



National Implementation plan for sustainable Fisheries and Aquaculture sector in Pakistan 2020-2030



**Transforming our Pakistan: the 2030
Agenda for Sustainable Development**



Draft Document
National Implementation plan for Fisheries and Aquaculture sector in Pakistan
2020-2030

Project summary:	
Title: Support to develop a National Policy and Implementation Plan for Fisheries & Aquaculture sector (TCP/PAK/3709/C6)	Indicator: <ul style="list-style-type: none"> • # of fishery and aquaculture related development projects initiated by the Government of Pakistan. • Strong political will of government will continue • Effective consultation process led by relevant government institutions.
Participating UN Organisation: Agriculture Organization of UN (FAO) FAO's Technical Cooperation Programme (TCP)	Sector: Fisheries and Aquaculture
Impact: Pakistan has improved its food security, nutrition and poverty reduction status. Contribution to Government priorities:	Outcome: Ministry of National Food Security and Research adopts National Fisheries and Aquaculture Development Policy and Implementation Plan SDG1: Contribute to the eradication of hunger, food insecurity and malnutrition. Regional initiative: Zero Hunger Challenge Country Programming Framework 2018-2022 Government priority 1: Zero Hunger: Healthy, Safe and Nutritious Food for all Country Outcome 1.1: Government institutions implement sectoral policies with the incorporation of food security and nutrition objectives and gender considerations. Output 1.1.1: New/revised policies/frameworks/strategies/guidelines with the incorporation of food security and nutrition objectives, and gender and social protection considerations in place.
Output:	National Fisheries and Aquaculture Development Policy and Implementation plan for Pakistan 2020-2024 developed Strong ownership and participation of provincial/regional line departments and other stakeholders MNFSR commitment in preparing the policy document will remain throughout the project period
Main TCO project officer suggestions:	<ol style="list-style-type: none"> 1. The objective of review the existing national fisheries is mainly to identify the gaps in the existing legislative framework in safeguarding the sustainability of capture fisheries and aquaculture in Pakistan in the current socioeconomic, environment and climate change context. The existing fisheries legal framework hardly covered aquaculture. So, the NC needs to make more effort to identify the gaps/needs to strengthen legislation for aquaculture governance. Not just try to modify the current fisheries legislations; 2. The national fisheries and aquaculture policy is to determine the vision and goals for fisheries and aquaculture development in Pakistan and provide policy guidance in the major areas related to sustainable development of fisheries and aquaculture industry in the current context and identify key strategies to support the priority policy goals. It should try to address the very specific issues. Current draft outline needs significant structural modification and expand coverage (suggested in document).
Government of Pakistan – Responsible Line Ministry: Ministry of National Food Security and Research (MoA) and Ministry of Maritime Affairs (MoMA), Pakistan	

DRAFT

National Implementation plan for Fisheries and Aquaculture sector in Pakistan, 2020-2030

Transforming our Pakistan: the 2030 Agenda for Sustainable Development

Pakistan’s pathway to the eradication of hunger, food insecurity and malnutrition, and sustainable & resilient future

The Quaid’s Vision

“...My guiding principle will be justice and complete impartiality and I am sure that with your support and cooperation, I can look forward to Pakistan becoming one of the greatest nations of the world...”

Muhammad Ali Jinnah 11th August 1947

Lead Author: Mohamed ElSayed Mohamed Ahmed Megahed, PhD (International Specialist on fisheries and aquaculture policy development).

Support Author: M. Wasim Khan (National Fisheries Consultant).

The work supported through FAO’s Technical Cooperation Programme (TCP), project symbol (TCP/PAK/3709/C6) to develop a National Policy and Implementation Plan for Fisheries & Aquaculture sector in 2019.

Copyright © 2020 National Policy for Sustainable Fisheries and Aquaculture in Pakistan 2030
Ministry of National Food Security & Research
Ministry of Maritime Affairs
FAO Representation in Pakistan
Government of Pakistan

Material in this publication may be freely quoted or reprinted, but acknowledgement is requested, together with a copy of the publication containing the quotation or reprint.

This publication is available from:

Ministry of National Food Security & Research

3rd Floor, B-Block, Pak Secretariat, Islamabad
Red Zone, Islamabad, Islamabad Capital Territory, Pakistan
Tel: #:+92- 51-9210088, 9211701
Fax: #: +92-51-9205912
Email: secretarynfsr@yahoo.com
Web: www.mnfsr.gov.pk

Ministry of Maritime Affairs in Islamabad

Block D, Pakistan Secretariat, F-5, Islamabad, Pakistan.
Tel: #:+92-51-9210322
Email: contact@mops.gov.pk

FAO Representation in Pakistan

National Agricultural Research Center (NARC).
Park Road, Chak Shahzad.
Islamabad
Mailing Address:
PO Box 1476, Islamabad
Tel: #:+92-51-9255491
Tel: #:+92-51-9255454
Email: FAO-PK@fao.org

وَهُوَ الَّذِي سَخَّرَ الْبَحْرَ لِتَأْكُلُوا مِنْهُ لَحْمًا طَرِيًّا وَتَسْتَخْرِجُوا مِنْهُ حِلْيَةً تَلْبَسُونَهَا وَتَرَى الْفُلْكَ مَوَاجِرَ
فِيهِ وَلِتَبْتَغُوا مِنْ فَضْلِهِ وَلِعَلَّكُمْ تَشْكُرُونَ

It is He Who has made the sea subject, that ye may eat thereof flesh that is fresh and tender, and that ye may extract therefrom ornaments to wear; and thou seest the ships therein that plough the waves, that ye may seek (thus) of the bounty of Allah and that ye may be grateful.

Al Qura'n

Chapter 16 The Bee سورة النحل - An-Nahl: Verse 14

List of acronyms and abbreviations

CBD	Convention on Biological Diversity
EAf	Ecosystem approach to fisheries
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
ICZM	Integrated Coastal Zone Management
IFAD	International Fund for Agricultural Development
IOC-UNESCO	Intergovernmental Oceanographic Commission of UNESCO
IUCN	International Union for Conservation of Nature
IUU	Illegal, unreported and unregulated fishing
MSP	marine spatial planning
MCS	Monitoring control and surveillance
MPA	Marine protected areas
MTC	Minimum terms and conditions
NGOs	Non-governmental organization
NPOA-IUU	National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing
OIE	World Organisation for Animal Health
RFMOs	Regional fisheries management organisations
SDGs	Sustainable development goals
SPS	Sanitary and phytosanitary
TCP	Technical Cooperation Program
UNDP	United Nations Development Program
UNEP	United Nations Environment Programme
UNCLOS	United Nations Convention on the Laws of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organization
VMS	Vessel monitoring system
WTO	World Trade Organization

Table of Contents

List of acronyms and abbreviations	vi
Table of Contents	vii
Forward	ix
Acknowledgements	x
Preamble	xi
Preparation of the policy strategic document	xii
1-Implementation Plan of the national sustainable fisheries and aquaculture for Pakistan 2020-2030	1
1.1-The purpose of the implementation plan strategic document.....	1
1.2-Implementation plan goals.....	1
2-Principles for implementation of the policy strategic priorities	7
3-The policy implementation matrix	9
3.1-The national policy and implementation plan of sustainable development and management of small-scale fisheries (SSF) (inland and coastal) in Pakistan: 2020–2030.....	9
3.2-The national policy and implementation plan of development of offshore marine fisheries and economic benefits of effective exploitation of the Exclusive Economic Zone (EEZ): 2020–2030.....	22
3.3-The national implementation plan of development sustainable aquaculture in inland and coastal areas 2020–2030.....	33
4-Policy priorities of interlinked sectoral policies in fisheries and aquaculture	53
4.1-Reducing vulnerabilities to climate change and disasters in fisheries and aquaculture.....	53
4.2-Development of national, regional and international trade and trade corridors and access to market for fisheries and aquaculture commodities.....	61
4.3-Development of Human and Institutions capacity for good governance in fisheries and aquaculture.....	65
4.4-Increase gender equality and mapping opportunities and support for business incubators models for women and youth enterprises in fisheries and aquaculture.....	69
4.5-Providing incentive and enabling environment for private sector investments and financing mechanisms in fisheries and aquaculture sector.....	70
4.6-Development of Integrated coastal zone management (ICZM).....	72
5-Monitoring and evaluation (M&E) plan for the national policy for sustainable fisheries and aquaculture	74

List of tables

Table 1. Areas of intervention for the operation of the implementation plan.....	5
Table 2. Principles for implementation of the policy strategic priorities.....	8

DRAFT

Forward

The national fisheries and aquaculture sectors in Pakistan plays a vital role in contributing to country wealth, employment and food security. Pakistan marine and inland resources have the capacity to contribute the country needs and achieve the UN SDGs through the adoption and implementation of strong national policy. The national fisheries and aquaculture in Pakistan plays a vital role in contributing to country wealth, employment and food security, socio-economic growth and improving the livelihoods, especially in the time when several unexpected crisis and disasters arises globally such as climate change and outbreaks of Pandemic diseases.

The specific objective of the policy is to guide Pakistan to achieve transformation of the fisheries and aquaculture sector. More specifically, this policy guides us towards increasing production, productivity, and incomes. The overall goal of the policy is to achieve sustainable development in fisheries and aquaculture sectors in Pakistan according to the UN SDGs, through achieving (i) increase the contribution of the fisheries and aquaculture sectors to national economic growth; (ii) increase the contribution of the fisheries and aquaculture sectors to poverty alleviation; (iii) increase the contribution of the fisheries and aquaculture sectors to food security; (iv) sustainable use of resources and ecosystem services; and (v) increase the contribution of women in fisheries and aquaculture. The policy developed as a realistic view of Pakistan context, needs, priorities, current challenges and attends to future challenges.

This policy means we can now move forward as a Pakistan with a clear direction in fisheries and aquaculture. We have defined clear goals and objectives for us to pursue. This national policy for sustainable fisheries and aquaculture is aligned to Pakistan's Vision 2030, National Food Security Policy, National Sustainable Development Strategy, National Climate Change Policy, and National Water Policy, which are the overarching long-term and medium term development strategies. This policy will guide us through a process by which individual fishers and farm households shift their economic activities from being strongly subsistence-oriented towards more specialized and market-oriented production. The policy is accompanied by action plan to outline the required interventions (such as but not limited to; the development of fisheries resources, improve facilities to promote post-harvest management, fisheries management in the Exclusive Economic Zones (EEZ), and regional cooperation in fisheries management), related activities, outcomes, time frames and responsible organizations through country commitment to attain self-sufficiency in fish and fisheries products, food security, employment, trade and improved GDP by 2030. This development requires dedicated and coordinated efforts from all provinces to develop a comprehensive and coherent policy ensuring the well-being of Pakistan people and more wealth creation by developing economy based on fisheries and aquaculture in environmentally sustainable activities. The FAOPK through the Technical Cooperation Program (TCP) wishes that the Director Generals of Fisheries (DGs), fisheries officers, policy makers, fisher folks, farmers and other relevant stakeholders and institutions would find this policy is very useful in contributing to positive reforms of fisheries and aquaculture at both national and provincial levels. Finally, I urge all of us to implement this policy with urgent effectiveness and efficiency. That duty is for us all.

<p>Syed Fakhar Imam Federal Minister Ministry of National Food Security and Research Government of Pakistan</p>	<p>Syed Ali Haider Zaidi Federal Minister Ministry of Maritime Affairs Government of Pakistan</p>
--	--

Acknowledgements

The Ministry of National Food Security and Research; and Ministry of Maritime Affairs led and coordinated the formulation and preparation of the national policy for Sustainable fisheries and aquaculture through the provincial marine fisheries departments and Fisheries Development Board, Islamabad, with financial support from the Technical Cooperation Program (TCP/PAK/3709/C6), a support to develop a National Policy and Implementation Plan for Fisheries and Aquaculture sector. The policy was developed through a highly consultative process incorporating input from a broad range of stakeholders. The Ministry of National Food Security and Research; and Ministry of Maritime Affairs wishes to thank all those who have contributed to the preparation of the National Policy for Sustainable Fisheries and Aquaculture in Pakistan. In particular, thanks are accorded to the team that coordinated the consultations.

This include the FAO Pakistan team namely; Ms. Mina Dowlatchahi (FAO Representative Pakistan); Mr. Farrukh Toirov (Deputy FAO Representative); Dr. Aamer Irshad (Assistant FAO Representative); Mr. Muhammad Wasim Khan (National Fisheries Consultant); Ms. Mariam Zia Khan (Reporting Officer); Mr. Syed Faisal, for their technical support to the process, particularly during the consultative processes was very valuable and duly appreciated. Special thanks are also extended to Dr. Mohamed ElSayed Megahed, (international consultant) who professionally carried out the national assessments of fisheries and aquaculture issues, trends and challenges that significantly informed the formulation of the National Policy for Fisheries and Aquaculture in Pakistan and for hardworking in drafting the national policy. The valuable support and input of the provinces, particularly Director Generals (DGs) of provincial fisheries departments through very useful feedback in formulation of the National Policy for Fisheries and Aquaculture, are also highly acknowledged. Equally important, FAO are indebted to the provincial fisheries departments and numerous stakeholder organizations in Pakistan. The international consultant for development of national fisheries and aquaculture policy is grateful and indeed appreciative for the active participation and collaboration of the FAO Pakistan office in the consultative processes. The international consultant is acknowledging the need for co-operation among the different provinces and regional fisheries organizations in managing fisheries, enforcing fisheries laws and regulations. It is expected that the policy implementation will help in the promotion of fisheries and aquaculture for its important role in the national economy, food security, and supporting livelihoods of a large number of fisher folks, farmers and workers in the country.

Finally, we are confident that the economic development, food security, livelihood and employment will improve by the implementation of these policy reforms. This policy document will be used to provide guidelines for formulating future strategies regarding the research and development activities for improving the food security and safety standards in Pakistan.

May Allah (SWT) bless and protect Pakistan

<p style="text-align: center;">Mr. Federal Secretary Ministry of National Food Security and Research Government of Pakistan</p>	<p style="text-align: center;">Mr. Federal Secretary Federal Secretary Ministry of Maritime Affairs Government of Pakistan</p>
--	---

Preamble

Despite that Pakistan's has a potential for economic progress from aquatic natural resources including; fisheries sub-sector and aquaculture. These resources remain underutilized and uncoordinated. Together fisheries and aquaculture contribute about 1% of total Pakistan (GDP). However, this figure under-estimate the true and significance importance of the fisheries and aquaculture in Pakistan. If managed properly, fish resource exploitation in Pakistan has the capacity to increases the contribution of fisheries and aquaculture into the total GDP.

Fisheries and aquaculture remains one of the mainstays of Pakistan's economy, contributing significantly to employment, economic growth, export earnings, poverty reduction, food security, livelihood, and nutrition. It also plays a critical role in ensuring sustainable use of natural resources. However, the government of Pakistan must confront and overcome several challenges in the sector, including low productivity, susceptibility to climate change, and poor management of resources (land, and water). All of these pose a threat to food security and nutrition in the face of a growing population, increased land pressure, and climate change.

In response, the national policy for sustainable fisheries and aquaculture seeks to sustainably transform the sector from subsistence to a market and export orientation in order to increase production, marketed surpluses of commodities, and real incomes. With regard to food security, the principal responsibility of fisheries and aquaculture is to produce sufficient diverse and nutritious foods, provide reliable food markets, and increase incomes. Therefore, the vision of the national policy for sustainable fisheries and aquaculture to assuring food security and nutrition is a more coordinated and diversified approach through the recovery of captures fisheries and commercialization of aquaculture (i.e., smallholder farmers), recognizes all types of entrepreneurial farmers and will support them to increase the scale and quality of their production, while promoting pro-poor linkages between large-scale estates and smallholder farmers, while also providing social protection services for the most vulnerable.

The national policy for sustainable fisheries and aquaculture is premised on a spirit of inclusiveness and coordinated partnerships. In developing the policy, nationwide consultations were conducted at local, provincial and national levels. Targeted focus group discussions were conducted with farmers, government staff, subject matter specialists, NGOs and civil society, the private sector, the youth, development partners, academia, and research organizations, with equal participation of women. In addition, proposed inputs for the national policy were solicited through national and local media outlets. This resulted in several organizations and individuals providing substantive independent contributions to the national policy for sustainable fisheries and aquaculture's content.

The national policy is aligned with several international agreements, instruments, laws, legislations and protocols on Fisheries and aquaculture, including UNCLOS; Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication, and the FAO Code of Conduct for Responsible Fisheries. Within Pakistan, fisheries and aquaculture require a harmonization of the policy framework to act as investment framework to support the sector. With these harmonization and partnerships among the wide range category of stakeholders and the government, the output will be strong commitment of the Government of Pakistan to transform fisheries and aquaculture into a vibrant and commercially-oriented sector.

Preparation of the policy strategic document

This is the draft version of the comprehensive national implementation for sustainable fisheries and aquaculture in Pakistan. The policy document was prepared by Dr. Mohamed Elsayed Megahed (International Specialist on fisheries and aquaculture policy development) with technical and financial assistance from the FAO Pakistan office and the national consultant. This National Policy for Fisheries and Aquaculture in Pakistan was prepared to be served as a tool for creating a conducive and enabling environment for the fisheries and aquaculture sectors to create equitable, social and economic development in Pakistan. The policy document aims at increasing the contribution of Pakistan's natural resources to the economic growth and wealth of the nation, as well as providing technical conceptualization of the fisheries reform mechanism, and enabling environment for public private sector strategic partnership for fisheries and aquaculture investment. The policy draft is structured to present the main strategic priority areas.

The final policy and implementation plan will be improved and refined based on the recommendations from the national fisheries consultant at FAO Pakistan office, to discuss the draft national sustainable fisheries and aquaculture policy and implementation plan 2020-2030, and consultation with the key stakeholders, relevant ministries, national organizations, NGOs, and private sector to reflect the interventions and feedback from outcome of the stakeholders consultation. The final document will be structured to contain the main findings and recommendations arising from the various consultations, and will be amended in the light of comments received from FAO technical officers. This policy draft made policy-relevant suggestions related to the previous policy documents and answered the following questions:

- How can vulnerable fisher-farmers' access to social protection be enhanced?
- What potential exists for social protection for fisheries and aquaculture communities?
- What institutions and mechanisms programs to reinforce poverty alleviation through conservation and sustainable use of fisheries and aquaculture resources?
- To what extent do the resource-poor participate in aquaculture?
- What is the relationship between participation in aquaculture and landownership and access?
- What is the nature and extent of employment associated with different types of aquaculture?
- How does aquaculture affect local food security?
- What are the effects of aquaculture development on well-being?

Thus, the interventions in this policy draft are designed to improve levels of inclusion of vulnerable fishers and farmers in existing social protection policy and programs that ensures inequitable access to the resources. Also, promoting greater coherence between fisheries (offshore, coastal and inland small-scale) and aquaculture policies, reform mechanisms and social protection programs in Pakistan.

1- Implementation Plan of the national sustainable fisheries and aquaculture for Pakistan 2020-2030.

This strategic document presents an outline of the implementation plan for the national sustainable fisheries and aquaculture for Pakistan 2020-2030, which specifies specific goals, objectives, strategies, the responsible entities, and the timelines for implementation. The overall goal is to realise the fisheries and aquaculture transformation that will significantly increase the incomes, food security, and nutritional status of Pakistan nation. To achieve this goal, the implementation plan specifies strategies that will sustainably increase production and productivity, strengthen market systems, and develop institutions, while enhancing coordination and strengthening capacity of actors in the fisheries and aquaculture sector. Linking smallholder farmers to input and output markets, through vertical coordination mechanisms such as contract farming, private-public partnerships, and establishing value addition and rural fisheries and aquaculture processing centres.

1.1- The purpose of the implementation plan strategic document

Fisheries and aquaculture resources are important strategic livelihoods and economic assets, as well as for marketing and trade for the majority of Pakistan populations involved directly and/or indirectly in fisheries and aquaculture activities. At present all concerned ministries and their provincial institution are playing a pivotal role in coordinating and supporting the development of fisheries and aquaculture as sources of food security, employment, and economic development. The overall performance of fisheries authorities in Pakistan is positive, and that the implementation plan will enhance fisheries and aquaculture institutional capacity and visibility and its progress in achieving its mandate of the sustainable development of fisheries and aquaculture in Pakistan. The 10 years implementation plan 2020-2030 is built on the relevant aspirations stated in the UN Agenda 2030 of the sustainable development goals (SDGs) and the targets for implementing the Pakistan fisheries and aquaculture reform agenda. The strategic objectives of the implementation plan of fisheries and aquaculture will form the basis for developing projects supporting wealth generation, enhancing performance of the fisheries and aquaculture sector, institutional strengthening capacity, stakeholder empowerment and participation, socio-economic integration, environmental sustainability and consolidation of the efforts already given by the Federal and Provincial government to fisheries and aquaculture sector. However, considering the importance of fisheries and aquaculture in the Pakistan economy, special attention will be given to the risk of climate change on fisher folks and aquaculture communities. This will need to organize provincial level emergency interventions. This will necessitate the development of sustainable response and coordination structures that require direct communication between provincial governments and the federal governments. The duration of the implementation plan is aligned with the national sustainable fisheries and aquaculture policy of 2020-2030; therefore, respond directly to achieving the aspirations of the UN SDGs 2030.

1.2- Implementation plan goals

The goal of the Pakistan sustainable fisheries and aquaculture implementation plan is to guide the development of an inclusive and sustainable economy that becomes a significant contributor to country transformation and growth, through advancing knowledge on marine and aquatic biotechnology, environmental sustainability, social and economic development, the development

of seas, rivers, reservoirs, lakes, the management of fishing activities on these aquatic ecosystems, and the exploitation and beneficiation of high sea fisheries. More specifically, the implementation plan aims to:

- Ensure the positive implementation of the policy to improve the overall performance, relevance; effectiveness and its attributes - sustainability, partnership, capacity building, learning, sharing and knowledge management, and efficiency of the fisheries and aquaculture.
- Ensure the positive changes in the fisheries and aquaculture resources in Pakistan through having more successful projects, programmes and received fund from major donors, designed and coordinated during the implementation of the national policy.
- Provide resources to the provinces to develop their fisheries and aquaculture policies and legislation.
- Enhance institutional capacity, and visibility, as well as progress towards achieving its mandate with respect to the sustainable development of and fisheries and aquaculture.

The contribution and effectiveness of the implementation plan is linked to the following specific areas:

- Strategic contribution in the programmes aligned with the relevant global strategies and initiatives and increase capacity to solicit financial resources from the donor community (i.e. FAO, IFAD, EU, and World Bank).
- Good governance through developing demand driven provincial fisheries and aquaculture policies, reviewing and updating national and provincial legislations, and align national and provincial activities with global, and regional initiatives (e.g. SDGs,) aiming to achieve sustainable food security and nutrition.
- Working with the private sector, and capacity to mobilize resources.
- Learning and sharing, knowledge management, communication and advocacy.
- Develop a core staff and supporting funds, dedicated to handling communication, partnership and advocacy in effective policy strategic implementation.
- Partnership and coordination through projects' support mechanisms to the provinces.
- Developing methods and approaches for development and domestication of the policy strategic priorities at provincial level.
- Improve participation of small-holder farmers and traders.
- Ensure the attainment of results based framework in a format suited for monitoring the outcomes.
- Developing methods and approaches for the development and domestication of the policy.
- Strengthen/establish stakeholder platforms, engagement with stakeholders and creation of awareness before project implementation to ensure buy-in and ownership on fisheries and aquaculture resources.
- Align the implementation reports with modules translating the outputs/outcomes as achievements from the implementation plan 2020-2030 and future strategic plans and policy update.
- Update and operationalize the communication strategies to effectively share experiences, outcomes and impacts.

1.3- Implementation Strategy

To ensure an effective implementation of the policy the enlisted strategic goals are translated into a focused agenda encompassing three levels of national governance - federal, provincial and local - along with an accountability structure. These areas include:

Institutional framework	Means of implementation	Monitoring progress for success
<p>The achievement of the UN agenda 2030 requires institutional to be well prepared at both federal, provincial levels At the provincial level P-SDC (Provincial SD Council) and then at the district level with a L-SDC (Local SD Council). . This is linked to the development of coordination strategies focusing on sustainable development for national and provincial goals.</p>	<p>The federal and provincial governments should create a conducive enabling environment for implementation of the policy strategic priorities. These could include a securing funding mechanism and incentives, human and institutional capacity, strengthen accountability and transparency, supporting science and innovation, and also involving civil society, NGOs, and private sector support the implementation of the policy.</p>	<p>The monitoring progress requires development of monitoring and evaluation strategy through collecting feedbacks from stakeholders and resource users, as this will help to improve the national strategy for sustainable fisheries and aquaculture development for 2030. The government institution in collaboration with private sector, civil society and NGOs have a great role in prioritizing the country needs for sustainable development and also to achieve the goals of the UN agenda 2030.</p>

1.4- Areas of intervention for the operation of the implementation plan

For the fisheries and aquaculture policy to move Pakistan closer to unlocking its full economic potential, constraints have to be identified, mapped and prioritized. To achieve the Pakistan and goals of the UN Agenda 2030, the areas of intervention of the implementation plan as described in (Table 1) should focus on:

- People and institutions change.
- Sustainable energy sources.
- Coherence and innovation in financing the policy strategic priority areas, capacities development, coordination, spatial planning and inclusiveness.
- Conflict resolution.
- Awareness building and communication.
- Transparency and accountability.
- Strength Institutions for policy governance.
- Accelerates the economics transformation.
- Implementation, monitoring, evaluation and reporting
- Evaluating the extent of outcome realization at provincial levels between 2025 and 2030.
- Reporting results to stakeholders at provincial levels.
- Identify the most important governance tools for implementing the fisheries and aquaculture
- Develop area-based management plan for aquaculture and land and marine spatial planning (MSP)
- Ecolabelling, fair trade, and ecotourism.
- Integrated maritime strategies and policies, integrated coastal management, marine protected areas, common fisheries policies, renewable energy, reporting and assessment of the state of the marine environment.
- Develop strategy to optimise the use of Pakistan’s resources for the benefit of all people of Pakistan through inclusive growth and sustainable development according to the United Nations 2030 Agenda for sustainable development in the sense that it contributes to the progressive achievement of SG14 - (conserve and sustainably use of use the oceans, seas, Lakes and rivers, and aquatic resources) and also promote the Goal 1 and 2 in the sense that its aims to end poverty in all its forms everywhere and also aim to end hunger and achieve food security, become self-sufficient with fish protein, contribute to regional and international fish trade and aquatic resource management; and move the continent to the top of key fish value chains. Contribute to achievement of SDG Target 14.4, which focuses on effective management of fisheries resources with a specific goal on ending illegal, unreported and unregulated (IUU) fishing.

- Implement NPOA-IUU and have substantial reforms of their legal frameworks to align with international obligations.

DRAFT

Table 1. Areas of intervention for the operation of the implementation plan

Area of Intervention	Actions	Targets
<ul style="list-style-type: none"> - Strength national and provincial Institutions for Policy implementation and governance. 	<ul style="list-style-type: none"> - Foster coherence in policy practice and harmonisation of regulatory frameworks, through capable institutions, collaboration, and accountability. - Enhance information system and reporting. - Develop a formal consultation with national and provincial players. 	<ul style="list-style-type: none"> - Domestication of existing national policy frameworks into provincial systems. - Capable national and provincial institutions to facilitate collaboration, implementation and accountability in delivering on policy goals. - Establishing and operationalized monitoring and reporting framework. - The nature of fisheries and aquaculture economy requires appropriate coordination and governance tools between the national, provincial, and community levels. - Improving fisheries and aquaculture governance can be achieved through multi-level governance approach based on the articulation of fisheries and aquaculture policy with legal and institutional framework of resources management. - The multi-level governance includes this developed policy framework and implementation plan that are consistent with the SDG's strategies, Aichi Target 11 of the CBD, Paris Agreement on climate change (2015).
<ul style="list-style-type: none"> - Institutional and human capacities development 	<ul style="list-style-type: none"> - Develop education platform and promote learning opportunities for capacity building to achieve the SDGs. - Develop stakeholder's platform to guide policy coherence at national and provincial levels (Provinces Policy Handbook). - Conduct Human and institutional resource needs assessment. - Conduct gap-analysis and adapt curriculum in education and research institutions to achieve policy goals. 	<ul style="list-style-type: none"> - Strengthened capacity in national and provincial structures to coordinate policy and implementation plan framework. - Legislative drafting for the appropriate regulatory bodies - Enhanced and strengthened coordination between all provinces to enable Pakistan one voice in policy implementation. - This is an important issue in order to ensure full implementation of the policy strategic and priority areas. - Promote the coordination at national and provincial levels for improved inter-sectoral collaboration and enhancing technical consultations with international players including UNESCO, IOC-UNESCO, UNDP, UNEP, FAO and IUCN.
<ul style="list-style-type: none"> - Enhance information system at national and provincial levels for having informed decision making and reporting. 	<ul style="list-style-type: none"> - Identify implementation data and information needs and build standard templates for data collection. - Enforce capacity in scientific, technical, academic and policy institutions for policy implementation. 	<ul style="list-style-type: none"> - Established and operationalized national and provincial information and knowledge database. - Strengthened research and innovations capacity in education and research institutions.
<ul style="list-style-type: none"> - Accelerates the economics transformation, 	<ul style="list-style-type: none"> - Enhance trade development, assess institutional, technical and human capacity needs trade enhancement. 	<ul style="list-style-type: none"> - Instruments and capacities for ensuring accelerated sustainable and an inclusive BE trade are actualised - Regional policy framework and action plan for BE trade enhanced

Area of Intervention	Actions	Targets
<p>leadership, and development.</p>	<ul style="list-style-type: none"> - Creation of business alliance on sustainable use of fisheries and aquaculture. - A limited performance and competitiveness in the processing and value addition of fisheries and aquaculture resources (food safety and international trade rules) for local consumption and exports is holding back the value and economies of the sector. - Evaluate the financing options that ensure resilience in the fisheries and aquaculture economy in Pakistan. - Evaluate the role of government, financial and insurance institutions in the financing of the fisheries and aquaculture policy implementation. - Improve the financing and insurance mechanisms and tools of the fisheries and aquaculture policy implementation. 	<ul style="list-style-type: none"> - The need to develop innovative financing models and financing sources for investment in the policy strategic and priority areas. - To realize the potential of the fisheries and aquaculture sector in Pakistan for rapid economic transformation, private equity institutions, commercial debt and public-private partnerships (PPP), contribution of international institutions among other financial models are needed. - Sustained funding is required to effective implementation of the fisheries and aquaculture policy. The sustained funding includes public-private partnerships, which offer a special and attractive legal framework for financing projects in fisheries and aquaculture. - Promote the creation of a maritime business alliance for the health and sustainable development of Pakistan Seas. - Assessment of technologies and business models and innovations needed to promote creation of as maritime business alliance

Holding the above initial intervention as a starting point, the next steps are as follows:

1. Develop a preliminary analysis on the decision process, cost and administrative impact of each policy
2. Create an implementation plan and timeline for the policy
3. Set up a dedicated implementation support team that will act as an analytical engine as well as project management office for tracking the policy implantation.

2- Principles for implementation of the policy strategic priorities

To effectively implement the policy strategic priorities, a strong cooperation, collaboration, coordination and investment across a range of fisheries and aquaculture based on a visionary, sequencing and participatory approach is required. It is crucial that in the implementation plan, responsible persons/institutions are held accountable for actions and results delivered in a timely fashion and the following Monitoring and Evaluation (M&E) plan specifies activities/indicators, include base line studies (social surveys), annual technical audits, beneficiary assessment before annual review, and an independent impact assessment. The provinces and relevant national institutes are responsible for the M&E for the implementation plan. An assessment of the implementation plan status will be submitted semi-annually by the government of each province. The key principles for implementation of the policy strategic priorities detailed in **Table 2:**

Table 2. Principles for implementation of the policy strategic priorities

Principles for implementation	Activities	Constraints in implementation	Facilitating implementation of the policy strategic areas
Stakeholders consultation, cooperation and participation	Participatory decision-making must be vested at the entire fisheries and aquaculture value chain starting from the lowest possible level. Provincial and Institutional linkages have to be established with other line ministries or agencies and partnerships and collaboration should be promoted between the private sector, international organizations (i.e. FAO, IFAD and world Bank,) and NGOs.	<ul style="list-style-type: none"> • Lack of significant attention and support to the national policy, legal frameworks, international instruments, and one platform addressing the issues of emergencies, climate change, vulnerability and resilience at the national, and provincial levels. • Absence of a Results Based Framework in a format suited for monitoring high level outcomes. 	<ul style="list-style-type: none"> • Establishing several working groups at the national and provincial level to facilitate implementation of the policy strategic priorities. • Align the implementation Plan to the major goals, objectives and key priority areas of the policy. • Strengthen the focus on implementation and delivering results.
Adopting a process approach	Provinces should develop an approach that will enable implementation of this strategy taking into consideration the available information and diagnosis. Implementation must develop on relevant information and implement relevant interventions in response to opportunities identified and constraints which need to be overcome.	<ul style="list-style-type: none"> • The need for provinces to document and communicate its achievements in a well-articulated format. • Shortage of core staff, especially those dedicated to handling communication, partnership and advocacy. 	<ul style="list-style-type: none"> • Set up and monitor clear and attainable results and impact goals. • Foster alignment and harmonisation in the numerous efforts and initiatives on fisheries and aquaculture development
Prioritization	It is important that implementation of the policy focuses on the realistic attainment of objectives in line with national, and provincial priorities.		<ul style="list-style-type: none"> • Enhance necessary appropriate support systems for facilitation of private investment in fisheries and aquaculture, fisheries and aquaculture -business and fisheries and aquaculture -industries, by giving priority to local investors.
Equity and equality	The issue of legitimacy, inclusivity, fairness and transparent and non-discriminatory to vulnerable groups, gender and disadvantaged groups.		<ul style="list-style-type: none"> • Commitment to Boosting International Trade in fisheries and aquaculture Commodities and Services.
Scalability	Activities and milestones proposed in the implementation plan needs to be streamlined and or designed to be useful in different levels such as national and provincial levels.		<ul style="list-style-type: none"> • Ensure that, by the year 2030 fisher folks and aquaculture producers are resilient to climate and weather-related risks.
Sustainability	Implementation needs to be undertaken through an Ecosystems Approach. Care must be taken to guard against undesirable biological and socio-economic and socio-cultural outcomes.		
Accountability	At each level of implementation, actors must be held responsible for their decisions and actions.		

3- The policy implementation matrix

3.1- The national policy and implementation plan of sustainable development and management of small-scale fisheries (SSF) (inland and coastal) in Pakistan: 2020–2030.

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
	Increase sustainable production and productivity in SSF.						
	<ul style="list-style-type: none"> - Enhance the importance contribution of SSF for improved livelihoods, food security, employment, and income. 	<ul style="list-style-type: none"> - Restock and restore SSF for increased productivity and production at sustainable level. - Ensure and control the access to appropriate non-destructive fishing technologies/gears. - Capacity for adaptation, resilience built, and early warning systems. - Build capacity for data collection and management to guide management and development of SSF. 	<ul style="list-style-type: none"> - 50% of provinces taken measures to restock and to restore the SSF. - 50% of provinces taken measures for increased production and productivity in SSF - 50% of provinces taken measure of access to non-destructive fishing technologies in SSF. - 50% of provinces established adaptation and resilience strategies and functional early warning system. 	<ul style="list-style-type: none"> - 100% of provinces adopted SSF recovery programs. - 50% of SSF restocked and restored and production increased by 25%. - 100% of provinces established adaptive capacity and resilience strategies and functional early warning system. 	<ul style="list-style-type: none"> - Increased production and productivity by restoring stocks and making SSF ecosystem resilience to climate change. - Increased SSF contribution to food security and wealth creation. - Capacity for adaptation, resilience built, and early warning systems established and functional. - Integrated data collection and management information systems established and strengthen. 	(i.e. FAO, IFAD and world Bank,) and NGOs.	(i.e. FAO, IFAD and world Bank,) and NGOs.
	<ul style="list-style-type: none"> - Develop and aligned provincial SSF policies to the national policy. 	<ul style="list-style-type: none"> - Ensure policy coherence across national and provincial levels. - Develop institutional 	<ul style="list-style-type: none"> - 50% of provinces developed coherent and harmonised policies and legal framework. 	<ul style="list-style-type: none"> - 100% of provinces developed coherent and harmonised policies and legal 	<ul style="list-style-type: none"> - Linkages between national and provincial fisheries governance institutes established and strengthened. 	(i.e. FAO, IFAD and world Bank,) and NGOs.	(i.e. FAO, IFAD and world Bank,) and NGOs.

		<p>and partnership arrangements at national and provincial levels for effective management of shared SSF ecosystems.</p> <ul style="list-style-type: none"> - Strengthening of Institutions responsible for fisheries governance. - Capacities for SSF research and information dissemination. 	<ul style="list-style-type: none"> - 50% of provinces established and strengthened fisheries institutions. - 50% of provinces established and strengthened coordinated strategic linkages between national and provincial fisheries governance institutes. 	<p>framework.</p> <ul style="list-style-type: none"> - 100% of provinces strengthen governance of SSF. - 100% of provinces built capacity of fisheries and aquaculture institutions in governing the SSF. - 100% of provinces included various actors with stake in the SSF to restore, conserve, protect and co-manage the SSF ecosystems. - 100% of provinces facilitated, train and support SSF communities to participate in and take responsibility for, their fisheries on which they depend for their livelihood. 	<ul style="list-style-type: none"> - Levels of information produced, knowledge sharing and utilization established. - Existence of mechanisms for efficient and effective regional cooperation on fisheries management. 		
	<ul style="list-style-type: none"> - Apply appropriate users rights-based governance and management system to maximize societal benefits and conservation of SSF ecosystem. 	<ul style="list-style-type: none"> - Control and monitoring over fishing operation and operators to minimize negative impacts to vulnerable groups and ecosystems. - Define and implement user rights based tools that take into account 	<ul style="list-style-type: none"> - 50% of provinces shifted from open access SSF to user rights-based SSF for ecological sustainability of the SSF ecosystem. - 50% of provinces minimized negative impacts to small- 	<ul style="list-style-type: none"> - 100% of provinces applied appropriate users rights-based management of the natural resources - Shift from open access fisheries to user rights-based 	<ul style="list-style-type: none"> - Management options for sustainable conservation and use of fish stocks developed. 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities

		<p>the socio-cultural context and nature of the fisheries, and ensure their activities did not negatively affect fish stocks.</p> <ul style="list-style-type: none"> - 	<p>scale fishers working in the SSF.</p> <ul style="list-style-type: none"> - 50% of provinces developed management options for sustainable conservation and use of fish stocks in the SSF. 	<p>fisheries for ecological sustainability of the resource and minimize negative impacts to small-scale fishers working in the fisheries sector.</p>			
Recover and rebuild over-exploited important fish stocks and protect threatened stocks.							
<ul style="list-style-type: none"> - Reduce catches of juveniles, fishing mortality; enforce limits on catches and size at first capture through mesh size regulation. 	<ul style="list-style-type: none"> - Limit access to SSF. - Establish marine protected areas (MPAs). - Shift from open access fisheries (resources) to user rights-based fisheries (resources) for ecological sustainability of the SSF ecosystems. - Develop management options for sustainable conservation and use of fish stocks. - Align the national and provincial development plans with clear roles and responsibilities through participatory processes. 	<ul style="list-style-type: none"> - 50% of provinces developed and implemented the guidelines for the management of SSF. - 50% of provinces strengthened fisheries management and equitable allocation systems in small-scale fisheries. - 50% of provinces, produced, approved, and implemented user rights based tools. - 50% of provinces strengthened enforcement of existing laws. 	<ul style="list-style-type: none"> - 100% of provinces optimized production of inland fisheries, rebuilt and restore overexploited stocks. - 100% of provinces promoted regulations for the use of gears that ensure sustainability of stocks. - 100% of provinces built a process of integrating local knowledge in SFF management. - 100% of provinces built a strong participatory MCS, and ratified international agreements. 	<ul style="list-style-type: none"> - Rich SSF ecosystems. - The provisions of the FAO-International Guidelines for Securing Sustainable Small-scale Fisheries applied. - Capacity to enable integration of local knowledge in the management SSF built. - Local knowledge of the SFF communities used in the management of SSF. - Capacity to develop and implement fisheries and related laws enhanced. - Educated and train fisher folks on formulation of laws and monitoring and surveillance Control (MCS). 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities	
<ul style="list-style-type: none"> - Design cooperative 	<ul style="list-style-type: none"> - Strengthen institutions 	<ul style="list-style-type: none"> - 50% of provinces 	<ul style="list-style-type: none"> - 100% of provinces 	<ul style="list-style-type: none"> - Promotion of 	DG Provincial	National/Provincial	

	management approach.	(Fishers Associations/Network, MCS (IUU), Management, and Research Institutions). - Strengthen linkages between national and provinces in legal frameworks and coordination of strategic partnership.	established inclusive management system in the SFF. - 50% of provinces developed participatory and consultative approaches in all aspects of the SFF. - 50% of provinces implemented co-management and involved stakeholders in the decision-making process in the management of the SSGF.	with established and recognised Fishing Associations. - 100% of provinces established a multi-stakeholder platform for decision making and governance with clear roles and responsibilities.	participatory fisheries resources management. - Strengthen capacity of the fisher community management groups. - Meetings reports produced and Co-management in place. - Fisheries governance improved through participatory management for inclusive decision-making process.	Fisheries Departments and Fishers organizations	fisheries authorities
	- Protection of spawning areas and implement biological rest.	- Develop alternative livelihoods options. - Promote sustainable cage farming in SSF.	- 50% of provinces enhanced diversification of livelihoods options. - 50% of provinces mapped potential cage farming sites in SSF.	- 100% of provinces defined opportunities for entrepreneurial skills development. - 100% of provinces established opportunities for entrepreneurial growth in SSF communities such as alternative employment and economic diversification.	- Established alternative livelihoods. - Potential aquaculture areas in the SSF ecosystems. - Existing national and provincial development plans for SSF. - Existing SSF stock enhancement programs. - Existing SSF management and measures. - Communities benefiting from the alternative livelihood opportunities.	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities

	<ul style="list-style-type: none"> - Zoning by fleet type and establish SSF zones. 	<ul style="list-style-type: none"> - Reduce resource user conflicts by designating fisheries zone (industrial and small-scale fishing zone) through Maritime spatial planning (MSP) (implementing Territorial Use Rights). - Identify and protect critical habitat and migratory routes and ecosystems conservation to secure long term sustainable use of SSF. 	<ul style="list-style-type: none"> - 50% of provinces selected fishing zones for the SSF. - 50% of provinces defined rules for the management of inshore zones to protect the rights of SSF. - 50% of provinces of federal and provincial Institutes strengthen capacity mechanism for enforcement of regulations for protection of SSF operations and conservation. 	<ul style="list-style-type: none"> - 100% of provinces established adaptation measures in the SSF. - 100% of provinces allocated SSF zoning to minimise risks and relocation to new exposed sites based on Efficiency prepared research reports. - 100% of provinces established and enforced exclusive zones for SSF and introduce selective and location-specific fishing gear. 	<ul style="list-style-type: none"> - Balancing sustainable SSF use and conservation of SSF. - Conflicts mitigated and synergies created amongst the users. - The right of access to newly allocated SSF is guaranteed. - Mechanisms for conflict resolution among stakeholders sharing common SSF resources Developed. - Fisher folks engaged in resolving their own conflicts through encourage the implementation of SSF committees within existing SSF ecosystems. - Rules and regulations in SSF produced and approved. - Gear-specific location in place. - Zones declared and Zones in place. 	<p>DG Provincial Fisheries Departments and Fishers organizations</p>	<p>National/Provincial fisheries authorities</p>
	<ul style="list-style-type: none"> - Combat of Illegal fishing using strong monitoring system. 	<ul style="list-style-type: none"> - Select the fishing practices and policies that offer the most social benefits. - Implement the best fishing practices and policies based on social profitability. 	<ul style="list-style-type: none"> - 50% of provinces selected the best fishing practices and policies that offer the most social benefits. - 50% of provinces established 	<ul style="list-style-type: none"> - 100% of provinces implemented the best fishing practices and policies based on social profitability. 	<ul style="list-style-type: none"> - Provincial Institutions responsible for SSF governance strengthen. - Fishers are organized to foster good SSF governance, and responsible use of SSF ecosystems. 	<p>DG Provincial Fisheries Departments and Fishers organizations</p>	<p>National/Provincial fisheries authorities</p>

			partnership with SSF users, agencies, and NGOs to help develop the capacities needed for safe, viable and sustainable participation of communities in management of SSF.		<ul style="list-style-type: none"> - Capacity Development and Stakeholders participation enhanced. - Best fishing practices and policies in place. 		
	<ul style="list-style-type: none"> - Improve scientific research targeting SSF. 	<ul style="list-style-type: none"> - Building capacity for fisheries research, including data collection and analysis to integrate scientific advice into management planning (implement evidence based advocacy). 	<ul style="list-style-type: none"> - 50% of provinces promoted research to capture true value and innovate new ways of increasing wealth from SSF. 	<ul style="list-style-type: none"> - 100% of provinces promoted social security protection for SSF in the entire value chain. - Establish insurance schemes for fishers to extend social welfare schemes to the SSF fishers. 	<ul style="list-style-type: none"> - Revised national and provincial legal frameworks, with detailed annual implementation reports. 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Identify and list relevant stakeholders for training and capacity development. 	<ul style="list-style-type: none"> - Develop and built capacity to empower SSF communities in policy-making process through education, awareness of the new sustainable technologies in managing SSF. 	<ul style="list-style-type: none"> - 50% of provinces mobilized resources for research and innovative activities. - 50% of provinces with a provision of financial and advisory support fishers in SSF. - 50% of provinces with functional and improved SSF resource institutions. 	<ul style="list-style-type: none"> - 100% of provinces invested in human resource development in health, and education and mobilized resources to enhance human capacity. 	<ul style="list-style-type: none"> - Partnerships with educational and research institutes established. - Training and capacity development intervention developed. - Resource capacities of SSF institutions strengthened. 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Setup management 	<ul style="list-style-type: none"> - Rehabilitate and or 	<ul style="list-style-type: none"> - 50% of provinces 	<ul style="list-style-type: none"> - 100% of provinces 	<ul style="list-style-type: none"> - Equitable access to SSF 	DG Provincial Fisheries	National/Provincial fisheries authorities

	frameworks for unexploited or under-exploited fish stocks.	secure threaten fishing grounds/zones. - Prevention of land based pollution and degradation of SSF ecosystems.	developed rehabilitation measure to recover SSF. - 50% of provinces produced legal regulations to prevent the arrival of land based pollution into SSF ecosystems.	developed rehabilitation measure to recover SSF and designed SSF recovery mechanisms system. - 100% of provinces produced legal regulations to prevent the arrival of land based pollution into SSF ecosystems.	ecosystems facilitated. - SSF stakeholders, and communities empowered by involving them in the designing, planning of SSF recovery mechanisms. - Assessment and meetings report produced and approved.	Departments and Fishers organizations	
Conduct fishing activities within national and international regulations.							
	- Strengthening the institutional capacity for MCS (national needs for MCS and enforcement) for both inland and coastal SSF for combating IUU fishing.	- Empower fisher's groups to take active role in governing of SSF. - Strengthen compliance and enforcement. - Establish a policy advisory mechanism to guide policy implementation. - Develop a guideline for reviewing and harmonization of laws and regulations at national and provincial levels. - Establish a multi-stakeholder platform for multi-stakeholder decision making and governance (co-	- 50% of provinces improved governance of SSF. - 50% of provinces improved and enabled policy, legal and regulatory frameworks. - 50% of provinces developed measures of controlled open access. - 50% of provinces developed measures of instituted user rights. - 50% of provinces developed measure of built capacity for co-management.	- 100% of provinces increased capacities of their fisheries resource institutions (public, private, stakeholders). - 100% of provinces ensured that fisheries organizations and associations exist for participatory management of the SSF.	- National and provincial initiatives supporting sustainable SSF management developed and in place. - Fisheries governance improved through participatory management for inclusive decision-making process. - Democratic structures and processes enhanced in fisheries management. - Sustainability of the SSF ecosystems promoted to increase employment and socio-economic benefits.	- DG Provincial Fisheries Departments and Fishers organizations	- National/Provincial fisheries authorities

		<ul style="list-style-type: none"> management initiatives). - Promotion of participatory Fisheries resources management - Control open access of SSF and Support User Right Approach. - Establish MPAs (Aquatic Protected Areas) for the fisheries resources management. 	<ul style="list-style-type: none"> - 50% of provinces developed measures of established MPAs. 				
	<ul style="list-style-type: none"> - Mobilization of financial resources for support to the SSF. 	<ul style="list-style-type: none"> - Secure funding to support the SSF. - Calculating the actual GDP contribution and employment of the SSF. - Establish sustainable funding mechanisms to support SSF. - Promote investments through development of fishing gear technology, business entrepreneurship, and boat-building that promotes chances for employment. 	<ul style="list-style-type: none"> - 50% of provinces assessed and valued social benefits of SSF at local and national levels. - 50% of provinces assessed the value of the SSF to GDP and employment. - 50% of provinces promoted private-public-partnership (PPP) sectors investments and financing for SSF. 	<ul style="list-style-type: none"> - 100% of provinces developed and approved systems for the generation of one common format assessment report. 	<ul style="list-style-type: none"> - Financial resources for support to the SSF mobilized. - Investment options identified in SSF to address poverty and contribute to nutritional and food security. 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Enhancing evidence based advocacy in SSF. 	<ul style="list-style-type: none"> - Improved research, data collection and information dissemination in SSF. - Involve fisher-folk in 	<ul style="list-style-type: none"> - 50% of provinces developed research, data collection and information 	<ul style="list-style-type: none"> - 100% of provinces built capacity for SSF research and information dissemination. 	<ul style="list-style-type: none"> - Evidence based advocacy in SSF enhanced through improved research, data collection and 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities

		<ul style="list-style-type: none"> data collection - Build capacity for SSF research and information dissemination. 	<ul style="list-style-type: none"> dissemination mechanism in SSF. 	<ul style="list-style-type: none"> - 100% of provinces assessed the capacity needs of national and provincial organisations on information collection, analysis and dissemination to sustainable management of SSF. 	<ul style="list-style-type: none"> information dissemination in SSF, and fisher-folk involved in data collection. 		
	<ul style="list-style-type: none"> - Strengthening Resilience and adaptability of SSF to climate change and other related risks. 	<ul style="list-style-type: none"> - Vulnerability, adaptation and resilience - Build capacity for adaptation and resilience - Prevention & Mitigation - Establish early warning systems. 	<ul style="list-style-type: none"> - 50% of provinces integrated the Human-rights based approach to inland fisheries management. - Create a common understanding on the human-rights based approach to fisheries management <ul style="list-style-type: none"> • Create an enabling environment to support the implementation of human-rights based approach to inland fisheries development 	<ul style="list-style-type: none"> - 100% of provinces designed and implemented scenarios for adaptation to climate change and mitigation measures in fisheries. 	<ul style="list-style-type: none"> • Mobilize financial resources to protect the resources and impacted stakeholders. 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities
Protection of the environment and SSF Ecosystems.							
	<ul style="list-style-type: none"> - Apply ecosystem approach to fisheries (EAF) to exploitation and management of 	<ul style="list-style-type: none"> - Optimise conservation and sustainable SSF resources use. - Establish institutional coordination 	<ul style="list-style-type: none"> - 50% of provinces implemented a holistic EAF management approach (multi- 	<ul style="list-style-type: none"> - 100% of provinces established institutional coordination mechanisms to 	<ul style="list-style-type: none"> - Provincial institutional coordination mechanisms to harmonize SSF 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities

	SSF.	<p>mechanisms to harmonised SSF activities.</p> <ul style="list-style-type: none"> - Support capacity development for improved Human resources and Institutional Efficiency and Effectiveness in the Delivery of Services and sustainable management of SSF. 	<p>sectoral approach).</p> <ul style="list-style-type: none"> - Promote, support and coordinate sustainable development actors - Promote conservation and sustainable management of aquatic resources. 	<p>harmonised SSF activities.</p> <ul style="list-style-type: none"> - 100% of provinces comply with marine protected areas (MPAs) laws and related legislations including CITES, CBD, to enforce management measures for over-exploited and threatened commercial stocks. 	<p>activities established.</p> <ul style="list-style-type: none"> - Conservation and sustainable management of SSF resources promoted. - EAF adopted and implemented during fishing operations through adequate coordination between SSF and environment departments. - Revitalized and strengthened SSF institutions at national and provincial levels. - Promoted mobility of professionals in SSF resources between provinces. 		
	<ul style="list-style-type: none"> - Apply the provisions of the FAO-International Guidelines for Securing Sustainable SSF. 	<ul style="list-style-type: none"> - Assess degraded SSF fishing grounds / zones and implement rehabilitation measures. - Rehabilitate degraded fishing grounds / zones. - Assess the introduction MPAs). - Monitor water quality pollution in SSF 	<ul style="list-style-type: none"> - 50% of provinces evaluate socio-economic impacts of by-catches and developed strategy for rehabilitation of degraded SSF fishing grounds. - 50% of provinces implemented pollution monitoring programs and 	<ul style="list-style-type: none"> - 100% of provinces prepared a cost-benefit analysis of the SSF activities to assess its environmental impact against socioeconomic benefits. 	<ul style="list-style-type: none"> - EAF management regime in place. - Report produced and approved. - Mitigation measures in place. - Cost-benefit report produced and approved. - Strategic national and provincial cooperation in the conservation of 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities

		locations.	mitigation measures, and prevented environmental impact of SSF against socio-economic gains.		fisheries SSF ecosystem developed.		
Design and apply risk management framework and mitigation of climate change in SSF.							
	<ul style="list-style-type: none"> - Implement resource use strategies based on well designed and verified indicators to the status of the fish stocks and SSF ecosystem. 	<ul style="list-style-type: none"> - Establish and strengthen early warning system for risk and disasters in SSF. - Develop resilience SSF activities. - Design and introduce mitigation measures for risks and disasters in SSF. - Establish a climate change response mechanism to mitigate effects on SSF. 	<ul style="list-style-type: none"> - 50% of provinces assessed the safety of SSF activities. - 50% of provinces designed strategies for safety at SSF operations and developed conflict resolution mechanisms. - 50% of provinces designed mitigation mechanisms for risks, disasters and climate change effects on SSF, approved and implemented. 	<ul style="list-style-type: none"> - 100% of provinces designed, produced, approved, and implemented mitigations Strategies. - 100% of provinces enhanced and give climate change and disaster risks a high priority at the political level. - 100% of provinces assessed the impacts of climate change and adopt mitigation strategies in cooperation with the stakeholders and build adaptive capacity at the local level. 	<ul style="list-style-type: none"> • Mitigation measures of climate change and disasters in SSF to ensure sustainable social, economic, environmental benefits. - Setup aquaculture zoning to minimise risks and relocation to new exposed sites. - Early -warning systems, projects; assessment of vulnerability of SSF ecosystems and climate adaptation plans prepared and developed. 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Design case specific precautionary and bio-security measure in SSF. 	<ul style="list-style-type: none"> - Strengthen research in SSF for effective and sustainable management of invasive species management and 	<ul style="list-style-type: none"> - 50% of provinces increased research and dissemination of best fishing and management practices. through 	<ul style="list-style-type: none"> - 100% of provinces invested in research on invasive species control. - 100% of provinces 	<ul style="list-style-type: none"> - Capacity in the health of SSF built. - Climate change impacts on fish and fisher folks in the SSF monitored. 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities

		<p>management of aquatic health problems.</p> <ul style="list-style-type: none"> - Mobilize resources for continued support to research. - Build an integrated research program in biology, ecology, economics, socio-economics and humanities for rational management of SSF. 	<p>increased funding.</p> <ul style="list-style-type: none"> - 50% of provinces developed capacity in management, economic, stock assessments, and human rights-based approaches to SSF management. 	<p>promoted and put in place response mechanism for the health of SSF.</p>	<ul style="list-style-type: none"> - Resilience activities, mitigation measures Develop. - Communication strategy and reports produced. - Capacity development interventions developed and reported. 		
	<ul style="list-style-type: none"> - Enhancing the role of SSF in food and nutrition security, and economic growth. 	<ul style="list-style-type: none"> • Carryout assessment of ecosystem services provided by SSF ecosystems to value their contribution to SSF ecosystem health and fishing communities wellbeing. • Mobilize financial resources to protect the SSF resources and impacted fishing communities. 	<ul style="list-style-type: none"> - 50% of provinces improved capacity of SSF researchers in undertaking research to support management of SSF. - 50% of provinces promoted investments in market access along the entire value chain in SSF. 	<ul style="list-style-type: none"> - 100% of provinces accelerated the development of SSF scientific research to support management of SSF. 	<ul style="list-style-type: none"> - Research funded and supported to strengthen the contribution of SSF in food and nutrition security and economic growth. 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities
Ensure sustainable social and economic environment for SSF fisher folks.							
	<ul style="list-style-type: none"> - Identify investment options and opportunities in SSF to address poverty and contribute to nutritional and food security. 	<ul style="list-style-type: none"> - Design sustainable social, economic, and environmental business and investment options. - Ensure equitable outcomes from investment in SSF natural capital. - Strengthen resilience 	<ul style="list-style-type: none"> - 50% of provinces ensured security of investment in SSF. - 50% of provinces created safe working conditions and security for fisher folks in SSF. - 50% of provinces assessed social 	<ul style="list-style-type: none"> - 100% of provinces strengthened capacities of national fisheries institutions, public, private, and stakeholders in SSF. • 100% of provinces strengthened 	<ul style="list-style-type: none"> - Sustainable social, economic, environmental business and investment options designed, approved and in place. - Safe working conditions and security in SSF created. - Monitoring and 	DG Provincial Fisheries Departments and Fishers organizations	National/Provincial fisheries authorities

		of SSF and reducing vulnerability to climate change.	cost/ benefit of SSF management plans.	collaboration with non-state actors including civil society, and NGOs, in the implementation of SSF management projects and programmes.	information system for SSF established. - Facilitate new initiatives to improve understanding of the importance and roles of SSF resources in socio-economic development.		
--	--	--	--	---	--	--	--

DRAFT

3.2- The national policy and implementation plan of development of offshore marine fisheries and economic benefits of effective exploitation of the Exclusive Economic Zone (EEZ): 2020–2030.

Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
Development of National MCS Strategy to Combat IUU and Enhance the role of national and provincial authorities in the governance of offshore fisheries.						
<ul style="list-style-type: none"> - Ascertain the priority of IUU fishing issues in Pakistan, including possible incidents of fisheries crime. 	<ul style="list-style-type: none"> - Conduct fishing activities within national and international regulations. - Strengthening the institutional capacity for MCS for combating IUU fishing. - Keeping record of authorized and illegal fishing vessels. - Identify specific fisheries, and coastal and marine areas which are susceptible to IUU fishing. - Identify available MCS tools and assets in Pakistan that may be used to address priority IUU fishing issues. - Developing minimum terms and conditions (MTC) of fisheries access with regards to granting access to resources to third parties and national fleet within the EEZ. - Evaluate terms and conditions for port access (Port State Measures Agreement (PSMA) and related regulations), pre-fishing inspections, country to country enforcement procedures, prosecutions, penalties, responsibilities of the flag states or fisher associations. - Enhance collaboration with the INTERPOL to prevent and control Fisheries Crime and the International MCS Network, which poses opportunities for collaboration. 	<ul style="list-style-type: none"> - 50% of coastal provinces endeavoured to accede and implement PSMA as a means of fighting IUU fishing. - 50% of coastal provinces built both infrastructure and human capacities to conduct inspections of foreign vessels at port using the FAO guidelines. - 50% of coastal provinces ensured that States, whether acting as a flag, coastal, port, or market State must adopt an effective MCS system in order to address IUU fishing. - 50% of coastal provinces developed responsible fisheries management plan based on best scientific knowledge, supportive legislation, inclusive management, effective monitoring and enforcement, and sustainable fishing effort. 	<ul style="list-style-type: none"> - 100% of provinces collaborated by coordinated their monitoring, control and surveillance (MCS) operations. - 100% of provinces shared information regularly to ensure freedom of navigation at sea, and to curb Illegal Unreported Unregulated (IUU) fishing. - 100% of provinces collaborated with the INTERPOL to control trafficking, piracy and maritime criminality. - 100% of provinces enforced the application of the binding FAO Agreement on Port State Measures to prevent, deter and eliminate illegal, unreported and unregulated fishing. 	<ul style="list-style-type: none"> - Safety and security EEZs enforced through MTC and PSMA an increased. - National environmental security task forces to ensure institutionalized cooperation between national law enforcement agencies and international partners strengthened and in place. - Collaboration with the INTERPOL established to conduct data analysis and assist providing advice on where to start and how to set 	Federal fisheries department, PMSA	National and provincial fisheries department

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
					priorities.		
	<ul style="list-style-type: none"> - Develop national plans of action to prevent, deter and eliminate IUU fishing in order to ensure that identified priority issues are addressed (finalised and officially adopted NPOA-IUU). Each NPOA-IUU should include a whole-of-government capacity building strategy to support its full implementation. 	<ul style="list-style-type: none"> - Improve fishing ports in order to facilitate implementation of PSMA. - Review penalties, make them more stringent and ensure illegal vessels are blacklisted and monitored. - Adopt Model Scheme on Port State Measures to Combat IUU Fishing and carrying out inspections of foreign vessels in ports under IPOA-IUU. - Assists coastal provinces in developing common procedures for inspection and agreed measures against IUU fishing vessels. - Conduct fisheries within enforceable regulatory frameworks and through Fisheries Access Agreements (FAA) and in consultations with fisheries associations and stakeholder. 	<ul style="list-style-type: none"> - 50% of provinces Provide information by vessels in advance to port States, expected results from port inspections, training of port inspectors, and proposed information system among port States. - 50% of provinces identified the Socio-economic impacts of FAA Agreements. 	<ul style="list-style-type: none"> - 100% of provinces benefited from generated fund from the FAA and is allocated credit to fishers to purchase equipment and gear to develop domestic fishing capacity. - 100% of provinces established total allowable catch (TAC) and relate the tonnage to be caught to the TAC. 	<ul style="list-style-type: none"> - Support political and policy decision makers to become aware of the importance of the Pakistan fisheries resources. - FAAs designed to target only the TAC to ensure maximum sustainable yield, and quota estimated to avoid overfishing and ecosystem damage. 	Federal fisheries department,P MSA	National and provincial fisheries department
	<ul style="list-style-type: none"> - Develop Pakistan MCS system to achieve the policy objectives. 	<ul style="list-style-type: none"> - Promote policy coherence for the development of high sea fisheries resources in coastal provinces. - Support provinces to identify critical capacity gaps that constrain development and implementation of policies and engage development partners to secure needed resources for capacity development for member states. - Review and apply policy decision making tools and build capacities of national and provincial stakeholders. - Establish national capacities for stakeholder engagement at all levels and stages in the 	<ul style="list-style-type: none"> - 50% of provinces assessed and identified legislation gaps at national and provincial levels. - 50% of coastal provinces promoted policy coherence. 	<ul style="list-style-type: none"> - 100% of provinces developed a communications strategy to keep all national and provincial partners up to-date with progress. 	<ul style="list-style-type: none"> - Policy development at national and provincial levels supported. - Legal and regulatory frameworks improved, enabled and promoted. 	Federal fisheries department,P MSA	National and provincial fisheries department

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
		Fisheries Access Agreements negotiation processes and create awareness on resource valuation.					
	- Harmonized Minimum Standards for Fishing Access.	<ul style="list-style-type: none"> - Assess the capacity for MCS and the legal framework for MCS in the coastal provinces. - Conduct examination of fisheries Observer Programs in coastal provinces. - Assess the status of fishing vessels registers for effective MCS and Review regional arrangements, if any, for MCS cooperation. - Develop proposals for effective and sustainable Monitoring capacity of fisheries in coastal provinces to fight IUU. - Update the national and provincial legal frameworks, complying with International legal instruments and tools (FAO Port state, FAO Flag state, FAO guidelines for small-scale fisheries, etc.). - Establish centralized and transponders (VMS or other MCS tools) to alert on IUU fishing, as well as search and rescue at sea. - Control and Monitoring: of Transshipment. - Develop Catch Logs and fishing areas information and make it available. 	<ul style="list-style-type: none"> - 50% of coastal provinces set and harmonised minimum standards for fisheries access. - 50% of coastal provinces adhered and established to compliance with national and international Laws. - 50% of coastal provinces improved Licences conditions and the use of UNCLOS Article 61 and 62 to ensure only stocks covered by the agreement is harvested. - 50% of coastal provinces prevented any transshipment at sea under any circumstances. - 50% of coastal provinces drafted a provincial MCS multi-year strategy and NPOA. - 50% of coastal provinces developed Catch Logs and fishing areas information and made it available. 	<ul style="list-style-type: none"> - 100% of coastal provinces designed database and set standard to collect adequate information on the vessel to ensure illegal vessels are not licensed. - 100% of coastal provinces developed certificate of good standing and set conditions that must be met to achieve this and no vessel shall be licensed unless they meet this set of conditions. - 100% of coastal provinces developed multi-annual development plans. 	<ul style="list-style-type: none"> - Coastal provinces allocated priority to fisheries and sustainable co-management in their legal frameworks. - Coastal provinces strengthened the governance of the sector, drafting provincial policies and strategies for the sustainable and equitable fisheries management and co-management. 	Federal fisheries department,P MSA	National and provincial fisheries department
	- Adhere and align to International Fisheries Instruments related to MCS and IUU fishing.	- Align to International Fisheries Instruments related to MCS and IUU fishing.	- 50% of coastal provinces strengthened the adherence to International Fisheries Instruments related to MCS and IUU fishing.	- 100% of coastal provinces strengthened the adherence to International Fisheries Instruments related	- Adherence to considerable number of legal (binding and non-binding) instruments for enforcing MCS	Federal fisheries department,P MSA	National and provincial fisheries department

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
				to MCS and IUU fishing.	<p>and the fight against IUU fishing, as well as other relevant international agreements ensured and in place.</p> <ul style="list-style-type: none"> - Legal and technical training to improve government capacity building strategies to all relevant agencies (Fisheries, Police, and Navy) in MCS implementation within their MCS responsibilities conducted and in place. 		
	<ul style="list-style-type: none"> - Develop risk assessment and management as part of the national MCS. 	<ul style="list-style-type: none"> - Ensure the coastal State powers implementation of MCS activities such as boarding, inspection, arrest and judicial proceedings under the (UNCLOS) to ensure the conservation and management of fisheries resources in the Exclusive Economic Zone (EEZ). - Ensure that the observers will gather scientific information on the catch and location of catches while on board. - Set up conflict resolution Mechanisms offer shared natural resources. 	<ul style="list-style-type: none"> - 50% of coastal provinces developed conservation and management measures. - 50% of coastal provinces established observer programmes under the (UNCLOS Article 62) to exercise their sovereign right over marine resources in their EEZs. 	<ul style="list-style-type: none"> - 100% of coastal provinces built observer programme and trained observers through financial compensation from Fisheries Access Agreements (FAA). - 100% of coastal provinces ensured 	<ul style="list-style-type: none"> - Vessel registration, authorization to fish, record of fishing vessels, vessel monitoring system (VMS), observer program, boarding and 	Federal fisheries department, PMSA	National and provincial fisheries department

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
		<ul style="list-style-type: none"> - Mobilize financial resources to protect the resources and impacted stakeholders. - Design disasters and risk management framework . - Establish risk management framework to achieving conservation objectives compatible with sustainable use of the fisheries natural resources (fish stocks condition and environmental health indicators) to avoid undesirable outcomes. - Establish national precautionary measures. 		the focus on improvement of conservation and sound utilization of fisheries resources.	inspection, port State measures, catch certification developed.		
Transshipments and Transiting Vessels.							
	<ul style="list-style-type: none"> - Enforce national and international law for banning transshipment at sea. 	<ul style="list-style-type: none"> - Coastal provinces should develop dedicated strategy on transshipment and ensure implementation. - Transiting vessels have to report entry into and exit out of national areas by international laws. 	<ul style="list-style-type: none"> - 50% of coastal provinces develop dedicated strategy on transshipment and ensure implementation and report to entry and exit national seas. 	<ul style="list-style-type: none"> - 100% of coastal provinces develop dedicated strategy on transshipment and ensure implementation and report to entry and exit national seas. 	<ul style="list-style-type: none"> - Strong regulation of the forbidding transshipment at sea. - Well-developed infrastructure, human capacity to monitor transshipments and adequate MCS systems results in significant reduction in IUU fishing. 	Federal fisheries department,P MSA	National and provincial fisheries department
Improve Management and Sharing of Information.							
	<ul style="list-style-type: none"> - Improve fisheries data, Information, and knowledge of the status of high sea fisheries. 	<ul style="list-style-type: none"> - Review constraints and challenges facing generation of fisheries Information and Sharing. - Improve collection of reliable data on total catches; catch composition, fishing effort, size of fleets, catch rates and socio-economic information. - Develop adequate tools, skills, and research for information generation and statistical data 	<ul style="list-style-type: none"> - 50% of coastal provinces developed sound, more informed decision-making and responsible fishery management system. - 50% of coastal provinces put into perspectives the social and economic benefits of the fisheries 	<ul style="list-style-type: none"> - 100% of coastal provinces improved fisheries statistical data collection, analysis and dissemination. - 100% of coastal provinces developed and 	<ul style="list-style-type: none"> - Adequate recording and analysis of statistical data on fisheries in place. - Updated dynamic legal framework for 	Federal fisheries department,P MSA	National and provincial fisheries department

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
		<p>analysis.</p> <ul style="list-style-type: none"> - Improve national and regional collaboration through well-developed strategic actions. - Increased cooperation with regional fisheries management organisations (RFMOs) for high sea fisheries management and facilitating inter-governmental cooperation for issues relating to high seas fisheries management. - Develop draft frameworks for enhancing regional cooperation approaches to MCS and observer programmes. - Develop collaborative manuals, handbooks and guidelines on the duties of at seas fisheries observers. - Develop of robust and effective harmonized vessel register databases in collaboration with neighbouring regions and countries including a technical implementation Manual. - Develop national plans for combating IUU. 	<p>sector including contribution to food and nutrition security.</p>	<p>strengthened a regional approach to negotiations of fishing access arrangements.</p> <ul style="list-style-type: none"> - 100% of coastal provinces strengthened capacity in the region to benefit more from the EEZ resources. 	<p>information sharing in place.</p> <ul style="list-style-type: none"> - Federal governments, in collaboration with provincial fisheries government and organizations developed harmonized protocols s to enhance compliance and mandatory registration of vessels with RFMOs and/or RFBs . - The inspection element within the MCS process in place. 		
Port based inspection of a fishing vessel.							
	<ul style="list-style-type: none"> - Port based pre-licensing inspection of a fishing vessel before it is granted a license to operate in the EEZ of coastal provinces. 	<ul style="list-style-type: none"> - Conduct at-sea inspection of a fishing vessel such as : <ul style="list-style-type: none"> ➤ <i>When it is undertaking transshipment in the EEZ.</i> ➤ <i>On the offshore before or after fishing operations and when that vessel is within the area of jurisdiction of a Regional Fisheries Management Organisation (RFMO) with enforcement authority for that part of the offshore fisheries.</i> 	<ul style="list-style-type: none"> - 50% of coastal provinces developed Model Scheme addresses the Port based pre-licensing inspection. 	<ul style="list-style-type: none"> - 50% of coastal provinces developed Model Scheme addresses the Port based pre-licensing inspection. 	<ul style="list-style-type: none"> - The overlap between fisheries and non-fisheries situations though Port based pre-licensing inspection of a fishing vessel resolved. 	<p>Federal fisheries department,P MSA</p>	<p>National and provincial fisheries department</p>

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
		<ul style="list-style-type: none"> ➤ <i>On the offshore in a non-fishing context (drugs, piracy, smuggling etc.).</i> 					
	<ul style="list-style-type: none"> - Port based pre-licensing inspection. 	<ul style="list-style-type: none"> - Conduct Port based pre-licensing inspection Pre-licensing inspections permit coastal provinces before an authorization is granted to fish in the EEZ of Pakistan. - Conduct inspection against: <ul style="list-style-type: none"> ➤ <i>Flag of vessel.</i> ➤ <i>Vessel types.</i> ➤ <i>Fishing method , and classification.</i> ➤ <i>Year built, IMO Number.</i> ➤ <i>International Radio, Call-sign.</i> ➤ <i>Fishing capacity.</i> ➤ <i>Specifications of fishing vessel.</i> ➤ <i>Net tonnage.</i> ➤ <i>Gross tonnage (GRT).</i> ➤ <i>Length overall (LOA).</i> ➤ <i>Vessel fishing gear characteristics.</i> ➤ <i>Storage/freezer capacity.</i> ➤ <i>Vessel markings.</i> ➤ <i>Current licence permits (fishing authorization if any and validity and certificate of registry.</i> ➤ <i>Logbooks.</i> ➤ <i>Navigation and communication equipment.</i> ➤ <i>Engine characteristics and power.</i> ➤ <i>Certificate of Registry.</i> ➤ <i>Minimum manning.</i> ➤ <i>Safety Certificate.</i> ➤ <i>Navigation log.</i> ➤ <i>Garbage Record Book, with regard to compliance with Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL).</i> 	<ul style="list-style-type: none"> - 50% of coastal provinces conducted Port based pre-licensing inspection Pre-licensing inspections permit coastal provinces before an authorization is granted to fish in the EEZ of Pakistan. 	<ul style="list-style-type: none"> - 50% of coastal provinces conducted Port based pre-licensing inspection Pre-licensing inspections permit coastal provinces before an authorization is granted to fish in the EEZ of Pakistan. 	<ul style="list-style-type: none"> - Effective Port based pre-licensing inspection Pre-licensing inspections permit coastal provinces before an authorization is granted to fish in the EEZ of Pakistan conducted and in place. 	Federal fisheries department,P MSA	National and provincial fisheries department
	<ul style="list-style-type: none"> - Conduct legal Boarding and inspection at sea for fishing 	<ul style="list-style-type: none"> - Conduct at sea inspection whilst the fishing vessel is engaged in fishing operations to 	<ul style="list-style-type: none"> - 50% of coastal provinces established harmonized 	<ul style="list-style-type: none"> - 100% of coastal provinces 	<ul style="list-style-type: none"> - Effective MCS increased the 	Federal fisheries	National and provincial

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
	vessels during fishing operation.	ascertain, whether the operations of the fishing vessel, the actual fishing vessel and its crew are in compliance with existing regulations and the specific conditions of the individual fishing licence or any applicable access agreement conditions.	and standardized procedures governing the at-sea boarding and inspection of licensed (and unlicensed) vessels to verify compliance with the terms and conditions of licensing.	established harmonized and standardized procedures governing the at-sea boarding and inspection of licensed (and unlicensed) vessels to verify compliance with the terms and conditions of licensing.	benefits of coastal provinces from acquiring effective capacity in the area of at-sea boarding and inspection.	department,P MSA	fisheries department
	<ul style="list-style-type: none"> - Conduct legal Port based Inspections Sea for fishing vessels. 	<ul style="list-style-type: none"> - Ensure that all fishing and support vessels must provide a port entry notice (including their authorization to fish, details of their fishing trip and quantities of fish on board, with due regard to confidentiality requirements in accordance with national laws) to the port authority and the national fisheries authority at least 24 hours before entering port. - Ensure that no fishing vessel or support vessel may enter port to carry out any functions without prior clearance from the port authority and the national fisheries authority. - Ensure that all fishing within national jurisdiction is within the terms and conditions of an approved licence and/or agreements. - Ensure that the full investigation of all relevant documents, fishing gear, catch and fish in stowage demonstrate compliance with national and international fisheries legislation and agreements, and meet the port State's international fisheries obligations. 	<ul style="list-style-type: none"> - 50% of coastal provinces Ensure that all fishing and support vessels must provide a port entry notice. 	<ul style="list-style-type: none"> - 50% of coastal provinces Ensure that all fishing and support vessels must provide a port entry notice. 	<ul style="list-style-type: none"> - Port based inspections are effective and in place. 	Federal fisheries department,P MSA	National and provincial fisheries department
	<ul style="list-style-type: none"> - Enhance participation in the newly established global partnership for oceans; build relationships and political, 	<ul style="list-style-type: none"> - Enhance Pakistan voice on high sea fisheries at all levels (Continental, Regional, and National). - Support capacity on policy, strategies formulation and decision-making processes on 	<ul style="list-style-type: none"> - 50% of coastal provinces of engaged with new partners to build relationships and political, 	<ul style="list-style-type: none"> - 100% of coastal provinces developed number of initiatives 	<ul style="list-style-type: none"> - Greater Pakistan Voice in high seas fisheries 	Federal fisheries department,P MSA	National and provincial fisheries department

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
	financial and scientific support for high seas fisheries.	<p>the Pakistan common voice on high sea fisheries by RECs.</p> <ul style="list-style-type: none"> - Formulate a strategy for consultations prior to the meetings of the RFMOs to harmonize positions on key issues - Develop a strategy for MS to actively participate in the ABNJ programme to promote sustainable management of fisheries resources and conservation and protection of biodiversity. 	financial and scientific support for high seas fisheries.	focusing on common position/Pakistan voice in the high sea fisheries.	<ul style="list-style-type: none"> - Assess and make recommendations to the federal government to be party to an appropriate RFMO - Conduct a study to determine the status of federal government in relation to relevant instruments Urge MS to accede to relevant and appropriate instruments - Assessment report produced (2022) - Status report produced (2022) - Correspondence to MS - Strategy produced and approved (2021) - Reports of high seas entities 		

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators (2020-2063)	Responsible Coordinator	Geographical Scale
	Implement Stock Assessments fundamental for any access agreement requirements and reduce By-catch and Discards.						
	<ul style="list-style-type: none"> - Conduct stock assessment and quantify the value of the fisheries resources using well established national stock assessments technical teams. 	<ul style="list-style-type: none"> - Develop high sea fisheries management options and stock status information. - Develop possible management scenarios politically and physically to adjust fishing effort in the short term. - Reduce fishing efforts on impacted stocks by 50% to rebuild and recover collapsed fish species and stocks and reduction of fishing mortalities. - Increase capacity building for researchers to conduct stock assessment. - multi-annual, multi-species and ecosystem-oriented management. - More effective and selective technical measures. Pilot measures to reduce discards, through the use of selectivity devices that reduce or eliminate by-catches of non-target species and of fishing methods that have a reduced physical impact on the environment should be strongly pursued. 	<ul style="list-style-type: none"> - 50% of coastal provinces significantly reduced fishing efforts. - 50% of coastal provinces increased capacity of fisheries research vessel to conducts fish stock assessment. - 50% of coastal provinces increased capacity of fisheries research vessel to carry out fish stocks assessment of not exploited fish stock. 	<ul style="list-style-type: none"> - 100% of coastal provinces significantly reduced fishing efforts. - 100% of coastal provinces increased capacity of fisheries research vessel to conducts fish stock assessment. - 100% of coastal provinces increased capacity of fisheries research vessel to carry out fish stocks assessment of not exploited fish stock. 	<ul style="list-style-type: none"> - Marine resources over-fished recovered. - Economic gains and development from high sea fisheries ecosystem. 	<ul style="list-style-type: none"> - Federal fisheries department, PMSA 	National and provincial fisheries department
	<ul style="list-style-type: none"> - Monitor and ensure that licensed fishing vessels shall land all by-catch at a designated port and shall not discard at sea and apply international best practices on bycatch mitigation solutions and devices. 	<ul style="list-style-type: none"> - Documentation of violations in gear markings, closed areas/closed seasons, undeclared transshipments, safety of Inspectors, observers, and patrol vessels. - Monitor and ensure that endangered threatened and protected species released immediately after capture to minimize mortality. - Develop MCS protocol to monitor the multi-species and multi-gears fisheries that is a characteristic of Pakistan fisheries. - Conserve the demersal fish communities in Pakistan waters which is the most diverse shelf areas in the world. - Develop indications of ecological changes linked 	<ul style="list-style-type: none"> - 50% of coastal provinces developed strategic national, regional and international cooperation in the conservation of fisheries resources. - 50% of coastal provinces established a conservation of aquatic genetic resources of endangered species. - Develop national gene bank equipped with all facilities for conservation of improved genetic 	<ul style="list-style-type: none"> - Sustainable utilisation and conservation of fisheries resources and aquatic genetic resources in EEZ of Pakistan. 	<ul style="list-style-type: none"> - Supported and well developed inspection of logbook data and recording of information. - Date of entry into the EEZ recorded. - Positions of all fishing activity within the EEZ recorded. - Daily and total fishing effort 	<ul style="list-style-type: none"> - Federal fisheries department, PMSA 	National and provincial fisheries department

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
		<p>to excessive fishing pressure and environmental degradation, and seriously disturbed habitat or ecosystem structure.</p> <ul style="list-style-type: none"> - Develop management options for sustainable conservation and use of fish stocks. 	<p>resources of endangered species.</p> <ul style="list-style-type: none"> - 50% of coastal provinces developed national gene bank equipped with all facilities for conservation of improved genetic resources endangered species. - 50% of coastal provinces developed MCS protocol to monitor the multi-species and multi-gears fisheries that is a characteristic of Pakistan fisheries. 		<p>within the EEZ area recorded.</p> <ul style="list-style-type: none"> - Daily and total catch will be recorded. - Daily and total by-catch and discard recorded. - Interactions with seabirds inspected and recorded. - Interactions with marine mammals and marine reptiles inspected and recorded. 		
	<ul style="list-style-type: none"> - Consider supporting a pioneer studies on discards in fisheries and developing feasibility for optimum use of this resource to even earn foreign exchange through meeting the ever increasing demands in the global market. 	<ul style="list-style-type: none"> - Conducts offshore fishing research studies on stock assessments to assess the status of exploited fisheries resources, severely overfished, depleted to a dangerous extent, and stocks below economically optimal levels. 	<ul style="list-style-type: none"> - 50% of coastal provinces monitoring of fishing activities and registration. 	<ul style="list-style-type: none"> - 100% of coastal provinces monitoring of fishing activities and registration. - 100% of coastal provinces conducted periodic assessments of the impacts of by-catch and discards on other fisheries, habitats and the socio-economics of the inshore communities. 	<ul style="list-style-type: none"> - The number of domestic vessels operating in Pakistan marine fisheries and the fishing effort they exert be drastically reduced by a 50% for a long term sustainable fisheries sector to rebuild most stocks. 	Federal fisheries department,P MSA	National and provincial fisheries department

3.3- The national implementation plan of development sustainable aquaculture in inland and coastal areas 2020–2030.

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
Establish Socio-economic environment for investment in aquaculture.						
<ul style="list-style-type: none"> - Provide funding mechanisms, and encourage private investment. 	<ul style="list-style-type: none"> - The federal and provincial government should announce their master plan for investment in aquaculture projects, with attractive incentive to the private sector investment in the sector. 	<ul style="list-style-type: none"> - 50% of provinces established an enabling environment for sustainable aquaculture development. - 50% of provinces improved capacity building and Service Delivery to the Sector. - 50% of provinces developed transboundary ecosystem management plan for aquaculture. - 50% of provinces enhanced innovation in Research and Development. 	<ul style="list-style-type: none"> - 100% of provinces mainstreamed financial mechanisms, and encourage private investment in aquaculture. 	<ul style="list-style-type: none"> International collaboration with funding organization such IFAD and FAO is established for aquaculture development for small and medium aquaculture enterprises. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities
<ul style="list-style-type: none"> - Update legislation governing aquaculture enterprises. 	<ul style="list-style-type: none"> - Formulation of national development policy framework to support sustainable aquaculture production. - Facilitates trade, and ensure favorable conditions access to markets, and input services. - Provinces fast-track harmonization of their aquaculture legislation to the national policy. - Develop policy codes which manage and control negative environmental impacts of aquaculture activities. - Harmonization of national and 	<ul style="list-style-type: none"> - 50% of provinces aligned to national policy by 2025. - 50% of provinces with harmonized registration processes of aquaculture business by 2025. - 50% of provinces with developed and implemented master plan for aquaculture by 2025. - 50% of provinces of developed strategic agreements with national and international organizations on 	<ul style="list-style-type: none"> - 100% of provinces aligned to national policy by 2030. - 100% of provinces with operational one - window – office systems servicing investment, licensing, trade, environmental management and basic information on conducting commercial aquaculture 	<ul style="list-style-type: none"> - National sustainable aquaculture development legal framework in place. - National and provincial favorable conditions for markets are developed. - Provinces strategic aquaculture development plans aligned and adapted to the national policy with strong political will. - Comprehensive national investment plan established for aquaculture development. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p>provincial legislations to facilitate registration of new business in aquaculture and to ease licensing procedures.</p> <ul style="list-style-type: none"> - Strengthened provincial, national, regional and international cooperation to develop coordinated mechanisms in aquaculture technology and innovations. - Development of comprehensive national, provincial, regional and national aquaculture investment plans and budgets. - Improved Licensing regime for aquaculture projects. 	<p>aquaculture development plans and aligned to national needs and the SDGs.</p>	<p>businesses by 2030.</p> <ul style="list-style-type: none"> - 100% of provinces aligned to national policy by 2030. - 100% of coastal provinces mainstreamed aquaculture with a separate budget line by 2030. 	<ul style="list-style-type: none"> - Licensing regime to ensure environmental, social and economic costs and benefits, improved. - 		
	<ul style="list-style-type: none"> - Formulation of legal frameworks that facilitate international trade and access to markets for aquaculture inputs, goods and services. 	<ul style="list-style-type: none"> - Develop international trade agreements for aquaculture products, inputs and services in line with national legal frameworks. 	<ul style="list-style-type: none"> - 50% of provinces developed international trade agreements for aquaculture goods and services developed, endorsed, and adopted into national policy by 2025. 	<ul style="list-style-type: none"> - 100% of provinces endorsed provincial and national environment management legal frameworks for aquaculture by 2030. - 100% of coastal provinces aligned their provincial aquaculture development program into national policy and plans by 2030. 	<ul style="list-style-type: none"> - All provinces implementing national and provincial environment management legal frameworks for aquaculture - All provinces aligned their provincial aquaculture development program into national policy and plans. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector - 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Develop standards for farming commercially important fish and shellfish species (shrimp) 	<ul style="list-style-type: none"> - Support farmers and investors by providing aquaculture extension services, and best use of technology. - Ensure large stakeholders and smallholders are equally complying 	<ul style="list-style-type: none"> - 50% of provinces developed aquaculture strategic investment map and plans, standard manuals, standard operating procedures 	<ul style="list-style-type: none"> - 100% of provinces achieved progress in establishing modern aquaculture enterprises (small- 	<ul style="list-style-type: none"> - Standards established that take into account all stakeholders. - Direct employment and credit facilities development. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	and trout).	<p>with strict national seafood and safety standards.</p> <ul style="list-style-type: none"> - Enhancing the industry's reputation for respecting the environment through adoption of best practices, and reducing the impact on wild fisheries by increasing use of alternative feed sources. - Support farm management through developing good aquaculture best practices manuals for the different farmed species. 	(SOPs) and available to farmers and investors by 2025.	scale and large scale).	<ul style="list-style-type: none"> - Modern aquaculture projects developed. - Food security, zero hunger, and poverty alleviation achieved. - SDG1, SDG2 and SDG3 achieved. 	Partners - Private Sector	
	- Improve productivity and profitability of aquaculture enterprises to make aquaculture attractive to investors.	<ul style="list-style-type: none"> - Provision of services and resources to aquaculture enterprises locally or zero tax for imported essential production inputs did not exist locally (Feeds, Seeds, Machinery, equipment, etc.). - Facilitate Export to international markets. - Reduce cost of energy supplies and provide alternative sustainable energy sources. • Improve staff training and <i>skills development</i>. 	<ul style="list-style-type: none"> - 50% of provinces developed their resources to make sure that production requirements are available locally as well as facilitation the import of production inputs not available locally at zero tax by 2025. - 50% of coastal provinces invested in alternative sustainable energy sources. 	<ul style="list-style-type: none"> - 100 % of provinces secured the availability all production inputs and services to farmers and investors. - 100 % of provinces provided technical assistance for adopting Best Energy management Practices which linked to energy use. 	<ul style="list-style-type: none"> - Market-led aquaculture developed. - Production inputs and services available locally. - Sustainable, cheap, and clean energy sources available. - Aquaculture investments operating in all provinces. - Benefits to local communities attained. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	- National/Provincial fisheries authorities
	- Provision of Aquaculture as a viable employment, career and wealth generation for small-scale as well as large-scale enterprises.	<ul style="list-style-type: none"> - Development of comprehensive national aquaculture investment plans and budgets for aquaculture. - Create investment environment for private sector through: <ul style="list-style-type: none"> • <i>Developing markets and trade.</i> • <i>Developing infrastructure.</i> • <i>Developing innovative value chain.</i> • <i>Developing quality standards,</i> 	<ul style="list-style-type: none"> - 50% of provinces developed and aligned their investment plans and budgets for aquaculture. - 50% of provinces developed and facilitated and attracted investment in aquaculture through providing a package of services to investors and 	100 % of provinces developed and aligned their investment plans and budgets for aquaculture. 100% of provinces developed and facilitated and attracted investment in aquaculture through providing a package of	<ul style="list-style-type: none"> - National and provincial aquaculture investment developed and recognized as a rewarding career which attracts, retains, educates and trains workers and staff in aquaculture business. - Comprehensive provinces budgeted investment plan 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	- National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p><i>traceability and certification.</i></p> <ul style="list-style-type: none"> • <i>Supporting research and development.</i> • <i>Providing extension services.</i> • <i>Developing human and institutional capacity.</i> • <i>Support fish farmers associations and cooperatives.</i> • <i>Facilitating and secure access to land and improves tenure system.</i> • <i>Developing cold transport and processing infrastructure.</i> <p>- Design aquaculture programs that fit a broad category of stakeholders including; small and large -scale farmers.</p> <p>- Develop Species Specific Target-oriented aquaculture industry development (i.e., Shrimp and trout farming industry).</p>	small scale holders.	services to investors and small scale holders.	<p>developed for aquaculture development.</p> <ul style="list-style-type: none"> - - Suitable transport and processing infrastructure improved and staff training developed. - - Federal and provincial budget allocations to aquaculture development programs approved. - Federal and provinces with a separate budget line for aquaculture. 		
Improve the delivery and access to inputs and support services for aquaculture.							
	<ul style="list-style-type: none"> - Improve access to seed of good quality. 	<ul style="list-style-type: none"> - Improve access to high quality fish and crustacean seeds. - Establish hatcheries and multiplication centers for the production of certified seeds of major commercial fish and crustacean species. - Deliver technical support to selected private sector hatcheries to establish them as demonstration hatcheries. - Develop and apply best management practices (BMPs) for hatchery techniques. - Practical training of hatchery producers at demonstration hatcheries. 	<ul style="list-style-type: none"> - 50% of provinces with operational demonstration - Hatcheries providing training by 2025. - 50% of provinces with BMPs on hatchery production by 2025. - 50% of provinces using hatchery operation manuals as routine practice by 2025. 	<ul style="list-style-type: none"> - 100% of registered commercial fish hatcheries at the provincial level operating and following - BMPs. - 100% of provinces according to the type of water resources available validated BMPs for commercial fish and crustacean hatcheries. - 100% of provinces 	<ul style="list-style-type: none"> - Protocols for establishing and operating of accredited provincial reference hatcheries for providing high quality seeds for aquaculture development. - Trained personnel managing hatcheries for different farmed species. - Validated BMPs for Seed production for important farmed commercial species and accessible to operators in all provinces according to species available and suitable at each province. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		- Attract private sector investment in seed production.		able to produce certified fish and crustacean seed and accessible to fish and crustacean farmers.	- Hatchery operation manuals available.		
	- Establish broodstock breeding center for economic finfish and shellfish species (i.e. trout and shrimp)	<ul style="list-style-type: none"> - Domestication and genetic selection programs for commercially important and better performing species and strains. - Identify and develop of selected centers at relevant provinces for maintaining improved selected broodstock species. - Develop broodstock management manuals for hatchery operators. - Develop national and provincial standard operating procedures for the production of pathogen free brood-stock - Develop and harmonize national and provincial certification protocols for seed production from commercial hatcheries. - Develop national and regional gene bank for important commercial farmed species. - Implement climate adaptive fish breeding programs for commercially important species. 	<ul style="list-style-type: none"> - 50% of provinces implementing broodstock domestication and genetic improvement programs and in place by 2025. - National and provincial legal framework on list of species and agreed location of establishing domestication and genetic improvement programs by 2025. - Capacity building for personnel of broodstock domestication and genetic improvements programs upon by 2020. 	<ul style="list-style-type: none"> - 100% of provinces implementing broodstock improvement programs. - 100% of provinces with BMPs on broodstock management manuals as routine practices and accessible online. - 100% of provinces with operational broodstock demonstration centers. - 100% of provinces endorsed certification procedures. 	<ul style="list-style-type: none"> - Protocols for establishing and operating of accredited provincial seed multiplication centers are available. - Validated BMPs for broodstock management for commercially important farmed species accessible to operators in all provinces and adopted by accredited broodstock production centers. - Validated manuals on selection of high quality broodstock are adopted. - Certified pathogen free brood-stock available. - Validated and endorsed national and provincial protocols for the certification of broodstock available. - National and provincial gene bank for commercially important aquaculture species is available. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	- National/Provincial fisheries authorities
	- Improve accessibility and to high quality and	- Establish and implement mechanisms to facilitate national and international trade in feeds and feed ingredients for the	- 50% of provinces routinely undertaking on-farm training on pond feeding and	- 100% of provinces adopted Tax incentives for feed manufacture and	- Operational national and provincial trade agreements and institutional legal	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments 	- National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	certified feeds, feed ingredients, and fertilizers for the different fish and crustacean species.	<p>different species.</p> <ul style="list-style-type: none"> - Tax incentives for feed manufacture and importation of non-available feed ingredients and additives for the different species. - Develop mechanisms to facilitate national and international trade in feeds and feed ingredients for the different species. - Increase the availability and accessibility of feed. - Develop standards and certification of fish feeds and live fish food standards. - Improve feed management at farm level. - Develop BMPs and user manuals on feeding practices at farm level - Improve pond Fertilization management. - Develop BMPs and user manuals on fertilizer management. 	<p>fertilization management.</p> <ul style="list-style-type: none"> - 50% of provinces using pond manuals as routine feeding and fertilization practices. 	<p>importation of specified feeds and feed ingredients.</p> <ul style="list-style-type: none"> - 100% of provinces mainstream and implement national and provincial legal frameworks and cooperation on trade of feeds, feed ingredients, fertilizers and live fish food. - 100% of province adopted standards for feeds, feed ingredients, additives and fertilizers. - 100% of provinces with BMPs on feed and fertilizers management manuals. - 100% of provinces undertaking on-farm feed testing and management in collaboration with feed manufacturers and farmers. 	<p>frameworks to facilitate trade in feeds, feeds ingredients and fertilizers.</p> <ul style="list-style-type: none"> - Taxation and financial incentives to promote investment in the manufacture of high quality feeds in place in all provinces. - Harmonized national and/or provincial standards and certification procedures for feeds, feed ingredients and fertilizers for commercially important farmed species. - Validated BMP for feeds and fertilizers management manuals accessible to farmers. 	<p>of fisheries</p> <ul style="list-style-type: none"> - Development Partners - Private Sector 	s
Improve environmental management technologies in aquaculture production sites.							
	- Develop	- Adopt national and international	- 50% of provinces	- 100% of	A sustainable long-term future for the aquaculture	- Relevant federal	- National/Pr

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	national criteria for Environmental Impact Assessment (EIA) of aquaculture projects based on sites selected and scales of the production.	<p>legislations and instruments for establishing aquaculture projects.</p> <ul style="list-style-type: none"> - Develop aquaculture investment map showing sites with minimum environmental impacts. - Develop a control strategies and making best use of available research and biosecurity measure into emerging aquatic pathogens. - Minimize discharge of farm and hatchery effluents to the environment. 	<p>endorsed environmental management legal frameworks for aquaculture projects and aligned their development plans according to the national policy.</p>	<p>provinces implementing the national aquaculture and development plans and environmental management legal frameworks for aquaculture projects.</p>	<p>industry through adoption of EIA strategies. Environmental impacts minimized.</p>	<p>Ministries</p> <ul style="list-style-type: none"> - Provinces departments of fisheries - Development Partners - Private Sector 	<p>vincial fisheries authorities</p>
	<ul style="list-style-type: none"> - Develop and implement draft environment management legal frameworks for aquaculture. 	<ul style="list-style-type: none"> - Develop national and provincial appropriate and socio-economically viable guidelines on environmental monitoring of aquaculture projects. - Create awareness among fish farmers, association and cooperatives to mitigate environmental impacts of aquaculture projects. - Develop strategic to mitigate risks, disasters and climate change by development climate smart and adaptive aquaculture (breeding of high temperature and high salinity tolerant fish species) and introduction of new and proven production techniques. - Reduce farm and hatchery waste and appropriate utilization of byproducts. 	<ul style="list-style-type: none"> - 50% of provinces developed appropriate and socio-economically viable guidelines on environmental monitoring of commercial aquaculture projects. - 50% of provinces developed provincial awareness platform and campaign of the potential and importance of the aquaculture sector. - 50% of provinces developed, and enhanced the capacity of aquaculture workers and institutions to ensure the sustainable development of aquaculture, based on current and emerging trends, challenges and needs. 	<ul style="list-style-type: none"> - 1000% of provinces developed appropriate and socio-economically viable guidelines on environmental monitoring of commercial aquaculture projects. - 100% of provinces developed provincial awareness platform and campaign of the potential and importance of the aquaculture sector. - 1000% of provinces developed, and enhanced the capacity of 	<ul style="list-style-type: none"> - Appropriate and feasible programs developed guide the sustainable aquaculture development. - Strong broader national and provincial governments regulation on the sustainable development of aquaculture projects. - Biosecurity protocols for aquaculture (at farm and hatchery sites) developed for the safe disposal of farm effluents and hatchery waste as farm and hatchery routine. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
				aquaculture workers and institutions to ensure the sustainable development of aquaculture, based on current and emerging trends, challenges and needs.			
Increase allocation of Federal and Provincial budgets to aquaculture development programs.							
	- Strengthening the private and public sectors partnership capacity.	- Allocate national and provincial specific fund resources to the market-led aquaculture investments. - Establish national and provincial systems to improve enabling environment for investment in market-led aquaculture project. - Harmonization of national and provincial system for the process to register aquaculture business.	- 50% of provinces established business development services for the commercial aquaculture value-chain.	100% of provinces with running aquaculture projects at different scale for production (small, medium and industrial scale).		- Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector	- National/Provincial fisheries authorities
	- Improve financial service delivery for aquaculture.	- Development of financial resources to support small and medium scale investments and the transformation of small-holder operations into commercial enterprises along the aquaculture value-chain. - Secure low-cost tailored loan facilities for aquaculture project at national and provincial level and establish revolving fund mechanisms - Provide tax and other incentives to support investments in aquaculture, especially small and	- 50% of provinces with financial resources targeting small and medium aquaculture operators along the value-chain. - 50% of provinces established revolving funds in partnership with private sector. - 50% of provinces providing tax and financial incentives to support private –sector investment in	- 100% of provinces with operational facilitated one window system for serving the investment, licensing, trade, environmental management and providing guidelines on establishing commercial aquaculture projects.	- Tailored loans and financial services and incentives available and accessible to farmers, and investors and to all stakeholders along the aquaculture value chain. - Accessible financial services through farmers/aquaculture cooperative and association to support small and medium scale investments in the commercial aquaculture	- Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector	National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p>medium scale aquaculture producers.</p> <ul style="list-style-type: none"> - Training small and medium scale aquaculture producers in business development skills. 	<p>aquaculture projects.</p> <ul style="list-style-type: none"> - 50% of provinces offering business development services as partnership with the private sector, in addition to training in business skills for aquaculture along the value chain. 	<ul style="list-style-type: none"> - 100% of provinces provided tax and other incentives to support investments in aquaculture projects. - 100% of provinces devolved training guidelines and manuals in business development skills. 	<p>value-chain.</p> <ul style="list-style-type: none"> - Best use of available provincial and national public funding for aquaculture industry including research grants. - More private sector funding available, encouraged by government and investor confidence. - Business development services for the commercial aquaculture value-chain. 		
Marine spatial planning and allocation zones for sustainable commercial aquaculture development.							
	<ul style="list-style-type: none"> - Spatial planning and site selection, and zoning for aquaculture development sites (provincial suitable sites per species). 	<ul style="list-style-type: none"> - Develop provinces assessments for aquaculture development. - Develop provinces spatial planning and assessments for aquaculture development. - Develop species specific farming sites taking into consideration effect of climate change in identified zones. - Preparation of master, business and management plans for development and operation of suitable aquaculture sites. - Facilitate access rights to land and water. - Assign aquaculture projects to zones in light of carrying capacity of identified zones, water availability, environmental footprint, land-use assessments. - Develop infrastructure facilities 	<ul style="list-style-type: none"> - 50% of provinces developed provincial spatial planning and assessment for aquaculture development zones. - 50 % of provinces embarked upon the identification and selection of potential zones for aquaculture development. - 50% of provinces with guidelines for aquaculture development in zones and development of master, business and management plans aquaculture zones. - 50% of Provinces with endorsed implementable 	<ul style="list-style-type: none"> - 100% of provinces with designated aquaculture zones and implementing appropriate management tools for commercial aquaculture. - 100% of provinces with implementing climate change mitigation strategies for specific species of economic significance. - 100% of provinces and environmental monitoring in operational aquaculture zones. 	<ul style="list-style-type: none"> - Right sites in the right zones selected and developed to minimize adverse impacts on the environment. - Aquaculture plans, in the context of marine and brackish and freshwater management plans, which provide a clear indication of where aquaculture development may take place for production of a different variety of commercial aquaculture species. - Aquaculture implementation and monitoring in zoned ecosystems is developed. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		(roads, electricity, markets, transportation, processing plants, quality control and diagnostic labs.).	master, business and management plans for aquaculture zones.				
	- Development of resource-use patterns criteria for inland and coastal cages aquaculture.	<ul style="list-style-type: none"> - Develop inland and cage aquaculture based upon the carrying capacity of identified sites in light of water availability, ecosystem footprint, and climate change. - Preparation of master investment map of priority species and farming systems for cage aquaculture. - Remote sensing process of recording information from sensors mounted either on aircraft or on satellites. - Develop environmental disaster and hazard management strategy (earthquakes, landslides, floods) for inland and coastal cages aquaculture using satellite's view of hazard. - Develop a site selection suitability plans using geographic information system (GIS). 	- 50% of provinces developed master plan (environmental and economic) for cages aquaculture.	- 100% of provinces developed master plan (environmental and economic) for cages aquaculture and it has well established running cages aquaculture projects.	<ul style="list-style-type: none"> - Integrated approach to select suitable sites for cages aquaculture developed. - Multiple use frameworks for cages aquaculture established and approved by the federal and provincial governments. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	- National/Provincial fisheries authorities
	- Conflict of natural resources and ecosystem users.	<ul style="list-style-type: none"> - Assess impact of cages aquaculture on wild fisheries, biodiversity and environment through appropriate planning and licensing systems. - Develop legal framework and legislations for cage aquaculture zones. - Develop monitoring instruments for cages aquaculture in inland and coastal zones to reduce 	<ul style="list-style-type: none"> - 50% of provinces developed legal framework to reduce resource user's conflicts. - 50% of provinces developed monitoring instruments for cages aquaculture in inland and coastal zones to reduce vulnerability of natural resources and 	<ul style="list-style-type: none"> - 100% of provinces developed legal framework to reduce resource user's conflicts. - 100% of provinces developed monitoring instruments for cages aquaculture in inland and 	<ul style="list-style-type: none"> - Zonation and mapping of cages aquaculture sites developed. - Awareness creation programs for the impacts of cage aquaculture in inland and coastal water developed. - Resources user conflict resolution mechanism developed. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	- National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		vulnerability of natural resources and ecosystems and issuing permit.	ecosystems.	coastal zones to reduce vulnerability of natural resources and ecosystems	<ul style="list-style-type: none"> - Capacity building programs for cage aquaculture developed based on provinces available resources. - Systems for issuance of permits and license for cages aquaculture developed and in place, and managing sensitive areas and resources. 		
Improve access to markets and enhance exports.							
	<ul style="list-style-type: none"> - Develop national standards and adopt to international standards, certification and labelling mechanisms of aquaculture products. 	<ul style="list-style-type: none"> - Develop and adopt relevant national and international standards, certification and labelling mechanisms. - Establishing of markets and marketing infrastructure. - Establish national and provincial market information systems for aquaculture products. - Harmonizes national legal frameworks with international legal framework for trade in aquaculture products and endorse relevant international trade treaties for standards, certification and labelling mechanisms. - Develop national standards, certification and labelling of aquaculture products. - Develop centralized markets and facilities for holding and marketing of aquaculture products. - Establish real time data collection 	<ul style="list-style-type: none"> - 50% of provinces applying standards for certification and labelling. - 50% of provinces with centralized markets with facilities for holding and marketing aquaculture products. - 50% of provinces established aquaculture marketing information system. - 50% of provinces developed smart phone application for tracking online seafood trade. - 50% of provinces ratified relevant national legislation and international trade treaties. - 50% of provinces with functional system to support private sector entrepreneurs brand and 	<ul style="list-style-type: none"> - 100% of provinces with food safety and environmental standards for aquaculture products. - 100% of provinces implementing national and international certification and ecolabelling for aquaculture products. - 100% of provinces with appropriate infrastructure that meet international standards along marketing value chains. - 100% of provinces developed their aquaculture production, marketing and 	<ul style="list-style-type: none"> - Access of Pakistan aquaculture products to international markets assured and enhanced. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<ul style="list-style-type: none"> and management systems for national and international markets of seafood products. - Develop smart phone for sharing online aquaculture marketing information. - Increase domestic supply of fish consumption. 	<ul style="list-style-type: none"> patent their products. 	<ul style="list-style-type: none"> trade statistics. - 100% of provinces developed their smart phone application for tracking on line trade in seafood products. 			
	<ul style="list-style-type: none"> - Organizational changes and upgrade laws and legislations in aquaculture export sector. 	<ul style="list-style-type: none"> - Support rational organizational changes to continue export expansion for products which are currently competing mainly on the basis of low prices in the international markets and resolve trade barriers of concerned importing countries. - The public sector in cooperation with the Pakistan Exporters Association working together to fulfil international markets such as EU seafood markets. - Upgrade quality control and traceability legislations and laboratory structure. - Enhance harmonization of Federal and Provincial trade legislation to improve efficiency in expanding market access opportunities. 	<ul style="list-style-type: none"> - 50% of provinces with updated trade legislation and commitment to international standards. - 50% of provinces with capacity building help to ensure quality control of aquaculture products. 	<ul style="list-style-type: none"> - 100% of provinces with updated trade legislation and commitment to international standards. - 100% of provinces with capacity building help to ensure quality control of aquaculture products. 	<ul style="list-style-type: none"> - Updated trade legislation and commitment to international standards in place. - Quality control laboratories and improved export facilities are developed. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector - 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Strengthen the capacity of small scale traders, fish producers, and processors to implement traceability mechanisms. 	<ul style="list-style-type: none"> - Facilitate access to credit and incentives to promote small scale aquaculture traders, producers and processors. - Improve awareness on the nutritional value of fish consumption. - Develop training for small scale aquaculture traders, producers 	<ul style="list-style-type: none"> - 50% of provinces with credit and incentive system for small scale aquaculture traders, producers and processors. - 50% of provinces with training centers on formalities and regulations of 	<ul style="list-style-type: none"> - 100% of provinces with developed quality control and efficient export system that fulfill international aquaculture markets requirement. 		<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector - 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	and processors in the FAO Codex, WTO agreements in national trade legislation. - Support processing plants to be HACCP approved.	aquaculture product exports to the international markets.				
- Improve aquaculture value chain for Export Competitiveness of the aquaculture sector.	- Develop aquaculture production value chain of commercially important farmed species. - Identify particular areas of actions and interventions in the value chain for specific products and assessing export competitiveness in the international markets. - Develop and enforce legal framework of commitment to international standards for aquaculture value chain. - Enhance coordination among government agencies, responsible on food quality and safety standards of exports and trade protection.	- 50% of provinces with well-structured and innovative value chain. - 50% of provinces with enforced legal framework for commitment to international standards for aquaculture value chain.	- 100% of provinces with facilities and legal framework supporting commitment to international standards for aquaculture value chain.	- Aquaculture value chain of different farmed aquatic species is enhanced and expert to international markets are in place.	- Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector -	- National/Provincial fisheries authorities
Support fish farmers associations and cooperatives and aquaculture networks.						
- Develop advocacy, capacity building and awareness programs to support Self-sustainable fish farmers associations and cooperatives.	- Strengthen the roles, status and performance of fish farmers associations. - Improve skills and knowledge sharing for the different levels of farmers (subsistence fish farmers, emerging fish farmers, start-up commercial fish farmers, developing commercial fish farmers and aquaculture industry). - Conduct aquaculture operators training needs assessments and develop credited training programs for practical skills	- 50% of provinces with high capacity aquaculture association and cooperatives.	- 100% of provinces with high capacity aquaculture association and cooperatives.	- Aquaculture associations and cooperatives strengthened.	- Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector	- National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		development. - Identify skills gaps in private and public sectors to develop strategic plans and their implementation.					
	- Support and enhance the role of Aquaculture Associations and Networks in aquaculture development.	- Conduct Aquaculture Associations and Networks needs assessment. - Develop national advocacy and awareness programs to support capacity building to associations to deliver services. - Develop advocacy and awareness programs to support capacity building and strengthen associations to deliver services. - Support the development of national networks of service providers in aquaculture. - Assessment on the roles, status and performance of aquaculture associations and networks in Pakistan.	- 50% of provinces developed and implemented strategies to strengthen the capacity of national and provincial aquaculture associations to deliver their services to the society. - 50% of provinces assessed the roles, status and performance of aquaculture associations and networks.	- 100% of provinces implemented strategies to strengthen the capacity of national and provincial aquaculture associations to deliver their services to the society.	- Self-sustainable national and provincial aquaculture associations/ networks operating and delivering services to the aquaculture sector. - National and provincial specific Best Practice guidelines to support aquaculture sector operations. - National and provincial strategies to strengthen aquaculture associations and cooperatives developed.	- Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector -	- National/Provincial fisheries authorities
Mitigation and reducing vulnerabilities to climate change and disasters in aquaculture.							
	- Enhance and give climate change and disaster risks a high priority at the political level.	- Asses the impacts of climate change and adopt mitigation strategies in cooperation with the stakeholders and build adaptive capacity at the provincial level. - Setup aquaculture zoning to minimize environmental risks. - Increase efficiency of water use, water recycling and introduce integrated fish farming (i.e. aquaponics) in situations of expected droughts. - Develop climate adapted genetically improved fish and crustacean Broodstock (high	- 50% of provinces with adopted mitigation strategies in cooperation with the stakeholders and build adaptive capacity at the provincial level.	- 100% of provinces with adopted mitigation strategies in cooperation with the stakeholders and build adaptive capacity at the provincial level.	- Climate adapted aquaculture industry developed and in place. - Regularly updated national and provincial inventory of aquaculture associated with export to international markets are in place.	- Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector	National/Provincial fisheries authorities

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	<p>temperature and salinity tolerant, and disease resistant).</p> <ul style="list-style-type: none"> - Develop early-warning systems, projects; assess vulnerability of coastal ecosystems and prepare climate adaptation plans. 					
Establish Biosecurity and aquatic health management and surveillance.						
<ul style="list-style-type: none"> - Develop and implement national and provincial aquatic health management, surveillance and biosecurity frameworks for aquaculture. 	<ul style="list-style-type: none"> - Develop, adopt, and implement national/provincial aquatic animal health management, surveillance and biosecurity strategies for commercially important species (i.e., fish and shrimp disease control legal frameworks), and include it in the national policies and plans. - Improve veterinary services at provincial level. 	<ul style="list-style-type: none"> - 50% of provinces endorsed national/provincial aquaculture disease control and surveillance legal frameworks. - 50% of provinces mainstreamed national/provincial aquatic health management legal frameworks into their policies and legislations for aquaculture. 	<ul style="list-style-type: none"> - 100% of provinces implementing aquaculture diseases control strategies, and compliance with an industry code which is evolving to reflect current best practice, Quarantine, capacity building to end users, and Certification of the aquaculture project. 	<ul style="list-style-type: none"> - Effective control strategies for aquaculture diseases and compliance with an industry code to reflect current best practices in aquaculture. - Adoption and implementation of national aquatic health management, disease control and legal surveillance frameworks and guidelines. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	National/Provincial fisheries authorities
Capacity building for institutions and operators in aquaculture.						
<ul style="list-style-type: none"> - Human capacity building for aquaculture farm management. 	<ul style="list-style-type: none"> - Capacity building across the core areas of aquaculture production value chain, including environment management, disease control, post-handling and processing. - Support to the private sector for skills development through workshops, regular meetings, and training, along aquaculture value chain. 	<ul style="list-style-type: none"> - 50% of provinces supporting practical training programs in collaboration with private-sector. 	<ul style="list-style-type: none"> - 100% of provinces implementing training programs for aquaculture skills development targeting operators in collaboration with private-sector. - 100% of provinces investing in training programs for trainers in aquaculture. 	<ul style="list-style-type: none"> - Capacity building in aquaculture production value chain enhanced and improved. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	<ul style="list-style-type: none"> - Develop specialized national and provincial training centers on aquaculture. 	<ul style="list-style-type: none"> - Develop training facilities for practical skills training programs in aquaculture. - Develop training curricula based stakeholder training needs assessments. - Strengthen the capacity of selected centre's to deliver study tours, field visits and exchange visits to aquaculture projects. - Organise and implement short-term training and exchange programs between provinces. - Provide support private-sector value-chain actors to participate in national and international conferences and exhibitions and to exhibit their products. - Disseminate practical manuals and protocols to increase accessibility for public use for aquaculture development. 	<ul style="list-style-type: none"> - 50% of provinces established aquaculture training centres delivering practical training in different aspects of aquaculture production. - 50% of provinces supported private-sector entrepreneurs attend national and international events - 50% of provinces developed and disseminated manuals, guidelines, SOPs, BAMP on aquaculture technology and development. 	<ul style="list-style-type: none"> - 100% of provinces established Centre's of excellence for practical skills training and operation of commercial aquaculture projects. - 100% of provinces validated and disseminated manuals, guidelines, SOPs, BAMP on aquaculture technology and development and available to the public. 	<ul style="list-style-type: none"> - Enhanced aquaculture business capacity. - Appropriate aquaculture technologies, socio-economically feasible and environmentally friendly developed to fit the unique provincial situations. - Availability of skilled staff developed. - Enhanced capacities of national and provincial institutes to develop and implement mechanisms to facilitate aquaculture development. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	National/Provincial fisheries authorities
Research and development and education.							
	<ul style="list-style-type: none"> - Establish centers of excellence for research and development in aquaculture. 	<ul style="list-style-type: none"> - Provide necessary support to establish centers of excellence. - Support for infrastructure and operations of selected aquaculture research facilities. - Identify, assess and provide necessary support to establish specialized reference research facilities. - Develop and encourage research on the sustainable utilization and management of aquatic resources within the context of local environmental, socio-economic 	<ul style="list-style-type: none"> - 50% of provinces developed criteria for identifying and selecting national centers of excellence and their objectives developed. - 50% of provinces established provincial centers of excellence identified and recognized. 	<ul style="list-style-type: none"> - 100% of provinces developed criteria for identifying and selecting national centers of excellence and their objectives developed. - 100% of provinces established provincial centers of excellence identified and recognized. 	<ul style="list-style-type: none"> - Regional Centre's of excellence in operation. - Credited training programs for practical skills development targeting aquaculture operators in collaboration with private-sector. - Research, information, education, consumer interest and participation, and awareness raising programme, established and improved. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p>and technological constraints.</p> <ul style="list-style-type: none"> - Increase research and dissemination of best practices through improved collaboration between national and provincial institutions. 					
	<ul style="list-style-type: none"> - Grants to support collaborative national applied aquaculture research with private sector. 	<ul style="list-style-type: none"> - Establish sustainable grants program in partnership with private sector to support demand driven applied and adaptive research. - Develop institutional arrangements for enhancing collaboration and partnership in aquaculture. 	<ul style="list-style-type: none"> - 50% of provinces implemented granting schemes. 	<ul style="list-style-type: none"> - 100% of provinces implemented granting schemes. 	<ul style="list-style-type: none"> - Granting schemes in partnership with private sectors to support the commercial-aquaculture value chain are in developed and in place. - Institutional arrangement, operational Framework, Financial and technical capacity building, International community commitment in terms of financial, technical and human capacity building in aquaculture enhanced. - Successful operational four levels of resources enhanced namely; Technical; Science/Research; regulatory instruments; and Communications channels. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Enhance Capacity building in different aspects of aquaculture including skills in farming and hatchery technology. 	<ul style="list-style-type: none"> - Develop practical methods to enhance skills along the value chain of the aquaculture. - Develop Information and reporting systems at national and provincial level, networking/information sharing through forums, networks and portals. - Develop industry - oriented 	<ul style="list-style-type: none"> - 50% of provinces with high level of education and skills of science and adoption of technology and innovation enhanced. - 50% of provinces developed technology and scientific innovation 		<ul style="list-style-type: none"> - Universities and research institutions with aquaculture programs supported. - New aquaculture technologies developed, and scientific innovations made. - Significant number of 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p>research system and strengthen the role of academia universities in the country to develop curricula to support the aquaculture sector at institutional and at enterprise level.</p> <ul style="list-style-type: none"> - Develop research system on new products and marketing strategies for aquaculture. - Develop relationship with international academia to provide short term / long term training scholarships to aquaculture staff, university graduate at the institutional level (i.e. Departments of Fisheries) in each province. 	and evidence of use the technology or innovation by the targeted stakeholders validated.		<p>operators in aquaculture trained on new technologies/skills and adopting new technologies.</p> <ul style="list-style-type: none"> - Aquaculture functioning information and reporting system established. - Community of practice in aquaculture including; forums, platforms, networks and portals developed and in place. - Strengthened aquaculture institutions (public, private sector and other stakeholders' organizations) at national and provincial levels. 		
Sustainable aquaculture development.							
	<ul style="list-style-type: none"> - Assess development potentials in aquaculture. 	<ul style="list-style-type: none"> - Mobilize national and provincial capacity to assess and regularly review the aquaculture potentials of Pakistan aquatic ecosystems, environmental, economic, and social costs, benefits of subsistence, domestic and export productions. 	<ul style="list-style-type: none"> - 50% of provinces mobilized national and provincial capacity to assess aquaculture potentials of Pakistan. 	<ul style="list-style-type: none"> - 100% of provinces assessed development potentials of aquaculture in Pakistan. 	<ul style="list-style-type: none"> - Sustainable aquaculture development, enhanced. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector - 	National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Include aquaculture development in spatial planning development. 	<ul style="list-style-type: none"> - Integrate aquaculture (freshwater and mariculture) in planning discussions, including marine spatial planning with relevant Ministries and Agencies - Identify areas suitable for aquaculture. 	<ul style="list-style-type: none"> - 50% of provinces included aquaculture development in spatial planning development. 	<ul style="list-style-type: none"> - 100% of provinces integrated aquaculture in planning discussions. 	<ul style="list-style-type: none"> - Sustainable aquaculture development, achieved. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners 	National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
						- Private Sector	
	- Develop freshwater Aquaculture.	<ul style="list-style-type: none"> - Develop integrated polyculture systems for tilapia, catfish and carps as a contribution to diversification of aquaculture farms. - Ensure and support fish seed quality, management of genetic diversity, and species diversification. - Develop fish seed networks to support aquaculture in remote areas, with poorer groups. - Develop least cost plant-based feeds for freshwater. - Diversification of farmed Species includes trout and freshwater prawn. 	- 50% of provinces developed master plan for freshwater Aquaculture development.	100% of provinces improved legislations and regulations govern freshwater aquaculture projects.	- Sustainable freshwater aquaculture development, achieved.	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	National/Provincial fisheries authorities
	- Develop Brackish Water Aquaculture.	<ul style="list-style-type: none"> - Encourage development and expansion of farming area of sustainable shrimp farming in brackish water. - Improve capacity in, disease control for fish and shrimp pathogen free seeds especially for Poor farmers, environmental management to avoid problems have arisen from poor planning and operational management of fish and shrimp farming, quality control and assurance of food safety and traceability. - Develop shrimp farming zones through Marine Spatial Planning and allocation of farming sites, and develop farming 	- 50% of provinces developed master plan for Brackish water Aquaculture development.	100% of provinces improved legislations and regulations govern Brackish water aquaculture projects.	- Sustainable brackish water aquaculture development, achieved.	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p>infrastructure.</p> <ul style="list-style-type: none"> - Diversification of farmed Species includes mollusk and crabs. 					
	<ul style="list-style-type: none"> - Develop Marine Aquaculture. 	<ul style="list-style-type: none"> - Increase investment in the marine farming sector, from government and the private sector, including international investors. - Develop sustainable marine fish and shrimp farming independent of the wild fishery, through developing a national seed production strategy and investments in more efficient feeds and feeding practices. - Develop cage farming for marine finfish species, based on engineering knowledge ensure safety and long cage life. 	<ul style="list-style-type: none"> - 50% of provinces developed master plan for marine Aquaculture development. 	<ul style="list-style-type: none"> - 100% of provinces improved legislations and regulations govern marine aquaculture projects. 	<ul style="list-style-type: none"> - Sustainable marine aquaculture development, achieved. 	<ul style="list-style-type: none"> - Relevant federal Ministries - Provinces departments of fisheries - Development Partners - Private Sector 	<ul style="list-style-type: none"> - National/ Provincial fisheries authorities

4- Policy priorities of interlinked sectoral policies in fisheries and aquaculture

4.1- Reducing vulnerabilities to climate change and disasters in fisheries and aquaculture

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
Mitigation of climate change and disasters in fisheries and aquaculture to ensure sustainable social, economic, environmental benefits.						
<ul style="list-style-type: none"> - Integrated Strategic legal Framework for climate change and disasters in fisheries and aquaculture. 	<ul style="list-style-type: none"> - Develop a checklist on existing frameworks to identify gaps and develop new legal framework for climate change and natural disasters. - Developing integrated platform knowledge across different marine ecosystem components and linking physical, chemical and biological aspects when assessing the status of marine systems as crucial for accurate evaluations. - Modelling marine ecosystems (e.g., hydrodynamic, habitat suitability models, ecosystem models, among others) for an understanding of the processes, functioning and interrelationships among marine ecosystem components. - Determine, at the national and regional levels, the means by which an integrated strategy can be implemented - Blue Economy guiding principles for ecosystem-based management based on the idea of ocean and coastal resources that need to be managed to reflect the relationships among all ecosystem components, including humans, as well as the resulting socioeconomic impacts. - Assess the contribution of environmental agreements in achieving climate change and 	<ul style="list-style-type: none"> - 50% of coastal provinces enhanced the issue of climate change and disaster risks as high priority at the political level. - 50% of coastal provinces assessed the impacts of climate change and adopt mitigation strategies in cooperation with the stakeholders and build adaptive capacity at the local level. - 50% of coastal provinces setup aquaculture zoning to minimise risks and relocation to new exposed sites. 	<ul style="list-style-type: none"> - 50% of coastal provinces increased efficiency of water use, water recycling and introduce aquaponics in situations of expected droughts. - 50% of coastal provinces developed climate adapted genetically improves fish and crustacean brood stocks (high temperature and salinity tolerant, disease resistant). - 50% of coastal provinces developed early-warning systems, projects; assess vulnerability of coastal ecosystems and Prepare climate adaptation plans. 	<ul style="list-style-type: none"> - Environmentally sustainable and climate resilient economies and communities developed. - Environmentally sustainable and climate resilient economies and communities working along the value chain of fisheries and aquaculture ensured. 	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	<p>social benefits.</p> <ul style="list-style-type: none"> - Align blue economy interventions to environmental agreements and other international agreements - Support Marine Spatial Planning, as a management tool that balances conservation efforts with increasing demands on marine resources, which, together with the ecosystem based approach, relying on a multidisciplinary approach integrating sociological, economic and ecological components. 					
Develop capacity for climate resilient economies and communities for fisher folks and fish famers and other actors along the value chain.						
<ul style="list-style-type: none"> - Instruments for capacity building for climate resilient economies and communities of fisher folks and fish famers and other actors along the value chain. 	<ul style="list-style-type: none"> - Promote efforts towards open access to scientific data and publications that provide better access to datasets and current research, which has the potential to result in better spatial and temporal analyses, by using existing information in a much more efficient and effective way through Information and Communication Technologies including the Geographical Information Systems (GIS). - Develop a national and regional policy framework and action plan to integrate climate resilient economies and communities. - Determine, at the national and regional levels, the means by which an integrated policy framework and action plan can be implemented. - Assess the impact of climate change agreements on Pakistan fisheries and aquaculture sector. - Assess the contribution of climate change agreements in enhancing climate resilient economies and communities. 	<ul style="list-style-type: none"> - 50% of coastal provinces developed Instruments for capacity building for climate resilient economies and communities of fisher folks and fish famers and other actors along the value chain. 	<ul style="list-style-type: none"> - 100% of coastal provinces developed strategies for resilient infrastructure. - 100% of coastal provinces developed a risk management framework. - 100% of coastal provinces developed information database and dissemination mechanism. 	<ul style="list-style-type: none"> - Capacity for climate resilient economies and communities developed. - Balanced marine ecosystems developed and enhanced. - Local communities livelihoods enhanced. - Risk management framework developed. 	<p>National ministries/ Federal and provincial fisheries departments Climate change ministry</p>	<p>National/Provincial fisheries authorities</p>
Balance marine ecosystem and Enhance local communities' livelihoods.						
<ul style="list-style-type: none"> - Assess instruments for balancing fisheries and aquaculture ecosystem. 	<ul style="list-style-type: none"> - Conduct a review on instruments to balance marine ecosystem through legal framework that will make ecosystems utilized effectively and plan to balance use of ecosystem. 	<ul style="list-style-type: none"> - 50% of coastal provinces enhanced Resilience of livelihoods and production systems to climate variability 	<ul style="list-style-type: none"> - 50% of coastal provinces developed commitment to zero hunger and climate change adaptation 	<ul style="list-style-type: none"> - Ecosystem Services and Resilience Environmentally sustainable and 	<p>National ministries/ Federal and provincial fisheries</p>	<p>National/Provincial fisheries authorities</p>

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<ul style="list-style-type: none"> - Determine, at the national and provincial levels, the means by which a balanced ecosystem service will be implemented. - Develop social community guideline towards enhancing local communities' livelihoods and community safe guard measures. - Formulate social legal framework that will enable local communities' participation and access insurance and credit schemes (health and social security). - Engage private sector to invest in housing, safe and hygienic sanitation for local communities. - Develop Risk Management Framework, stipulating approach to risk management, reporting, and how to embed to operations. - Define a risk assessment criteria and risk tolerance and realignment of risk management to the implementation of the fisheries and aquaculture development strategy. 	<p>and other risks.</p> <ul style="list-style-type: none"> - 50% of coastal provinces developed integrated strategies for sustainable environmental management. 	<p>through increased sustainable productivity and production from fisheries and aquaculture.</p>	<p>climate resilient economies and empowered communities developed.</p> <ul style="list-style-type: none"> - Environmentally sustainable and climate resilient economies and communities enhanced and developed. 	<p>departments Climate change ministry</p>	
	<ul style="list-style-type: none"> - Contribute to reduce risk in the fisheries and aquaculture sector. 	<ul style="list-style-type: none"> - Reduce risk at sea through training for safety at sea. development of communication and support systems, such as weather forecast and sea rescue and cooperation and sponsorship to provide safety equipment. 	<ul style="list-style-type: none"> - 50% of coastal provinces developed risk reduction measures for climate change impacts on fisheries and aquaculture. 	<ul style="list-style-type: none"> - 100% of coastal provinces quantified the risk and developed operational risk management system for monitoring climate change impacts on fisheries and aquaculture. 	<ul style="list-style-type: none"> - Understanding and management of risk, increased. - Government supported the development of partnership and collaboration between stakeholders working groups with financial institutions and insurance companies to assess investment risks. 	<p>National ministries/ Federal and provincial fisheries departments Climate change ministry</p>	<p>National/Provincial fisheries authorities</p>
<p>Improve marine and coastal ecosystem management.</p>							

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
- Monitor and reduce aquatic pollution.	- Establish system for monitoring fishing vessels pollution, through enforcement of existing legislation.	- 50% of coastal provinces devolved measures to reduce water pollution.	- 100% of coastal provinces developed legal framework to monitor and control aquatic pollution.	- Monitoring and reporting system for pollution events from vessels, tourists and land sources, developed.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
- Develop the network of protected areas.	- Develop a national and provincial network of conservation areas and adaptive management strategies. - Develop marine spatial planning for fisheries and aquaculture activities to reduce vulnerabilities to climate impacts.	- 50% of coastal provinces	- 100% of coastal provinces	- Adaptive management systems for natural heritage, established and in place.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
National adaptation plan for climate change issues in fisheries and aquaculture.						
- Formulation of a adaptation, Integrated Planning and Management Framework.	- Assess the Impacts of Potential Climate Changes and Sea-Level Rise <ul style="list-style-type: none"> • Fresh Water Resources. • Human Settlement. • Human Health. • Coastal Zone. • Tourism. • Fisheries. • Biodiversity. 	- 50% of coastal provinces assessed major Implications for impacts of climate change. - 50% of coastal provinces ranked climate impact issues by magnitude and significance. - 50% of coastal provinces increased Institutional capacity building of and legal arrangements for responding to climate change issues.	- 100% of coastal provinces developed adaptation mechanisms.	- Key Legislation Relating to Coastal management, developed. - Participation of non-government Agencies in adaptation to climate change, strengthened. - International Agreements Relating to Marine Management, developed and in place.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
- Impacts of climate change on fishery habitat.	- Assess impact on Mangroves, which are of considerable importance to fisheries.	- 50% of coastal provinces assessed the	- 100% of coastal provinces developed	- Projected mutation	National ministries/	National/Provincial fisheries

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	<ul style="list-style-type: none"> - Assess impact on Seagrasses. And Coral reefs. - Assess impact on Oceanic features such as: - Assess impact on River inputs. - Assess impact on Freshwaters and Wetlands and coastal and estuarine wetlands that may sustain fisheries. 	impact of climate change on fishery habitat, especially vulnerable fisheries and aquaculture ecosystems.	legal framework for mitigation Impacts of climate change on fishery habitat, and aquaculture resources.	measures habitat at federal and provincial level to reduce the loss of fisheries and aquaculture developed and in place.	Federal and provincial fisheries departments Climate change ministry	authorities
Direct impacts of climate change on fishery stocks.						
- Impacts on stock distribution.	<ul style="list-style-type: none"> - Assess the threat of climate induced changes in fishery resource biomass or production. - Establish monitoring systems that can detect gross trends in the fisheries, and unpredictable departures from these trends that may be attributable to climatic change, or anthropogenic effects. - Establish a species by species examination of ranges in order to determine potential specific local impacts of range shifts. 	- 50% of coastal provinces established monitoring systems that can detect gross trends in the fisheries, and unpredictable departures from these trends that may be attributable to climatic change, or anthropogenic effects.	- 100% of coastal provinces developed mitigation measures to reduce the threat of climate induced changes in fishery resource biomass or production.	- Climate change mitigation measures developed and the shifts in distribution of species at the extremes of their distributional ranges, reduced and under control.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
- Impacts on recruitment and fish stock availability.	- Assess the variability in recruitment based on the type of life history, and variations in adult stock in the impacted habitats, in which they spend their early life history, numbers and sizes of recruits that survive to enter the fishery.	- 50% of coastal provinces developed ecosystem models to predict the response of fishery resource populations to climate change using recent extensions of ECOPATH models to ECOSIM and ECOSPACE for spatial simulation of climate effects.	- 100% of coastal provinces updated its legal framework to include Impacts on recruitment and stock availability in the legal framework for mitigation impacts of climate change.	- The impacts assessment platform of fishing gears, storms, sea level rise, temperature rise, and wind on recruitment and fish stock availability, established and in place.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
Impacts on the harvesting sector.						
- Impacts on revenues.	- Assess the potential impacts on fishers and fishing communities due to viability of fisheries and their contribution to food security.	- 50% of coastal provinces evaluated both stock abundance	- 100% of coastal provinces assessed climatic change that	- Amount of effort that can be expended each	National ministries/ Federal and	National/Provincial fisheries authorities

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	<ul style="list-style-type: none"> - Assess the potential impacts of climatic change on revenues from fishing indirectly through stock abundance and stock availability. - Evaluate resources that are overexploited, and develop measures that reduce fishing efforts and lead to stock recovery in the longer-term, and thence to increased catch per unit effort and increased total landings, even from lower efforts. 	and availability on the catch per unit effort, the prices, and the revenues.	reduces the number of days on which vessels can fish, this bring about a short-term reduction in catch per vessel and overall catch affected by adverse weather conditions.	year, the total annual revenue per vessel, and for the industry overall assessed and mitigation measured developed and in place.	provincial fisheries departments Climate change ministry	
<ul style="list-style-type: none"> - Impacts on costs. 	<ul style="list-style-type: none"> - Develop mechanisms for determination of the cost due to damage of natural resources from climate change impacts such as damage of fishing vessels and fishing gears. 	<ul style="list-style-type: none"> - 50% of coastal provinces assessed the impacts of storms and hurricane damage on fishing activities, and developed compensations mechanisms for the mitigation of these impacts. 	<ul style="list-style-type: none"> - 100% of coastal provinces established mitigation mechanisms and compensation to stakeholders affected from storms and hurricane damage. 	<ul style="list-style-type: none"> - In collaboration with financial and insurance companies, the government established mitigation and compensation mechanisms for the impacts of storms and hurricane damage on fishing activities. 	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
Aquaculture.						
<ul style="list-style-type: none"> - Vulnerability of aquaculture enterprises to climate change impacts. 	<ul style="list-style-type: none"> - Assess the vulnerability of aquaculture enterprises to impacts of climate change, especially on shore aquaculture in low-lying coastal areas, as sea level rises. - Assess the loss of protection to the coast by degradation of mangroves, Seagrasses and coral reefs. - Assess the impact on aquaculture enterprises in cages and pens in sheltered coastal habitats. 	<ul style="list-style-type: none"> - 50% of coastal provinces developed master plan for allocation of less impacted sites for land based coastal and water based cage culture. 	<ul style="list-style-type: none"> - 100% of coastal provinces updated their legislation towards allocation of less impacted sites through obligatory environmental impact assessment and marine spatial planning before granting license to aquaculture projects. 	<ul style="list-style-type: none"> - The “Code of Conduct for Responsible Fisheries” is adapted to local situations. 	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
Conservation and sustainable utilization of fisheries and aquaculture resources use.						
- Sustainable utilisation and conservation of fisheries and aquaculture resources.	<ul style="list-style-type: none"> - Develop strategic national, regional and international cooperation in the conservation of fisheries and aquaculture natural resources. - Assess the capacity needs of regional organisations on information collection, analysis and dissemination to achieve such goals. - Develop management options for sustainable conservation and use of fish stocks. - Develop national gene bank equipped with all facilities for conservation of improved genetic resources of farmed species and their wild relatives. - Capacity building of personnel operating the gene-bank. 	- 50% of coastal provinces Regulatory provision for compliance of regional and international obligation for sustainable utilization and conservation of fisheries and aquaculture resources.	- 100% of coastal provinces assessed the capacity needs of regional organisations on information collection, analysis and dissemination to achieve such goals.	- Strategic national, and international cooperation in the conservation of fisheries and aquaculture natural resources, developed.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
- Establish fisheries and aquaculture zones.	<ul style="list-style-type: none"> - Allocate the most suitable location for aquaculture development. - Introduce zones for aquaculture development in accordance with areas of high potentials for aquaculture enterprises. 	- 50% of coastal provinces introduced zones for aquaculture development in accordance with areas of high potentials for aquaculture enterprises.	- 100% of coastal provinces enforced legislation for allocating the most suitable location for aquaculture development, before the start of the project activities.	- Master plan for aquaculture enterprises are in place.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
- Genetic Conservation of farmed species and their wild relatives.	<ul style="list-style-type: none"> - Develop national gene bank equipped with all facilities for conservation of improved genetic resources of farmed species and their wild relatives. - Capacity building of personnel operating the gene-bank. 	- 50% of coastal provinces developed genetic conservation program for farmed species and their wild relatives.	- 100% of coastal provinces developed instructress required for the genetic conservation program, such as Genebanks and breeding facilities.	- Gene bank and breeding facility for genetic of farmed species and their wild relatives, established and in place.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
- Set up conflict resolution mechanisms offer shared natural resources.	<ul style="list-style-type: none"> - Develop mechanism for conflict resolution among stakeholders sharing common natural resources such as the conflict between small – scale fishers and resort owners for the beach 	- 50% of coastal provinces developed effective conflict resolution mechanism	- 100% of coastal provinces developed effective conflict resolution mechanism	- Conflict resolution mechanisms offer shared	National ministries/ Federal and provincial	National /Provincial fisheries

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	and costal area use, conflict between cage farmers and small-scale fishers, conflict between small-scale fishers and trawlers (Territorial Use Rights in Fisheries for small-scale fisheries). Mobilize financial resources to protect the resources and impacted stakeholders.	by the power of the law.	by the power of the law and updated its legal framework.	natural resources, developed.	fisheries departments Climate change ministry	authorities
- Design disasters and risk management framework.	- Establish risk management framework to achieving conservation objectives compatible with sustainable use of the fisheries and aquaculture natural resources (fish stocks condition and environmental health indicators) to avoid undesirable outcomes. - Establish national precautionary measures. - Design bio-security measures and reducing vulnerability to impacts of climate change.	- 50% of coastal provinces established disasters and risk management framework.	- 100% of coastal provinces updated its legal framework to enforce the implementation of the disasters and risk management framework.	- Disasters and risk management framework, established and inn place.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
National institutional capacity.						
- Capacity to monitor impact of climate change.	- Assessment of the national institutional capacity to systematically collect and analyse data to monitor the ecological and socio-economic impact of climate change on the fisheries sector would be best based on a strategic assessment of the type and level of assessment that would be sustainable for Pakistan fisheries. - Application of the precautionary approach and risk management to provide guidance required to promote climate resilient economies and communities within environmental sustainable framework.	- 50% of coastal provinces increased involvement of stakeholders as partners to monitor impact of climate change.	- 100% of coastal provinces 100% of coastal provinces increased monitor impact of climate change through well-established infrastructure and training.	- Risk evaluation and risk criteria in fisheries and aquaculture developed and inn place. - Precautionary approach owing to uncertainty associated with climate change, developed.	National ministries/ Federal and provincial fisheries departments Climate change ministry	National/Provincial fisheries authorities
Scientific research for the assessment of climate change impacts on fisheries and aquaculture resources.						
- Data recording systems for the impact of climate change on fisheries, fish stocks, and aquaculture.	- Evaluate and record the relationships between present distributions of fishery resources and temperature. - Evaluate and record the relationships between seasonal availability of migratory species and the seasonal climate cycle.	- 50% of coastal provinces developed quantitative predictions scientific methods of the impacts.	- 100% of coastal provinces developed database and data recording system for the fishery and aquaculture, including	- Basic data collection systems for fisheries catch and aquaculture enhanced as a	National ministries/ Federal and provincial fisheries departments Climate	National/Provincial fisheries authorities

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	<ul style="list-style-type: none"> - Evaluate and record the effects of the seasonal cycle on spawning, including aggregation, of fishery resources. - Evaluate and record the relationships of early life history, particularly planktonic stages, to meso-scale and local-scale circulation. - Develop focussed research initiatives to provide valuable information for planning for adaptation to climate change. 		effects on habitat, exploited populations, and fishing communities.	research need and a capacity building need, established and in place.	change ministry	

4.2- Development of national, regional and international trade and trade corridors and access to market for fisheries and aquaculture commodities.

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
Improve fish and fisheries products trade and access to market systems.						
<ul style="list-style-type: none"> - Access to markets, improvement in market infrastructure and Fish processing establishments. 	<ul style="list-style-type: none"> - The federal government should facilitate provinces in: <ol style="list-style-type: none"> i. Improving market intelligence for informed decision making. ii. Market regulations for better transparency and access. iii. Developing standard grading, processing and packaging entrepreneurship, iv. Identification of potential key food products for overseas markets to enhance international market access and provide enabling environment for 	<ul style="list-style-type: none"> - 50% of coastal provinces improved market regulations and adhered to international standard to support exports. 	<ul style="list-style-type: none"> - 100% of coastal provinces developed standard market infrastructure and inspection laboratories to facilitate the exports. 	<ul style="list-style-type: none"> - Access to markets, improvement in market infrastructure and Fish processing establishments, enhanced and international exports increased. 	National ministries/ Federal and provincial fisheries departments	National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p>exports.</p> <p>V. Development of modern market concept to be run by farmers and private dealers.</p> <p>Vi. Facilitate and promote farmers marketing system and establishment of e-marketing of food products.</p>					
	<ul style="list-style-type: none"> - Improve Value Chain Analysis (VCA) for specific products and assessing export competitiveness. 	<ul style="list-style-type: none"> - Promote access to market and marketing diversification. - Remove barriers in the national, international trade and markets legislation. - Develop mechanisms for improved national and international fish trade. - Create awareness on the international import regulations to improve fish trade and marketing. - Support price competitiveness at local, national, regional, and international levels. - Mapping fish trade corridors. - Trade policy capacity building. - Provision of technical expertise to making optimum use of harvests and reducing post-harvest losses. 	<ul style="list-style-type: none"> - 50% of coastal provinces developed programs to strengthen the Value Chain Analysis (VCA) for specific products and assessing export competitiveness. 	<ul style="list-style-type: none"> - 100% of coastal provinces secured fund to develop species specific value chains for fisheries and aquaculture products. 	<ul style="list-style-type: none"> - Positive impact on the productivity of local firms, export competitiveness, diversification, and on the overall economic growth. 	<p>National ministries/ Federal and provincial fisheries departments</p> <p>-</p>	<ul style="list-style-type: none"> - National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Market Development Needs. 	<ul style="list-style-type: none"> - Conduct comprehensive marketing study to evaluate the efficiency of the marketing system in Pakistan. - Development of the national cold chain to promote more efficient and hygienic preservation and marketing of fisheries and aquaculture products. - Training for agents, wholesalers, retailers and processors. - Establish a system that helps consumers to trace fisheries and aquaculture products to the source, detect quality along the market channels. 	<ul style="list-style-type: none"> - 50% of coastal provinces provided market development needs. - 50% of coastal provinces promoted diversification of species cultured through a market oriented approach to better assure financial viability and sustainability. 	<ul style="list-style-type: none"> - 100% of coastal provinces provided financial resources for market development. - 100% of coastal provinces supported trademark development. 	<ul style="list-style-type: none"> - Trade in the international and domestic markets, promoted. - Investment in wholesale marketing, possibly including major city auction establishment, increased. 	<p>National ministries/ Federal and provincial fisheries departments</p>	<p>National/Provincial fisheries authorities</p>
Improve quality and safety of fisheries and aquaculture products.							

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	<ul style="list-style-type: none"> - Build capacity of the value chain, handling, value addition, labelling and traceability data in fisheries and aquaculture. 	<ul style="list-style-type: none"> - Comply with sanitary, phytosanitary standards (SPS) and safety of fisheries and aquaculture products according to the national and international standards. - Establish national reference laboratories for food safety, quality control and assurance to better access regional and international markets. - Promote eco-labelling as a trade-enhancing mechanism. - Removal of technical barriers to trade. - Assess the current certification and allied testing services as perceived by the processing industry. - Capacity building of inspection staff to and for conducting inspections. 	<ul style="list-style-type: none"> - 50% of coastal provinces increased capacity of the whole value chain of fisheries and aquaculture products. 	<ul style="list-style-type: none"> - 100% of coastal provinces developed infrastructure for sanitary, Phytosanitary standards (SPS) and safety of fisheries and aquaculture products according to the national and international standards. 	<ul style="list-style-type: none"> - Value chain, handling, value addition, labelling and traceability data in fisheries and aquaculture, enhanced and in place. 	<p>National ministries/ Federal and provincial fisheries departments</p> <ul style="list-style-type: none"> - 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities
Improve capacity building of fish traders.							
	<ul style="list-style-type: none"> - Put in place efficient fish trade information systems, infrastructure and strengthen the capacity of small scale traders, fish producers to implement traceability mechanisms. 	<ul style="list-style-type: none"> - Facilitate access to microcredit schemes to promote gender main-streaming for women and youth traders and processors. - Improve awareness on the nutritional value of fish consumption. - Encourage participation of fish producers, fish traders, and government officials in the FAO Codex and OIE Meetings. - Include WTO agreements in national trade legislation. - Support processing plants to be HACCP approved. - Improve export management skills. - Enhance capabilities of Seafood Export Association. - Assist in developing a value addition and maintain cold chain. - Create awareness on the international import regulations to improve fish trade and 	<ul style="list-style-type: none"> - 50% of coastal provinces implemented traceability mechanisms, and increased small scale traders, fish producers. 	<ul style="list-style-type: none"> - 100% of coastal provinces encouraged participation of fish producers, fish traders, and government officials in the FAO Codex and OIE Meetings, include WTO agreements in national trade legislation, processing plants to be HACCP approved, and supported. 	<ul style="list-style-type: none"> - Seafood Export enhanced and increased. 	<p>National ministries/ Federal and provincial fisheries departments</p> <ul style="list-style-type: none"> - 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<ul style="list-style-type: none"> marketing. - Develop strategies to increase fish consumption. - Develop campaigns on the nutritional value of fisheries products to enhance fish consumption. 					
Improve the value chain and value added products form the fisheries and aquaculture.							
	<ul style="list-style-type: none"> - Encourage development of markets for fisheries and aquaculture products. 	<ul style="list-style-type: none"> - Establish a cross government-industry working group to draw up and develop a marketing Plan. - Establish and maintain mechanisms for marketing arrangements. - Facilitate exhibition, branding, market research. - Coordinate marketing arrangements and development. - Encourage use of sustainability certification. - Establish and strengthen linkages between government and non-government agencies to mainstream fisheries into trade. 	<ul style="list-style-type: none"> - 50% of coastal provinces encouraged use of sustainability certification. 	<ul style="list-style-type: none"> - 100% of coastal provinces strengthened linkages between government and non-government agencies to mainstream fisheries into trade. 	Development of markets for fisheries and aquaculture products encouraged.	National ministries/ Federal and provincial fisheries departments -	- National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Development of food sanitary and quality inspection services. 	<ul style="list-style-type: none"> - Develop food sanitary and inspection services to ensure that fisheries and aquaculture products meets export standards. - Review and upgrade legislation and official working documents to meet local and international markets requirements for fisheries and aquaculture products. - Strengthen government laboratory capacity across agencies. 	<ul style="list-style-type: none"> - 50% of coastal provinces Strengthen government laboratory capacity across agencies for food sanitary and quality inspection services. 	<ul style="list-style-type: none"> - 100% of coastal provinces reviewed and upgrade legislation and official working documents to meet local and international markets requirements for fisheries and aquaculture products. 	- Food sanitary and quality inspection services, developed.	National ministries/ Federal and provincial fisheries departments -	- National/Provincial fisheries authorities
	<ul style="list-style-type: none"> - Increase processing and local value added. 	<ul style="list-style-type: none"> - Identify avenues and mechanisms to encourage the production of local processing. - Narrow trade gap for fish products through the promotion of freshness, local supply and 	<ul style="list-style-type: none"> - 50% of coastal provinces provide technical information and assistance to the private 	100% of coastal provinces Narrow trade gap for fish products through	- Processing and local value added, increased.	National ministries/ Federal and provincial fisheries	- National/Provincial fisheries authorities

	Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		branding. - Develop cooperation, partnerships and projects with international funding organizations that introduce new products. - Identify financing mechanisms to access new technology.	sector.	the promotion of freshness, local supply and branding, through effective legislations.		departments -	

4.3- Development of Human and Institutions capacity for good governance in fisheries and aquaculture

	Priority/Strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	Enhance capacity development of the fisheries communities, fish farmers, and governmental intuitions.						
	- Promote awareness of fisheries and fish farmers' community to have adequate knowledge and skills to encourage good governance in the fisheries and aquaculture sector.	- Conduct situational assessment. - Improve authority's response to the needs of fisheries communities and fish farms, including women and youth. - Improve the adherence to international instruments governing the fisheries and aquaculture sectors. - Develop fisheries and aquaculture specific management plans. - Implement human rights-based fisheries management tools. - Enhance the contribution of the research institutions and universities in fisheries and aquaculture management based on scientific evidences and advices. - Strength Institutions for policy and governance. - Capacity building of governmental institutions to better manage and benefits from fisheries and aquaculture resources.	- 50% of coastal provinces increased capacity of fisheries communities, fish farmers, and governmental intuitions.	- 100% of coastal provinces promoted awareness of fisheries and fish farmers' community to have adequate knowledge and skills to encourage good governance in the fisheries and aquaculture sector.	- Fisheries and aquaculture governance improved through participatory management for inclusive decision-making process.	National ministries/ Federal and provincial fisheries departments -	- National/Provincial fisheries authorities

	Priority/Strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<ul style="list-style-type: none"> - Enhance capacity development of fisheries and aquaculture communities, and governmental intuitions. - Design empowerment mechanisms system. - Assess policies coherence in respect of fisheries and aquaculture to poverty reduction. - Catalogue stakeholders for training and capacity development. Catalogue stakeholders for training and capacity development. - Identify emerging opportunities. - Promote, support and coordinate sustainable development actors. Promote, support and coordinate sustainable development actors. - Set up professional organizations. 					
Organizational changes and Upgrade laws and legislations in fisheries and aquaculture export sector.							
	<ul style="list-style-type: none"> - Support rational organizational changes. 	<ul style="list-style-type: none"> - Enhance coherence, harmonization, and merge Federal and Provincial legislation and related aspects among all involved Ministries at the Federal level and provincial fisheries departments at provincial level. - Define opportunities for entrepreneurial skills development. 	<ul style="list-style-type: none"> - 50% of coastal provinces made necessary changes and improvements in fisheries and aquaculture export sector. 	<ul style="list-style-type: none"> - 100% of coastal provinces created opportunities for entrepreneurial skills development. 	<ul style="list-style-type: none"> - Harmonized Federal and Provincial legislations. 	<ul style="list-style-type: none"> National ministries/ Federal and provincial fisheries departments - 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities
Institutional Sustainability.							
	<ul style="list-style-type: none"> - Reinforcement of capacities at national and provincial institutions holding responsibility for environmental, fisheries and protected areas. 	<ul style="list-style-type: none"> - Build capacities for institutes managing fisheries and aquaculture resources. - Reinforce the commitment of the Federal and Provincial's institutions for managing the ecosystem, and develop their capacity. - Create Jobs chances for youth to be hired and actively involved in Biodiversity, Protected Areas and Climate Change Programme. - Design adequate training for human resources involved in fisheries and 	<ul style="list-style-type: none"> - 50% of coastal provinces developed programs for enhancing knowledge and skills of the provincial technical levels. 	<ul style="list-style-type: none"> - 100% of coastal provinces created and organized measures for institution capacity. 	<ul style="list-style-type: none"> - Institutional sustainability, reinforced. 	<ul style="list-style-type: none"> National ministries/ Federal and provincial fisheries departments - 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/Strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p>aquaculture management to address the development and implementation of the policy activities.</p> <ul style="list-style-type: none"> - Increase capacity of the government officers and stakeholders in participating in the development (negotiation and adoption) of national and international instruments, including the policy strategic action. - Encourage participation in training programmes on international instruments organized by such development partners as FAO. - Develop strategies, plans and laws at the national level to implement the agreed provisions, and operationalizing the agreed rights, duties and obligations. 					
Achieving the Knowledge, Science, Technology and Innovation goals.							
	<ul style="list-style-type: none"> - Strengthen the value of the Education and Skills as the main drivers for Excellence of Pakistan to become a developed country. 	<ul style="list-style-type: none"> - Develop academic environment which promotes the thinking mind as a powerful tool for social mobility. - Enhance the scale and quality of fisheries and aquaculture education in general and the scale and quality of scientific / technical education in Pakistan in particular. - Development of fisheries and aquaculture curriculum. - Modify the curriculum and its delivery so that a graduate can aim for an equally rewarding career in teaching, research, industry and management. - Increase public expenditure on fisheries and aquaculture education and skills generation. - Gradually increase vocational and technical education in fisheries and aquaculture sector. - Develop skills base of the graduate would be broadened through supplementary modules / programmes in universities. 	<ul style="list-style-type: none"> - 50% of coastal provinces improved the educational system (pre-university schools, university colleges, and vocational education. 	<ul style="list-style-type: none"> - 100% of coastal provinces enhanced the scale and quality of fisheries and aquaculture education in general and the scale and quality of scientific / technical education in Pakistan in particular. 	<ul style="list-style-type: none"> - The value of the Education and Skills as the main drivers for Excellence of Pakistan to become a developed country, strengthened. 	<p>National ministries/ Federal and provincial fisheries departments</p> <p>-</p>	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority/Strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	Capacity Development across three dimensions.						
	- Individual dimension:	- Increase the knowledge and skills capacities of individual people involved in public servants, distributors, producers, farmers, fishermen, rural service providers, technicians, traders, food inspectors, etc.), through facilitated events, mentoring, training and competency development.	- 50% of coastal provinces	- 100% of coastal provinces	- Partnership programs with international organizations such as FAO may assist Pakistan to establish customized education and training programs local needs and, meet local development needs via sustainable training and education sustainable approach, established.	National ministries/ Federal and provincial fisheries departments -	- National/Provincial fisheries authorities
	- Institutional dimension:	- Improve the capacity of the government institutions agencies and ministries, staff working in inspection and quality control laboratories and education and research institutes.	- 50% of coastal provinces enhanced intuitions motivation; operational capacity; human performance and financial resources deployment; knowledge and information resources and infrastructure.	- 100% of coastal provinces facilitated the development of clear procedures and guidelines. - 100% of coastal provinces promoted the partnerships and created networks between institutions to have adequate access and exchange of information and knowledge.	- Partnership programs with International organizations such as FAO may assist Pakistan in assessing capacity needs and establishing priorities and plans to strengthen their institutions, established and in place.	National ministries/ Federal and provincial fisheries departments -	- National/Provincial fisheries authorities
	- Policy Enabling Environment dimension:	- The federal and provincial government of Pakistan has to provide enabling environment for policy implementation.	- 50% of coastal provinces supported the policy enabling environment to achieve successful political commitment to achieve policy vision and goals.	- 100% of coastal provinces provided resources and budget allocations to achieve good governances in fisheries and aquaculture sector.	Partnership programs with International organizations such as FAO may be instrumental in facilitating the analysis and adoption of policy, legal and economic framework changes.	National ministries/ Federal and provincial fisheries departments -	- National/Provincial fisheries authorities

4.4- Increase gender equality and mapping opportunities and support for business incubators models for women and youth enterprises in fisheries and aquaculture

Priority/strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
Enhance Increase the Gender equality and empower disadvantaged groups in business development and governance in fisheries and aquaculture sector						
<ul style="list-style-type: none"> - Increase inclusion of women and youth in fisheries and aquaculture policy, laws and management plans. 	<ul style="list-style-type: none"> - Provide technical and financial support towards development of national incubators models for women and youth in fisheries and aquaculture. - Establish criteria for preferential treatment for women and youth in providing services. - Develop ecosystem map for fisheries and aquaculture business incubators support structure and input towards the development of resource mobilization initiatives for fisheries and aquaculture sector. - Profiling potential business enterprises, successful incubators and accelerators, financing models for women and youth enterprises, by national governments in support for business incubation. Profiling potential business enterprises, successful incubators and accelerators, financing models for women and youth enterprises, by national governments in support for business incubation. - Financing models and innovations with potential for up - scaling and for start-ups and small and medium enterprises (SMEs) along targeting women and youth and support women and youth job creation. - Increase the gender equality and empower disadvantaged groups in business development and governance in fisheries and aquaculture sectors 	<ul style="list-style-type: none"> - 50% of coastal provinces developed health, education, social welfare, for women's development at provincial level. 	<ul style="list-style-type: none"> - 100% of coastal provinces developed Women's Unions. - 100% of coastal provinces developed national commission on the Status of Women in fisheries and aquaculture sector. 	<ul style="list-style-type: none"> - Women are actively involved in small-scale fisheries and aquaculture with support from traditional extension and training activities directed toward women empowerment. - The number of female staff working in small-scale fisheries and aquaculture, increased. 	<ul style="list-style-type: none"> - National ministries/ Federal and provincial fisheries departments 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

4.5- Providing incentive and enabling environment for private sector investments and financing mechanisms in fisheries and aquaculture sector

	Priority/Strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
	Increase socio- economic, cultural contributions of the private sector investment in fisheries and aquaculture projects						
	<ul style="list-style-type: none"> - Improved enterprise performance within the fisheries and aquaculture sector. 	<ul style="list-style-type: none"> - Improve private sector governance. - Develop mechanisms for dissemination and sharing of feasibility studies and investment opportunities in the fisheries and aquaculture sector. - Develop an integrated budgeted action plan to implement the policy actions - Increase economic, social and cultural contributions of the private sector investment in fisheries and aquaculture projects. 	<ul style="list-style-type: none"> - 50% of coastal provinces developed mechanisms for dissemination and sharing of feasibility studies and investment opportunities in the fisheries and aquaculture sector. - 50% of coastal provinces developed an integrated budgeted action plan to implement the policy actions. - 50% of coastal provinces increased economic, social and cultural contributions of the private sector investment in fisheries and aquaculture projects. 	<ul style="list-style-type: none"> - 100% of coastal provinces improved private sector governance. - 100% of coastal provinces facilitated easy access to credit facilities, including options for establishing small and medium enterprises (SME) investment fund. - 100% of coastal provinces Facilitated easy access to credit facilities, including options for establishing SME investment fund. 	<ul style="list-style-type: none"> - Environment for enhancing aquaculture and fisheries productivity diversification, food processing and product development, marketing and quality control, enabled and enhanced. 	<ul style="list-style-type: none"> - National ministries/ Federal and provincial fisheries departments 	<ul style="list-style-type: none"> - National/ Provincial fisheries authorities
1.2	Enhancing the importance to economic growth and wealth generation						
	<ul style="list-style-type: none"> - Contribution of fisheries and aquaculture for improved livelihoods, food and income of fishing and aquaculture communities and related actors along the value chain. 	<ul style="list-style-type: none"> - Enhancing the role and importance to food and nutritional Security. - Promote, support and coordinate sustainable development actors along the value chain. - Identify emerging opportunities in fisheries and aquaculture sector. - Analyse overall contribution of fisheries and aquaculture to the economy. - Promote rural development and food security in Pakistan through building 	<ul style="list-style-type: none"> - 50% of coastal provinces developed programs that enhance the contribution of fisheries and aquaculture for improved livelihoods, food and income of fishing and aquaculture communities and related actors along the value chain. 	<ul style="list-style-type: none"> - 100% of coastal provinces promoted rural development and food security in Pakistan through building entrepreneurship and business development capacity. - 100% of coastal 	<ul style="list-style-type: none"> - Improving entrepreneurship, trade and market development are key to creating income earning opportunities, raising livelihood standards and increasing economic growth in Pakistan. 	<ul style="list-style-type: none"> - National ministries/ Federal and provincial fisheries departments 	<ul style="list-style-type: none"> - National/ Provincial fisheries authorities

	Priority/Strategic Activities	Milestones	Mid-Term Indicators (2020-2025)	Timeframe (2020-2030)	Output Indicators	Responsible/Coordinator	Geographical Scale
		<p>entrepreneurship and business development capacity.</p> <ul style="list-style-type: none"> - Support the establishment of aquaculture and fisheries business centres. 		<p>provinces supported the establishment of aquaculture and fisheries business centres.</p>			
	<ul style="list-style-type: none"> - Promote creative, informative and practical market-based business approaches for small and medium enterprises. 	<ul style="list-style-type: none"> - Design tailor made training, support exchange of successful experiences on business development to entrepreneurs to increase the chances of investment success. - Support the design of investment programmes and strategies directed at small- and medium-scale enterprises and strengthen input supply and extension services. - Facilitate access to finance for aquaculture enterprise development, but also contribute to poverty reduction and sustainable development. - Promote domestic and international partnerships at production and market information, market development systems and trade. 	<ul style="list-style-type: none"> - 50% of coastal provinces promoted creative, informative and practical market-based business approaches for small and medium enterprises. 	<ul style="list-style-type: none"> - 100% of coastal provinces supported the creation and strengthening of producer and marketing organizations. - 100% of coastal provinces provided research, development and technology transfer, linked to entrepreneurial skills development. - 100% of coastal provinces established innovative risk management mechanisms to address vulnerability challenges. 	<ul style="list-style-type: none"> - Tailor-made programs for small- and medium-scale operations that produce and market aquaculture and fisheries commodities, designed, developed and in place. - An enabling enterprise development programme framework serving small- and medium-scale entrepreneurs in Pakistan developed. - Federal and Provincial Programmes for Food Security, developed and in place. 	<p>National ministries/ Federal and provincial fisheries departments</p> <ul style="list-style-type: none"> - 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

4.6- Development of Integrated coastal zone management (ICZM)

Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
Devolve integrated coastal zone management and coastal eco-tourism facilities.						
<ul style="list-style-type: none"> - Developing sustainable integrated coastal zone management through development of eco-tourism infrastructures strategies. 	<ul style="list-style-type: none"> - Develop Integrated and sustainable coastal and marine tourism facilities. - Determine, at the provincial level, the means by which an integrated strategy can be implemented. - Develop integrated strategies for sustainable tourism and infrastructures and promote nature based solution for the enhancement of coastal and aquatic ecosystem contribution to Biodiversity. - Develop integrated strategies for sustainable tourism. - Develop integrated tourism infrastructure strategies. 	<ul style="list-style-type: none"> - 50% of coastal provinces ensured that environmentally sustainable and climate resilient infrastructure developed. - 50% of coastal provinces increased capacity and integrated strategies for balanced ecosystem, sustainable environmental management, and enhanced resilient infrastructure. 	<ul style="list-style-type: none"> - 100% of coastal provinces developed capacity for integrated strategies to enhance provincial cooperation. - 100% of coastal provinces promoted effective planning and coordinated mechanism between provinces and federal governments. - 100% of coastal provinces developed strategies and established linkages to infrastructure. 	<ul style="list-style-type: none"> - Coastal zones with eco-tourism infrastructures developed. 	<ul style="list-style-type: none"> - National ministries/ Federal and provincial fisheries departments 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities
Enhance partnership between public and private sector.						
<ul style="list-style-type: none"> - Public Private Partnership engagement in integrated coastal zone management (ICZM). 	<ul style="list-style-type: none"> - Enhance awareness on public private sector participation and engagement in ICZM through development projects. - Strengthen communication channels between public and private sectors. 	<ul style="list-style-type: none"> - 50% of coastal provinces enhanced awareness on public private sector participation and engagement in ICZM through development projects. - Enhance awareness on public private sector participation and engagement in IZM through development projects. 	<ul style="list-style-type: none"> - 100% of coastal provinces enhanced awareness on public private sector participation and engagement in ICZM through development projects and strengthened communication channels between public and private 	<ul style="list-style-type: none"> - Public Private Partnership engagement in integrated coastal zone management (ICZM), enhanced and discussion forum on the use of ICZM. 	<ul style="list-style-type: none"> - National ministries/ Federal and provincial fisheries departments 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

	Priority Activities	Milestones	Mid-Term Indicators (2020-2025)	Time Frame (2020-2030)	Output Indicators	Responsible Coordinator	Geographical Scale
				sectors.			
	<ul style="list-style-type: none"> - Integrated Spatial Planning coordinated mechanism for coastal zone management (ICZM). 	<ul style="list-style-type: none"> - Review existing plans, coordination mechanisms, identify gaps and share best practices in ICZM. - Engagement of stakeholders in coordination of the development ideas and projects on the sustainable use and development of ICZM. 	<ul style="list-style-type: none"> - 50% of coastal provinces reviewed existing plans, coordination mechanisms, identify gaps and share best practices in IZM, and engaged of stakeholders in coordination of the development ideas and projects on the sustainable use and development of ICZM. 	<ul style="list-style-type: none"> - 100% of coastal provinces reviewed existing plans, coordination mechanisms, identify gaps and share best practices in ICZM, and engaged of stakeholders in coordination of the development ideas and projects on the sustainable use and development of ICZM. 	<ul style="list-style-type: none"> - Master plan for the provincial ICZM developed, and validated. 	<ul style="list-style-type: none"> - National ministries/ Federal and provincial fisheries departments 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities
Develop integrated coastal zone planning with other coastal users.							
	<ul style="list-style-type: none"> - Establish ICZM Committee at the provincial level with representation of all involved provincial departments and representatives from other key stakeholder groups. 	<ul style="list-style-type: none"> - Review of existing coastal zone planning processes, and Conduct a survey of present resources and area usage. - Capacity building and awareness-raising for provincial government. - Develop a provincial coastal zone that integrate different activities such eco-tourism, fisheries and aquaculture projects. - Provide livelihood support, focusing on aquaculture, coastal fisheries and other economic activities, mainly in poorer coastal communities. - Consolidation and expansion of fishing ports. 	<ul style="list-style-type: none"> - 50% of coastal provinces developed master plan for ICZM based on the province priority needs. 	<ul style="list-style-type: none"> - 100% of coastal provinces with operational ICZM projects such as aquaculture, eco-tourism, and modern fishing ports with all infrastructures necessary for meeting international standards for export. 	<ul style="list-style-type: none"> - ICZM Committee at the provincial level developed with representation of all involved provincial departments and representatives from other key stakeholder groups. 	<ul style="list-style-type: none"> - National ministries/ Federal and provincial fisheries departments 	<ul style="list-style-type: none"> - National/Provincial fisheries authorities

5- Monitoring and evaluation (M&E) plan for the national policy for sustainable fisheries and aquaculture

The monitoring and evaluation plan (M&E) for the implementation plan specifies targets for a set of indicators through which performance in achieving specific outputs related to the goals and objectives of the implementation. The policy and implementation plan will be reviewed annually starting in 2021, with a comprehensive review being done in the fifth year of implementation 2025. The design of the M&E system depends on leveraging existing data systems within government, as well as those of development partners, civil society, private sector, and academic and research institutes. The M&E Plan provides a number of indicators that covers of the scope of implementation plan. The relevant ministries will have primary responsibility for implementing the M&E strategy, and will collaborate with the established Technical Working Group on M&E, which includes the a diversity of offices belong to the relevant ministries.

At the national level, selected indicators that will be used for monitoring progress of the policy and implementation plan include:

- Attaining fisheries and aquaculture gross domestic product (GDP) growth rate of at least 20 percent per annum between 2025 and 2030.
- Increase fisheries and aquaculture productivity and production by 70 percent by 2030.
- Increase consumption of fisheries and aquaculture products by more than 50 percent by 2030;
- Increase fisher folks and farmer adoption of fisheries and aquaculture technologies by more than 50 percent by 2025.
- Increase the aquaculture land area by 20,000 ha by 2025.
- Increasing value addition and processing output by 30 percent per year.
- Increasing the value of fisheries and aquaculture exports by 50 percent by 2025.

DRAFT



National Implementation plan for sustainable Fisheries and Aquaculture sector in Pakistan 2020-2030

اعْدِلُوا هُوَ أَقْرَبُ لِلتَّقْوَىٰ

Be just: that is next to piety:
Chapter 5 The Table Spread سورة المائدة - Al-Maeda: Verse 8

Ministry of National Food Security and Research (MoA)

Ministry of Maritime Affairs (MoMA), Pakistan