

TERMS OF REFERENCE
CONSULTING FIRM
DEVELOPMENT OF SHRIMP AQUACULTURE STRATEGIES AND ACTION PLANS
FOR TOWARD SUSTAINABLE AND CONVERSION-FREE AQUACULTURE IN
SOUTHEAST ASIA - TOSCA PROJECT

A. Project Background

Aquaculture in the Indonesian Sea Large Marine Ecosystem (ISLME) is a significant industry with diverse scales, species, and environmental and social impacts. Two of the most important aquaculture species in the region are shrimp and seaweed. Shrimp farming is highly valuable but has a large environmental footprint, while seaweed cultivation provides significant ecosystem benefits with minimal negative impacts. A key distinction is that shrimp farming relies on feed, which brings substantial environmental and social liabilities, whereas seaweed does not require feed input.

Shrimp farming generates substantial economic value and supports livelihoods across its supply chains; however, it has also caused significant damage to tropical coastal environments. This includes habitat degradation of coastal wetlands, nutrient pollution, bycatch during broodstock or seed collection, chemical discharge, and an overall large ecological footprint. Notably, around 40% of shrimp farming land contributes only 6–11% of production, while the remaining 60% produces the bulk of global farmed shrimp—indicating low productivity and wasted land potential. Although trends such as controlled intensification and the adoption of closed systems for disease control and water purification signal progress, a major unresolved issue lies in the feed sector.

In Indonesia, efforts to improve shrimp farming are ongoing, but sustainability challenges persist—particularly in addressing the environmental and social impacts associated with shrimp feed production. The shrimp feed supply chain remains highly opaque, with limited transparency regarding the sourcing of marine ingredients like fishmeal and fish oil, which are often linked to IUU fishing and habitat destruction. Moreover, smallholder shrimp farmers are frequently disempowered within a supply chain dominated by middlemen who control market access and critical information, further hindering equitable and sustainable development.

To address these challenges, Asian Development Bank (ADB) is providing Technical Assistance (TA) through the “Toward Sustainable and Conversion-Free Aquaculture in Southeast Asia” (TOSCA) Project, which supports both shrimp aquaculture in Indonesia and seaweed aquaculture in Timor-Leste. TA will promote sustainable and conversion-free aquaculture and improve the export performance of key marine commodities. In Indonesia, the project aims to mitigate the negative impacts of shrimp aquaculture by increasing accountability and transparency in shrimp feed supply chains and has intended an outcome to improve the shrimp-feed management system. In Timor Leste, the project aims to improve seaweed cultivation and value generation among seaweed farmers and has an intended outcome to improve sustainability and resilience of seaweed aquaculture production.

Implementation arrangements: The Project will be executed by the National Development Planning Agency (Bappenas) as the Executing Agency, and implemented in partnership with the Directorate General of Aquaculture - Ministry of Marine Affairs and Fisheries (MMAF) as the Implementing Agency. Bappenas, through the Indonesia Climate Change Trust Fund (ICCTF), will act as the Project Implementation Unit (PIU) to coordinate, manage, monitor, and evaluate specific activities related to strategy development and market linkages.

As an effort to improve the shrimp-feed management system in Indonesia, TOSCA will be implemented in partnership with Directorate General Aquaculture - Ministry of Marine Affairs (MMAF) and Deputy of Food, Natural Resources, and Environment - National Development Planning Agency (Bappenas) for respective activities. Bappenas through Indonesia Climate Change Trust Fund (ICCTF) will be responsible for the following outputs and activities:

1) Output 1: National Aquaculture strategies and action plans developed.

ICCTF-Bappenas will lead and facilitate the development of a National Action Plan for shrimp aquaculture, aiming to identify suitable water bodies and land areas by considering carrying capacity, ecosystem services, and other environmental functions; and the development of marketing and business plan for the shrimp aquaculture sector to set out strategies for market engagement and market expansion.

2) Output 2: A credible and functioning shrimp feed management system created to connect shrimp feed to shrimp products.

In collaboration with MMAF, training will be provided for government officials and stakeholders from feed and processing sector, focusing on the requirements for accessing key shrimp export markets, such as those governed by the Seafood Task Force (STF). To ensure transparency in feed sourcing—from ocean harvest to feed processing—a feed-to-shrimp tracking system including a mass balance inspection protocol to validate the system will be developed by MMAF. As part of this effort, five supply chain validation exercises will be conducted to refine and enhance the tracking system. ICCTF-Bappenas will be responsible for implementing the dissemination of policy and regulatory improvements in feed, sharing knowledge with industry stakeholders, and supporting the proposed framework for sustainable financing that strengthens feed-to-shrimp connectivity. Other activities under this output will be implemented by MMAF.

3) Output 3: Sustainable techniques for seaweed aquaculture adopted by seaweed farmers for increased production and capture of nutrients from the ocean. All activities for this output will be implemented by Timor Leste

4) Output 4: Market linkages for shrimp feed and seaweed improved.

Most of the activities related with shrimp will be implemented by MMAF with ICCTF-Bappenas will support the implementation of buyer visits to showcase the improvement in the feed supply chain. The visit also aims to inform the marketing and business plan developed and to help expand market access.

- 5) Output 5: Knowledge management and learning system supported for sustainable and conversion-free aquaculture.

ICCTF-Bappenas will lead the activities to formulate the lesson learned, knowledge products, organize dissemination events and participate in regional meetings and international conferences.

As part of the implementation of Output 1, ICCTF–Bappenas will coordinate the development of a National Shrimp Aquaculture Strategy, which will include a comprehensive marketing strategy and business plan. This strategy will serve as a critical framework for guiding the planning, financing, marketing, and implementation of sustainable shrimp aquaculture across Indonesia. The strategy supports integrated aquaculture development aligned with RPJMN 2025–2029, aiming to strengthen upstream production—such as seed quality, sustainable feed, and disease control—while enhancing downstream value through processing, logistics, and export competitiveness. It responds to persistent productivity challenges in the shrimp sector by promoting nature-based solutions, modern technology, and landscape-based approaches to improve efficiency and climate resilience. By providing a clear pathway for increasing sustainable production, the National Shrimp Aquaculture Strategy serves as a roadmap to guide investment, policy reform, and environmental safeguards—driving inclusive economic growth and contributing to the targeted 3.46% GDP growth in the fisheries, agriculture, and forestry sectors by 2029.

B. Purpose of the Assignment

The purpose of this consultancy is to assist the Government of Indonesia, through ICCTF-Bappenas, in the development of a National Shrimp Aquaculture Strategies and Action Plan that promotes sustainability, inclusiveness, and economic competitiveness.

The strategy will be designed to i) address the key challenges facing Indonesia’s shrimp aquaculture industry, including low productivity, fragmented governance, and environmental degradation; ii) promote the adoption of Aquaculture Management Area (AMA), ensuring responsible farm management and spatial planning while preserving critical ecosystem like mangroves; iii) promote conversion-free aquaculture, supporting Indonesia’s commitment to biodiversity and climate resilience; iv) enhance Indonesia global competitiveness through a national marketing strategy that includes branding, certification, and traceability measures, opening new market opportunities; and v) provide a clear roadmap for government investment focusing on the needs of small and medium scale shrimp farmers like basic infrastructure and farmer capacity building. The strategy will also outline opportunity to attract private sector engagement and responsible private investment in the shrimp aquaculture sector through inclusive business plan.

To achieve the main objectives, the Consultant will be required to familiarize itself with and ensure the Strategy and Action Plan align with ADB key documents including those which govern lending policies and practices, including but not limited to:

- a. ADB Environmental and Social Framework (2024)

- b. Other related ADB policies, strategies, or procedures as relevant to the Project.

By engaging a Consultant, it is expected that the Client will have access to international best practice in the field of sector strategy preparation, engineering design for aquaculture infrastructure, and advice on specific technical issues including environmental and social (“E&S”) requirements that will include health and safety and sexual exploitation, abuse and harassment (SEAH) among others.

C. Duration and Location of the Services

The assignment will be conducted over a period of 10 months. It is expected that the appointed Consultant will commence its services in Quarter 3, 2026, however, the commencement and completion dates and other implementation arrangements for this assignment, including travel, are indicative. The pilot sites will include shrimp-producing areas in Sumatra, Java, Kalimantan, and Sulawesi. Activities as mentioned in the scope of services will be implemented in Jakarta and at selected project pilot sites for the purposes of data collection and validation workshops.

D. Scope of Services and Task

The scope of services for this consultancy will include the following tasks, that is included, but is not limited to:

- a. Assessment of the current shrimp aquaculture sector, aquaculture production and value chain.
 - Conduct a comprehensive review of the current shrimp aquaculture sector, covering the full value chain (upstream to downstream).
 - Identify key production challenges, including feed systems, seed quality, disease management, biosecurity, and post-harvest handling.
 - Conduct field visit and evaluate the performance of traditional, semi-intensive, intensive, and closed shrimp farming systems, including the environment and carbon footprint, input efficiency and climate resilience for each system.
 - Identify land-use conversion issues and propose models for conversion-free aquaculture, aligned with ecological safeguards such as mangrove conservation.
 - Review existing aquaculture regulatory frameworks, identify gaps, and draft recommendation for improved compliance and policy enforcement
 - Assess aquaculture development potential, evaluating resource availability, environmental carrying capacity, and suitability of species and production systems
 - Develop and recommend suitable models for replication and scaling, based on technical, social, land tenure, environmental, and economic and financial feasibility. The model should include but not limited to productivity enhancement through the revitalization of large-scale existing pond areas, integrated approach for corporatization of traditional and semi-traditional farming systems using a

corporate-based area management framework, and specialized model for the cultivation and management of natural *Penaeus monodon* (black tiger shrimp).

- Assess the financial feasibility and economic benefits of different shrimp farming systems by analyzing costs, productivity gains, social and environmental impacts; identify investment and sustainable financing opportunities; and provide policy recommendations to support profitable and sustainable shrimp aquaculture
- Assess the use and impact of plastic materials across the value chain and develop strategies to promote a circular economy.

b. Feed System Assessment and Strategy Development

- Assess the sourcing and use of marine ingredients (e.g., fishmeal and fish oil) in shrimp feed
- Evaluate the level of traceability and transparency in the shrimp feed supply chain.
- Assess the potential use of alternative protein sources that can improve feed quality standards
- Prepare data and criteria to support the national shrimp feed strategy plan

c. Spatial Planning and Aquaculture Management Areas (AMA)

- Map existing and potential shrimp aquaculture zones across Indonesia.
- Evaluate regional conditions for aquaculture development
- Propose the designation and implementation of Aquaculture Management Areas (AMAs) as area-based planning tools aligning recommendations with regional spatial plans (RTRW).
- Input for the main guidelines for governance of AMA implementation

d. Marketing Strategy and Business Plan Development

- Conduct comprehensive market analysis, including market trends, consumer preferences, and competitive dynamics.
- Develop a marketing strategy that includes branding, certification, traceability, and product differentiation, to be included into national strategy.
- Prepare standard business and marketing plan models that include cost-benefit analysis, investment strategies, and funding options from public, private, and donor sources.
- Develop shrimp branding strategies per market segment (e.g., China, U.S., EU) and facilitate brand validation focus group discussions and exchange knowledge with other countries on marketing and branding strategies (e.g. Vietnam)

e. Stakeholder engagement and communication

- Conduct inclusive stakeholder consultations, focus group discussions (FGDs), and validation workshops.

- Engage key actors including smallholder farmers, industry associations, academia, CSOs, local governments, and donors.
 - Develop a communication plan and design multimedia content (e.g. video, podcast, infographic) related with sustainable shrimp aquaculture action plan and branding to promote awareness
- f. Environmental and Social Assessment
- Conduct environmental assessment and evaluate potential environmental and social impact
 - Provide guidance on environmental best practices, compliance with national regulations and international best practices.
 - Develop environmental mitigation strategies to minimize harm and promote ecosystem resilience, to be included into national strategy.
 - Ensure compliance with Indonesia's environmental regulations (e.g., AMDAL, KLHS) and integrate international best practices.
 - Conduct comprehensive social risk assessments, including social mapping, tenure evaluation, labor conditions, and potential conflict identification across the value chain.
- g. Shrimp Aquaculture Infrastructure Assessment
- Conduct assessment on existing Shrimp Aquaculture infrastructure
 - Develop standard engineering designs and layouts for various intensity of farming systems
 - Evaluate site-level infrastructure feasibility to support the development of AMA's and spatial planning with climate related disaster risk consideration
 - Provide indicative cost estimate for infrastructure development to give input for Shrimp Aquaculture Strategies and Action Plan
- h. Development of the National Shrimp Strategy and Action Plan
- Formulate a strategy that integrates sustainability, competitiveness, and inclusive growth, aligned with RPJMN 2025–2029
 - Structure the strategy around short-, medium-, and long-term goals, with clear thematic pillars
 - Develop a prioritized Action Plan with milestones, responsible institutions, and resource requirements.
 - Ensure the strategy promotes conversion-free aquaculture and preserves critical ecosystems
 - Ensure the strategy is completed with marketing and business plan, feed system improvement action plan and AMA strategy implementation.

Notes: Data collection and validation workshops will be carried out at selected pilot sites using representative sampling methods to capture the diversity of shrimp farming systems across different regions.

E. Reports And Deliverables

The Consultant shall report to the Client's nominated representative on all aspects of the assignment. The expected deliverables shall be submitted according to the agreed timeline and within the project implementation period. For all main reports, an executive summary will be included.

Unless otherwise agreed, all deliverables and documents will be in both English and Bahasa Indonesia. The consulting firm is required to provide two printed copies and submit electronic versions via email to the ICCTF Secretariat at secretariat@icctf.or.id.

All documents (reports, financial models, and spatial drawings) must be provided in editable digital format (e.g., Word, Excel, GIS/AutoCAD format) and converted into PDF format. Digital copies of financial feasibility studies, costings, and business plans shall have all links, formulas, and fields active to allow the Client to conduct further evaluation and scenario testing.

Table 1. Time Schedule and Expected Deliverables

No	Deliverables	Time Schedule	Content / Key Activities
1	Inception Report	Within 4 weeks from the issuance of the notice to proceed	Present the workplan, methodology, implementation arrangement, stakeholder mapping, and stakeholder engagement plan.
2	Progress Report 1	Within 12 weeks or 3 months from the acceptance of the inception report	Present the process of data collection in the targeted locations, including desk review, and consultation with key stakeholders. Present drafts of summary findings for: • Shrimp value chain, production challenges, and farming system performance. • Conversion-free aquaculture potential and economic analysis. • Feed system assessment. • Marketing strategy and business plan development.

No	Deliverables	Time Schedule	Content / Key Activities
			• Aquaculture regulatory frameworks and gap analysis. • Environmental and social assessment. • Shrimp aquaculture infrastructure. • Farming model development recommendations. • Financial feasibility and economic benefits. • Communication plan and multimedia content for branding and awareness.
3	Progress Report 2	Within 16 weeks or 4 months from the acceptance of Progress Report 1	Present the comprehensive draft of the National Shrimp Aquaculture Strategy and Action Plan, which must include, but is not limited to, the following key outputs: • A Marketing and Business plan, including branding strategies. • A Model for Conversion-free aquaculture. • Feed strategies, feed sourcing system, and action plan. • Recommendations for scalable farming models (large-scale revitalization, corporatization of traditional and traditional plus farming systems, and <i>Penaeus monodon</i> management). • Operational guidelines and governance models for AMA implementation, including spatial maps. • Regulatory improvements and policy enforcement recommendations. • Standard engineering designs, layouts, and indicative cost estimates for various intensities of farming systems.

No	Deliverables	Time Schedule	Content / Key Activities
			• An Environmental and social mitigation strategy and guidance on best practices. • Technical recommendations and guidelines on site suitability for AMA zoning implementation. • Proposed financial feasibility and economic benefits of various farming systems, sustainable financing for O&M, revitalization feasibility, and financing opportunities. • A communication strategy and design for multimedia content. • Present the results of the public consultation on the draft strategy.
4	Final Report	Within 8 weeks or 2 months from the acceptance of Progress Report 2	• Present the Final National Shrimp Aquaculture Strategy and Action Plan. • Present the final document in a workshop with ICCTF-Bappenas and MMAF for final input and launching. • Submit the completion report consisting of the highlights of all achievements, project financial report, lessons learned, and project documentation. • Other supporting documents.

F. Firm Qualification

To deliver the expected outputs and implement the activities in the scope of works, list of the minimum required experts is provided below. Please note that the consulting team (hereafter will be refer to as the Consulting Firm) can consists of one company or a consortium of companies, civil society organization, academic and research organizations. The consulting entity is also required to demonstrate strong collaborative capabilities to maintain seamless, continuous coordination with the MMAF to ensure mutual alignment in final deliverables. The consulting entity will be expected to have these general requirements:

- a. Research institutions or consulting service providers that are legally established entities with a minimum of 5 years of experience in consulting services in the field of developing national strategy, program

planning, and/or regional planning related to marine resource management, and/or management of aquaculture and fisheries in either government or private environments;

- b. Have at least 1 (one) relevant work experience in the last five (5) years in facilitating and/or implementing the Ecosystem Approach to Aquaculture (EAA), preparing or facilitating spatial planning documents or other similar assignments related to implementing and facilitating RTRW documents with adopting aquaculture under systematic and reasonable planning;
- c. Have at least 1 (one) relevant work experience in the last five (5) years in developing best management practices for shrimp/aquaculture activities, developing aquaculture business models aligned with certification or sustainability standards, or other similar assignments related.
- d. Have at least 1 (one) work experience in the last 5 (five) years in aquaculture management, or fisheries management, or environmental assessment, or supply chain assessment or natural resources management.

G. Team Composition and Qualification Requirements for the Key Experts

The Consultant shall prepare a Deployment Schedule of their experts for the entire period of the assignment (10 months), demonstrating how deliverables will be submitted on time.

Below is the summary of the minimum indicative expert requirements for this consultancy. The Consultant may propose additional inputs or experts if deemed necessary to achieve the objectives of the assignment.

No.	Position	Category	Indicative Input (Person-Months)
A	Key Experts (National)		
1	Aquaculture Management Specialist (Team Leader)	Key Expert	[10]
2	Shrimp Value Chain Specialist	Key Expert	[10]
3	Regional Planning Specialist	Key Expert	[10]
4	Shrimp Marketing and Business Plan Specialist	Key Expert	[10]
5	Environmental and Social Safeguards Specialist	Key Expert	[10]
6	Aquaculture Regulatory Specialist	Key Expert	[10]

7	Business Communication Specialist	Key Expert	[10]
8	Shrimp Aquaculture Infrastructure Specialist	Key Expert	[10]
	Subtotal Key Experts		[80]
B	Non-Key Experts & Support Staff		
9	Finance and Administration Officer	Non-Key / Support	[10]
	Subtotal Non Key Experts & Support Staff		[10]

The detailed task, qualifications, experience required for key experts are given below:

1. Aquaculture Management Specialist (As Team Leader)

The Specialist will meet the following requirements:

- A doctor degree in aquaculture, marine science, fisheries management, aquatic animal health.
- A minimum of 10 years of professional experience in aquaculture management or development planning, with demonstrated experience in national or regional aquaculture policy, area-based management initiatives, or infrastructure planning.
- Strong understanding of Indonesia's aquaculture sector, including farming systems (traditional, semi-intensive, intensive, and closed systems), shrimp feed, resource potential, aquaculture production systems, and regional diversity.
- Strong expertise in evaluating aquaculture potential, including resource suitability, environmental carrying capacity, and infrastructure needs.
- A solid track record in designing strategic plans for aquaculture growth, especially those that integrate environmental sustainability, socio-economic inclusion, aquatic animal health management and biosecurity, and private sector engagement.
- Familiarity with the Aquaculture Management Area (AMA) concept, including technical, environmental, and governance dimensions; Indonesia's aquaculture policies, regulations, and institutional frameworks, particularly those related to land use, environmental safeguards, and regional planning.
- Strong interpersonal and stakeholder coordination skills, and excellent oral and written communication skills in English, including report writing and presentation delivery.
- Ability to work across disciplines and collaborate with spatial planners, environmental and social specialists, and regulatory experts to support integrated AMA design and implementation.

The Aquaculture Management Specialist will:

1. Conduct field visit and evaluate the performance of traditional, semi-intensive, intensive, and closed shrimp farming systems, including the environmental footprint, input efficiency, and climate resilience for each system
2. Assess the aquaculture potential in targeted regions by evaluating:
 - Natural resources (e.g., water quality, land availability)
 - Environmental conditions (e.g., salinity, temperature, biodiversity sensitivity)
 - Access to inputs, infrastructure, and support services
 - Institutional and regulatory readiness for expansion
3. Develop strategies for sustainable aquaculture growth, including:
 - Recommendations for priority species, production systems, and geographic zones
 - Integration of climate resilience, gender equality, environmental safeguards, and aquatic animal health management and biosecurity
 - Strategic actions to align with national policies (e.g., RPJMN, National Aquaculture Strategy)
4. Provide technical input and field support in the planning, implementation, and monitoring of project activities related to aquatic animal health management and biosecurity planning, including:
 - Identification of common disease risks and mitigation strategies across hatchery and grow-out stages
 - Development of standard biosecurity and disease control protocols aligned with farming systems
 - Recommendations to improve hatchery seed quality, pond hygiene, and health surveillance systems
 - Inputs to farm-level standard operating procedures (SOPs) for shrimp health and disease prevention
5. Provide technical advice on the design of aquaculture policies, regulatory improvements, and implementation roadmaps.
6. Collaborate closely with other specialists (e.g., regional planners, marketing experts, environmental and social specialists) and MMAF to ensure an integrated approach to shrimp and aquaculture development planning.
7. Develop and recommend suitable systems for replication and scaling, based on technical, environmental, and economic feasibility and integrated into national strategies and action plans. The model should include, but not be limited to, productivity enhancement through the revitalization of existing pond areas; an integrated approach for corporatization of traditional and semi-traditional farming systems using a corporate-based area management framework, and a

specialized model for the cultivation and management of *Penaeus monodon* (black tiger shrimp).

8. As team leader the specialist should lead the coordination and communication between consulting firm and ICCTF Bappenas and related stakeholders
9. Coordinate and lead development of project report and deliverables and ensures all deliverables meet ICCTF Bappenas and ADB standards
10. Facilitate the flow of essential information among expert members
11. Ensure the implementation following the agreed workplan and budget
12. Maintain close communication and coordination with the MMAF

2. Shrimp Value Chain Specialist

The specialist will possess the following qualifications:

- A Master's degree in fisheries, aquaculture, management, business administration, economy.
- A minimum of 10 years of professional experience working within the fisheries industry, shrimp aquaculture industry, seafood value chains, or relevant sustainability and supply chain programs.
- Demonstrated expertise in the shrimp value chain, including production systems, input supply (e.g., feed and seed), post-harvest handling, processing, and market dynamics.
- Proven ability to identify operational bottlenecks, develop strategic solutions, and implement value chain improvements within multi-stakeholder environments.
- Experience working on sustainable resource utilization, especially related to feed sourcing and traceability systems.
- Strong skills in market research, supply chain mapping, and analysis.
- Familiarity with national policy processes and experience collaborating with government agencies, especially MMAF and Bappenas, is preferred.
- Excellent oral and written communication skills in English, with the ability to produce high-quality reports and present complex information effectively to diverse audiences.

The Shrimp Value Chain Specialist will responsible to:

1. Lead stakeholder engagement, data collection, desk research across the trash fish and shrimp feed supply chain project pilot sites to validate sourcing practices, document challenges, and refine sustainable sourcing guidelines
2. Provide ongoing technical guidance, conduct field visits, participate in workshops, and maintain regular communication with key public and private sector stakeholders including MMAF and Bappenas.

3. Consolidate findings into a practical Shrimp Feed Sourcing and Action Plan that addresses traceability, sustainability, and resource efficiency to be integrated into National Shrimp Aquaculture Strategy and Marketing Plan.
4. Provide consolidated report and presentation outlining the success factors, challenges, and opportunities to strengthen shrimp feed sourcing, traceability, and overall value chain performance.
5. Work closely with project partners such as MMAF, local government, Universities, and farmers to ensure the integration of the feed sourcing strategy into the broader National Shrimp Aquaculture Strategy and Marketing Plan
6. Assist with troubleshooting and support design improvements and opportunities to the shrimp feed traceability systems developed by MMAF, and enhance transparency and accountability across the whole value chain, and ensure alignment with the five supply chain test pilots. This responsibility will need close communication and coordination with MMAF and will depend on the feed traceability system development activity conducted by MMAF.
7. Assess the use and impact of plastic materials across the shrimp value chain, including production, processing, packaging, and distribution stages, to identify key sources and types of plastic use and their environmental footprint.
8. Develop practical recommendations and strategies to promote the circular economy, reduce the plastic footprint in the shrimp value chain, including options for plastic reduction, substitution with sustainable materials, improved waste management, and alignment with national and international sustainability standards.

3. Regional Planning Specialist

The specialist will possess the following qualifications:

- A Master's degree in Economics, Regional Planning, Environmental Economics, Natural Resource Economics, Public Policy, or related fields.
- A minimum of 10 years of professional experience in regional development planning in Indonesia, particularly in coastal development, natural resource management, or aquaculture sectors in Indonesia
- Proven knowledge of Indonesia's planning and spatial frameworks, regulatory framework, environmental and governance instruments (e.g., RPJMN, RPJMD, RTRW, RZWP3K, KLHS), and integration of sectoral priorities into regional development strategies
- Demonstrated experience in economic analysis related to natural resources, including cost-benefit analysis, economic valuation of ecosystem services, and policy-oriented modelling.
- Proven understanding of aquaculture systems and development dynamics, including land-use planning, infrastructure needs, environmental trade-offs, and investment requirements.

- Experience in assessing trade-offs between economic development and environmental sustainability, particularly in coastal and aquaculture contexts.
- Proven ability to work collaboratively with government institutions (e.g., Bappenas, MMAF, provincial planning agencies), CSOs, and academic stakeholders.
- Excellent analytical, facilitation, and communication skills, with strong English writing and reporting abilities.

The Regional Planning Specialist will responsible to:

1. Assess regional shrimp aquaculture development potential in priority provinces, including socio-economic conditions, infrastructure readiness, environmental constraints, and spatial suitability.
2. Conduct spatial and policy alignment analysis to identify gaps between proposed Aquaculture Management Area (AMA) zones and existing planning instruments (RPJMD, RTRW, RZWP3K, KLHS).
3. Support the identification and prioritization of candidate AMA sites by integrating spatial, environmental, and economic feasibility considerations.
4. Develop regional shrimp aquaculture development strategies that are inclusive, conversion-free, and climate-resilient, outlining key opportunities, risks, and enabling conditions.
5. Undertake economic analyses, including cost-benefit assessments of various aquaculture systems, valuation of ecosystem services, and analysis of trade-offs between productivity and environmental sustainability.
6. Provide recommendations on economic instruments, investment priorities, and sustainable financing mechanisms (including public-private partnerships) to support aquaculture development.
7. Facilitate stakeholder engagement through consultations, workshops, and coordination with government, academia, and other partners to ensure alignment and local ownership.
8. Establish collaborative relationships with government agencies, universities, and other research institutions to support data gathering, scenario modeling, and peer validation of economic assumptions.
9. Contribute to the development of the AMA framework and National Shrimp Aquaculture Strategy by integrating spatial planning, economic evidence, and institutional coordination mechanisms
10. Maintain close communication and coordination with the MMAF

4. Shrimp Marketing and Business Plan Specialist

The special will possess the following qualifications:

- A master's degree in marketing, Fisheries, Aquaculture, Natural Resources and Environment Management, economics, agribusiness, Business administration.
- A minimum of 10 years of professional experience in shrimp marketing, trade, or seafood sector economics, or brand development with a proven track record of developing and implementing market strategies and agribusiness sectors.
- Demonstrated expertise in conducting comprehensive market analyses, including assessments of global and domestic market trends, consumer preferences, value chain dynamics, and pricing strategies.
- Proven experience in identifying target audiences, and designing and executing data-driven marketing strategies.
- Demonstrated ability to create and evaluate the effectiveness of marketing campaigns, including those related to branding, product positioning, and market penetration.
- Strong understanding of the shrimp industry landscape in Indonesia, including production systems, trade flows, quality certification, and key export markets.
- Experience working with government institutions, the private sector (including exporters and processors), and international buyers or certification bodies.
- Proven ability to translate market insight into actionable strategies for enhancing industry competitiveness and sustainability.
- Excellent oral and written communication skills in English, with the ability to present complex market insights in a clear and compelling manner including proficiency in producing branding briefs and marketing dashboard.
- Familiarity with natural resource-based industries, including seafood, aquaculture, or sustainable product supply chains, is preferred.
- Strong communication, facilitation, and stakeholder engagement skills, with the ability to liaise across industry, government, and international platforms.

The Shrimp Marketing and Business Plan Specialist will responsible to:

1. Conduct a comprehensive market analysis of the Indonesian shrimp industry and develop market analysis report, including:
 - Demand and supply trends (domestic and export)
 - Consumer behavior and preferences in target markets
 - Analysis of trade competitiveness and export dynamics
 - Evaluation of Indonesia's positioning relative to competitor countries
2. Identify marketing opportunities and constraints at various stages of the shrimp value chain (production, processing, branding, certification, and export), with particular attention to:
 - High-value product development

- Traceability and sustainability certification
- Market diversification strategies
- 3. Develop strategic recommendations and branding plan to improve the shrimp industry's competitiveness and sustainability through:
 - Pricing strategies
 - Product differentiation
 - Branding and promotion in priority export markets (e.g., EU, U.S., China)
 - Domestic market strengthening and downstream value addition
- 4. Develop national shrimp marketing strategy and business plan that includes
 - Segmented branding approaches for different product and market type
 - Alignment of marketing strategies with national development goals and blue economy agenda
 - Consistency with the Shrimp Aquaculture Strategies and Action Plan
 - Campaign strategies and implementation roadmap
 - Scalable and adaptable business plan template for use by public and private stakeholders
- 5. Design and facilitate stakeholder consultation process (i.e. interviews, focus groups, dissemination events) to gather insight and validate strategic direction, including site visit or exchange knowledge with other countries in coordination with ICCTF Bappenas.
- 6. Engage members of global platforms, such as the Seafood Task Force, to align branding initiatives with traceability and sustainability expectations.
- 7. Evaluate the effectiveness of marketing activity, including
 - Create tools to support monitoring of brand performance using Key performance indicators (KPIs) and marketing performance dashboard
 - Develop Mechanisms to track awareness, buyer engagement, and market access improvements
- 8. Maintain close communication and coordination with the MMAF

5. Environmental and Social Safeguards Specialist

The consultant is expected to have the following qualifications:

- A Master's degree in Environmental Science, Environmental Management, Marine Science, ecology, Sociology, Anthropology, Social Development, or related social sciences.
- A minimum of 10 years of professional experience in conducting environmental assessments, designing and implementing environmental management plans,

advising on environmental sustainability, and managing environmental compliance in aquaculture, fisheries, or related sectors.

- Proven knowledge of Indonesian environmental regulations (e.g., AMDAL, UKL-UPL), and familiarity with international best practices and safeguards frameworks.
- Experience in assessing environmental and social risk, developing and implementing environmental, climate change mitigation and adaptation plans for aquaculture, coastal development, or natural resources management projects.
- Understanding of ecosystem-based management principles, integrated coastal zone management, and aquaculture-environment interactions
- Proven ability to work across sectors and with multiple stakeholders, including government agencies, local communities, and development partners.
- Excellent analytical, report writing, and communication skills, with fluency in English and experience producing technical documentation and guidance materials.

The Environmental and Social Safeguards Specialist will be responsible to:

1. Conduct environmental and social assessments related to shrimp aquaculture development, including:
 - Identification and analysis of potential environmental impacts across the value chain (e.g., land conversion, water use, effluent discharge, biodiversity impacts)
 - Evaluation of ecological sensitivity in candidate Aquaculture Management Areas (AMAs) and project pilot sites
2. Develop a comprehensive Environmental and Social Assessment Report, detailing potential project-related environmental impacts and risks, including carbon emissions from farming operations, with actionable recommendations for mitigation.
3. Develop and recommend mitigation strategies to minimize adverse environmental impacts, promote ecosystem resilience, and ensure sustainable resource use. These may include:
 - Site selection and zoning guidance
 - Waste management protocols
 - Biodiversity protection measures
 - Recommendations for mangrove conservation and restoration in aquaculture zones
4. Provide technical advice and support on:
 - Compliance with national environmental regulations (e.g., AMDAL, UKL-UPL)

- Integration of environmental considerations into the National Shrimp Aquaculture Strategy and Action Plan
- 5. Support the development of environmental and social policy and operational guidance, ensuring that recommendations align with national priorities and international standards
- 6. Conduct comprehensive social risk and institutional assessments in aquaculture development areas:
 - Social mapping of key stakeholders across the shrimp aquaculture value chain
 - Assessment of tenure arrangements, contractual systems, and power dynamics, including risks related to dependency, unequal bargaining position, and income vulnerability
 - Analysis of labor conditions, occupational health and safety risks, and potential vulnerabilities among informal workers
 - Identification of existing and potential sources of social conflict, including farmer–company relations and access to grievance mechanisms
- 7. Maintain close communication and coordination with the MMAF

6. Aquaculture Regulatory Specialist

The candidate will possess the following qualifications

- A Master’s degree in aquaculture, fisheries management, law, public policy, or a related discipline.
- A minimum of 10 years of professional experience in aquaculture policy, regulatory compliance, or legal advisory services within the marine or fisheries sector.
- In-depth knowledge of Indonesia’s legal and regulatory frameworks governing aquaculture, including licensing systems, environmental compliance, spatial planning regulations, and food safety standards.
- Strong experience in the analysis and interpretation of regulatory frameworks, and the formulation or revision of legal and policy instruments in the aquaculture or broader natural resources sector.
- Proven ability to liaise effectively with government agencies, legislative bodies, private sector actors, and civil society organizations.
- Familiarity with international best practices in aquaculture governance, including traceability, environmental safeguards, and sustainable production standards.
- Excellent oral and written communication skills in English, including experience drafting policy briefs, legal analyses, and stakeholder communications.

The Aquaculture Regulatory Specialist will be responsible to:

1. Analyze and interpret existing aquaculture regulatory frameworks, with a focus on:
 - Licensing and permitting systems
 - Zoning regulations and Aquaculture Management Area (AMA) frameworks
 - Environmental compliance, biosecurity, and feed-related regulations
 - Market access and traceability standards
2. Develop a comprehensive regulatory analysis report outlining the current legal and institutional frameworks for aquaculture in Indonesia, identifying gaps, inconsistencies, and areas for reform.
3. Identify legal and institutional gaps that hinder the effective implementation of sustainable shrimp aquaculture and propose regulatory improvements aligned with national priorities and international standards.
4. Proposed regulatory improvements supporting the implementation of sustainable aquaculture practices, including those related to zoning, compliance, and traceability.
5. Provide technical guidance on compliance requirements for shrimp producers, processors, and other value chain actors, including recommendations for streamlined, transparent regulatory processes, and integrated into National Shrimp Aquaculture and Action Plan
6. Provide input to the National Shrimp Strategy and Action Plan, specifically on regulatory alignment, legal feasibility, and institutional arrangements for effective implementation
7. Maintain close communication and coordination with the MMAF

7. Business Communication Specialist

The candidate will meet the following criteria:

- A master's degree in communications, marketing, public relations, media production.
- A minimum of 10 years of professional experience in a communications, media, or outreach role, preferably within development projects, public policy, environmental management, or aquaculture/fisheries sectors.
- Demonstrated ability to design and implement strategic communication plans, including audience targeting, messaging development, and multi-channel delivery.
- Proven experience in content creation across multiple formats, including video, podcast, infographics, and presentation materials.

- Excellent written and verbal communication skills in English, with the ability to translate technical content into engaging, audience-friendly formats.
- Strong stakeholder engagement and facilitation skills, with experience coordinating communication efforts across government, private sector, and community stakeholders.
- Familiarity with branding and visual identity alignment in the context of national development programs is an advantage.

The Business Communication Specialist will responsible to:

1. Develop and implement a comprehensive communication strategy to promote the Shrimp Aquaculture Action Plan, aligned with the project's branding guidelines, blue economy objectives, and stakeholder engagement roadmap.
2. Produce high-quality communication materials, including:
 - Short videos and or explainer animations to communicate key messages of Shrimp Aquaculture Action Plan
 - Podcasts or audio content targeting relevant audiences (e.g., small-scale farmers, policymakers)
 - Visual presentations and fact sheets for policy dialogue and media engagement
3. Engage with stakeholders across multiple levels to ensure broad dissemination of the Action Plan's messages
4. Ensure accessibility and inclusiveness of communication content, tailoring language and format to suit diverse target audiences (government officials, civil society, academia, local communities, and industry actors)
5. Maintain close communication and coordination with the MMAF

8. Shrimp Aquaculture Infrastructure Specialist

The candidate should have the following qualifications:

- A Master's degree in civil engineering, coastal engineering, water resources engineering, or a related field.
- A minimum 10 years of relevant experience in aquaculture infrastructure, coastal zone development, water resources engineering or similar projects
- Familiarity with irrigation system, water management infrastructure and environmental impact mitigation
- Proficient in infrastructure design, BoQ development and CAD/GIS tools
- Understanding of Indonesia spatial planning regulation, coastal zone management laws, and public infrastructure standards

- Strong coordination and communication skill, ability to work with multidisciplinary teams and local stakeholders. Fluent in Bahasa Indonesia and proficient in English.

The Shrimp Aquaculture Infrastructure Specialist will responsible to:

1. Conduct infrastructure assessment in selected shrimp farming areas.
2. Evaluate existing engineering conditions, to inform site selection and infrastructure improvement for climate related disaster resilience.
3. Design standard infrastructure models for various farming systems, incorporating sustainable and climate-resilient features.
4. Evaluate site-level infrastructure feasibility and provide technical inputs to the formulation of Aquaculture Management Areas (AMA) ensuring feasibility and environmental safeguards.
5. Prepare indicative cost estimates for infrastructure development and contribute to the financial planning and investment strategy section of the national action plan.
6. Maintain close communication and coordination with the MMAF shrimp farming specialist.

9. Finance and Administration Officer

The ideal candidate will possess the following qualifications:

- A bachelor's degree in finance, accounting, business administration, management, economics, or a closely related field.
- A minimum of 3 years of professional experience in finance and administrative roles, preferably in development projects, donor-funded initiatives, or public-sector programs.
- Demonstrated experience in financial management, budgeting, expenditure tracking, and procurement, aligned with donor or government standards.
- Familiarity with government SOPs, or international donor procedures (e.g., UN, ADB, the World Bank) is a strong asset.
- Strong organizational and coordination skills, with attention to detail and accuracy in documentation.
- Ability to work collaboratively across teams and with stakeholders, while ensuring confidentiality and compliance.
- Proficiency in Microsoft Office tools, especially Excel, and financial management software is an advantage.
- Excellent oral and written communication skills in Bahasa Indonesia and English.

The Finance and Administration Officer (FAO) will support both the operational and financial components of the Shrimp Aquaculture Strategy project. Responsibilities include:

1. Provide day-to-day administrative support, including organizing logistics for meetings, workshops, field visits, and stakeholder engagement events.
2. Maintain project files, records, and correspondence, ensuring documentation is accessible, up-to-date, and compliant with ICCTF and donor procedures.
3. Coordinate schedules, monitor deliverables, and support communication between project team members and external stakeholders.
4. Ensure proper management and control of financial transactions, budgets, and reporting in compliance with ICCTF and donor Standard Operating Procedures (SOPs).
5. Prepare financial requests, payment processing documentation, and activity expenditure reports related to project implementation.
6. Prepare necessary documentation and support donor financial report submissions, ensuring compliance with reporting schedules and formats.
7. Liaise with vendors, consultants, and procurement units for timely financial and contractual processing.
8. Maintain close communication and coordination with the MMAF

H. Relevant material for the assignment

Several key regulatory and strategic instruments serves as foundation for this activity:

- National Mid-Term Development Planning 2025-2029
- Government Work Plan 2026
- Law No. 31/2004 and Amendment Law No. 45/2009 on fisheries. Provide the legal framework for responsible and sustainable fisheries, highlighting environmental protection, legal certainty in aquaculture development, and traceability.
- Regulation of the Minister of Marine Affairs and Fisheries No. 32/2024 on National Fish Traceability and Logistics System (Stelina). Mandates the implementation of a national system for tracking fishery products from origin to market, enhancing transparency, food safety, and compliance with international standards.
- Regulation of the Minister of Maritime Affairs and Fisheries No. 29/2024 on Implementation of the Indonesian National Qualification Framework in Fish Feed Production. The regulation introduces standardized qualifications for professionals in fish feed production, aiming to improve feed quality and support sustainable aquaculture growth
- Regulation of the Minister of Maritime Affairs and Fisheries No. 31/2024 on Control of Antimicrobial Resistance (AMR) in Aquaculture. Provide establishes guidelines

to monitor and control the use of antimicrobials in aquaculture to prevent the development of resistance, ensuring sustainable and safe aquaculture practices.

- Regulation of the Minister of Maritime Affairs and Fisheries No. 21/2024 on National Fish Seed System. Provide establishes a national framework for the production and distribution of high-quality fish seeds, crucial for enhancing aquaculture productivity and sustainability.
- Regulation of the Minister of Maritime Affairs and Fisheries No. 6/2020 on Implementation of Fish Welfare in Farmed Fish. Establishes standards for the welfare of farmed fish, promoting ethical and sustainable aquaculture practices.
- Regulation of the Minister of Maritime Affairs and Fisheries No. 33/2024 on Export of Fishery Products. The regulation outlines procedures and requirements for the exportation of fishery products, aiming to boost competitiveness and ensure compliance with international market standards.
- Directorate General of Aquaculture decree No.372/2018 on Masterplan for the development of aquaculture 2020-2024.
- Aquaculture zoning, site selection and area management under the ecosystem approach to aquaculture, published by FAO and World Bank.
- FAO Code of Conduct for Responsible Fisheries.

I. Client's Input and Counterpart Personnel

a. Services, facilities, and property to be made available to the consultant

There are no particular services, facilities, and property to be made available to the prospective partner for this project. Prospective partner shall use personal tools, and equipment to perform the work

b. Professional and support counterpart personnel to be assigned by the client to the Consultant's team

All the correspondent and consultancy in performing the work in this project activity as detailed in this ToR should be directed to the Secretariat of ICCTF, at procurement@icctf.or.id

J. Basis payment

The type of the contract is a lumpsum (invoicing) contract with a verification process, which will be paid after obtaining approval from the ICCTF.

The budgeted will be charged to TOSCA project budget in MWA ICCTF, Ministry of National Development Planning (Bappenas) for Fiscal Year 2026 - 2027.

The payment shall be proceeded with the following schedule:

Deliverables		Payment Time line	Percentages
1	Inception Report	After approval of the final inception report which has incorporated inputs from relevant stakeholders	20%
2	Progress Report 1	After approval of the final progress report 1 which has incorporated inputs from relevant stakeholders	30%
3	Progress Report 2	After approval of the final progress report 2 which has incorporated inputs from relevant stakeholders	30%
4	Final Report	After approval of the final report which has incorporated inputs from relevant stakeholders	20%