

PLEASE NOTE: THIS LIST IS FOR INFORMATION ONLY AS IT WAS COLLATED PRIOR TO THE GLOBAL PANDEMIC AND STAKEHOLDER PRIORITIES MAY HAVE CHANGED

ID	THEME	ORGANISATION TYPE	QUESTION		Key
001	BIO	Fishing Industry	What are the effects of a windfarm on commercially fished species?	BIO	Biological/Ecological understanding
002	BIO	Fishing Industry	What are the benthic effects of a windfarm?	CLI	Climate/carbon footprint
003	BIO	Fishing Industry	How does the aquaculture industry affect commercially fished species?	DAT	Data
004	BIO	Fishing Industry	How can we have a cod restoration programme and meet the need for better science?	MAN	Management & policy
005	BIO	Fishing Industry	What is a way forward to rear juvenile cod for release into inshore areas to enhance stock levels?	SOC	Social & communications
006	BIO	Fishing Industry	What is a way forward to rear juvenile scallops for release into inshore areas to enhance stock levels?	TEC	Technology solutions
007	BIO	ENGO	What is the actual fishing mortality on all species, where and when precisely does this takes place?		
008	BIO	ENGO	How can we most rapidly recover the health and productivity of our seas?		
009	BIO	ENGO	Where are the essential fish habitats (nursery, spawning etc) and how can we recover/enhance their ability to provide that function?		
010	BIO	ENGO	What innovations could be used to understand the impact of seals on fishermen's catch and what innovations could be used to reduce this?		
011	BIO	ENGO	How do we incorporate all the ecosystem services fish stocks provide into fisheries management?		
012	BIO	ENGO	Which variables are important for determining a baseline for ecosystem health to inform fisheries management decisions?		
013	BIO	ENGO	How can the fishing industry take steps towards alleviating their impact and contribute towards improving the health of the marine environment?		
014	BIO	ENGO	How can the fishing industry go beyond existing management measures to mitigate and remediate their impact on the Scottish marine area?		
015	BIO	ENGO	What are the thresholds for environmentally sustainable fisheries across gear types and habitats in Scotland?		
016	BIO	Academia	What is the importance of inshore areas to commercial fish stocks and how can essential fish habitats be better defined?		
017	BIO	Academia	How can distinct populations of Scottish whitefish stocks be spatially defined and how can the management of these be improved?		
018	BIO	Academia	How can information on the distribution of non-commercial species improve the profitability and sustainability of commercial fishing operations?		
019	BIO	Academia/consultant	How can we quantify marine ecosystem health e.g. to support fisheries sustainability certifications?		
020	BIO	Academia/consultant	How can we improve the habitat mapping coverage for UK seas to a high spatial resolution to support spatial management and impact assessments?		
021	BIO	Academia/consultant	How can we better understand the life cycle linkages for fished species i.e. sources and sinks, and how these will be impacted by climate change?		
022	CLI	Fishing/Academia	How can we 'level the playing field' so that the environmental effects of fishing are judged on the same basis as other means of food production?		
023	CLI	Processor	How can we measure carbon intensity for fishery products in a consistent way which allows for comparisons with other protein sources?		
024	CLI	Science	How can the Scottish fishing industry reduce its average annual hydrocarbon-based fuel consumption per kg of landed protein?		
025	CLI	Science	Are there modifications to fishing gears that can reduce a vessel's fuel consumption?		

026	CLI	Science	Are there modifications to fishing methods / techniques / operating procedures that can reduce a vessel's fuel consumption?		
027	CLI	Science	How will Scottish fisheries fare once carbon emissions are included in sustainable fishing accreditation schemes?		
028	CLI	Science	How should fisheries management and fisheries science adapt in order to help Scotland reach net-zero emissions by 2045?		
029	CLI	Science	Should Minimum Carbon Emissions be included in fisheries management frameworks alongside Maximum Sustainable Yield?		
030	CLI	NDPB	How can new technology, materials and/or design be applied in towed gear to help reduce hydrodynamic or seabed drag, to reduce carbon footprint through improved fuel efficiency?		
031	CLI	ENGO	How do fishing activities impact the natural assets that provide natural climate solutions, and how might fisheries management approaches influence the effectiveness of marine natural climate solutions?		
032	CLI	ENGO	How can climate-smart fishing inclusive of blue carbon be delivered in Scotland?		
033	CLI	Academia	How do we reduce the carbon footprint of the industry?		
034	CLI	Academia/consultant	How can we move the industry to a net-zero carbon basis?		
035	CLI	NGO/Academia	How can we modify our fishing practices to minimize any predicted negative impacts of climate change upon our marine ecosystem?		
036	CLI	Seafood expert	What practical steps can our fishers, processors and transporters take to achieve reductions in greenhouse gas emissions, or other contributors to the climate change emergency?		
037	CLI	Seafood expert	How can we make changes to ensure resilience to climate change is built into our seafood supplies?		
038	DAT	Fishing Industry	How can we improve stock assessments of data-limited stocks?		
039	DAT	Fishing Industry	How can we improve the assessment of data-deficient stocks?		
040	DAT	Fishing Industry	How can we make greater use of the electronic and manually-entered data routinely available from fishing vessels to improve stock assessment and management models?		
041	DAT	Fishing/Academia	Who needs to take the lead in empowering and enabling Scottish fishermen and processors to become leaders in providing scientific data on their fisheries?		
042	DAT	Fishing/Academia	How should industry's participation in the provision of scientific data be paid for?		
043	DAT	Fishing/Academia	What technical innovations and training are needed for fishermen and processors to routinely collect and report data that is useful for scientific assessment of fish stocks?		
044	DAT	Fishing/Academia	What role should international scientific organizations like ICES take in empowering the fishing industry to become key players in providing scientific data on fish stocks and changes in the marine environment?		
045	DAT	Fishing/Academia	How can we make greater use of fishermen's data, including data recorded manually or autonomously, and the potential of fishing boats as data-recording platforms?		
046	DAT	ENGO	What innovations would improve the accuracy and quantity of inshore data i.e CPUE, landing sizes, management of quota & non-quota species?		
047	DAT	Academia	How can we incorporate fishermen's knowledge and data into stock assessment and management advice?		
048	DAT	Academia	What approaches are required to provide data on fish distributions in challenging and poorly sampled areas?		
049	DAT	NGO/Academia	What innovations can be introduced to accurately measure fishing effort across all of the UK fleet so that bycatch rates of protected species can be better determined?		
050	MAN	Fishing/Academia	Can we develop 'better', more efficient ways of assessing the state of fish stocks that are faster, simpler, cheaper and more transparent, and applicable to stocks that are data-poor?		
051	MAN	Processor	How can we create a road map to better manage inshore fisheries, from effort management to output control?		

052	MAN	Fishing Industry	How can we ensure fishing can continue inside a wind farm as before?		
053	MAN	Fishing Industry	How can we improve collaboration between the fishing and aquaculture industries?		
054	MAN	Fishing Industry	How can we resolve inter- and intra-sector gear conflict around the Scottish coast?		
055	MAN	Fishing Industry	How can we responsibly manage the scallop sector?		
056	MAN	Fishing Industry	How can we responsibly manage the creel sector?		
057	MAN	Fishing Industry	How can we improve assessment and management models for mixed fisheries?		
058	MAN	Fishing Industry	Can we develop better measures of the sustainability of fisheries than single-species targets?		
059	MAN	Fishing/Academia	What steps do government and fisheries organizations each need to take to make co-management of Scottish fisheries a reality?		
060	MAN	Fishing/Academia	What science (data and tools) is needed to support better alignment of fishing opportunities with the distribution of fish in Scottish waters?		
061	MAN	Fishing/Academia	What role should Scottish science take in assessing the size of the NE Atlantic mackerel stock?		
062	MAN	Fishing/Academia	How can we more effectively assess and manage multi-species fisheries?		
063	MAN	Fishing/Academia	Is it necessary to manage every species in a multi-species fishery?		
064	MAN	Fishing/Academia	Can we develop better measures of the 'sustainability' of fisheries than crude single-species targets, and that reflect the complexity of multi-species fisheries and changing environmental conditions.		
065	MAN	ENGO	What is the best mechanism for distributing access to a public asset in a way that delivers social & environmental good while being fair to vested interests?		
066	MAN	ENGO	How can we best utilise spatial management of fisheries (and other industries) to best deliver social and environmental benefits?		
067	MAN	ENGO	How can we fairly restructure/transition fisheries when they are causing unacceptable social or environmental impacts?		
068	MAN	ENGO	How can we set appropriate potting limits in our inshore waters that are effective, fair and lead to sustainable levels of pots?		
069	MAN	ENGO	How can fully documented fisheries be delivered in Scotland?		
070	MAN	ENGO	How do we deliver a strategic environmental assessment of fishing activities in Scotland?		
071	MAN	ENGO	How could a low impact trial (inc spatial management and gear separation) be delivered in Scottish inshore waters and what benefits might such a trial provide?		
072	MAN	ENGO	How can ecosystem-based fisheries management be defined and implemented in practice?		
073	MAN	ENGO	How could the Scottish local fisheries management model be improved to integrate other marine uses?		
074	MAN	Academia	How can we support industry to be proactive in fisheries management for environmental gain, e.g. in the context of MPA and PMF management?		
075	MAN	Academia/consultant	Can MPAs be designed which could deliver fisheries benefits in UK seas?		
076	MAN	Academia/consultant	How can we move towards to deliver fully documented fisheries?		
077	MAN	Academia/consultant	How can socio-economic research be better used to support the long-term future of the industry, and balance social and economic policy aims?		

078	MAN	NGO/Academia	How best can a truly ecosystem-based management of fisheries be implemented?		
079	MAN	NGO/Academia	What would be the best mitigation measures to minimize entanglement by large whales in pot fisheries?		
080	MAN	NGO/Academia	How can we reduce the amount of lost or discarded fishing gear in our seas?		
081	MAN	NGO/Academia	What novel spatio-temporal management procedures can be introduced to ensure that stocks are not overfished?		
082	MAN	NGO/Academia	How can local coastal communities benefit more from fishing in their regional waters?		
083	MAN	NGO/Academia	How can we reconcile potentially conflicting user interests within Marine Protected Areas?		
084	MAN	ENGO	How could innovative spatial approaches to fisheries management (such as temporary gear restrictions, gear separation, co-location & no-take zones) be delivered through Demonstration and Research MPAs?		
085	MAN	ENGO	What is the most effective method of spatially managing fishing activities to avoid conflict between sectors but meet conservation objectives, and improve the flow of ecosystem services to society?		
086	SOC	Fishing Industry	How can we improve collaboration between Scottish fishermen's associations?		
087	SOC	Fishing/Academia	What mechanisms are needed to prevent and mitigate supply chain socioeconomic impacts when certified fisheries that are on the boundaries of criteria are at risk of bouncing in and out of certification?		
088	SOC	Fishing/Academia	How should Scotland address the urgent need for skills (e.g. age readers) and resources (people) to assess pelagic stocks?		
089	SOC	Fishing/Academia	What joint actions can government, retailers and industry undertake in working to promote responsible and transparent Scottish fisheries?		
090	SOC	Processor	How can we better join up the value chain around shellfish?		
091	SOC	ENGO	How can we best involve public in decisions about fisheries/our seas?		
092	SOC	ENGO	How do we bridge the gap between seafood consumers and fishers in the UK?		
093	SOC	ENGO	How can we ensure effective communication of science, regulation and legislation to commercial fishermen?		
094	SOC	ENGO	What innovations could increase fisher participation in government, regulation and legislative consultations?		
095	SOC	ENGO	What is the best approach for facilitating knowledge exchange across fisheries stakeholder groups?		
096	SOC	ENGO	What actions could provide the transformative change needed in Scottish fisheries to ensure maximum sustainable benefits for environment & society?		
097	SOC	ENGO	How can the costs of fishing activities (including impacts on ecosystem services) be internalised within the fishing industry to support ecosystem-based management?		
098	SOC	Academia	How can we better facilitate communication between industry and science to identify knowledge gaps, and develop collaboration in research, data collection and technology to fill such gaps?		
099	SOC	Academia/consultant	Can we use advances in social media to engage the public and improve the image of the fishing industry with the wider public?		
100	SOC	Seafood expert	How can we encourage the British public to consume more seafood?		
101	SOC	Seafood expert	How can we encourage the British public to consume currently non-popular species?		

102	SOC	Seafood expert	How can we ensure that export markets (EU and non-EU) for our seafood landings/production remain or become accessible – and how can we grow those opportunities?		
103	SOC	Seafood expert	What steps could be taken to help improve the financial performance within Scotland’s processing industry, through cost reduction or enhanced sales values?		
104	SOC	Seafood expert	What studies, stakeholder engagements, or workshops could ascertain how we might enable the industry to self-fund innovations, along the lines of those developed by countries such as Norway and Iceland?		
105	SOC	Seafood industry coordinator	What incentives such as later life mortgages, community boats, start-up housing, access to latest health & safety provisions might encourage younger people to continue in or join the fishing industry?		
106	TEC	Fishing Industry	How can there be a more direct link between policy makers and the with the fishing 'coal face'.		
107	TEC	Fishing Industry	How can fishermen be involved more actively in scientific programmes and further evolve a system where skippers can be informed what’s in the net before hauling?		
108	TEC	Fishing/Academia	How can fishers use data collected on fishing operations, catches and the environment to provide them with business intelligence tools to enhance business operations and reputation for markets?		
109	TEC	Processor	How can we record interactions with ETP species in a way which minimise effort for fishermen but also allow anonymity/privacy?		
110	TEC	Processor	Can we use fishing activity to accurately estimate nephrops populations in a similar way to fishery independent underwater TV surveys?		
111	TEC	NDPB	How can we introduce novel mechanical, automated or other interventions during fishing operations to reduce the health and safety risks to crew, particularly during the shooting and hauling of gear?		
112	TEC	NDPB/Consultant	How can we improve the animal welfare on ships and during live transport so that consumers who worry about this topic are not put off from eating seafood?		
113	TEC	NDPB/Consultant	How can we develop a fully integrated traceability system so that consumers know where their fish was caught, who by and by what method?		
114	TEC	NDPB/Consultant	How can we retrieve lost fishing gear so that the fishing industry becomes part of the solution to plastics-pollution in the oceans rather than part of the problem?		
115	TEC	ENGO	What is the precise catch location of any given seafood product?		
116	TEC	ENGO	How can we use technology to create more selective or precise fisheries?		
117	TEC	ENGO	What innovations and technology would reduce the occurrence of illegal tampering of fishing gear?		
118	TEC	ENGO	What innovation or technologies could be used to support effective monitoring / implementation regulation and enforcement?		
119	TEC	ENGO	How could modern, digital technologies such as the Internet of Things, Blockchain and Artificial Intelligence be utilised in the fisheries supply chain to increase transparency and traceability?		
120	TEC	ENGO	What are the opportunities for innovative gear design that would reduce the industry’s contribution to marine litter?		
121	TEC	ENGO	What innovations can be used to better understand Endangered, Threatened and Protected (ETP) bycatch and entanglement rates in Scotland, and what measures could reduce bycatch of ETP species?		

122	TEC	Academia	What can help accelerate the industry-led development and application of selective fishing gears?		
123	TEC	Academia	How can real-time reporting/ data sharing be developed to allow avoidance of stocks, non-commercial species etc and so maximize sustainability and profit?		
124	TEC	Academia/consultant	How can we best incorporate advances in AI, robotics and Big-Data to support sustainable fisheries?		
125	TEC	Academia/consultant	How can we substantially reduce the habitat impacts of bottom towed gears?		
126	TEC	Academia/consultant	How can we mitigate entanglement risks for species of conservation interest from static gear?		
127	TEC	Seafood expert	How can we support technical innovation in our processing sector?		
128	TEC	Seafood expert	What techniques might extend the shelf life and improve the quality of our 'fresh' fish?		
129	DAT/ MAN	Fishing/Academia	What can we learn from other countries about stocks assessment and fisheries management?		