultation with MASTS, HEIs, ALBs, Freshwater groups
- >100 questions
- >Half are related to climate change and net zero





Background & Framework

- **The Blue Economy Vision**

- Clean, healthy, safe, productive and biologically diverse marine environments
- Meeting long-term needs of nature and people
- Aligned with UK Marine strategy

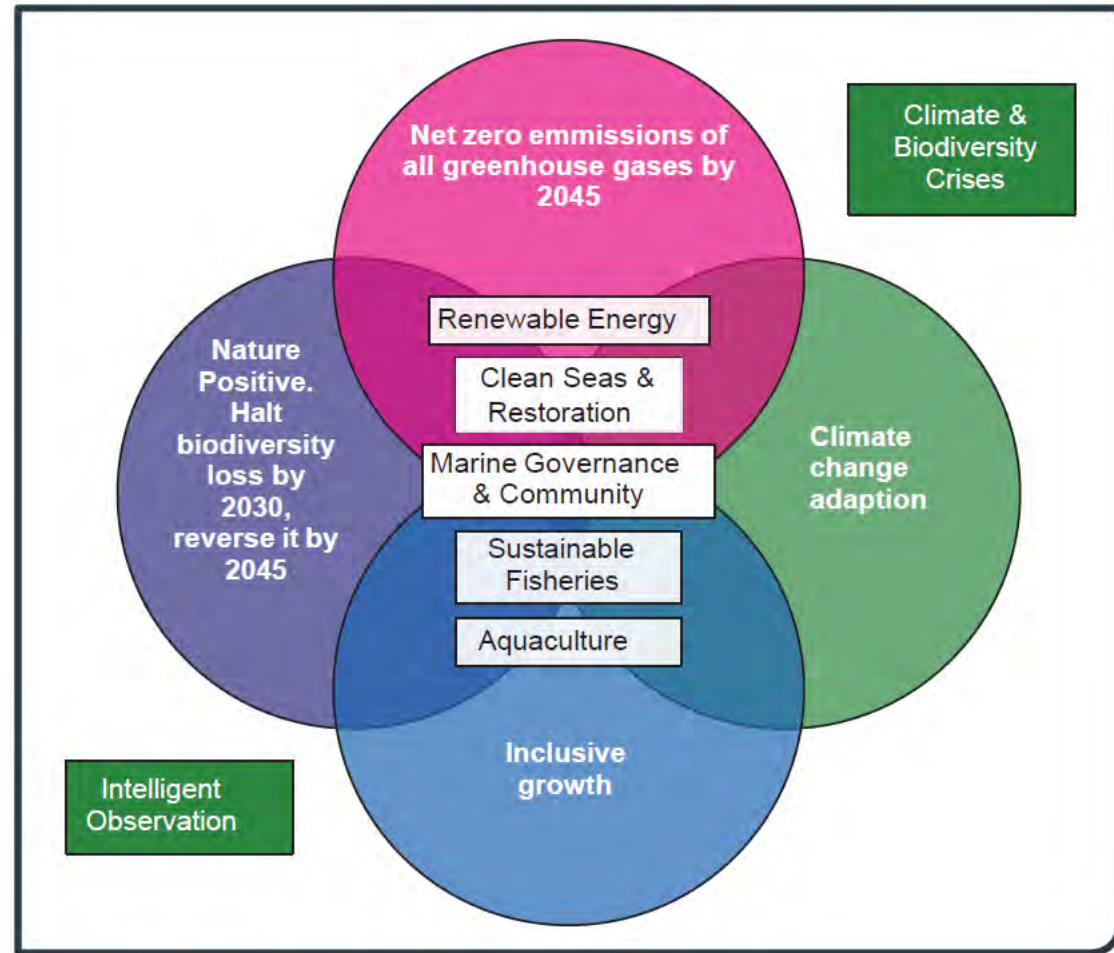
- **Legislative Framework**

- Climate Change (Scotland) Act: Net Zero by 2045
- Marine (Scotland) Act Balancing demands on Scotland's seas.
- Nature Positive: Halt biodiversity loss by 2030, reverse by 2045

Blue Economy Vision	ARI	CEFAS	ICES
Resilience to Climate Change	Climate Change & Biodiversity	Climate Change	Marine Ecosystems Science
Healthy Marine Ecosystems	Clean Seas and Restoration	Ecosystem Resilience Water Quality	Conservation & Restoration Science
Innovative & Competitive Marine Sectors Leadership in Sustainable Blue Foods	Renewable Energy Sustainable Fisheries Aquaculture	Energy Transition Aquatic Food Supply	Impacts of Human Activities Food From the Sea
Equal Access to Ocean Benefits	Marine Governance & Community	One Health	Sea & Society
Ocean Literacy and Awareness	Intelligent Observation	System Monitoring	Observation & Exploration of the Seas & Oceans Emerging Techniques & Technologies

Seven ARI themes span the science evidence needs of the **Marine and Offshore Wind Directorates** and **Scottish Government agencies**.

- Climate & Biodiversity Crises
- Clean Seas & Restoration
- Renewable Energy
- Sustainable Fisheries
- Aquaculture
- Marine Governance & Restoration
- Intelligent Observations





Theme 1. Climate & Biodiversity Crises

- 1.1 Ocean Change
- 1.2 Carbon Sequestration
- 1.3 Ecosystem Resilience
- 1.4 Nature-based solutions & Ecosystem Scale Change

Theme 2. Clean Seas & Restoration

- 2.1 Marine Use Impacts
- 2.2 Cumulative Stressors
- 2.3 Marine Pollution
- 2.4 Enhancement and Transformation

Theme 3. Renewable Energy

- 3.1 Assessing and managing Impact
- 3.2 Environmental Monitoring
- 3.3 Industry Integration
- 3.4 Environmental enhancement

Theme 4. Sustainable Fisheries

- 4.1 Marine Fisheries
- 4.2 Freshwater Fisheries
- 4.3 Socio-economic and Interaction Management

Theme 5. Aquaculture

- 5.1 Environmental Monitoring
- 5.2 Aquaculture Production, Fish Health and welfare
- 5.3 Industry-Environment Interactions
- 5.4 Ecosystem and Community Enhancement

Theme 6. Marine Governance

- 6.1 Marine Protected Areas
- 6.2 Stakeholder Integration
- 6.3 Policy Design and Implementation
- 6.4 Systemic Change

Theme 7. Intelligent Observations

- 7.1 New Technologies
- 7.2 Enduring Data Integration
- 7.3 Transformation Monitoring

Further Information

ARI Marine & Freshwater available at:

<https://www.gov.scot/publications/areas-research-interest-marine-freshwater>

Short url: <https://tinyurl.com/2knbphtj>

Email ARMarineFW@gov.scot

