Workshop report from Structures in the Marine Environment 2025:

Desired decommissioning outcomes in the North Sea

INSITE

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1 Executive summary

A cross-sector workshop session was held at the Structures In the Marine Environment (SIME) conference at the National Museums of Scotland, Edinburgh, on 24 June 2025. A diverse group of participants came together from the academic, offshore industry, consultancy, government and non-government organisation sectors to share viewpoints on **how to decommission Marine Artificial Structures in the North Sea in ways that are environmentally responsible, economically viable, and socially just**.

This report captures viewpoints from across the sectors, highlighting the similarities and dissimilarities of participants' most desired environmental, economic and social outcomes for the decommissioning of Marine Artificial Structures.

The interdisciplinary discussions revealed broad agreement that decommissioning of Marine Artificial Structures, focusing on both oil and gas and offshore wind structures, should no longer be considered according to technical feasibility or regulatory compliance alone, but rather as a multi-dimensional opportunity to shape the future of the marine environment and those that depend most on it.

The findings from the workshops reveal overlapping priorities across environment, economy and society. In the environment session, the most discussed idea and shared priority across all sectors was shifting from damage control toward actively restoring and enhancing ecosystems, **adopting a "nature positive" approach to decommissioning** that goes beyond mitigation to one that delivers measurable ecological improvements. In the economy session, the focus was on **delivering better value for money** by minimising taxpayer and operator costs while still **achieving environmental benefits**. Sectors thought better connections to upfront planning, avoiding future liabilities and re-investing savings into community and environmental gains are needed. Discussion in the society session emphasised **making decommissioning more inclusive and transparent** by involving all voices, particularly marginalised groups and future generations in decision-making, with a focus on broad stakeholder engagement that underpinned many other societal priorities.

The top cross-cutting priority across all three themes, environment, economy and society, was ensuring **decommissioning delivers long-term, positive outcomes for both people and nature while avoiding future burdens**, to be achieved through inclusive decision-making, site-specific approaches and circular economy practices that maximise re-use and recycling. This overarching idea can integrate environmental restoration, economic value for money, and societal benefit into a single, shared vision.

2 Introduction

The Structures In the Marine Environment conference (SIME) is the UK-based annual science conference of the INSITE Programme[1]. Now in its seventh consecutive year, SIME brings together a specialist community of academic researchers, industry professionals, and representatives from governmental and non-governmental organisations to share and discuss their latest challenges and research findings surrounding Marine Artificial Structures (MAS). The conference serves as a platform for sharing the latest research on reef effects, food webs, connectivity between MAS, and decommissioning strategies.

SIME 2025 took place over two days, 23–24 June, with sessions focused on six key themes:

1. Social Attitudes towards MAS
2. Long-term effects of contaminants in sediments
3. Estimating biomass associated with MAS
4. Monitoring, Evidence and Innovation Surrounding MAS and Decommissioning
5. Can ecological values of MAS be considered for biodiversity conservation?
6. How can we best decommission our MAS?

An interactive workshop session was organised for SIME 2025 following the conference sessions on the second day, which was designed to capture the emerging reflections of conference attendees. The purpose of the workshop was to **identify decommissioning outcomes for Marine Artificial Structures that are desirable for the environment, economy, and society**. A diverse group of participants from different sectors took part, ensuring a broad range of perspectives.

The anonymised results of that workshop are presented in this report: a compiled list of the decommissioning outcomes considered most desirable by participants at SIME 2025, reflecting their varied backgrounds and expertise.

3 Workshop method

The two-hour workshop was structured to facilitate focused discussions and collaborative identification of key priorities across different stakeholder groups, with a total of 55 participants attending. Participants were pre-assigned to tables representing these four stakeholder groupings:

- Operators and developers of offshore industries (~10)
- Academia and research institutes (~20)
- Government / Non-Government Organisations (NGOs) (~10)
- Consultancies and Industry services (~15)

The workshop was structured around three themes to identify the preferred outcomes for decommissioning Marine Artificial Structures (MAS) from an environmental, economic and societal perspective. Before any group-work started, participants were asked to write down

[1] https://insitenorthsea.org/

one desired outcome for each of the three themes on separate post-it notes. Each of the 55 participants did this individually without discussion.

The workshop was conducted in three sequential rounds of discussion, each focused on one of the core themes: the preferred environmental, economic and social outcomes of decommissioning. This thematic progression allowed participants to explore the complexities of decommissioning from multiple angles and to consider inter-dependencies across the three domains. The first session was on environmental outcomes, followed by sessions on societal and economic outcomes, each lasting 30 minutes. During each session, facilitators recorded group discussion points and helped the group to identify the most important priorities. Each session concluded with a plenary summary from each table, where facilitators shared their group's top priorities and reflected on commonalities or differences across sectors.

The workshop concluded with a brief reflection and discussion of next steps. The primary outputs include a compiled list of the participants preferred decommissioning outcomes by sector and theme (environmental, economic and societal), forming a foundation for future synthesis. Key findings are presented in this report (Section 4), with raw notes from each session and group presented as appendices (Section 6).

4 Key findings: Desired decommissioning outcomes

Across the environment, economy and society discussions, participants consistently emphasised the need for decommissioning approaches that deliver lasting environmental benefits, economic value, and positive societal outcomes.

Common priorities included **adopting inclusive, transparent decision-making processes** that engage all stakeholders, particularly marginalised groups and future generations; applying **site-specific assessments to balance ecological protection with practical and financial considerations**; and **integrating circular economy principles** to maximise re-use, recycling, and sustainability. **Minimising environmental impacts**, ensuring **robust monitoring**, and **avoiding the transfer of costs or liabilities** to future generations were widely supported.

Participants also highlighted opportunities for decommissioning to **drive innovation, create jobs, strengthen community and cultural connections to the sea**, and **support new uses for marine infrastructure** such as conservation, tourism, and research, underpinned by sustainable funding models and mixed public–private approaches that align asset use with ecosystem health.

4.1 Environmental outcomes

Discussions in the environment theme highlighted shared priorities of moving beyond damage control toward actively restoring and enhancing ecosystems. The majority of participants agreed on the value of site-specific assessments over blanket removal rules, with operators and researchers emphasising the need to minimise disruption, noise, emissions, and contamination during decommissioning. Government bodies, NGOs and consultancies stressed the importance of recycling and reusing materials, components and structures,

alongside implementing robust monitoring to verify outcomes and enable adaptive management. Operators, government and NGO stakeholders highlighted the potential of adopting new tools, such as Other Effective Conservation Measures (OECMs), alongside a shift from traditional Comparative Assessments toward Net Environmental Benefit Analysis approaches.

Cross-cutting priorities (across all stakeholder groups):

- **'Nature positive' approach to achieve healthy ecosystems**: All commented on moving beyond damage control to actively restoring or enhancing ecosystems.
- **Case-by-case flexibility**: Strong agreement emerged for site-specific assessments rather than blanket removal rules.
- **Minimising impact**: Operators and academia stated the need for reducing disruption, noise, emissions and contaminants during decommissioning.
- **Recycling/ re-use of materials:** Government, NGOs and consultancies documented that re-using materials, components and even structures was important.
- **Monitoring**: Government, NGOs and consultancies called for robust monitoring to validate outcomes and adaptive management over time.
- **Management**: Concepts like 'Other Effective Conservation Measures' (OECMs), biodiversity net gain and ecosystem function were mentioned as well as movements towards Net Environmental Benefit Analysis approaches rather than Comparative Assessments.

Sector-specific Ideas:

- **Industry:** Support for changing OSPAR 98/3; integrate Net Environmental Benefit Analysis (NEBA) approaches instead of Comparative Assessment (CA).
- **Academia:** Emphasis on defining "ecosystem baselines," futureproofing for climate change, and minimising loss of newly established habitats.
- **Government/NGOs**: Called for standardisation of approaches, re-use incentives and better alignment of decommissioning approaches with national environmental restoration goals.
- **Consultancy/Industry services:** Urged measurable environmental assessments and the use of offshore MAS as conservation tools where appropriate.

Further detail in Appendix 6.1 Environment session – Workshop notes.

4.2 Economic outcomes

Discussions revealed some shared priorities across sectors. Workshop participants emphasised delivering value for money by minimising taxpayer and operator costs while ensuring environmental benefits, making re-use, recycling and sustainability more economically attractive, and avoiding the transfer of costs to future generations through upfront planning and liability provisioning.

There was a strong focus on sustainable funding models, circular economy practices and maximising recycling where costs are equal to or better than using virgin materials. Many stressed the need for upfront planning and secure funds to avoid passing liabilities to future generations, with calls for benefits to be shared fairly, including with developing nations. Ideas included using decommissioning savings for environmental restoration, local community benefits and long-term monitoring, as well as integrating cost-effective nature-positive measures into project financing.

Some participants highlighted the potential for new economic opportunities such as aquaculture, tourism and local job creation, while others noted the value of basin-wide collaboration, shared infrastructure and fair use of marine resources. Across sectors, there was support for mixed public–private models that align asset use with ecosystem protection, policies that don't deter sustainable projects, and improved quantification of environmental and societal returns to guide decision-making.

Cross-cutting priorities (across all stakeholder groups):

- **Value for money**: All stakeholder groups mentioned priorities around minimising taxpayer/operator costs while still delivering environmental benefits.
- **Recycling**: Academia and consultancies emphasised the need for making re-use, recycling and sustainability more economically attractive.
- **Moral responsibility**: Most groups stated wanting to avoid passing costs to future generations with calls for upfront planning and provisioning for decommissioning liabilities being made.
- **New economic opportunities**: Jobs, innovation, aquaculture and even tourism potential in re-used sites were priorities for academia, government, NGOs and consultancies.

Sector-specific ideas:

- **Industry:** Suggested economic models that blend private and public benefit, as well as the need to link decommissioning design to financing.
- **Academia:** Supported a "just" economic distribution, re-use to support local economies, and basin-wide shared approaches.
- **Government/NGOs:** Emphasised that cost savings should be returned to society, potentially using decommissioning cost savings to fund nature restoration.
- **Consultancy:** Advocated for life cycle thinking, realistic liability planning and policies that don't penalise sustainable projects.

Further detail in Appendix 6.2 Economy session – Workshop notes.

4.3 Societal outcomes

The session identified strong consensus on making decommissioning more inclusive, transparent and beneficial to society, with participants emphasising the need to involve all voices, particularly marginalised and future generations, while improving public visibility of marine issues and the trade-offs involved.

Participants called for decommissioning to leave a positive legacy through clean seas, sustained livelihoods, job creation and minimal future burdens, supported by interactive education, citizen science and stronger cultural connections to the sea. Sector perspectives varied, with ideas ranging from integrating recycling and circular economy skills to repurposing sites for conservation, tourism, or research purposes, to developing shared sustainability funds, measuring "society net gain" and ensuring a just transition for affected communities such as fishers.

Operators and developers highlighted the importance of linking offshore wind and oil and gas infrastructure approaches, as well as learning from other industries experiences of decommissioning, such as from the steel or coal industries.

Cross-cutting priorities (across all stakeholder groups):

- **Inclusivity in decision-making**: Stakeholder involvement, particularly marginalised voices, was a priority raised among academia, government, NGO and consultancy participants.
- **Engagement and awareness**: Discussions around improved visibility of marine issues and decommissioning decisions were shared across all sector groups.
- **Connection**: Operators, government, NGOs and consultancy participants emphasised the improvement of cultural, health and heritage value of marine spaces as important.
- **Long-term societal benefit and sustainability**: Emphasis on legacy was mentioned across the majority of sectors participating, specifically relating to clean seas, job creation and minimal future burdens. All sectors shared views that decommissioning should support livelihoods, communities and marine users, particularly those reliant on the sea, such as fishing and coastal communities.

Sector-specific ideas:

- **Industry:** Concerned with making environmental and social impacts more "visible" to communities and investors.
- **Academia:** Proposed inclusive governance, active community engagement and development of new metrics for social impact.
- **Government/NGOs:** Emphasised inter-generational fairness, connection to sea and better communicating trade-offs to the public.
- **Consultancy:** Framed decommissioning as an enabler of the energy transition and rural/economic regeneration. Questions were raised about future space-sharing with fishers and other users.

Further detail in Appendix 6.3 Society session – Workshop notes.

5 Conclusion

This report summarises the findings of a cross-sector workshop held at the SIME conference in Edinburgh, June 2025, in which 55 participants from different sectors were invited to share perspectives and discuss approaches to responsibly decommission offshore MAS in the North Sea. Over two hours, participants engaged in lively discussions that highlighted several valuable insights, as well as a striking degree of common ground among participants from industry, government, NGOs and academia.

Participants agreed that decommissioning should be seen not only as a technical or regulatory process, but also as a critical opportunity to influence the future of the marine environment and coastal communities. They emphasised the need for future decommissioning to adopt more 'nature-positive' approaches, supported by investment in cost-effective planning that minimises future liabilities. Participants also highlighted the importance of improving communication around decommissioning challenges with a wide range of stakeholders, helping to support more transparent and inclusive decision-making.

It is important to note that the perspectives captured in this workshop report reflect the contributions of a cross-section of sectoral participants, rather than the outcome of a wider, dedicated body of research intended to guide decommissioning policy. The findings should be interpreted as coming out of a 'snapshot in time', shaped by discussions immediately following a stimulating series of talks at the SIME conference. As such, they are best viewed as indicative themes and priority areas for further exploration in the pursuit of optimal decommissioning approaches. Importantly, they also help to chart a course toward a shared, long-term vision that brings together ecological restoration, economic value, and social justice in the decommissioning of marine artificial structures.

6 Appendices

6.1 Environment session – Workshop notes

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
Priorities identified	Minimise impact Account for positive effects Align regulation + assessment → build in flexibility / use existing instruments + policy foundation Deliver against national/regional vision	None stated	Net positive (ecologically & materially) Self-sustaining resilient ecosystem Monitoring: no knowledge of success without it	None stated

Nature-positive / Resilience	Account for the positives & future use (include in assessment & feed into vision)	Enhanced biodiversity (across species)	Habitat restoration, population support / increase, biodiversity increased	Ecosystem level Nature Positive outcomes are realised post decommissioning.
	Nature-positive - No significant residual environmental risks = Some form of nature positive gain. Existing habitat / species = putting species first	Long term predictable negligible or positive impact	Nature positive / functional ecosystem	N/A
	Nature-positive - Maximise ecosystem services while minimising environmental liabilities. Baseline with shift due to cumulative pressures → so this must be considered more	Marine Net Gain (MNG) / nature positive to be at ecosystem level	Restoration / increased biodiversity	
	Nature Positive - Better alignment nature recovery (e.g. Marine biodiversity benefits) and decommissioning	Ecosystem benefits / attributes maintenance on existing infrastructure	Functioning ecosystem (improved)	

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
	Nature Positive - Undertake decommissioning in the most environmentally friendly way. Reducing the environmental impact as much as possible whilst being able to retain the environmental positives created. Being able to count those positives towards all overarching goal/vision/compensation/net gain	Future context… Marine Net Gain. Important!		
		Improved marine habitats		
		Enhanced, ecosystem services (carbon storage, tourism, water quality)		
Healthy environment	Net zero balanced MAS decom projects and solutions that assist Flora and fauna in climate adaptation and biodiversity recovery	Maintain or improve ecosystem function and protect biodiversity	Self-sustaining and resilient ecosystems	Important especially for fishing - Remove artificial structures, if we do not our waters will become overloaded with the number of structures which will affect fishing, transport and navigation
		Maintain as much of the ecosystem that existed around the structure prior to decommissioning	Minimising habitat and species loss	
		Healthy and functioning marine ecosystems	Minimal loss of 'established' or created habitat and species associated with MAS	
		Moving past looking at the baseline and focusing on future distribution changes with climate change. To ensure environment is reverted to a resilient system with ecosystem services and keystone species at the forefront.	Re-use/protection of ecological values that contribute to North Sea ecosystem restoration	
		Protect biodiversity, functioning ecosystems, future-proof oceans (coastal protection, climate resilience etc). Environmental justice.		
Monitoring	N/A	N/A	Sites should be well monitored	Measurable assessments (and monitoring). A way to quantify

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
				(biomass/biodiversity, species importance, habitat) and a threshold of acceptable
			Desired outcomes: self-sustaining, resilient, well monitored (gets missed!) healthy environment	Ecological value - Helping operators understand what has colonised and grown on their assets and structures –
			Management and monitoring to know if what we are doing is effective	Science-based environment assessment to select the best decommissioning option
			Baselines (politics)	
Recycling/ Re-use	N/A	N/A	Recycling of materials – net reduction of environmental impacts	Circular, processes, re-use / refurbish - Max level of circularity achieved
			Incentivising offshore wind component re-use. Repowering not replacement. Standard sizes of OW turbines.	
			Incentivising components to be re-used	
			Recycling of materials where this leads to a net-reduction of environmental impact	
			Maximised re-use of assets / materials where all stakeholders have embraced circular economy (for econ, env. and society)	
Definitions	What is good for biodiversity? Important to consider this	Need to understand 'desired' / baselines (step 1)	Definitions - Standardisation	try to determine ecological value – inform their internal decision making.
	The right opportunity / forum for the key messaging on environmental	(Step 2) what are the desired outcomes and where to start?		Leave environment in a better state than we found it or in a better

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
	impact to be conveyed and highlighted and tally understood by decision makers	Clarity on definitions – ecosystem functioning baseline		condition… but what does better mean? Clarity on definitions. Baselines?
		Spatial scale of 'enhanced biodiversity' - which organisms are included?		
Minimise impacts of decommissioning	Minimise impact including Net Zero	Reduction in contaminants (e.g. plastic, heavy metals)	N/A	N/A
		Remove contaminants, leave structure in place, maintain / enhance exclusion zone		
		Minimal disruption / disturbance to the existing environment / ecosystem		
		Decommissioning should lead to not compromising the natural development/restoration of the local marine environment		
		Minimal disturbance to newly established community (only where establishment has occurred)		
		Free from risk of hydrocarbon contamination		
		Minimum disruptions on the local ecosystems. No damage inflicted physically / chemically / biologically etc.		
Case by case decommissioning	N/A	Sustainable development of OWFs + decom of O&G using case by case approach	Priorities dependent on location and environmental goals	Case-by-case assessments of the ecological value of MAS and potentially deliberate use for conservation.

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
		Balance based on robust science that removes the risk of harm as much as is possible while maintaining ecosystem benefits – removal of as much as is needed for that		Bespoke case by case decision which moves that location or area towards target condition
Management	The ability to assess the existing habitats on our structures	N/A	Opportunity for Other Effective Conservation Measures (OECMs)?	N/A
	Influence / change OSPAR 98/3 to allow consideration of INSITE findings			
	Use NEBA (Net Environmental Benefit Analysis) rather than Comparative Assessment			
	Additional OECMs at the decommissioned fields, possibly added to the existing MPAs			
	Use NEBA (Net Environmental Benefit Analysis) rather than Comparative Assessment - Build on improving coordination between OW & O&G sectors			

6.2 Economy session – Workshop notes

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
Priorities identified	None stated	• Sustainable funding • Circular economy and recycling - Justice (distribution of benefits to developing nations) • Security funds	• Understand where the cost savings go • Reduce taxpayer burden and customer cost	None stated

Value for money and benefit for nature	A decom (removal cost) could be better spent.	Shared decom (fund)	Cost-effective	Safe spaces for species may lead to spillover and allow for healthier marine stock populations i.e. for fisheries
	How do you offset financial liabilities for OW (tax vs project position)	Best value for the taxpayer	Value for taxpayer	
	Being able to factor in cheaper way of doing decommissioning and increasing nature positive would be good for Project financing.	Reduced decom cost with savings used for environmental and societal benefit (from savings)	Where circular economy practices are cost equal or better than virgin material from original equipment / manufacturing, so we maximise value from assets	
	Undertake decommissioning as cost effectively as possible and have certainty about this at the start of the project	Decision making and reducing maintenance costs - Reduce maintenance cost	Can we pass savings back to community / customer?	
	Mixed private and public economic models that marry asset use and ecosystem protection, justly.		Minimum taxpayer burden	
	In the long term, increased fish stocks. Short term, less cost decommissioning to the taxpayer's money into the marine		Savings from reducing cost of full removal to cost of partial removal passed back to taxpayer / local communities	

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
	foundation to fund research and long-term monitoring			
	Most effective environmental benefit at lowest cost (maximise env. benefit / cost)		Investment in energy efficiency	
	Optimise decommissioning costs (to reduce liability of operator / taxpayer) whilst meeting environment and economic objectives			
Investment and future look	A longer-term view of decommissioning costs for offshore wind	Better decision making	Future delivery of renewables	Plan for an end state and get the site intervention right first time
	Economic cost decreasing (in situ = cost removal decreasing) (removal = facilitate circularity)		Economic growth and investment cycles	Realistic decom expectations and liabilities that don't discourage investment in projects in the first place
	Cost of future decommissioning could kill a project (OW)		Growth and investment cycles	In-situ option / policy will affect Contract For Difference (CfD) bid prices – developers must factor in decom costs (Decom costs included if needed)
				Legacy considerations/ removability factored in - A prioritisation of removability in design / planning of MAS
Finance for nature	N/A	N/A	Funding for nature restoration measures	N/A
			Nature positive	

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
Socio and economic stability	N/A	Supports UK and overseas jobs	Steady flow of employment	Planned transition for communities, supply chain, jobs (e.g. RAMPION)
		Basin operations costed and paid upfront i.e. operational construction and decommissioning	"stability"	
			Renewables are stable in costs and delivery	
Equal use	N/A	Share resource across the basin	Fair and equal use of resources	Ensure that all sectors can sustainably benefit financially, not financial gain to the point of irreversible environmental degradation
		Co-location with our industry (maximise positives)	Fair and equal use of seabed and for generations	
		Opportunities to decom across countries to share resources		
		Reintroduction of fishing industry		
Sustainable economy	N/A	Sustainable decommissioning	Transition to sustainable economy	N/A
		Establishment of funds from (super) profits derived from use of shared resources to support long term sustainability		
		Funds public shared resources from projects to support outcomes		
Recycling	N/A	Maximum recycling of resources	N/A	Enable re-use of decommissioned seabed areas
		Fully recyclable structures (including re-use)		
		Find adequate infrastructure for recycling of recovered material		
		Recycling - of materials to reduce costs and reintroduction of fishing industry		

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
Quantification and new monitoring methods	Ability to quantify cost / economic impact of environmental policy decisions and have that factored into Comparative Assessments / NEBA for decision making	Long term effective monitoring includes Machine learning model to predict the behaviour	N/A	N/A
	How do you monetise decommissioning?	Natural capital used in comparative assessments		
	How much nature do we get per £ - how do we optimise this? cost effectiveness.	Accounting of ecosystem services (ES) and value of ES into Environmental Impact Assessments (EIAs)s / decommissioning		
Moral responsibility	N/A	No passing costs on to future generations	be good ancestors	Provide for future costs at the time of decom i.e. don't pass to future generations
Benefits	N/A	Local economic benefits / economic distributive justice	N/A	More positive effects should be felt at "household" level
		Cost benefits to society (and developers)		New industry benefits (aquaculture) - Alternative fishing opportunities (mussel harvesting)
		Equitable and distributed benefit (Benefits – keep spend / fund in country)		

6.3 Society session – Workshop notes

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
Priorities identified	• Interlinking between Offshore Wind and Oil and Gas operations and assets. Note: Effects are multifaceted which makes reaching consensus hard.	• Inclusivity important • Interactive education and communication • Societal benefits (social and natural capital)	• Effective communication • More connection with issues and society	None stated

Transparency	It's all invisible – how do we make it visible? Communities and societies built on MAS?	Communicated and just action	N/A	Population is brought along the journey to a mix of local / zonal end points appropriate to locations
	A balanced view of the cost and benefits of decommissioning			
Raising awareness	A better understanding – better informed science	An aware, engaged, cooperative society e.g. participate in citizen science	Public stakeholder understanding of the trade-offs and cost-benefit of different decommissioning options	Less niche common goods - Attenborough documentary on nature on artificial structures in marine environment
		Promote understanding of issues around decommissioning contextualize scale with other activities	Improve awareness / understanding of nature but also, trade-offs of decommissioning options	
		Informed understanding of society of the risk and benefits to enable support for the decisions or reasonable challenge	Improved understanding and appreciation for nature / natural resources	
			Decommissioning opportunities to show underwater live streams / videos of structures	
Creating connection with MAS	Have society understand / see the potential value in monitoring	N/A	Improved connection with sea 'value of the sea'	Heritage preserved in communities (fishing) - If we

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
	MAS – from a biodiversity perspective.		Further offshore you go the less connection	do not remove MAS then this will provide less space for fishermen which in turn will degrade our cultural connection with the sea and maritime heritage
			Connection to a stable environment where jobs and space are maintained	
			Connection to the marine area	
			Improved sense of connection and ownership in real time. North Sea nature	
			Community project funds	
Moral responsibility	N/A	The final decommissioning option will have considered people (jobs / users of the sea)	Moral responsibility of operators	N/A
			What message are we sending next generation?	
Inclusivity	N/A	Just /equitable opportunities for input into decisions	Making sure all voices can be heard / considered e.g. younger generations who will feel the cost /benefit	Listen to local communities and other marine users. How can we measure 'society net gain'? think of jobs, supply chain, taxes generated
		Takes into account all stakeholders views	Making sure ALL voices are heard	Inclusion and long-term vision of all voices for marine space planning
		Just /equitable sharing of decision making and power	Sea as legal entity?	
		Include in decision making		
		Society should have active involvement in the discussion		

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
Opportunities and innovation	Decommissioning interlinked with other operational phases.	Maximise ecosystem benefits e.g., carbon sequestration	Recycling and Circular economy in skills + training development and jobs potential as value in material is extended	If, after operations end, sites can become OECMs more protected areas in the sea = If refugia? - Opportunities for tourism and research
		Engineering should have: ○ Regulation ○ fully understand mechanism ○ explicit laws ○ standard procedure ○ fill up regulation aspects	Decommissioning activity can stimulate innovation e.g. rescuing critical minerals from drill cutting piles.	Local opportunities for the value chain.
			Maximised and diversified supply chains embraced	Decommissioning as an enabler in energy transition - Local opportunities for value chain
				Decommissioning as an enabler in energy transition - Use decom as a 'bridge' or 'enabler' for jobs etc… through the energy transition and future jobs.
Sustainability and the future	Long term, sustainable just transition in marine activity and employment	Society is the future	Less burden on taxpayer	N/A
	Nature recovery. Positive impact on society e.g. tourism, health	Does not prevent future use of seabed or healthy environment	Livelihoods	
	Healthy accessible marine environment	No future problems	Better at waste management	
	More resilient, healthy, ecosystem supporting and promoting biodiversity at sea and in coastal areas	Green House Gas emission reduction or at least minimisation of impacts from removal	Achieve "a just transition"	
	Ability to see re-use or repurposing opportunities that reduce waste and have	Reduction of greenhouse gas emissions	Sustainable use of marine area	

Stakeholder Group	Developers and Operators	Academia	Govt. / NGO	Consultancy and Industry Services
	ecological benefit and demonstrate CSR			
	Undertake decommissioning in a way which provides current / future benefits. Doesn't leave a legacy to address risks / costs	Decommissioning should lead to not compromising future uses of the sea	Clean energy	
		Re-use - of the area as before (fishing recreation & view shed)	Equal benefits / costs	
		Society should have a healthy ocean	Jobs contributing to a sustainable economy	
		Just transition with sustainable jobs including fisheries		
		Just transition for fishing industry (displacement effects)		
Benefits	N/A	Just distribution of benefits, costs and risks	N/A	N/A
		Clean energy and equally distributed benefits		
Understanding decommissioning	Learn lessons from other industries (steel / coal) not decommissioning just failing.	Complexity and nuance in understanding mitigation of social impacts that cannot be reduced to monetary impacts	N/A	N/A
	New ways of assessing social impacts – how to measure social affinity/ impacts/ benefits – may not be where we think they are.			
Evidence in decision making	Position and values based on evidence	N/A	N/A	N/A