



## **Marine Plan Partnership (MaPP) Initiative Contract Announcement:**

### **Feasibility Assessment for Shellfish Aquaculture in the Central Coast**

The MaPP initiative seeks to contract a consultant or consulting team to prepare a feasibility assessment that determines the location, number and size of sites required to make geoduck and scallop aquaculture viable on the Central Coast.

#### **Background**

The Marine Plan Partnership for the North Pacific Coast (MaPP) is a collaborative process for implementing marine plans completed in 2015 for the coastal and marine areas of Haida Gwaii, North Coast, Central Coast, and North Vancouver Island. MaPP is a partnership between the Province of British Columbia represented by the Ministry of Forests, Lands and Natural Resource Operations (FLNRO), the Coastal First Nations-Great Bear Initiative, the North Coast-Skeena First Nations Stewardship Society, the Central Coast Indigenous Resource Alliance, Council of Haida Nation and the Nanwakolas Council (the MaPP Partners). The partnership includes 17 member First Nations. Tides Canada is supporting the MaPP partners by, among other activities, holding and disbursing funds. Tides Canada has set up a project called the MaPP Implementation Support Project.

The Central Coast Marine Plan outlined a vision, objectives and strategies for the stewardship and management of the Central Coast coastal and marine areas, and provided guidance and recommendations for First Nations and Provincial agencies in their evaluation of coastal and marine based activities and uses.

The Province of BC and the Heiltsuk, Kitasoo/Xai'Xais, Nuxalk and Wuikinuxv Nations ("the Central Coast MaPP partners") are working to implement the recommendations in the Central Coast Marine Plan, with input from communities, stakeholders, local governments, and the broader public.

#### **Overview**

Through the construction of clam gardens, First Nations on the Central Coast established some of the earliest shellfish aquaculture sites. Today, the Heiltsuk, Kitasoo/Xai'Xais, Nuxalk, and Wuikinuxv Nations continue to recognize the economic potential of shellfish aquaculture.

The Central Coast MaPP partners are doing significant work to identify optimal sites for aquaculture development and to develop proactive management measures that help ensure optimal sites are not used for conflicting uses and activities.

In 2016, MaPP sought expert recommendations for developing scallop and geoduck aquaculture in the Central Coast. The report identified the ideal biophysical parameters for both scallop and geoduck aquaculture. A habitat suitability index was then developed, which identified a coarse

suite of areas with biophysical capability for sustaining geoduck and scallop aquaculture operations on the Central Coast. A production model that assesses how parameters such as farm size, survival rate, growth rate and biophysical factors impact harvest date and biomass was also developed.

Guided by the habitat suitability index and zoning in the Central Coast Marine Plan, the Central Coast MaPP partners have identified a suite of areas that may have high capability and suitability for scallop and geoduck aquaculture. These areas now need to be ground-truthed and refined by conducting detailed site surveys over a 6-8 week time period carried out by First Nation community-based Guardian Watchmen. The detailed site surveys will help identify those site-specific areas with the best capability for establishing scallop and geoduck aquaculture. A feasibility study that determines economic viability of various operational models also needs to be conducted.

## **Contract Summary**

### **Scope of Work**

Phase 1 (biophysical/ habitat suitability) of the study will consist of:

- Work with the Central Coast MaPP partners to develop a plan for Guardian Watchmen to conduct detailed site surveys that seek to ground-truth the suitability index previously developed in order to identify a sub-set of sites for further assessment. Provide input on factors such as the parameters that should be monitored, specialized equipment that may be required, and any additional locations that should be added or removed from the sites identified for detailed site surveys.
- Work with the Central Coast MaPP partners to gather any other relevant information for each of the monitored sites, based on criteria MaPP has developed through other aquaculture research, and recommendations based on contractor expertise.
- Develop a report that summarizes the conditions at each of the surveyed sites and summarizes any other relevant data provided to the contractor by the Central Coast MaPP partners. Sites with the most favourable conditions (assessed using the suitability index and other relevant information) should be highlighted.
- Work with the Central Coast MaPP partners to identify a subset of sites from the phase 1 report that will receive further assessment in phase 2 of the study.

Phase 2 (economic feasibility) of the study will consist of:

- Determine potential expenses (staffing, start-up costs, equipment needs, training requirements, infrastructure needs, seed availability, etc) and potential income (based on market value and biomass produced) associated with developing scallop and/or geoduck aquaculture in each of the subset of sites using tools such as the production model.
- Outline a variety of scenarios for making scallop and/or geoduck operation(s) economically viable on the Central Coast.

**Deliverables:**

1. A report (with appropriate maps and related datasets) that summarizes findings of on-site monitoring conducted by the Guardian Watchmen, and identifies those sites with the most favourable conditions for scallop and geoduck aquaculture based on on-site monitoring, additional data provided by the Central Coast MaPP partners, and a description of any other information that will help with site selection. Highlight sites with the most favourable conditions.
2. A detailed outline of the proposed approach to assessing economic feasibility of scallop and geoduck aquaculture operations.
3. A feasibility assessment that provides an assessment of the number, size and location of aquaculture operations needed to make geoduck and scallop aquaculture economically viable under a variety of different scenarios.

**Timeline and Milestones** – (subject to change):

**By August 11, 2017:** Notification of selection and issuance of contract.

**By August 21, 2017:** Monitoring plan finalized.

**By September 29, 2017:** Completion of data collection on biophysical parameters

**By October 30, 2017:** Present draft Phase 1 report for review

**By November 30, 2017:** Provide final Phase 1 report

**By January 5, 2018:** Subset of sites to be included in feasibility assessment identified

**By January 5, 2018:** Present proposed approach to assessing economic feasibility of scallop and geoduck aquaculture operations

**By Feb 16, 2018:** Present draft feasibility assessment

**March 30, 2018:** Present final report and recommendations

**Ongoing:** Monthly check-in and report with Central Coast Implementation Technical Team to review progress against deliverables

**Contract Remuneration:**

- Up to a maximum of \$30,000 plus GST inclusive of all expenses

**MaPP input**

MaPP will provide the consultant with:

- Relevant background on work to date related to shellfish aquaculture initiatives in the Central Coast.
- The habitat suitability index, production model, and maps, data files and biological or physical information for relevant areas of the Central Coast.
- Staff, vessels, fuel and basic equipment to conduct site investigation and data collection, in accordance with available capacity.
- Direction on which of the sites in the Phase 1 report should be included in the feasibility assessment.

- Advice on factors (such as access to power) that have already been considered or should be considered when determining feasibility in each of the sites in the Phase 2 report.

#### **Qualifications, Experience and Skills:**

- Consultant or consulting team with marine biological, economic and social science skills including demonstrated experience in feasibility assessments, spatial planning and analysis.
- Experience working with First Nations.
- Experience conducting aquaculture assessments for the public or private sector.
- Experience in shellfish aquaculture (or similar field) business ownership and management experience is an asset.
- Familiarity with the Central Coast marine environment, coastal communities, and infrastructure is considered an asset.
- GIS capacity to produce maps and resultant datasets.
- Access to specialized sampling equipment (such as pH metres) required to conduct site investigation and data collection is an asset.
- Good communication skills and organizational skills.

#### **To Apply**

Please submit by 5 pm on **Monday July 31, 2017** a project proposal that outlines the proposed project approach, names of consultants, qualifications, and fees and expense projections by task. Extensions to the submission timeline may be granted if there are insufficient applications. Send proposals to:

Central Coast Shellfish Aquaculture Feasibility Assessment  
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