GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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General Project Information

Project Title	
Conserving Marine Biodiversity by Accelerating Transition to Sustainable and Regenerative Fisheries Management Practices	
Region Asia	GEF Project ID 12285
Country(ies) Pakistan	Type of Project MSP
GEF Agency(ies): FAO	GEF Agency ID 753134
Executing Partner Ministry of Maritime Affairs	Executing Partner Type Government
GEF Focal Area (s) Biodiversity	Submission Date 2/19/2026
Project Sector (CCM Only)	
Taxonomy Focal Areas, Biodiversity, Mainstreaming, Fisheries, Stakeholders, Beneficiaries, Civil Society, Academia, Community Based Organization, Private Sector, Local Communities, Type of Engagement, Participation, Information Dissemination, Partnership, Consultation, Communications, Behavior change, Awareness Raising, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Access and control over natural resources, Capacity Development, Access to benefits and services, Capacity, Knowledge and Research, Knowledge Generation, Training, Innovation, Knowledge Exchange	
Type of Trust Fund GET	Project Duration (Months) 48
GEF Project Grant: (a) 2,850,685.00	GEF Project Non-Grant: (b) 0.00
Agency Fee(s) Grant: (c) 270,815.00	Agency Fee(s) Non-Grant (d) 0.00
Total GEF Financing: (a+b+c+d) 3,121,500.00	Total Co-financing 20,300,000.00
PPG Amount: (e) 100,000.00	PPG Agency Fee(s): (f) 9,500.00
PPG total amount: (e+f) 109,500.00	Total GEF Resources: (a+b+c+d+e+f) 3,231,000.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: No Competitive Window: No

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”.(max. 250 words, approximately 1/2 page)

Pakistan’s globally significant marine biodiversity is declining rapidly, driven primarily by unsustainable fisheries management compounded by habitat degradation and climate change. The commercial fishing fleet has expanded from fewer than 800 vessels in the 1950s to over 30,000 today, relying largely on destructive practices such as deep-sea trawling and large-scale gillnets, resulting in high by-catch, discards, and stock depletion. Marine fisheries are effectively managed under an open-access regime, as governance frameworks remain fragmented, outdated, and under-resourced across national and provincial institutions. The private sector has limited incentives or capacity to adopt sustainable practices, while fisheries and biodiversity monitoring systems are weak, fragmented, or absent, constraining evidence-based decision-making. Recent FAO-supported Fisheries Resource Appraisal confirms that most marine fish stocks are overfished or severely depleted.

The project aims to conserve globally significant marine biodiversity by accelerating the transition to ecosystem-based, sustainable fisheries management. It will strengthen governance and policy coherence, build public and private sector capacity to adopt sustainable and regenerative fishing practices, and establish robust fisheries and biodiversity monitoring and knowledge systems. Together, these interventions will shift fisheries away from business-as-usual open access toward rational, stock-based and biodiversity-sensitive management.

By project completion, Pakistan will have improved fisheries governance frameworks, enhanced private sector capacity for sustainable practices, and an operational monitoring system supporting adaptive management. The project contributes directly to the Kunming–Montreal Global Biodiversity Framework by reducing marine biodiversity loss through sustainable use and restoration. It will contribute to GEF core indicators, including 1.2 million ha of improved management of marine habitat (CI5), 339,000 mt of recovery of overexploited fish stocks (CI8), and benefits to more than 25,000 people, including women and men in coastal communities (CI11).

Indicative Project Overview

Project Objective

To conserve globally significant marine biodiversity by accelerating adoption of ecosystem-based responsible use and sustainable management of fisheries resources

Project Components

1. Policy, Regulation, and Financing

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
635,343.00	4,806,370.00
Outcome:	

1. Sustainable and regenerative fisheries practices adopted within Pakistan's marine zones through strengthened governance, regulation, and financing.

Illustrative Indicators

# of revised marine biodiversity and fisheries policy frameworks drafted and submitted for government approval

# of vessels in the marine fleet incorporated into a verified Monitoring, Control, and Surveillance (MCS) system

# of national agencies and provincial government agencies adopting and implementing new marine conservation and fisheries management plan

increase in annual funding allocated by national and provincial governments to support sustainable marine fisheries management and biodiversity conservation

of revised policy, regulatory, financing, and fisheries management instruments reviewed for gender-differentiated impacts across the fisheries value chain, including women's shore-based roles in processing, handling, marketing, and community-level fisheries support services.

Output:

1.1: National and provincial fisheries policies and regulatory frameworks strengthened and harmonized to support sustainable management.

1.2: National and Provincial Marine Biodiversity Conservation and Fisheries Management Strategies and Action Plans developed and adopted.

1.3: Institutional capacity and sustainable financing mechanisms designed for improved national and provincial government management.

2. Improved Private Sector Engagement

Component Type	Trust Fund
Investment	GET
GEF Project Financing ($)	Co-financing ($)
971,925.00	6,921,173.00

Outcome:

2. Regenerative fisheries and biodiversity-positive business models adopted through mobilized public and private capital and investment-readiness support.

Illustrative Indicators

# of private vessels transitioned to pro-biodiversity conservation harvest techniques

# of participating private vessels reporting increased profitability

% of national private fleet conforming to improved regulatory standards

# of women and women-led or women-benefiting fisheries value-chain enterprises accessing project-supported training, technical assistance, financial literacy support, or incentive schemes.

Output:

2.1 National and provincial government and other stakeholders' capacity improvement for private sector engagement

2.2 Capacity building program to support private fishing fleet transition to sustainable fishing practices and management

2.3 Financial and value chain support program to incentivize private fishing fleet transition to sustainable practices

3. Informed decision-making, knowledge management, and communications

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
971,925.00	6,921,173.00

Outcome:

3. Integrated knowledge management systems and adaptive management protocols operationalized to drive evidence-based decision-making and scale up investments in marine biodiversity conservation.

Illustrative Indicators

Coordinated data system operational with # annual reports produced and used to inform fisheries management planning

% of national fleet members registered, engaged, and actively reporting data sets to the established centers (disaggregated by vessel size and harvest technique)

# of annual marine fisheries and biodiversity conservation status reports completed

# of annual knowledge management platform users

Output:

3.1 Coordinated fisheries and biodiversity data and information management centers at national and provincial levels

3.2 Cohesive national and provincial level monitoring, control and surveillance program for harvest practices, fisheries stock and marine biodiversity

3.3 Knowledge management platform and annual state of the fisheries reports

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
135,746.00	684,619.00

Outcome:

Project monitoring and assessment of global environmental benefits (GEBs)

Output:

Project progress and results, including gender-differentiated project impacts, are monitored, evaluated, and disseminated for transparency, organizational learning and adaptive management

Component Balances

Project Components	GEF Project Financing ($)	Co-financing ($)
1. Policy, Regulation, and Financing	635,343.00	4,806,370.00
2. Improved Private Sector Engagement	971,925.00	6,921,173.00
3. Informed decision-making, knowledge management, and communications	971,925.00	6,921,173.00
M&E	135,746.00	684,619.00
Subtotal	**2,714,939.00**	**19,333,335.00**
Project Management Cost	135,746.00	966,665.00
Total Project Cost ($)	**2,850,685.00**	**20,300,000.00**

Please provide justification

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Context

1. The Republic of Pakistan is in South Asia. Pakistan is comprised of four provinces, one federal territory, and two disputed territories. The total population is nearly 250 million. Pakistan is considered the 47th most vulnerable country and ranks as the 151st most ready country.[1] The World Bank estimates Pakistan's national poverty rate to be approximately 40%.[2]

2.

The total land mass covers more than 881,900 km^2. The total coastline is approximately 1,001 km. Pakistan's exclusive economic zone (EEZ) extends 200 nautical miles (370 km) at sea from baseline and covers approximately 240,000 km[3]. After the approval by UN in 2015, Pakistan's continental shelf has been further extended up to 350 nautical miles from baseline adding an area of 50,000 Sq. Km to continental Shelf. ln terms of size, Pakistan's marine zones area (EEZ + Continental

shelf) comprise 290,000 Sq. kms which is second only to the country's largest province i.e. Balochistan. Pakistan's coastal and offshore waters are part of the Arabian Sea Large Marine Ecosystem (ASLME).

Globally Significant Marine Biodiversity

3. Pakistan's coastal marine biodiversity is globally significant.[4][4] The Arabian Sea LME is a highly productive ecosystem, being home more than 1,000 fish species, 140 elasmobranchs (sharks, rays, skates, and guitarfishes), Green (Chelonia mydas) and Olive ridley (Lepidochelys olivacea) turtles, and 19 cetaceans. . Pakistan provides a critical foraging habitat for Arabian Sea humpback whales.[5][5] Nine marine megafauna habitat sites are identified as ecologically and biologically significant (EBSA) by the Convention on Biological Diversity (CBD).[6][6]

4. Mangrove forests cover approximately 132,000 ha with nearly all mangroves found in the Indus Delta.[7][7] There are no coral reefs in Pakistan, but rock formations support coral assemblages.[8][8] Marine and coastal zones provide vital ecosystem services, protecting coastlines and supporting livelihoods of millions.

5. Pakistan is making limited but steady progress towards identifying and conserving critical marine habitats. The GoP established the country's first community-based no-take zone in Sonmiani. It also recently created two major MPAs covering the Astola and Churna Islands. However the GoP reports that these protected areas are threatened by Ilegal, Unreported and Unregulated (IUU) fishing. The project's sites represent a strategic opportunity to enhance governance and management effectiveness to ensure the conservation of these critical habitats.

Location	Conservation Significance
Keti Bundar and surrounding creeks	Nursery grounds: The creeks and mangrove forests of Keti Bundar provide vital nursery grounds for numerous fish species, including commercially important ones like prawns and pomfrets. Sheltered habitats: The area's complex network of creeks and mangroves offers sheltered habitats for a diverse array of marine life, including dolphins, whales, and sea turtles. Coastal protection: The mangrove forests of Keti Bundar and surrounding areas provide essential coastal protection, shielding communities from storms, erosion, and other hazards.
Indus Delta	Biodiversity hotspot: The Indus Delta is a unique confluence of freshwater and marine ecosystems, supporting a rich array of species. Migratory bird habitat: The delta's wetlands and mudflats provide critical stopover sites for millions of migratory birds, including endangered species like the Siberian crane and the white-backed vulture.

	Fisheries and livelihoods: The Indus Delta supports a significant portion of Pakistan's fisheries, with many communities relying on fishing and related activities for their livelihoods.
Churna Island and surrounding reefs	Located off the coast of Karachi, Churna Island is a vital habitat for coral reefs, sea fans, and sea whips. The area is a spawning ground for numerous fish species, including groupers, snappers, and emperor fish.
Sonmiani and Kalmat Khor Lagoons	These coastal lagoons, located in Balochistan, provide crucial habitats for migratory birds, including the endangered spoon-billed sandpiper and the vulnerable Dalmatian pelican.
Miani Hor and Hingol River Delta	This coastal wetland, located in Balochistan, is a vital habitat for numerous fish species, including the endangered Indus dolphin. The area also supports a diverse array of birdlife, including pelicans, flamingos, and avocets.
Astola Island	This is a designated Marine Protected Area (MPA). Astola Island is a nesting site for endangered green turtles and hawksbill turtles. The island's coral reefs and rocky shores support a diverse array of fish, invertebrates, and algae.
Khor Kalmati	Critical habitat for marine life: Khor Kalmati, a coastal wetland located in Balochistan, provides a critical habitat for numerous marine species, including fish, crustaceans, and mollusks. Nesting site for endangered turtles: Khor Kalmati is a nesting site for endangered green turtles and hawksbill turtles, which are protected under international law. Migratory bird stopover: The wetlands of Khor Kalmati serve as an essential stopover for millions of migratory birds, including endangered species like the Dalmatian pelican and the marbled teal.
Ormarah and Gawadar Bays	Situated in the southwestern coast of Pakistan, these bays support an array of marine life, including dolphins, whales, and dugongs. The area is also a critical habitat for commercially important fish species, such as tuna, mackerel, and sardines.
Jiwani	Marine biodiversity hotspot: Jiwani is situated near the mouth of the Dasht River, creating a unique blend of freshwater and marine ecosystems. This mixture supports a rich array of marine life, including fish, dolphins, whales, and sea turtles. Nesting site for endangered turtles: Jiwani's beaches are a critical nesting site for endangered green turtles and hawksbill turtles. Migratory bird habitat: The coastal wetlands of Jiwani provide a vital habitat for millions of migratory birds, including endangered species like the Dalmatian pelican and the marbled teal.

6. The indicative target areas were selected using preliminary criteria appropriate for PIF stage. These criteria include: (i) significance for globally important marine biodiversity, including habitats used by threatened marine megafauna, turtles, sharks, rays, cetaceans, migratory birds, mangroves, coral assemblages, coastal lagoons, and nursery areas; (ii) relevance to priority fisheries pressures, including gillnetting, trawling, bycatch, juvenile fish harvest, post-harvest losses, and IUU fishing; (iii) importance for fisheries-dependent coastal communities and value chains in Sindh and Balochistan; (iv) strategic relevance to federal, provincial, and EEZ-level management responsibilities; (v) potential to strengthen management effectiveness of existing MPAs, EBSAs, OECMs, and other priority marine conservation areas; and (vi) feasibility for stakeholder engagement,

monitoring, and demonstration of improved fisheries practices. Several, but not all, of the indicative sites overlap with or are associated with Key Biodiversity Areas, EBSAs, MPAs, or other areas recognized for high conservation value. A full site-selection account, including georeferenced boundaries, biodiversity values, management status, stakeholder profile, and final selection criteria, will be prepared during the PPG and presented at CEO Endorsement.

Project Target Areas

7. The project is designed to accelerate and strengthen marine biodiversity conservation by engaging national stakeholders while focusing effort across Pakistan's EEZ for Federally Governed Marine Fisheries and Biodiversity Zones along with two maritime provinces of Balochistan and Sindh.

8. EEZ of Pakistan for Federally Governed Marine Fisheries and Biodiversity Zones are the areas beyond 12 NM from baseline at sea. These are important areas for industrial fishing activities particularly by large fishing vessels. Larger fishing boats also operate in high seas.

9. Sindh Province is an important commercial and economic center. The Indus River and delta define much of this province's social, economic and ecological character. Sindh's total land area is approximately 140,000 km^2 with approximately 267 km of coastline. The province has a population of over 55 million. The coastal city of Karachi is capital city of Sindh Province. The metro area has over 20 million inhabitants.

10. The Sindh fisheries sector, inclusive of aquaculture, generates approximately US$ 1 billion in revenue each year with approximately US$ 300,000 in exports and employs directly and indirectly more than 1.5 million people.[9][9] It is estimated that Sindh contributes nearly 70% of Pakistan's total marine capture fisheries.[10][10] Karachi fish harbor is the largest in the country and is estimated to host 80 – 90% of the national commercial fleet.[11][11]

11. Balochistan is the largest province of Pakistan and covers roughly 44% of the country's total land mass. The province has a human population of less than 15 million. Balochistan's land area covers nearly 350,000 km^2 with a coastline of approximately 735 km.[12][12] The provincial capital is Quetta located inland near the Pakistan-Afghanistan border at an elevation of 1,680 meters. Quetta's metro area has less than 1.6 million inhabitants.

12. Balochistan's extensive coastal area is considered remote and under-developed. There eight major landing sites along Balochistan's coast with 40 fishing community settlements, nearly 11,000 licensed fishing vessels and over 80,000 registered fisherfolk. The nine major fishing stations are located at Jiwani, Pishukan, Surbandar, Pasni, Ormara, Dam, Gaddani, Kund Malir and Gwadar.[13][13]

13. The largest Balochistan coastal town is Gwadar with a population of less than 100,000 persons. Gwadar is a major fish processing center located directly across the Arabian Sea from Oman. The second coastal population center is Passini with less than 35,000 inhabitants. Passini is highly reliant upon commercial fisheries with fresh frozen facilities exporting fish to Karachi approximately 450 kilometers away.[14][14]

14. In the coastal areas of Sindh, fisheries for hard shell Mollusca have operated since 1985. Export of carinate rock shell (I*ndothais lacera*) and spiral ivory whelk (*Babylonia spirata*), was initially of shells which were obtained as bycatch in shrimp trawling. Later, a targeted fishery using baited traps was established in Pakistan. More recently, other export fisheries for clams including finger razor shell (*Solen dactylus*), marbled venus (Marcia recens), asiatic hard clam (*Meretrix meretrix*) and antique ark (*Anadara antiquata)* have been developed. These species are either hand-picked or harvested using rakes or spades. [15][15]

15. Fisheries for jellyfish (Scyphozoa) were established in Pakistan in 2003. Prior to this, a major bloom of Crambionella orsini in 2002 had affected fish harvesting by shrimp trawlers and gillnetters but helped to establish processing of jellyfish in Pakistan. Although many jellyfish species are found in Pakistan, only Catostylus perezi and Rhizostoma pulmo are commercially harvested using mainly pelagic trawl or gillnet. After treatment with salt and alum, these jellyfishes are exported, mainly to China. [16][16]

16. The estuarine set bag net (ESBN), locally known as "Bhulla" has been used in the creek area of Sindh since the late 1970s. This gear is placed in the creeks of the Indus Delta to catch fish and shellfish that migrate with incoming and outgoing tides. Because it is often set completely across smaller channels and uses a small mesh size, it catches large numbers of juveniles and even larvae of commercially important species. Although its use has been banned for many years, it is estimated that about 8,000 ESBNs are still operating in almost all large and small creeks of the Indus Delta system. [17][17]

17. Pakistan's thousands of small fishing vessels (under 10 m) tend to target demersal species on the continental shelf.[18][18] Longlines and handlines are generally used for catching large demersal species, including croakers, eels, groupers, seabreams, sharks and rays in coastal and offshore waters. In addition to these, cast nets and beach seines are used in coastal, creek and intertidal waters. Seine gear, locally known as "Katra" is used in Pakistan for catching small pelagics including sardinellas, anchovies and scads. There are thousands of seine gear boats.[19][19]

18. Shrimp trawling was introduced in Pakistan in 1950s. The nation's bottom trawling fleet is now estimated to be nearly 3,600 vessels.[20][20] Trawlers operate from shallow coastal waters out to a depth of about 100 m in the offshore

waters. Previously, these vessels only conducted shrimp trawling, but since 2002 almost all trawlers operate both a shrimp trawl net (especially in August and September) and a high opening bottom trawl for fish.

19. Gillnets are the most important fishing gear used in Pakistan. Types include small mesh size (2 cm) bottom- set gillnet called "Thukri" to large mesh size (15 cm) driftnets used by the tuna gillnetters targeting large pelagic species in the offshore waters of Pakistan. There are more than 5,500 gillnetters in Pakistan, including both Sindh and Balochistan provinces.[21]

20. There are approximately 700 vessels are over 25 meters. These ships generally target tuna, billfish, and other larger marine species.[22] Foreign longliners have also obtained licenses to fish Pakistan's EEZ, particularly during the 1990's and early 2000s.[23]

21. Tuna longlining started in 1991 with the fleet increasing to 50 vessels in 1993. Offshore longlining continued until May 2009 with nine vessels operating. Under the Deep-Sea Fishing Policy, the Government of Pakistan still regularly invites applications from tuna longliners, tuna purse seiners and demersal trawlers; however, no viable proposals have been received since 2009.[24]

22. The impacts of unsustainable harvest are not limited to Pakistan. Shared stocks are highly migratory with extensive migrations across entire oceans and occupying large pelagic habitats.[25] Pakistan is actively involved with and regularly reports to the Indian Ocean Tuna Commission. [26]

Biodiversity Conservation Challenges

23. A combination of factors drives marine biodiversity loss.

- Coastal habitat degradation, driven by coastal development, pollution, unsustainable aquaculture expansion, and climate change impacts (including sea level rise and ocean warming), particularly the destruction of mangrove forests and coral reefs, contributes to marine biodiversity loss. The recent FRAP estimated that Pakistan has lost nearly 50% loss of its mangrove forests in the past two decades.[27] A 2015 academic study showed substantial loss of coral reefs across the Astola Island Marine Protected Area.[28]

- *Marine pollution*, particularly in areas close to Karachi and the Indus Delta. This includes reports of severe eutrophication, hypoxia and "dead zones". Karachi produces nearly 500 million gallons of wastewater per day. [29] However much of the coastal waters off more remote and sparsely populated Balochistan remain relatively free of pollution.

- *Climate change*, will almost certainly accelerate and exacerbate biodiversity loss and ecosystem degradation.

- *Unsustainable coastal and marine fishing practices* are considered the most immediate and direct to Pakistan's globally significant marine biodiversity.[30]

24. Pakistan's fleet size and total fishing effort in 1947 consisted of approximately 800 small vessels.[31][31] Pakistan now has more than 30,000 vessels with 12,000 "registered" commercial fishing vessels and more than 20,000 smaller artisanal coastal vessels.[32][32] FAO data indicate that Pakistan's marine capture fisheries produce on the order of 340,000–360,000 metric tons annually.[33][33] Pakistan's coastal communities are highly reliant upon marine fisheries for their livelihoods and food security. Fisheries employ approximately 390,000 people directly and more than 1.25 million indirectly.[34][34] Pakistan, however, has one of the world's lowest per capita rates of fish consumption at 2 kg per year. [35][35] The global average is 17 kg.

25. Pakistan's marine fishery can be characterized as largely open access with few mechanisms in place to control fishing. The World Bank and others recently concluded that "a leading challenge (to marine conservation) is the serious over-exploitation of marine fisheries stocks due to overcapacity in fishing fleets, illegal fishing methods, and lack of surveillance and licensing."[36][36]

26. The misuse of seine encircling gear often results in indiscriminate harvest of juvenile of other commercially important fishes and cause habitat impacts when such gear is used in creek areas or very shallow coastal waters. [37][37]

27. The operation of such a large trawling fleet has resulted both in the depletion of shrimp stocks and in a number of ecological impacts that may seriously affect the biological diversity and productivity of the fishing grounds. One major problem is the use of fine mesh size nets that end up catching juveniles of commercially important and unimportant food species in massive quantities. Due to their small size and low consumer preference these are called "trash fish" and converted into fishmeal used in animal feed for chicken farming. [38][38] This not only diminishes biodiversity by impacting survival and recruitment, it also reduces later adult stocks that could be harvested for higher values.

28. Pakistan's thousands of gillnet vessels can have sets as long as 5 - 12 km. [39][39] This is far beyond the 2.5 km maximum stipulated by UN regulations and Indian Ocean Tuna Commission (IOTC) guidelines.[40][40] The nets are indiscriminate and result in alarming levels of waste and bycatch.[41][41] The impacts to marine biodiversity are immense. Some estimates suggest that up to 30% of the total catch is discarded, including endangered species such as sea turtles and sharks. Bycatch regularly includes sharks, rays, turtles, and large cetaceans.[42][42] Actual figures may vary and are suspected by fisheries and marine conservation specialists to be much higher.

29. The fleet continues to rely upon gillnets even though unsustainable fishing practices result in huge biodiversity costs and decreased catch values. Gillnets are cheaper to purchase and operate than long-lines. Therefore, conversion to more sustainable methods tend to be considered expensive and unreliable. There are no economic incentives, policies or legal requirements to shift practices. Gillnet and purse seine captured tuna tend to go to local markets and/or canneries. There are high value export opportunities for properly handled and processed long-line captured fish. However, pathways to help fishing interests realize the increased market value resulting from more sustainable fishing practices are non-existent and/or inadequate. Commercial

vessels accustomed to gillnetting believe that gillnets result in much higher rates of catch than long-lines or other more sustainable methods.[43][43]

30. Pakistan has generally poor-quality control and processing technologies with as much as 60% of the catch being used for lower-grade products such as a fishmeal. This product is in high demand with several fishmeal operations requesting product. There is limited capacity for high-quality and certified processing demanded by export markets. Indeed, the EU banned fish imports from Pakistan for several years. [44][44]

31. Prices for tuna captured via gillnet are generally far lower than long-line caught fish. Tuna captured using drift nets have high rates of post-harvest spoilage and elevated histamine levels.[45][45] Sometimes this price difference can be as much as 500%. Additionally, onboard storage and handling practices result in an estimated 70% of the commercial catch being discarded.[46][46] Vessels report that one of every ten fish harvested is often lost or wasted due to handling practices. These post-harvest practices are wasteful, uneconomical and highly unsustainable.

32. To compensate financially, the vessel operators simply increase catch rates to offset costs associated with waste or discard, considering efficiency factors such as catch quantity per unit of fuel. They largely disregard marine biodiversity impacts. The conservation impacts are then multiplied with at least 700 commercial vessels increasing the amount of both target and non-target species captured and, often, discarded or used for under-value products such as pet food. The Government of Pakistan reported to the IOTC in 2016 that "(t)here has been no sustained increase in fish production from marine sector in spite of significantly increased fleet size."[47][47]

33. Less than a dozen large commercial Pakistan vessels use more sustainable and discretionary fishing techniques such as long-line and circle hooks for tuna and tuna-like species.[48][48]

34. Taxonomic assessment and status data for marine fauna and flora is generally low quality and/or not readily available. However, conservation experts and government officials broadly observe and agree that the current open-access management system is a direct driver of Pakistan's marine biodiversity decline with many species and habitats critically vulnerable.[49][49]

35. The Fisheries Resources Appraisal in Pakistan Project (FRAP) is the most recent and comprehensive Stock Assessment Survey. The FRAP was carried out by FAO and GoP from 2009 to 2015.[50][50] The survey found that nearly all of Pakistan's commercial marine species are overfished and depleted with severe fish stock declines, degraded habitats, and reduced species diversity. Nine of fourteen major species are in decline. The health of commercially targeted demersal stocks is declining rapidly. This was confirmed in 2017 WWF-sponsored research found that Pakistan's high value demersal groups such as snappers, groupers, grunters, croakers, soles, and shrimp were in critical condition. In many cases, large groupers, sharks, rays, and guitarfish were substantially declined and, in many cases, completely absent. Commercially targeted tuna and other pelagics were found to be depleted and at risk.

36. As the number of fishing vessels in Pakistan's coastal waters has steadily increased, catch rates have generally declined. Marine production peaked in the 1990s at 500,000 mts, declined in the early 2000s and has since plateaued at approximately 350,000 mts.[51][51]

37. Tuna and other pelagics are crucial to Pakistan's marine ecosystem. These species drive the food web. They help maintain ocean health, regulate prey populations, and facilitate nutrient cycling. Accurate numbers are not available, however tuna and tuna-like species (e.g., Yellowfin, Longtail) have had pronounced declines.[52][52] From 2018 to 2019, harvest decreased by 32 %. In 2018, tuna and tuna-like species harvest was 70,569 mt reduced to 44,360 Mt in 2022. [53][53] A major factor in this decrease was an early fishing season closure in response to extremely low March and April 2022 harvest rates. Pakistan vessels usually observe a voluntary two-month season closure only from June to July. The extended closure impacts were compounded by extremely low prices of tuna in the market serving to disincentivize continued fishing effort. [54][54]

Climate Change and Marine Biodiversity Conservation Challenges

38. Rising ocean temperatures are altering water chemistry, changing fish migration patterns, and making marine life more susceptible to the effects of overfishing.

39. Pakistan faces rates of warming considerably above the global average with a potential rise of 1.3°C–4.9°C by the 2090s over the 1986–2005 baseline with rises in the annual maximum and minimum temperature projected to be stronger than the rise in average temperature, likely amplifying the pressure on human health, livelihoods, and ecosystems.[55][55] Pakistan has recorded evidence of climate-induced floods, droughts, heatwaves, and rising cases of infections over the past years. More than 40% of households in Pakistan have suffered from moderate to severe food insecurity during 2020 mainly caused by climate change.[56][56] Blue carbon and ecosystem-based solutions will be critical to advance Pakistan's aspirations to contribute to climate change mitigation and adaptation goals.

40. Climate change will alter the structure and function of marine ecosystems, leading to a decline in ecosystem services and resilience.[57][57] Rising temperatures are already suspected of altering fish distributions, behavior, and physiology, while ocean acidification is affecting marine life, especially organisms with calcium carbonate shells, like corals and shellfish.[58][58] Shifts in distribution, behavior, and physiology will impact fisheries and the livelihoods of people dependent on them, particularly in the coastal communities of Sindh and Balochistan.[59][59] Rising temperatures, ocean acidification, and other climate-related stressors will lead to the loss of marine species and ecosystems, including coral reefs, mangroves, and seagrasses.[60][60]

41. Climate change will accelerate the rate of marine biodiversity loss, degradation of marine ecosystem integrity, and severity of impacts on the fishing sector.[61][61] Sea-level rise will likely increase by 26 cm to 82 cm by 2050, leading to coastal erosion, flooding, and saltwater intrusion into freshwater sources, particularly in the Indus Delta region.[62][62] Marine heatwaves will become more frequent and severe, causing coral bleaching, habitat destruction, and changes in fish populations, as observed in the Astola Island Marine Protected Area.[63][63] Ocean acidification will continue to increase, impacting marine life, especially

organisms with calcium carbonate shells, such as oysters and mussels, which are commercially important species in Pakistan.[64]

42. Extremely high sea surface temperatures are occurring during August to October influencing poor catches of tuna and tuna operations operated during this period.[65] In addition, climate induced jellyfish blooms (*Crambionella orsini*) during high temperature months interfere with fishing due to excessive and expensive entanglements. [66]

Baseline

National and Provincial Fisheries Management Responsibilities

43. The provincial governments of Balochistan and Sindh are responsible for fisheries management within 12 nautical miles at sea from the baseline point. Each of the provincial governments has Departments of Fisheries responsible for licensing and fisheries regulation. The national government is responsible for fisheries management from 12 nautical miles to 200 nautical miles (the Exclusive Economic Zone), including licensing and regulation of deep-sea fishing activities within the EEZ.[67] Both within and beyond the 12 nautical mile zone, business-as-usual fisheries practices are unsustainable open access with limited regulation. Industrial vessels are registered for tonnage in principle and fish in specific, allocated zones with limited spatial prohibitions on the use of seine and trawl nets. [68]

44. The Ministry of Maritime Affairs noted in 2022 that significant progress has been made during the years from 2016-2018, to reduce bycatch such as promulgation of fisheries legislation by both provinces of Sindh and Balochistan. This legislation prohibited the catching of turtle, cetacean (whales & dolphins), whale shark, silky shark, oceanic whitetip shark, thresher shark, hammerhead sharks, all species of sawfishes of Family Pristidae, all species of guitarfishes and wedgefishes of family Rhinidae, Rhinobatidae or Rhynchobatodae. It is made mandatory to have VMS on all fishing vessels larger than 15 meters (in length overall). The contravention of these regulation is punishable with fine and imprisonment.[69]

45. Fisheries statistical data reported by Pakistan have historically remained debatable and unreliable with landing data gathered only inconsistently. Data gathering and management are generally not integrated, standardized or formalized.[70] Provincial and national agencies gather relevant data. The Marine Fisheries Department (MFD) is responsible for collecting, collating, and reporting fisheries statistics to international agencies. However, there are no formal national or provincial fisheries monitoring centers. Very few vessels are even fitted with VMS.

Balochistan Fisheries Management Baseline

46. The Fisheries and Coastal Development Department is the immediate fisheries management authority for the Government of Balochistan.[71]

47. Provincial policy, laws and regulations covering fisheries and marine conservation include:

- Balochistan Sustainable Fisheries and Aquaculture Policy 2025-2035
- Balochistan Fisheries and Aquaculture Bill, 2024 (draft)

- Balochistan Fisheries Ordinance, 1961
- Balochistan Sea Fisheries Ordinance, 1971
- Pasni Fisheries Harbour Authority Ordinance, 1983
- Balochistan Coastal Development Authority Act, 1998

48. The Balochistan Province aspires to shift vessels away from harmful netting practices to longline fishing, subsurface nets, and circle hooks. The Balochistan Government is making several investments designed to enhance and support marine fisheries. Examples include the development of fisheries and community training centers (Gwadar, Surbandar, etc.), construction of artificial reefs, the establishment of model fish markets and auction halls, and capacity building.

49. The Gwadar Lasbela Livelihoods Support Project Phase-II (GLLSP-II) supported by IFAD has assisted the province in engaging marine stock assessments, improving the development of three harbors and associated infrastructure, and formulating a new fisheries policy along with revision of outdated fisheries legislation.

Sindh Fisheries Management Baseline

50. In Sindh Province, marine fisheries management falls under the Directorate of Fisheries Sindh (Marine) Karachi. The Directorate was established in 2008 and is positioned within the provincial government's Livestock and Fisheries Department.[72][72] The Sindh Enterprise Development Fund (SEDF) under the Investment Department of Sindh actively promotes expansion and marketing of the province's fisheries sector.[73][73]

51. Provincial laws and regulations covering fisheries and marine conservation include:

- Sindh Fisheries Rules, 1983
- The Sind Fisheries Ordinance, 1980

52. The Sindh Government is making several investments designed to enhance and support marine fisheries. Examples include introduction of refrigerated seas water systems in fishing vessels to reduce post-harvest losses.

National Fisheries Management Baseline

53. The national Fisheries Development Commissioner (FDC) under the Ministry of Food, Agriculture and Livestock (MFAL) is the primary national level authority tasked with managing the fishing industry. The marine subsector is overseen by the Ministry of Maritime Affairs and, specifically, the Marine Fisheries Department. The Ministry of Climate Change and Environmental Coordination and, specifically, the Inspector General of Forests oversees forestry, wildlife, and biodiversity conservation inclusive of the UNCBD.

54. Pakistan currently does not have a specific national strategy or policy for marine capture fisheries. Several national laws cover fisheries and marine conservation. The 2007 National Policy and Strategy for Fisheries and Aquaculture Development produced with the support of FAO has not been formally adopted. The Exclusive Fishery Zone Act and subsequent amendments is the most fundamental, granting fisheries officers authority to regulate fishing, establishing requirements for monitoring tools such as VMS, vessel registration and gear restrictions. The complete enabling environment includes the following:

- Exclusive Fishing Zone (Regulation of Fishing) Act, 1975 (amended in 1983 and 1993).
- Exclusive Fishery Zone (Regulation of Fishing) Rules 1990.

- Amendments in Exclusive Fishery Zone (Regulation of Fishing) Rules 1990 (Issued by Ministry of Maritime Affairs vide SRO No.981(I)/2021 dated 26 July 2021)
- The Pakistan Maritime Zones Act, 2023
- The Pakistan Merchant Shipping Ordinance, 2001
- The Fishing Vessels Inspection Rules, 2020
- The Fishing Vessels Registration Rules, 2021
- National Maritime Policy 2002.
- The Pakistan Maritime Shipping (Regulation and Control) Act, 1974
- The Pakistan Maritime Shipping (Regulation and Control) (amended in 2017)
- The Maritime Security Agency Act, 1994
- The Maritime Security Agency (Amendment) Act, 2013
- The Pakistan Fish Inspection and Quality Control Act, 1997
- The Pakistan Fish Inspection and Quality Control Rules, 1998 (amended in 2023)
- The Pakistan Animal Quarantine (Import and Export of Animals and Animal Products), 1979
- The Pakistan Coast Guard Act, 1973
- Coastal Vessel Act, 1838

55. The national government is making several investments designed to improve Pakistan's marine fisheries commercial sector. Examples include the establishment of a business park, cold storage and freezing tunnels, and modification of the auction hall at the Korangi Fish Harbor.

56. FAO and the GoP are coordinating the implementation of Phase II of the ABNJ Tuna Project. The IOTC assists with capacity building and data analysis, ensuring compliance with IOTC´s conservation and management measures (CMMs).

57. In year 2024, FAO assisted MoCC in drafting an implementation action plan for sustainable fisheries and aquaculture under Living Indus Initiative for areas within the Indus River basin and its canal system. In 2024-2025, FAO is providing technical assistance to MoMA for the development of a National Fisheries and Aquaculture Policy in Pakistan.

58. WWF-Pakistan's "Sustainable Fisheries Entrepreneurship Project" (2016 – 2019) generated several scalable lessons, including observer programs and alternative gear trials that reduced bycatch and increased profitability.[74][74]

59. From 2012 to 2018, the GoP implemented a fishery monitoring program to assist vessels in reporting data using digital cameras and printed forms. This program helped increase data and information on endangered, threatened and protected (ETP) species.

Target Fishers, Fishing Communities, and Value-Chain Actors

60. The project will target fisheries-dependent communities and enterprises across the marine fisheries value chain in Sindh, Balochistan, and the federally governed EEZ. Target groups include small-scale and artisanal fishers operating smaller coastal vessels; crew members and vessel operators engaged in gillnet, seine, trawl, longline, handline, and other marine fisheries;

larger commercial vessels operating in offshore and EEZ waters; landing-site workers; fish handlers; processors; traders; exporters; boat owners; gear suppliers; fisheries cooperatives and associations; women working in shore-based processing, handling, marketing, and household-level fisheries support; and community organizations representing fisherfolk and coastal communities.

61. These groups are not uniform. Small-scale coastal fishers and fishing households often combine fishing with other livelihood activities, including petty trade, wage labour, seasonal work, processing, small enterprise activity, and household-based support to fisheries value chains. Larger commercial operators are more directly linked to formal landing, processing, export, and investment channels. Women's roles are often less visible because they are concentrated in shore-based, informal, lower-paid, or household-linked segments of the chain rather than vessel ownership or offshore fishing. The project will therefore not rely only on vessel owners, cooperatives, or formal associations. Consultations and beneficiary targeting will include community-level fisherfolk organizations, CSOs, MSMEs, small-scale fisherfolk, women's groups or women-benefiting value-chain actors, processors, traders, and private-sector representatives.

62. The project will work with both small-scale and larger commercial fishing enterprises, but through differentiated approaches. Small-scale and artisanal fishers will be engaged through community organizations, landing-site outreach, capacity building, fisheries extension, training, and value-chain support. Larger commercial vessels and enterprises will be engaged through regulatory compliance, gear transition pilots, MCS/VMS measures, export-market incentives, and investment-readiness support. This dual approach is intended to reduce leakage risk. If only small-scale actors were targeted, larger vessels could continue driving unsustainable effort and bycatch. If only larger enterprises were targeted, small-scale and informal fisheries pressures could remain unmanaged. The PPG will refine the proportion of small-scale and large-scale enterprises to be targeted, based on fleet structure, gear type, landing sites, ecological pressure, and feasibility of achieving measurable biodiversity benefits.

Stakeholders

Stakeholder	Summary of stakeholder role in system and why critical to delivery of project outcomes, including GEBs
National Government Agencies	
Ministry of Maritime Affairs	Responsible for designing, implementing and overseeing policy, legal and institutional arrangements for fisheries beyond territorial waters including the sea food export and serving as focal point for international treaties related to entire maritime domain of Pakistan and also responsible for marine biodiversity conservation. It has the following departments to govern all aspects of the marine fisheries and export of both marine and inland fisheries and aquaculture: Office of the Commissioner Fisheries Development; Marine Fisheries Department (MFD) – will act as Execution Agency for this project; Mercantile Marine Department (MMD) – for registration and inspections of sea-going fishing vessels and harbour crafts; and Korangi Fish Harbour Authority.
Ministry of National Food Security and Research (MNFS&R) through Fisheries Development Board (FDB).	Research and Capacity Building for fisheries and aquaculture.
Ministry of Climate Change and Environmental Coordination	Mainly responsible for the aspects of and coordination for environment and climate change including biodiversity conservation in federal jurisdiction except for marine

	ecosystems and represents Pakistan as Focal Point for several key conventions / MEAs such as CITES, CMS, CBD, and Kunming-Montreal.
Ministry of Finance	Oversees government funding, policy and financial regulation
Ministry of Commerce	Trade, export and business facilitation
Ministry of Defence	Pakistan Maritime Security Agency (PMSA) - for maritime surveillance, assistance in MCS-VMS; and Joint Maritime Information Coordination Centre (JMICC) - for safe navigation and assistance in MCS-VMS.
Federal Environmental Protection Agency	For pollution control and environmental compliance at sea beyond 12 nautical miles
Pakistan Standards and Quality Control Authority (PSQCA)	Setting the quality standards including for seafood
Balochistan Government Agencies	
Balochistan Fisheries and Coastal Development Department	Represents the front line of marine fisheries management, and regulates within 12 NM at sea and development of coastal areas along Balochistan province, including implementation, policy dialogue, capacity building, and monitoring
Balochistan Food Authority (BFA)	Enforcement of standards including for seafood within Balochistan province, including the coastal areas.
Balochistan Environmental Protection Agency (BEPA)	For pollution control and environmental compliance on-shore and off-shore till 12 nautical miles at sea from baseline
Balcohistan Forest Department (BFD)	For mangroves related intervention
Sindh Government Agencies	
Sindh Marine Fisheries Directorates, Karachi	Represents the front line of marine fisheries management, and regulates within 12 NM at sea from the baseline along Sindh province, including implementation, policy dialogue, capacity building, and monitoring
Sindh Food Authority	Enforcement of standards including for seafood within Sindh province, including the coastal areas.
Sindh Environmental Protection Agency (SEPA)	For pollution control and environmental compliance on-shore and off-shore till 12 nautical miles at sea from baseline
Sindh Forest Department (SFD)	For mangroves related intervention
International Development Agencies and Banks	
FAO	GEF Implementing Agency and also to provide technical assistance for marine biodiversity conservation and sustainable fisheries management.
UNEP / UNDP	Likely execution partner – to be rationalized and confirmed during project formulation phase.

Private Sector: Companies, Sectors, and/or Representative Organizations	
Pakistan Fisheries Exporter Association (PAKFEA);	To serve and advocate for the interests of its members in the seafood exporting industry.
Fish Exporters Association at Gwadar Chamber of Commerce and Industry (GCCI)	Gwadar-based industry body representing seafood exporters in Balochistan; supports export trade, member services, and engagement with quality and market access requirements.
Civil Society, NGOs, Academic Organizations, etc.	
Fishermen's Cooperative Society of Karachi	Cooperative society representing fisherfolk operating from Karachi Fish Harbour; supports member welfare, landing operations, and community-level coordination.
Pakistan Fisherfolk Forum	National civil society organization advocating for small-scale fisher rights, coastal community welfare, and fisheries governance reform.
Balochistan Fishermen's Cooperative Society of Gwadar	Cooperative society representing small-scale fisherfolk in Gwadar, Balochistan; supports member welfare and community-level coordination.
Rural Community Development Center (RCDC), Gwadar	Balochistan-based civil society organization focused on community mobilization, women's livelihoods, and coastal development.
Gwadar Mahighir Itehad	Small-scale fisherfolk union representing artisanal fishers in Gwadar, Balochistan — Indigenous Peoples and Local Community (IPLC) organization.
Fishermen's Association of Mekran	Fisherfolk association representing the Makran coast, Balochistan — IPLC organization.
Anjuman Ittehad-e-Mahigiran (Association of United Fishermen)	Community-based fisherfolk association advocating for member rights and welfare.
Lasbela University of Agriculture, Water & Marine Sciences, Balochistan	These play a role in research, advocacy, monitoring, capacity building and awareness raising.
National Institute of Maritime Affairs (NIMA)	Federal research and policy institute on maritime affairs, security, and the blue economy.
Centre of Excellence in Marine Biology, University of Karachi	University-based marine biology research center; expertise in marine ecosystems, species assessments, and conservation science.
Applied Economics Research Center, University of Karachi	University-based research center; expertise in economic analysis of fisheries value chains and coastal livelihoods.
COMSATS	Commission on Science and Technology for Sustainable Development in the South — research and capacity-building network.
National Institute of Oceanography (NIO)	Pakistan's federal marine research institute; expertise in oceanography, marine ecosystems, and coastal monitoring.
IUCN-Pakistan	Likely support in implementation phase through its repository of data and roaster of human resources on marine biodiversity.
WWF-Pakistan	Likely support in implementation phase through its repository of data and roaster of human resources on marine fisheries.

Target Communities: Balochistan Province
Gunz, Jiwani, Gwadar, Pasni, Ormara, Kund Malir, Damb, Gadani
Target Communities: Sindh Province
Keti Bunder, Shah Bunder, Sajawal, Korangi and Mubarak Village

Persistent Challenges and Barriers

Barrier 1: Existing governance and incentive structures favor unsustainable commercial fishing practices over marine biodiversity conservation.

63. Government capacity to adopt and implement an enabling environment designed to effectively manage and oversee commercial fisheries is the fundamental barrier conserving Pakistan's globally significant marine biodiversity. Although advances are being made, national and provincial governments struggle to keep pace with the rapidly growing fisheries sector and associated biodiversity conservation pressures. To date, they have lacked the capacity to create a coherent, integrated and effective system for marine fisheries management and conservation.

64. Regulations, agency mandates and management guidelines tend to be antiquated and incoherent. The frameworks do not integrate best international marine conservation principles and practices. They do not generally provide clear guidance and direction required to achieve sustainable fisheries management and conservation outcomes. Fundamental conservation tools such as effective fisheries enforcement, reliable monitoring, and marine spatial planning are nearly absent.

65. As noted, national and provincial governments have authority over marine fisheries with often convoluted mandates. National and provincial laws, policies, strategies and institutional mandates too often overlap, contradict, or have gaps. Neither national or provincial authorities have clear regulatory guidance in terms of controlling harvest methods and/or fishing capacity. The result is a fragmented fisheries management approach that is inadequately financed and ineffective conservation planning, monitoring, and oversight.[75] This leads to a continuing degradation and loss of marine biodiversity.

66. Enabling environment gaps generate communication and coordination issues within and between government agencies. Federal and provincial regulations are not well aligned to help safeguard marine biodiversity. National and provincial resource managers lack adequate financing to effectively protect marine resources. This is largely due to an enabling environment that does not guarantee fundamental financing from national or state level budgets. The enabling environment also fails to integrate innovative models for sustainable financing with appropriate contributions from the commercial fisheries sector.

67. Lack of policy and planning clarity weakens outreach and engagement with the private sector. Limited resources are often not allocated strategically to effectively address priority conservation concerns. The National Policy and Strategy for Fisheries and Aquaculture Development was prepared in 2007 and is still not officially adopted by the national government. None of the provinces have policy, strategy and / or clear roadmap for the sustainable development of fisheries and aquaculture. There is clash and confusion over federal-provincial jurisdictions in marine fisheries due to unharmonized rules, involvement of multi-actors and coordination gaps.

68. Critically, the absence of effective regulation and enforcement has allowed destructive fishing practices to continue, leading to the degradation of habitats and the depletion of fish stocks. Illegal, unreported, and unregulated (IUU) fishing activities are prevalent. Enforcement and oversight is inadequate. National legislation bans the use of trawl nets, ESBN and

seine net in the creek area of the Indus Delta and the entire extent of Balochistan waters. However, extensive poaching occurs throughout these areas due to capacity issues such as convoluted institutional mandates and inadequate financing.[76]

69. The Sindh and Balochistan Provinces passed provincial legislation in 2016 to protect species such as sharks and rays. However, these provinces have over 70 informal landing sites spread along a 1,000 km coastline. Provincial fisheries departments lack the technical, financial, human, and regulatory capacities to comprehensively conduct the MCS required to pivot and improve fisheries management practices.

70. Agencies struggle to create and align comprehensive strategic planning and management that are critical to achieving biodiversity conservation outcomes. Financing and capacity do not exist to properly implement primary management and oversight. National and provincial authorities have difficulties upholding international obligations and applying best practices such as the FAO Code of Conduct for Responsible Fisheries (CCRF), FAO's Voluntary Guidelines for Sustainable Small-Scale Fisheries (SSF) and value chain improvements.

71. In addition, Pakistan is not a signatory of the 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas. Pakistan has not yet signed the Agreement on Port State Measures to Prevent, Deter, and Eliminate IUU Fishing (FAO 2016) or prepare and formalize National Plans of Action for subjects such as capacity limitation, illegal, unreported and unregulated (IUU) fishing, and conservation.

72. There is an urgent need to create the governance conditions to allow for effective fisheries management plans informed by best available data and information that set-in-place licensing, monitoring, reporting, time, place, and fishing method restrictions designed to ensure stock recovery.

Barrier 2: Existing market, financing, and capacity conditions favor continued use of low-value and biodiversity-harmful fishing practices.

73. Along with improved governance and oversight, there is a need to build capacities, create models and insert capital and incentivize investment in private sector approaches designed to address urgent biodiversity conservation challenges while increasing the commercial value of fisheries and ability of fisheries to promote nutrition and health. Pakistan's private sector fishing interests face significant barriers to adopting sustainable fishing practices. These barriers include limited access to financing, lack of capacity-building tools, and inadequate incentives for sustainable fishing practices

74. Current commercial fisheries approaches are obviously unsustainable and a key driver of marine biodiversity loss. Although the value proposition shows that sustainable harvest methods linked to better post-harvest management reduce ecological impacts and increase profitability, assessments indicate that Pakistan's marine fisheries remain dominated by non-selective gears such as gillnets and trawls, while only a very small proportion of vessels—estimated at less than five percent—have transitioned to more selective fishing methods such as pelagic longlines (PLL), despite evidence that these approaches reduce bycatch and improve product value[77]. Transitioning private vessels to PLL costs approximately USD$ 4,000/vessel and requires time to re-fit ships and train captains.

75. As noted, the capacity of Pakistan's fisheries sector to capture the valuable export market is extremely low. Lack of access to foreign markets reduces catch value and opportunities for innovative, conservation-oriented marine fisheries management. Little valued is added in post-harvest value chains Landing, handling, and processing facilities are not adequate for the task due to limited cold-chain infrastructure, insufficient ice availability, outdated or overcrowded landing sites, weak hygiene and quality control practices, and inadequate processing capacity aligned with international sanitary, phytosanitary, and traceability requirements..[78] Again, handling of catch is very low with less than 30 – 35% of the catch utilized. There is no rigorous certification system. High value markets such as the EU, Japan, and the United States represent less than 3% of

Pakistan marine fisheries export markets.[79][79] This limits the incentives for private sector fisheries to adopt and follow higher management and harvest standards designed to promote biodiversity conservation outcomes.

76. Pakistan's private sector fishing interests have not widely adopted sustainable fishing practices due to a combination of interrelated structural, regulatory, and economic factors. These include an open-access fisheries management regime, weak enforcement and limited regulatory certainty, inadequate value chains characterized by high post-harvest losses, and limited access to high-value markets. Within this broader context, one of the key constraints facing fishing vessels seeking to transition to more sustainable practices is the lack of direct financial incentives and the relatively high upfront costs associated with gear conversion, vessel refitting, and crew training. Although the State Bank of Pakistan promulgated Guidelines for Fisheries Financing in 2007, these are now outdated and do not reflect current sustainability, value-chain, or conservation objectives. There is therefore a need to develop a coherent strategy that combines regulatory reforms with targeted financial support and incentives to enable the sector to transition toward sustainable production methods and higher value addition. To date, neither government nor private stakeholders have articulated a comprehensive program of grants, concessional finance, subsidies, tax relief, and skills development sufficient to support and accelerate this transition.

77. Until this barrier is removed, Pakistan's private fishing sector will continue to drive degradation of marine ecosystems and the loss of marine biodiversity. [80][80]

Barrier 3: Fisheries and biodiversity conservation decision-making is constrained by fragmented, incomplete and unintegrated data, monitoring and surveillance systems..

78. Rigorous data required to inform fisheries management and biodiversity conservation decision-making are both insufficiently collected and inadequately accessible. In many cases, fundamental fisheries data—such as species composition, fishing gear, effort, and landings—are not systematically or consistently collected across fleets and landing sites. Where data collection does occur, it is often fragmented, incomplete, or not standardized, limiting its usefulness for management purposes. Access to reliable, timely, and quality-controlled information by both public and private decision-makers is therefore constrained. Data and information gaps are even more pronounced for broader biodiversity conservation needs, including the status of endangered, threatened, and protected species, habitat condition, and ecosystem health. Together, these limitations severely restrict the ability to support evidence-based fisheries management, biodiversity conservation planning, and adaptive decision-making.This barrier will become increasingly problematic as climate change advances.

79. The Marine Fisheries Department (Ministry of Maritime Affairs) oversees fisheries research and, as noted, is responsible for fisheries management from 12 – 200 nautical miles. The National Institute of Oceanography focuses upon marine biology, oceanography and geology. The Ministry of Climate Change and Environmental Coordination (MoCC&EC) is broadly responisible for biodiversity policy and reporting, but not field monitoring. The Sindh and Balochistan Fisheries Departments oversee licensing, basic fisheries oversight, and limited biodiversity monitoring. Provincial EPAs and Forest Departments monitor mangroves and coastal habitats. Critical information such as landing research, active vessel monitoring, on-board monitors, and other fundamental marine fisheries data and information tools required to inform decision-making are absent. Rigorous tracking and monitoring programs for biodiversity conservation indicators such as habitat integrity and ecosystem services are not in place. Without these essential knowledge management and informed decision-making tools, it is challenging to realize spatial, temporal, and harvest programming required to support the achievement of national marine conservation aspirations and an accelerated transition to sustainable and regenerative fisheries practices and effective Ecosystem Approach to Fisheries (EAF) management and conservation.

80. The Fisheries Resources Appraisal in Pakistan Project (FRAP) found that Pakistan's fisheries sector is characterized by inadequate data collection, inconsistent data reporting, and limited data sharing among stakeholders. There is no established target reference point for marine fish stock to provide guidance in devising a strategy or procedure to utilize the available resources on the principle of maximum sustainable yield. Similarly, there is no authentic data and information about the state of inland fisheries stock and its actual potential to be utilized and developed on a long-term basis. Absent these essential knowledge management and informed decision-making tools, it is challenging to realize spatial, temporal, and harvest

programming required to support the achievement of national marine conservation aspirations and an accelerated transition to sustainable and regenerative fisheries practices.

81. Monitoring, control and surveillance (MCS) tends to be challenged by a complex and poorly aligned institutional along with low levels of capacity. Again, MCS responsibilities are distributed amongst numerous agencies and a variety of regions, e.g., provincial waters and national (EEZ) waters.

82. The GoP understands the severity of biodiversity loss and works with limited resources and capacities to address the challenges. The national GoP is working to improve oversight and data collection required to advance marine biodiversity conservation objectives. However, the country has tens of thousands of fishing vessels, 9 major landing sites and over 70 informal landing sites spread along a 1,000 km coastline. Provincial fisheries departments lack the technical, financial, human, and regulatory capacities to comprehensively conduct the monitoring, control and surveillance (MCS).

83. The lack of reliable and accurate data on fisheries and marine ecosystems makes it challenging to assess the status of fish stocks, monitor the impacts of fishing activities, and develop effective conservation and management strategies. Removing this data and information barrier demands an innovative approach applying advanced techniques and capacities. [81][81]

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B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF’s policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

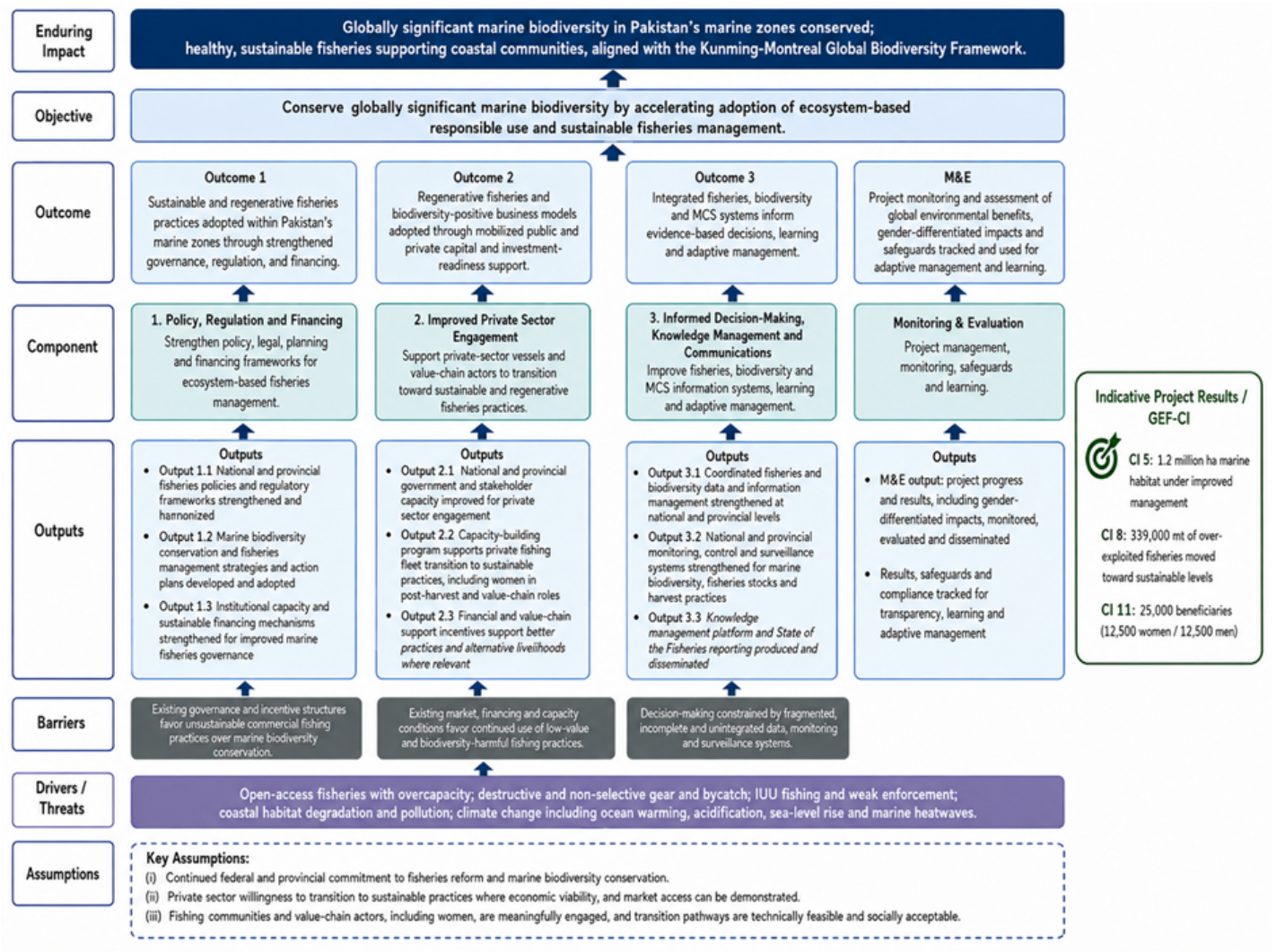
Theory of Change

1. The project objective is to conserve globally significant marine biodiversity by accelerating the adoption of ecosystem-based fisheries management.

2. If Pakistan strengthens federal and provincial fisheries governance, aligns regulatory and financing systems with ecosystem-based fisheries management, supports public and private actors to adopt sustainable and regenerative fisheries practices, and establishes integrated fisheries, biodiversity, and MCS information systems, then marine fisheries will progressively shift away from open-access, high-bycatch, and low-value practices toward biodiversity-sensitive, stock-based, and economically viable management. This will reduce pressure on globally significant marine biodiversity, support recovery of over-exploited marine fisheries, improve management of priority marine habitats, and generate benefits for fisheries-dependent communities, including women and men across the fisheries value chain.

3. The causal pathway is: fragmented governance, weak incentives, unsustainable harvest practices, and inadequate data systems drive biodiversity loss and fish-stock depletion; the project addresses these barriers through strengthened policy and financing frameworks, adoption of improved fisheries practices and value-chain incentives, and operational monitoring and knowledge systems; these outputs enable adoption of sustainable fisheries management and private-sector transition; and this contributes to improved marine habitat management, recovery of over-exploited fisheries, and benefits for coastal communities.

4. Key assumptions are that federal and provincial authorities remain committed to fisheries reform; private-sector actors are willing to participate where incentives, training, market access, or regulatory clarity are provided; fisheries-dependent communities are meaningfully consulted; improved data are used in decision-making; and PPG design confirms technically feasible and socially acceptable transition pathways.



5. In the existing scenario, a combination of inter-related factors are driving the loss of Pakistan's marine biodiversity. The current fisheries management regime under both the national and provincial authorities can largely be described as open access. At the same time, fishing pressure has increased. The size of the national fleet has expanded dramatically. That fleet relies almost exclusively upon harvest methods that considered to be non-sustainable and harmful to marine biodiversity. Finally, there is no rigorous system in place to monitor fisheries performance, monitor the status of key biodiversity indicators, and/or inform decision-making at provincial or national levels.

6. The result is the continued decline in marine biodiversity, degradation of commercial fisheries value, and negative social, economic and food security impacts. The Government of Pakistan (GoP) recognizes that the existing scenario is negative for

biodiversity and the well-being of Pakistani citizens. The GoP is eager to reverse this situation. [1][82] Pakistan recognizes that there is a need to shift away from an open-access marine resource model and to reduce fishing effort to below scientifically informed thresholds. The GOP would like to promote marine biodiversity conservation via expanded adoption of sustainable and regenerative marine fisheries practices applying an ecosystem approacs to fisheries management (EAFM) to address the identified challenges.[2][83] However, the country continues to struggle with limited technical and institutional capacity to drive this vision forward.

7. The proposed project will address each of these three inter-related challenges. The project will help to establish a new and improved enabling environment, shifting away from the current open access management regime to one that is more focused upon effectively conserving globally significant biodiversity and Pakistan's highly valuable marine fisheries resources. The project will help to build the capacities of the commercial fisheries sector to transform practices away from the existing methods that cause substantial harm to more sustainable and profitable approaches. The project will help fill information and knowledge gaps by supporting the establishment of monitoring and data collection systems designed to inform decision-making and promote conservation of marine biodiversity and associated ecosystem services.

8. The proposed project aligns with GEF-8's programming directions and Pakistan's national commitments and aspirations to conserve marine biodiversity, modernize the fishing sector, and improve socio-economic conditions for fishers.

Incremental/Additional Cost Reasoning

9. Baseline scenario: Without GEF financing, Pakistan's marine fisheries continue under the current open-access regime. Federal and provincial counterparts maintain recurrent investments — approximately USD 17 million in in-kind co-financing over the 48-month project period — supporting basic licensing, operational management, and limited regulatory functions. These investments are sufficient to maintain the status quo but cannot drive sectoral transition; marine biodiversity loss, IUU fishing, and stock depletion continue.

10. GEF Alternative scenario: GEF financing of USD 2,850,685 enables a coordinated set of interventions that the baseline cannot deliver: (i) harmonization and modernization of national and provincial policy and regulatory frameworks (Component 1); (ii) catalytic capacity, finance and market-incentive design for private sector transition (Component 2); and (iii) establishment of integrated fisheries and biodiversity monitoring, control and surveillance systems (Component 3). USD 20.3 million in co-financing is aligned with these interventions to deliver associated baseline investments under the project framework

11. .Incremental cost: The additional resources required to generate global environmental benefits beyond the baseline equal the GEF grant of USD 2,850,685. This incremental investment yields 1.2 million ha of marine habitat under improved management (CI5), 339,000 mt of recovery of overexploited stocks (CI8), and benefits to 25,000+ coastal beneficiaries (CI11) — global environmental benefits not generated under the baseline.

Brief Description of Project Components and Activities

Component 1: Policy, Regulation and Financing

Outcome: Sustainable and regenerative fisheries practices adopted within Pakistan's marine zones through strengthened governance, regulation, and financing.

Output 1.1: National and provincial fisheries policies and regulatory frameworks strengthened and harmonized to support sustainable management.

12. As noted, the existing marine fisheries management regime can be described as “open access”. This is a direct result of persistent issues with the current legal and regulatory environment at both the national and provincial level. FAO worked with the national government to draft a national fisheries policy and strategy in 2007 prior to the 2010 Constitutional reforms. The policy was neither promulgated nor revised based upon the new Constitution. Subsequently, FAO provided technical assistance for a national fisheries and aquaculture policy from 2019 to 2022 and again the document couldn’t be finalized. Now, FAO is providing technical assistance to MoMA for development of a National Fisheries and Aquaculture Policy. Balochistan has promulgated its provincial policy for fisheries and aquaculture. This project will support Sindh province for developing a provincial fisheries policy.

13. Gender considerations will be integrated into all regulatory and policy review processes under this output. Assessments will explicitly examine how existing and proposed marine fisheries laws, licensing frameworks, and co-management regulations affect women and men differently, including differential impacts on women's access to fishing licenses, gear ownership, landing-site use, access to subsidies, and participation in community decision-making structures. Policy and regulatory recommendations will include specific provisions to reduce gender-based barriers and promote equitable access to resources and markets.

14. The project will be tasked with assisting the national and provincial governments with building the capacity required to design, revise and adopt an effective and efficient enabling environment designed to shift current management regimes towards solutions designed to promote marine biodiversity conservation and overall improvements to marine fisheries health, productivity, and profitability.

15. The project will help to bridge gaps and ensure that specific policy support mechanism comprising national and provincial fisheries legislation, regulations and other institutional frameworks and monitoring mechanisms (including MCS) are in place and fully aligned with the Ecosystem Approach Fisheries Management (EAFM), supporting best practices, regional agreements, and international commitments and national priorities and obligations.

16. A focus will be to reduce and re-direct fishing overcapacity. The framework will consider voluntary, paid, and mandatory fishing rest periods, better licensing, seasonal restrictions, gear restrictions and other innovations. These actions may include harvest control rules (HCR), catch limits, and CMMs to reduce the loss of marine biodiversity and increase fish stocks. Efforts will specifically target the reduction of IUU. This will be based upon support to build capacity of fisheries managers and private stakeholders to expand knowledge of existing and emerging global principles and practices that may assist the Pakistan context.

17. This will be linked to efforts under both Component 2 (private sector transformation) and 3 (monitoring and knowledge), so that private fleet members have access to verified models showing that shifting from the current open-access situation can not only improve biodiversity and ecosystem health, but also increase fish stocks, increase fish size, and result in higher rates for productivity and profitability.

Output 1.2: National and Provincial Marine Biodiversity Conservation and Fisheries Management Strategies and Action Plans developed and adopted.

18. This project will support the preparation of national and provincial marine biodiversity conservation and fisheries policies' implementation frameworks comprising management strategies and action plans which will be formally adopted by key national and provincial government agencies.

19. The strategies and plans will identify conservation challenges and prioritize responses. Importantly, the strategy and plan will help to harmonize conservation efforts at national and provincial levels. This will help to alleviate many of the gaps, conflicts, and mandate confusion that currently inhibits effective marine fisheries management. This output includes strengthening management effectiveness of existing marine protected areas through improved planning, zoning, monitoring, compliance, and institutional coordination.

20. The strategy and plan will identify and help to inform specific regulatory and legal updates required to create a more coherent and effective enabling environment. Importantly, the strategy and plan will focus attention and provide solutions to resolve existing budgeting and human capacity short falls at national and provincial levels. This will include setting marine biodiversity conservation targets, indicators and monitoring regimes to inform decision-making.

21. The project will help build knowledge and hardware capacities to identify and prioritize temporal and spatial management approaches. Marine megafauna hot spots and critical fisheries stocks (tuna and similar kinds) will be identified with a substantial portion of Pakistan´s EEZ set on a path to be designated MPAs or other effective conservation measures (OECMs).

22. Part of this effort will be directed towards engaging national and provincial strategic planning and financing agencies. The effort will result in marine fisheries management and biodiversity conservation being mainstreamed and prioritized within government planning and budgets.

23. The strategy and plan will describe in detail and establish a coordination mechanism for horizontal and vertical alignment inclusive of national and provincial agencies. Ideally, this coordination mechanism will include a joint body composed of national and provincial agencies tasked with cooperatively overseeing implementation and guiding adaptive management.

Output 1.3: Institutional capacity and sustainable financing mechanisms designed for improved national and provincial government management.

24. The lack of adequate government financial and human resources is a basic constraint. Until this is addressed, there is little chance that the current open access marine fisheries management regime will be altered. The sector will continue to be defined by IUU, over-capacity, and unsustainable fishing practices. Pakistan's globally significant marine biodiversity will continue to be lost.

25. The project will address this issue by helping the national and provincial governments with training programs to help build required capacity.

26. The project will assist with the identification of capacity short-falls and provide strategic inputs to help the national and provincial governments fill gaps. This will include increasing revenues from licensing and other harvest associated fees to be reinvested in government efforts focused upon conserving the marine biodiversity upon which the private sector depends.

27. The project will support the design of a financing and human resources strategy for the fisheries sector. The strategy will identify innovative approaches to substantially increase financing, secure human resources, and build required professional capacities withing government agencies designed to improve the long-term conservation of marine biodiversity.

Component 2: Improved Private Sector Engagement

Outcome: Regenerative fisheries and biodiversity-positive business models adopted through mobilized public and private capital and investment-readiness support.

Output 2.1 National and provincial government and other stakeholders' capacity improvement for private sector engagement

28. The project will build capacities within targeted national and provincial agencies to support private sector adoption of marine biodiversity conservation-oriented practices. New positions will be rationalized and established within these agencies with persons tasked specifically with working with and providing outreach to the private sector to support and accelerate transition to sustainable and pro-marine biodiversity conservation practices. The new offices will serve a knowledge building, data, information, and communication hubs between Government agencies and private domestic and international fishing interests.

29. These new offices will be responsible for outreach with fleet members. This will include provisioning fleet members with knowledge and information regarding improved fishing practices and options. The office will have the capacity to assist private fleet members with information required to access financing to pay for transition costs such as gear refitting. The offices will serve a conduit and communication center to help national fleet members under and access international export markets designed to increase the fisheries value while improving conservation of Pakistan's globally significant marine biodiversity.

30. The offices will also help fleet members better understand and comply with revised and improved legislation, regulations, and policies under Component one. In addition, the offices will support fleet participation in monitoring and data collection under Component two.

31. The offices will work closely with fisheries extension services to design and implement targeted capacity building programs to support vessels with the training and access to financing required to adopt proven and innovative practices to reduce bycatch, improve profitability, and maintain and improve the integrity of marine ecosystems.

Output 2.2 Capacity building program to support private fishing fleet transition to sustainable and best practices

32. The project will support the design and implementation of a comprehensive training and extension services program to support vessels with the training and access to financing required to adopt proven and innovative practices to reduce bycatch, improve profitability, and maintain and improve the integrity of marine ecosystems. In this regard, a comprehensive capacity mapping exercise will be carried out.

33. The project will expand upon baseline initiatives, approaches and tools to reduce bycatch, discards, and post-harvest losses, as well as the widespread adoption of low-impact fishing gears. These gears may include PLL, circle hooks, subsurface gillnets, and release practices.

34. These measures may include the widespread scaling of low-cost bycatch reduction devices (BRD). The project will also explore innovative harvest technologies and approaches, such as alternative gears like green sticks and buoys.

35. The approach will build upon the successful FAO programs in other fisheries (e.g., the Caribbean Billfish Project). These efforts will be linked to and aligned with Component One's policy and enabling environment improvements.

Output 2.3 Financial and value chain support program to incentivize private fishing fleet transition to sustainable practices

36. The project will assist targeted national and provincial government agencies to build their capacities to provide the private sector with technical support required to access financing to transition to more sustainable harvest practices. This will include working with private and public financial institutions to facilitate financing for private sector adoption of innovative harvest practices.

37. Government agencies and private stakeholders will work together with project support to identify financial needs and opportunities. This will include exploring options for subsidies, tax relief, and direct government investment designed to incentivize and ease transition to harvest techniques designed to advance marine biodiversity conservation. These programs and priorities will subsequently be integrated within Component one enabling environment improvements at both the national and provincial levels.

38. In some cases, the project may provide direct financial support for adoption of improved practices. This will be done to model approaches and provide evidence-based results showing that sustainable practices can practically result in biodiversity conservation improvements and sustained or increased profitability.

39. Under this output, the project will support value chain improvements and export market access designed to increase pro-marine biodiversity conservation fishing practices.

40. As noted, under the existing scenario the ability of Pakistan's commercial fleet to access profitable international markets is limited. This is due to several factors, including low capacity to harvest and process fish at levels anticipated by international markets as well as knowledge and access to such markets.

41. The project will work extensively with the private sector to capture international market shares and to expand national market opportunity and demand for sustainably harvested seafood. This will include assisting to organize participating fishing vessels and associated private entities to cooperatively market, label, and certify sustainably harvested marine resources.

42. During the PPG phase, specific transition options will be considered such as pelagic longlines, circle hooks, subsurface gillnets, and bycatch-reduction devices (BRDs). Training-of-Trainers and knowledge–attitude–practice (KAP) surveys may be used to build practical adoption pathways, especially for small-scale fishers. This will be aligned with FAO-Rome/WWF-P/MOMA gear conversion project.

43. Where fisheries management measures require reduced fishing effort, seasonal restrictions, gear changes, or transition away from harmful practices, the project will consider viable alternative or supplementary livelihood pathways for affected fishers, crew, households, and value-chain workers. This will include other fisheries-adjacent livelihood options to be assessed during the PPG.

44. The design of financial and value-chain support will address gender-based differences in access to vessels, licenses, finance, training, and markets. While women may have limited access to or ownership of private fishing vessels, the project will identify entry points where women are active in the fisheries value chain, including processing, handling, marketing, quality control, small enterprise activity, and household-level fisheries support. Project-supported training, financial literacy, incentive schemes, and value-chain upgrading measures will include targeted outreach to women and, where relevant, women-led or women-benefiting enterprises. The PPG gender analysis and Gender Action Plan will further define these measures, indicators, and budget requirements for CEO Endorsement.

Component 3: Informed decision-making, knowledge management, and communications

Outcome: **Integrated knowledge management systems and adaptive management protocols operationalized to drive evidence-based decision-making and scale up investments in marine biodiversity conservation.**

Output 3.1 Coordinated data and information management centers at national and provincial levels

45. Under the existing scenario, marine fisheries management in Pakistan does not have adequate monitoring and data collection and institutional pathways required to inform conservation-based decision-making. The project will help build the capacities required to address this challenge. Data and information sharing between national, provincial and private stakeholders will be key.

46. The project will help national and provincial level fisheries management agencies to establish coordinated data and information centers. With project support, these centers will have the human and technical resources required to design and implement professional level marine fisheries data collection and monitoring. Training and strategy frameworks will ensure a monitoring and data collection approach that is efficient, cost-effective and prioritizes marine biodiversity conservation needs. This will specifically emphasize monitoring of key indicator species and habits.

Output 3.2 Cohesive national and provincial level monitoring, control and surveillance program for marine biodiversity, fisheries stock and harvest practices

47. The project will help set up a reliable data collection program to improve planning, development and conservation-based approaches for marine capture fisheries. This will include fundamental fisheries management data collection such as vessel and harvest monitoring and on-vessel observer programs. The project will assist stakeholders to identify and utilize technologies designed to increase monitoring efficiencies and lower human resource costs such as remote sensing and statistical analysis tools.

48. The project will support the creation and launch of a national system designed to enhance the fisheries´ data required to inform EAFM, as well as bycatch reduction and marine biodiversity conservation. The program will enhance the onboard presence of observers. The project will assist Pakistan in improving remote and electronic reporting for landing sites linked to geo-data reporting and satellite programs. The project will assist provincial fisheries departments in creating vessel monitoring and data collection programs that are streamlined and cost-effective.

49. The project will assist with and build capacities required to conduct periodic marine fish stock assessment to rationalize stock-based licensing by developing and maintaining target reference point for maximum sustainable yield.

50. The project will enhance the technical capacity of the national fisheries department staff on data collection, analysis, and participation in decision-making processes to ensure the EAFM. This capacity will link to comprehensive MCS and VMS. The system will be gender-responsive. The effort will help identify and prioritize the conservation of vulnerable marine ecosystems (VMEs) and designate EBSAs. These monitoring and analytical functions will directly support improved management effectiveness of existing marine protected areas and other effective area-based conservation measures (OECMs). The program will be specifically designed to track the status and responses of biodiversity and critical fish stocks to project proposed interventions. Monitoring and knowledge management will inform and improve regulatory and planning programs and harvest methods.

51. During the PPG phase, the desig will consider product diversification opportunities (e.g., pharmaceuticals and nutraceuticals) and support access to high-value export markets for sustainably harvested products in addition to conventional seafood markets.

52. This may include building capacity via a stock assessment focused upon understanding the status of marine biodiversity to inform decision-making.

53. The project will amplify best practices by engaging with regional, national and global stakeholders. By fostering a culture of knowledge sharing, the project aims to translate local and national experiences into insights that can enhance regional and global understanding of sustainable fisheries management using a platform like the International Waters Learning Exchange and Resource Network and educational tools of the IOTC [3][84]. The approach will help inform ecosystem-based decision-making by enabling regional (LME), national and provincial agencies to cooperatively share and exchange the detailed information essential to transitioning fishing practices to improve marine biodiversity conservation.

Output 3.3 Knowledge management platform and annual state of the fisheries reports

54. The effort will be designed to be certain rigorous information and data is being integrated within national and provincial decision-making platforms. This will include the creation of a web-based knowledge management platform to support capacity building, information sharing, transparency, and informed decision-making.

55. The project will assist the national and provincial data and information management centers to coordinate and cooperate with the production of an annual marine fisheries and biodiversity conservation status report. This report will collate findings and provide policy and financing recommendations for consideration by national and provisional planning and budgeting agencies. This information will also be used as the basis for reporting to international and regional fora.

56. During the project implementation period, the annual status report will be presented at regional workshops organized at provincial and national levels and designed to engage key private and public sector stakeholders. This will include reporting on project progress and results.

Sustainability

57. The project will provide initial support to establish necessary capacities. This will include provisioning of required training, technical skill building, and limited hardware inputs. By project close, all programs and functions will be fully supported technically and financially by national and provincial budgets. This will be ensured via a hand-over strategy to completed at least one year prior to project close. This hand-over strategy will fully describe financial and capacity requirements and how these needs will be met by national and provincial budgets and staff.

58. The project anticipates setting in place several innovations designed to support and sustain implementation. This includes increasing licensing and other fees to be levied against private fishing fleet members. These increased fees will be directed towards conserving the marine biodiversity values upon which the fleet depends. The project will support policy and enabling environment improvements that will assist with integrating and prioritizing marine biodiversity conservation within national and provincial plans and budgets.

59. During the PPG, the design will consider the use of national and provincial data centers to partner with leading academic and research institutions, including COMSATS and the National Institute of Oceanography, to ensure science-based monitoring and integration of traditional knowledge consistent with CBD Article 8(j).

Results

60. The GEF investment will help to conserve globally significant marine biodiversity, targeting one of the world's most important LMEs.

61. The project will assist Pakistan in meeting key biodiversity conservation aspirations of the Kunming-Montreal 30 X 30 objective [4][85]. The project will support obligations with the BBNJ Agreement [5][86].

62. The project will contribute to the future of Pakistan's fishery sector. The project will advance food security and economic well-being by assisting the adoption of harvest and post-harvest technologies proven to reduce negative biodiversity impacts and maintain sustainable catch levels while increasing product value.

Stakeholders Benefits and Co-Benefits

63. Pakistan's fishing fleet includes nearly 30,000 vessels with hundreds of thousands of persons directly and indirectly reliant upon marine ecosystems and associated services. The project will advance harvest and post-harvest technologies proven to reduce negative biodiversity impacts and maintain sustainable catch levels while increasing product value. The project will benefit these stakeholders by helping to set in place the tools, programs, and capacities required to help reverse current biodiversity losses that translate into lower profits and lower food security.

64. The project will help to improve the fisheries management in the country, which will plug the loop holes in the overall value chain will ultimately results in the development of fisheries in the country and bring the foreign exchange through sustainable production and seafood exports.

65. The project will help improve the institutional, financial, HR capacity in fisheries sector and will lead to the prosperity, reduce the poverty contributing in the National Economy through exports of seafood.

Gender

66. Women generally work in a variety of shore-based capacities to support the marine fisheries sector. They generally hold very low wage paying positions and there is a large gender gap. Opportunities for women to rise to higher positions, such as owners or operators of commercial enterprises, are low do to inequalities of access to capacity, learning and finance. Indeed, licenses are often restricted to men.

67. In addition, statics with regards to women empowerment and access to benefits and opportunities are quite low. This makes it difficult to strategically design and implement targeted interventions that will result in positive gender impacts.

68. The proposed project will address these issues by reflecting and integrating issues of gender and women empowerment and opportunity throughout the final design. The project design will include a gender analysis and action plan. Beyond this, each of the project's components and activities will consider issues of gender and seek out opportunities to advance empowerment and equality. The project will reflect this in the design's budget, human resource and capacity plan, and – critically – within the results framework so that specific indicators track specific and tangible lines of inquiry and support positive impact.

Knowledge Management

69. The project is specifically designed to enhance and improve knowledge management. This is integrated across all aspects of the project framework, including the numerous planned capacity building efforts. Component 3 is entirely focused upon knowledge management. Under this component, the project will strive to fill existing data gathering and information management gaps. The project will set in place a sound and rigorous approach designed to facilitate coordination between national, provincial and private sector stakeholders. This will include inputs from academia and civil society. This substantially improved knowledge management platform will be focused upon making certain government fisheries managers and private stakeholders have the information required to sustain fisheries and conserve globally significant biodiversity.

Policy Coherence

70. The proposed project is full aligned with national and provincial marine fisheries management and biodiversity conservation aspirations.

Governing Instrument	Alignment
International Agreements	Pakistan a signatory to the: United Nations Convention on the Law of the Sea, 1982 Convention on Biological Diversity, 1992 United Nations Framework Convention on Climate Change, 1992 Agreement for the Establishment of the Indian Ocean Tuna Commission, 1993 Kunming-Montreal Global Biodiversity Framework. WTO Fisheries Subsidies Agreement (Phase I), 2025 BBNJ Agreement\
Economic Survey of Pakistan 2015-16 (Ministry of Finance)	Provides a national status report for fisheries development to "promote fisheries to ensure food security through availability of quality products at competitive prices"
Pakistan's NBSAP 2017-2030	Calls for reducing IUU fishing through strengthened monitoring, control, and surveillance (MCS). The policy explicitly addresses the ecosystem impacts of fishing, including unintended and excessive "bycatch" of non-targeted marine life. Proposed interventions include assessing significant fish stocks, setting limits for sustainable harvest, and developing better measures for enforcement measures. The GoP intends to integrate targets for conserving coastal areas and marine ecosystems into annual and medium-term development plans and establish and manage protected areas covering at least 10% of the marine area of biodiversity significance.
Pakistan 2025: One Nation, One Vision12 (Planning Commission 2014)	affirms the Sustainable Development Goals (SDGs) and has pillars covering elements such as institutional reform, food security, the private sector, and entrepreneurship-led growth and value addition. An important part of Pakistan Vision 2025 is a structural transformation towards production of high value-added products. The Ministry of National Food Security and Research, under which the Fisheries Development Board (FDB) operates, recently released a draft National Food Security Policy (MNFSR 2017) in which fisheries and aquaculture are considered "high value activities."
Pakistan's NDC 2021	Government of Pakistan (GoP) as a Party to the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC) has planned to reduce 20% GHGs by the year 2030. Target is set in sync with DGG's country framework.
Exclusive Fishery Zone (Regulation of Fishing) Act, 1975	This is the Federal fisheries legislation currently in force. The Act is accompanied by a set of rules, the Exclusive Fishery Zone (Regulation of Fishing) Rules, 1990 amended in 2021 (Issued by Ministry of Maritime Affairs vide SRO No.981(I)/2021 dated 26 July 2021).
Draft National Fisheries and Aquaculture Policy 2025-2035	For a national vision on fisheries and aquaculture in Pakistan, afresh policy document is under development process and nears completion. It is fully sync with the Balochistan Fisheries and Aquaculture Policy and aligned with other national and provincial laws and international obligations.
Balochistan Fisheries and Aquaculture Policy 2025-2035	It covers both marine and inland fisheries in Balochistan. Coherent policy measures in Federal-Provincial are made regarding Marine Fisheries within 12 NM. This project will help in establishing provincial policy support mechanism in sync with the national policy and legislation.
GEF agreements	Pakistan is a signatory of all relevant GEF agreements, including CBD and Kunming-Montreal Global Biodiversity Framework.

IOTC	The country is a contracting party to the IOTC and is associated with the G16-like-minded coastal states [6][87].

[1] https://www.mafmc.org/eafm

[2] FAO. 2023. Ecosystem approach to fisheries (EAF) – Regional Fishery Body Secretariats' Network Magazine, No. 21. December 2022. Rome.

[3] https://iotc.org/educational-tools

[4] https://www.cbd.int/article/draft-1-global-biodiversity-framework

[5] https://oceans-and-fisheries.ec.europa.eu/ocean/international-ocean-governance/protecting-ocean-time-action_en

[6] Group of Like-minded Coastal States in the IOTC

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

Overall implementation arrangement:

1. The project will be executed by the Marine Fisheries Department (MFD), Ministry of Maritime Affairs (MoMA). The steering committee will be set up and notified by MoMA including all the relevant stakeholders from Public and Private Sectors. The said committee will be decision making body for the execution and implementation of the project.

Planned cooperation with other relevant GEF-financed projects and other initiatives:

2. The project's approach underscores the importance of building upon existing baseline activities and initiatives implemented by development partners. It also places a strong emphasis on establishing new partnerships and strengthening existing ones to ensure the sustainability of the results achieved.

3. The project will actively connect and collaborate with various stakeholders, including potential implementation partners and co-financing entities. Furthermore, it will draw lessons from a range of related initiatives, fostering partnerships to maximize impact.

4. While the ongoing key related initiatives are outlined below, the project will continue to explore additional opportunities during the PPG phase.

a. FAO and the GoP are coordinating the implementation of Phase II of the ABNJ Tuna Project. The IOTC assists with capacity building and data analysis, ensuring compliance with IOTC´s conservation and management measures (CMMs).

b. Under GLLSP Project Phase-II (financed by IFAD), activities are related to the development of three harbors and associated infrastructure and formulating a new fisheries policy along with revision of outdated fisheries legislation.

c. During PPG, the project will confirm operational synergies with relevant GEF-financed initiatives in Pakistan and the wider marine fisheries portfolio, including GEF project #11656 and GEF project #11214, as applicable. The PPG will review their objectives, geographic scope, executing arrangements, stakeholder platforms, knowledge products, and lessons relevant to marine biodiversity conservation, fisheries governance, private-sector engagement, monitoring, and sustainable financing. Where complementarities are confirmed, the project document will define coordination arrangements to avoid duplication and support exchange of technical tools, stakeholder engagement approaches, and monitoring or knowledge-management outputs.

Core Indicators

Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1,200,000.00			

Indicator 5.1 Fisheries under third-party certification incorporating biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Type/name of the third-party certification

Indicator 5.2 Large Marine Ecosystems with reduced pollution and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE

Indicator 5.3 Marine OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 8 Globally over-exploited fisheries moved to more sustainable levels

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
339,000.00			

Fishery Details

This is an estimate based upon current FAO and GoP figures. A more precise number will be determined during PPG. The project intend to determine quantity of fisheries moved to more sustainable levels based upon: (1) Achieve reduction in post-harvest losses by volume and value up to 30 percent on short-term basis (0-3 years of the project)

and 40% in medium-term (i.e. 3-7 years); (2) increase in fish export 50 to 70% over next five years, (3) Maintain fish landing data 100% at all landing stations (may be included as core activity as part of capacity building, details may figured out during detailed project formulation), and (4) Through survey of consumers / fish exporters. (After Capacity Building and raising awareness under the scope of the project).

There will be a need to set target reference point and thereafter periodic stock assessment data on a frequency of 5 years and regular basis, with atleast 3 regular year-long consistent stock surveys. Without this, no stock-base licensing can be achieved. This has also been made part of Balochistan Fisheries Policy and the draft National Fisheries Policy. The feasibility of having a rigorous number determined during a five-year project period will be quite challenging.

Again, this will be revisited during the PPG.

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	12,500			
Male	12,500			
Total	**25,000**	**0**	0	**0**

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

Core Indicator 5:

The project will target approximately 5% or 1.2 million hectares of the existing EEZ. The target represents approximately 4% of Pakistan's marine zones (EEZ + extended continental shelf = 290,000 km² ≈ 29 million ha). Indicative breakdown by site cluster: Sindh territorial waters and Indus Delta complex (~200,000 ha — Keti Bundar, Indus Delta, Churna Island, Mubarak Village waters); Balochistan territorial waters (~400,000 ha — Sonmiani/Kalmat, Miani Hor, Astola, Khor Kalmati, Ormara/Gwadar Bays, Jiwani); and selected zones within Federal EEZ beyond 12 NM (~600,000 ha) prioritized for tuna/pelagic stock recovery and OECM designation. Site-level boundaries and final figures will be confirmed during PPG.

Core Indicator 8:

This is an estimate based upon current FAO and GoP figures. FAO and GoP estimates of current annual marine capture (340,000–360,000 mt) and FRAP findings that 9 of 14 major commercial species are overexploited. Indicative provincial breakdown (proportional to landing data): Sindh-based capture fleet ~70% (≈ 237,000 mt) and Balochistan-based capture fleet ~30% (≈ 102,000 mt). Stocks targeted for recovery include tuna and tuna-like pelagics, shrimp, and key demersal stocks (snappers, groupers, croakers). Recovery is operationalized through the four pathways previously described (post-harvest loss reduction, export uplift, 100% landing data, target reference points + periodic stock assessment).

A more precise number will be determined during PPG.

The project intend to determine quantity of fisheries moved to more sustainable levels based upon: (1) Achieve reduction in post-harvest losses by volume and value up to 30 percent on short-term basis (0-3 years of the project) and 40% in medium-term (i.e.

3-7 years); (2) increase in fish export 50 to 70% over next five years, (3) Maintain fish landing data 100% at all landing stations (may be included as core activity as part of capacity building, details may figured out during detailed project formulation), and (4) Through survey of consumers / fish exporters. (After Capacity Building and raising awareness under the scope of the project).

There will be a need to set target reference point and thereafter periodic stock assessment data on a frequency of 5 years and regular basis, with atleast 3 regular year-long consistent stock surveys. Without this, no stock-base licensing can be achieved. This has also been made part of Balochistan Fisheries Policy and the draft National Fisheries Policy. The feasibility of having a rigorous number determined during a five-year project period will be quite challenging.

Again, this will be revisited during the PPG.

Indicator 11:

Gender inclusivity and empowerment will be critical aspects of this project, including increasing pathways for women to benefit from project activities and results meaningfully.

The project commits to gender parity in beneficiary numbers, recognizing that women's substantial but informal roles in the fisheries value chain (post-harvest processing, mollusc and shellfish hand-collection, drying, marketing) are typically undercounted in cooperative and association rolls. Although men are more visible in offshore fishing and vessel operations, women play important shore-based and informal roles in fish handling, processing, marketing, household-level fisheries support, and community value chains. Targeted measures to ensure women benefit include: (i) dedicated training in post-harvest, processing and value-chain segments where women predominate; (ii) financial products and incentive schemes accessible to women-owned enterprises and cooperatives; (iii) outreach via women's processing groups in addition to fishing cooperatives; and (iv) sex-disaggregated monitoring of all training, finance and benefit-flow activities. The project will therefore track beneficiaries using sex-disaggregated data and will include targeted measures to ensure women benefit from training, financial literacy support, value-chain upgrading, incentive schemes, consultation processes, and gender-responsive monitoring. The final beneficiary target and gender-disaggregated methodology will be refined through the PPG gender analysis and Gender Action Plan.

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	High	Risk-1: Extreme weather events at sea may impact fishing operations at sea. Assessment: Rising sea surface temperatures and extreme weather events, such as cyclones and storms, can alter fish distributions, behavior, and productivity, leading to reduced catches. The existing capacity is inadequate to respond to sudden climatic variations while fishing at sea. There is no functional early warning system or VMS in place. This may result in reduced fish catches and livelihood impacts on coastal communities.

		Mitigation: Focus on capacities for VMS / MCS and early warning system.
Environmental and Social	Moderate	Risk-2: Inadequate stakeholder engagement and lack of consideration for community livelihoods may lead to social conflicts and environmental degradation. Assessment: The project's focus on transitioning to sustainable and regenerative fisheries management practices may require changes in fishing practices, gear restrictions, reduction in licenses to reduce fishing efforts or closed seasons, which could impact the livelihoods of fishing communities. Inadequate engagement with local communities, fishermen, and other stakeholders may lead to misunderstandings, resistance, or conflicts. Environmental degradation could occur if the project's interventions are not carefully designed and implemented to consider the needs of both the environment and local communities. Mitigation: Active engagement of relevant stakeholders including gross-root fisherfolk / coastal communities and participation of all throughout capacity building and awareness raising related interventions. In addition, the engagement of relevant actors from both provinces is important during detailed formulation of the project document.
Political and Governance	Moderate	The Project will benefit from a stable overall political and governance context, both at national and provincial levels, an enabling situation which is expected to continue. In addition, MoMA maintains very good working relationships with relevant government counterparts of this project, along with other stakeholders, which will help in the project's implementation.
INNOVATION		
Institutional and Policy	Low	Risk-3: Inadequate institutional and policy frameworks may hinder the adoption and scaling up of innovative sustainable fisheries management practices. There is a material risk that transitioning Pakistan’s large fishing fleet may proceed more slowly than anticipated. Mitigation will include phased adoption targets, pilot demonstrations, incentive-based fleet-capacity reduction aligned with provincial jurisdiction, and stakeholder engagement to reflect FRAP recommendations. Assessment: The project's success depends on the ability of institutions and policymakers to support the adoption of innovative practices, such as new technologies or management approaches such as use of IOTC compliant gears, VMS, digitalization, data system, digital scanners at landing sites etc. Existing institutional and policy frameworks may not be conducive to innovation, or may even create barriers to adoption. During PPG Phase, existing gaps would be evaluated thoroughly. Mitigation: Support innovative-friendly policies and institutions. During PPG Phase, conduct policy and regulatory assessments to identify gaps and opportunities for innovation.
Technological	Low	Risk-4: Technological limitations vis-à-vis standards and best practices or inadequate infrastructure may hinder the adoption and effectiveness of

		innovative sustainable fisheries management practices. Assessment: The project's success depends on the availability and accessibility of suitable technologies, such as monitoring systems, data analytics, or sustainable fishing gear. Technological limitations, inadequate infrastructure, or lack of technical expertise may hinder the adoption and scaling up of innovative solutions. Cybersecurity risks particularly for VMS / MCS system or data management issues may compromise the integrity and effectiveness of technological solutions. Mitigation Measure: During project implementation, analyze and summarize the results and experiences of practical cases from different regions to develop technical standards and methods suitable for various scenarios and conditions.
Financial and Business Model	Moderate	Risk-5: Inadequate financial resources, weak business models, and limited commercial capacity may hinder adoption and scaling up of sustainable fisheries practices, particularly among MSMEs, cooperatives, small-scale fishers, and value-chain enterprises. Exchange-rate volatility may also affect project budgeting and disbursement. Assessment: The project's success depends on whether (i) commercially viable sustainable practices can be identified and designed at PPG stage, and (ii) participating fishers, vessel operators, MSMEs, cooperatives, processors, and value-chain actors can adopt these commercially viable sustainable practices. Experience with MSMEs and community-based enterprises shows that business failure risk can be significant where financial literacy, market analysis, access to credit, working capital, bookkeeping, cooperative governance, product quality, and buyer relationships are weak. This risk is therefore rated Moderate at PIF stage. Mitigation Measure: The project will integrate business model innovation into private-sector and value-chain support. Mitigation measures will include financial literacy and business planning support; assessment of market demand and buyer requirements; phased pilots before wider scaling; links to public and private finance providers (including finance-readiness capacity building, matchmaking, referrals, and application/business-plan support); support for quality, traceability, and certification where feasible; targeted assistance for MSMEs and cooperatives; and PPG-stage analysis of commercially viable incentive models. Budgeting will also be refined during PPG using updated exchange-rate assumptions.
EXECUTION		
Capacity	Moderate	Risk-6: The limited capacity of fisheries departments at federal and province levels may affect the project implementation result. Assessment: The project's success depends on the capacity of fisheries departments to implement project activities, manage resources, and monitor progress. Limited capacity, including inadequate staffing, skills, or resources, may lead to delays, inefficiencies, or ineffective implementation. Insufficient capacity may also affect the sustainability of project outcomes beyond the project duration. Mitigation Measure: During PPG Phase, ensure that capacity mapping exercise is integral part of the document and it is carried out comprehensively along with preparation and execution of training plans accordingly during the project

		implementation phase. During the PPG, consideration will be given to capacity-building support for civil and maritime security agencies engaged in monitoring, ensuring coordinated surveillance and enforcement capabilities.
Fiduciary	Moderate	The fiduciary (project implementer) has strict fiscal and procurement management procedures and extensive experience, therefore it is risk-free.
Stakeholder	Low	Risk-7: Inadequate collaboration between relevant departments and the different levels of awareness about Marine Biodiversity Conservation through Sustainable Fisheries Managements, along with insufficient social participation, may affect the impact of project implementation. Assessment: During the PIF phase, key stakeholders were consulted at the national and provincial levels. In-depth consultations are currently being held and will be carried out further during PPG. Mitigation Measure: Carry out in-depth stakeholder consultations during PPG phase. During project implementation phase, develop and implement a comprehensive stakeholder engagement plan along with other relevant plans for stakeholder capacity building.
Other		
Overall Risk Rating	Moderate	The overall project risk is rated Moderate at PIF stage. This reflects the combined effect of high climate risk, moderate political/governance and implementation-capacity risks, moderate environmental and social risk, and moderate financial/business model risk associated with transition of fisheries practices, MSME and cooperative viability, stakeholder acceptance, and private-sector adoption. The rating also reflects the fact that the project depends on coordinated action by federal and provincial authorities, private-sector actors, and fishing communities. Proposed mitigation measures include detailed PPG assessments, stakeholder engagement, gender analysis, ESS screening, capacity mapping, phased pilots, business model support, MCS/VMS strengthening, and refinement of implementation arrangements before CEO Endorsement.

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

1. The proposed project is fully aligned with GEF-8 strategies.

2. The project will support Objective 1 to improve conservation, sustainable use and restoration of natural ecosystems in line with GBF goals A and B. This includes supporting an integrated seascape management approach that will use multiple tools and strategies to respond to the drivers causing the loss of Pakistan's globally significant marine biodiversity.

3. The project will contribute to GEF-8's Objective 3 by increasing mobilization of domestic resources for conservation of marine biodiversity. This will be done by targeting both public and private financing to generate and direct a greater share of this financing to support conservation of marine biodiversity and associated ecosystem services.

Private sector engagement will be critical to this project as successful outcomes will depend upon private sector innovation, transformation, and compliance with regulatory, technical, and monitoring advancements.The project will support achievement of Kunming – Montreal Protocol aspirations by addressing marine biodiversity loss through restoration and sustainable management practices. The project will contribute to implementation of the following targets, which will be confirmed during PPG:

- Target 1: The project will support integrated, biodiversity-sensitive marine planning and fisheries management across priority marine zones.
- Target 2: The project will support recovery of degraded marine ecosystems and over-exploited fisheries through improved management, monitoring, and adoption of sustainable practices.
- Target 3: The project will strengthen the management effectiveness of existing MPAs and support identification of OECMs or other priority area-based conservation measures, as appropriate.
- Target 5: The project will promote sustainable, safe, and legal use of wild marine species by reducing IUU fishing, bycatch, destructive practices, and unsustainable fishing effort.
- Target 9: The project will support sustainable fisheries-based livelihoods and benefits for fisheries-dependent communities through improved practices, value-chain upgrading, and more sustainable use of marine biodiversity.
- Target 14: The project will support mainstreaming of biodiversity into fisheries policies, regulations, financing, planning, and monitoring systems at federal and provincial levels.
- Target 19: The project will support increased public and private financing for marine biodiversity conservation and sustainable fisheries management.
- Target 21: The project will improve the availability and use of fisheries, biodiversity, and MCS information for evidence-based decision-making.
- Target 22: The project will support participation of fisherfolk organizations, CSOs, IPLCs as applicable, women, MSMEs, private-sector actors, and coastal communities in project design and implementation.
- Target 23: The project will integrate gender-responsive measures, sex-disaggregated indicators, and actions to improve women's access to project benefits across the fisheries value chain.

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities: Yes

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

The PIF-stage consultation process included government, civil society, fisherfolk, academic, and private-sector stakeholders, including participants representing Gwadar Mahigir Itehad, Rural Community Development Center Gwadar, Pakistan Fish Exporters Association, Aquahatch International, fisheries associations, academia, and relevant provincial and federal institutions. These consultations informed the PIF's emphasis on sustainable fisheries transition, value-chain upgrading, capacity building, monitoring, and stakeholder engagement during the PPG. During the PPG, consultation will be broadened and documented to include MSMEs, small-scale fisherfolk, coastal community representatives, women and women-benefiting value-chain actors, ethnic minority groups along the coast where applicable, CSOs, private-sector actors, and IPLCs as applicable. The results will be integrated into the Stakeholder Engagement Plan, Gender Action Plan, ESS instruments, and final project design.

The following is the summary of stakeholder engagement to date:

1. During his meeting with FAOR on 3rd June 2024 at FAO Representation Islamabad, Secretary Fisheries and Coastal Development Department Dr. Javed Anwar Shahwani was apprised about the project for marine biodiversity under GEF funding and the process including the PIF development and sought provincial input and active engagement during detailed formulation phase of the project in the capacity of project counterpart. The Secretary Fisheries Balcohistan appreciated FAO and MoMA for inclusion of Balochistan Fisheries Department in the upcoming GEF marine biodiversity project. Subsequently, after internal departmental consultation, he wrote a letter to FAOR Pakistan dated 26 August 2024 in which he acknowledged FAO's technical assistance and desired support in tapping adequate funding / grants from various sources including GEF for supporting the interventions envisioned in Balochistan Sustainable Fisheries and Aquaculture Policy 2025-2035. He mentioned a list of interventions related to strategies, plans, mapping, research and capacity building etc. The said letter of the Secretary Balochistan Fisheries department was used as an input during preparation of this PIF document.

2. In another effort, during his visit to FAO Representation Islamabad on 4th June 2024 for meetings with AFAOR Programme, FAO Pakistan's GEF Focal and FAO's Senior Policy Specialist - Fisheries, Director General Sindh Marine and Coastal Fisheries Dr. Ali Muhammad Mastoi was apprised about the project idea for marine biodiversity under GEF funding and the process including the PIF development and sought provincial input and active engagement during detailed formulation phase of the project in the capacity of project counterpart. Dr. Mastoi appreciated FAO's role in Sindh and said that Sindh Fisheries Department will welcome and support collaboration with FAO for Technical Assistance.

3. An information session on draft GEF BD PAK PIF was held as part of the Stakeholder Consultation Workshop on the initial draft of the National Fisheries and Aquaculture Policy of Pakistan. As lead partner and with Technical Assistance of FAO, the Ministry of Maritime Affairs (MoMA) organized this one-day consultation workshop at Marriott Hotel Karachi on 22nd May 2025 in which FAO Technical Officer Ms. Yurie Naito presented an overview on the draft PIF for GEF Marine Biodiversity Project in Pakistan online via zoom, which was appreciated at large by the Chair and other key govt officials and other stakeholders from Sindh and Balochistan provinces. It was agreed that the same group of stakeholders would be consulted during the detailed formulation of the GEF BD PAK Marine Biodiversity Project.

It was a very relevant forum for information and feedback from more than 85 relevant and experienced participants, representing all relevant stakeholders including high-level officials from both coastal provinces (i.e. Sindh and Balochistan) and federal institutions, FAO, MoMA, Fisheries Development Board (FDB), Fisheries Departments of Sindh and Balochistan, Trade Development Authority of Pakistan (TDAP), Pakistan Fish Exporters Association (Pak FEA), academia, civil society and private sector. The following key dignitaries were present during the information session on draft GEF PIF BD PAK, in the workshop:

- Secretary Mr. Tariq Qamar Baloch (as Guest of Honour) and DG Fisheries Balochistan
- Director, Deputy Directors and Assistant Directors from Sindh Fisheries Department.
- Mr. Athar Khokhar, Director General, TDAP
- Mian Asim Abrar, Chairman, Korangi Fish Harbour Authority (KoFHA)
- Dr. Shahid Aslam Mirza, Managing Director KoFHA
- Dr. Mansoor Wassan, Director General, Marine Fisheries Department (MFD), MoMA
- Mr. Junaid Wattoo, CEO FDB, Ministry of National Food Security and Research, Islamabad.
- Advisor Fisheries WWF-P Mr. Moazzam Khan.
- Gwadar Mahigir Itehad
- Rural Community Development Center, Gwadar
- Mr. Wasim Khan, former DG MFD and Ex FAO's Consultant.
- WB's Study (on fisheries value chain) Team Members from AERC Karachi University, including Director Prof. Dr. Nooreen Mujahid and Prof. Dr. Ambreen.
- Mr. Faisal Iftikhar, CEO Aquahatch International.
- Mr. Asif Lahri, PMU, GLLSP-II, Quetta.
- Mr. Daim Shah Bukhari, President, Aquaculture Farmers Association
- Mian Saeed Fareed, Pak Fish Exporters Association (Pak FEA).
- Participants from academia and think tanks including LUAWMS (Lasbela University of Agricultrue, Water and Marine Sciences), Applied Economics Research Centre (AERC) - University of the Karachi, Centre of Excellence in Marine Biology - University of the Karachi, National Institute of Maritime Affairs (NIMA) - Bahria University, Dadabhoy Institute of Higher Education Karachi etc.

Inputs from PIF-stage consultations with the IPLCs, CSOs, and private sector actors listed in the Stakeholder Engagement table — including Mahigir Itehad Gwadar, Fishermen's Association of Mekran, Pakistan Fisherfolk Forum, Rural Community Development Center (RCDC) Gwadar, Pakistan Fish Exporters Association (PAKFEA), Aquahatch International, and Aquaculture Farmers Association — shaped key design elements, including the differentiated treatment of small-scale and industrial fleet segments, alternative livelihoods under Output 2.3, gender parity in Indicator 11, and the value-chain and certification focus of Component 2. IPLCs, CSOs, MSMEs, and small-scale fisherfolk will be invited to provide direct input into project design at PPG stage through free, prior and informed consultations. A dedicated PPG budget line covers these consultations and the documentation of their inputs.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant($)	Agency Fee($)	Total GEF Financing ($)
FAO	GET	Pakistan	Biodiversity	BD STAR Allocation: BD-1	Grant	2,850,685.00	270,815.00	3,121,500.00
Total GEF Resources ($)						**2,850,685.00**	**270,815.00**	**3,121,500.00**

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount ($)

100000

PPG Agency Fee ($)

9500

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG($)	Agency Fee($)	Total PPG Funding($)
FAO	GET	Pakistan	Biodiversity	BD STAR Allocation: BD-1	Grant	100,000.00	9,500.00	109,500.00
Total PPG Amount ($)						**100,000.00**	**9,500.00**	**109,500.00**

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total($)
FAO	GET	Pakistan	Biodiversity	BD STAR Allocation	1,244,400.00
FAO	GET	Pakistan	Land Degradation	LD STAR Allocation	435,400.00
FAO	GET	Pakistan	Climate Change	CC STAR Allocation	1,551,200.00
Total GEF Resources					**3,231,000.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
BD-1-4	GET	2,850,685.00	20300000
Total Project Cost		**2,850,685.00**	**20,300,000.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Maritime Affairs	In-kind	Recurrent expenditures	3000000
Recipient Country Government	Marine Fisheries Department	In-kind	Recurrent expenditures	8000000

Recipient Country Government	Korangi Fisheries Harbor Authority	In-kind	Recurrent expenditures	6000000
Private Sector	Private Sector Fleet	In-kind	Recurrent expenditures	3000000
GEF Agency	FAO	In-kind	Recurrent expenditures	300000
Total Co-financing				**20,300,000.00**

Describe how any "Investment Mobilized" was identified

The indicative co-financing reflects recurrent and investment-related contributions from national institutions, fisheries authorities, harbour authorities, the private fishing fleet, and FAO that are directly relevant to the project objective. Government co-financing includes staff time, operational support, technical inputs, facilities, data and administrative systems, policy and regulatory processes, fisheries management functions, harbour-related support, and participation in project governance, monitoring, and implementation. Private-sector co-financing includes vessel owner and fleet contributions associated with participation in training, gear transition, operational adjustments, improved handling, value-chain upgrading, compliance with monitoring requirements, and adoption of sustainable fisheries practices. FAO co-financing includes technical assistance, staff time, quality assurance, and knowledge support.

Co-financing comprises in-kind contributions valued on the basis of recurrent expenditures attributable to project-aligned activities over the 48-month implementation period:

- Ministry of Maritime Affairs (USD 3.0M): staff time of policy, legal and technical officers contributing to fisheries and biodiversity policy reform and inter-ministerial coordination.
- Marine Fisheries Department (USD 8.0M): operational costs of MCS, vessel registration, fisheries data collection, observer programmes and inspections in project areas.
- Korangi Fisheries Harbor Authority (USD 6.0M): operational costs of port-state services, landing-site monitoring, cold-chain and quality-control infrastructure aligned with project objectives.
- Private Sector Fleet (USD 3.0M): vessel-time, equipment use and crew engagement in capacity-building, pilot demonstrations and gear-conversion trials.
- FAO (USD 0.3M): technical backstopping and project oversight.

During the PPG, all co-financing will be reviewed and confirmed in accordance with GEF requirements, including the definition of investment mobilized. The project will also explore opportunities for cash co-financing from government, private-sector, financial institution, development partner, and other sources. Final co-financing amounts, type, source, investment mobilized classification, and supporting documentation will be confirmed at CEO Endorsement.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Jeffrey Griffin	2/19/2026	Yurie Naito	0066800604631	yurie.naito@fao.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Ms. Khalida Bashir	Joint Secretary (Climate Finance)	Ministry of Climate Change and Environmental Coordination	2/4/2026

ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place

Please see the uploaded document for additional maps.

Target Areas	Lat/Long
EEZ of Pakistan for Federally Governed Marine Fisheries and Biodiversity Zones	Beyond 12 NM from baseline at Sea
Balochistan Marine and Coastal Zones	25 01’45.28 N 64 04’10.23 E (Including 12 NM at Sea from baseline
Sindh Marine and Coastal Zones	24 46’ 36.99 N 67 04’23.64” E (Including 12 NM at Sea from baseline

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title

ANNEX D ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING_additional note

Pakistan_ Climate risk screening_Climate Risk Team FAO

Full ES Risk Screening checklist for project 753134

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	Significant Objective 1	Principal Objective 2	No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4
Influencing models			
	Transform policy and regulatory environments		
	Strengthen institutional capacity and decision-making		
	Convene multi-stakeholder alliances		
	Demonstrate innovative approaches		
	Deploy innovative financial instruments		
Stakeholders			
	Indigenous Peoples		
	Private Sector		
		Capital providers	
		Financial intermediaries and market facilitators	
		Large corporations	
		SMEs	
		Individuals/Entrepreneurs	
		Non-Grant Pilot	
		Project Reflow	
	Beneficiaries		
	Local Communities		
	Civil Society		
		Community Based Organization	
		Non-Governmental Organization	
		Academia	
		Trade Unions and Workers Unions	
	Type of Engagement		
		Information Dissemination	
		Partnership	
		Consultation	
		Participation	
	Communications		
		Awareness Raising	
		Education	
		Public Campaigns	
		Behavior Change	
Capacity, Knowledge and Research			
	Enabling Activities		
	Capacity Development		
	Knowledge Generation and Exchange		
	Targeted Research		
	Learning		
		Theory of Change	
		Adaptive Management	

		Indicators to Measure Change	
	Innovation		
	Knowledge and Learning		
		Knowledge Management	
		Innovation	
		Capacity Development	
		Learning	
	Stakeholder Engagement Plan		
Gender Equality			
	Gender Mainstreaming		
		Beneficiaries	
		Women groups	
		Sex-disaggregated indicators	
		Gender-sensitive indicators	
	Gender results areas		
		Access and control over natural resources	
		Participation and leadership	
		Access to benefits and services	
		Capacity development	
		Awareness raising	
		Knowledge generation	
Focal Areas/Theme			
	Integrated Programs		
		Commodity Supply Chains ([1][88]Good Growth Partnership)	
			Sustainable Commodities Production
			Deforestation-free Sourcing
			Financial Screening Tools
			High Conservation Value Forests
			High Carbon Stocks Forests
			Soybean Supply Chain
			Oil Palm Supply Chain
			Beef Supply Chain
			Smallholder Farmers
			Adaptive Management
		Food Security in Sub-Sahara Africa	
			Resilience (climate and shocks)
			Sustainable Production Systems
			Agroecosystems
			Land and Soil Health
			Diversified Farming
			Integrated Land and Water Management
			Smallholder Farming
			Small and Medium Enterprises
			Crop Genetic Diversity
			Food Value Chains
			Gender Dimensions
			Multi-stakeholder Platforms
		Food Systems, Land Use and Restoration	
			Sustainable Food Systems
			Landscape Restoration
			Sustainable Commodity Production
			Comprehensive Land Use Planning
			Integrated Landscapes
			Food Value Chains
			Deforestation-free Sourcing
			Smallholder Farmers
		Sustainable Cities	
			Integrated urban planning
			Urban sustainability framework
			Transport and Mobility
			Buildings
			Municipal waste management
			Green space
			Urban Biodiversity
			Urban Food Systems
			Energy efficiency
			Municipal Financing

		Global Platform for Sustainable Cities
		Urban Resilience
Biodiversity		
	Protected Areas and Landscapes	
		Terrestrial Protected Areas
		Coastal and Marine Protected Areas
		Productive Landscapes
		Productive Seascapes
		Community Based Natural Resource Management
	Mainstreaming	
		Extractive Industries (oil, gas, mining)
		Forestry (Including HCVF and REDD+)
		Tourism
		Agriculture & agrobiodiversity
		Fisheries
		Infrastructure
		Certification (National Standards)
		Certification (International Standards)
	Species	
		Illegal Wildlife Trade
		Threatened Species
		Wildlife for Sustainable Development
		Crop Wild Relatives
		Plant Genetic Resources
		Animal Genetic Resources
		Livestock Wild Relatives
		Invasive Alien Species (IAS)
	Biomes	
		Mangroves
		Coral Reefs
		Sea Grasses
		Wetlands
		Rivers
		Lakes
		Tropical Rain Forests
		Tropical Dry Forests
		Temperate Forests
		Grasslands
		Paramo
		Desert
	Financial and Accounting	
		Payment for Ecosystem Services
		Natural Capital Assessment and Accounting
		Conservation Trust Funds
		Conservation Finance
	Supplementary Protocol to the CBD	
		Biosafety
		Access to Genetic Resources Benefit Sharing
Forests		
	Forest and Landscape Restoration	
		REDD/REDD+
	Forest	
		Amazon
		Congo
		Drylands
Land Degradation		
	Sustainable Land Management	
		Restoration and Rehabilitation of Degraded Lands
		Ecosystem Approach
		Integrated and Cross-sectoral approach
		Community-Based NRM
		Sustainable Livelihoods
		Income Generating Activities
		Sustainable Agriculture
		Sustainable Pasture Management

		Sustainable Forest/Woodland Management
		Improved Soil and Water Management Techniques
		Sustainable Fire Management
		Drought Mitigation/Early Warning
	Land Degradation Neutrality	
		Land Productivity
		Land Cover and Land cover change
		Carbon stocks above or below ground
	Food Security	
International Waters		
	Ship	
	Coastal	
	Freshwater	
		Aquifer
		River Basin
		Lake Basin
	Learning	
	Fisheries	
	Persistent toxic substances	
	SIDS : Small Island Dev States	
	Targeted Research	
	Pollution	
		Persistent toxic substances
		Plastics
		Nutrient pollution from all sectors except wastewater
		Nutrient pollution from Wastewater
	Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
	Strategic Action Plan Implementation	
	Areas Beyond National Jurisdiction	
	Large Marine Ecosystems	
	Private Sector	
	Aquaculture	
	Marine Protected Area	
	Biomes	
		Mangrove
		Coral Reefs
		Seagrasses
		Polar Ecosystems
		Constructed Wetlands
Chemicals and Waste		
	Mercury	
	Artisanal and Scale Gold Mining	
	Coal Fired Power Plants	
	Coal Fired Industrial Boilers	
	Cement	
	Non-Ferrous Metals Production	
	Ozone	
	Persistent Organic Pollutants	
	Unintentional Persistent Organic Pollutants	
	Sound Management of chemicals and Waste	
	Waste Management	
		Hazardous Waste Management
		Industrial Waste
		e-Waste
	Emissions	
	Disposal	
	New Persistent Organic Pollutants	
	Polychlorinated Biphenyls	
	Plastics	
	Eco-Efficiency	
	Pesticides	
	DDT - Vector Management	
	DDT - Other	
	Industrial Emissions	
	Open Burning	
	Best Available Technology / Best Environmental Practices	
	Green Chemistry	
Climate Change		
	Climate Change Adaptation	
		Climate Finance

		Least Developed Countries Small Island Developing States Disaster Risk Management Sea-level rise Climate Resilience Climate information Ecosystem-based Adaptation Adaptation Tech Transfer National Adaptation Programme of Action National Adaptation Plan Mainstreaming Adaptation Private Sector Innovation Complementarity Community-based Adaptation Livelihoods
	Climate Change Mitigation	Agriculture, Forestry, and other Land Use Energy Efficiency Sustainable Urban Systems and Transport Technology Transfer Renewable Energy Financing Enabling Activities
	Technology Transfer	Poznan Strategic Programme on Technology Transfer Climate Technology Centre & Network (CTCN) Endogenous technology Technology Needs Assessment Adaptation Tech Transfer
	United Nations Framework on Climate Change	Nationally Determined Contribution

[1]