



Request for Services (RFS)

Geospatial Database & Programming  
Contractor:

Technical Services for Data Processing of Automatic Identification  
System (AIS) Shipping Data

**Clear Seas Centre for Responsible Marine Shipping**

Contact: Jennifer Steele, Director of Research Operations

June 6, 2023

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## SERVICE REQUIREMENTS

Clear Seas requires a technical services contractor to support data processing and database systems establishment for a large automatic identification system (AIS) geospatial dataset to support the characterization and analysis of shipping activity and risk.

Clear Seas' research seeks to address the challenges related to accessing, understanding, and applying shipping data in decision-making and planning processes. Examples of Clear Seas research conducting geospatial/statistical analysis and working with shipping-focused data that are similar and related to the work this contract seeks to support include:

- [Vessel Traffic in Canada's Pacific Region](#): demonstrates analysis with large shipping datasets (AIS), generating track lines python modeling from AIS points, and statistical analysis of shipping metadata.
- [Maritime Commercial Incidents and Accidents](#): demonstrates an interactive web-based dashboard and mapping application that presents historical data on marine occurrences from various sources.
- [Assessing Shipping Risk in Canada](#): provides a sample of explaining risk and generating risk metrics to create context for marine shipping risk.

As part of the [Mapping Marine Traffic \(MMT\)](#) project, Clear Seas is developing a geospatial database and analytical resource, the "MMT Toolkit." The project brings together a unique combination of data and models from different sources to illustrate the state of marine shipping in Canada.

Application of the MMT Toolkit will allow for geospatial and statistical analysis to characterize marine shipping and explore questions related to shipping risk and impacts. It will be used to support other Clear Seas activities and programs, including the delivery of community workshops helping Indigenous and coastal communities to engage with spatial and non-spatial shipping-related data, research conducted through Clear Seas' [Indigenous Internship Program](#), and other research projects on topics related to marine shipping.

The MMT Toolkit will integrate existing open-source data and models from different sources, as well as generating new datasets and models. To support the next phase of the MMT toolkit development, Clear Seas has purchased automatic identification system (AIS) data and is seeking to process the points into track lines. This polyline dataset, combined with other datasets and models in a geodatabase, will serve as a foundation to numerous research projects.

To expedite these activities, Clear Seas is seeking technical service support from a contractor experienced in writing and editing python and R scripts, large dataset processing and

management, and GIS process automation. A contractor could be an individual operating as a sole proprietor or staff contracted out from a larger consultancy.

## COMPANY INFORMATION

Clear Seas is a Canadian not-for-profit and independent research centre that provides impartial and fact-based information on marine shipping to policy makers and the public. Clear Seas' work focuses on identifying and sharing best practices for safe and sustainable marine shipping in Canada, encompassing the human, environmental, and economic impacts of the shipping industry. Through comprehensive research, communications, and Indigenous-focused programs, Clear Seas helps fill knowledge gaps and build capacity in this important sector of the Canadian and global economy.

All Clear Seas reports are publicly released and made available at [clearseas.org](http://clearseas.org).

## SCOPE OF WORK

Clear Seas is seeking to hire a GIS and/or data consultant who can provide support to the Clear Seas Research team in establishing workflows to manage and process large datasets.

Key tasks include:

- Establish workflows to process large quantities of point data (in CSV form) into polylines.
- Debug and troubleshoot existing Python scripts.
- Automate data cleaning and geoprocessing tasks using Python, with ArcGIS Pro integration.
- Conduct web scraping to fill dataset gaps.
- Aid writing and integrating scripts within R and ArcGIS Pro to support automated and general data visualization.
- Provide guidance and establishing best practices for managing large datasets and maintaining data integrity.
- Document development methods and "how to" instructions to deploy and troubleshoot new processes and ensure replicability of systems.
- Participate in meetings with Clear Seas team.
- Contract reporting include to provide regular timesheets and progress reports at meaningful intervals.
- Other related tasks as required.

Completion of the contract activities are expected to be guided by the following considerations:

- The contractor could be an individual operating as a sole proprietor or staff contracted out from a larger consultancy.
- All work will be completed in a timely manner that ensures Clear Seas are able to maintain the systems and edit or run any code that is written.
- Process(es) will be taught to members of the Clear Seas team once tasks are completed to ensure Clear Seas can maintain and run the systems independently.
- The expected workload is estimated to be two to three hours of meetings with the Clear Seas research team per week, with one to five hours of additional data processing and workflow development tasks weekly.
- The workload may vary each week, depending on the type of support required from the research team.
- The contractor is expected to be available to meet with Clear Seas core working hours (9:00am to 5:00pm Pacific Standard Time). Work done independent of the Clear Seas team may be done outside the core hours at the contractor's discretion.
- The contract will cover an initial 3 months of work, with the possibility to extend to include additional scope of work.

## BUDGET

Respondents are expected to submit an hourly rate for technical professional fees and minimum contract value to engage in work.

Additional expenditures and miscellaneous expenses are not expected.

## CONTRACT TERMS & CONDITIONS

See Appendix A for Clear Seas' Service Agreement which is proposed to apply to this service contract.

## CONTRACTOR SELECTION PROCESS

The selection criteria are provided in Appendix B. Briefly, the Contractor will be selected based on:

- Contractor's hourly rate for provision of technical services
- Ability to meet defined workload and timelines

- Past experience with GIS, python and R script processes
- Past experience developing, documenting and training on data processing and database systems for hand-off
- Other experience relating to web scraping
- Understanding of or experience with AIS data is an asset but not necessary

## SUBMISSION DETAILS

In response to this RFS, a proposed Contractor must:

1. Email Jennifer Steele ([jennifer.steele@clearseas.org](mailto:jennifer.steele@clearseas.org)), Director of Research Operations, with a bid for the work outlined in this RFS that is to be valid for 60 calendar days after the closing date. Bid to provide following cost breakdown:
  - a. Rate (\$/hr) for professional services
  - b. Minimum contract amount needed to engage in work – in Canadian funds (exclusive of GST)
2. Include an outline of the approach to conduct the requested services.
3. Demonstrate previous experience in the areas outlined within this RFS.
4. Declare any potential conflicts of interest.
5. Adhere to the following guidelines in response:
  - a. PDF for electronic submission
  - b. Maximum of 4 pages (excluding resumes and sample(s) of past work)
  - c. Regular 12-point Arial or Times New Roman font with margins of 2.5 cm
  - d. Structure:
    - i. Contractor / company information
    - ii. Approach to conduct requested services
    - iii. Hourly rate and minimum contract amount
    - iv. Relevant experience
    - v. Key personnel qualifications
    - vi. Candidate references
    - vii. Declaration of conflict of interest
    - viii. Resumes for key personnel
    - ix. Sample(s) of past work

Bid responses will be accepted until 5 PM Pacific time June 23, 2023. Clear Seas expects to award this contract the week of July 4, 2023 with some flexibility on start date. Clear Seas

reserves the right to cancel or reissue this bid solicitation at any time, negotiate with a sole bidder or accept or reject any or all bids received in response to this bid solicitation.

We look forward to your submission, and any further questions can be directed to:

Jennifer Steele

Director of Research Operations, Clear Seas

355 Burrard Street, Suite 630, Vancouver, BC V6C 2G8

778.730.1332 | [jennifer.steele@clearseas.org](mailto:jennifer.steele@clearseas.org)

## APPENDIX A - Service Agreement

This Agreement (the “**Agreement**”) is made as of the \_\_\_ day of \_\_\_\_\_, 20\_\_.

BETWEEN:

**CLEAR SEAS CENTRE FOR RESPONSIBLE MARINE SHIPPING SOCIETY**, a society incorporated under the laws of British Columbia and having an office at 630 – 355 Burrard Street, Vancouver, BC V6C 2G8.

(“**Clear Seas**”)

AND:

▼ **[Insert Contractor’s full legal name]** having an office at \_\_\_\_\_

(the “**Contractor**”)

WHEREAS:

- A. The Contractor is in the business of providing ▼ **[Describe type of services]** services; and
- B. Clear Seas wishes to engage the Contractor to perform the Services (as defined herein), and the Contractor agrees to provide the Services to Clear Seas in accordance with the terms and conditions set out in this Agreement, including any terms and conditions that may be set out in other documents incorporated by reference into this Agreement.

THEREFORE in consideration of the agreements and covenants set out in this Agreement Clear Seas and the Contractor agree as follows:

### SERVICES

#### Services

Clear Seas hereby retains the Contractor to provide the services as described generally in Schedule A to this Agreement (the “**Services**”). Clear Seas may deliver to the Contractor variations to the Services in writing or may request the Contractor to submit proposals for variations to the Services.

#### Standard of Care

The Contractor agrees that it will:



perform the Services with that degree of care, skill and diligence normally provided by a qualified and experienced practitioner performing services similar to the Services, and on the understanding that Clear Seas is relying on the Contractor's experience and expertise;

comply with all reasonable requests from Clear Seas in relation to providing the Services;  
and

comply, at its own expense, with all relevant legal requirements, and to apply for and obtain all consents required for providing the Services.

### **Access by Contractor**

Where the Contractor requires access to Clear Seas' premises, access will be available at such times as agreed by the parties. When accessing Clear Seas' premises, the Contractor agrees to comply with the policies of Clear Seas, including those in relation to security and occupational health and safety.

Clear Seas may grant, in its absolute and sole discretion, to the Contractor temporary access to Clear Seas' information technology, systems and data (the "**IT Systems**") for the limited purpose of providing the Services. The Contractor will only use and access Clear Seas' IT Systems to provide the Services during the Term. At Clear Seas' option, any access to Clear Seas' IT Systems may be restricted or removed at any time.

### **Time is of the Essence**

The Contractor acknowledges that time is of the essence with respect to the provision of the Services and accordingly the Contractor will undertake the Services in a timely manner, and in accordance with any milestone dates as may be agreed to in writing by Clear Seas and the Contractor.

### **Independent Contractor**

The parties acknowledge that in entering into this agreement and in providing the Services, the Contractor has and will have the status of an independent contractor and that nothing in this Agreement will contemplate or constitute the Contractor as an agent, partner or employee of Clear Seas for any purpose.

### **FEES**

#### **Fees**

In exchange for the Services, Clear Seas will pay to the Contractor the fixed fee of \$▼ (the "**Fee**") for performance of the Services described in Schedule A plus applicable GST.

**Disbursements**

Unless specifically set out in Schedule A affixed hereto, the Contractor will not be reimbursed for travel, office and other general overhead expenses related to the Contractor's performance of the Services.

**Payment**

Payment terms will be as follows:

Clear Seas will pay the Contractor a deposit of \$▼ on account of the Services to be performed by the Contractor; and

the balance of the Fee will be payable on the following basis:

the Contractor will submit an invoice to Clear Seas requesting payment of the applicable portion of the Fee for performance of the Services as each milestone set out in Schedule A is met plus any permitted disbursements incurred (if applicable), together with receipts and invoices for all permitted disbursements claimed (the Contractor will reduce the amount of the first invoice, and subsequent invoices, as applicable, to apply the deposit paid by Clear Seas); and

Clear Seas will pay the portion of an invoice which Clear Seas determines is payable within 30 days of the receipt of the invoice.

Payment by Clear Seas of the Fee and any permitted disbursements will be full payment for the Services and the Contractor will not be entitled to receive any additional payment from Clear Seas.

**INSURANCE AND INDEMNITY****Contractor's Insurance Policies**

The Contractor will, on request from Clear Seas, provide evidence, satisfactory to Clear Seas, of all the Contractor's insurance policies providing coverage relating to the Services, including any professional liability insurance policies.

**Indemnity**

The Contractor will indemnify and save harmless Clear Seas and all its directors, officers, employees, servants, representatives and agents from and against all claims, demands, causes of action, suits, losses, damages and costs, liabilities, expenses and judgments (including all actual legal costs) which Clear Seas or its directors, officers, employees, servants, representatives or agents incur, suffer or are put to arising out of or in connection with any failure, breach or non-performance by the Contractor of any obligation of this Agreement, or any wrongful or negligent act of the Contractor or any employee or agent of the Contractor. This

indemnity will survive the termination or completion of this Agreement and, notwithstanding such termination or completion, will continue in full force and effect for the benefit of Clear Seas.

### **Deductions and Remittances**

The Contractor is solely responsible for the deduction and remittance of all statutory remittances and deductions, including without limitation income tax, CPP and EI, in respect of all amounts paid by Clear Seas to the Contractor under this Agreement and in respect of any employees or subcontractors retained by the Contractor to perform the Services. Furthermore, if these amounts are not remitted, the Contractor will indemnify and hold harmless Clear Seas from and against any claim for taxes, penalties and for withholding of funds by the Canada Revenue Agency, the Employment Insurance Commission, the Canada Pension Commission, WorkSafeBC, the British Columbia Employment Standards Branch or any other government agency with respect to any amount found to be payable by Clear Seas to such agency or commission in respect of the Fees (and the Services) including any legal fees incurred by Clear Seas in defending such claims.

### **TERMINATION**

Clear Seas may terminate this Agreement at any time and for any reason whatsoever by giving written notice of termination to the Contractor. Clear Seas will pay the Contractor for Services performed by the Contractor (a percentage of the Fee based on the percentage of the Services completed), and permitted disbursements incurred by the Contractor, up to and including the date of termination. Upon payment of such amounts no other payment will be owed by Clear Seas to the Contractor, and, for certainty, no amount will be owing on account of lost profits relating to the portion of any Services not performed. If the amount payable for Services performed is less than the amount of the deposit paid by Clear Seas, the Contractor will refund the balance to Clear Seas.

If Clear Seas fails to make payments when due, or otherwise is in breach of the Agreement, the Contractor may suspend performance of services upon five (5) calendar days' notice to Clear Seas. The Contract shall have no liability whatsoever to Clear Seas for any costs or damages as a result of such suspension.

### **CONFIDENTIALITY AND DISCLOSURE OF INFORMATION**

[Except as provided for by law or otherwise by this agreement, the Contractor will keep strictly confidential any information supplied to, obtained by, or which comes to the knowledge of the Contractor as a result of the performance of the Services and this Agreement (the “**Confidential Information**”), and will not, without the prior express written consent of Clear Seas, publish, release, disclose or permit to be disclosed any such information to any person or corporation, either before, during or after termination of this Agreement, except as reasonably required to complete the Services.]

**[OR use the following language if wish to couple this services Agreement with the generic NDA]**

[The Contractor agrees that, either before or immediately following its execution of this Agreement, it will enter into a non-disclosure agreement with Clear Seas (the “**NDA**”) in substantially the same form as set out in Schedule B attached hereto to govern how the Contractor handles Clear Seas’ Confidential Information (as such term is defined in the NDA).]

## **PRIVACY**

### **Privacy**

The Contractor acknowledges that as a service provider to Clear Seas, it is subject to the *Personal Information Protection Act* (British Columbia) (“**PIPA**”), and in particular the provisions concerning the protection, use and disclosure of personal information, as defined by PIPA (“**Personal Information**”). The Contractor agrees to comply with all applicable requirements of PIPA as service providers, including without limitation:

- any applicable order of the commissioner under PIPA; and
- any direction given by Clear Seas under this Agreement.

The Contractor will ensure that the Services are provided so as to comply with the confidentiality obligations under this Agreement and/or the requirements of PIPA, as applicable.

## **WORK PRODUCT**

### **Definition**

For the purposes of this agreement, “**Work Product**” means all of the work product that the Contractor prepares and delivers to Clear Seas as part of the Services.

### **Ownership of Work Product**

Clear Seas will be the exclusive owner of the Work Product, and the Contractor agrees to assign and cause its employees, agents and contractors to assign to Clear Seas, effective at the time of creation, all right, title and interest, including all copyright, in and to the Work Product. The Contractor also hereby irrevocably waives and agrees to waive and cause its employees, agents and contractors to waive in favour of Clear Seas and its successors, assigns and licensees any and all moral rights which it may have in and to the Work Product.

The Contractor will keep and maintain adequate and written records of all Work Product made. These records will be available to Clear Seas and will be the sole property of Clear Seas. The Contractor agrees not to, and not to cause or permit anyone else to, include any third party intellectual property into the Work Product unless otherwise agreed in writing by Clear Seas. The Contractor will assist Clear Seas in obtaining and enforcing, for Clear Seas' benefit, patents, copyrights and any other protections in any and all countries for any and all Work Product made by the Contractor (in whole or in part) the rights to which belong to or have been assigned to Clear Seas. The Contractor agrees, upon request, to execute all applications, assignments, instruments and papers and perform all acts that Clear Seas or its counsel may

deem necessary or desirable to obtain any and all patents, copyrights or other protection in such Work Product and to protect the interests of Clear Seas therein.

## **NO COMMITMENT TO FUTURE WORK**

The parties have entered into this Agreement on the basis that Clear Seas makes no commitment to retain the Contractor to perform any additional services.

## **DISPUTE RESOLUTION**

### **Notice of Dispute**

Any dispute under this Agreement which cannot be resolved by the parties within thirty (30) days of one party giving written notice to the other of a dispute will be mediated.

### **Mediation**

Clear Seas and the Contractor will agree on the choice of mediator and will share the cost equally. If Clear Seas and the Contractor cannot agree on the choice of mediator within forty-five (45) days of one party giving written notice to the other of a dispute, then the President of the British Columbia Arbitration & Mediation Institute will be requested to appoint a mediator.

### **Mediation Rules**

The National Mediation Rules and Code of Conduct for Mediators will apply to the mediation.

## **GENERAL**

### **Applicable Laws**

This Agreement will be governed by and construed in accordance with the laws of the Province of British Columbia.

### **Compliance with Laws and Clear Seas' Rules**

The Contractor will provide the Services in full compliance with all applicable laws. The Contractor agrees to abide by all of Clear Seas' applicable policies, security and safety regulations provided to it.

The Contractor agrees that it will comply with all applicable health and safety regulations including the *Workers Compensation Act*. On request from Clear Seas, the Contractor will provide evidence of registration and good standing with WorkSafeBC or other provincial body as relevant to the Contractor's location under the *Workers Compensation Act*.

### **Subcontracting and Assignment**

The Contractor will not sub-contract or assign its obligations under this Agreement, in whole or in part, without the prior written approval of Clear Seas.

**Entire Agreement**

This Agreement, including [the NDA and] **[delete square brackets if NDA not used]** all attached schedules, contains the entire Agreement of the parties regarding the provision of Services and no understandings or agreements, oral or otherwise, exist between the parties except as expressly set out in this Agreement.

**Further Assurances**

Each of the parties will execute and deliver (and cause to be executed and delivered) such further and other documents and do and perform (and cause to be done and performed) such further and other acts or things as may be necessary or desirable to give full effect to this Agreement, including the execution and delivery of assignments of title to and copyright in the Work Product, and waivers of moral rights, in favour of Clear Seas, at the request of Clear Seas from time to time.

**Amendment**

This Agreement may be amended only by agreement in writing, signed by both parties.

**Notices**

Any notice, report or other document that either party may be required or may wish to give to the other must be in writing, and will be deemed to be validly given to and received by the addressee, if served personally, on the date of such personal service or, if delivered by mail, fax or email, when received. The addresses for delivery will be as follows:

To Clear Seas at:  
630 – 335 Burrard Street,  
Vancouver, BC V6C 2G8  
Attention: ▼  
Fax: ▼  
E-mail: ▼

To the Contractor at:

▼  
▼  
Attention: ▼  
Fax: ▼  
E-mail: ▼

**Unenforceability**

If any provision of this agreement is invalid or unenforceable, it will be severed from the Agreement and will not affect the enforceability or validity of the remaining provisions of the Agreement.

**Headings**

The headings in this agreement are inserted for convenience of reference only and will not form part of nor affect the interpretation of this Agreement.

**Waiver**

No waiver by either party of any breach by the other party of any of its covenants, obligations and agreements will be a waiver of any subsequent breach or of any other covenant, obligation or Agreement, nor will any forbearance to seek a remedy for any breach be a waiver of any rights and remedies with respect to such or any subsequent breach.

IN WITNESS WHEREOF the parties have duly executed this Agreement as of the day and year first above written.

**[If Contractor is a corporation, use the following execution blocks]**

**CLEAR SEAS CENTRE FOR RESPONSIBLE  
MARINE SHIPPING SOCIETY**

**▼ [INSERT FULL LEGAL NAME OF  
CONTRACTOR]**

Per: \_\_\_\_\_

Per: \_\_\_\_\_

Authorized Signatory

**OR**

**[If Contractor is an individual, use the following execution blocks]**

**CLEAR SEAS CENTRE FOR RESPONSIBLE  
MARINE SHIPPING SOCIETY**

Per: \_\_\_\_\_  
Authorized Signatory

SIGNED AND DELIVERED in the presence of: )  
)  
)  
)  
)  
)

_____ Signature of Witness	)	_____ <b>[INSERT FULL LEGAL NAME OF CONTRACTOR]</b>
_____ Name of Witness	)	
_____ Address	)	
_____ Occupation	)	
	)	

**SCHEDULE A – SCOPE OF SERVICES**

*[describe milestones and percentage of fee payable at each milestone]*

**SCHEDULE B – NDA**

*[delete this Schedule B if NDA not opted to be included in Services Agreement]*



## APPENDIX B - Evaluation Criteria

Experience	Score
Contractor has necessary technical and project management experience to successfully complete the work	
Contractor has a good track record in this field	
Canadian company (Y/N) and/or working in Canada (Y/N)	
Indigenous-owned or operated business (Y/N)	
EDI commitment in business and demonstration in proposed project team (Y/N)	
Experience Score:	
Approach	Score
Proposal approach is realistic and sufficient to meet project objectives	
Proposal contains a portfolio of past work examples for the delivery of professional services related to this scope of work	
Approach Score:	
Cost	Score
Professional services fee (\$/hr)	
Minimum contract value ranking (lowest = 5; highest = 1)	
Cost Score:	
Other	Score
Proposal meets submission requirements (Pass / Fail)	
Reference verification (Pass / Fail)	
Other Score:	
Final Ranking	

Interpretation	Scale
Excellent. The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.	5
Very Good. The proposal addresses the criterion very well, but a small number of shortcomings are present.	4
Good. The proposal addresses the criterion well, but a number of shortcomings are present.	3
Fair. The proposal broadly addresses the criterion, but there are significant weaknesses.	2
Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.	1
Fail. The proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.	0

Category	Weighting
Experience	40
Methodology	30
Cost	30