

# FORUM



## *Blue* food in the face of climate change Food sovereignty and security in Mexico

# RESULTS REPORT

APRIL 2025

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# INTRODUCTION



In the context of the triple threat to the planet that is climate change, loss of biodiversity and pollution, a more sustainable, resilient and inclusive rethinking of national food systems is a priority. In this context, blue foods — food from aquatic ecosystems — have emerged as a key alternative for food security, the protection of biocultural heritage, and promoting a fair blue economy in Mexico.

"...The environmental footprint of blue foods varies, but most blue food systems provide animal-based proteins with relatively low greenhouse gas emissions and effects of biodiversity. Some systems, such as mussel and clam aquaculture, improve their own environments by filtering excess nutrients from the water (in support of SDGs 12, 14 and 15)..." (United Nations, 2021). These systems are an important avenue for countries to fulfill their international climate commitments without compromising national food security.

Salt water and freshwater ecosystems with blue food species are highly vulnerable to the impacts of climate change (Moran, 2024). Therefore, effective public policies are essential to ensuring continued access to the nutritional, health, social, economic, and cultural benefits these ecosystems provide.

However, this is not a simple task. It requires integrated governance on the seas and coasts, as well as the implementation of accessible and inclusive decision-making mechanisms.

Such mechanisms should be based on the best available science and traditional knowledge (The Hunger Project Mexico, 2021). They should promote blue and environmental justice and strengthen the resilience of coastal communities to climate change and other social and economic challenges. These challenges must be resolved in a timely manner to ensure access to quality food, which positively impacts the economic well-being and health of the Mexican public.

The main goal of the **National Blue Food Forum in the Face of Climate Change: Food Sovereignty and Security in Mexico**, was to create strategic public policy recommendations in order to establish a critical path for incorporating blue foods into the country's updated Nationally Determined Contributions (NDCs). Six strategic areas were addressed through conferences, topic panels, and a collaborative workshop to structure the discussion on the sector's challenges and opportunities.



Through the efforts of the Environmental Defense Fund de México (EDF de México), Stanford University, and the Moore Foundation, and a collaborative co-design effort involving six institutions, the National Blue Food Forum sought to raise the profile of blue food in Mexico's national food sector agenda. The forum promoted incorporating blue food into the country's international climate change agreements and commitments, as well as its NDCs (Government of Mexico, 2021) and National Climate Change Strategy Vision 10-20-40; (Federal Government, 2013). This work included assessing how blue foods in national food and climate strategies are currently included, specifically in terms of NDCs and NAPs, as well as the extent to which climate considerations are reflected in current blue food policies (sustainable production, consumption, and efficient conservation of natural resources). Based on this assessment, recommendations were identified and provided, along with a critical path for incorporating them into national policies.

This report summarizes the design and execution process of the National Blue Food Forum. It also provides a detailed summary of the proposals that were analyzed and prioritized for the six areas addressed during the conferences, panels, and working groups included in the event's agenda.



The image features a vibrant green background with abstract, overlapping shapes and patterns. A prominent vertical bar in a darker shade of green runs down the center, containing the text 'EXECUTIVE OVERVIEW' in white, bold, uppercase letters. The overall design is modern and professional, suitable for a corporate report or presentation.

# EXECUTIVE OVERVIEW

## The National Blue Food Forum in the Face of Climate Change: Food Sovereignty and Security for Mexico

brought together over 70 specialists from 35 public, private and academic sectors, as well as international and civil society organizations, in an effort to give visibility to blue foods and position them on the national climate change and food security agenda.

The National Forum on Blue Food in the Face of Climate Change: Food Sovereignty and Security for Mexico was formed from an initiative of EDF de México, together with Stanford University and the Moore Foundation. The forum was the result of an important co-design process involving six institutions that made up the Collaborative Core Group (GNC). The forum took place in Mexico City on December 5, 2024.

A collaborative space was created by this joint effort, allowing sector experts from the production, management, conservation, legislation, technological innovation and research of blue foods in Mexico fields to develop a set of strategic proposals to raise the profile of blue foods in the national food sector agenda and promote the incorporation of these foods into the goals and priorities of Mexico's international agreements and climate change commitments, in addition to including blue foods in the NDCs and the National Climate Change Strategy vision 10-20-40 (ENECC, 2013).

The Blue Justice approach (Arce-Ibarra et al., 2024) has been instrumental in developing this forum. It recognizes the importance of having the political will to leverage institutional agreements and promote co-governance to improve the sustainable management of our fisheries and aquaculture resources while adopting human rights as a guideline.

The event's agenda was structured around six priority topic areas:

- **Food sovereignty**
- **Food policy**
- **Science and innovation**
- **Blue Justice**
- **Biocultural heritage**
- **Climate change**

A set of public policy recommendations was created through a collective reflection that took place during keynote presentations, expert panels, and a participatory workshop. The reflection also led to the identification of **key actions, strategic stakeholders, and sources of funding** to promote a critical path towards the integration of blue foods in Mexico's NDCs.

This exercise has yielded several proposals, including updating the legal framework for fisheries and aquaculture in Mexico, promoting technological innovation and food justice, conserving ecosystems and developing adaptive capacities in the face of climate change. These actions are aligned with multiple Sustainable Development Goals (SDGs), including SDGs 2, 12, 13 and 14.



# GOALS

## GOALS OF THE FORUM

### Overall Goals

Create strategic public policy recommendations on blue food, food sovereignty and food security, and identify necessary elements to include a critical path for climate commitment based on sustainable and resilient blue food production into Mexico's NDC, through a space for sector experts from the production, management, conservation, legislation, technological innovation, and research of blue food in Mexico fields to participate.

### Specific Goals

- Identify and evaluate opportunities to raise the profile of blue foods in the Mexican food system.
- Propose and analyze solutions and actions to achieve strategic goals for Mexico in terms of food sovereignty and security, quality nutrition, public health, community welfare, and social justice through blue foods.
- Discuss and propose public policies and national strategies to strengthen, sustain and promote climate resilience of the fisheries and aquaculture sector to form a solid and fully integrated food system.
- Identify the basis for a critical path that establishes national goals and commitments for mitigating and adapting to climate change from blue foods.

alimentos azules  
ante el cambio climático

Soberanía  
y seguridad  
alimentaria  
para México

FORO DE  
OCTUBRE 2024



# NUMBERS

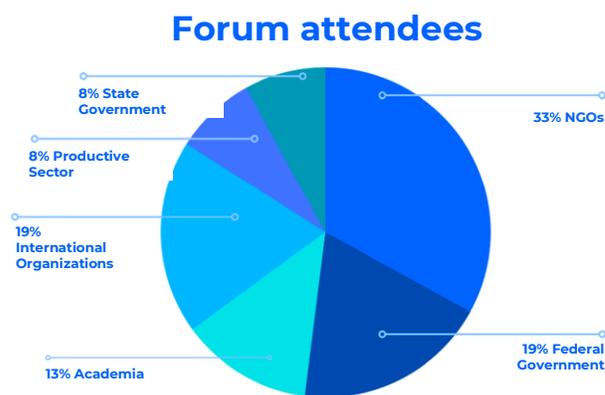


The National Blue Food Forum in the Face of Climate Change brought together representatives from 35 institutions and 70 public, private, civil society and academic sector specialists, as well as international organizations for the first time in the same space. The diversity of stakeholders enabled an enriched dialogue with complementary perspectives, creating a space for reflection on the importance of incorporating blue foods into Mexico's climate change and food security agenda.

Participation was divided up by sector as follows:

SECTOR	PARTICIPANTS
Non-Governmental Organizations	28
Federal Government	14
Academia	8
International Organizations	14
Productive Sector	3
State Governments	3
<b>TOTAL</b>	<b>70</b>

The following chart shows the participation of the various sectors that attended this event:



These data reflect the participation of various key stakeholders in public policy advocacy, providing comparative although different sector perspectives and experiences. This collaborative effort strengthened our involvement in future forums for dialogue and opened up opportunities for closer collaboration.



The forum was developed through a work dynamic that highlighted the following:

- **Six topic areas** that structured the discussion on the challenges and opportunities of blue foods in Mexico, which made it possible to address multiple relevant topics throughout the event.
- **Thirteen keynote lectures** given by specialists with extensive and recognized experience in the fields of sustainable fisheries and aquaculture, food security, human health and climate change. The speakers shared knowledge and experiences on the role of blue foods.
- **Three panel discussions** designed to generate an interactive dialogue, featuring **seven panelists** provided diverse perspectives on the challenges and solutions to boost blue foods in Mexico.
- **Two professional moderators** guiding the sessions and fostering a structured and participatory conversation.
- **Nine facilitators**, experts in the different topics of the working tables, guiding participants to define actions to strengthen the role of blue foods in Mexico's food and climate agenda.



A photograph of a fish being held by a person on a boat. The fish is brown and has its mouth open. The background shows a boat with blue and white sections. A large blue rectangular overlay covers the right side of the image, containing the title text in white. The text is arranged in two lines: 'METHODOLOGY' on the top line and 'AND PREPARATION' on the bottom line. The font is a bold, sans-serif typeface.

# **METHODOLOGY AND PREPARATION**

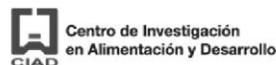
In our commitment to a collaborative approach to designing this national forum, we brought together six leading Mexican institutions in the field of blue foods. These institutions' representatives actively participated in an intense co-design process through the Collaborative Core Group (CNG).

The following institutions participated in the GNC:

- Center for Scientific Research and Higher Education at Ensenada, Baja California (CICESE)
- Center for Research in Food and Development (CIAD)
- Institute of Marine Sciences and Limnology (ICML) of the National Autonomous University of Mexico (UNAM).
- Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)
- EDF de México
- Food and Agriculture Organization of the United Nations (FAO) in Mexico
- Two experts in sustainable fisheries and food safety: Dr. Miguel Ángel Cisneros Mata and Pablo López.

The collaboration took place through multiple interactive remote meetings to construct the agenda, identify key issues and select strategic points linked to public policy for blue food in Mexico. The institutional diversity of the group is reflected in its composition:

- Three scientific research centers
- Two independent experts
- A governmental research institute
- An international organization
- A non-governmental organization (NGO)



This diverse group ensured diverse yet complementary perspectives, enriching the design of the forum and strengthening its comprehensive approach to addressing the challenges and opportunities of blue foods in the face of climate change in Mexico.



# WORK PROCESS

The CNC worked through weekly virtual meetings to develop the agenda, design the workshops, and find guests to participate as speakers or experts and contribute to the event's various aspects. The work dynamics ensured a participatory, transparent and inclusive space for analysis, discussion and consensus.

As a result of the collaborative effort of the CNC, six topic areas were identified and defined, reflecting the critical areas for Mexico's blue food agenda:

TOPIC AREA	GOAL	DISCUSSED TOPICS
 <p><b>Area 1. Blue Foods: A strategic component of food sovereignty as a guiding principle.</b></p>	<p>Inform the diagnosis of fisheries, aquaculture, and food sovereignty, as well as the key concepts that will provide an updated frame of reference for constructing public policies and developing a national food agenda.</p>	<ul style="list-style-type: none"> <li>• Food sovereignty: vision and perspectives from fisheries and aquaculture in Mexico.</li> <li>• Sustainable fisheries in the perspective of food sovereignty and security with a community approach.</li> <li>• Sustainable aquaculture in the perspective of food sovereignty and security with a community approach.</li> </ul>
 <p><b>Area 2. Food Policy in Mexico: Sustainable management of fishery and aquaculture resources for a regionalized and integrated agri-food system.</b></p>	<p>Discuss the sustainable management of fishery and aquaculture resources in the context of climate change, seeking to strengthen Mexico's food agenda.</p>	<ul style="list-style-type: none"> <li>• From blue revolution to blue food: regenerative multi-trophic aquaculture and other alternatives.</li> <li>• Sustainable and resilient fisheries production.</li> </ul>
 <p><b>Area 3. Science, Technology and Innovation in Blue Food Production.</b></p>	<p>Identify proposals to innovate and implement available technological tools to help strengthen the sustainable blue food value network.</p>	<ul style="list-style-type: none"> <li>• The development and transfer of technology in fisheries and aquaculture for traceability and safety.</li> <li>• Policy recommendations for innovation.</li> <li>• Technology for the transition to sustainable production in fishing and aquaculture communities for food sovereignty.</li> <li>• Public policy recommendations.</li> </ul>

TOPIC AREA	GOAL	DISCUSSED TOPICS
 <p><b>Area 4. Blue justice: policies and participatory governance in fisheries and aquaculture to guarantee the right to healthy food.</b></p>	<p>Address strategies to ensure that social welfare, community and equity goals are met through a blue food policy.</p>	<ul style="list-style-type: none"> <li>• Public policy perspective for food sovereignty and the right to healthy food for nutrition and well-being.</li> <li>• Blue justice and participatory governance.</li> <li>• International experience: collaborative efforts in the sustainable food systems agenda.</li> </ul>
 <p><b>Area 5. Conservation of biocultural heritage for food sovereignty.</b></p>	<p>Present measures for effectively conserving marine resources and biocultural heritage, highlighting their role in sustainably incorporating blue foods into an integrated national food system to ensure food sovereignty and the well-being of coastal communities.</p>	<ul style="list-style-type: none"> <li>• Biocultural approach to conservation for blue food production.</li> <li>• Food sovereignty for the development of biocultural heritage conservation models.</li> </ul>
 <p><b>Area 6. Impact of climate change: mitigation, adaptation and resilience for blue food production.</b></p>	<p>Analyze the impact of climate change: mitigation, adaptation and resilience for blue food production.</p>	<ul style="list-style-type: none"> <li>• Mitigation and adaptation strategies in blue food production and economic impact of climate change on food sovereignty.</li> <li>• WORKSHOP: The basis for establishing the critical path for incorporating a commitment to food sovereignty and security with blue foods into the NDC.</li> </ul>



The EXUS consulting team, made up of experts in the facilitation and construction of similar events for the environmental sector, was hired for the operational development and implementation of the forum. The facilitating team played an important role. Their experience was fundamental to refining the timing, improving the approach to questions, detailing the agenda and workshop exercise, and systematizing results.

## The National Forum on Blue Food in the face of Climate Change

The forum was held in two parts. The first part included keynote presentations and topical panels. These panels addressed the different challenges and opportunities and presented public policy proposals. The second part consisted of a workshop, in which all participants carried out exercises at discussion tables aimed at identifying the necessary elements for the construction of a critical path for incorporating blue foods in Mexico's NDCs.

Of note was the use of a digital platform created for the Forum, which served as a reservoir of general information on the Forum and provided a tool for compiling information on recommendations and priorities identified through various interactive exercises for Forum participants.

## Forum part 1: presentations and panels

The National Commission of Fisheries and Aquaculture (CONAPESCA) presented an initial diagnosis of fisheries and aquaculture in Mexico. Participants included Dr. Verónica Lango, general director of transformation and consumption; Dr. Víctor Manuel Vidal, head of the Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS); and Silvio Simonit, deputy representative for Mexico of the Food and Agriculture Organization of the United Nations (FAO). After establishing common ground, Oceanologist Juan Carlos Lapuente, Director of Aquaculture Research at IMIPAS, and Dr. Silvia Salas of the Center for Research and Advanced Studies of the National Polytechnic Institute (CINVESTAV), addressed the topics of sustainable management and production.

Two panels were held with experts to address the topic of science, technology, and innovation. The first panel, which addressed topics on research and technology transfer, featured Dr. Felipe Amezcua from the National Autonomous University of Mexico (UNAM), Dr. Carmen Paniagua from CICESE, and Dr. Crisantema Hernández from CIAD Mazatlán. The speakers emphasized the importance of research centers in understanding and solving problems in the sector.

In addition, the relevance of environmental and species monitoring was highlighted, emphasizing that there is no sustainable production without healthy ecosystems. The Technology for the transition towards sustainable production panel included Emmanuel Rivera, Blue Economy Coordinator of WWF México's Oceans Program, and Leonardo Vázquez-Vera, a Consultant Specialist in Ecology and Coastal Systems. The following critical factors were identified for technology transfer: training, accessibility, collaboration between government agencies, and the need for clear policies to encourage the adoption of technological tools. Additionally, a regulatory framework is needed to govern their use in order to optimize production and traceability in the fishing and aquaculture sectors.

The topic of blue foods and their role in public health was addressed in a panel formed by Pablo López and Jessica J. Pradel, who discussed major public health problems related to an inadequate diet and discussed important findings on the potential health and economic benefits of increasing protein- and mineral-rich blue food intake.

In the areas of blue justice and participatory governance, Dr. Alma Rosa García, the Minister of Fisheries and Aquaculture of Baja California and President of the National Association of Aquaculture and Fisheries Holders, delivered an exceptional presentation. She shared the actions that the state government implemented from 2019–2024 and emphasized the importance of collaboration between the government and fisheries and aquaculture sectors to meet sustainability goals.

Her speech addressed the strategies developed in Baja California to address challenges such as climate change and promote gender inclusion and support for indigenous communities. These are just some of many relevant strategic projects.

To provide international insight on collaborative efforts in the sustainable food systems agenda, Pedro Zapata, Senior Director of the Resilient Oceans and Fisheries Global Initiative at EDF and the Blue Foods International Coalition, discussed the coalition's goals of raising the profile of blue foods, mobilizing support, and promoting knowledge sharing and local action. He also unveiled plans for 2025 that include expanding the coalition, organizing events at global forums and fostering partnerships for specific projects in the field. He especially highlighted the collaboration with the government of Iceland, underlining potential opportunities for Mexico.

A panel was held to discuss the biocultural approach to conservation for blue food production, with the following participants: Citlali Gómez, President of The Mexican Council for the Promotion of Fishery and Aquaculture Products (COMEPESCA); Jorge Christian Alva, Regional Director of the Yucatán Peninsula for the National Commission of Protected Natural Areas (CONANP); and Oscar Guzmán, Director of the Sian Ka'an Biosphere Reserve for CONANP.



The panelists presented cases of initiatives successfully implemented in the field that included blue food production practices in a comprehensive manner. They emphasized the participation of community organizations in project implementation and respect and recognition of the cultural and social context of the work sites. In addition, emphasis was placed on the close link between biodiversity conservation and the sustainability of the fisheries and aquaculture sectors.

Dr. Rafael Ortiz, the CEO of EDF de México, and Celia Pigueron Wirz, the Deputy Director of Climate Change Risks at the National Institute of Ecology and Climate Change, participated in a panel discussion on climate change, discussing mitigation and adaptation strategies in blue food production, as well as the socioeconomic impact of climate change on food sovereignty. The panelists discussed how community governance can be used as an adaptation and resilience strategy in the fisheries and aquaculture sectors at different scales.

Emphasis was placed on the positive results of adopting governance mechanisms such as advisory committees, which have broad representation and allow decisions to be made effectively, efficiently and legitimately, thus reducing conflict. INECC provided an overview of the vulnerability diagnosis in coastal communities and highlighted the role of blue foods in reducing greenhouse gas emissions. In addition, this area faces the following challenges: mobilizing international financing, promoting capacity building for sustainable practices, and facilitating innovation and technology transfer to promote sustainable blue food production.

Finally, Luisa Alejandra Domínguez, a consultant for the Global Green Growth Institute (GGGI) in the General Directorate for Climate Change Adaptation at the Ministry of Environment and Natural Resources (SEMARNAT), discussed the process of creating Mexico's NDC and its periodic updates. She also discussed Mexico's commitments to climate change adaptation and mitigation, highlighting the potential of the blue food approach to contribute to Mexico's international climate change goals under the United Nations Framework Convention on Climate Change (UNFCCC).

In the first part of the workshop, experts presented information that provided a general overview and specific perspectives on various issues related to blue foods in Mexico. This served as the basis for starting a discussion during the workshop phase.

## Forum part 2: **workshop**

The Forum provided participants a space to exchange ideas and discuss topics at working tables with panelists, to identify actions that help integrate blue foods into the climate change agenda. This was done by identifying important elements that contribute to developing a critical path for formulating Mexico's climate commitment for food sovereignty through blue foods.

Discussions were held simultaneously at working tables, where areas 2 through 6 were addressed. This methodology enabled all attendees to participate in each proposed topic, offering diverse perspectives. As a result, key actions in food sovereignty were identified, along with the main stakeholders responsible for implementing them and possible sources of financing. The efforts made at the forum, as well as desk-based analysis and actions carried out after this event, provided fundamental inputs to formulate and integrate a commitment to food sovereignty for Mexico in the updating of its NDCs.





# RESULTS

The forum led to the development of public policy proposals, which were distributed across the five addressed topical areas. The proposals aim to strengthen food sovereignty and security, ensure the sustainability of marine and coastal ecosystems, and increase the resilience of fishing communities, promoting inclusive economic development that respects the environment.

The following public policy proposals came up from this participatory effort after an internal regrouping and synthesis process to facilitate analysis.



## Area 1. Blue Foods: A strategic component of food sovereignty as a guiding principle.

**Implementation of regional territorial use agreements, favoring the assignment of rights to local fishing communities committed to improving the management, conservation, sustainability and legal exploitation of marine resources.**

**Vision:** Mexican coastal fishermen have legal and preferential access to local resources and exercise sustainable use, co-management and conservation of the natural resources associated with their communities' traditional fishing zones.



### Cross-sectional topics

Climate change, blue justice and blue economy.



### Achievable Goal(s)

- Contribute to the resilience of fishing and aquaculture communities in Mexico.
- Encourage ownership and compliance with community welfare, health, conservation and sustainable management of natural resources associated with areas adjacent to communities.



### Goal(s): expected results

- Within three years, a critical path will be developed for implementing the action plan to diversify climate-resilient species in fisheries and aquaculture that respects local populations.
- Within five years, at least one pilot program will be implemented in fisheries and aquaculture to diversify native species in each region along the national coastline.



### Scope

Short, medium and long term.

 <p><b>Implementation measures: steps to achieve it</b></p>	<ul style="list-style-type: none"> <li>• Strengthen inter-institutional, academic and private sector collaboration mechanisms with the fisheries and aquaculture sector. Develop legal and financial incentives for supply networks that are geared toward legality, compliance with co-management agreements, and social and environmental responsibility.</li> <li>• Develop a financing strategy for its implementation.</li> <li>• Socialize the process and update the legal framework.</li> </ul>
 <p><b>Inter-institutional coordination for implementation</b></p>	<ul style="list-style-type: none"> <li>• Ministry of Agriculture and Rural Development (SADER)</li> <li>• National Commission of Fisheries and Aquaculture (CONAPESCA)</li> <li>• Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)</li> <li>• Fishing and Aquaculture Organizations</li> <li>• Academic Sector</li> <li>• Private Sector</li> <li>• Civil Society Organizations</li> </ul>
 <p><b>Key collaborators</b></p>	<ul style="list-style-type: none"> <li>• Ministry of the Environment and Natural Resources (SEMARNAT)</li> <li>• Ministry of Finance and Public Credit (SHCP)</li> <li>• Ministry of the Economy (SE)</li> <li>• National and International Financial Funds</li> </ul>





## Area 2. Food Policy in Mexico: Sustainable management of fishery and aquaculture resources for a regionalized and integrated agri-food system

**Update the General Sustainable Fisheries and Aquaculture Act (LGPAS) and set forth its regulations, incorporating guidelines on ecosystem, precaution, co-management, adaptation, mitigation, adaptive management, vulnerability, risk, legality, blue justice and co-governance.**

**Vision:** Mexico has updated its sectoral legislation to incorporate climate change and social welfare as guiding principles, ensuring the viability, sustainability, and resilience of blue food production.



### Cross-sectional topics

Climate change and blue justice.



### Achievable Goal(s)

- To strengthen, align and coordinate legislation between the fisheries and aquaculture sector policies and social, environmental, and climate sector legislation.



### Goal(s): expected results

- In three years, Mexico will strengthen its national food sovereignty and security by promoting sustainable and resilient blue food production.
- Within three years, Mexico will ensure its population has access to quality blue food.



### Scope

Medium term.



### Implementation measures: steps to achieve it

- Law modification initiative promoted by CONAPESCA and endorsed by the sector's stakeholders.
- Initiate and follow up on the legislative process, ensuring a participatory, inclusive and transparent process.
- Develop a financing strategy for its implementation.
- Socialize the process and update the Law.

 <p><b>Inter-institutional coordination for implementation</b></p>	<ul style="list-style-type: none"> <li>• Ministry of Agriculture and Rural Development (SADER)</li> <li>• National Commission of Fisheries and Aquaculture (CONAPESCA)</li> <li>• Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)</li> <li>• Congress of the Union</li> </ul>
 <p><b>Key collaborators</b></p>	<ul style="list-style-type: none"> <li>• Interministerial Commission for the Sustainable Management of Seas and Coast (CIMARES)</li> <li>• Environmental Sector</li> </ul>
<p><b>Protect, strengthen, recover, expand or incorporate new strategic blue food production zones by promoting administrative, management and integrated management policies for the coastal-marine zone based on the watershed approach, the region and community co-management in the face of climate change.</b></p>	
<p><b>Vision:</b> Mexico has a legal and financial framework that incorporates climate change, the watershed approach, co-management and social welfare as guiding principles of public policy to ensure the viability, sustainability and management of blue food production.</p>	
 <p><b>Cross-sectional topics</b></p>	<p>Land management, ecology, fisheries and aquaculture, climate change, blue justice, blue economy.</p>
 <p><b>Achievable Goal(s)</b></p>	<p>In response to the impacts of climate change, a legal and administrative framework is needed that is compatible with the watershed approach between climate and environmental policy for the fisheries and aquaculture sectors.</p>
 <p><b>Goal(s): expected results</b></p>	<ul style="list-style-type: none"> <li>• Build scientific knowledge and create the conditions necessary for public policy in the fisheries and aquaculture sectors that will contribute positively to national food sovereignty and security.</li> <li>• Develop an updated, reliable and effective model for managing national fishery and aquaculture resources.</li> <li>• Ensure the public has access to quality food in healthy, resilient environments.</li> </ul>
 <p><b>Scope</b></p>	<p>Short, medium and long term.</p>



### Implementation measures: steps to achieve it

- Strengthen regional collaborative and participatory mechanisms for government, academic, private sector institutions, and the fishing and aquaculture industries.
- Modernize and innovate the technology used to administer and control national fisheries and aquaculture.
- Develop a financing strategy for its implementation.
- Socialize relevant scientific information so that fishing and aquaculture communities may improve their production processes, product quality, and social benefits.



### Inter-institutional coordination for implementation

- Ministry of Agriculture and Rural Development (SADER)
- Ministry of Finance and Public Credit (SHCP)
- Ministry of the Economy (SE)
- National Commission of Fisheries and Aquaculture (CONAPESCA)
- Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)
- Fishing and Aquaculture Organizations
- Academic Sector
- Private Sector
- Civil Society Organizations



### Key collaborators

- Interministerial Commission for the Sustainable Management of Seas and Coast (CIMARES)
- Environmental Sector





## Area 3. Science, Technology and Innovation in Blue Food Production.

**Design and implement regional programs for the development, adaptation, implementation, innovation, and use of technology based on the needs raised by the producers themselves and integrate them into an accessible and transparent national digital platform for blue food.**

**Vision:** Each region of the country operates an integrated digital platform that uses technology to generate, process, share, and apply information to improve the products and processes of regional blue food supply networks within the Mexican food system.



### Cross-sectional topics

Food sovereignty, climate change, technology, governance, financing.



### Achievable Goal(s)

- Reconcile the interests and needs of producers, authorities, and researchers to strengthen information for designing sustainable management strategies and decision-making processes. Achieve traceability and safety for fishery and aquaculture products and improve their quality and competitiveness.
- Improve the information available to consumers on national blue foods.
- Improve support for management and marketing mechanisms and strategies.



### Goal(s): expected results

- Improve traceability and market competitiveness.
- Strengthen safety at sea.
- Improve scientific and technical knowledge of resources.
- Increase informed decision-making.
- Increase producer resilience to the effects of climate change.



### Scope

Short, medium and long term.



### Implementation measures: steps to achieve it

- Conduct a regional diagnostic study to identify available natural resources, technological needs, existing infrastructure, and local capacities of blue food producers.
- Analyze existing policies and regulations that may influence the blue food sector, adapting them to regional requirements.
- Evaluate market demands and trends to ensure that the technologies implemented are aligned with local and global business needs and opportunities.



### Inter-institutional coordination for implementation

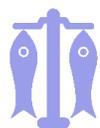
- Ministry of Agriculture and Rural Development (SADER)
- National Commission of Fisheries and Aquaculture (CONAPESCA)
- Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)
- Ministry of Science, Humanities, Technology and Innovation (SECIHTI)
- Fishing and Aquaculture Organizations
- Academic Sector
- Private Sector
- Civil Society Organizations



### Key collaborators

- The Mexican Agency of International Cooperation for Development (AMEXCID)





## Area 4. Blue justice: policies and participatory governance in fisheries and aquaculture to guarantee the right to healthy food.

**Strengthening the culture of legality within the national fisheries and aquaculture sectors by establishing administrative and tax incentives to encourage compliance with regulations and management agreements, as well as providing producers with competitive advantages and security.**

**Vision:** Mexico has a balanced system of incentives and penalties that strengthen the benefits for producers who operate legally, comply with current regulations, and adhere to management agreements for the sustainability, resilience, accessibility, and quality of blue food production.



### Cross-sectional topics

Blue justice, participatory governance, food sovereignty and security.



### Achievable Goal(s)

- Have effective tools to encourage stakeholders in the sector to comply with regulations and management agreements.
- Promote Transparency and Traceability.
- Strengthening Supervision and Control.



### Goal(s): expected results

- Achieve increased compliance with fishing and aquaculture regulations in the main producing regions within 3 years.
- Increase the adoption of sustainable practices by fishing and aquaculture companies within 3 years.
- Increase Stakeholder Participation in Certification and Recognition Programs.



### Scope

Medium term.



### Implementation measures: steps to achieve it

- Establish a certification system for companies and producers that comply with current regulations, giving them access to additional benefits.
- Provide more efficient and streamlined processes for those who demonstrate compliance with environmental, fishing, and aquaculture management regulations to obtain permits and licenses.

	<ul style="list-style-type: none"> <li>• Offer tax exemptions or reductions for companies and producers that demonstrate their commitment to regulatory compliance.</li> </ul>
 <p><b>Inter-institutional coordination for implementation</b></p>	<ul style="list-style-type: none"> <li>• Ministry of Agriculture and Rural Development (SADER)</li> <li>• Ministry of Finance and Public Credit (SHCP)</li> <li>• Ministry of the Economy (SE)</li> <li>• National Commission of Fisheries and Aquaculture (CONAPESCA)</li> <li>• Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)</li> <li>• Fishing and Aquaculture Organizations</li> <li>• Academic Sector</li> <li>• Private Sector</li> <li>• Civil Society Organizations</li> </ul>
 <p><b>Key collaborators</b></p>	<ul style="list-style-type: none"> <li>• Ministry of the Navy (SEMAR)</li> <li>• Ministry of the Environment and Natural Resources (SEMARNAT)</li> </ul>
<p><b>Increase the participation of local blue foods in regional government programs that provide relief and food to communities affected by natural disasters and other emergencies.</b></p>	
<p><b>Vision:</b> The country will have an updated network of local blue food producers who have the necessary logistics and financing to supply communities affected by natural disasters and other emergency situations with healthy, quality food at a fair price in a timely manner.</p>	
 <p><b>Cross-sectional topics</b></p>	<p>Blue justice, food sovereignty and security, technology, financing, health, governance.</p>
 <p><b>Achievable Goals</b></p>	<ul style="list-style-type: none"> <li>• Provide mechanisms to shorten and optimize marketing and supply networks, alleviate and solve social pressures caused by health and hunger stress resulting from emergencies and extreme events.</li> </ul>

 <p><b>Goal(s): expected results</b></p>	<ul style="list-style-type: none"> <li>• Within five years, all national coastal regions deemed most vulnerable to extreme climate-related events will have fully operational programs to provide blue food producers with the means to offer healthy, quality products that the public needs at affordable prices in emergency situations.</li> </ul>
 <p><b>Scope</b></p>	<p>Medium - long term</p>
 <p><b>Implementation measures: steps to achieve it</b></p>	<ul style="list-style-type: none"> <li>• Collaborative work among the Ministry of Health, the Ministry of Public Education, the Ministry of Agriculture and Rural Development, state and municipal governments, and local fishery and aquaculture organizations to integrate quality blue food into the emergency food program for disaster and emergency areas within national education and public health policies.</li> <li>• Design and implement pilot projects that validate a viable regional model for operating school breakfast programs, which should be appropriate to the culture and natural resources available and include specific indicators that evaluate their performance and impact on target populations.</li> <li>• Design the logistics and financial engineering necessary to guarantee the operation of blue food distribution and supply mechanisms in disaster and emergency food zones.</li> </ul>
 <p><b>Inter-institutional coordination for implementation</b></p>	<ul style="list-style-type: none"> <li>• Ministry of Agriculture and Rural Development (SADER)</li> <li>• Ministry of Health (SSA)</li> <li>• Ministry of National Defense (SEDENA)</li> <li>• Ministry of the Navy (SEMAR)</li> <li>• Ministry of Public Education (SEP)</li> <li>• National Commission of Fisheries and Aquaculture (CONAPESCA)</li> <li>• Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)</li> <li>• Fishing Commissions of the Chambers of Senators and Deputies</li> <li>• Academic Sector</li> <li>• Private Sector</li> <li>• Civil Society Organizations</li> </ul>

 <p><b>Key collaborators</b></p>	<ul style="list-style-type: none"> <li>• Ministry of Finance and Public Credit (SHCP)</li> <li>• Ministry of the Economy (SE)</li> <li>• Fishing and Aquaculture Organizations</li> <li>• German Society for International Cooperation (GIZ) (support to cooling networks with alternative energies).</li> <li>• Food and Agriculture Organization of the United Nations (FAO)</li> </ul>
<p><b>National system of regional, direct-to-producer purchases of sustainable, traceable, and legally documented blue foods that regularly supply healthy, quality-assured products to school breakfast programs and marginalized populations.</b></p>	
<p><b>Vision:</b> Mexico will have a timely, safe, and accessible supply of healthy blue foods to meet the requirements of a national school breakfast program and support marginalized populations.</p>	
 <p><b>Cross-sectional topics</b></p>	<p>Blue justice, food sovereignty and security, health, financing, collaborative partnerships.</p>
 <p><b>Achievable Goal(s)</b></p>	<ul style="list-style-type: none"> <li>• Design a regional strategy for regularly purchasing blue food on an annual basis that is sustainable and committed to childhood health, as well as the social and economic well-being of communities.</li> </ul>
 <p><b>Goal(s): expected results</b></p>	<ul style="list-style-type: none"> <li>• Every Mexican child will have access to breakfasts made with healthy, quality blue foods, ensuring a nutritious and adequate diet.</li> </ul>
 <p><b>Scope</b></p>	<p>Medium - long term</p>



### Implementation measures: steps to achieve it

- Implement a collaborative process between government agencies, producers, academia, and the private sector to design an economically viable strategy that ensures the purchase, supply, and sanitary logistics of the distribution and cold chain of quality, legal, and sustainable national blue foods.
- Launch national awareness and sensitization campaigns that focus on the importance of healthy eating and the benefits of blue foods in preventing inflammatory and chronic diseases.



### Inter-institutional coordination for implementation

- Ministry of Agriculture and Rural Development (SADER)
- National Commission of Fisheries and Aquaculture (CONAPESCA)
- Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)
- Ministry of Health (SSA)
- Ministry of Public Education (SEP)
- Fishing Commissions of the Chambers of Senators and Deputies
- Academic Sector
- Private Sector
- Civil Society Organizations



### Key collaborators

- Ministry of Finance and Public Credit (SHCP)
- Ministry of the Economy (SE)
- Ministry of the Environment and Natural Resources (SEMARNAT)
- Food and Agriculture Organization of the United Nations (FAO)
- Fishing and Aquaculture Organizations





## Area 5. Conservation of biocultural heritage for food sovereignty.

**Plan new, sustainable, multi-specific, annual, multi-species fisheries co-management systems at the regional level, that will adapt to the new conditions imposed by climate change and contribute to increasing the resilience and well-being of communities.**

**Vision:** Mexico's fisheries and aquaculture sectors are resilient to the effects of climate change and other global shifts thanks to effective sustainable adaptation measures that improve ecosystem health.



### Cross-sectional topics

Blue justice, food sovereignty and security, climate change, participatory governance.



### Implementation measures: steps to achieve it

- Using the best available science and technology, evaluate current or potential species that can be incorporated into local production cycles to improve community sustainability and resilience.
- Implement pilot projects on an annual basis in each region to validate viable, multi-species co-management models, that will implement and operate fishing and aquaculture processes appropriate to the culture and natural resources available, with specific indicators to evaluate their performance and impact on communities.
- Law modification initiative promoted by CONAPESCA and endorsed by the sector's stakeholders.
- Initiate and follow up on the legislative process, ensuring a participatory, inclusive and transparent process.
- Develop a financing strategy for its implementation.
- Socialize the process and update the Law.



### Inter-institutional coordination for implementation

- Ministry of Agriculture and Rural Development (SADER)
- Ministry of Finance and Public Credit (SHCP)
- Ministry of the Economy (SE)
- National Commission of Fisheries and Aquaculture (CONAPESCA)
- Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)
- Fishing and Aquaculture Organizations
- Academic Sector
- Private Sector
- Civil Society Organizations



### Key collaborators

- Interministerial Commission for the Sustainable Management of Seas and Coast (CIMARES)
- Environmental Sector





## Area 6. Climate change impact: mitigation, adaptation and resilience for blue food production.

**Develop financial mechanisms and instruments for social security to protect local fishermen from the possible negative effects of climate change.**

**Vision:** Mexican local fishermen will have access to social security financial instruments to resist climate effects.



**Cross-sectional topics**

Climate change, blue justice and blue economy.



**Achievable Goal(s)**

Contribute to the resilience of Mexico's local fishing sector.



**Goal(s): expected results**

- Creation of a social security system that provides a regular income and financial support in times of crisis, such as extreme weather events or a decline in fishing due to changes in marine ecosystems.
- Local fishermen will have access to emergency funds and weather insurance to protect them against economic losses caused by adverse weather events.



**Scope**

Medium term



**Implementation measures:  
steps to achieve it**

- Law modification initiative promoted by CONAPESCA and endorsed by the sector's stakeholders.
- Initiate and follow up on the legislative process, ensuring a participatory, inclusive and transparent process.
- Develop a financing strategy for its implementation.
- Socialize the process and update the Law.



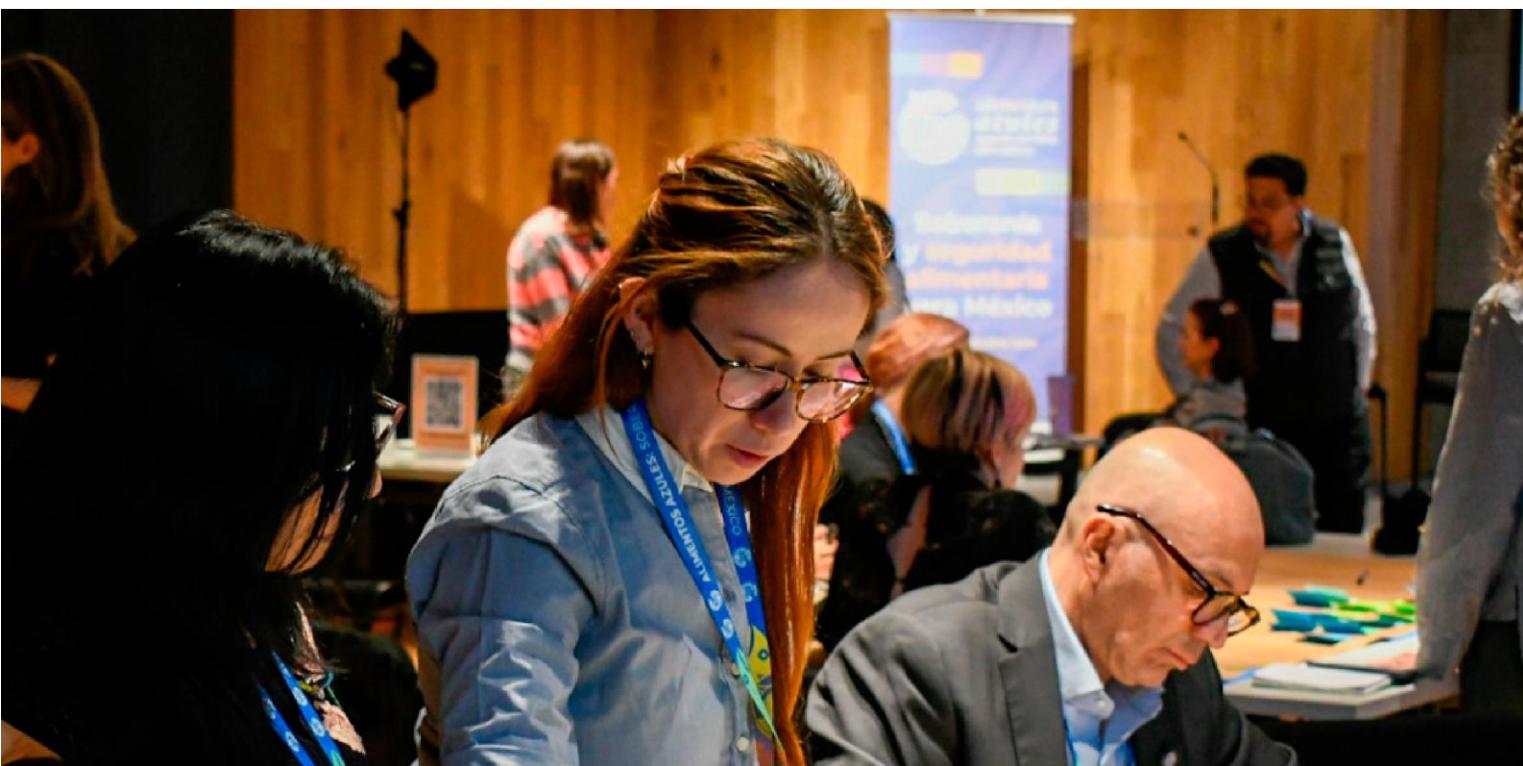
### Inter-institutional coordination for implementation

- Ministry of Agriculture and Rural Development (SADER)
- Ministry of Finance and Public Credit (SHCP)
- Ministry of the Economy (SE)
- National Commission of Fisheries and Aquaculture (CONAPESCA)
- Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)
- Fishing and Aquaculture Organizations
- Academic Sector
- Private Sector
- Civil Society Organizations



### Key collaborators

- Interministerial Commission for the Sustainable Management of Seas and Coast (CIMARES)
- Environmental Sector

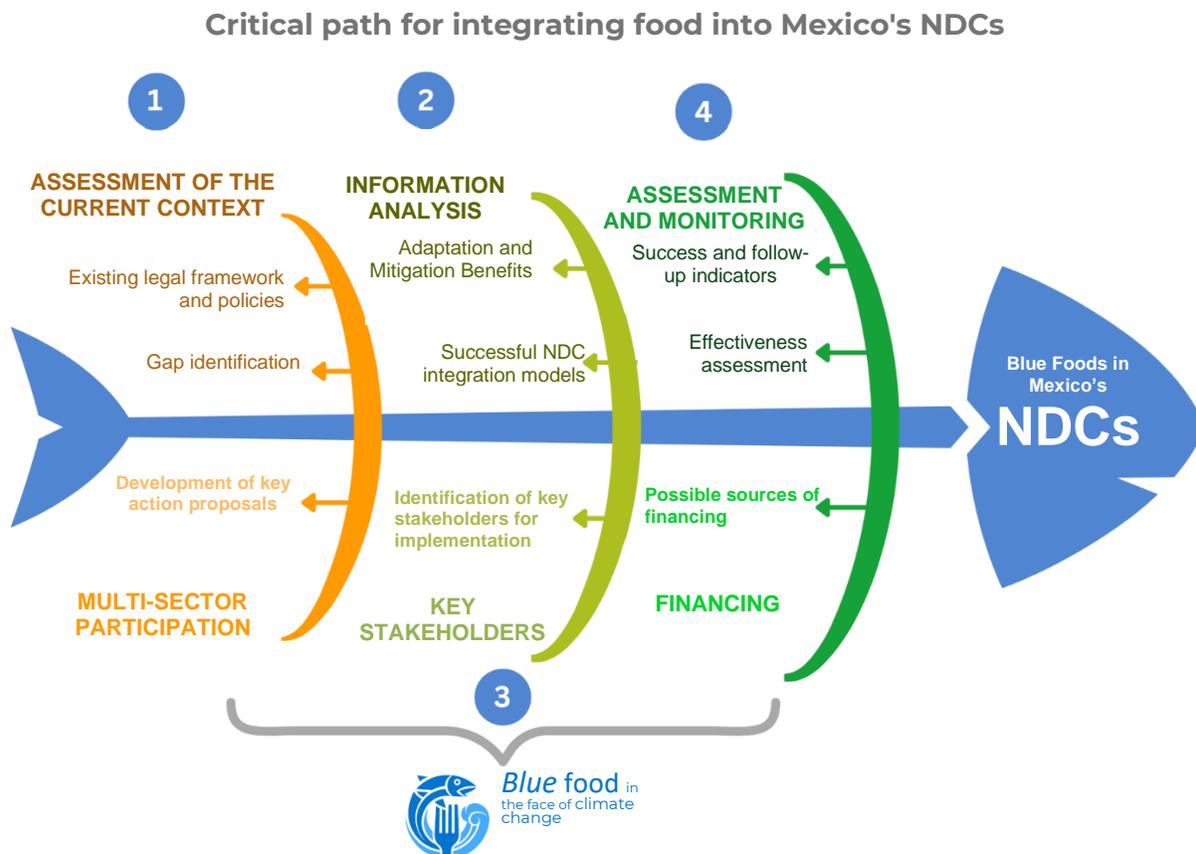


## How can a critical path be formed for incorporating blue foods into Mexico's NDCs?

The blue food approach is currently poorly integrated into Mexico's NDCs. This presents an opportunity to incorporate, mainstream, and strengthen it with actions that address the issue holistically without losing effectiveness, which would provide environmental, economic and social benefits in the face of the current triple planetary crisis.

Considering the steps necessary to form a critical path, as shown in Figure 1, the Forum outlined and identified identifying actions, key stakeholders, and financing. This will align the sustainable production and consumption of blue foods with climate change mitigation and adaptation goals, ensuring this resource contributes to food security and strengthens the resilience of marine ecosystems and coastal communities.

We were able to answer questions with the results of the exercise carried out in the workshop, such as: What actions involving blue foods address Mexico's NDC goals? Who are the stakeholders involved in implementing these actions? What are the possible sources of funding for its implementation?



## What actions should be taken into account?

### 1. Actions for management of sustainable and climate-adaptive fisheries.

#### Proposal for action



**Promote the transition to sustainable and resilient blue food production models in the fisheries and aquaculture sectors by adopting responsible practices that ensure the conservation of marine ecosystems, reduce greenhouse gas (GHG) emissions, promote biodiversity and improve food security.**

**Expected results:** Reduction of environmental impacts, reduction of GHG emissions, increased resilience to climate change, protection of marine ecosystems and more resilience in coastal and fishing communities by promoting a circular economy.

**Alignment with SDGs:** SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production), and SDG 14 (Life Below Water).

#### Proposal for action



**Integrate productive diversification and sustainability into national fisheries and aquaculture management policies.**

**Expected results:** Long-term sustainability; diversification of income sources; strengthening and resilience in the face of climate change; stress reduction for some species.

**Alignment with SDGs:** SDG 14 (Life Below Water), SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action).

### Proposal for action



**Establish seed production laboratories to ensure the sustainable reproduction of salt water and freshwater species, promoting biodiversity and increasing the production of blue food.**

**Expected results:** Increased production of sustainable blue food; genetic diversity and variability of species; recovery of populations and ecosystems; development of local capacities.

**Alignment with SDGs:** SDG 2 (Zero Hunger), SDG 14 (Life Below Water) and SDG 13 (Climate Action).

### Proposal for action



**Integrate productive diversification and sustainability into national management policies. Promote the adoption of environmental certifications to ensure the sustainability and resilience of the blue food sector in the face of climate change challenges.**

**Expected results:** Improved resource management, resilience to the effects of climate change, more access to markets, and enhanced competitiveness and development of the culture of sustainability in the fishing and aquaculture sectors.

**Alignment with SDGs:** SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water) and SDG 17 (Partnerships for the Goals).

### Proposal for action



**Promote the use of fishery and aquaculture waste by establishing policies and regulations that encourage circular economy models.**

**Expected results:** Significant reduction of waste generated by the aquaculture and fishing sectors; development of new waste-recovery industries; improvement of sector sustainability; and incentives for innovation in recycling and utilization processes.

**Alignment with SDGs:** SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water) and SDG 8 (Decent Work and Economic Growth).

### Proposal for action



**Development of regulations and policies that promote and regulate the reuse and recycling of fishing gear in the fishing and aquaculture sectors.**

**Expected results:** Reduction in marine pollution caused by plastics, reduction in the consumption of raw materials and the ecological footprint associated with their production, cost reduction, creation of new markets and sources of income, job creation, adoption of sustainable practices and the strengthening of fishing and aquaculture communities.

**Alignment with SDGs:** SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water) and SDG 8 (Decent Work and Economic Growth).

### Proposal for action



**Promote the adoption of clean energy sources and reduce energy consumption throughout the supply chains of the fisheries and aquaculture sectors.**

**Expected results:** Reduction of greenhouse gases (GHG), conservation of natural resources, reduced operating costs, more competitiveness, green job creation, strengthening of energy security, compliance with Paris Agreement goals.

**Alignment with SDGs:** SDG 7 (Affordable and Clean Energy), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action) and SDG 14 (Life Below Water).

## 2. Actions for management of sustainable and climate-adaptive fisheries.

### Proposal for action



**Development of regulatory documents and public policies promoting the development and implementation of Digital Traceability Systems in the fisheries and aquaculture sectors.**

**Expected results:** Reduction of overfishing and promotion of sustainable fishing practices, management of aquatic resources and biodiversity conservation, improvement of operational efficiency, access to international markets, greater value chain transparency, promotion of fishing and aquaculture sector best practices, incentives for compliance with environmental and labor regulations, adaptation to changing climate conditions, a reduced carbon footprint and improved energy management.

**Alignment with SDGs:** SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action) and SDG 14 (Life Below Water).

### Proposal for action



**Promote the use of clean and efficient technologies in aquaculture and fisheries production, such as remote monitoring systems for resource management.**

**Expected results:** A reduced carbon footprint, conservation of resources, reduced operating costs, improved working conditions, strengthening of the food security agenda, better water quality, reduction of vulnerability to the effects of climate change.

**Alignment with SDGs:** SDG 7 (Affordable and Clean Energy), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water).

### Proposal for action



**Promote the implementation of technology for the use, integral management and sanitation of water in the fishing and aquaculture sectors.**

**Expected results:** Conservation of water resources, reduced pollution and more robust climate change mitigation actions.

**Alignment with SDGs:** SDG 6 (Clean Water and Sanitation), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 14 (Life Below Water) and SDG 15 (Life on Land).

### Proposal for action



**Promote technology transfer for the adoption of innovative practices that improve resource management and increase productivity.**

**Expected results:** A reduced ecological footprint, preservation of salt water and freshwater species, increased productivity, greater profitability, access to international markets, development of local capacities, job creation, improved quality of life, resilience to climate change, reduction of GHG emissions.

**Alignment with SDGs:** SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation and Infrastructure) and SDG 13 (Climate Action).



### 3. Actions for research and capacity building

#### Proposal for action



**Encourage research on identifying and cultivating marine-coastal flora and fauna species with a greater capacity to adapt to climate change effects.**

**Expected results:** Improved ecosystem health, improved productivity and profitability, sustainability of the sector through marine species adapted to extreme climatic conditions.

**Alignment with SDGs:** SDG 14: (Life Below Water), ODS 13: (Climate Action), SDG 2 (Zero Hunger), SDG 9 (Industry, Innovation and Infrastructure), and SDG 17 (Partnerships for the Goals).

#### Proposal for action



**Encourage collaboration among the public, private and academic sectors to implement these studies and promote sustainable and adaptive practices in the fisheries and aquaculture sector.**

**Expected results:** Development of innovative solutions, strengthening of the sector's activities and promotion of public-private investment.

**Alignment with SDGs:** SDG 17 (Partnerships for the Goals), SDG 14: (Life Below Water), ODS 13: (Climate Action), SDG 2 (Zero Hunger), SDG 9 (Industry, Innovation and Infrastructure), and SDG 12 (Responsible Consumption and Production).

#### Proposal for action



**Encourage carrying capacity studies to ensure a balance between production and resource conservation.**

**Expected results:** Improved ecosystem health, improved productivity and profitability, sustainability of the sector through marine species adapted to extreme climatic conditions.

**Alignment with SDGs:** SDG 14: (Life Below Water), ODS 13: (Climate Action), SDG 2 (Zero Hunger), SDG 9 (Industry, Innovation and Infrastructure), and SDG 17 (Partnerships for the Goals).

### Proposal for action



**Promote alliances of the private sector (aquaculture companies), governments, non-governmental organizations and international organizations to secure funding for research projects in fisheries and aquaculture.**

**Expected results:** Development of innovative solutions, strengthening of the sector's activities and promotion of public-private investment.

**Alignment with SDGs:** SDG 17 (Partnerships for the Goals), SDG 14: (Life Below Water), ODS 13: (Climate Action), SDG 2 (Zero Hunger), SDG 9 (Industry, Innovation and Infrastructure), and SDG 12 (Responsible Consumption and Production).



#### 4. Actions for capacity building in matters of resilience to climate change.

##### Proposal for action



**Implement a regionalized national early warning system for natural disasters associated with climate change effects for the fisheries and aquaculture sector.**

**Expected results:** Reduced economic losses, climate resilience of the sector, improved profitability.

**Alignment with SDGs:** SDG 13 (Climate Action), SDG 14 (Life Below Water), SDG 2 (Zero Hunger).

##### Proposal for action



**Establish a collaborative network between local fishing and aquaculture communities and climate change experts to share practical knowledge on strategies that have proven successful in other regions and that can be applied in similar contexts.**

**Expected results:** Adaptive and sustainable best practices.

**Alignment with SDGs:** SDG 13 (Climate Action), SDG 14 (Life Below Water), SDG 2 (Zero Hunger), SDG 8 (Decent Work and Economic Growth) and SDG 1 (No Poverty).

## 5. Actions for conservation, preservation and productive restoration of priority ecosystems for blue food.

### Proposal for action



**Prepare a national atlas of priorities for conservation, remediation or sustainable use of critical coastal-marine ecosystems (mangroves, seagrasses, *Macrocystis pyrifera* forests, etc.) including the current and expected baseline scenario under climate change conditions.**

**Expected results:** Improvement of local and regional management of coastal-marine resources, strengthening of territorial planning and climate adaptation strategies, establishment of restoration and remediation priorities and identification of critical conservation areas.

**Alignment with SDGs:** SDG 13 (Climate Action), SDG 14 (Life Below Water).

### Proposal for action



**Implementation of nature-based solutions for conservation, restoration and sustainable use of resources.**

**Expected results:** Efficient conservation of ecosystems, sustainable ecological restoration and more robust climate resilience.

**Alignment with SDGs:** SDG 13 (Climate Action), SDG 14 (Life Below Water).

### Proposal for action



**Inter-institutional collaboration for early identification of opportunities and use of new conditions arising from climate change effects.**

**Expected results:** Recognition of new opportunities to help adapt to climate change.

**Alignment with SDGs:** SDG 13 (Climate Action), SDG 14 (Life Below Water).

## Who should be involved?

Relevant stakeholders were also identified to lead the aforementioned actions, including the following:

PUBLIC SECTOR	PRIVATE SECTOR	NON-GOVERNMENTAL ORGANIZATIONS
Ministry of Agriculture and Rural Development (SADER)	Technology developers	Non-governmental organizations at the national level
Ministry of the Environment and Natural Resources (SEMARNAT)	Fishing and aquaculture chambers	International organizations
Ministry of the Navy (SEMAR)	Producers' confederations and organizations.	Research centers
Ministry of Finance and Public Credit (SHCP)	Tourism companies	Universities
Ministry of Health (SSA)	Participants in the fishery and aquaculture value chain	
Ministry of Welfare		
Ministry of Public Education (SEP)		
Mexican Institute for Research in Sustainable Fisheries and Aquaculture (IMIPAS)		
Ministry of Science, Humanities, Technology and Innovation (SECIHTI)		
National Service of Health, Safety and Agri-Food Quality (SENASICA)		
National Commission of Fisheries and Aquaculture (CONAPESCA)		
National Water Commission (CONAGUA)		
National Commission of Natural Protected Areas (CONANP)		
Federal Attorney General's Office for Environmental Protection (PROFEPA)		
State Governments		

## How can it be financed?

Finally, sources of financing were identified to implement the aforementioned actions. The most frequently listed sources are:

NATIONAL PUBLIC SOURCES	INTERNATIONAL SOURCES	PRIVATE SECTOR
Federal Expenditure Budget	United Nations: FAO, UNEP, UNICEF, UNDP, among others.	Philanthropic foundations
State budgets	International cooperation: International Climate Initiative (IKI), Government of Germany, GIZ, KfW, French Cooperation Agenda, USAID, European Union, UK-PACT, among others.	Private companies: restaurant, hospitality and industrial sectors
Trust Funds for Rural Development (FIRA)	Multilateral development banks.	Non-governmental organizations
	Inter-American Development Bank (IDB)	Private banks
	Global funds (GEF, GCF)	Environmental technology funds (Fintech)
		Carbon credits
		Impact investment funds
		Chambers of commerce

These sources serve as a base for building a critical path toward integrating blue foods into international climate change commitments. Although concrete actions must be discussed with those who prepare the NDC update, these initial proposals highlight the most pressing needs and relate them to Mexico's climate change agenda priorities.



A man with dark hair and glasses is speaking at a podium. He is wearing a blue and white checkered shirt. The background is a wooden wall. A large blue semi-transparent rectangle is overlaid on the right side of the image. In the background, a screen displays the text 'Formació' and 'la voz global para lo'.

# CONCLUSIONS AND NEXT STEPS

**T**he National Blue Food Forum in the Face of Climate Change: Food Sovereignty and Security for Mexico represented an unprecedented milestone in the multisectoral articulation around a national blue food agenda. Thanks to the active participation of 70 specialists from 35 institutions — including government, academia, the private sector, civil society, and international organizations — a comprehensive diagnosis was created, points of consensus were identified, and a roadmap was established for integrating blue foods into national public policy, particularly in the context of NDCs for addressing climate change.

Through a participatory and collaborative approach, the forum achieved the following:

- It identified six strategic areas addressing the main challenges and opportunities of the fisheries and aquaculture sector in Mexico.
- It created public policy proposals at a territorial, sectorial, and inter-institutional level.
- It recognized key actions to mitigate and adapt to climate change, aligned with the SDGs.
- It visualized the potential of blue foods to strengthen food sovereignty, drive technological innovation, protect marine biodiversity and promote social justice in coastal communities.
- It established a digital platform for participation and information exchange that strengthened the systematization of results.

Discussions during the panels, keynote speeches, and working tables made it clear that not only is the sustainable production of blue foods viable, it is also a strategic way to address Mexico's current environmental, economic, and social challenges.

The need to promote more inclusive governance mechanisms, circular economy approaches, climate finance, and legal frameworks adapted to local conditions was also emphasized.

## Suggested next steps

1. Create a permanent inter-institutional working group to follow up on the recommendations from the forum and coordinate their incorporation into NDC and other sectoral policy updates.
2. Socialize the results of the forum at the national and regional levels through executive reports, dissemination materials, webinars and bilateral meetings with key decision makers.
3. Engage in dialogue with the institutions in charge of food, climate, and fishery policies to establish synergies and collaboration mechanisms for implementing the proposals.
4. In collaboration with coastal communities, promote high-impact regional pilot programs to validate models of blue food production, co-management, and commercialization that are resilient to climate change.
5. Manage financial resources through international funds, public-private partnerships, bilateral cooperation, and national programs to implement priority actions.
6. Update the legal and regulatory framework of the fisheries and aquaculture sectors to include sustainability, climate resilience, traceability, and food justice components.
7. Strengthen local and technical capacities through training programs, knowledge exchange networks and accessible digital platforms that promote community-driven innovation.

These conclusions and next steps provide a solid foundation for transitioning to a national food model that acknowledges the strategic importance of blue foods, ensures their sustainability, and establishes them as a critical component of Mexico's climate response strategy.





# SOURCES

Arce-Ibarra, Minerva, Fernanda Fitzmaurice, Miguel Ángel Cisneros-Mata, Silvia Salas , María José Espinosa- Romero , Valeria Fernández-Valencia, Francisco Javier Fernández-Rivera Melo , and Germán Ponce- Díaz J. 2024: Legal and Policy Assessment of the Implementation of the Small-Scale Fisheries Guidelines in Mexico: A Baseline for Blue Justice. Chapter 5 in Nakamura et al. (eds.), Implementation of the Small-Scale Fisheries Guidelines, MARE Publication Series 28, [https://doi.org/10.1007/978-3-031-56716-2\\_5](https://doi.org/10.1007/978-3-031-56716-2_5)

ENCC 2013. Estrategia Nacional de Cambio Climático. Visión 10-20-40. Gobierno de la República. <https://www.gob.mx/inecc/documentos/estrategia-nacional-de-cambio-climatico-vision-10-20-40>

Gobierno de México. (2021). ¿Qué es la NDC? México Ante el Cambio Climático. <https://cambioclimatico.gob.mx/NDC/que-es-la-ndc.html>

Los saberes tradicionales transforman y contribuyen al desarrollo local. (2021, 6 noviembre). The Hunger Project México. <https://thp.org.mx/los-saberes-tradicionales-transforman-y-contribuyen-al-desarrollo-local/>

Moran, M. (2024, 26 enero). Océanos - Desarrollo sostenible. Desarrollo Sostenible. <https://www.un.org/sustainabledevelopment/es/oceans/>

United Nations, 2021. Department of Economic and Social Affairs; sustainable Development. Sustainable Blue Foods are Vital to Global Food Security <https://sdgs.un.org/news/sustainable-blue-foods-are-vital-global-food-security-33148>





# *Blue* Food in the face of Climate Change