Balochistan Blue Economy 10-Year Strategic Development Plan (2025–2035)

# Roadmap for Harnessing Coastal and Marine Resources for Sustainable Socio-Economic Growth

# By

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**1. Executive Summary**

The Balochistan Blue Economy Development Plan (2025–2035) outlines a transformative strategy to harness and sustainably develop the province’s extensive marine and coastal offshore resources. By integrating the Balochistan Sustainable Fisheries and Aquaculture Policy measures (2025-2035) with the Balochistan Coastal Development Master Plan, the initiative aims to create a resilient and diversified blue economy that fosters socio-economic growth while protecting the environment. The plan is in line with national and global policies and commitments regarding the Blue Economy.

The strategic plan aims to produce significant economic growth, environmental sustainability, and social development, thereby creating a lasting impact on the livelihoods in the province. It facilitates increased investment, encourages innovation across marine sectors, and generates both formal and informal jobs for the province’s youth. Improving management and conservation measures will bolster coastal resilience and protect marine ecosystems. The proposed initiatives will promote inclusive development, elevate local incomes, and enhance community resilience against climate change and economic shocks.

After a thorough analysis of current projects and potential investments and interventions, the strategic plan centres on seven key objectives: establish**ing a sustainable marine and inland living resource management system, fostering aquaculture development and diversification, driving innovation through modern practices and technology, enhancing stakeholders' capacity, achieving diversification through value chain and infrastructure development, improving governance and regulatory mechanisms, and boosting participation and stakeholder engagement.** Each objective delineates various goals, a range of activities, investment considerations, and measurable outcomes. The plan sets forth short-term, medium-term, and long-term priorities that encompass key actions and their intended results. Additionally, it identifies proposed projects and interventions, projected employability, the budget, and financial plans, direct and indirect revenue generation, phased implementation timelines, and concludes with a mechanism for monitoring, evaluation, reporting, and way forward.

**2. Introduction & Context:**

Balochistan’s extensive coastline, abundant fishery resources, and strategic geographic position create significant potential for a vibrant blue economy. However, underinvestment, outdated practices, and fragmented management have historically constrained growth in the fisheries and coastal sectors. As per established business guidelines, the role of Fisheries and Coastal Development is to promote an integrated approach to coastal development and fisheries management in Balochistan. The department has introduced a preliminary Master Plan for coastal development that outlines a clear strategy for reviving and enhancing essential coastal infrastructure such as jetties, landing sites, and access roads. Regarding fisheries, a Fisheries & Aquaculture policy has been implemented, proposing clear measures for the sector, while a revised Fisheries & Aquaculture bill, currently in progress, will further strengthen our regulatory framework.

Balochistan boasts a 770 km coastline, with a vast territorial sea of 16,170 sq km and an additional coastal zone extending up to 30 km, encompassing around 39270 sq km – approximately the same size as Denmark. Despite these significant marine resources, the fisheries sector reports an annual catch of 163,981 metric tons, alongside a concerning 325,080 metric tons caught illegally during a nine-month season. According to the FRAP-FAO 2025 report, over 90% of our valuable fish stock has been depleted due to unsustainable practices. The Fisheries and Coastal Development Department has historically suffered from poor management, lacking well-developed regulatory and service structures, modern infrastructure, accountability, and strong governance. The sector has been largely overlooked and not prioritised in the development agenda.

The government has recently prioritised the sector, and the department has enacted a comprehensive legal and policy framework that provides robust guidelines—including updated fisheries policies and regulations, PPP regulations, stakeholder engagement protocols, and gender mainstreaming measures. Despite these improvements, significant infrastructural and institutional challenges persist. Current facilities remain outdated or insufficient, with no large-scale aquaculture farms or boat-building yards to enable the conversion of over 16,000 wooden boats to fiberglass. Furthermore, there is no dedicated fish processing plant, such as canning. Moreover, harbour and jetty infrastructures urgently need rehabilitation and expansion, while export promotion, quality control, and research and development mechanisms are still lacking. Coastal development is primarily restricted to a few schemes without a comprehensive development strategy. Hence, this 10-year development strategy is essential to transform Balochistan’s fisheries and marine sectors into a sustainable, diversified blue economy that will contribute to achieving long-term economic growth and job creation opportunities.

**3. Vision, & Mission:**

**Vision**

To transform Balochistan into a vibrant and resilient blue economy hub to foster sustainable development, ensure food security, and promote inclusive growth.

**Mission**

To implement a coordinated 10‐year strategy that promotes sustainable fisheries and aquaculture practices and modernize coastal infrastructure, encourages innovation, and empowers local communities through targeted investments and robust governance.

**4. Strategy Objectives;**

1. **Sustainable marine & inland living resource management system:** Modernize traditional capture fisheries by adopting eco-friendly practices and managing marine resources to prevent overexploitation.
2. **Promoting aquaculture development and diversification:** Initiate and promote sustainable aquaculture—both marine and inland—to provide alternative livelihoods and reduce pressure on wild fish stocks. Diversify coastal aquaculture to seaweed extraction and marine biotechnology.
3. **Innovation through modern practices and technology:** Deploy modern monitoring, research, and digital solutions to improve productivity and management. Invest in technology, research & training centers to foster innovation in marine resource utilization.
4. **Building capacity of the stakeholders:** Equipping local stakeholders with skills, knowledge, and opportunities to participate actively in and obtain benefits from the blue economy.
5. **Achieving diversification through value chain and infrastructure development:** Diversifying the economy via upgraded landing sites, boat building yards, fish processing facilities, coastal tourism, logistics, value-added facilities, and desalination.
6. **improving governance and regulatory mechanisms:** Develop and enforce strong policy and governance frameworks to ensure transparency and compliance.
7. **Strengthening participation and stakeholder engagement:** Engage and facilitate the private sector’s investment in the blue economy and build trust. Integration efforts can be bolstered through innovative financing mechanisms such as blue bonds and public–private partnerships. These mechanisms ensure that investments in coastal infrastructure support job creation, enhance regional connectivity, and strengthen the overall competitiveness of Balochistan’s coastal and marine sectors.

**A) Detail of Strategic Objectives:**

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| **Objective 1: Sustainable Marine & Inland Living Resource Management** | | | | |
| **Goals** | | **Activities** | **Investment Considerations** | **Measurable Outcomes / KPIs in 10 Years** |
| **1.1** | **Establish Robust MCS System for IUU Control** | Deploy MCS technology and protocols; coordinate between provincial and federal agencies. | Investment in surveillance equipment, boats, & operational costs, and inter-agency coordination. | • Reduce IUU fishing incidents by 70% within 5 years. |
| **1.2** | **Formulate & Enforce Rules** | Develop comprehensive, business‐friendly rules covering all aspects of the policy; treat any violation as illegal. | Legal drafting, stakeholder consultations, and enforcement system setup. | • Rules published and enforced within 1 year. • ≥95% compliance as measured by inspections. |
| **1.3** | **Seasonal Fishing Ban on Target Species** | Impose bans during June–August on species in spawning periods (rather than a blanket ban) to protect reproductive stocks and support small-scale fishers’ livelihoods. | Administrative costs to update permits and monitor seasonal closures; capacity for species-specific data collection. | • ≥90% compliance with seasonal bans. • Documented recovery in spawning stocks (≥15% biomass increase over baseline). |
| **1.4** | **Observer Program for Protected Species** | Collaborate with national/international bodies to implement an observer program to protect endangered species (e.g. turtles, dolphins, sharks). | Costs for training observers, equipment, and reporting systems; coordination with UN agencies. | • Observer coverage ≥80% of operations. • Reduction in by-catch of protected species by ≥40%. |
| **1.5** | **Develop Mesopelagic Resource Utilization** | Research and pilot the use of mesopelagic organisms as an alternative “trash” resource for fish meal production. | Upgrade fishing Boats to exploit mesopelagic Resources | • Demonstrated potential to replace ≥20% of conventional fish meal inputs by exploiting mesopelagic resource |
| **1.6** | **Ban Destructive Practices** | Prohibit dynamiting, poisoning, and similar destructive methods (e.g. spearfishing in coral areas). | Enforcement training and monitoring; legal penalties and fines. | • 100% ban in regulations; zero tolerance enforced. • Documented incidents reduced to near zero (<5 per year). |
| **1.7** | **Standardize Catch & Stock Data Reporting** | Mandate the completion of catch disposal forms on landing and maintain digital records (including a combined stock database updated through regular assessments). | IT system development, digital training, and routine stock assessment funding. | • 100% of licensed vessels report catch data electronically. • Stock data at landing sites updated at defined intervals (e.g. every 6–12 months). |
| **1.8** | **Habitat Protection & Pollution Control** | Implement environmental management programs; control pollution sources at harbours. | Funding for environmental management, pollution control measures, and habitat restoration projects. | • Increase protected marine area by ≥20%.  • Reduce pollution incidents by 40%. |
| **1.9** | **Promote Conservation & Alternative Livelihoods** | Establish ban periods; develop alternative income programs. | Support for alternative livelihood programs; compensation schemes for affected fishers. | • Reduce overfishing pressure by 25%.  • Increase alternative livelihood uptake by 30%. |
| **1.10** | **Establish Marine Fish Sanctuaries** | Conduct scientific studies; designate and manage sanctuary areas. | Research, designation, and ongoing management costs. | • Establish 5 new marine sanctuaries within the short–medium term. |
| **1.11** | **Develop Artificial Coral Reefs** | Research and implement coral development projects at selected locations. | Investment in research and coral cultivation projects. | • Develop artificial coral areas over designated marine zones (target area to be defined by research). |
| **1.12** | **Enhance Governance for Inland Fisheries** | Set up the new division; restructure institutional arrangements to focus on sustainable inland fisheries. | Administrative restructuring costs; operational and capacity-building budgets. | • Directorate-General established within 2 years.  • Governance 5performance index i6mproves by ≥30%. |
| **1.13** | **Develop Regulatory Framework for Freshwater Access** | Draft and implement legal frameworks; engage stakeholders for consensus. | Legal drafting, stakeholder consultation, and implementation costs. | • Legal framework adopted within 2 years.  • 90% compliance rate among freshwater fisheries users. |
| **1.14** | **Conduct a Comprehensive Scoping Study** | Conduct a scoping study in collaboration with the Irrigation Department; map resources and recommend a rehabilitation plan. | Research funding; technical consultancy and mapping technology expenses. | • Complete the scoping study and mapping within 3 years.  • Coverage of ≥90% of target freshwater resources. |
| **1.15** | **Map Resources & Build Capacity for Inland Fisheries** | Implement mapping and stakeholder training programs; enhance extension services at district levels. | Investment in mapping technologies, training, and extension service enhancements. | • Train 100% of targeted district offices and stakeholders within 3 years.  • Achieve a ≥25% increase in local capacity ratings. |
| **1.16** | **Raise Awareness on Inland Fisheries Development** | Conduct targeted awareness campaigns using accessible communication channels. | Communication campaign costs; outreach program budgets. | • Achieve a ≥30% increase in stakeholder awareness (measured via surveys) within 2 years. |
| **1.17** | **Establish Freshwater Fish Sanctuaries** | Identify potential sanctuary sites; conduct studies; designate and manage sanctuary areas. | Research, designation, and long-term management costs. | • Develop 20 freshwater sanctuaries within the short–medium term. |
| **1.18** | **Promote Inland Fisheries Value Chain Development** | Develop value chain programs; support infrastructure and market access initiatives. | Investment in infrastructure, market development programs, and capacity building. | • Increase inland fisheries’ economic contribution by ≥40% over 10 years. |
| **1.19** | **Promote Cage-Culture via PPP Models** | Develop and implement lease agreements (15–20 years BOT) for cage-culture projects. | Costs shared via PPP arrangements; lease incentives and infrastructure investment. | • Initiate ≥5 cage-culture projects.  • Increase production from cage-culture by ≥30%. |
| **1.20** | **Implement a Digital Data Collection System** | Develop and deploy a digital data collection system; integrate it with existing reporting mechanisms. | IT systems and software development; ongoing data management and training costs. | • Achieve 100% digital data capture of inland fisheries data.  • Improve data accuracy and reporting timeliness by ≥80%. |
| **1.21** | **Promote Best Practices in Harvest & Handling** | Develop best practice guidelines; conduct training programs and disseminate information widely. | Investment in guideline development, training workshops, and extension services. | • Achieve a ≥30% reduction in post-harvest losses.  • Increase adoption of best practices by ≥50% of inland stakeholders. |
| **1.22** | **Develop & Implement Gear Guidelines** | Create rules and guidelines for acceptable fishing gears and practices in line with IOTC and FAO codes. | Legal drafting, research studies, and stakeholder consultations. | • Guidelines published within 1 year. • ≥90% of licensed vessels compliant with new gear standards. |
| **1.23** | **Appraise & Phase Out Detrimental Gears** | Conduct research to evaluate existing gears and phase out those harmful to ecosystems; only permit gears that conserve biodiversity. | Funding for research studies and monitoring systems. | • Research completed within 2 years. • Reduction in use of harmful gears by ≥80%. |
| **1.24** | **Mandate Gear Marking & Prohibit Toxic Inputs** | Require gear marking for owner identification and ban toxic/explosive materials in fishing operations. | Implementation costs for marking systems and monitoring; enforcement costs. | • 100% of gear marked on issuance of licence. • Zero tolerance violations for toxic/explosive substances. |
| **1.25** | **Streamline Registrations** | Develop clear, business‑friendly procedures for registering vessels, fishers, processing units, aquaculture establishments, and cooperatives; integrate into a Central Digital Register (in liaison with MMD and NADRA). | IT system development, training for staff, legal/administrative costs. | • 100% digital registration of eligible entities within 2 years. • Registration processing time reduced by ≥50%. |
| **1.26** | **Implement Comprehensive Licensing** | Issue sector‑specific licences (for capture, aquaculture, recreational, etc.) with clear guidelines; include catch quota allocation and mandate VMS installation. | Administrative costs, online platform development, periodic inspection budgets. | • All licenses issued within 1 year. • Online licensing adoption rate ≥90%. |
| **1.27** | **Establish Certification Procedures** | Develop procedures to verify and issue certificates for crew, vessel inspections, traceability, and quality; support trade union recognition. | Certification lab costs, training, and operational costs for inspection teams. | • Annual certification of 100% of applicable entities. • Certificate compliance rate ≥95%. |
| **1.28** | **Streamline Auction Processes** | Formulate and implement rules to regulate and lease out freshwater fishing rights and monitor fish landing auctions. | Mapping and regulatory costs; costs for digital auction platform development. | • Complete mapping exercise within 2 years. • Auction process efficiency improved (processing time reduced by ≥40%). |

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| **Objective 2: Aquaculture Development and Diversification** | | | | |
| **Goals** | | **Activities** | **Investment Considerations** | **Measurable Outcomes / KPIs in 10 years** |
| **2.1** | **Launch Small‑Scale Coastal Aquaculture Schemes** | Roll out a 10‑acre scheme on 50,000 acres of government land, allocated on 25‑year lease terms to 5,000 fisherfolk (with preferential hares for youth, women, ultra‑poor). | Land lease administrative costs; seed, solar pumping systems, and extension support; initial free provisions. | • Scheme operational by end of 2026. • ≥25% of participants are youth/women/ultra‑poor; demonstration plots developed on first 2-5 acres per holder.  Develop 02 advanced hatcheries on the coastline |
| **2.2** | **Develop Large-Scale Coastal Aquaculture** | Expand coastal aquaculture as a sustainable alternative to reduce fishing pressure at sea.  Initiate large-scale coastal aquaculture projects and provide technical/financial support. | Investment in aquaculture infrastructure and operational costs. | • Expand coastal aquaculture area by ≥200%.  • Increase aquaculture production by 50%. |
| **2.3** | **Strengthen Sustainable Aquaculture Farming** | Launch pilot projects; provide technical/financial support; build industry support networks.  Develop 05 hatcheries to provide seed | Investment in pilot projects (hatcheries, feed mills), technical assistance, and subsidies. | • Initiate at least 3 sustainable projects over 10 years.  • Increase aquaculture production by 50%. |
| **2.4** | **Meet Nutritional Demand; Increase Income & Exports** | Enhance supply chain efficiency and product quality to meet domestic nutritional needs and boost exports.   Improve quality control; develop targeted marketing and trade facilitation programs. | Investment in quality assurance, marketing campaigns, and supply chain infrastructure. | • Increase domestic consumption by 25%.  • Boost export revenue by 100% annually. |
| **2.5** | **Promote Inland Fisheries & Aquaculture** | Unlock the potential of inland water resources for sustainable production.  Identify suitable sites; implement pilot projects; extend technical and financial support. | Funding for site development, infrastructure, and capacity building. | • Initiate at least 5 inland projects.  • Increase inland aquaculture output by 40%. |
| **2.6** | **Promote Mass‑Scale Shrimp Farming** | Focus on establishing and maintaining competitive shrimp farming through targeted campaigns and support program | Investment in hatcheries, PPP facilitation, and capacity building. | • Initiate shrimp farming projects covering target acreage within 3 years. • Export earnings from shrimp increase by ≥50% over medium term. |
| **2.7** | **Facilitate Large‑Scale Corporate Interventions** | Develop PPP-based coastal aquaculture schemes on 50,000 acres with corporate and social partnerships on BOT basis. | Capital investment, legal/PPP facilitation costs, and long‑term operational budgets. | • Initiate ≥3 large-scale PPP projects within 5 years. • Private investment mobilized increased by ≥40%. |
| **2.8** | **Support Private Aquaculture on Privately Owned Land** | Encourage private initiatives to develop aquaculture on personal land; provide extension services and digital production data tracking. | Minimal administrative support; extension service costs. | • ≥30% increase in private aquaculture initiatives within 5 years. |
| **2.9** | **Control Exotic Species** | Develop legal guidelines and permit systems for import/export of exotic species; establish quarantine and rapid response measures. | Legal review, infrastructure for quarantine, and monitoring systems. | • Permit system operational within 1 year. • Early detection and control response time reduced by ≥50%. |

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| **Objective 3: Technology and Innovation** | | | | |
| **Goals** | | **Activities** | **Investment Considerations** | **Measurable Outcomes / KPIs in 10 years** |
| **3.1** | **Establish a Digital Data & Knowledge Management System** | Develop a centralized digital system; integrate Vessel Monitoring Systems (VMS); provide user training. | Investment in IT infrastructure, software development, ongoing maintenance, and training. | • Achieve 100% digital integration across the value chain.  • Reduce IUU fishing incidents by 70%. |
| **3.2** | **Document Transboundary Barter Trade** | Develop a reporting system integrated with customs procedures; maintain trade records. | Administrative integration and system development costs. | • 100% documentation of transboundary trade data. |
| **3.3** | **Reform Governance & Institutional Structures** | Conduct institutional reviews; restructure organizations; revise operational protocols. | Consultancy, restructuring costs, and training expenses for new governance protocols. | • Implement governance reforms within 2 years.  • Reduce administrative turnaround times by 40%.  • Improve governance performance index by 30%. |
| **3.4** | **Ease of Doing Business via E-Governance** | Develop and deploy the e-governance platform; conduct training and technical support sessions. | Investment in platform development, integration, system maintenance, and user training. | • Reduce processing times by 50%.  • Achieve a 95% satisfaction rate among business users. |
| **3.5** | **Promote Modern Technologies & Best Practices** | Modernize fishing fleets (e.g., fiberglass, solar-powered boats); enforce best practices; provide incentives. | Investment in fleet modernization, incentives, and extension service enhancement. | • Reduce harvest losses by 30%.  • Increase value addition in processing by 25%. |
| **3.6** | **Implement a Digital Data & Traceability System** | Install digital scanning systems at all landing sites; maintain an integrated digital repository. | IT infrastructure and software development; system maintenance and training. | • Achieve 100% digitization of landing sites.  • Reduce IUU incidents by 70%. |
| **3.7** | **Develop a Mobile App for Digital Fishing Maps** | Develop and deploy the app; train vessel owners and crew on its use. | App development, maintenance, and user training expenses. | • App adoption by ≥80% of registered vessels.  • Reduction in navigation-related incidents by 30%. |

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|  | **Objective 4: Capacity building & Community Empowerment** | | | |
| **4.1** | **Enhance Capacity Building & Institutional Competence** | Improve the skills and performance of fisheries institutions and stakeholders.   Organize regular training sessions, seminars, and knowledge-sharing workshops; develop mentorship programs. | Investment in training materials, expert facilitation, and continuous professional development. | • Conduct at least 20 training sessions per year.  • Improve institutional performance ratings by 50% over 5 years. |
| **4.2** | **Strengthen Research & Extension Infrastructure** | Allocate resources and develop a strategy for improved research and extension services; promote university‑industry collaboration. | Budget for research centers, training programs, and outreach activities. | • Strategy implemented within 2 years. • Increase in research outputs by ≥30% over 5 years. |
| **4.3** | **Promote Research, Development & Innovation** | Drive R&D and technological innovation to add value and improve efficiency in the fisheries value chain.  Establish innovation hubs and research centers; provide R&D grants; foster academia–industry partnerships. | Funding for R&D initiatives, technology incubators, and innovation grants. | • Initiate at least 15 R&D projects.  • Secure 5 patents/innovations.  • Increase technology adoption by 30%. |
| **4.4** | **Promote Innovative Technologies & Practices** | Introduce technologies such as Biofloc culture, artificial reefs, and innovative climate‑compatible practices; sponsor R&D projects in quality assurance. | Funding for R&D, technology trials, and pilot projects. | • Initiate ≥5 pilot projects within 3 years. • Adoption of innovative practices in ≥40% of farms. |
| **4.5** | **Expand Extension Services via Mobile Units** | Establish mobile laboratories and extension units to provide doorstep solutions to fishers and aquaculture producers. | Capital investment for mobile units, operational costs, and training. | • Deploy at least 10 mobile units within 2 years. • ≥80% user satisfaction rate in targeted areas. |
| **4.6** | **Establish a State‑of‑the‑Art Data System** | Develop an integrated digital system for catch data, stock assessments, and overall fisheries statistics using digital scanners and IT platforms. | IT infrastructure, software development, training, and ongoing maintenance. | • System operational within 2 years. • 100% of landing sites reporting electronically; data accuracy improved by ≥80%. |
| **4.7** | **Develop a Knowledge Management Platform** | Create a digital repository and platform for sharing research, best practices, and institutional knowledge. | Development and operational costs of the platform; training programmes. | • Platform launched within 2 years. • ≥70% stakeholder engagement and regular usage. |
| **4.8** | **Foster Collaborative Data Exchange** | Establish linkages with national, federal, and international organizations for data sharing and research collaboration. | Partnership and coordination costs; capacity building for data management. | • At least 3 international partnerships established within 3 years. |
| **4.9** | **Enhance Access to Nutritious Food & Livelihoods** | Promote programs that improve food security and income for coastal communities; establish safety nets and social assistance programmes. | Budget for social programmes, subsidies, insurance schemes, and credit facilities. | • ≥20% increase in household incomes among fisher communities. • Food security indices improved by ≥15%. |
| **4.10** | **Promote Gender Balance & Vocational Training** | Ensure equal employment opportunities, provide vocational training, and empower women and marginalized groups in the sector. | Training and capacity-building funds; targeted grants and incentives. | • Increase women’s participation in the sector by ≥30%. • ≥80% of target groups complete vocational training programmes. |
| **4.11** | **Improve Healthcare, Sanitation & Community Infrastructure** | Ensure access to healthcare, clean sanitation, and community facilities (e.g. fishermen’s sheds, community halls) in landing sites. | Public investment in social infrastructure and partnerships with local authorities. | • Facilities established in ≥90% of major landing sites within 3 years. • Measurable improvements in community health indicators. |

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| **Objective 5: Economic Diversification, Value Chain & Infrastructure Development** | | | | |
| **Goals** | | **Activities** | **Investment Considerations** | **Measurable Outcomes / KPIs** |
| **5.1** | **Develop Basic Fisheries Infrastructure** | Modernize coastal, landing, field offices and processing facilities for operations.  Upgrade fish landing sites, storage facilities, and transport networks. | Capital investments in infrastructure projects and ongoing maintenance costs. | • Upgrade 100% of critical facilities.  • Reduce post-harvest losses from 60% to 30% by 2031. |
| **5.2** | **Modernize Post‑Harvest Practices** | Promote use of modern, cost‑effective technologies (e.g. flake ice, fiber boats) and best practices to minimize losses and improve by-catch utilization. | Investment in technology transfer, training programmes, and equipment subsidies. | • Target post-harvest losses reduced by 40% (short‑term) to 90% (long‑term) as measured by volume/value. |
| **5.3** | **Mapping & Planning of Infrastructure Needs** | Carry out spatiotemporal mapping and develop an implementation plan for resilient public/private infrastructure (harbours, jetties, processing units, etc.). | Mapping studies, planning consultancy, and initial capital planning. | • Mapping completed within 1 year. • Implementation plan approved with measurable targets for each facility type. |
| **5.4** | **Rehabilitation & Maintenance Program** | Prepare and implement a program for rehabilitation and maintenance of existing facilities (e.g. Pasni Fish Harbour, jetties, road connectivity). | Budget for rehabilitation projects and ongoing maintenance contracts. | • Rehabilitation completed for ≥80% of targeted facilities within 5 years. |
| **5.5** | **Regularize Unauthorized Existing Jetties** | Register and regularize informal, unauthorized jetties and landing sites.  Develop and implement specific registration rules and guidelines; levy fees, taxes, and rents for structures. | Legal and administrative processing costs; IT system development for registration and monitoring. | • 100% registration and regularization of informal jetties within 3 years.  • Increase in revenue from fees/taxes by a targeted percentage (e.g., ≥20%). |
| **5.6** | **Develop New Infrastructure via PPP** | Engage private sector partners to develop new facilities (e.g. solar-powered water pumping stations, BOT projects for jetties/harbours). | PPP facilitation costs, public investment, and long‑term operational funds. | • At least 50 new infrastructure projects initiated within 5 years. |
| **5.7** | **Modernize Fishing Vessels for Post-Harvest Handling** | Encourage upgrading of vessels to meet post‑harvest handling and storage requirements. | Subsidies for vessel modernization; low‑interest loans. | • Modernization of ≥50% of the fleet within 5 years. • Reduction in on‑vessel spoilage incidents by ≥30%. |
| **5.8** | **Develop SOPs for Landing & Processing Sites** | Establish standard operating procedures (including infrastructure for quarantine, testing labs, and auctions) for safe landing and preprocessing. | Capital expenditure on facility upgrades; training and SOP development costs. | • SOPs developed and implemented within 1–2 years. • Post‑harvest losses at landing sites reduced by ≥30%. |
| **5.9** | **Incentivize Private Sector in Cold Chain & Value‑Addition** | Encourage private investments in cold storage, freezing, packing plants, and specialized transportation. | PPP models, tax incentives, and subsidized financing. | • ≥3 new private cold chain projects initiated within 3 years. • Increased export value of fish products by ≥15%. |
| **5.10** | **Promote Women’s Participation in Post-Harvest Activities** | Introduce measures to encourage and support women’s involvement in processing, value addition, and marketing. | Targeted grants, training programmes, and preferential incentives. | • Increase women’s participation by ≥25% in post‑harvest activities within 5 years. |
| **5.11** | **Best Practices in Processing & Trading** | Encourage economic operators to adopt resource‑efficient, environmentally sound practices in processing, trading and marketing. | Investment in training, capacity building and modern technology adoption. | • ≥75% of operators certified to use best practices within 3 years. • Reduction in resource wastage by ≥20%. |
| **5.12** | **Capacity‑Building for Handling & Transportation** | Implement awareness and training programmes to improve handling practices on vessels, at landing centres, and during transportation. | Budget for workshops, training sessions, and educational materials. | • Conduct ≥20 training sessions per year. • Measurable improvement in handling quality (survey score increase by ≥25%). |
| **5.13** | **Annual Certification & Monitoring of Processes** | Ensure that BFD develops technical capacity to inspect and certify quality control measures at all production stages. | Funding for inspection teams, certification laboratories, and monitoring systems. | • Annual certification of ≥90% of processing units. • Reduction in product rejection rates by ≥30%. |
| **5.14** | **Enhance International Technology Cooperation** | Strengthen linkages with international partners for technology transfer in processing, transportation, and storage. | Funding for international collaboration programmes and technology acquisition. | • At least 2 international technology transfer projects initiated within 3 years. |
| **5.15** | **Implement Sanitary & Quality Standards** | Ensure all facilities comply with HACCP/ISO standards through regular inspections by BFA and BFD. | Costs for periodic inspections, facility upgrades, and certification processes. | • ≥90% compliance rate with sanitary standards. • Increase in export market acceptance rates by ≥20%. |
| **5.16** | **Establish Integrated Digital Traceability System** | Develop a harmonized digital system to register, track, document and report catch, processing and movement of products from sea to market. | IT infrastructure development, software integration, training and maintenance. | • 100% digital traceability coverage within 2 years. • Reduction in IUU-related discrepancies by ≥70%. |
| **5.17** | **Define Clear Traceability Standards** | Develop and enforce rules and standards for catch documentation, vessel identification, electronic tracking, supply chain mapping, and certification. | Regulatory development, stakeholder training, and periodic audits. | • Standards published within 1 year. • ≥90% compliance among monitored entities. |
| **5.18** | **Build Stakeholder Capacity in Traceability** | Implement comprehensive training and capacity-building programmes for fishers, processors, and private companies. | Funding for training programmes, workshops, and communication materials. | • ≥80% of stakeholders trained within 2 years. • Improved traceability audit scores by ≥30%. |
| **5.19** | **Promote Market Competitiveness & Consumer Satisfaction** | Enhance product quality, branding, and market access for domestic and international markets.  Implement quality certification, market information systems, and marketing campaigns. | Investment in quality labs, marketing, and certification process costs. | • Increase export market share by 20%.  • Achieve a consumer satisfaction rating of ≥90%. |
| **5.20** | **Enhance Market Access & Efficiency** | Improve market information systems, promote e‑markets, and establish transparent pricing and trading systems for fishery products. | Investment in digital platforms, marketing, and training programmes. | • Market access improvements reflected in export growth ≥20%. • E‑market adoption rate ≥70%. |
| **5.21** | **Foster Public‑Private‑Producer Partnerships (4Ps)** | Employ the 4Ps model to develop capacity of cooperatives and consolidators, enhance infrastructure and finance access, and strengthen market linkages. | PPP facilitation costs, capacity-building grants, and infrastructure investments. | • Formation of ≥5 cooperative clusters within 3 years. • Increased income for participants by ≥30%. |
| **5.22** | **Promote Local Manufacturing & Business Markets** | Support local boat building, maintenance facilities, and establishment of model business centres/technology parks in key locations. | Capital investment in facilities; incentives for local manufacturers. | • Establish at least 2 model business markets in coastal and inland segments within 3 years. |
| **5.23** | **Golden Sandy Beaches Development** | Establish resorts/hotels, enhance beach facilities (public toilets, restaurants, visitor centers), and upgrade access roads and security. | Investment in infrastructure (construction, maintenance), hospitality training, and facility upgrades. | • Increase tourist arrivals by at least 20% over 5 years.  • Achieve hotel occupancy rates ≥70%.  • Generate incremental revenue of 15–20% annually from beach tourism. |
| **5.24** | **Geological Marvels Promotion** | Develop interpretation centers, guided tours, and signage; create digital and printed educational materials. | Costs for design and construction of visitor centers, interpretive signage, and tour operations. | • Increase visitor numbers by ≥25% within 3 years.  • Achieve a visitor satisfaction rating of ≥85%.  • Generate revenue through entrance fees and guided tours with a target increase of 15% per annum. |
| **5.25** | **Hub Dam & Water Sites Development** | Introduce, water sports facilities (rafting, kayaking), and picnic/rest areas along the Hub Dam and Gaddani & Kund Malir area. | Capital expenditure for water sports equipment, boat services, and infrastructure (piers, parking). | • Increase participation in water sports by ≥30% within 3–5 years.  • Achieve a 20% annual increase in revenue from water-based tourism activities. |
| **5.26** | **Eco‑Tourism Initiatives** | Promote eco‑tourism at sites including Hub Delta, Miani Hor, Hingol River, and other eco‑sensitive areas.  Develop eco‑resorts, nature trails, bird watching platforms, and conservation projects; support sustainable practices and community involvement. | Costs for eco‑friendly infrastructure (green building, renewable energy), environmental management, and capacity building. | • Increase eco‑tourism visitor numbers by ≥30% over 5 years.  • Protect and expand designated eco‑zones by at least 20%.  • Generate eco‑tourism revenue growth of 15% annually. |
| **5.27** | **Religious Tourism Development** | Enhance and promote pilgrimage and religious sites such as Hinglaj Mata Mandir, Surbandar shrine, Chandragupth, and other significant sites.  Improve amenities (accommodation, transportation, sanitation) at religious sites; organize cultural and religious events; streamline visa and travel processes. | Investment in infrastructure upgrades, improved transport links, and marketing campaigns targeting religious tourists. | • Increase religious tourist visits by ≥25% within 3 years.  • Boost revenue from religious tourism by 10–15% annually. |
| **5.28** | **Dam Sites, Parks & Playgrounds Enhancement** | Develop recreational areas at dam sites (Akara Dam, Shadi Kaur Dam) and parks (Cornish Sunset Park, Nasir Bagh) for leisure tourism.  Construct visitor centers, develop landscaped parks, and provide recreational facilities such as picnic areas and boating services. | Budget allocation for landscaping, facility construction, and ongoing maintenance. | • Increase local and regional visitation by ≥20%.  • Achieve park usage rates with satisfaction scores ≥80%.  • Generate consistent community revenue streams. |
| **5.29** | **Heritage & Archeological Sites Restoration** | Restore and promote heritage sites (e.g., Victoria Hut, Ormara Fort, Portuguese Fort) and archeological sites.  Initiate conservation projects, establish museums and guided tour services, and develop interpretative materials for educational outreach. | Restoration and conservation budgets; partnerships with heritage organizations and academic institutions; marketing expenses. | • Complete restoration of key heritage sites within 3–5 years.  • Increase visitor numbers by ≥30% and improve heritage site revenue by 20% annually. |
| **5.30** | **Adventure & Water Sports Promotion** | Establish the coastline as a hub for adventure tourism and water sports (e.g., surfing, scuba diving, boating).  Develop sports facilities and clubs, organize adventure events/festivals, and create safety and training programmes for tourists. | Capital and operational investments for sports facilities, training programs, event organization, and safety equipment. | • Organize at least 3 major adventure events per year.  • Increase participation in water sports by ≥30% within 5 years.  • Achieve revenue growth in adventure tourism of 15% per annum. |
| **5.31** | **Community-Based & Cultural Tourism** | Empower local communities by developing cultural tourism that showcases handicrafts, cuisine, traditional arts, and local festivals.  Establish homestays, artisan workshops, and cultural festivals; promote local cuisine and handicrafts through organized markets. | Funding for capacity building, training for local artisans, infrastructure for homestays and marketplaces, and marketing initiatives. | • Increase local SME revenue from tourism by ≥30% over 5 years.  • Engage at least 50% of local communities in cultural tourism programmes. |
| **5.32** | **Marketing & Branding Strategy for Coastal Tourism** | Implement a robust marketing plan to attract domestic and international tourists and to promote Balochistan as a prime coastal destination.  Develop digital campaigns (social media, YouTube documentaries, short films), create a dedicated tourism portal, and run targeted advertising and PR campaigns. | Marketing and media production budgets; digital platform development; partnership costs with media houses. | • Increase overall tourist arrivals by ≥20% annually.  • Achieve social media engagement growth of ≥30% annually.  • Realize a measurable improvement in brand recognition and online presence. |
| **5.33** | **Public‑Private Partnership for Tourism Infrastructure** | Attract private investment for the development of integrated tourism infrastructure (e.g., marinas, mini‑ports, tourist resorts).  Develop PPP frameworks; facilitate investment tenders; coordinate with local and international investors; establish investment-friendly policies. | PPP facilitation, legal and advisory costs; initial public funding to attract private partners. | • Initiate at least 3 major PPP projects within 5 years.  • Mobilize private investment increased by ≥40% within the same period. |
| **5.34** | **Transport & Connectivity Improvement** | Enhance transport services and connectivity to key tourism sites to improve accessibility.  Upgrade road networks, improve public transportation (shuttle services, private cruises, boat trips), and coordinate with airlines for increased flight routes. | Investment in transport infrastructure, subsidies for shuttle services, and partnership costs with transport providers. | • Reduce average travel time by ≥30%.  • Increase connectivity and tourist satisfaction rates (≥90% positive feedback).  • Achieve a ≥20% increase in tourist arrivals due to improved accessibility. |

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| **Objective 6: Regulatory Enhancement & Robust Governance** | | | | |
| **Goal** | | **Activities** | **Investment Considerations** | **Measurable Outcomes / KPIs** |
| **6.1** | **Redefine Institutional Governance Setup** | Review and restructure the design, functions, roles, responsibilities, and authorities of offices within the Balochistan Fisheries Department (BFD). | Consultancy for organizational review; costs for restructuring and capacity-building; training expenses. | • New governance structure implemented within 2 years.  • Performance improvement index of ≥30% across restructured units. |
| **6.2** | **Establish the Balochistan Fisheries and Aquaculture Council (BFAC)** | Constitute BFAC with representatives from government, civil society, academia, fisherfolk, private sector, and experts; develop SOPs, review legislation, and oversee policy enforcement. | Operational costs for council meetings, stakeholder engagement, and coordination activities. | • Council operational within 1 year.  • 100% of key policy recommendations reviewed annually.  • Stakeholder satisfaction rating ≥90%. |
| **6.3** | **Transfer Gwadar Fish Harbour & Establish a Directorate General/Company** | Merge existing harbour authorities; repeal or amend relevant laws (e.g., Pasni Fisheries Harbour Authority Ordinance, BCDA Act); identify potential PPP projects.  or  Make a Cosatal & Harbour Dev. Company to have shares in PPP projects | Legal and administrative restructuring costs; capital expenditure for integration; PPP facilitation expenses. | • Directorate General/ Company established within 2 years.  • 100% integration of harbour management functions.  • Initiation of at least 10 PPP projects within 3 years. |
| **6.4** | **Revisit Fisheries Legislation for Policy Coherence** | Conduct legal reviews; amend existing laws, rules, and guidelines to promote coherence and best practices. | Legal consultancy fees; costs for stakeholder consultations and legislative drafting. | • Revised legislation enacted within 2 years.  • ≥80% alignment with international obligations and national frameworks. |
| **6.5** | **Translate International Obligations in Governing Instruments** | Review international standards; revise governing instruments to reflect global best practices and treaties. | Legal review and amendment costs; expert consultancy fees. | • 100% of relevant international obligations integrated into updated instruments within 2 years. |
| **6.6** | **Develop Legal Procedure for Regularization of Informal Jetties & Harbours** | Draft new legal procedures; engage stakeholders through consultations; implement registration systems. | Legal drafting and stakeholder engagement costs; administrative setup expenses. | • 100% of informal jetties registered and regularized within 3 years. |
| **6.7** | **Develop Legal Procedures for Enforcement, Compliance & Monitoring** | Draft enforcement guidelines; establish compliance monitoring frameworks; train enforcement personnel. | Legal and administrative costs; training and system development expenditures. | • Compliance rate of ≥90% within 2 years.  • Reduction in policy violations by ≥50%. |
| **6.8** | **Establish Coordination Mechanism via a Dedicated Directorate at Quetta** | Set up a Directorate of E‑Governance, Monitoring, Coordination and Public Relations at Quetta; develop coordination protocols and integrated communication platforms. | Organizational setup costs; staffing and operational expenses; IT support for communication systems. | • Directorate operational within 1 year.  • Inter-agency coordination metrics improve by ≥40%. |
| **6.9** | **Establish a Robust E-Governance System & FMIS** | Develop and deploy an integrated Fisheries Management Information System (FMIS) covering registrations, licensing, VMS, catch data, traceability, etc. | Investment in IT infrastructure; software development and system integration costs; training and maintenance expenses. | • System fully operational within 2 years.  • Processing times reduced by ≥50%.  • User satisfaction rate ≥95%. |
| **6.10** | **Establish a Directorate of Marine Surveillance & Enforcement at Gwadar** | Create the Directorate; deploy technology (e.g., surveillance systems, digital mapping); recruit and train a patrolling force; coordinate with PMSA and other agencies. | Capital investment in surveillance technology and equipment; training, operational, and personnel costs. | • MCS mechanism operational within 2 years.  • IUU fishing incidents reduced by ≥70%. |
| **6.11** | **Establish Special Courts or Tribunals System** | Create Special Courts or Tribunals; develop fast-track judicial procedures; train judicial personnel on fisheries issues. | Administrative and operational costs; training and infrastructure expenses. | • Special courts established within 2 years.  • Case resolution times reduced by ≥50%. |
| **6.12** | **Enforce Labour Rights & Welfare** | Ensure protection of labour rights through clear regulations, digital registries for social benefits (EOBI), and establishing support facilities (e.g. fishermen shades, community halls). | Administrative, training, and social programme budgets. | • 100% of workers registered in digital system. • Reduction in labour disputes by ≥50%. |
| **6.13** | **Prevent Child Labour & Protect Children** | Strengthen enforcement of child protection laws; implement digital age-verification and awareness programmes; provide alternative education and livelihood opportunities. | Public awareness campaigns, digital system setup, and support programme costs. | • Zero child labour in the sector. • ≥90% compliance with age‑verification procedures. |

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| **Objective 7: Strengthening Participatory Governance and Stakeholder Engagement** | | | | |
| **Goal** | | **Activities** | **Investment Considerations** | **Measurable Outcomes / KPIs** |
| **7.1** | **Strengthening Participatory Governance & Stakeholder Engagement** | Ensure inclusive and transparent decision-making by actively engaging all stakeholders.  Establish advisory councils; hold regular consultation forums and public workshops. | Budget for stakeholder events, communication platforms, and outreach programs. | • Hold quarterly stakeholder meetings with ≥90% attendance.  • Achieve a stakeholder satisfaction index of ≥85%. |
| **7.2** | **Establish a Grievance Redressal Mechanism** | Provide an effective system to handle complaints and feedback within the BFD.  Develop a dedicated grievance mechanism; set up communication channels; monitor and report on grievance resolution. | Operational costs for system development; staffing and maintenance expenses. | • Grievance mechanism operational within 1 year.  • ≥90% of complaints resolved; average resolution time reduced by ≥50%. |
| **7.3** | **Promote Private Sector Engagement through Leasing of Land** | Enhance private sector participation in aquaculture, jetties, landing sites, and harbours through leasing of BFD-controlled land.  Develop leasing guidelines; initiate leasing processes under existing policies or PPP laws. | Administrative and legal costs for developing leasing frameworks; facilitation and advisory expenses. | • Increase in leased land projects by ≥50% within 3 years.  • Private sector investment increased by ≥30%. |
| **7.4** | **Develop Cooperative Governance Rules** | Create dedicated rules for fisheries cooperatives ensuring transparency, accountability, and inclusive decision‑making. | Legal drafting, stakeholder consultations, and capacity‑building costs. | • Cooperative governance rules published within 1 year. • ≥80% of cooperatives adopting the new framework within 2 years. |
| **7.5** | **Establish Federation of Cooperatives** | Encourage formation of umbrella organizations (federations) to represent cooperatives and influence policy. | Organizational setup costs, training, and coordination expenses. | • Federation established within 2 years. • Representation in policy decision‑making increased by ≥30%. |
| **7.6** | **Provide Startup Grants & Support Services** | Offer financial assistance, training and infrastructure support to fisherfolk cooperatives (especially at key landing sites). | Seed funding via government programmes, PPP support, and capacity‑building budgets. | • ≥15 cooperatives receive startup grants within 3 years. • Beneficiaries (e.g. 50,000 fishers) report ≥25% income improvements. |

**5. Development Priorities**

**I. Short‑Term Priorities (Years 1–3): Laying the Foundation**

This phase focuses on establishing robust governance, essential enforcement mechanisms, and critical infrastructure that will support sustainable fisheries, aquaculture, and coastal economic development.

**Priority 1: Institutional Strengthening & Capacity building**

**Key Actions:**

* Redesign service structures within the fisheries department with clear job descriptions.
* Improve recruitment, retention, and professional development strategies.
* Invest in modern Monitoring, control & surveillance mechanisms including vessel monitoring systems (VMS).
* Roll out a robust system including catch documentation schemes, and marine spatial planning.
* Ensure digital integration and data transparency across stations
* Establish uniform rules for gear use, registration, auction, licensing criteria, and seasonal bans.
* Enforce guidelines to phase out destructive practices.
* Make a Coastal & Harbour Dev. Directorate/Company to have shares in PPP projects; Merge existing harbour authorities; repeal or amend relevant laws (e.g., Pasni Fisheries Harbour Authority Ordinance, BCDA Act);

**Intended Outcomes:**

* At least a 70% reduction in IUU fishing.
* Improved real-time data collection and enforcement of regulations
* Robust Governance

**Priority 2: Modernize the Capture Fisheries and enhance the value of Fish**

**Key Actions:**

* Modernize the fishing fleet by upgrading vessels with selective gears and onboard ice storage cabins.
* Expand financial inclusion with tailored credit facilities.
* Modernize auction markets and improve their efficiency.
* Enhance sanitary and phytosanitary (SPS) compliance mechanisms.
* Develop unified branding, improved processing facilities, export financing, and streamlined trade facilitation.
* Establish the Balochistan Fisheries and Aquaculture Council (BFAC) to institutionalize participatory governance.
* Establish Corporative societies

**Intended Outcomes:**

* Strengthened stakeholder engagement and transparent decision-making.
* Improved coordination among government, industry, and fisher communities.
* Higher policy compliance and effective conflict resolution.

**Priority 3: Studies on Large Coastal Infrastructure Projects**

**Key Actions:**

* Conduct comprehensive feasibility studies on new harbours, processing zones, and logistic hubs.
* Develop data-driven recommendations aligned with environmental and socio-economic criteria.

**Intended Outcomes:**

* Clear identification of high-priority coastal sites.
* Informed investment decisions for sustainable coastal infrastructure.

**Priority 4: Mapping and pilot project for Coastal Aquaculture and Cage Culture**

**Key Actions:**

* Undertake detailed mapping and environmental assessments of the coastline.
* Define zones that reduce conflict with other marine activities while maximizing economic potential.
* Initiate pilot phase, coastal Aquaculture project, and cage culture project (up to 3000 acres)

**Intended Outcomes:**

* Clearly demarcated zones for coastal aquaculture.
* Enhanced investor confidence and ecological balance.

**Priority 5: Design Coastal Aquaculture Farming Models**

**Key Actions:**

* Design coastal aquaculture systems tailored to Balochistan’s unique coastal conditions.
* Validate models through pilot projects and scientific studies.

**Intended Outcomes:**

* Proven aquaculture frameworks that increase productivity and profitability.
* Higher investor confidence due to tested and replicable models.

**Priority 6: Invest in preparing proposals of Coastal Tourism Projects and inviting the private sector**

**Key Actions:**

* Prepare detailed, investment-ready project designs for coastal tourism infrastructure.
* Align tourism projects with sustainable practices and local community benefits.

**Intended Outcomes:**

* Viable, sustainable tourism models that diversify the coastal economy.
* Increased local employment and business opportunities.

**II. Medium‑Term Priorities (Years 4–7): Scaling Up and Expanding Reach**

**The medium-term phase emphasizes expansion of aquaculture and fisheries, increased economic benefits, and integration of technological solutions.**

**Priority 1: Expand Coastal and Inland Aquaculture**

**Key Actions:**

* Launch the Balochistan Coastal & Inland Aquaculture Farming Project (covering 50,000 to 100,000 acres).
* Establish fish feed mills and additional hatcheries.
* Promote incentive-based aquaculture schemes among small-scale producers.

**Intended Outcomes:**

* Aquaculture production increased by 50%.
* Establishment of at least 10 new hatcheries supporting coastal and inland aquaculture.

**Priority 2: Improve Post-Harvest Practices & Value Chain Development**

**Key Actions:**

* Develop modern fish processing plants and certification laboratories.
* Upgrade fish handling, storage, and market infrastructure.
* Implement digital traceability and quality‑assurance systems.

**Intended Outcomes:**

* Reduction in post‑harvest losses by 40%.
* Fishery export value increased by 15% through enhanced value addition.

**Priority 3: Blue Infrastructure Development**

**Key Actions:**

* Rehabilitate Pasni Fish Harbour and construct new fish landing harbors.
* Develop fishermen colonies and encourage PPP-based development of marine infrastructure (including boat building yards, slipways, processing plants and branding).

**Intended Outcomes:**

* A 50% increase in fish handling capacity.
* Create new employment opportunities and improve logistic support for the sector.

**III. Long‑Term Priorities (Years 8–10): Sustaining Growth and Innovation**

**In the long-term phase, the focus shifts to fostering innovation, and positioning Balochistan as a regional leader in the blue economy.**

**Priority 1: Institutionalize Fisheries & Aquaculture Research and Development**

**Key Actions:**

* Establish fisheries research centers in Lasbela, Gwadar, and Quetta.
* Expand digital knowledge platforms and data-driven management systems.
* Foster international technology cooperation and academic partnerships.

**Intended Outcomes:**

* Three fully operational research centers driving innovation in fisheries management.
* Increased capacity for evidence-based policy adjustments.

**Priority 2: Promote Eco-Tourism & Marine Conservation**

**Key Actions:**

* Develop Astola Island as a premier ecotourism destination.
* Establish marine parks and conservation zones along key coastal areas.
* Support community-based tourism initiatives to diversify income streams.

**Intended Outcomes:**

* Eco‑tourism revenue grows by approximately 15% annually.
* Expansion of marine protected areas by at least 20%.

**Priority 3: Establish Blue Economy Leadership**

**Key Actions:**

* Host regular Blue Economy Summits (beginning in Year 9) to showcase innovations and foster partnerships.
* Develop PPP-driven export hubs for seafood.
* Strengthen regional and global partnerships for technology transfer and investment.

**Intended Outcomes:**

* Fisheries and aquaculture exports surpass $1 billion.
* Full compliance with international standards solidifies Balochistan’s blue economy leadership.

### **6. Proposed Projects and interventions**

**I. Short‑Term Priorities (Years 1–3): Laying the Foundation**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S#** | **Project Name** | **Key Components** | **Estimated Cost (PKR) Million** | **Direct Jobs Created** | **Indirect Jobs Created** | **Expected Impact** |
|  | Fishing Vessel Modernization & Cold Chain Enhancement Project | Upgrade vessels (e.g., “Fishing Boat 8000”) with advanced selective gears and onboard freezing plants | 1840 | 2000 | 2000 | Enhanced catch quality and improved post‑harvest handling |
|  | Blue Infrastructure projects design | Conduct feasibility studies and develop data‑driven recommendations for new harbours, processing zones, and logistic hubs | 250 | 20 | 10 | Clear identification of priority coastal sites and informed investment decisions |
|  | Coastal Aquaculture Mapping and Pilot Project | Undertake detailed mapping and environmental assessments; define aquaculture zones; launch pilot projects (up to 3,000 acres) | 5000 | 1500 | 1000 | Clearly demarcated aquaculture zones and enhanced investor confidence |
|  | Integrated Digital Transformation and Traceability System for Fisheries | Develop a unified IT platform that digitizes catch data, centralizes registration, supports real‑time reporting (VMS, catch documentation), and offers mobile apps for mapping and trade documentation | 100 | 5 | 10 | Improved data integration, transparency, and reduced IUU fishing |
|  | Quality Certification, Traceability, and Stock Assessment Enhancement Project | Establish comprehensive quality assurance, implement supply‑chain traceability, and conduct regular stock assessments | 5000 | 50 | 100 | Enhanced quality compliance and sustainable resource management |
|  | Marine Surveillance, Vessel Monitoring, and Licensing Enhancement Project | Deploy modern surveillance Mechanism and VMS technologies, strengthen sector‑specific licensing, and include coastguard defender boats | 11,000 | - | - | Significant reduction in IUU fishing and improved enforcement |
|  | Fisheries Regulatory Enhancement and Conservation Initiatives Project | Develop and enforce a robust regulatory framework, implement protected species observer programmes, pilot mesopelagic resource utilization, and run awareness campaigns against destructive practices | 100 | - | - | Higher regulatory compliance and conservation outcomes |
|  | Governance and Institutional Reforms Project | Restructure service frameworks, improve recruitment/retention, and establish participatory bodies (e.g., BFAC, cooperative societies) | - | - | - | Improved institutional capacity and transparent decision-making |
|  | Integrated Fisheries Management Information System (FMIS) Project | Implement a digital system to manage registrations, licensing, catch data, and traceability across all stations | 100 | - | - | Streamlined operations and reduced administrative turnaround |
|  | Fisheries Financial Inclusion and Credit Facilities Project | Expand tailored credit products and financial services for fisherfolk and related businesses | 2000 | 100 | 200 | Increased investment in fleet modernization and value chain improvements |
|  | Modernization of Auction Markets Project | Upgrade auction market infrastructure and integrate digital systems for transparency and efficiency | 2000 | 400 | 300 | Streamlined market operations and improved price discovery |
|  | Post‑Harvest Processing, Value Addition, and Quality Assurance Modernization Project | Modernize fish processing facilities at least 2; introduce best practices in handling, storage, and quality control; institute annual certifications | 4000 | 400 | 200  (processing staff, quality inspectors) | Reduced post‑harvest losses and higher product value |
|  | Fisheries Market Competitiveness and Branding Project | Develop & facilitate unified branding, improve export financing and trade facilitation strategies | 200 | 50 | 100 | Increased market competitiveness and export potential |
|  | Enhanced Market Access and E‑Market Platform Project | Establish a digital e‑marketplace for efficient trading and broader market access for fisheries products | 50 | - | 50  (platform developers, logistics) | Improved market access and transparent pricing |
|  | Fisheries Startup Grants and Support Services Project | Provide financial and technical support to emerging fisheries ventures | 1000 | 150 | 200  (grant administrators, technical consultants, farmers) | Increased innovation and sector growth  Upto 50 new ventures established |
|  | Geospatial Marine and Coastal Resource Management Project | Utilize geospatial and remote sensing technologies to map and assess coastal resources for feasibility studies | 200 | - | - | Data‑driven decision-making for coastal infrastructure |
| Total | | | 32,840.00 | 4,675.00 | 4,170.00 |  |

**II. Medium‑Term Priorities (Years 4–7): Scaling Up and Expanding Reach**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr. | Project Name | Key Components | Estimated Cost (PKR) Million | Direct Jobs Created | Indirect Jobs Created | Expected Impact |
| 1 | Large‑Scale Coastal Aquaculture and Inland Fisheries Expansion Project | Launch an aquaculture project (50,000–100,000 acres), establish fish feed mills and additional hatcheries, and promote incentive‑based schemes; integrate inland fisheries scoping and rehabilitation | 5000 | 5000 | 1000 (construction, operational support, logistics) | 50% increase in aquaculture production; establishment of at least 10 new hatcheries |
| 2 | Post‑Harvest Value Chain Enhancement Project | Scale up fish processing plants, upgrade handling/storage and market infrastructure, and implement advanced digital traceability and quality‑assurance systems | 500 | 250 | 300  (processing plant staff, IT support, logistics) | 40% reduction in post‑harvest losses; 15% increase in export value |
| 3 | Local Manufacturing and Business Market Development Project | Stimulate local manufacturing of fisheries-related products and develop business centers to support the value chain | 250 | 20 | 50 (manufacturing, business development support) | Strengthened local production capacity and economic diversification |
| 4 | Integrated Coastal Harbour, Jetty, and Fishermen Colony Development Project (Scale‑Up) | Execute full-scale rehabilitation and construction of fish landing harbours, develop fishermen colonies, and support PPP‑based infrastructure development   * ***Jiwani Harbour Constr*** * ***Kund Malir Harbor Cons*** * ***Pasni Harbour Cons*** * ***Gaddani Harbour Cons*** * ***Damb Harbour Const*** | 17,500 | 1000 | 1500  (New larger boats entry for mesopelagic resource, construction, harbour management, &ancillary services) | 50% increase in fish handling capacity; improved logistics and new job creation |
| 5 | Desalination Plants Project | Construct 08 desalination plants to secure a reliable supply of high‑quality water for local population | 800 | 40 | 80 (plant operators, maintenance technicians, distributors) | Improved water availability |
| 6 | Local Boat Building Yards Development Project | Modernize and expand local 05 boat building and repair yards to enhance vessel production and maintenance | 500 | 100 | 50  (Fiberglass boat makers, skilled labour, trades, other support) | Increased efficiency and capacity in vessel production and repair |
| Total | | | 24,550 | 6,410 | 2,980 |  |

**III. Long‑Term Priorities (Years 8–10): Sustaining Growth and Innovation**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr.** | **Project Name** | **Key Components** | **Estimated Cost (PKR)** | **Direct Jobs Created** | **Indirect Jobs Created** | **Expected Impact** |
| 1 | Fisheries R&D, Innovation Hub, and Research Vessel Procurement Project | Establish research centers in Lasbela, Gwadar, and Quetta; expand digital knowledge platforms; procure a dedicated research vessel for advanced studies | 2000 | 20 | 50  (researchers, technical staff, academic partners) | Three fully operational research centers driving innovation and evidence‑based policy adjustments |
| 2. | Partnership with International Aquaculture Groups | Outsource Ocean Aquaculture blocks/zones for fish farming | 1000 | 300 | 600 | Offshore and on shore farms will be estbalished |
| 2. | Quality Assurance & Maintenance in blue Infrastructures | Port entry & Exit Mechanisms, SPS Measures Compliance, Data Management System on Harbor  Export Facilitation Centers  International Hygienic Compliance | 2000 | 200 | 400  (engineering, planning consultants, other skilled HR) | Clear identification of priority coastal sites and informed investment decisions |
| 3. | Eco Tourism and Marine Conservation Expansion Project | Develop Astola Island as a premier ecotourism destination, establish marine parks, and support community‑based tourism initiatives | 2000 | 30 | 60 (tourism operators, conservation staff, local service providers) | 15% annual eco‑tourism revenue growth; expansion of marine protected areas by at least 20% |
| 4. | Habitat Protection & Ghost Net Control Project | Launch initiatives/campaigns/awareness sessions to protect critical marine habitats and eliminate ghost nets from the ecosystem | 50 | - | - | Significant reduction in habitat degradation and ghost net incidences |
| 5. | Artificial Coral Reef Development Project | Research and establish artificial coral reefs to enhance marine biodiversity and support fish stock recovery | 50 | - | - | Enhanced biodiversity and measurable recovery of fish stocks in designated zones |
| 6. | Blue Economy Leadership & Export Hub Development Project | Host regular Blue Economy Summits, develop PPP‑driven export hubs for seafood, and strengthen regional/global partnerships for technology transfer | 30 | - | - | Fisheries and aquaculture exports surpass $1 billion; solidified regional leadership in the blue economy |
| Total | | | 7,130 | 550 | 1,110 |  |

**7. Summary of Job Creation**

|  |  |  |  |
| --- | --- | --- | --- |
| Category | Direct Jobs Created | Indirect Jobs Created | Total |
| Short-Term (2025-2030) | 4,675 | 4,170 | 8,845 |
| Medium-Term (2026-2032) | 6,410 | 2,980 | 9,390 |
| Long-Term (2026-2035) | 550 | 1,110 | 1,660 |
| Total (10-Year Plan) | **11,635** | **8,260** | **19,895** |

**8. Financial Plan & Budget Allocation**

1. Funding Sources

|  |  |  |
| --- | --- | --- |
| **Source** | **Description** | **Estimated Contribution (%)** |
| **Government Funding** | Development budget for fisheries infrastructure, hatcheries, research | 35% |
| **Private Sector Investments** | Fish farming, aquaculture parks, processing industries | 25% |
| **Donors & International Aid** | FAO, World Bank, Asian Development Bank (ADB) grants | 20% |
| **Public-Private Partnerships (PPP)** | Joint ventures in fisheries projects, cold chain, exports | 10% |
| **Community-Based & Cooperative Funds** | Local fisher cooperatives, self-sustaining models | 10% |
| **Total** |  | **100%** |

1. Annual Budget Estimates (2025-2035). (Rs in Million)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **2025-26** | **2026-27** | **2027-28** | **2028-29** | **2029-30** | **2030-31** | **2031-32** | **2032-33** | **2033-34** | **2034-35** | **Total** |
| **Fisheries Infrastructure Development** | 1,363 | 1,364 | 1,363 | 4,700 | 4,700 | 4,700 | 4,700 | 667 | 667 | 667 | 24,890 |
| **Marine & Inland Aquaculture Expansion** | 1,667 | 1,667 | 1,666 | 1,250 | 1,250 | 1,250 | 1,250 | 333 | 333 | 334 | 11,000 |
| **Cold Storage & Processing Units** | 1,500 | 1,500 | 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,500 |
| **Capacity Building & Training Programs** | 1,000 | 1,000 | 1,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,000 |
| **Fish Hatcheries & Breeding Centers** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 667 | 667 | 666 | 2,000 |
| **Regulatory & Sustainability Measures** | 5,367 | 5,367 | 5,366 | 0 | 0 | 0 | 0 | 700 | 700 | 700 | 18,200 |
| **Technology Adoption & Smart Monitoring** | 133 | 133 | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 400 |
| **Marketing, Branding & Export Support** | 83 | 83 | 84 | 63 | 63 | 63 | 63 | 10 | 10 | 10 | 530 |
| **Total Budget** | 11,113 | 11,114 | 11,113 | 6,013 | 6,013 | 6,013 | 6,013 | 2,377 | 2,377 | 2,377 | 64,520 |

### **9. Key Considerations for Budget Allocation**

i) Revenue Generation Strategy

To ensure financial sustainability, the fisheries sector will adopt multiple revenue streams, including:

* 1. Direct Revenue Sources
     + - Licensing & Permit Fees → Issuing commercial fishing licenses and aquaculture farm permits.
       - Fish Seed & Hatchery Sales → Revenue from supplying quality fish seed to farmers.
       - Cold Storage & Processing Fees → Fees from private sector use of government-built facilities.
       - Export Duties & Certification Fees → Generating revenue from fish exports and certification services.

ii) Indirect Revenue Sources

* + - Public-Private Partnerships (PPP) Royalties → Revenue-sharing in fish processing, cold storage, and supply chains.
    - Value-Added Fish Products → Encouraging processing units to pay for branding and market access.
    - Aquaculture Tourism & Eco-Parks → Revenue from eco-tourism and fishing activity zones.
    - Research & Innovation Commercialization → Collaboration with universities for research-based innovations.

iii) Financial Sustainability Measures

* 1. Gradual Decrease in Government Dependence → Transition from subsidy-driven funding to a self-sustaining sector.
  2. Performance-Based Budget Allocation → Investment in high-growth, high-employment fisheries projects.
  3. Encouraging Private Sector Growth → Incentives for cold chain infrastructure, fish processing, and exports.
  4. Eco-Friendly & Sustainable Fisheries → Ensuring compliance with global fisheries standards to attract international funding.

**10. Phase-Wise Implementation Timeline**

|  |  |  |
| --- | --- | --- |
| **Year** | **Key Milestones** | **Responsibility Departments/Entities** |
| **2025** | Completion of pilot installations and facility upgrades within the scheduled timeline.  Reduction in illegal, unreported, and unregulated fishing incidents by a targeted percentage.  Decrease in fish catch spoilage rates following vessel modernization.  At least a 50% reduction in administrative processing time through digital integration.  Near 100% digitization of key data with ≥95% accuracy in marine resource mapping.  A targeted number of personnel trained, achieving post-training satisfaction above 80%.  High stakeholder engagement with strong adoption of feasibility study recommendations.  Measurable increases in aquaculture production yields and corresponding income improvements.  Favorable cost-benefit outcomes and projected ROI from pilot initiatives.  Improved enforcement response times ensuring compliance with environmental and international standards. | Fisheries & Coastal Development, IT, Finance, PPP Authority, BFAC |
| 2026 | • Expand digital integration across all stations and roll out FMIS system • Achieve 50% progress in vessel modernization and cold chain implementation • Launch coastal aquaculture mapping and pilot projects (up to 3,000 acres) • Establish initial capacity‐building programs and form the Balochistan Fisheries & Aquaculture Council (BFAC) • Modernize auction market and expand tailored credit facilities | Fisheries & Coastal Development, IT, Finance, PPP Authority, BFAC |
| 2027 | • Fully operationalize FMIS/VMS and enforce new licensing and gear regulations (targeting 70% compliance) • Initiate advanced post‑harvest processing and quality assurance improvements • Validate coastal aquaculture farming models through pilot projects • Launch enforcement of new regulatory measures, including protected species observer programmes | Fisheries & Coastal Development, Enforcement Agencies, BFAC, Private Sector |
| 2028 | • Conduct comprehensive performance assessments of digital systems, vessel upgrades, and regulatory enforcement • Update coastal infrastructure feasibility studies and revise project designs • Expand pilot coastal aquaculture projects to additional zones • Intensify capacity‑building, training, and stakeholder engagement programs | Fisheries & Coastal Development, PPP Authority, BFAC, Stakeholders |
| 2029 | • Scale up coastal and inland aquaculture projects (targeting 50,000–100,000 acres) • Begin construction of large‑scale fish processing plants and certification labs • Initiate new harbour, jetty, and fishermen colony projects based on updated feasibility studies • Strengthen inland fisheries rehabilitation and value chain enhancement initiatives | Fisheries & Coastal Development, Construction, Private Sector, PPP Authority |
| 2030 | • Achieve full operationalization of expanded aquaculture projects and supply chain enhancements • Integrate digital traceability and quality‑assurance systems across the sector • Consolidate and standardize post‑harvest value chain practices and infrastructure improvements | Fisheries & Coastal Development, IT, Quality Assurance, Finance, Private Sector |
| 2031 | • Present a comprehensive evaluation report to the Government covering all interventions and outcomes • Consolidate best practices and lessons learned; finalize policy revisions and strategic planning for the next phase • Ensure full stakeholder alignment for continued sector transformation | Fisheries & Coastal Development, Policy Units, PPP Authority, Stakeholders |

**11. Monitoring, Evaluation & Reporting Mechanism**

**A. Key Performance Indicators (KPIs)**

|  |  |  |  |
| --- | --- | --- | --- |
| **KPI** | **Metric** | **Target** | **Frequency** |
| **Economic Growth KPIs** |  |  |  |
| Fisheries Export Value Growth | Annual % increase in export value of fisheries products | 20% increase per year | Annual |
| Aquaculture Production Growth | % increase in aquaculture output (tons or revenue) | 50% increase over baseline (8.00 MT)  by Year 2 | Annual |
| Value‑Added Processing Growth | % increase in revenue from value‑added fish products | 20% increase per year (0%) | Annual |
| **Employment KPIs** |  |  |  |
| Direct Employment Growth | Number of new direct jobs created in the fisheries sector | 1000 new jobs per year  (Baseline; 83,945 Reg. Marine Fisherfolk, 5000, Inland Fish farmers and approx.. 5000 in allied sectors = 93,945 sector employment ) | Annual |
| Indirect Employment Growth | Number of new indirect jobs created in the value chain | 1000+ jobs per year (multiplier effect estimate) | Annual |
| **Production Efficiency KPIs** |  |  |  |
| Post‑Harvest Loss Reduction | % reduction in post‑harvest losses | 50% reduction by Year 5; 90% long‑term target | Annual |
| Catch‑to‑Processing Efficiency | Ratio (%) of processed yield relative to total catch | Achieve ≥80% efficiency by Year 7 | Annual |
| **Sustainability KPIs** |  |  |  |
| IUU Fishing Reduction | % reduction in illegal, unreported, and unregulated fishing | 70% reduction within 5 years | Annual |
| Fish Stock Biomass Increase | % increase in biomass of target fish stocks | 15% increase over baseline (90% decline) | Annual |
| Marine Protected Area (MPA) Expansion | % increase in marine protected area coverage | Increase MPA coverage by ≥20% by Year 10 | Annual |
| Regulatory Compliance Rate | % of licensed vessels compliant with regulations (gear, bans) | 95% compliance | Annual |
| **Innovation KPIs** |  |  |  |
| R&D Investment in Fisheries | 2% of GDP (or sector revenue) allocated to fisheries R&D | 2% target to be defined based on baseline data 1%) by year 10 | Annual |
| Fisheries Research Centers Established | Number of new fisheries research centers or innovation hubs | 3 centers by Year 10 | Annual |
| Technology Adoption Rate in Fisheries | % of operators using digital systems (FMIS, VMS, traceability apps) | 100% adoption by Year 5 | Annual |

**B. Reporting Framework**

**B.1. Reporting Frequency & Stakeholders**

|  |  |  |
| --- | --- | --- |
| **Report Type** | **Frequency** | **Target Audience** |
| **Operational Report** | Monthly | Fisheries Departments & Coastal Dev. Deptt |
| **Performance Report** | Quarterly | Ministry of Maritime Affairs & Fisheries & Coastal Development Authorities |
| **Financial Report** | Bi-Annual | Finance & Planning Departments, Donors, PPP Authorities |
| **Impact & Sustainability Report** | Annual | Government, NGOs, International Partners, Stakeholder Councils (e.g., BFAC) |

**B.2. Communication and Reporting Mechanism of the key components**

**📌 Executive Summary**

* **Overview:** Brief summary of overall fisheries and coastal development performance over the reporting period.
* **Key Achievements & Challenges:** Highlight major milestones (e.g., vessel modernization, new harbour projects, digital integration) and challenges (e.g., compliance gaps, funding shortfalls).
* **Investments & Expenditures:** Summarize total investments made, funds disbursed across projects, and expenditure efficiency.

**📌 Section 1: Coverage & Accessibility**

This section focuses on infrastructure, service reach, and operational coverage.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Indicator** | **Metric** | **Target** | **Current Status** | **Remarks** |
| Upgraded Fishing Fleet | % of vessels modernized vs. total | 100% modernized by Year 3 | % | Focus on “Fishing Boat 8000” upgrades |
| Operational Coastal Harbours & Jetties | Number of functional harbours/landing sites | new/rehabilitated sites | sites | Some facilities require additional upgrades |
| New Coastal Aquaculture Zones Established | % of coastline with designated aquaculture zones | 100% mapped & pilot zones | % mapped | Pilot projects initiated on 3,000 acres |
| Digital FMIS Implementation | % of stations integrated into the FMIS | 100% integration | % | Ongoing digital transformation |

**📌 Section 2: Resource Quality & Sustainability Monitoring**

This section measures the health of marine resources, environmental compliance, and sustainable practices.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Indicator** | **Metric** | **Target** | **Current Status** | **Remarks** |
| IUU Fishing Incidents | % reduction in IUU incidents | 70% reduction within 5 years | % reduction | Monitoring via VMS and observer programmes |
| Fish Stock Biomass | % increase in biomass of key fish stocks | 15% increase over baseline | % | Regular stock assessments ongoing |
| Marine Protected Area (MPA) Expansion | % increase in designated MPAs | ≥20% increase by Year 10 | % | New sanctuaries under study |
| Compliance with Gear Regulations | % of licensed vessels adhering to approved gear use | ≥95% compliance | % | Improved through enforcement initiatives |

**📌 Section 3: Infrastructure Development & Maintenance**

Tracks progress on physical assets such as harbours, boat yards, aquaculture facilities, and desalination plants.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Indicator** | **Metric** | **Target** | **Current Status** | **Remarks** |
| New/Upgraded Harbours & Landing Sites | Number of new or rehabilitated facilities | per year | facilities | Based on Integrated Coastal Harbour Project |
| Modernized Boat Yards | Number of upgraded local boat building/repair yards | 100% modernized by Year 7 | % | Enhances vessel production capacity |
| Aquaculture Infrastructure Expansion | Acreage of coastal/inland aquaculture developed | 50,000–100,000 acres | acres | Includes new hatcheries and feed mills |
| Desalination Plants Installed | Number of plants constructed | plants by Year 7 | plants | Supports water supply for aquaculture |

**📌 Section 4: Financial & Budget Utilization**

Monitors investment, budget adherence, and funding mix in the fisheries and coastal sector.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Indicator** | **Metric** | **Allocated Budget** | **Utilized Budget** | **Variance (%)** | **Remarks** |
| Total Sector Budget Utilization | % of total budget spent on projects | PKR Billion | PKR Billion | –% | Efficiency in project execution |
| Government vs. Donor Funding | % share in total project funding | % Govt, % Donors | % Govt, % Donors | – | Focus on increasing local investment |
| Cost Recovery from Commercial Revenues | % of revenue generated from fisheries product sales | % recovery target | % recovery | – | Tariff and pricing strategy review |

**📌 Section 5: Community Engagement & Stakeholder Satisfaction**

Evaluates the extent of community participation, satisfaction with services, and outreach effectiveness.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Indicator** | **Metric** | **Target** | **Current Status** | **Remarks** |
| Stakeholder Engagement | % of key stakeholders actively engaged | ≥90% engagement | % | Regular meetings via BFAC |
| Capacity Building & Training Participation | Number of training sessions and participant attendance | ≥20 sessions per year | sessions | Increases technical skills and compliance |
| Community Satisfaction | Satisfaction index (via surveys) | ≥90% satisfaction | % | Reflects improved service delivery |

**📌 Section 6: Challenges & Recommendations**

* **Challenges:** Identify issues such as funding gaps, compliance delays, infrastructure maintenance hurdles, or data integration challenges.
* **Recommendations & Action Plan:** Propose corrective actions (e.g., policy revisions, additional capacity-building, enhanced monitoring systems).
* **Conclusion & Next Steps:** Summarize overall performance, lessons learned, and outline immediate actions for the next reporting period.

**C. Independent Monitoring & Evaluation (M&E)**

* **Inter-Departmental Coordination & Stakeholder Engagement:** Review collaboration among Fisheries Departments, coastal authorities, and PPP entities.
* **Roles & Responsibilities:** Verify clarity of roles among government, industry, and community stakeholders.
* **Public-Private Partnerships (PPP) Strategy:** Evaluate the effectiveness and financial viability of PPP projects.
* **Citizen Engagement Mechanisms:** Monitor feedback and participation from fisherfolk and coastal communities through surveys and public forums.

**Conclusion & Way Forward**

* **Summary of Expected Outcomes:** Reiterate key targets such as increased aquaculture production, enhanced marine resource sustainability, and improved economic outcomes.
* **Policy Recommendations:** Highlight necessary adjustments based on performance data.
* **Next Steps for Implementation:** Outline immediate priorities for the next quarter or year based on evaluation results.