



**Marine Plan Partnership Initiative  
Contract Announcement:**

**REGIONAL DATA MANAGEMENT COORDINATOR**

The Marine Plan Partnership for the North Pacific Coast (MaPP) seeks to contract a consultant with expertise in data and information management and data manipulation and analysis to oversee the implementation and stewardship of a Data Management System (DMS) unique to MaPP, and to help advance the *MaPP Integrated EBM Indicator Monitoring and Reporting Program*.

**Overview of MaPP**

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 four sub-regions of B.C.: Haida Gwaii, the North Coast, the Central Coast, and North Vancouver Island. MaPP is a partnership between the Province of British Columbia, the Coastal First Nations-Great Bear Initiative Society, 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 Marine Plan Partnership for the North Pacific Coast Implementation Support Project to carry out activities identified by the MaPP Partners to support the initiative including contracts with external consultants.

The four MaPP sub-regional marine plans are being implemented at the sub-regional level, and, where appropriate through regional initiatives as identified in a Regional Action Framework (RAF) completed in March 2016.

The sub-regional marine plans and the RAF are available on the MaPP website:  
<http://mappocean.org/>.

**Contract Summary**

**Scope of Work**

***Background:***

Within the MaPP sub-regional marine plans and the RAF, there are numerous strategies and actions related to **indicator monitoring and reporting**. Marine ecosystem-based management (EBM) is considered by the MaPP Partners to be the preferred approach to effectively managing coastal and marine ecosystems and resources and is the foundation of both MaPP recommendations and the implementation of these recommendations. The selection and monitoring of EBM indicators are an important part of MaPP implementation to determine the state of the ecosystem, whether the plans are achieving their desired improvements, and how to adapt the plans (as required).

The recommended RAF actions on **EBM Monitoring and Indicators** focus on monitoring ecosystem health and human well-being over time to inform management and decision-making at regional and sub-regional scales; they are consistent with sub-regional marine plan objectives and strategies. Included in the RAF actions on EBM Monitoring and Indicators are actions on:

- Establishing a regional suite of EBM indicators and initiating regionally-consistent monitoring and analyses;
- Coordinating access to data and the development of information-sharing protocols (where appropriate);
- Assessing existing programs associated with marine EBM indicator monitoring to identify potential linkages and synergies;
- Maintaining and enhancing a comprehensive data management system to effectively store and share EBM indicator-related and other MaPP data and metadata; and
- Reviewing existing funding mechanisms for monitoring and exploring opportunities to improve these mechanisms and bolster funding at sub-regional and regional scales.

Also included in the RAF are related actions, for example, on **Climate Change** (e.g., identifying and monitoring climate change indicators for the MaPP region and incorporating data on these indicators into a long-term and effective EBM monitoring program to inform adaptation) and **Cumulative Effects** (e.g., refining and implementing a MaPP cumulative effects framework, CEF).

Since entering an implementation phase, MaPP has been collaborating with organizations such as the Coastal Ocean Research Institute (CORI), and existing programs, such as the Coastal First Nations – Great Bear Initiative (CFN-GBI)'s Regional Monitoring System (RMS), to implement the RAF actions (and sub-regional strategies) on EBM Monitoring and Indicators. MaPP has also been working at regional and sub-regional levels to advance Climate Change- and Cumulative Effects- related actions and strategies.

Recognizing the many linkages between actions and strategies under these priority MaPP 'programs' (EBM Indicators, Cumulative Effects and Climate Change), MaPP is now exploring the development and advancement of a **MaPP Integrated EBM Indicator Monitoring and Reporting Program**. Implementation of this program is geared, over the long-term, towards coordinated sub-regional monitoring across the MaPP region, leading to:

- An assessment and comparison of the state of key ecosystem components across the MaPP region, and an analysis of potential local to regional drivers and stressors;
- More effective strategic and operational decision-making related to MaPP strategies and actions; and
- 'State of the ecosystem' reporting, through an analysis of indicator baselines and trends over time.

Key to the implementation of this program (and to all MaPP activities involving data access, collation and creation) is the implementation and stewardship of a **Data Management System (DMS)** unique to MaPP. In 2017-18, the MaPP Partners worked with a consultant to facilitate the development of a *Data and Information Management Strategy* for MaPP. Two reports were

produced: 1) a detailed scoping report including background context, agreed-to MaPP data principles, and data scenarios unique to MaPP; and 2) an 'operational' report presenting options for implementation of a DM system. MaPP is currently in the process of internally deciding on an implementation option and will be actively pursuing the implementation of the chosen option in 2018-19.

To coordinate the implementation and stewardship of the *MaPP DM System* and to advance - with the MaPP Regional Projects Coordinator and the MaPP Marine Implementation Technical Team (MITT) - the *MaPP Integrated EBM Indicator Monitoring and Reporting Program*, MaPP requires a contractor with extensive experience and expertise in data and information management, project management, and data analysis to coordinate key regional activities by carrying out a number of specific tasks. These tasks are described in detail below.

**Key Activities and Tasks:**

The following tasks to be carried out by the Regional Data Management Coordinator in 2018-19 may include (but are not limited to):

**1. MaPP DM System implementation**

- a.** Act as **primary coordinator** for the implementation of the MaPP DM System, working with the Regional Projects Coordinator and relevant MaPP Partners;
- b.** Coordinate meetings (as necessary) with the MaPP Partners (e.g., the MaPP DM Sub-Committee) to advance *MaPP DM System* implementation;
- c.** Develop a **detailed implementation plan** including lists of current and future datasets relevant to MaPP and where they will be stored;
- d.** Work with appropriate staff in the key metadata and data store organizations (e.g., Province, RMS, other) to implement the data management system including budgets;
- e.** Oversee the development of a comprehensive MaPP metadata catalogue, with the chosen metadata store organization;
- f.** Work with MaPP Partners and external organizations (data custodians) to assist with the development of necessary data sharing/ participation agreements;
- g.** Coordinate the uploading of existing data sets into the *MaPP DM System* (i.e., central store(s)) and the cataloguing of that data in the metadata catalogue;
- h.** Be the overall **MaPP DM System administrator**, e.g.,
  - i. Monitor the use and effectiveness of the System;
  - ii. Develop and maintain a technical and policy procedures manual;
  - iii. Provide initial training to MaPP Partner technical staff on using the System;

- iv. Coordinate ongoing data and information management tasks including: uploading/downloading data sets, creating the architecture for new data sets, overall quality management, version control, and coordination of the development/addition of new software components and tools;
- v. Be the primary MaPP 'point person' for datasets that are in the central stores and catalogued in the metadata catalogue, responding to internal questions and requests regarding the datasets; and
- vi. Respond to external data requests/ questions regarding the datasets in the central store(s), in collaboration with staff of the metadata and data store organizations.

**2. Support data management and analysis to help advance the *MaPP Integrated EBM Indicator Monitoring and Reporting Program***

- a.** With the MaPP Regional Projects Coordinator and other MaPP Partner members, review and become familiar with existing monitoring projects/programs - and specifically, **existing data sets** - related to confirmed regional and sub-regional indicators, to help inform data access, exploration, and analysis;
- b.** Draft and implement a **detailed project work** plan related to access of existing data sets, and data exploration and analyses;
- c.** Liaise with related organizations and initiatives to request available, relevant data from data custodians, and negotiate information sharing agreements (where necessary);
- d.** Collate metadata (including collection methodologies) associated with received data;
- e.** QA/QC and input received datasets and associated metadata into central store(s) and metadata catalogue, respectively;
- f.** With the MaPP Regional Projects Coordinator, explore whether existing data sets (and methodologies) are sufficient to address MaPP strategies and actions and to inform management action over time, and use this exploration to:
  - i.** Identify any spatial and temporal monitoring gaps for confirmed regional and sub-regional indicators;
  - ii.** Inform ongoing on-the-ground monitoring project development.
- g.** Help the MaPP Regional Projects Coordinator to develop supporting foundational documents related to datasets (e.g., schematics, matrices etc.) to advance the *MaPP Integrated EBM Indicator Monitoring and Reporting Program*; and

- h.* Where appropriate, research and develop methods and conduct statistical analyses of existing data sets for confirmed regional indicators, and document analysis methods, so that they are reproducible.

### **3. Indicator reporting to help advance the *MaPP Integrated EBM Indicator Monitoring and Reporting Program***

- a.* Produce data summaries (e.g., baseline and/or trend graphics and accompanying narrative) for a public audience from:
  - i.* Existing data sets from monitoring projects/programs (where they form a 'regional' picture); and
  - ii.* Collected data (e.g., from regionally-consistent, on-the-ground monitoring program implementation).

### **4. Other**

- a.* Assist MaPP Partners with activities and proposals to obtain the necessary funding for the long-term sustainability of the *MaPP Integrated EBM Indicator Monitoring and Reporting Program* and the *MaPP DM System*.

## **Qualifications, Education, Experience and Skills**

### **Education and Experience**

- Degree or technical diploma in spatial statistics or other data management program with a strong focus on data management, analysis, and/or manipulation;
- At least 5 years' relevant work experience working with data, preferably related to BC marine ecosystems or a combination of work experience and education;
- Extensive experience and expertise in project management;
- Experience requesting data sets from government agencies (First Nation, provincial, federal) and/or academic researchers, and with data use agreements;
- Excellent knowledge and understanding of native data formats, conversion methods, spatial data display and analysis outputs, and reporting methods;
- Experience with spatial data, spatial data manipulation and visualization/analysis software (e.g., ArcGIS, QGIS); and
- Proven communication, organizational, and time management skills;
- Demonstrated experience in project management employing high attention to detail and accuracy.
  
- **Asset:** Demonstrated experience choosing and using robust statistical methods, producing data summaries, and explaining methods and results to a general audience;
- **Asset:** Report writing skills.
- **Asset:** An understanding of inherent complexities associated with data and information management in the MaPP planning and implementation environments.
- **Asset:** Existing working relationships with marine scientists and data and knowledge holders.

### **Technical Competencies**

- Advanced competency using data management software;
- Advanced competency in Microsoft Word and Excel; and
- Competency in mapping data, preferably marine-related data.
  
- **Asset:** Competency using statistical analysis software (e.g., R or other).
- **Asset:** Competency in summarizing data, documenting methods and preparing reports for a general audience.

### **The Contractor will:**

- Be an independent contractor and provide their own tools (phone, computer, software and internet) to effectively complete the tasks;
- Be available to work a variety of hours and days; and
- Be available to travel throughout BC if needed.

### **Additional Contracting Details and Timeline**

Note that this is a contracted position for a single contractor for approximately 20 – 25 hours per week, for a 1-year term beginning in June 2018-March 31 2019 with the opportunity for extension for one more year. Contract remuneration will depend on experience but will be up to \$48,000 plus GST for the contract period.

- **Posting date April 18, 2018** - SOW posted and circulated, and questions directed to Fiona Kilburn, MaPP Administration and Finance Coordinator, [fkilburn@mappocean.org](mailto:fkilburn@mappocean.org)
- Closing date for submissions: **May 4, 2018**
- Submission evaluation period: **May 18, 2018**
- Contract award no later than: **June 1, 2018**
- Contractor start date: **June 4, 2018**

### **To Apply**

Please submit by **May 4, 2018** a cover letter, CV and writing sample demonstrating the experience and skills required. The cover letter should provide details of relevant experience. Send proposals to:

### **MaPP Regional Data and Monitoring Coordinator Contract**

c/o Fiona Kilburn

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