

BELIZE

IFD/CTI

Belize Shrimp Biosecurity Aquaculture Zone Management Project

BL-T1113

Compete Caribbean Partnership Facility – Consultant – Cluster Manager

TERMS OF REFERENCE - 1

Background:

The Inter-American Development Bank (IDB), the UK's Department for International Development (DFID), the Government of Canada, and the Caribbean Development Bank (CDB) have established a co-financing facility called "The Compete Caribbean Partnership Facility" (GN-2851), which is a continuation of the Compete Caribbean Program that funded over 100 private sector development projects over the period 2010-2016 in the Caribbean. This first phase of the Compete Caribbean program (CC1) provided support to cluster initiatives and delivered outstanding results: Over 5595 jobs were created (nearly 80% for women); the revenue of firms and clusters supported increased by 40% over the baseline; and six clusters developed new or improved products or services.

In line with the Compete Caribbean Partnership Facility's (CCPF) objective to support Caribbean firms to grow, innovate, and enter new sectors and markets, the CCPF issued a Call for Proposals (CFP), under its Pillar I focused on Productivity and Innovation in Firms, to attract promising clusters of firms interested in receiving technical assistance. Upon the close of the CFP in November 2017, 91 cluster applications from 13 Caribbean countries were received. After internal short listing, an independent Investment Panel (IP) was convened in January 2018 to evaluate eight cluster applications. Representatives from each cluster made pitches to the IP, who as per the Operating Regulations of Compete Caribbean, recommend to the Facility which projects to fund.

Four projects were recommended to progress to the next step in CCPF's cluster development process which is the co-design of a Cluster Development Plan (CDP) and implementation. These four cluster projects will receive nearly USD\$1.6 million worth of technical assistance for implementation, 20% of which will come from the private firms involved. One of these four projects is "*Belize Shrimp Biosecurity Aquaculture Zone Management*" by the Belize Shrimp Growers Association (BGSA).

The purpose of the CDP is to provide a roadmap for the creation and implementation of a Biosecurity Aquaculture Zone Management Plan (BAZMP) among Belizean shrimp growers. The implementation the BAZMP will create conditions to improve the performance predictability of shrimp production through strengthened biosecurity to reduce and mitigate disease risks and impacts and to strengthen the foundation for strong market positioning and growth. The proposed Project has three primary objectives to:

- Adopt and enforce mandatory regulations for biosecurity: The industry will define and agree on requirements that will be first adopted voluntarily but with the vision that they will become mandatory regulations that will be enforced.
- Enhanced monitoring and data analysis capabilities: Establish and improve surveillance programs of shrimp health and production information and develop capacity for analysis of epidemiological data.
- Capacity building: Develop new knowledge and technology on best production methods for preventing disease, and transfer to participants through training and information sharing.

The Team:

The purpose of the Compete Caribbean Partnership Facility (CCPF) is to support the region in driving competitiveness and sustainable economic growth. The program focuses on: (i) supporting firms to grow, innovate and enter new sectors and markets; and (ii) promoting an environment that enables innovation and growth. More specifically, the CCPF's objectives are to:

- a. Increase productivity in firms;
- b. Increase employment, particularly for women and vulnerable groups;
- c. Generate and sustain exports within and outside the region;
- d. Foster sustainable and inclusive economic growth.

The Compete Caribbean Partnership Facility encompasses two mutually reinforcing private sector development pillars and instruments:

Pillar 1 - Foster productivity and innovation in the private sector through capacity building of business support organizations (BSOs) and direct support to firms, clusters and value chains.

- Direct Support to Clusters and Value Chains
- Innovation Funds
- Technology Extension Services (TES)
- Entrepreneurship Support

Pillar 2 - Enhance the business and innovation climate through technical assistance for regulatory and policy reforms.

- Drafting of legislation, regulations, operating standards, guidelines, etc.
- Strengthening of institutions that promote private sector development, competitiveness, productivity, innovation or sector-level reforms.

The work of the Facility also fosters capacity building through networks, applied knowledge and dissemination of best practices. There is emphasis on using a data-driven and market-driven approach to decision making which requires data management and transformation of data into useful information, and transfer of this information through partnerships between the public and private sector. These activities aim to make the activities of the Facility more catalytic and sustainable. The Facility also integrates gender/youth considerations, and climate change adaptation / mitigation in every project funded.

What you'll do:

The objective of this consultancy is to assist the Belize Shrimp Growers Association (BSGA) with the implementation of a Cluster Development Plan for the development of a Biosecurity Aquaculture Zone Management Plan (BAZMP) among Belizean shrimp growers.

Key Activities

The scope of works includes but is not limited to the following:

- a) Implementation of the CDP and Biosecurity Aquaculture Zone Plan with a detailed workplan
- b) Working with the various stakeholder groups, including women and women-owned firms, to develop and implement the procedures and arrangements to be adopted for the collection and compilation of data and information. This must include a description of GIS methodologies, tools and data to be used, including scenarios for biosecurity zone assessment, management of data, impacts and the vulnerability and adaptation to climate change.
- c) Oversee the collection of baseline data, as well as regular monitoring data, which will be used to inform the BAZMP.
- d) Coordinate with Consultants for the biosecurity risk assessment to identify disease risks and gaps in biosecurity measures
- e) Detail a schedule of, and ensure gender inclusion at, meetings, consultations and training workshops including facilitating Training Workshops in:
 - a. Sustainable Shrimp Farm Practices
 - b. Water Quality Management for Shrimp Farms
 - c. Hatchery Management and Protocols
 - d. Nutrition and Feeding of Shrimp
 - e. Shrimp Diseases and Management
 - f. Processing, Record Keeping and Data Management
 - g. Monitoring and Surveillance.
- f) Determine methodologies to be used for the vulnerability and BAZMP Assessment and finalize the work plan and timetable.
- g) Provide information using an appropriate Information Technology (IT) platform for the sharing of scientific empirical data and management systems to inform production and disease mitigation decisions.
- h) Assist in the establishment of gender-inclusive:
 - a. Shrimp Industry Technical Team for farm visits, sharing information and lobbying of government stakeholders
 - b. Biosecurity Zone Management Plan
 - c. Research and Development Board
 - d. Innovation Fund and a Disaster Fund.
- i) Initiate the establishment of centralized laboratory services to facilitate farms, lower costs and get faster response times for management decision making.
- j) Collaborative Marketing Initiatives from the Industry
- k) Provide timely and regular reports to all key stakeholders to facilitate management of the CDP and BAZMP.

Deliverables:

Guided by the scope of this consultancy and the general requirements of Compete Caribbean, the consultant will produce an indeterminate number of documents as far as appropriate and in line with the completion of the defined activities. Nevertheless, the following deliverables are expected:

- A detailed implementation work plan and schedule, no later than four weeks after the start of the consultancy;
- Timely progress reports for every three-month period of implementation, no later than one month after the close of the period;
- An end of project report no later than three months after the close of the project;
- Mission Reports, as necessary.

Payment timeline:

The consultant will be paid in accordance with the following schedule;

- a) 15% upon submission and acceptance of the work plan;
- b) Quarterly and in equal disbursements across the duration of the project and upon the presentation and acceptance of the three month period implementation reports and the end of project report;
- c) 15% upon submission and acceptance of the final project report;

Costs arising from approved business-related travel and per diems will be reimbursed by filing separate statements of expense.

Skills you'll need:

Education:

- Post graduate qualification in relevant fields/thematic areas required to carry out the works as included in the scope of this study:
 - in biological sciences/data management/project management preferably
 - related to with experience in cluster development programs and
 - strategies to improve the competitiveness of private sector organizations

Experience:

- Experience in project management and in monitoring and evaluation are required.
- Sound understanding of legislation, regulations, and guidelines for aquatic biosecurity is required.
- Experience in climate change vulnerability and impact assessment and adaptation methodologies is an asset
- Professional experience working on technical assistance/loan programs under multilateral institutions such as the IDB, EU, World Bank, or similar bodies would be an asset.
- Experience working in the Caribbean region would be an asset.

Languages:

- Excellent ability to communicate in English, both written and spoken.

Core and Technical Competencies:

- Knowledge of aquaculture and aquatic biosecurity, or a similar field related to marine sciences

- Demonstrated competence in developing GIS based outputs
- Excellent communication skills, good working relationship with the government and other organisations, and ability to collect and analyse data and information.
- Facilitation and leadership skills with ability to relate to broad range of stakeholders.
- Have a flexible approach and persistence to optimize results.
- Demonstrated skills in project preparation and report writing

Opportunity Summary:

- **Type of contract and modality:** Individual, Product and External Services Contractual (PEC), Lump Sum
- **Length of contract:** Twenty-four (24) months from the start date
- **Location:** Belize
- **Responsible person:** Gerard Alleng, Climate Change Senior Specialist, of the Climate Change and Sustainable Development Division (CSD/CCS).
- **Requirements:** You must be a citizen of one of the [IDB's 48 member countries](#) and have no family members currently working at the IDB Group.

Our culture: Working with us you will be surrounded by a diverse group of people who have years of experience in all types of development fields, including transportation, health, gender and diversity, communications and much more.

About us: At the Inter-American Development Bank, we're devoted to improving lives. Since 1959, we've been a leading source of long-term financing for economic, social, and institutional development in Latin America and the Caribbean. We do more than lending though. We partner with our 48 member countries to provide Latin America and the Caribbean with cutting-edge research about relevant development issues, policy advice to inform their decisions, and technical assistance to improve on the planning and execution of projects. For this, we need people who not only have the right skills, but also are passionate about improving lives.

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Visa and Work Permit: The Bank, pursuant to applicable policies, may submit a visa request to the applicable immigration authorities; however, the granting of the visa is at the discretion of the immigration authorities. Notwithstanding, it is the responsibility of the candidate to obtain the necessary visa or work permits required by the authorities of the country(ies) in which the services will be rendered to the Bank. If a candidate cannot obtain a visa or work permit to render services to the Bank the contractual offer will be rescinded

Consanguinity: Pursuant to applicable Bank policy, candidates with relatives (including the fourth degree of consanguinity and the second degree of affinity, including spouse) working for the IDB, IDB Invest, or MIF as staff members or Complementary Workforce contractuales, will not be eligible to provide services for the Bank.

Diversity: The Bank is committed to diversity and inclusion and to providing equal opportunities to all candidates. We embrace diversity on the basis of gender, age, education, national origin, ethnic origin, race, disability, sexual orientation, and religion. We encourage women, Afro-descendants and persons of indigenous origins to apply.

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Compete Caribbean Partnership Facility – Consultant – Develop Biosecurity Control Measures and Regulations

TERMS OF REFERENCE - 2

Background:

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What you'll do:

A core component of the Biosecurity Aquaculture Zone Management Plan (BAZMP) will be the development of control measures and regulations for biosecurity necessary to implement and regulate the BAZMP.

The consulting firm/consultant's proposed activities include, but are not limited to:

- Meet with Biosecurity Aquaculture Zone Management Plan (BAZMP) consultants to understand the biosecurity protocols that should need to be regularized.
- Meet with Belize Shrimp Growers Association (BSGA) members – including women and women-owned firms - to review the biosecurity measures that need to be regulated.
- Conduct meetings with Shrimp Aquaculture Cluster members and Government regulatory agencies to discuss the biosecurity measures that need additional institutional support.
- Draft gender-sensitive control measures and regulations for biosecurity along the BAZMP.
- By consensus, define the control measures and regulations that will be adopted, voluntary, by cluster members and define a lifetime to move from voluntary to mandatory.

Deliverables:

The following outputs are expected from the consultancy:

- First Draft of control measures and regulations
- Second Draft of control measures and regulations
- Final Draft of control measures and regulations

Payment timeline:

Payment terms will be based on project milestones or deliverables. The Bank does not expect to make advance payments under consulting contracts unless a significant amount of travel is required.

Deliverable	%
First Draft of control measures and regulations	30%
Second Draft of control measures and regulations	30%
Final Draft of control measures and regulations	40%
TOTAL	100%

Skills you'll need:

Education:

- The consultant should have a degree in law with some knowledge in industrial relations.

Experience:

- At least 5 years experience working with the agro-sector or related sectors.

- Demonstrated experience developing control measures and regulations for the agro-sector or related sectors, preferably for shrimp aquaculture sectors.
- Experience working in the Caribbean and Central American region would be an asset.

Languages:

- Excellent ability to communicate in English, both written and spoken.

Core and Technical Competencies:

- Excellent communication skills, good working relationship with the government and other organisations, and ability to collect and analyse data and information.
- Facilitation and leadership skills with ability to relate to broad range of stakeholders.
- Have a flexible approach and persistence to optimize results.
- Demonstrated skills in project preparation and report writing

Opportunity Summary:

- **Type of contract and modality:** Individual, Product and External Services Contractual (PEC), Lump Sum
- **Length of contract:** Nine (9) months from the start date
- **Location:** Belize
- **Responsible person:** Gerard Alleng, Climate Change Senior Specialist, of the Climate Change and Sustainable Development Division (CSD/CCS).
- **Requirements:** You must be a citizen of one of the [IDB's 48 member countries](#) and have no family members currently working at the IDB Group.

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Belize Shrimp Biosecurity Aquaculture Zone Management Project

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**Compete Caribbean Partnership Facility – Consultant – Standardized and Systematic
Data Collection System**

TERMS OF REFERENCE - 3

Background:

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The purpose of the CDP is to provide a roadmap for the creation and implementation of a Biosecurity Aquaculture Zone Management Plan (BAZMP) among Belizean shrimp growers. The

implementation the BAZMP will create conditions to improve the performance predictability of shrimp production through strengthened biosecurity to reduce and mitigate disease risks and impacts and to strengthen the foundation for strong market positioning and growth. The proposed Project has three primary objectives to:

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The Team:

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- Drafting of legislation, regulations, operating standards, guidelines, etc.
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What you'll do:

Parallel to the biosecurity risk assessment and the development of the Biosecurity Aquaculture Zone Management Plan, a consultant will develop standardized and systematic data collection system among shrimp farms.

The consultant's proposed activities include, but are not limited to:

- Meet with the technical team of each farm to understand the farm data collection system, including: parameters, frequency, measurement unit, sampling site, record keeping and data analysis.
- Assess the current data collection systems and define a methodology to standardize the data collection.
- Draft a gender-sensitive data collection standardized protocol for Belize shrimp farms considering the production system, and technical capabilities.
- Conduct hands-on gender-inclusive trainings to validate the standardize data collection protocol.
- Finalize the validated data collection protocols that will standardize the parameters to monitor, the measurement unit, the frequency, the sampling site, record keeping and data analysis.

Deliverables:

The following outputs are expected from the consultancy:

- Report of findings – current data collection and analysis implemented by shrimp farms
- Draft protocol for data collection and analysis
- Report of validation trainings
- Final protocol for data collection and analysis

Payment timeline:

Payment terms will be based on project milestones or deliverables. The Bank does not expect to make advance payments under consulting contracts unless a significant amount of travel is required.

Deliverable	%
Report of findings	30%
Draft protocol for data collection and analysis	30%
Report of validation trainings	40%
Final protocol for data collection and analysis	
TOTAL	100%

Skills you'll need:

Education:

- The consultant should have an advance degree in veterinary, aquaculture or related field, preferable a veterinarian with shrimp aquaculture knowledge.

Experience:

- At least 5 years' experience collecting and analyzing data for aquaculture facilities.
- Demonstrated experience developing standardized and systematic data collection systems, preferably for shrimp aquaculture sectors.
- Experience working in the Caribbean and Central American region would be an asset.

Languages:

- Excellent ability to communicate in English, both written and spoken.

Core and Technical Competencies:

- Excellent communication skills, good working relationship with the government and other organisations, and ability to collect and analyse data and information.
- Facilitation and leadership skills with ability to relate to broad range of stakeholders.
- Have a flexible approach and persistence to optimize results.
- Demonstrated skills in project preparation and report writing

Opportunity Summary:

- **Type of contract and modality:** Individual, Product and External Services Contractual (PEC), Lump Sum
- **Length of contract:** Five (5) months from the start date
- **Location:** Belize
- **Responsible person:** Gerard Alleng, Climate Change Senior Specialist, of the Climate Change and Sustainable Development Division (CSD/CCS).
- **Requirements:** You must be a citizen of one of the [IDB's 48 member countries](#) and have no family members currently working at the IDB Group.

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TERMS OF REFERENCE - 4

Conduct Biosecurity Risk Assessment, Identifying Disease Risks and Gaps in Biosecurity Measures and Develop Biosecurity Aquaculture Zone Management Plan (BAZMP)

Belize

BL-T1113

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[Link to Web approved document](#)

Belize Shrimp Biosecurity Aquaculture Zone Management Project

1. Background and Justification

- 1.1.** The Inter-American Development Bank (IDB), the UK's Department for International Development (DFID), the Government of Canada, and the Caribbean Development Bank (CDB) have established a co-financing facility called "The Compete Caribbean Partnership Facility" (GN-2851), which is a continuation of the Compete Caribbean Program that funded over 100 private sector development projects over the period 2010-2016 in the Caribbean. This first phase of the Compete Caribbean program (CC1) provided support to cluster initiatives and delivered outstanding results: Over 5595 jobs were created (nearly 80% for women); the revenue of firms and clusters supported increased by 40% over the baseline; and six clusters developed new or improved products or services.
- 1.2.** In line with the Compete Caribbean Partnership Facility's (CCPF) objective to support Caribbean firms to grow, innovate, and enter new sectors and markets, the CCPF issued a Call for Proposals (CFP), under its Pillar I focused on Productivity and Innovation in Firms, to attract promising clusters of firms interested in receiving technical assistance. Upon the close of the CFP in November 2017, 91 cluster applications from 13 Caribbean countries were received. After internal short listing, an independent Investment Panel (IP) was convened in January 2018 to evaluate eight cluster applications. Representatives from each cluster made pitches to the IP, who as per the Operating Regulations of Compete Caribbean, recommend to the Facility which projects to fund.
- 1.3.** Four projects were recommended to progress to the next step in CCPF's cluster development process which is the co-design of a Cluster Development Plan (CDP) and implementation. These four cluster projects will receive nearly USD\$1.6 million worth of technical assistance for implementation, 20% of which will come from the private firms involved. One of these four projects is "Belize Shrimp Biosecurity Aquaculture Zone Management" by the Belize Shrimp Growers Association (BGSA).
- 1.4.** The purpose of the CDP is to provide a roadmap for the creation and implementation of a

Biosecurity Aquaculture Zone Management Plan (BAZMP) among Belizean shrimp growers. The implementation of the BAZMP will create conditions to improve the performance and predictability of shrimp production through strengthened biosecurity to reduce and mitigate disease risks and impacts and to strengthen the foundation for strong market positioning and growth. The proposed Project has three primary objectives to:

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- Capacity building: Develop new knowledge and technology on best production methods for preventing disease, and transfer to participants through training and information sharing.

2. Objectives

- 2.1 The main objective of this consultancy is to conduct a Biosecurity Risk Assessment to identify disease risks and gaps in biosecurity measures, and develop a Biosecurity Aquaculture Zone Management Plan (BAZMP) for Belizean shrimp growers, along with a methodology for epidemiological data collection and analysis.

3. Scope of Services

- 3.1. The consultant will work closely with the Belize Shrimp Growers Association (BSGA), Belize Agricultural Health Authority (BAHA), and other stakeholders to analyse biosecurity risks across the Belize shrimp industry, and design a BAZMP for which compliance will be voluntary at the first instance but with the aim that the BAZMP will become mandatory. The consulting team will also be required to design application for data collection and epidemiological data analysis, and to deliver training to growers and technicians in basic epidemiology, risk analysis, disease evaluation, surveillance and monitoring.

4. Key Activities

The contractual will carry out the following key activities that will facilitate the achievement of the objective:

- 4.1. Identify disease, hazards, risks and gaps in biosecurity measures:
- In collaboration with epidemiologists, growers, BAHA, DOE, Ministry of Agriculture and other relevant stakeholders including women and women-owned firms,
 - develop and validate a standardized format to collect current biosecurity measures at farm level.
 - Conduct a qualitative biosecurity risk analysis to identify main hazards threatening shrimp farms and hatcheries, and proposed measures to mitigate risks.

- Establish mitigating actions for all critical control points.
 - Assess the traceability of animal movements using a simple network analysis to evaluate high risk nodes, these nodes will define an exhaustive surveillance.
 - In collaboration with cluster members, project manager and government officers, update the biosecurity risk analysis at least every six months over the project life cycle.
- 4.2.** Develop a gender-sensitive Biosecurity Aquaculture Zone Management Plan (BAZMP):
- Collect current biosecurity operational procedures and country regulations in force (at national and regional level).
 - Harmonize operational procedures according to country regulations in force with proposals of improvement, including a contingency plan for diseases outbreaks.
 - Collect and analyze data from surveillance and monitoring programs.
 - Analyze the evolution of prevalence of shrimp diseases.
 - Assess the sampling methodology and diagnostic techniques.
- 4.3.** Develop an application for data collection and epidemiological data analysis:
- Identify and collect available data from shrimp producers to select KPIs.
 - Register shrimp farms and collect data of animal movements.
 - Design of an online modular application with a relational database to collect information about movements, water management, shrimp production and health data (access will be restricted by password with encrypted confidential variables).
 - Acquisition of a cloud-based software package to host the database
 - Fulfillment of database by shrimp producers.
 - Improve interface and add supplementary tools as needed.
 - Assess suitable statistical and epidemiological analysis to identify risk factors, to implement a syndromic surveillance system for early disease detection and be able to trace animal movements.
 - Implement basic modules for epidemiological and statistical analysis.
 - Assess multivariate statistical and epidemiological analysis to identify risk factors and implement customized analysis.
 - Implement advanced modules for epidemiological and statistical analysis.
- 4.4.** Training:
- Develop training modules and related materials (session plans, slides, exercises, hand-outs, evaluation forms, etc.) for all training modules designed around particular topics that will provide both updated technical knowledge and enable members to run better and more sustainable businesses.
 - Introductory course on basic epidemiology, risk analysis, disease evaluation, surveillance and monitoring.
 - Gender-inclusive training to growers, technicians, other key users of the on-line application.
 - Gender-inclusive technical staff training over the cycle of the project.

5. Expected Outcome and Deliverables

The consultant will be responsible for the delivery of the following products:

- 5.1 Draft training materials within 1 month of contract signing.
- 5.2 Report of initial biosecurity status and results of biosecurity risk analysis.
- 5.3 Draft Biosecurity Aquaculture Zone Management Plan (BAZMP).
- 5.4 Recommendations report for improvements in surveillance and monitoring programs.
- 5.5 Identification of inadequate mitigation measures that require further attention and propose additional measures that will reduce the risk level.
- 5.6 Modules for data collection, custom epidemiological and statistical analysis, and for system of alerts based on syndromic surveillance and traceability of animal movements.
- 5.7 Epidemiology and risk analysis training course material.
- 5.8 Final biosecurity management plan.
- 5.9 Final application for data collection and epidemiological data analysis.

6. Reporting Requirements

- 6.1. All reports identified in Section 5 are to be submitted in electronic format (MS Word, Power Point, and PDF where applicable).

7. Acceptance Criteria

- 7.1. Reports will be reviewed by the Team Leader and the Compete Caribbean Facility Coordination Unit. Acceptance of deliverables are contingent on addressing any comments provided by these parties within revised versions of the submissions.
- 7.2. Additionally, the consultant is required to participate in technical meetings (by video/teleconferencing) as necessary to discuss any matter considered important for the timely implementation of the project. The timing of the meeting will be determined as needed.

8. Other Requirements

- 8.1. Candidates will be provided with data and documentation to assist in the achievement of the objectives outlined in Section 2.

9. Supervision and Reporting

- 9.1. The technical responsibilities of this consultancy will be coordinated by Gerard Alleng, Climate Change Senior Specialist, of the Climate Change and Sustainable Development Division, Inter-American Development Bank. Administrative responsibilities of this consultancy will be coordinated by the Compete Caribbean Partnership Facility.

10. Schedule of Payments & Qualifications

- 10.1. Payment terms will be based on project milestones or deliverables. The Bank does not

expect to make advance payments under consulting contracts unless a significant amount of travel is required. The Bank wishes to receive the most competitive cost proposal for the services described herein.

Payment Schedule	
<i>Deliverable</i>	%
1. Initial Biosecurity Risk Assessment	15%
2. Draft BAZMP	15%
3. Recommendation for Surveillance and Monitoring Improvements	10%
4. Modules for epidemiological data collection and analysis	10%
5. Epidemiology and risk analysis training course material	10%
6. Final BAZMP	20%
7. Final application for data collection and epidemiological data analysis	20%
TOTAL	100%

Qualifications

Contractual teams should have specific expertise and knowledge, which will be the main criterion for their selection. It is anticipated that the team would comprise of individuals with strong competencies in the below areas but this is not meant to restrict team compositions to exact roles described below.

- The consulting team should have experts with:
 - advance degrees in epidemiology of aquatic animal diseases, preferable veterinarians with a PhD degree.
 - skills in developing and implementing a knowledge management system for aquatic animal health management
 - At least 10 years experience analyzing and designing biosecurity strategies for aquatic animal diseases.
- Trustworthiness and integrity and a demonstrated ability to work independently in challenging environments.
- Being a designated laboratory for aquatic animal health will be an asset.
- Experience working in the Caribbean and Central American region would be an asset.

Team Leader – Expert in the design and implementation of integrated shrimp aquaculture production systems, with expertise in:

- General practices and trends in shrimp aquaculture
- Production strategies worldwide
- Success stories
- Future threats that shrimp industries need to prepare for
- Best genetic lines for specific area and production systems

Hatchery/Nursery Expert with expertise in:

- Assistance with coordination of hatchery/production schedule
- Brood replacement schedule
- Best Management Practices and Protocol for production of clean Post-larvae
- Live food production and artificial feeds
- Engineering of Nursery Systems
- Designs
- Biofloc
- Flow through
- Symbiotics

Aquaculture Engineer with expertise in:

- General design for closed recirculating systems
- Physical, Biological and Chemical filtration
- Oxygen Addition and Aeration
- Disinfection
- Use of Ozone systems
- Use of Ultraviolet systems
- Chemicals
- Gas Removal Systems
- Carbon Dioxide, Nitrogen, Hydrogen Sulfide
- Energy Requirements
- Pumps, air-lifts
- Structures, Construction
- Renewable energy
- Additional desired qualifications:
- Evidence of capacity development of shrimp aquaculture industries will be an added advantage.
- Knowledge of shrimp farming and other aquatic animal production systems in the Caribbean/Central American region will be an added advantage.

Other Skills

- Project Management
- Excellent and proven track record of previous works with governments and/or multilaterals.
- Change management/capacity building
- Fluency in English
- Strong interpersonal, verbal and written communication skills
- Proven ability to advise and train users in the use of complex systems/applications and related matters and effectively prepare specifications and other written reports/documentation in a clear and concise style. Ability to communicate with various levels of technical experience (developers, end-users, management and support staff);

Characteristics of the Consultancy

Consultancy category and modality: Firm, Simplified Competitive Selection (SCS)

Contract duration: Twenty-four (24) months from the start date

Place(s) of work: Belize.

Payment and Conditions of Employment: Remuneration will be determined in accordance with Bank regulations and criteria.

Consanguinity: Individuals with relatives working for the IDB within and including the fourth degree of consanguinity and the second degree of affinity are not eligible for employment as staff or contractual. Candidates must be individuals from any IDB member country and non-IDB member countries recognized by the Donors of the Compete Caribbean Partnership Facility as eligible.

Diversity: The IDB is committed to diversity and inclusion and to providing equal opportunities in employment. We embrace diversity on the basis of gender, age, education, national origin, ethnic origin, race, disability, sexual orientation, religion, and HIV/AIDS status. We encourage women, Afro descendants and persons of indigenous origins to apply.