Handbook for Developing Jurisdictional Initiatives for the Seafood Sector

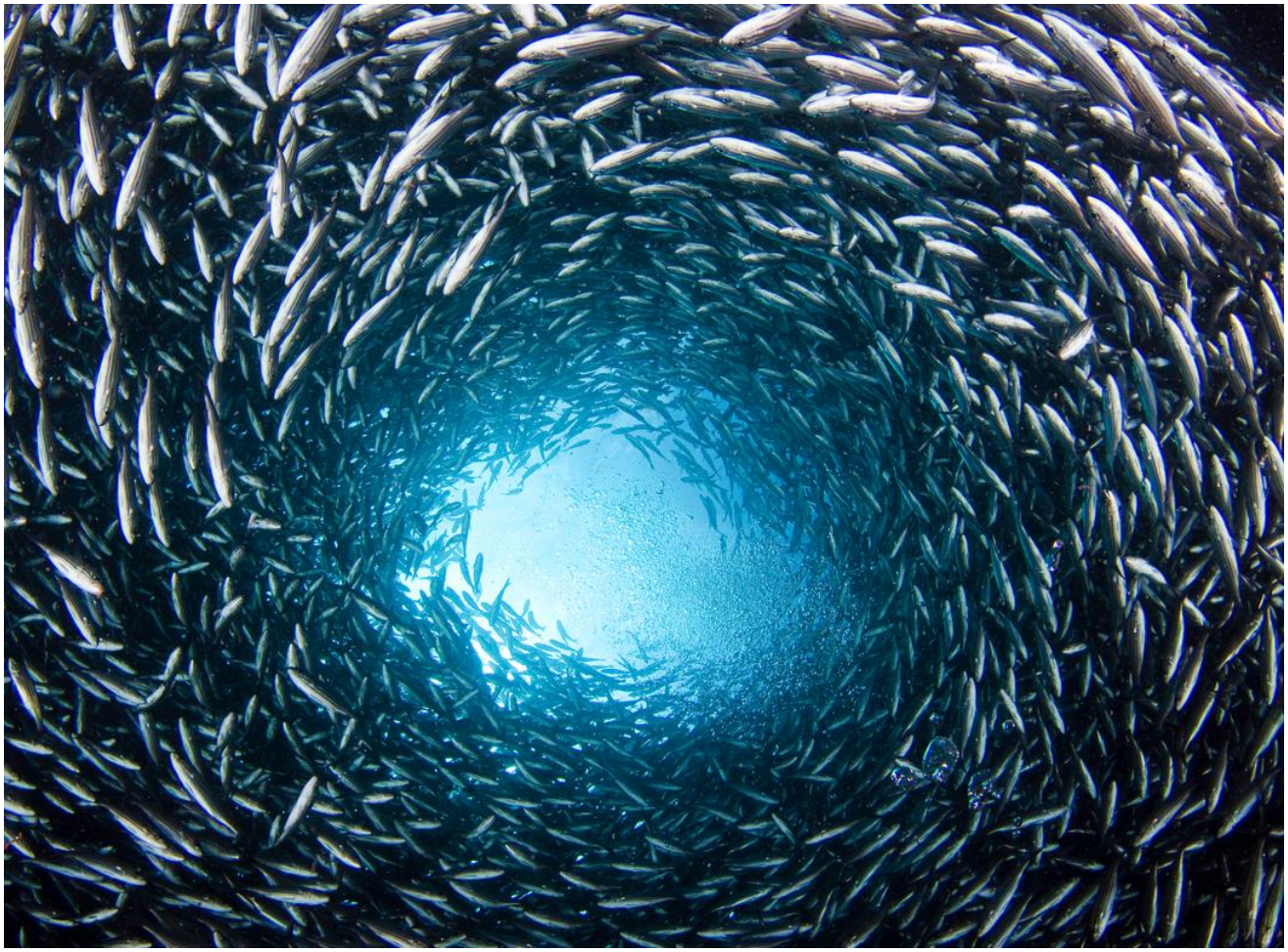
Acknowledgements

Authors:
Ashley Apel (Manager, Seafood Partnerships – Conservation International)
Stephanie Bradley (Director, Fisheries in Transition – World Wildlife Fund US)
Clarus Chu (Senior Policy Advisor, Production – World Wildlife Fund UK)
Alison Cross (Director, Fishery Sustainability – World Wildlife Fund US)
Dane Klinger (Director, Aquaculture – Conservation International)
Merrielle Macleod (Director, Aquaculture – World Wildlife Fund US)
Pablo Obregon (Director, Sustainable Tuna – Conservation International)

The authors would like to extend special thanks to the Walmart Foundation for providing funding to develop this guidance document, California Environmental Associates for providing research, and many NGOs, seafood companies, and other organizations across the seafood community for providing input into the development of the document.

This guidance document will be updated as additional information, knowledge, and implementation experience lead to learnings in the field.

Table of Contents



Glossary

Blended finance: Blended finance can be broadly defined as the combination of public, concessional, official development assistance with private or public resources, generally with the aim of mobilizing or leveraging development finance from other actors (Oxfam 2017).

Contextual analysis: Identifies key systemic environmental and socio-economic challenges in the seafood production system of the jurisdictional initiative site and against which improvements and performance claims will be measured, as well as providing insights into whether key enabling conditions are in place, or could be created, to support the successful co-design of the jurisdictional initiative. This analysis is completed during the co-design phase.

Credible: Having rigor and a strong likelihood of success; worthy of belief and confidence.

Market partners: Seafood businesses, including end buyers, mid-supply chain suppliers, and local exporters.

Marine protected area: Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, and historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment (WCPA 1999).

Monitoring: An ongoing function that uses the systematic collection of data on specific indicators to assess and document the extent to which actions, progress, performance, and compliance are being carried out or achieved.

Scoping assessment: An assessment conducted in the Scoping phase to evaluate whether the key enabling conditions are in place, or could be created, to support the successful co-design of a jurisdictional initiative.

Seascape: Large, multiple-use marine area, defined scientifically and strategically, in which government authorities, private organizations, and other stakeholders cooperate to conserve the diversity and abundance of marine life and promote human well-being (Murphy, S. E. et al. 2021).

Site: The specific location/area of the jurisdictional initiative.

Triple bottom line: Improvement of a fishery/farm's environmental, social, and economic performance.

Verification: An assessment and validation of compliance, performance, and/or actions relative to a stated commitment, standard, or target. It utilizes monitoring data and other information sources as input to the verification process.

List of Acronyms

AIP: aquaculture improvement project
ASC: Aquaculture Stewardship Council
BAP: Best Aquaculture Practices
CBD: Convention on Biological Diversity
CI: Conservation International
CoC: chain of custody
CRI: certification, ratings, and improvement
EAA: ecosystem approach to aquaculture
EAF: ecosystem approach to fisheries
EBM: ecosystem-based management
EEZ: exclusive economic zone
EFT: ecological fiscal transfer
ETP: endangered, threatened, and protected
FAD: fish aggregating device
FAO: Food and Agriculture Organization
FFIA: Fiji Fishing Industry Association
FIP: fishery improvement project
FISH: Fairness, Integrity, Safety, and Health
FISHE: Framework for Integrated Stock and Habitat Evaluation
FMP: fishery management plan
FPI: fishery performance indicator
GDP: gross domestic product
GDST: Global Dialogue on Seafood Traceability
GTA: Global Tuna Alliance
IMT: Implementation Monitoring Tool
IPs: Indigenous peoples
IUCN: International Union for the Conservation of Nature
IUU: illegal, unreported, and unregulated
JA: jurisdictional approach
JI: jurisdictional initiative
KDE: key data element
KPI: key performance indicator
MPA: marine protected area
MSC: Marine Stewardship Council
MSP: marine spatial planning
MSP: multistakeholder process
MOU: Memorandum of Understanding
NGO: nongovernmental organization
PNA: Parties to the Nauru Agreement
RAT: rapid assessment tool
RFMO: regional fishery management organization
SDGs: Sustainable Development Goals

SIDS: Small Island Developing States
SRA: Social Responsibility Assessment Tool for the Seafood Sector
UN: United Nations
UNCLOS: United Nations Convention on the Law of the Sea
VDS: vessel day scheme
WCPA: World Commission on Protected Areas
WCPO: Western Central Pacific Ocean
WWF: World Wildlife Fund/Worldwide Fund for Nature

About the Handbook

These guidelines were developed by Conservation International (CI) and World Wildlife Fund (WWF) in consultation with civil society organizations and seafood supply chain members. In the following pages, we present what a jurisdictional initiative for the seafood sector entails, guidance for when and how to develop such an initiative, and best practices to help producers, local communities, governments, the private sector, and civil society establish credible jurisdictional initiatives to address systemic drivers of decline of global biodiversity and increase the resilience of marine and freshwater ecosystems. The goal of this document is to provide useful guidance to build an approach that is more likely to address systemic and policy-level changes that improve social and environmental conditions; however, some jurisdictional initiatives may not require the implementation of all elements outlined in this guide. The application of these initiatives is still nascent, especially in the seafood sector. The community will learn as we further develop jurisdictional initiatives. As such, this document provides early guidance and will be updated as experience in the field warrants.

Section 1. Jurisdictional Initiatives for the Seafood Sector

1.1 What Is a Jurisdictional Initiative for the Seafood Sector?

Background

Aquatic ecosystems across the world are in peril. The collapse of key commercial fisheries within the past 50 years has made clear the precarious position of the world's fish stocks. Decades of overfishing and coastal habitat conversions for fish farming have taken a significant toll on the health of aquatic ecosystems, human livelihoods, and global food security, and demand for seafood continues to increase. Over one-third of the world's commercial fish stocks are overfished, and the global fishing fleet is two–three times larger than the oceans can sustainably support. Unregulated growth of aquaculture has, in many places, led to conversion of marine and terrestrial habitats, water quality degradation, and biodiversity loss. Approximately 600 million livelihoods rely on fishing, aquaculture, and related activities, and more than 4 billion people around the world rely on seafood as an important source of animal protein.

We have reached a point where we need to achieve conservation impact at scale. In 2009, Rockström et al. proposed an approach to global sustainability based on nine planetary boundaries within which humanity can operate safely. They noted the deterioration of one or more planetary boundaries may be damaging or potentially catastrophic, pushing the Earth beyond a "safe operating space." A 2015 update (Steffen et al. 2015) on this planetary boundary concept showed that two of the core boundaries, climate change and biosphere integrity (including genetic diversity), have reached a high-risk point that may push the Earth into a new state.

The historical and current realities of inconsistent and inadequate regulation and enforcement across regions have led many actors to turn toward voluntary and market-based mechanisms to drive or achieve better environmental and social practices in seafood production. Certification and eco-labeling schemes (including the Marine Stewardship Council (MSC) and Aquaculture Stewardship Council (ASC)), emerged in the 1990s–2010 to harness the purchasing power of seafood businesses to incentivize fishers and aquaculture producers to improve their fishing and farming practices. Certifications are usually granted to a single related farm or fishery or group of related farms and fisheries and do not often cover the entire area of production or whole fisheries. An eco-certification label on a product indicates that it has been grown and harvested in a manner that meets the associated standard. Consumers and retailers who value responsibly produced seafood can preference seafood products with a certification eco-label, rewarding better performance, which in theory can rise over time.

Some conservation nongovernmental organizations (NGOs) also provide seafood ratings based on their own methodology that reviews the status and environmental impacts of fisheries and aquaculture (e.g., Seafood Watch, WWF seafood guides). These ratings are then shared with consumers through wallet guides and mobile apps and on menus and seafood counters.

Over the past decade, fishery improvement projects (FIPs) and aquaculture improvement projects (AIPs) have been developed to provide a credible improvement pathway for fisheries and farms (especially those in the supply chains of retail, food service, broad line, and multinational companies with sustainable seafood commitments) that cannot immediately meet the certification standards (e.g., MSC and ASC). Like certifications, these improvement projects are primarily implemented at individual fishery and farm levels.

Together, these certification, ratings, and improvement (CRI) efforts have been effective at bringing awareness to environmental and social issues in fisheries and aquaculture and moving the needle toward improved fishing and aquaculture practices in many parts of the world. Indeed, there are numerous examples of improved performance in fisheries and aquaculture farms, large and small, around the world due to engagement in CRI efforts that provide the basis for seafood company commitments and related improvement efforts for specific fisheries or farms, particularly those that contribute to international trade.

While CRI approaches are impactful and critical to continue, their current framework of working with individual fisheries or farms is not designed to achieve the scale of improvement needed in global seafood production, nor do they effectively engage many of the world's small-scale fisheries and farms who are not always incentivized by export market demand or cannot afford the costs associated with certification. In addition, these market-focused interventions alone are proving insufficient to address critical, systemic issues that can be barriers to long-term environmental sustainability and social responsibility of individual fisheries and aquaculture farms, such as cumulative environmental impacts, labor rights, climate change impacts, and biodiversity loss, which often can only be achieved through policy changes. This shortcoming is in part due to CRI efforts not often addressing the vital role that governments play in allocating, regulating, and managing the use of marine/freshwater resources (Buchanan et al. 2019). Therefore, there is an opportunity for new approaches that aim to address systemic barriers at scale while engaging seafood sector stakeholders broadly in improvement efforts, as complementary to CRI approaches.

Jurisdictional Initiatives for the Seafood Sector

In recent years, new jurisdictional approach (JA) frameworks have been developed to drive improvements at scale for environmental challenges in terrestrial commodities such as soy, palm oil, and timber (FAO 2005, FAO 2010, Fishman et al. 2017, Boyd et al. 2018, CI 2018, Boshoven et al. 2021). JAs for terrestrial commodities have been defined as "an integrated landscape approach that aims to reconcile competing social, economic and environmental objectives through participation across stakeholders and sectors, implemented within governmental administrative boundaries, and with a form of government involvement" (CI 2018). These initiatives have restricted themselves to national and sub-national political jurisdictions and have provided added value to credible certification efforts by addressing not only environmental but also additional

social and economic barriers to sustainability at a jurisdictional level or within the boundaries of a management system. Noting the successes in applying JAs to terrestrial commodities, recent efforts have focused on evaluating the applicability of these approaches to seafood commodities.

Fisheries and aquaculture production raise new opportunities and challenges for the application of JIs. The mobile and transboundary nature of many wild fish species often confounds JIs from a fishery management perspective, as well as in terms of stakeholder behavior. In aquaculture, the interconnectivity of open (e.g., cages and pens) and semi-closed (e.g., ponds and raceways) production systems that rely on common water bodies creates the need for coordinated effluent and disease management, which can also influence stakeholder behavior and complicate JIs. Another key difference influencing the industry-level approach outlined in this document is linked to the realities of most seafood sectors and supply chains. In terrestrial landscapes with multiple commodities planted together (or in rotation), largely sold to a single buyer, and with readily available geospatial land-use monitoring tools, different models focused on multiple commodities in a region are possible.

We define seafood jurisdictional initiatives (JIs) as place-based initiatives in key seafood commodity-producing regions that utilize policy and market-based approaches to drive holistic improvements in seafood production at relevant ecological and political scales (Kittinger et al. 2021; Figure 1). JIs aim to achieve positive environmental, social, and economic outcomes in seafood production, such as achieving environmentally sustainable harvesting practices, promoting equity and safe and decent working conditions, and enhancing the economic profitability of those involved. Through the application of ecosystem-based management (EBM), JIs also seek to manage, restore, and/or protect critical habitats, threatened species, and biodiversity by addressing cumulative impacts, as well as to increase ecosystem and climate resilience. The success of JIs relies on a robust and inclusive multistakeholder dialogue and collaboration to align goals and incentives among government, market, and producer actors, and with local communities and Indigenous peoples (IPs).

Figure 1. Jurisdictional initiatives (JIs) simultaneously utilize governance reform and market-based approaches to drive holistic improvements in seafood production at a jurisdictional scale. By combining these approaches, JIs can deploy the considerable resources and innovation of the private sector and the regulatory authority of governments to drive seafood sustainability across entire production geographies.

Seafood JIs aim to initiate or accelerate more holistic policy-level approaches to private-sector seafood interventions across a whole region or jurisdiction. While these JIs may not be able to solve all ecosystem-level sustainability challenges on their own, by engaging with industry, government, local communities and IPs, and nongovernmental organizations (NGOs), and within the context of the larger regional social and ecological realities, the JI process will begin to engage a wider set of necessary actors and contextualize for the industry those larger limits of the seascape. The reality is that success in achieving the ultimate outcomes and lasting systemic change may require patience, perseverance, and long-term financing.

These initiatives are designed to be long-term engagements that drive systemic changes at ecologically and politically relevant scales and rely on long-term efforts such as policy reform, public-private partnerships, and trust-based community engagement. As such, JIs can be particularly effective at driving alignment and collective action by government, IPs, local communities, the private sector, and civil society groups toward a shared vision and agenda for seafood production across a seascape.

JIs are not intended to be separate from existing government-led fisheries management frameworks for a particular geography and jurisdiction. JIs are instead seeking to address the

siloed way in which these policy efforts have oftentimes been implemented to date, with limited engagement by market and industry actors, resulting in slow adoption of best practices for seafood production. In Indonesia, for instance, the emergence of JIs was the result of a national recognition of the need to adopt a multistakeholder approach and the weaving together of multiple international initiatives to address deforestation, including the provision of financial and market-based incentives and strengthening Indigenous rights (Seymour et al. 2020).

Existing fisheries management and stakeholder consultation efforts that are being led by governments should similarly be incorporated within multistakeholder JIs' efforts to address system needs. In certain cases, these consultations may include broader jurisdictional ocean governance efforts, such as government commitments under the Global Biodiversity Framework and delivery of the 30x30 ocean protection agenda. If JI partners collectively agree to create new marine protected areas (MPAs) as part of the initiative, then a marine spatial planning (MSP) process should be undertaken to determine where and how to do so in a manner consistent with the objectives of the JI. The potential costs and benefits of new MPAs should be adequately assessed, and innovative mechanisms should be designed to alleviate potential losses incurred by JI participants, including by the seafood industry. The latter will help ensure that incentives among the pertinent public and private stakeholders are aligned, enabling collective action in securing ocean protection and holistic seafood production improvements at scale.

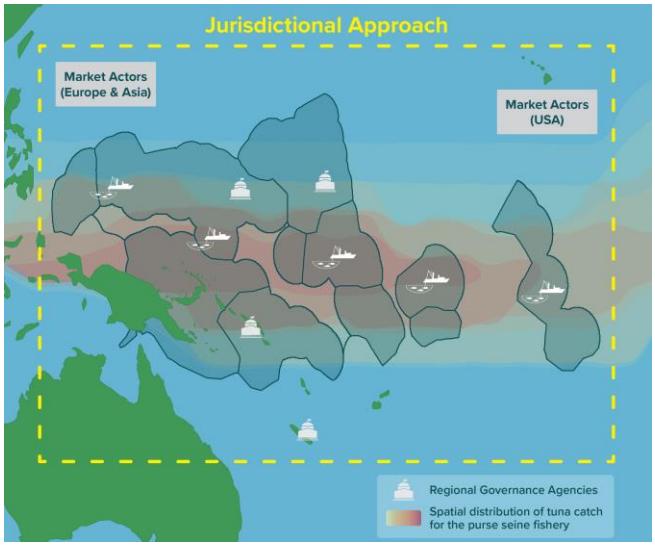
Given the central role envisioned for government in the design of a JI, a key barrier to long-term success is the inevitability of government turnover and the resulting change in policy priorities. Mechanisms should therefore be embedded in the initiative's design that insulate it from political shifts—for instance, developing a long-term financing strategy that provides sufficient resources for the long-term implementation of JIs or securing buy-in from leadership in the technical and regulatory agencies that are less susceptible to political shifts.

Producers, governments, and NGOs are accelerating efforts to develop and implement JIs to support seafood sustainability at scale (Box 1). Many of these initiatives are early iterations of terrestrial JA efforts.

Box 1. Case Studies: Advancing seafood jurisdictional initiatives (JIs)

1.1 Fisheries:

One of the most notable examples of a JI for large-scale fisheries comes from the Parties to the Nauru Agreement (PNA) in the Western Central Pacific Ocean (WCPO), wherein eight Pacific Islands' governments partnered to create a new tuna management jurisdiction and regime that extended across most of the area where the purse seine tuna fishery occurs (policy-based approaches at a jurisdictional scale). The PNA member countries subsequently obtained Marine Stewardship Council (MSC) certification for the fishery and then developed joint ventures with private-sector partners to commercialize tuna coming from the new "verified sourcing area" (market-based approaches at jurisdictional scale). The latter efforts can be distinguished from traditional industry-led certifications, ratings, and improvement (CRI) efforts in a number of ways.



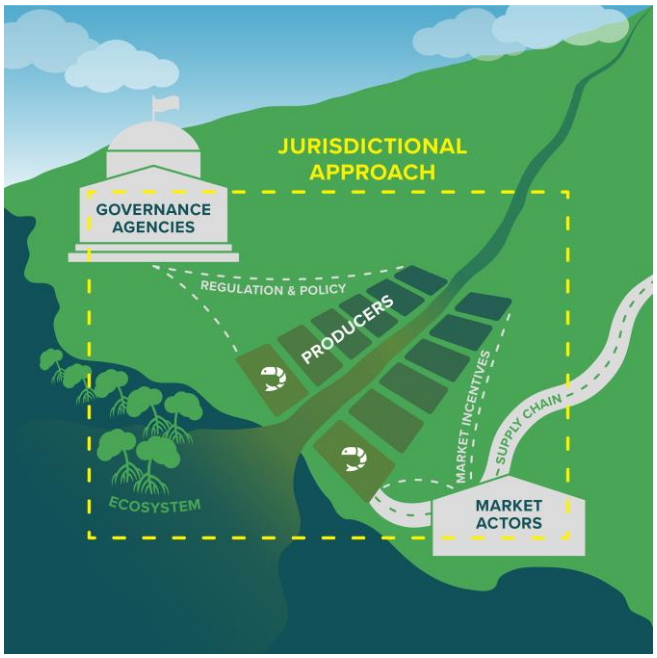
First, the creation of the PNA was led by governments that had the jurisdictional authority to establish new policies, rules, and regulations. The latter governance mechanism was designed to achieve improved triple-bottom-line outcomes prioritized by the Small Island Developing States (SIDS) where the fishery occurs. As a result, the new scheme established requirements that all purse seine vessels fishing in the PNA area had to comply with, such as restrictions to fishing in certain high seas pockets, seasonal bans on fish aggregating devices (FADs), and in-port transshipment requirements for monitoring, among others. Second, the jurisdictional scale of the PNA management area was designed to encompass most of the ecological distribution of skipjack tuna stocks, thereby ensuring that the regulatory requirements would apply to all fishing vessels operating in most of the area where fishing occurs. The latter is fundamentally different from many industry-led CRI efforts, which are restricted to the vessels of participating companies; as such, traditional CRI initiatives are susceptible to "free riding" by other fishery participants in the same areas, who are not engaged in CRI efforts, leading to leakage of benefits. Industry-led CRI efforts can also be impaired by limited government participation and leadership, which are needed to establish a regulatory framework that ensures ecosystem-based management across an entire production geography. Furthermore, the scope of industry-led CRI objectives is oftentimes narrower, focused on ensuring the environmental sustainability of a fishery rather than achieving triple-bottom-line outcomes. The PNA case study again illustrates how a broader set of policies can be implemented to achieve socio-economic benefits beyond the scope of certifications, such as through their catch retention requirement, ensuring that tuna catches that would otherwise be discarded at sea are instead landed or transshipped to meet local food security objectives.

While there remain challenges associated with management of the PNA fishery, including limitations in monitoring and enforcement that lead to violations of the agreement (Yeeting et al. 2018), the creation of the PNA scheme has nonetheless yielded undeniable environmental and socio-economic benefits for the purse seine fishery and for Pacific Island peoples. The stock status of these commercial tuna species in the WCPO, for instance, is one of the most sustainable on the planet (Brouwer et al. 2018, ISSF 2023). The revenues generated from the purse seine industry for the nine participating island nations have also

increased from US$60 million in 2010 to close to US$500 million in 2018 (PNA 2019). The financial in-flows, derived primarily from daily access fees levied on vessels who wish to fish PNA waters, provide a long-term financing mechanism to fund the regional JI scheme. The PNA management regime was also designed to enhance the climate resilience of member countries through the Vessel Day Scheme (VDS) trading mechanism (Aqorau et al. 2018). The latter array of benefits illustrates the success of PNA members in integrating effective governance systems, together with market-based approaches within a politically and ecologically defined jurisdiction, to achieve holistic improvements (Kittinger et al. 2021).

1.2 Aquaculture:

A JI for shrimp aquaculture is currently being developed in Banyuwangi, East Java, Indonesia. The initiative focuses on enabling shrimp farms across the region to improve shrimp farm performance to match international environmental and social standards. Numerous aquaculture farms occupy multiple watersheds in the project region, resulting in these farms being ecologically connected through shared water resources and dependent on a range of ecosystem services. Disease outbreaks, pollution problems, and other unsustainable practices represent shared threats that require farmers to work together to reduce risks. A JI is currently underway in this area to incentivize the adoption of responsible practices through a zonal management approach, implemented collaboratively by producers, government, supply chain companies, universities, and nonprofit organizations (Kittinger et al. 2021).



The Food and Agriculture Organization (FAO 2021) also highlights the example of Estero Real Delta in Nicaragua, a water body in which juvenile wild-caught shrimp harvesting and local farmed shrimp operations are engaged in holistic interventions around alternative livelihoods to improve economic and environmental outcomes of the farmed shrimp sector.

International market actors are also advancing significant commitments to support the development of these JIs. In 2021, the UK supermarket chain Tesco introduced a new "Seascape" sourcing approach, a similar concept to JI, to marine sustainability, aiming to manage whole marine ecosystems in a healthy, productive way. Through this new approach to tuna sourcing, developed in partnership with WWF, Tesco will work with suppliers and others across the industry to implement a road map to transition sourcing to only fisheries with an EBM approach by 2030 (Seafood Source, March 2021).

Despite these successes, the JI concept is still nascent for fisheries and aquaculture production systems, and there is need for greater clarity around the key elements of successful JIs for seafood. Guidance for practitioners or companies is also needed to clarify what makes JIs for fisheries and aquaculture impactful and credible and how to measure progress. For these

initiatives to become more mainstream, it is critical to define what a credible JI for seafood should encompass to help ensure the greatest impact and long-term viability.

Elements of Successful Jurisdictional Initiatives

As summarized in Figure 1, JIs utilize policy- and market-based strategies at relevant political and ecological scales to achieve social, economic, and environmental objectives in a seafood production system. In addition, these initiatives are locally driven and locally defined through multistakeholder forums, providing an opportunity to improve inclusivity and democratize planning and management. This allows for engagement of smallholders who may not participate in certification due to cost and capacity constraints. The latter considerations, as well as other key elements needed for JIs to be successful and credible, are summarized below (Figure 2). NGO partners can help other stakeholders determine which elements should apply within a specific JI.

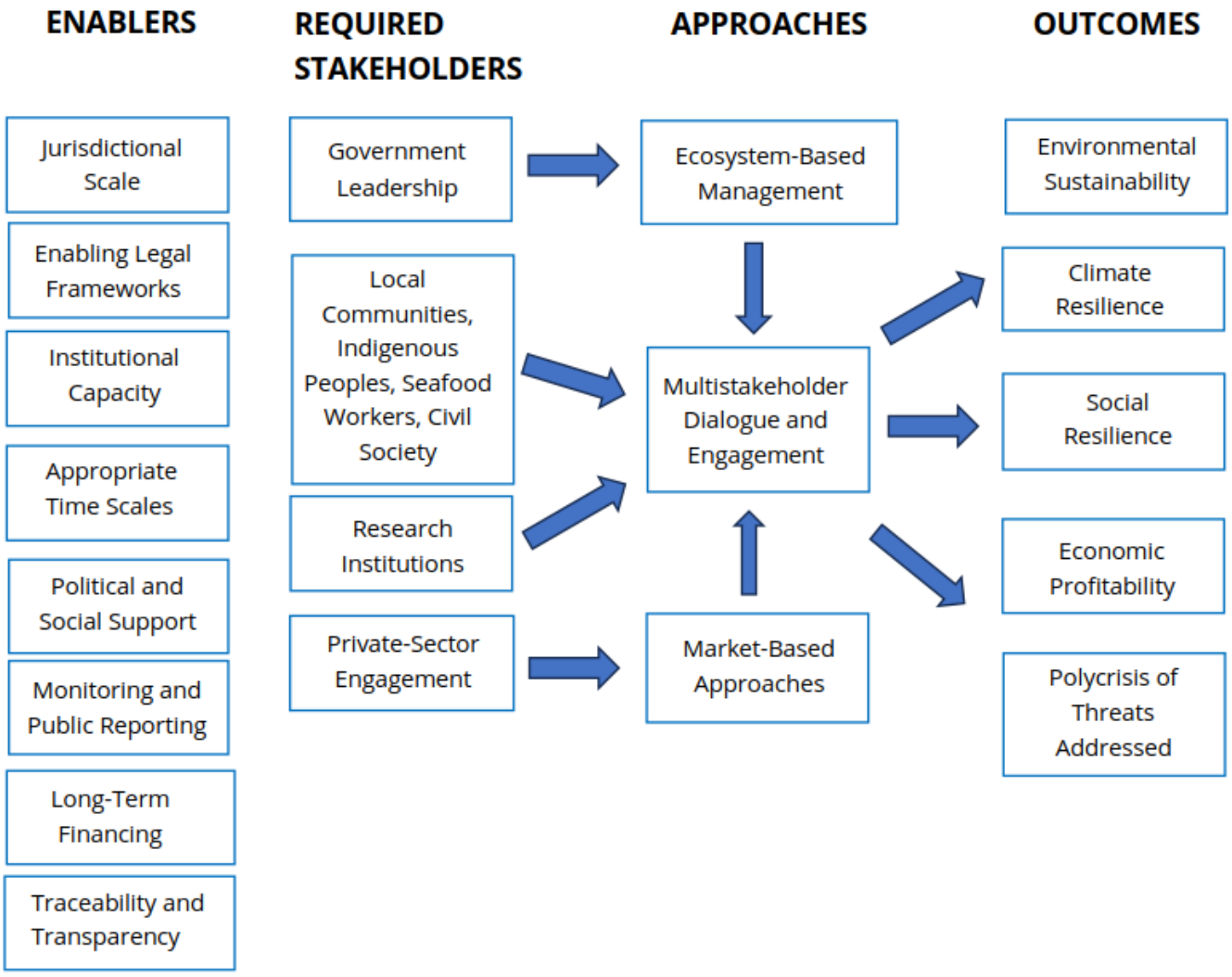


Figure 2. Elements of successful jurisdictional initiatives for seafood.

Enablers:

- Jurisdictional Scale: JIs oftentimes occur at different scales than traditional CRI efforts. The appropriate political and ecological scale of a JI should be determined by the highest-level political jurisdiction that is needed to address the key sustainability challenges (environmental, social, economic) identified.
- Enabling Legal Frameworks: An enabling framework of laws, conventions, regulations, and policies exists, or can be developed, at the appropriate scale to facilitate the design and implementation of JIs.
- Institutional Capacity: Adequate institutional frameworks and capacity are present, including personnel, infrastructure, research, and equipment, to make the relevant governance structures (governmental, commercial, and civil) work effectively and efficiently.
- Appropriate Timescales: Timescales of successful JIs and ecosystem approaches to fisheries (EAF)/aquaculture (EAA) often range from eight to 20 years (Brugère et al., 2019). This is due to the focus on policy change, participatory and multistakeholder processes (MSPs), and ecosystem-level outcomes reliant on collective impact. The complexity and duration of JIs require sustained engagement and investment to achieve systemic change; therefore, local, and global expectations across all types of stakeholders need to be thoughtfully managed to create achievable goals and timescales and help ensure lasting results. These timescales also must be thoughtfully considered when discussing recognition, claims, and incentives.
- Political and Social Support, Including Local Community Engagement: Resilient processes are needed in the design of the initiative to ensure broad political support across levels of government (local, sub-national, national) and strong shared ownership by the private sector and civil society. This will help safeguard the initiative against political change. A strong narrative that articulates the initiative's goals, needs, and early successes is crucial to building support across stakeholders. Engagement with all who may be impacted, including IPs and local communities, is critical.
- Monitoring and Public Reporting: A public, multistakeholder reporting framework for communicating accessible information on a regular basis about outcomes achieved, key partners who contributed, and future actions to be taken is key for transparent dialogue. The latter will include a set of metrics to enable regular assessment of improvements against impact outcomes on a jurisdictional scale (beyond the individual entity, farm, or supply chain level).
- Long-Term Financing: A long-term financing strategy to cover the multimillion-dollar cost is essential. Early identification of various types of long-term financing models is needed to support and sustain a JI at its various stages. Nearly all JIs rely on a blended finance approach. Terrestrial JI implementers have noted that cost estimates for JIs are nearly impossible to make, as these initiatives vary greatly depending on the scope and approach. Landscape Finance Lab, an organization who supports practitioners in structuring and launching landscape-scale initiatives, such as JIs, estimates approximately US$2.5 million per landscape over five years to cover their costs for capacity-building, baseline studies, technical assistance, and seed funding for feasibility studies. This cost estimate is only for

Landscape Finance Lab's support; additional coordination, resource mapping, etc., across the entire JI requires additional support.

- Traceability and Transparency: A set of metrics to enable regular assessment of product traceability. (See *Section 1.8: Traceability and Transparency* in *Guidelines for Developing Jurisdictional Initiatives for the Seafood Sector: Overview* for additional information.)
- Public-Private Collaboration: Public-private collaboration is needed to develop and support necessary research for development and monitoring of metrics, generation of appropriate communication, and innovation.

Required Stakeholders:

- Government Leadership: Leadership from government is critical, and staff engagement at the sub-national level is often useful, supported by national-level commitments or initiatives. To ensure durable change, it is important to obtain political commitment and leadership of the initiative across various levels of government (local to national). Successful JIs often have sub-national implementation plans linked to national policy initiatives and embed the work in government operations. In some situations, other partners may be the initial driving force who bring government to the table. But to have a successful JI, the government needs to participate.
- Local Communities, Indigenous Peoples, Seafood Workers, Civil Society: It is important that local communities and IPs are engaged in the scoping and co-design to ensure that their rights are upheld, and their needs are heard. On-the-ground coordination and implementing partner(s) are needed to support management of the JI and its activities, including coordination of a multistakeholder entity.
- Research Institutions: Research institutions conduct the scientific research necessary to help inform management decisions. These institutions also can play an important role in sharing information and connecting with local communities to help ensure that local needs are addressed, and decisions are made from a common understanding among stakeholder groups.
- Private-Sector Engagement: Long-term commitments of private-sector actors throughout the supply chain (e.g., from producers to processors to retailers) are crucial for project success, given the dominant role the market plays in driving change in the seafood sector. Some actors may join the effort informally to engage with regional suppliers and reduce risks, while others may seek more formal involvement.

Approaches:

- Ecosystem-Based Management: JIs aim to achieve an adaptive, ecosystem-based, and climate-resilient approach to management. While a single industry and its stakeholders may not have the ability to achieve EBM alone, a JI will engage holistic levers and other important actors needed to ultimately achieve EBM. For additional information about the EAF, please reference the Food and Agriculture Organization (FAO) e-learning academy, including guidance for policy-makers, NGOs, and other practitioners about why, when, and how to use the EAF-Implementation Monitoring Tool (EAF-IMT) (FAO 2010; FAO 2022).
- Multistakeholder Dialogue and Engagement: Success depends on robust and inclusive stakeholder dialogue and engagement during scoping, design, and implementation.

Stakeholder interests should be sufficiently aligned to develop shared goals. To ensure success, we recommend that the main parties involved in the initiative document the degree of engagement and buy-in by different stakeholders, such as by signing a Memorandum of Understanding (MOU) that defines the specific roles and responsibilities of each entity so that expectations are clear from the outset about the objectives and the role that each group plays. For additional guidance, see the FAO's recent guidance on how to design and secure multistakeholder collaboration to address environmental, social, and economic issues in food systems (FAO 2023).

- Market-Based Approaches: Market-based approaches comprise a wide array of strategies focused on generating incentives along the supply chain that favor sustainability (Jacquet et al. 2009, Sutton 1998, Murphy E.L., et al. 2021). The latter approaches are traditionally driven by the private sector and focus on encouraging sustainable behavior through market signals. Certification is a prominent example that has effectively promoted fishery sustainability due to its inclusion in the sourcing requirements of large retailers in Europe and North America.

Outcomes:

- Environmental Sustainability, Including Ecosystem, Climate, and Biodiversity Resilience: Goals to secure sustainable resource use through the application of EBM. As a result, JIs also seek to manage, restore, and/or protect critical habitats, threatened species, and biodiversity by addressing cumulative impacts, as well as to increase ecosystem and climate resilience.
- Social Resilience: Goals to help address a variety of social issues, including equity, community well-being, human and labor rights, safe and decent working conditions, and local (including Indigenous) community rights (including access rights) and engagement.
- Economic Profitability: Goals to help enhance the economic performance of a seafood production system, including by maximizing biological productivity, enhancing operational efficiency, and/or increasing market value (Holmes et al. 2014). Coupled with equity and inclusivity goals, economic profitability should be inclusive of local fishers, workers, and suppliers, enhancing worker and community well-being throughout the supply chain.
- Polycrisis of Threats Addressed: A JI aims to address multiple risks in fisheries and aquaculture that would otherwise lead to compounding negative impacts.

Claims made by JI stakeholders as a whole and/or individual participating entities should be appropriate to the phase of the initiative as well as verifiable. Credible and robust verification of monitoring, evaluation, and progress against goals is critical for ensuring the impact of the initiative's activities. (See *Section 1.6 Claims* and *Section 1.7: Monitoring, Reporting, and Verification* in *Guidelines for Developing Jurisdictional Initiatives for the Seafood Sector: Overview* for additional information.)

Section 2. How to Implement Jurisdictional Initiatives

This section is designed around Figure 3 and provides guidance about the main steps in scoping, co-designing, and co-implementing JIs for the seafood sector.

- The Scoping Step involves bringing stakeholders together and understanding the context in a seafood production system.
- The Co-Designing Step involves engaging stakeholders to diagnose the environmental, social, and economic performance of a seafood production system and create a shared vision for success with specific triple-bottom-line improvement goals for that system. The co-design step will also require that initiative partners agree on an improvement action plan with appropriate metrics to measure progress and develop a monitoring framework to track progress.
- The Implementing Step involves implementing the policy and private-sector interventions outlined in the action plan, conducting regular monitoring and verification of improvement results, and public reporting of those results to ensure transparency.

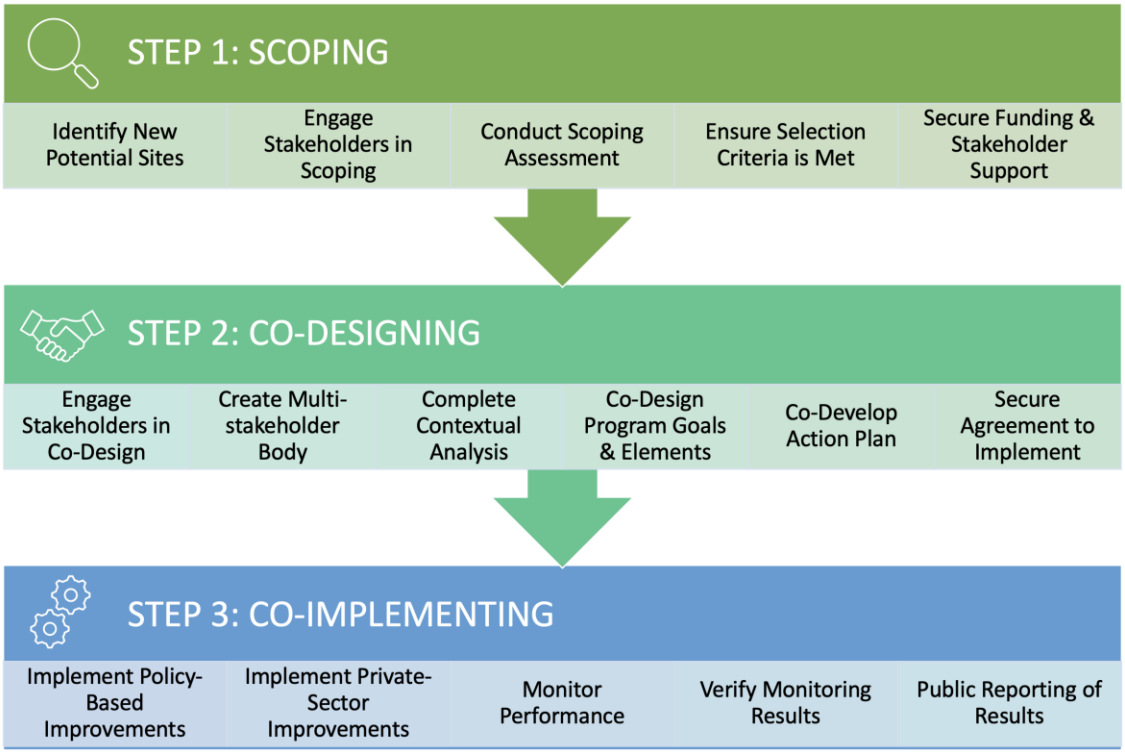


Figure 3. Process to create new seafood jurisdictional initiatives.

JIs need a robust design that supports credibility—to reinforce strong collaboration among diverse stakeholders, to support and incentivize the behavior and practice shifts necessary for driving change, to provide verifiable data that triggers the continued release of resources such as funding, and to allow for continued evaluation and adaptation to ensure long-term targets are met. While JIs will differ, they must fundamentally be focused on addressing key environmental, social, and production issues in the region.

Step 1. Scoping

Scoping of JIs often involves bringing stakeholders together and understanding the context in a seafood production system, including the following key steps: (1.1) Identify new potential JI sites, (1.2) Engage stakeholders in scoping (1.3) Conduct a scoping assessment, (1.4) Ensure selection criteria are met, and (1.5) Secure funding and stakeholder support for co-design. Each of these steps is described in further detail below.

1.1. Identify new potential jurisdictional initiative sites

JIs have traditionally been initiated in one of three ways (Table 1):

1. A political leader prioritizes the development of these types of initiatives to achieve the government's goals in an area under its jurisdiction.
2. Private-sector actors commit to and/or invest in supporting the development of JIs to increase their supply chain resilience.
3. NGOs, civil society, donors, or other "backbone" organizations initiate and fund the planning and design of JIs based on observed needs in an area, including ecosystem and local community resilience.

Table 1. Case studies illustrating different ways in which jurisdictional initiatives (JIs) for wild-caught tuna have been initiated.

Political Leadership	Private-Sector Commitment	NGO Coordination
As highlighted in Section 1, one of the most notable attempts to implement a JI for large-scale fisheries comes from the Parties to the Nauru Agreement (PNA). The cooperation between eight Pacific Island governments was born out of a need to adapt the inadequate tuna management schemes at the time as well as a recognition that these tuna resource-owning countries could derive greater economic benefits through cooperation on policy reform. Since its establishment, the PNA agreement has benefited from considerable political buy-in and ownership by government partners and has resulted in significant	In 2021, the UK supermarket chain Tesco introduced a new "Seascape" sourcing approach (a similar concept to JI) to marine sustainability to ensure whole marine ecosystems are maintained in a healthy, productive way. Through this new approach to tuna sourcing, developed in partnership with WWF, Tesco will work with suppliers and others across the industry to implement a road map that leads to sourcing only from fisheries with an ecosystem-based management (EBM) approach by 2030. The new Seascape approach, which mirrors the landscape approach adopted in the Tesco UK Zero Deforestation Soy Transition Plan (2021), has	In 2022, the French overseas territory of New Caledonia and the Pacific Island nation of Fiji initiated JIs for their longline tuna fisheries. The initiatives in each country were scoped following a set of engagements by Conservation International (CI) with the domestic industries that were focused on highlighting how engaging in a JI could be beneficial to the local industry. A Memorandum of Understanding (MOU) was signed with the industry in each country (Seafood Source, 2023), which subsequently paved the way for an expanded partnership with government authorities. In New Caledonia, the JI that is being developed now includes

economic returns to these countries, from US$60 million in 2010 to about US$500 million in 2019. More recent examples of political leadership in the scoping of seafood JIs can be found in the Cook Islands, where Prime Minister Henry Puna convened public, private, and civil society stakeholders to develop a national tuna "gold standard." The latter commitment from the highest level of political leadership prompted the development of a draft national tuna policy through a collaboration among the national technical agencies and ministries, private-sector partners, and civil society groups (Cook Islands News 2019). The policy and standard are still in development but, once implemented, would set minimum environmental, social, and economic sustainability requirements for all vessels operating within the exclusive economic zone (EEZ).	been specifically designed to align with and build on existing tools and guidelines already widely used by the industry, including the guidelines of the Global Tuna Alliance (GTA), the NGO (Nongovernmental Organization) Tuna Forum, and the Marine Stewardship Council (MSC) (Seafood Source 2021).	100% of the local industry, which will ensure that all tuna fisheries operating within the political jurisdiction of New Caledonia's EEZ meet the highest standards required by high-value tuna markets. In Fiji, the partnership involves the Fiji Fishing Industry Association (FFIA), CI, WWF, and the Ministry of Fisheries, which will promote the integration of policy and market-based strategies to improve the economic, environmental, and social performance of tuna fisheries at a jurisdictional scale.

The examples in Table 1 provide a blueprint for how new potential JI sites can be identified, such as the presence of, or ability or need to harness government and/or producer or supplier support at the appropriate ecological and political scales. Support from the government, the private sector, civil society, and donors is critical for the successful design and implementation of effective JIs, although endorsement by each of these partners is likely to be secured at different stages in the project. The availability of support from at least two of these stakeholder groups during the Scoping phase is critical and can be used as selection criteria to identify new potential sites (Box 2).

Box 2. Selection criteria for scoping new jurisdictional initiatives (JIs)

Political Will:

- Government leaders or other decision-making authorities have expressed interest in strengthening environmental sustainability, social responsibility, and sustainable development within a seafood production area. These leaders have the institutional capacity, resources, and willingness to partner to achieve this vision. Several JIs have started with the articulation and endorsement of a high-level vision for sustainable development in the jurisdiction by its elected leader (Seymour et al. 2020).

Private-Sector Interest:

- Local producers, processing facilities, and/or exporters have expressed interest in designing a seafood JI. Alternatively, international importers and end buyers are currently sourcing from the geography and/or have expressed tangible interest in directly supporting ecosystem-focused environmental sustainability and/or improving the social welfare of fishers/farmers, surrounding communities, and workers in the supply chain.

Financial Opportunity:

- Public, private, and/or philanthropic financing drives the initial development of these types of initiatives. Long-term financing opportunities beyond philanthropic sources should also be leveraged as the JI moves into the Implementation phase. The Parties to the Nauru Agreement (PNA) scheme, which was able to capture significant revenues from daily access fees levied on vessels who wished to fish PNA waters, provides a compelling example of how long-term financing mechanisms can be established to fund JIs. (See Box 1.)

Social Support, Including Local Champions, Indigenous Leadership, and/or Nongovernmental Organization (NGO) Coordination:

- The presence of strong local support and/or NGO leadership in developing JIs is based on the ecological and/or socio-economic importance of a particular area.

Biological Significance:

- Area is of national, regional, or international significance in terms of its biological attributes (Atkinson et al. 2011). For JIs focused on one or two commodities, these specific seafood resources must be of particular significance to government and industry participants since these stakeholders will need to engage in the design and implementation of policy- and market-based improvement strategies over an extended time horizon. Additional elements of biological significance that may motivate other stakeholders include biological diversity, important ecosystem features, and iconic species (for instance, totemic shark species for local Indigenous groups).

Need for Improvements at a Jurisdictional Scale:

- The improvements needed across a jurisdiction cannot be addressed completely through traditional market approaches, such as certifications and rating schemes, or

traditional conservation, such as protected area designation. Noting the range of existing certifications and standards that exist for sustainable seafood, project developers should identify sites where traditional approaches alone are not well suited to achieve the desired improvements and sustainability outcomes. (See *Section 1.2: When to Implement Jurisdictional Initiatives Versus Other Approaches* in *Guidelines for Developing Jurisdictional Initiatives for the Seafood Sector: Overview* and Kittinger et al., 2021, for additional information.)

1.2. Engage stakeholders in scoping

Developing a JI is an inclusive process designed to ensure that a wide variety of stakeholders with varying perspectives are an integral part of the project from start to finish. This helps guarantee that activities are appropriate for the sociopolitical context of the fishery or aquaculture farms in the region.

Noting the need for support from one or more of the key stakeholders described in Box 3 below, project developers should engage a range of stakeholders in scoping new potential JIs. Participants will vary depending on the nature of the project but will often include:

- government officials
- fishers (industrial, artisanal, Indigenous, recreational)
- aquaculture producers (small, medium, and large) and producer groups
- labor associations/unions and/or fisher/farmer/worker-led organizations
- other supply chain members and associated workers (e.g., hatcheries, feed mills, traders, processors, retailers, and importers/exporters)
- fishery managers/aquaculture regulators
- customary and Indigenous groups/local communities within the ecosystem
- academics, scientific and/or technical expertise
- environmental NGOs and other civil society organizations

The roles and responsibilities of each stakeholder group will vary by JI, depending on its unique circumstances. The JI coordinator role, for instance, responsible for engaging and convening the various stakeholder groups in the early stages of scoping a new JI, could be played by governments, NGOs, or private-sector actors, depending on their level of interest, influence, and capacity. While NGOs can oftentimes fill this role during the early stages of JI development, governments should eventually adopt the coordinator functions as part of the efforts to weave together the various management and stakeholder consultations focused on improving seafood production at a jurisdictional scale.

Effective strategies for engaging stakeholders will also vary but include developing outreach materials, hosting workshops, and—critically—building out relevant incentives for each stakeholder group. Understanding the incentives of each group will help the JI coordinator determine the most effective and credible ways to bring market-based leverage and actors into the JI framework for that geography. Some stakeholders may not join the effort or may take time

to become engaged, and this should be identified and factored into outreach and planning strategies.

1.3. Conduct a scoping assessment

Once new potential sites have been identified, project developers should conduct a scoping assessment to evaluate whether the key enabling conditions (Figure 2) are in place or could be created to support the successful co-design of a JI.

The main findings of the scoping assessment could be captured in a relatively succinct document that provides the following:

- Brief description of the target geography and characteristics of the seafood production system.
- Summary of the key systemic environmental and socio-economic issues that have been identified in the seafood production system, including through the stakeholder engagement process. These key issues should focus on adoption of best management practices, impacts of the industry on biodiversity and habitat loss in the ecosystem, threats to people's rights and livelihoods, and risks around climate instability.
- Summary of the specific environmental and social goals the potential seafood JI would seek to achieve, ensuring these respond to local priorities and conditions.
- Summary of the availability of support from key stakeholder groups, including the presence of political will, private-sector interest, financial opportunity, local champion leadership, and/or NGO coordination.
- Stakeholder group summary that includes a summary of discussions around incentives and motivations for each group, as well as how those various incentives could line up with credible requirements and systems for monitoring and evaluation, traceability, and other types of verification and assurance needed to build impactful markets-based leverage using a JI.
- Explanation of why the initiative builds on, includes, or offers more opportunities to achieve environmental and social goals than other traditional markets-based FIPs/AIPs or certification pathways that have been used to leverage change. (See *Section 1.2: When to Implement Jurisdictional Initiatives Versus Other Approaches* in *Guidelines for Developing Jurisdictional Initiatives for the Seafood Sector: Overview* for additional information.)

Desk-based reviews, as well as expert and stakeholder interviews, can be used to guide the drafting of the scoping assessment. The tools outlined in Step 2.3 can also be used to inform the scoping assessment; however, project developers should not seek to address all the elements highlighted by those tools. The level of analysis required to scope, co-design, and ultimately implement a seafood JI will include a series of steps that become increasingly more detailed. The scoping assessment can be used as the basis for developing a more complete diagnostic assessment of the seafood production system under Step 2.3 once all the activities under Step 1 (Scoping) have been completed.

1.4. Ensure selection criteria are met

Following completion of the scoping assessment, project developers should ensure that at least two or more of the selection criteria for scoping new JIs are met (Box 2), including:

- political will
- private-sector interest
- financial opportunity
- social support, including local champions, Indigenous leadership, and/or NGO coordination
- biological significance
- need for improvements at a jurisdictional scale

Additional enabling conditions for consideration are highlighted in Figure 2, including enabling legal frameworks and institutional capacity. At this stage in the process, JI project developers should use all the knowledge gathered during the Scoping phase to determine which of the above selection criteria are most important for the specific JI under development and should therefore be mandatory in order to proceed to the next step.

1.5. Secure funding and stakeholder support for co-design

Prior to initiating the co-design of a seafood JI (Step 2), we recommend the main parties involved in the Scoping phase sign an MOU or similar agreement that outlines the overall vision for the JI and defines the specific roles and responsibilities of each entity. This ensures clear expectations from the outset about the role each group plays. This may not be possible in all scenarios.

Furthermore, project developers should aim to secure funding for the co-design process of the initiative, which typically comes from philanthropic sources or local governments who are leading. Long-term financing opportunities beyond philanthropic sources should also be explored, although the latter will become more important as JIs move into the Implementation phase. The PNA scheme, which was able to capture significant revenues from daily access fees levied on vessels who wished to fish PNA waters, provides a compelling example of how long-term financing mechanisms can be established to fund JIs. (See Box 1.)

Terrestrial JI implementers have noted that cost estimates for JIs are nearly impossible to make, as these initiatives vary greatly depending on the scope and approach. Landscape Finance Lab, an organization who supports practitioners to structure and launch landscape-scale initiatives, such as JIs, estimates approximately US$2.5 million per landscape over five years to cover their costs for capacity-building, baseline studies, technical assistance, and seed funding for feasibility studies. This cost estimate is only for Landscape Finance Lab's support; additional coordination, resource mapping, etc., across the entire JI requires additional support.

Step 2. Co-Designing a Jurisdictional Initiative for Seafood

Often, co-designing a seafood JI involves engaging stakeholders to understand the context more fully in a seafood production system, creating a shared vision for success, and determining

improvement goals for that system. Partners then agree on an improvement action plan, decide on metrics to measure progress, and develop a monitoring framework to track progress. As such, often, co-designing a JI involves the following key steps:

- 2.1. Engage stakeholders to participate in the co-design phase.
- 2.2. Create a multistakeholder body to lead program design and implementation.
- 2.3. Complete a contextual analysis that identifies key systemic environmental and socio-economic challenges in the seafood production system, and against which improvements and performance claims will be measured.
- 2.4. Co-design the initiative's goals and elements; this includes articulating a high-level vision and goals for the initiative, as well as defining meaningful, relevant metrics and key performance indicators (KPIs) to enable assessments of baseline performance and progress toward targets, milestones, and outcomes.
- 2.5. Develop a clearly defined, time-bound action plan that lays out steps to meet program milestones and outcomes. As part of these efforts, develop a detailed budget for activities to be implemented and secure funding. Finally, develop an effective monitoring framework, including data governance systems and protocols to credibly gather, store, analyze, and use data, and monitoring frequency.
- 2.6. Secure an agreement to implement the action plan, including by signing an MOU or similar. Project partners may also want to sign a code of conduct (rules of engagement) that outlines how the multistakeholder platform will address a range of issues that may arise, such as conflicts of interest, disagreements, and KPI development.

2.1. Engage stakeholders in co-design

Building on the stakeholder engagement efforts initiated in Step 1.2, the key actors should formalize their collaboration through the development of a multistakeholder body responsible for co-designing the main elements of the JI (Box 3). Engagement might include developing a communication plan with stakeholders who initially chose not to be directly involved in the JI.

Box 3. Roles and responsibilities in designing a jurisdictional initiative (JI)

Nongovernmental organizations (NGOs)/JI developers:

- Project developers should support the transparent development of a representative, multistakeholder platform to ensure strong and consistent participation by all pertinent stakeholders. The resulting multistakeholder body will be responsible for leading the program design and implementation.
- Project developers will oftentimes also lead the drafting of the contextual analysis, which identifies key systemic environmental and socio-economic challenges in the seafood production system.
- Project developers support co-design of market and policy-based strategies to address key deficiencies identified in the contextual analysis. For instance, project developers may need to lead trainings targeting industry partners to improve understanding of business dependencies and impacts on the region as well as to identify how best a business can affect change in a seafood production area.

Government:

- Relevant levels of government should actively participate in the multistakeholder body to design and implement the initiative. A political (e.g., Office of the Prime Minister) or technical (e.g., Ministry of Fisheries) leadership group within the group may also lead the coordination of the group.
- Relevant levels of government should support the development of a contextual analysis, providing data and insights that can help identify key deficiencies in the seafood production system. This might include data from monitoring systems or government-led modeling.
- Relevant levels of government should lead co-design of policy-based strategies to address key deficiencies identified in the scoping assessment.

Private sector:

- In the early JI stages, the fishing or aquaculture industry can support the development of a contextual analysis, providing data and insights that can help identify key deficiencies in the seafood production system. This may include collected data or any industry-led modeling or reports.
- Downstream companies can clarify what their market requests are for sustainability, helping to drive alignment across their seafood value chain and creating incentives to drive improvements within a production geography. Large market partners can also use influence and advocacy to bring together various parts of government with stakeholders to address issues at a jurisdictional scale (CI 2018).
- Private-sector partners across the value chain can then lead the co-design of market-based strategies and interventions to address key deficiencies identified in the scoping assessment, including by committing to the transformative potential of a JI by rewarding progress with preferential sourcing.

All:

- "*Companies, donors, and NGOs should support governments in those jurisdictions that have demonstrated commitment through an inclusive process and clear actions to reduce ecosystem impacts and improve sustainability of commodity production. As noted elsewhere, sustainability at the jurisdictional level is a difficult and long-term process. Implementing jurisdictional sustainability plans or 'road map' will be expensive, and government leaders willing to take on the challenge will need to see that their courage and commitments are being recognized and rewarded during the journey and not only at the end point. This is especially important if we hope and expect other jurisdictions to follow the leaders*" (CI 2018).

Local communities and/or Indigenous peoples (Ips):

- Local communities and/or IPs who are sometimes marginalized from traditional CRI efforts should support the development of a contextual analysis, providing data, traditional knowledge, and insights that can help identify key deficiencies and improvement priorities for a seafood production system.

2.2. Create a multistakeholder body

Project developers should support the transparent development of a representative, multistakeholder platform to ensure strong and consistent participation and collaborative decision-making by all pertinent stakeholders. Considerable resources are available that highlight

how to create multistakeholder engagement processes and decision-making bodies, including the FAO guidance about facilitating MSPs (Box 4).

Box 4. Food and Agriculture Organization (FAO) guidance on facilitating multistakeholder processes (MSP)

"An MSP is fundamentally about participatory decision-making and information sharing at the country level. Key stakeholders should be represented and decide what issues to focus on and what actions to take. MSPs range from simple processes such as one-off consultations to more complex ones such as multistakeholder networks and partnerships.

What are the benefits of MSPs?

- *Relevance: Local stakeholders best understand which activities are truly relevant to their needs and realistic in a specific context.*
- *Ownership and sustainability: Local stakeholders share information and jointly decide what actions to take. This leads to greater local ownership of activities and outcomes, which makes them more sustainable.*
- *Builds partnerships and alliances: Having a common goal strengthens partnerships and creates opportunities for dialogue and sharing resources.*

Tips for facilitating MSPs:

- *Designing the MSP: Key stakeholders should be involved in designing the MSP and coordinating the process.*
- *Selecting Participants: Conducting a Stakeholder Mapping exercise will ensure that you do not miss any important groups affected by the issue at hand. Select people at approximately the same level of authority and keep a gender balance. Suggested Tool: Stakeholder Mapping.*
- *Facilitation: Local facilitators should have prior training in facilitation techniques and use the local language. They should make sure women have a voice and that the meeting is truly participatory. FAO and similar organizations can support the process, but their role should be that of an observer or mentor rather than leading the MSP. Suggested Tool: MSP Facilitation Guidelines.*
- *Structure and setup: Having a permanent platform for multistakeholder consultations will ensure that the benefits of MSPs continue beyond the scope of the project or program.*
- *Process: During meetings, minimize long plenary presentations by experts and maximize group work and discussions. Different people should have the opportunity to take the floor and report back to plenary group. Suggested Tool: Socratic Questions.*
- *Common goal: Stakeholders often have different, sometimes even conflicting, goals and objectives. MSPs can be used to find common ground and build a shared vision for the future. Suggested Tool: Visioning."*

For additional guidance about the steps in setting up an MSP, see: fao.org/capacity-development/resources/practical-tools/multi-stakeholder-processes/en/

Ultimately, the multistakeholder body will be responsible for leading the program design and implementation. A strong collaborative platform that provides transparency, frequent communication, and continued coordination is necessary to keep the project on course and

ensure strong engagement across government, industry, local communities, and civil society sectors, which is necessary for success. Additional resources about how to set up multistakeholder platforms (Adekunle and Fatunmbi 2012) and potential challenges around these bodies (Faysse 2006) include the recent guidance by the FAO on how to design and secure multistakeholder collaboration to address environmental, social, and economic issues in food systems (FAO 2023). A particular emphasis should be placed on developing truly participatory decision-making mechanisms to ensure equity between smallholders and corporate or government interests.

2.3. Complete a contextual analysis that identifies key systemic environmental and socio-economic challenges in the seafood production system, against which improvements and performance claims will be measured.

Once a new potential JI has been scoped, ideally including securing funding and stakeholder support, project developers should conduct a complete contextual analysis to evaluate key socio-economic, environmental, cultural, and political contexts within which the initiative will be developed. The contextual analysis should identify key deficiencies in the seafood production system and provide insights into whether key enabling conditions are in place or could be created to support the successful co-design of JIs.

Identifying the most pressing environmental, social, and economic issues to be addressed in a seafood production system can be facilitated using various diagnostic tools. Credible seafood JIs are centered on identifying the environmental issues around habitat and biodiversity, as well as climate resilience and systemic social challenges in that region. We highlight various methodologies and tools below that can be used to identify key deficiencies and leverage points for improving the triple-bottom-line performance of seafood production systems.

While we are not prescriptive about which methodologies to use, we recommend project developers begin to highlight key issues using rigorous diagnostic tools recognized by their end buyers. For instance, if a target seafood commodity within a jurisdiction is intended to be sold to a retailer requiring products certified by the MSC, ASC, or Best Aquaculture Practices (BAP), project developers should at least utilize these assessment frameworks for environmental sustainability to help identify systemic issues across the jurisdiction. While certification standards are generally specific to the performance of an individual fishery or aquaculture farm, some indicators capture performance at the jurisdictional level, such as the effectiveness of national fishery management measures. Existing certification reports can be useful information sources and provide a level of verification of status against specific performance indicators that apply across the jurisdiction.

Note, however, the environmental certification standards and other internationally recognized certification and ratings schemes may not include all the considerations that are important to JI stakeholders (e.g., cumulative environmental impacts, climate change, and social responsibility). These tools and frameworks should be complemented with other tools to adequately assess local priorities tied to the desired ecosystem and social systemic challenges in the JI. The three

Performance Frameworks developed by the Certifications and Ratings Collaboration (2019) may provide a useful starting point to identify critical environmental and social issues that should be reviewed for wild-capture and aquaculture JIs.

Box 5. Diagnostic tools to identify key deficiencies in seafood production systems

<u>Fisheries</u>

Environmental Sustainability

- Project developers can utilize a range of diagnostic tools to identify key issues in fisheries. For fisheries with limited data availability, for instance, project developers could utilize the rapid assessment tool (RAT) highlighted on FisheryProgress to analyze the environmental performance of a particular fishery, including the management framework of which it is a part.
- For more robust assessments, particularly for jurisdictions that have key fisheries selling to markets with Marine Stewardship Council (MSC) certification as a sourcing requirement, project developers can utilize the MSC pre-assessment and MSC full assessment tools, preferably pulling from existing certification reports as these have been through an independent, third-party verified scoring process.

Social Responsibility

- The Social Responsibility Assessment Tool for the Seafood Sector (SRA) is a diagnostic assessment tool to assess the risk of social issues, identify areas in need of improvement, and inform the development of a work plan that includes actions toward social improvements. A portion of the SRA is used as the framework for fishery improvement projects (FIPs) to report on social performance on FisheryProgress.org. Note the Certification and Ratings Collaboration framework highlighted above has been incorporated into the SRA.
- Wild-capture fisheries can also benchmark their performance against internationally recognized certifications such as the Responsible Fishing Vessel Standard or the Fairness, Integrity, Safety, and Health (FISH) Standard for Crew for vessel or fishery-level improvements. Currently, there are no jurisdictional-level certifications.

Economic and Financial Resilience

- Value-Chain Mapping
- Cost-Benefit Analysis
- Financial Modeling and Business Case Development
- Economic pillar of the Fishery Performance Indicator (FPI) Assessment

Other Tools

- Ecosystem Approach to Fisheries (EAF) Toolbox
- Fishery Performance Indicators (FPI) Assessment
- FishPath
- Climate-Resilient Fisheries Planning Tool
- Framework for Integrated Stock and Habitat Evaluation (FISHE)
- Tuna Sourcing Issues Identification Checklist

<u>Aquaculture</u>

Environmental Sustainability

- Project developers can benchmark their jurisdictions to internationally recognized certifications or frameworks, such as Sustainable Fisheries Partnership's FishSource Framework.
- For more robust assessments, particularly for jurisdictions that have key aquaculture farms selling to markets with Aquaculture Stewardship Council (ASC) certification as a sourcing

requirement, project developers can benchmark against criteria in the ASC standard, preferably pulling from existing certification reports, as these have been through an independent, third-party verified scoring process.

Social Responsibility

- Project developers can benchmark their jurisdictions to internationally recognized certifications or frameworks, such as the ASC or Global Seafood Alliances Best Aquaculture Practices, for farm-level improvements. Currently, there are no jurisdictional-level certifications or frameworks.
- The SRA can also be used to assess social risk in aquaculture JIs.

Economic and Financial Resilience

- Value-Chain Mapping
- Cost-Benefit Analysis
- Financial Modeling and Business Case Development

The main findings from these analyses might be recorded in a document that builds on the scoping assessment completed under Step 1 and that ideally will include the following sections:

- Executive Summary
    - Briefly describe the target geography and characteristics of the seafood production system.
    - Briefly summarize the key deficiencies identified in the seafood production system, including through the stakeholder engagement process.
    - Briefly summarize the goals the potential seafood JI would seek to achieve, ensuring these respond to local priorities and conditions. The sectors and factors outside the focus of the JI that present risks to achieving stated goals should be noted along with the main ways in which they should be considered/engaged with from within the JI.
    - Briefly summarize the availability of support from the key stakeholder groups highlighted in Box 3, including the presence of political will, private-sector interest, financial opportunity, local champion leadership, and/or NGO coordination.
    - Explain why the JI presents a competitive advantage to address issues compared with traditional FIPs/AIPs or certification pathways. (See *Section 1.2: When to Implement Jurisdictional Initiatives Versus Other Approaches* in *Guidelines for Developing Jurisdictional Initiatives for the Seafood Sector: Overview* for additional information.)
- Introduction
    - Provide an overview of the target geography and characteristics of the seafood production system, as well as additional background information that may be relevant for the initiative.
- Fishery or Farm Status
    - This section provides information about the status of the fishery or farm area in terms of biological, social, and economic performance.
    - For fisheries, this could include the following considerations:

        - Ecological: Stock condition and potential for recovery if depleted. Fishing impacts to endangered, threatened, and protected (ETP) species as well as on vulnerable habitats. Management effectiveness.
        - Social: Human and labor rights and equity conditions in the fishery and community. Contribution to food security and nutrition and to cultural identity of local communities.
        - Economic: Contribution of fishery to local and national economies. Contribution of fishery to livelihoods of fishers and indirect workers (e.g., jobs at processors or input providers). Profitability of companies.
    - For aquaculture, this could include the following considerations:
        - Ecological: Type of production (e.g., fed versus unfed, open versus closed) and potential and documented negative and positive impacts on associated ecosystems.
        - Social: Human and labor rights and equity conditions in the farm and local community. Contribution to food security and nutrition, and to cultural identity of local communities.
        - Economic: Contribution of production to local and national economies. Contribution of production to livelihoods of farm workers and indirect workers (e.g., jobs at processors or input providers). Profitability of companies.
- Regulatory System
    - Regulatory systems refer to the rules and regulations that are in place to control and monitor seafood producers' efforts and reduce the impact of local fisheries or farms on marine biodiversity and ecosystems. The purpose of this section is to characterize the existing regulatory systems and their effectiveness in meeting sustainable production goals. (See Box 5 for tools that can be used to assess sustainability performance.)
- Governance and Policy Framework
    - Governance and policy framework refers to the institutional, operational, legal, and customary frameworks that govern the seafood production system. The purpose of this section is to determine whether there are enabling political and institutional frameworks that promote the sustainable production of seafood and to identify potential barriers to sustainable seafood production. This section should also identify power relations, social hierarchies, and decision-making processes that affect the seafood production system.
- Market Potential
    - The purpose of this section is to describe the size (value) and growth potential of existing and new potential seafood markets, and to assess the market's willingness to pay for products derived from a successful JI. This section will help determine the competitiveness of the fishery and/or farm(s) and identify potential barriers to achieving market potential.
- Stakeholder Engagement
    - The purpose of this section is to identify whether there is stakeholder interest and commitment to participate in the co-design of a seafood JI. Buy-in from each of the

key stakeholders (see Figure 2) should be explicitly characterized, ensuring there is social predisposition, political will, and market interest of all relevant stakeholders in collaborating effectively on co-designing and implementing a seafood JI.

2.4. Co-design the initiative's goals and elements

The first step in the design of several JIs has been to articulate a high-level vision for sustainable development in the jurisdiction, which provides the framework needed for a more formal design (Seymour et al. 2020). Significant momentum can be generated when the vision of the program is endorsed by a high-level political leader, but institutional adoption by the pertinent regulatory agencies (e.g., Ministry of Fisheries, Ministry of Finance, etc.) is also critical to ensure the initiatives are not disrupted by changes in political administrations.

- Determining goals and scope: Sustainability and production-based goals should be clearly stated and relevant to the jurisdiction in which the program is being implemented.
    - What is the high-level vision for sustainable development/ecosystems in the jurisdiction?
    - What are the priority commodities (fisheries/aquaculture farms) of the JI? Given the nature of seafood, most seafood JIs will likely be focused on a species/commodity; however, program design should consider other industries and interdependent commodities in the region and identify ways to engage with them.
    - What are the priority environmental and socio-economic challenges within the jurisdiction that the initiative will seek to address? What are specific goals and metrics for social and environmental objectives? The scope should incorporate as many of the locally determined improvement priorities as possible, as determined by a robust and inclusive stakeholder engagement process.

- Determining scale: The program should be of a meaningful scale to drive improvements.
    - Choose the spatial scale that allows you to have influence over the outcome you are seeking but that is not so large that you cannot gain traction/get it to work. What is the ecosystem level to appropriately address the key sustainability challenges identified?
    - The monetary value of the seafood production should be large enough to attract financial institutions to engage and invest.
    - The scale of a JI is oftentimes determined by political boundaries, reflecting the need for JI elements to be eventually incorporated into official government policies, regulations, and/or development plans at national or sub-national levels. What is the highest-level jurisdiction to address that ecosystem? Government engagement at the correct level is required. This can include sub-national entities, but national-level policies and levels of government are critical for success.
    - Climate change impacts on seafood production systems may alter the jurisdictional scale needed to address issues at an ecosystem level. Climate-driven shifts in species range, for instance, should be considered when determining the appropriate jurisdictional scale.

- Identifying appropriately sized incentives for participating producers: These should be commensurate to opportunity costs of conversion, where applicable.
    - Ensure the allocation of benefits, including reduction of production and supply risks, is commensurate with the contributions of each stakeholder to the outcomes. An approach to distributing rewards will need to be agreed on early, before the JI is implemented. To distribute financial benefits, the national government may be able to transfer cash directly through existing governmental cash transfer systems or through a newly established ecological fiscal transfer (EFT) mechanism—a mechanism to allocate fiscal transfers to the regions based on ecological performances (Tropical Forest Alliance 2021).

- Determining metrics and KPIs: Relevant metrics and KPIs should be determined to enable assessments of progress toward targets, milestones, and outcomes. Metrics should be tied directly to performance against environmental (i.e., biodiversity and climate), social, and economic outcomes at the jurisdictional level. Suggested categories for JI metrics are included in *Section 1.5: Metrics* of *Guidelines for Developing Jurisdictional Initiatives for the Seafood Sector: Overview* and include broad categories covering biodiversity, climate, social, and economic impacts of seafood production. Because a JI can span decades, it may be helpful to define not only outcome-based metrics but also pathway indicators that can help capture important progress toward measurable outcomes over time. For example, an outcome metric could focus on population trajectories of ETP species while pathway metrics focus on the enabling conditions for outcome-based improvement—notably effectively implemented legal frameworks and management measures, with sufficient information to support effective management. This may provide more useful tracking of progress over the early years of a JI. Example outcome and pathway metrics could include:

    - <u>Environmental Sustainability</u>
        - Area under improvement management:
            - hectares (or km^2) of area under improved management (i.e., meeting all key elements of an effective management system) [pathway]
            - number or volume of priority species under effective, precautionary, climate-resilient fisheries/aquaculture management [pathway]
        - Species conserved:
            - fishery/aquaculture impacts on ETP species are quantified and monitored [pathway]
            - metric tons of seafood working toward improved practices tied to biodiversity [pathway]
            - number or volume of wild-caught fish stocks at biologically sustainable levels [outcome]
            - biodiversity index for jurisdiction [outcome]
        - Habitat conserved:
            - management measures protect vulnerable marine ecosystems within the jurisdiction [pathway]
            - habitat index for jurisdiction [outcome]

- Social Responsibility
    - Socio-economic benefits:
        - number of people receiving direct socio-economic benefits from fishery or farm, and number of people receiving indirect socio-economic benefits [outcome]
    - Inclusive decision-making:
        - legal frameworks in place to support participation/inclusion in resource planning and management for all stakeholders involved in, or affected by, production activities [pathway]
        - grievances raised and resolved by local and Indigenous communities against fishery or aquaculture industry [pathway]
    - Labor rights:
        - relevant legal frameworks explicitly require respect for women's rights, including decent working conditions, equal pay [pathway]
        - effective grievance mechanisms in place to support human rights violations [pathway]
        - incidence of child or forced labor [outcome]

- Economic and Financial Resilience
    - Socio-economic Benefits:
        - legal frameworks in place to support equitable distribution of benefits [pathway]
        - amount of additional funding (increased cash flow) received by public and private-sector partners because of the JI outcome

2.5. Co-develop an action plan and secure funding

Stakeholders should develop a clearly defined time-bound action plan that lays out steps to meet initiative milestones and outcomes. The action plan should identify the key policy and market-based strategies and actions to address the priority deficiencies identified by the scoping assessment. The action plan should also establish clear timelines, roles, and responsibilities for each key action. (See the Action Plan Template for additional information (forthcoming)). The action plan can also identify and reference overlapping objectives around timelines for stakeholder engagement and information sharing.

As part of these efforts, it will also be critical to develop an effective monitoring framework, including data governance systems and protocols to credibly gather, store, analyze, and use data, and monitoring frequency.

The accuracy of claims about jurisdictional performance depends on the quality of the monitoring process. This includes the quality, availability, and relevance of the data collected, as well as how effectively it is gathered, managed, and analyzed to draw conclusions. When choosing data sources and developing frameworks for monitoring against metrics identified, factors such as the

relevance, accuracy, spatial and temporal resolution, cost, availability, and use rights should be considered.

A trustworthy monitoring framework should include the following (ISEAL 2022b):

- Clear guidance for application: For each individual metric, clear, explicit guidance must be developed to ensure reliable and consistent assessments. This guidance must be fully developed and explicitly clear to ensure credible assessments and consistent tracking across years of JI implementation. We suggest testing the application of the guidance before it is finalized to ensure consistent interpretation and analyses across individuals and identify potential issues around information availability.

- Information sources: For each metric, include the information source(s) used to gain insights about performance. Data sources should be made available in an accessible format to enable third parties to verify and derive insights about performance.

- Data management protocols: Procedures for collecting, storing, analyzing, and utilizing data are in place to ensure the accuracy and consistency of the collected data.

Finally, it will be critical to develop a detailed budget and secure funding for the costs of activities, coordination of the initiative, and monitoring and reporting. This will involve exploring and applying innovative and complementary investments. In addition to the investments required to reduce ecosystem impacts, improve livelihoods, and implement sustainable production systems, sustainable management of oceans, watersheds, and natural capital is fundamental to sustainability of a jurisdiction.

Three financial structures have typically been used in JIs:

1. Local, regional, or global investors directly invest in a project or co-invest in complementary activities.
2. Investors contribute to a global, regional, or national fund. The fund may contribute directly to a project or to another fund at the jurisdictional level that specifically serves the initiative.
3. Blended approach of direct project investment and jurisdictional level fund.

The public sector (e.g., bilateral, and multilateral agencies) has been the largest provider of funding to support JIs thus far. However, their scale of financing is insufficient to match the scale of financing needed. As such, private-sector investment also needs to be a primary source of financing. Companies who have already made commitments to ocean conservation, community development, or similar sustainability goals through either corporate or philanthropic channels should consider directing these investments or philanthropic programs to support priority seafood JIs. Blending various sources of financing—public, private, and, in some cases, philanthropic—is a way to manage the different risk profiles and risk appetites of the financing sources that will likely be needed to support the initiative over time (Tropical Forest Alliance 2021). As noted in Box 1, the PNA scheme provides a compelling example of how long-term financing

mechanisms can be established to fund JIs, wherein high value daily access fees were levied on vessels who wished to fish in PNA waters.

2.6. Secure an agreement to implement

The final step in the co-design phase is to secure agreement by all pertinent stakeholders to implement the co-designed action plan, including by potentially signing an MOU or similar agreement. These documents should be shared with all relevant stakeholders to support long-term transparency and accountability.

Step 3. Co-Implementing

Once the milestones, timelines, and responsible parties have been identified in the action plan, implementation of these activities can begin by each pertinent partner but under the overall coordination of the multistakeholder body, which may integrate new scientific data or new stakeholders as needed.

3.1. Implement policy-based improvements

Public sector-led interventions should be undertaken in coordination with initiative partners and according to the action plan, which can be periodically updated and revised based on delays, progress, or updated information.

- Examples:
    - setting a minimum floor for seafood production performance through policy and/or regulatory levers
    - data collection and analysis to improve understanding of seafood production performance
    - improving regulations and associated enforcement regarding human and labor rights, right to organize, and equity

Note that JIs are not intended to be separate from and run parallel to existing government-led fisheries management frameworks for a particular geography and jurisdiction. JIs instead seek to address the siloed way in which these policy efforts have oftentimes been implemented, with limited engagement by market and industry actors, resulting in slow adoption of best practices for seafood production. As such, the existing fisheries management and stakeholder consultation efforts that are being led by governments should be incorporated within the multistakeholder JIs' efforts. The latter will help ensure that incentives among the pertinent public and private stakeholders remain aligned, enabling collective action in securing holistic seafood production improvements at scale. In Fiji, for instance, the government's efforts to adopt a fair and rights-based crewing policy to ensure worker safety in tuna fisheries are being embedded within the JI. The domestic tuna industry, which is also a participant in the JI and has a keen interest in addressing social responsibility in their fleets, is now able to engage more effectively in the improvement efforts through the JI multistakeholder platform.

3.2. Implement private-sector improvements

Private-sector-led interventions should be undertaken in coordination with initiative partners and according to the work plan, which can be periodically updated and revised based on delays, progress, or updated information.

- Examples:
    - gear trials to assess potential to reduce species and ecosystem impacts
    - adoption of best management practices specific to farm type (e.g., small/medium/large, extensive/intensive, open/closed, fed/unfed).
    - voluntary commitments such as expanding electronic monitoring beyond the existing regulatory requirements
    - conducting human rights due diligence processes within supply chains
    - adopting supplier codes of conduct for human and labor rights and equity

NGOs, scientists, and other JI partners should provide guidance in the design and implementation of these private-sector-led improvements. Market supply chain commitments will also play a critical role in driving the implementation of JIs, helping to ensure that the incremental costs of these initiatives can be offset by the benefits derived from longer-term preferential sourcing arrangements.

3.3. Monitor performance against identified metrics

After implementation has begun, stakeholders must regularly and publicly track progress against the milestones laid out in the action plan and as noted above, ensure tracking is as transparent as possible. This ensures that JI participants can credibly and publicly make associated claims. (See *Section 1.6: Claims* in *Guidelines for Developing Jurisdictional Initiatives for the Seafood Sector: Overview* for additional information.)

As best practice, progress against the objectives and timelines outlined in the JI's action plan should be reported publicly every three to six months. After determining the agreed-upon frequency of monitoring and reporting, performance should be tracked against the outcome and pathway indicators identified in Step 2.4 and using the guidance and monitoring framework developed in Step 2.5.

A consistent monitoring and reporting template, tied to outcome and pathway indicators mapped directly to core objectives of the initiative, should be designed to enable continuous reporting, and improve processes and impacts over the course of the initiative.

3.4. Verify monitoring results and performance claims

Thoughtful, effective, and robust verification systems are critical to the credibility of the JI, especially when public-facing claims are being made. (See *Section 1.6: Claims* and *Section 1.7: Monitoring, Reporting and Verification* in *Guidelines for Developing Jurisdictional Initiatives for the Seafood Sector: Overview* for additional information.) A handful of organizations, including ISEAL, have developed guidelines on how credible verification and assurance should work for JIs (ISEAL 2022b); we suggest reviewing these documents for more detailed guidance.

The final verification approach should strive to meet the four key principles for verification of performance in jurisdictional projects defined by ISEAL (2022b): consistency, competence, impartiality, and transparency. Verification is ideally conducted by an independent third party to help ensure alignment with these principles.

3.5. Publicly report results

As these initiatives develop and advance, a public platform may be developed to house multiple seafood JIs in a consistent and robust manner. In the interim, individual JIs may choose to develop a website for their efforts. Elements that might be posted on the website may include a summary work plan, public and regular progress updates against the action plan, overall goals and metrics of the JI, participants and their roles, any data sources/scientific information, and funding sources for the initiative. As the initiative progresses, transparency around verification and reporting progress against goals must be included, especially once claims are used by participants. The website should also include a mechanism for feedback and guidance on responsible parties and roles. Ultimately, there should be transparency in the structure, commitment, agreements, financing, and actions of the initiative, and this information should be publicly available. Noting the diversity of stakeholders involved in JIs, mechanisms should be established that allow reporting by the various actors to be bottom up as well as top down.

Conclusion

As governments, seafood companies, and civil society organizations around the world seek opportunities to improve seafood production systems and commit to place-based ecosystem approaches, opportunities for seafood JIs are greater than ever. Initiatives that tackle systemic barriers to sustainable production are an important tool for working toward a future where ocean ecosystems can continue to support the people and businesses who depend on them. By bringing stakeholders together (such as IPs and local communities, government representatives, civil society organizations, and seafood supply chain companies) to implement and support these initiatives, we can deliver significant conservation outcomes by addressing environmental, social, and economic barriers to environmental sustainability and social responsibility at relevant political and ecological scales. We hope this guide will help you join these efforts.

References

Adekunle, A. A., and Fatunmbi, A. O. (2012). Approaches for Setting-up Multi-Stakeholder Platforms for Agricultural Research and Development. World Applied Sciences Journal 16 (7): 981–988, 2012 ISSN 1818-4952: citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=d911e9410035313c2875bdabadf122103e9c1c0d

Aqorau, T., Bell, J., and Kittinger, J. N. (2018). Good Governance for Migratory Species. Science. 2018 Sep 21: science.org/doi/10.1126/science.aav2051

Atkinson, S., Esters, N., Farmer, G., Lawrence, K., McGilvray, F. (2011). The Seascapes Guidebook: How to Select, Develop and Implement Seascapes. Conservation International, Arlington, Virginia, USA. 60 pp. coraltriangleinitiative.org/sites/default/files/resources/CI_Seascapes_Guidebook_select_develop_implement_seascapes.pdf

Boshoven, J., Fleck, L.C., Miltner, S., Salafsky, N., Adams, J., Dahl-Jørgensen, A., Fonseca, G., Nepsted, D., Rabinovitch, K., and Seymour, F. (2021). Jurisdictional sourcing: leveraging commodity supply chains to reduce tropical deforestation at scale. A generic theory of change for a conservation strategy, v 1.0. Conserv. Sci. Pract., 3 (5) (2021), pp. 1-16, 10.1111/csp2.383

Boyd W, Stickler C, Duchelle A, et al. (2018). Jurisdictional approaches to REDD+ and low emissions development: progress and prospects. Washington, DC: World Resources Institute.

Brouwer, S., Pilling, G., Hampton, J., Williams, P., Vincent, M., and Peatman, T. (2018). The Western and Central Pacific Tuna Fishery: 2018 Overview and Status of Stocks. Pacific Community. Oceanic Fisheries Programme. Tuna Fisheries Assessment Report No. 19.

Brugère, C., Aguilar-Manjarrez, J., Beveridge, M. C. M., and Soto, D. (2019). The Ecosystem Approach to Aquaculture 10 Years on—a Critical Review and Consideration of Its Future Role in Blue Growth. Reviews in Aquaculture 11, no. 3 (2019): 493–514, doi.org/10.1111/raq.12242

Buchanan, J., Durbin, J., McLaughlin, D., McLaughlin, L., Thomason, K., and Thomas, M. (2019). Exploring the Reality of the Jurisdictional Approach as a Tool to Achieve Sustainability Commitments in Palm Oil and Soy Supply Chains. Conservation International, 2019. conservation.org/docs/default-source/publication-pdfs/jurisdictional_approach_full_report_march2019_published.pdf?Status=Master&sfvrsn=23c977ae_3.

Certifications and Ratings Collaboration. (2019). Sustainable Seafood: A Global Benchmark: certificationandratings.org/wp-content/uploads/2019/11/Sustainable-Seafood-A-Global_Benchmark.pdf

Conservation International (CI). (2018). Summary Report: Exploring the Reality of the Jurisdictional Approach as a Tool to Achieve Sustainability Commitments in Palm Oil and Soy Supply Chains. conservation.org/docs/default-source/publication-pdfs/summary-report-exploring-the-reality-of-the-jurisdictional-approach.pdf?Status=Master%26sfvrsn=52208c3_5

Cook Islands News. (2019). Cooks aim for 'gold' standard tuna. May 23, 2019: cookislandsnews.com/national/cooks-aim-for-gold-standard-tuna/

Deichmann, J. S., Canty, W. F. J., Akre, T. S. B., and McField, M. (2019). Broadly defining "working lands." 363. 1046. science.org/doi/10.1126/science.aaw8293

FAO. (2005). Putting into practice the ecosystem approach to fisheries. Rome, FAO. 2005. fao.org/documents/card/en/c/80f97581-8f96-5313-9db7-1792e912730e

FAO. (2010). FAO Technical guidelines for responsible fisheries. Suppl. 4. Aquaculture Development. 4. Ecosystem Approach to Aquaculture. fao.org/3/i1750e/i1750e.pdf

FAO. (2021). Handbook: Ecosystem approach to aquaculture management. fao.org/3/ca7972en/ca7972en.pdf

FAO. (2022). Ecosystem Approach to Fisheries-Implementation Monitoring Tool (EAF-IMT): elearning.fao.org/course/view.php?id=872

FAO. (2023). Rethinking our food systems: A guide for multi-stakeholder collaboration: fao.org/documents/card/en/c/cc6325en

Faysse, N. (2006). Troubles on the way: An analysis of the challenges faced by multi-stakeholder platforms. Natural Resources Forum 30 (2006) 219–229

Fishman A, Oliveira E, and Gamble L. (2017). Tackling deforestation through a jurisdictional approach: lessons from the field. Gland, Switzerland: WWF International.

Holmes, L., Strauss, C. K., de Vos, K., and Bonzon, K. (2014). Towards investment in sustainable fisheries: A framework for financing the transition. Environmental Defense Fund and The Prince of Wales's International Sustainability Unit.

ISEAL Alliance. (2017). Scaling Sustainability: Emerging Interactions Between Standards Systems and Landscape and Jurisdictional Approaches. isealalliance.org/sites/default/files/resource/2017-11/ISEAL_Briefing_Regional_Sourcing_FINAL%201Aug17_0.pdf

ISEAL Alliance. (2022a). Effective company actions in landscapes and jurisdictions: Guiding practices, v1.0. isealalliance.org/get-involved/resources/effective-company-actions-landscapes-and-jurisdictions-guiding-practices

ISEAL Alliance. (2022b). Making credible jurisdictional claims: ISEAL good practice guide, v1.1. isealalliance.org/get-involved/resources/making-credible-jurisdictional-claims-good-practice-guide-v11-2022

ISEAL Alliance. (2023). Effective company claims about landscape investments and actions. isealalliance.org/get-involved/resources/joint-landscape-position-papers-20222023

International Seafood Sustainability Foundation (ISSF). (2023). Status of the World Fisheries for Tuna: March 2023. iss-foundation.org/research-advocacy-recommendations/our-scientific-program/scientific-reports/download-info/issf-2023-01-status-of-the-world-fisheries-for-tuna-march-2023/

Jacquet, J., Hocevar, J., Lai, S., Majluf, P., Pelletier, N., Pitcher, T., Sala, E., Sumaila, R., and Pauly, D. (2009). Conserving wild fish in a sea of market-based efforts. Oryx, 44, 45–56.

Kittinger, J. N., Bernard, M., Finkbeiner, E., Murphy, E., Obregon, P. Klinger, D. H., Schoon, M. L., Dooley, K. J., and Gerber, L. R. (2021). Applying a jurisdictional approach to support sustainable seafood. Conservation Science and Practice. 2021. doi.org/10.1111/csp2.386

Murphy, E. L., Bernard, M., Gerber, L. R., Dooley, K. J. (2021). Evaluating the role of market-based instruments in protecting marine ecosystem services in wild-caught fisheries, Ecosystem Services, Volume 51, 2021, 101356, ISSN 2212-0416: sciencedirect.com/science/article/pii/S2212041621001145

Murphy, S. E., Farmer, G., Katz, L., et al. (2021). Fifteen years of lessons from the Seascape approach: A framework for improving ocean management at scale. Conservation Science and Practice. 2021. doi.org/10.1111/csp2.423

Oxfam. (2017). Blended Finance: What it is, how it works and how it is used. oxfamilibrary.openrepository.com/bitstream/handle/10546/620186/rr-blended-finance-130217-en.pdf;jsessionid=D1E889BF2078639CED2D9A2EEE82D859?sequence=1

Parties to the Nauru Agreement (PNA). (2019). www.pnatuna.com/content/pna%E2%80%99s-outside-box-thinking-benefits-islands-improves-resource-sustainability

Rockström, J., W. Steffen, K. Noone, Å. Persson, F.S. Chapin, III, E. Lambin, T.M. Lenton, M. Scheffer, C. Folke, H. Schellnhuber, B. Nykvist, C.A. De Wit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sörlin, P.K. Snyder, R. Costanza, U. Svedin, M. Falkenmark, L. Karlberg, R.W. Corell, V.J. Fabry, J. Hansen, B. Walker, D. Liverman, K. Richardson, P. Crutzen, and J. Foley. (2009). Planetary boundaries: Exploring the safe operating space for humanity. *Ecol. Soc.*, 14, no. 2, 32.

Seafood Source (2021). Tesco introduces new tuna-sourcing approach. March 2, 2021: seafoodsource.com/news/environment-sustainability/tesco-introduces-new-tuna-sourcing-

approach#:~:text=Tesco%20will%20first%20adopt%20Seascape,based%20management%20approach%20by%202030

Seafood Source (2023). New Caledonia, Fiji embark on jurisdictional approach initiative for longline tuna fishery. March 27, 2023. seafoodsource.com/news/environment-sustainability/new-caledonia-fiji-embark-on-jurisdictional-approach-initiative-for-longline-tuna-fishery

Seymour, F. J., Aurora, L., and Arif, J. (2020). The Jurisdictional Approach in Indonesia: Incentives, Actions, and Facilitating Connections. Front. For. Glob. Change, 09 November 2020. Sec. People and Forests. doi.org/10.3389/ffgc.2020.503326

Steffen, Will & Richardson, Katherine & Rockström, Johan & Cornell, Sarah & Fetzer, Ingo & Bennett, Elena & Biggs, Reinette & Carpenter, Stephen & Vries, Wim & de Wit, Cynthia & Folke, Carl & Gerten, Dieter & Heinke, Jens & Persson, Linn & Ramanathan, Veerabhadran & Reyers, Belinda & Sörlin, Sverker. (2015). Planetary Boundaries: Guiding Human Development on a Changing Planet. Science. 10.1126/science.1259855.

Stickler, C., et al. (Eds.). (2020). The State of Jurisdictional Sustainability: Synthesis for Practitioners and Policy Makers. cifor.org/knowledge/publication/7797/

Sutton, M. (1998). Harnessing market forces and consumer power in favour of sustainable fisheries. In T. J. Pitcher, P. J. B. Hart, & D. Pauly (Eds.), Reinventing fisheries management (pp. 125–135). Netherlands: Springer.

Tesco. (2021). Tesco takes action to improve marine sustainability, moving to a Seascape approach for tuna sourcing. tescoplc.com/tesco-takes-action-to-improve-marine-sustainability-moving-to-a-seascape-approach-for-tuna-sourcing/

Torquebiau, Emmanuel. (2015). Whither Landscapes? Compiling Requirements of the Landscape Approach. Climate-Smart Landscapes: Multifunctionality in Practice.

Tropical Forest Alliance. (2020). Landscape Scale Action for Forests, People and Sustainable Production: A Practical Guide for Companies. globallandscapesforum.org/publication/landscape-scale-action-for-forests-people-and-sustainable-production-a-practical-guide-for-companies/

Tropical Forest Alliance. (2021). The Investment Case for Jurisdictional Approach. tropicalforestalliance.org/assets/Uploads/Investment-Case-of-Jurisdictional-Approach-FINAL-5.pdf

United Nations Development Programme (UNDP) Green Commodities Programme. (2019). Value Beyond Value Chains: Guidance note for the private sector Version 1.0. tropicalforestalliance.org/assets/Uploads/VBV-Guidance-Note.pdf

Walmart, Inc. (2022). Project Gigaton™ Nature Pillar Guidance for submitting goals and reporting progress. walmartsustainabilityhub.com/climate/project-gigaton/nature

World Commission on Protected Areas (WCPA). (1999). Guidelines for Marine Protected Areas. Kelleher, G., Phillips, A. (Eds). IUCN, Gland, Switzerland and Cambridge, UK.

World Wildlife Fund (WWF). (2023). Nature-Positive Seascapes. worldwildlife.org/pages/nature-positive-seascapes

Yeeting, A. D., Weikard, H. P., Bailey, M., Ram-Bidesi, V., and Bush, S .R. (2018). Stabilising cooperation through pragmatic tolerance: the case of the Parties to the Nauru Agreement (PNA) tuna Fishery, Reg. Environ. Change 18 (3) (2018) 885–897. doi.org/10.1007/s10113-017-1219-0