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International Commission on Land Use Change and Ecosystems

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A MARINE ECOSYSTEMS RECOVERY STRATEGY

Part I: Marine Fisheries Recovery

Report compiled in collaboration with the Zoological Society of London





Dear Commissioner,

It gives me great pleasure to introduce Part One of the GLOBE Marine Ecosystems Recovery Strategy, on Marine Fisheries.

The aim of this document is to define clear and targeted actions to guide legislators in implementing the comprehensive reforms that will ensure an economically and environmentally sustainable future for our oceans' fisheries.

The global nature of this resource necessitates a globally coordinated response, with action needed at all political levels:

- Within national and regional parliaments where fishing rights are held in common, measures are needed to address fleet efficiency and to ensure that the management of domestic fisheries is governed by a sustainable, ecosystem-based approach.
- The largest importers of fish must also pass robust regulations to eradicate illegal fish from the market and promote sustainable sourcing.
- Regional cooperation is needed between key port and coastal states in order to ensure there are no safe havens for illegal fishing.
- Finally, action is needed by parties to the main international marine and fisheries agreements to ensure the proper management of the high seas.

By agreeing a Recovery Strategy for Marine Fisheries on World Oceans Day, the GLOBE International Commission on Land Use Change and Ecosystems has committed to lead this coordinated response and help to restore the wealth of our oceans.

A handwritten signature in blue ink that reads "Ian Johnson" with a stylized flourish at the end.

Mr Ian Johnson
Chair, GLOBE International Commission on
Land Use Change and Ecosystems

A Marine Ecosystems Recovery Strategy

Marine ecosystems provide critical ecosystem services for humankind. The oceans regulate the Earth's temperature, cycle its nutrients, have taken up nearly half of anthropogenic CO₂ emissions, and provide nearly half the oxygen in the atmosphere. More than 1 billion people worldwide depend on the marine environment for goods and services such as coastal protection, food, income and livelihoods. Marine fish are critical to food security, particularly in coastal developing countries, in some places providing more than half of animal protein consumed.

However, the oceans are in crisis. Climate change is changing patterns of productivity in the oceans, altering the timing of natural marine cycles and causing coral bleaching and ocean acidification which, in turn, are impacting marine ecosystem services. Coastal pollution, mainly arising from the use of agrochemicals and poor waste management, is causing extensive habitat degradation through eutrophication and harmful algal blooms, leading to the spread of dead zones and contributing to the destruction of coastal marine ecosystems. Overfishing, driven by poor systems of ocean and coastal governance, poses a significant threat to fish populations, the wider marine ecosystem, and the people dependent on these ecosystems for livelihoods, food and other services.

Legislators play a central role in developing, ratifying and monitoring the enforcement of domestic legislation, as well as in holding their governments to account over international commitments. The GLOBE Marine Ecosystems Recovery Strategy will serve as an action plan for legislators, recommending a range of international and national measures where legislators can make an important difference in addressing the drivers of marine ecosystem degradation.

The Strategy focuses on three key aspects of the marine environment:

1. Marine fisheries
2. Tropical coral reefs
3. Coastal shelf marine ecosystems.

The strategy may also include additional related topics in the future. Each part of the GLOBE Marine Ecosystems Recovery Strategy will contain legislative measures for national and regional parliaments, as well as proposals for advocacy at a regional and international level. These recommendations are supported by background documents developed in national and regional workshops by leading experts, policymakers and legislators.

When finalised, all three parts of the strategy will be discussed and agreed by legislators of the GLOBE International Commission on Land Use Change and Ecosystems. Consensus will therefore be built across party-political lines and national borders on the actions needed to restore marine ecosystem health and productivity that both secure and increase the goods and services available to humankind.

This document presents policy proposals on Marine Fisheries, which form Part 1 of the Strategy. Outstanding issues of importance to marine fisheries management such as coastal zone management, aquaculture and bycatch will be dealt with in the coastal shelf marine ecosystems paper mentioned above.

Part 1: Marine Fisheries Policy Proposals

Open access to marine resources and the provision of inappropriate subsidies for fishers have created large incentives for overfishing. Disparate marine policies mean that environmental, conservation and developmental issues are often addressed separately from fisheries, while policy implementation routinely ignores scientific advice. Lack of communication, transparency and inclusive decision-making has contributed to distrust between stakeholders, scientists and managers. Existing high seas legislation is poorly implemented, leading to continued overexploitation of stocks, the use of destructive fishing practises and illegal and unregulated fishing on the high seas. Regional Fisheries Management Organisations, the cornerstones of international fisheries governance, are too narrow in scope and coverage and their performance on the whole has been poor. Policing the oceans is a challenge facing all fishing and coastal nations. Illegal, Unregulated and Unreported fishing seriously undermines existing management efforts and threatens sustainability.

This paper sets out a series of measures required to successfully restore fish stocks and the marine ecosystems impacted by fishing. These measures include recommendations for national legislation and for action at a regional and international level. They are arranged under four main themes:

- 1) **ECONOMIC INCENTIVES:** Adjusting the economic incentives faced by fishers can change fisher behaviour to favour sustainable fishing practices, improved economic performance and beneficial fleet restructuring.
- 2) **FULLY INTEGRATED MARINE POLICY:** A precautionary, ecosystem-based approach should be at the core of all marine policy. Environmental and fisheries legislation must be integrated, increasing the role of science in fisheries management and implementing a global network of national and high seas MPAs.
- 3) **HIGH SEAS MANAGEMENT:** Important new measures are proposed to introduce accountability to the implementation of existing high seas legislation and expand the remit and spatial coverage of RFMOs.
- 4) **ENSURING COMPLIANCE:** Global coordination and national measures are needed to improve the monitoring of fishing activities and fish trade and strengthen enforcement for both coastal and high seas fisheries.

A summary of Priority Actions for legislators is provided in the final section (5).

There are a number of clear common ideas that underpin the recommendations presented. These are principles that should also be central to the policymaking approach for all areas of marine fisheries, and are summarised as follows:

- **Clear Policy Objectives:** Legislation, policies, and management decisions at every level of fisheries governance should be steered by clear and precise policy objectives. Implementation of the policy proposals in this document should begin with defining a set of realistic objectives and priorities for each issue;
- **Ecosystem Approach:** Fish populations are embedded in an intricately-linked marine food web and larger marine ecosystem. Sustainable management of these resources requires an ecosystem, rather than single-species, approach. To achieve this, governments need to ensure greater integration of environmental and fisheries policy within an ecosystem-based approach to resource management;
- **Global and Regional Cooperation and Coordination:** The global nature of many obstacles to achieving sustainable fisheries management means that the successful implementation of many policy proposals in this document will require close cooperation between nations and collaboration at the regional and global level;
- **Capacity Building:** Developing countries generally do not have the governance or sectoral capacity to implement many of the policy proposals in this document. Developed countries should provide financial support and training to enable the sustainable use of fisheries in developing countries, and should ensure adequate integration of development, environment and fisheries policy.

1) Measures to Adjust Economic Incentives to Promote Sustainability

Subsidy Reform: Direct and indirect government subsidies to the fishing industry should be used to incentivise responsible fishing practices. To achieve this, the following steps should be taken:

- Redirect and phase out subsidies (currently \$22 billion per year globally) which contribute to overcapacity and overfishing;
- Subsidies for small-scale fisheries driven by specific social policies such as poverty alleviation and maintaining the cultural value of coastal fishing communities should continue in the short-term provided that it achieves sustainable fishing and livelihoods in the long-term
- Maintain or increase public funding (currently only \$7 billion per year globally) for programmes that improve fisheries management (including fisheries and ecosystem-based research, monitoring and enforcement, and conservation measures such as Marine Protected Area designation and management);
- Link direct fishing sector subsidies to specific sustainable and legal fishing practices (for example measures for health and safety, improving efficiency) and promote good voluntary practices such as sustainability certification and use of selective fishing gear, thereby providing economic incentives for these practices;
- Develop and implement subsidy reform through multilateral and enforceable agreements within international institutions such as the World Trade Organisation (WTO).

The long-term policy objective should be environmentally and economically sustainable fisheries that do not require public financial support.

Rights-based Management: Rights-based management involves the allocation of fishing rights to individuals or communities. Fishing rights can remove the economically wasteful 'race to fish' and create incentives for resource conservation and economically efficient fishing. Rights-based management schemes can take different forms (transferable or non-transferable, individual or community) with different outcomes. Where feasible, fishing nations should implement flexible rights-based management schemes for both coastal and high seas fisheries that are adapted to the type and size (small- and large- scale) of fishery and the local or regional context, with particular attention to local communities, so that they can meet clear policy objectives in each situation.

Fleet Overcapacity: The successful implementation of subsidy reform and rights-based fisheries management can address the drivers of overcapacity and can ultimately lead to fleet restructuring. Direct measures to reduce fleet size, such as vessel purchase schemes, should only be used with caution. The success of these measures depends heavily on implementation methods, and they do not address the underlying economic incentives that lead to overcapacity. It is essential to address any short-term socioeconomic impacts of fleet restructuring by implementing transitional measures for individuals and fishing communities, such as occupational retraining, through collaboration with national development agencies. Effective management of fishing capacity is crucial for achieving sustainable fisheries.

Cap and Restore: Governments should undertake a new 'Cap and Restore' approach for severely depleted fisheries that would impose a temporary moratorium or drastic reduction in fishing effort and catches to allow fish stocks to recover. During the stock recovery period, fishers will be paid compensation to leave the industry or should be employed for scientific assessments and enforcement activities. Once re-opened, the fishery will be operated with stronger links to the market and greater economic efficiency, compulsory environmental and economic impact assessments, improved inter-stakeholder communication and a precautionary-ecosystem based management approach.

2) Measures to Establish Integrated Marine Policy

Scientific Advice: Governments should direct fisheries management authorities to create science-based decision-making frameworks that operate at a range of levels (local, provincial, national, regional and global). These frameworks should include:

- Interdisciplinary scientific research integrating bio-physical and socio-economic information;
- Provisions that prevent decision-makers from setting catch limits above scientific recommendations, especially in cases where target stocks are at risk of collapse.

Stakeholder Involvement: The lack of trust and communication that exists between the fishing industry, research scientists and managers is concerning and should be addressed through the following measures:

- National and intergovernmental fisheries research agencies should continue existing or establish new fisheries-science partnership programmes that increase the participation of fishers in fisheries data collection and facilitate dialogue between scientists and industry members;
- Fisheries agencies must secure the involvement and agreement of industry stakeholders when designing a fisheries management system (e.g. fishing rights) through co-management regimes.

Integrated Policies: The integration of environmental and fisheries legislation and management through the creation of comprehensive marine policy that strongly links fisheries and other marine industries to the environment is required. Important aspects of this more 'joined-up' policy approach for fisheries include:

- The application of marine environmental legislation to fisheries, especially environmental impact assessments (EIAs), both at the national level and for areas beyond national jurisdiction;
- Ensure EIAs are conducted for infrastructure in or directly affecting the marine environment
- Increased collaboration between different government departments or ministries, particularly for fisheries and environment policy at the national level and for areas beyond national jurisdiction;
- Policy coherence with regard to marine spatial planning and conservation measures such as Marine Protected Areas;
- Increased collaboration with development agencies, programmes, and inter-governmental organizations to ensure international fisheries policy is coherent with poverty reduction, food security and sustainable development policies in developing coastal states.

Protected Areas and Planning: Fully protected marine reserves can build resilience in marine ecosystems, protect biodiversity and are increasingly being considered as an important tool for ecosystem-based fisheries management in combination with measures outside of protected areas. Governments and regional management bodies should implement Marine Protected Area Networks in coastal waters and on the high seas as part of integrated marine policy frameworks incorporating marine spatial planning. To achieve these goals it is necessary to:

- Define clear objectives for MPAs, which may include species or habitat conservation, a fisheries management tool, or both;
- Provide funding and support for network designation, building capacity, alternative livelihoods and infrastructure for management, and further MPA research;
- Adopt new MPA network targets of at least 25% to propel the creation of marine reserves and networks globally. MPA networks should be designated on the basis of scientific criteria taking into account levels of protection through zoning
- Ensure MPAs are monitored, enforced and effectively managed by creating a well-coordinated MCS network at all levels of governance including community-based and co-management initiatives for small-scale fisheries as part of integrated coastal zone management;
- Increase communication to address the disagreement between marine stakeholders (such as industry) and research scientists on the potential costs and benefits of MPAs, particularly in coastal waters;
- Develop marine spatial planning guidelines that ensure the process involves all stakeholders and is steered by clear long-term objectives;
- Investigate the establishment of a new global framework agreement for marine spatial planning in areas beyond national jurisdiction that would provide a science-based framework for MPA network designation, management and enforcement, and mandate the integration of marine conservation into sectoral and regional management.

3) Measures to Strengthen High Seas Management

Implementing existing legislation: All relevant countries should ratify and adopt robust implementing legislation for existing international marine and fishery agreements including:

- United Nations Convention on the Law of the Sea (UNCLOS);
- United Nations Fish Stocks Agreement (UNFSA);
- United Nations General Assembly Resolutions 61/105 and 64/72;
- Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing;
- Food and Agriculture Organization of the United Nations (UN FAO) Code of Conduct for Responsible Fisheries.

Accountability: Governments should undertake a new policy to independently evaluate RFMO performance and hold states accountable. To achieve this, it will be necessary to:

- Request that the UN conduct periodic reviews of RFMO performance based on existing benchmark standards for RFMOs in the UNFSA;
- Hold non-compliant states accountable using the International Tribunal on the Law of the Sea (ITLOS) and allow access to ITLOS by non-state entities in cases relating to the mismanagement of fisheries on the high seas;
- Use economic incentives to increase RFMO membership and member compliance. Invite non-member states to join RFMOs and support new members through financial and human capacity-building. Restrict market access for non-compliant or non-member states fishing within RFMO boundaries.

Ecosystem-based Management: Many RFMO conventions are based on old concepts of resource exploitation and require updating to reflect modern approaches to sustainable ecosystems-based management of biotic resources. The mandates of RFMOs currently have a narrow management remit for a fraction of the target fish stocks within their geographic areas of competence. Participating governments should update RFMO agreements to include a precautionary, ecosystem-based approach incorporating the protection of biodiversity and long-term sustainability of fish stocks (as already required by the UNFSA). These approaches should be applied to all exploited fish stocks within the regions of competence of RFMOs.

RFMO Coverage: The coverage and number of RFMOs should be expanded to reduce unregulated fishing activities that take place in areas of the high seas not covered by RFMOs.

Research and Assessment: Increased funding should be provided for research to assess the impacts of fishing, other human activities and environmental factors on target stocks and associated species. New regional and international initiatives for the coordination and collation of fisheries research should be supported in order to ensure the independence and rigour of fisheries research. Environmental impact assessments should be a prerequisite for permitting fisheries to operate in any part of the high seas.

4) Measures to Ensure Compliance

Control Measures: Fishing, coastal and market states should implement measures at every stage of the supply chain to prevent, deter and eliminate illegal fishing.

- **Market States** should address the economic drivers of IUU by implementing market legislation that imposes penalties for trading illegal fish. New national and regional IUU regulations on trade, such as the US Lacey Act and EU IUU Regulations, should be adapted and implemented in other major importing countries or regions. Existing legislation (e.g. tax laws) can also be implemented in a manner that discourages illegal trade in fish;
- **Port States** should ratify, and encourage others to ratify, the UNFAO Port State Agreement, and adopt robust implementing legislations;
- **Port and market state** legislation must include provisions for capacity building and funding for developing countries to adopt and effectively implement such legislation.

The successful implementation of port and market state measures depends on effective at-sea monitoring and surveillance to ensure fraud-resistant traceability.

- **Coastal States** should increase and harmonize sanctions against IUU perpetrators, and secure funds for the development of an effective Monitoring, Control and Surveillance system both nationally and regionally;
- **RFMO members** should work to improve RFMO governance and increase RFMO enforcement authority;
- **Flag states** should develop a framework for legal and coordinated international diplomatic and economic action against non-compliant flag states, for example, through ITLOS;
- **Developed countries** should cooperate with developing nations to provide financial, technical and logistical resources to build capacity for at-sea monitoring and enforcement in the coastal waters of developing countries.

Incentives: Investigate the establishment of a global certification scheme for legally and sustainably caught seafood. Existing community-led and industry initiatives should also be supported and economic incentives provided for further voluntary measures.

Global cooperation: Countries should work together to combat IUU fishing by improving existing tools (e.g. tamper-proof Vessel Monitoring Systems (VMS)) and by investing in research and development to establish new ones.

- The International Monitoring, Control and Surveillance (IMCS) Network requires increased financial support and its capacity to coordinate professional intelligence-gathering efforts needs to be significantly expanded;
- Reform the vessel identification system, potentially through expansion of the International Maritime Organization system;
- Countries should support the FAO Global Record of Fishing Vessels, Refrigerated Transport Vessels and Supply Vessels project. This should include a comprehensive global list of fishing and reefer vessels, including a blacklist of vessels or other entities involved in or permitting IUU fishing, and a 'positive' list of those vessels with proven records of compliance.

Priority Actions for Legislators:

Parliamentary Legislation

- Ratify and adopt robust implementing legislation for all existing UN and FAO international fishery agreements.
- Redirect inappropriate fishing subsidies into programmes that improve fisheries management.
- Implement flexible rights-based management schemes for both coastal and high seas fisheries.
- Prevent fisheries authorities from setting catch limits above scientific recommendations.
- Involve the fishing industry in data collection and co-management of fisheries.
- Mandate environmental impact and stock assessments for all commercially fished species.
- Integrate fisheries and environment policy within government.
- Provide economic incentives for industry initiatives to source legal and sustainable fish.
- Introduce legislation to ban the import and domestic trade of illegally-caught fish (e.g. US Lacey Act).
- Implement a 'Cap and Restore' approach for all severely depleted fisheries.
- Adopt modern MPA network targets to propel domestic implementation of MPAs that link in to national and regional networks, alongside comprehensive fisheries management outside of protected areas.

Regional Cooperation

RFMO Members

- Review and reform of RFMO conventions to promote sustainable, ecosystem-based management of marine biotic resources.
- Construct new RFMOs or expand existing RFMOs to manage species and areas currently unmanaged.
- Implement UNFSA requirements for a precautionary, ecosystem-based approach.
- Agree new RFMO rules that prevent decision-making bodies from setting catch limits above scientific recommendations.
- Incentivise RFMO membership by linking it to capacity-building assistance, and agree economic sanctions against non-compliant states.
- Establish RFMO mandates for all flag states to ensure their vessels carry tamper proof monitoring and surveillance equipment.

Coastal and Port States

- Increase and harmonize sanctions against illegal fishing and transshipment vessels across coastal and port states in key regions.
- Establish regional agreements for sharing data on fishing activities and resources for monitoring and enforcement, especially in developing country coastal and port states.

International Actions

New Agreements

- Mandate the UN to review and monitor RFMO performance based on existing benchmark standards for RFMOs in the UNFSA.
- Support the development of a multilateral and enforceable agreement on fishing subsidy reform within the World Trade Organisation.
- Require all fishing and reefer vessels to carry unique identification, such as IMO numbers.
- Hold non-compliant states accountable using the International Tribunal on the Law of the Sea.
- Adopt modern MPA network targets to propel the creation of marine reserves and networks globally.
- Investigate a new Global Framework Agreement for Marine Spatial Planning in areas beyond national jurisdiction.

New Multilateral Institutions

- Continue and increase support for the International Monitoring Control and Surveillance Network, expanding its mandate to conduct and coordinate global high seas fisheries intelligence-gathering.