

ADVANCE CONTRACT AWARD NOTICE (ACAN)

1. Advance Contract Award Notice (ACAN)

An ACAN is a public notice indicating to the supplier community that a department or agency intends to award a contract for goods, services or construction to a pre-identified supplier, thereby allowing other suppliers to signal their interest in bidding, by submitting a statement of capabilities. If no supplier submits a statement of capabilities that meets the requirements set out in the ACAN, on or before the closing date stated in the ACAN, the contracting officer may then proceed with the award to the pre-identified supplier.

2. Definition of the Requirement

The Department of Natural Resources Canada (NRCan) has a requirement to map and monitor Canada's forest ecosystems, in conjunction with the provinces and territories, as well as providing information to enhance the safety of all Canadians. This work will provide quantitative information regarding the risk of forests and forest located communities to wildfire. The work will undertake science to inform on susceptibility to wildfire over the entirety of Canada's forest ecosystems as well as provide new applied science for creating up-to-date polygon based forest inventory using satellite data. The work will involve the following: gathering of relevant satellite data and spatial data at the national scale; processing of the data to ensure compatibility, determination of appropriate modeling approach, model implementation, creation of national maps (at 30 m spatial resolution for a greater than 30 year time series of data). The forest inventory based image segmentation work will be done over a prototype area and will require selecting and testing of possible algorithms. Algorithm must allow for nested implementation. Both analyses require provision of methods (in written form) as well as maps in digital form.

The work identified requiring multiple years of data and analysis at the national scale is a massive computing job. The forested area of Canada is 650 million hectares in area. The pixels we use are 1/10th of a hectare in area. These pixels hold multiple values. This means billions of pixels per year, then multiple year analysis (for the fire risk and projections).

3. Criteria for assessment of the Statement of Capabilities (Minimum Essential Requirements)

Any interested supplier must demonstrate by way of a statement of capabilities that it meets the following requirements:

- **Experience:**

The supplier has developed a unique protocol and specialized scripts (in R software) to process billions of pixels over space and time towards the wildfire susceptibility outcome.

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The supplier must demonstrate a minimum of 15 years' experience working with satellite time series in high performance computing environments; modeling using novel machine learning algorithms; applications and published science outcomes regarding image segmentation in a forest inventory context.

The supplier must demonstrate experience working with medium spatial resolution (10 to 30 m pixel size) satellite data representing in a gap-free and uniform fashion over 500 million hectares over a minimum time series of 30 years using a computing routines capable of implementing the work described above.

- **Knowledge and Understanding:**

The supplier must demonstrate knowledge and understanding of time series processing of satellite imagery over large areas (> 500 million hectares) in a forest monitoring context. Demonstration of knowledge, such as via publication of peer reviewed papers, of knowledge of image segmentation and multiscale implementation and applications.

- **Academic qualifications:**

The proposed project leader must possess a PhD from a recognized university in forestry, geography, or computer science.

4. Justification for the Pre-Identified Supplier

The supplier mentioned in section 9 below is the only known supplier that meets the mandatory criteria set out in section 3 above.

Should Canada receive a statement of capabilities from a supplier that contains sufficient information to indicate that it meets the requirements set forth in this ACAN, a competitive process will be triggered with a technical and financial evaluation methodology of the bids proposed by the potential bidders

5. Government Contracts Regulations Exception(s)

The following exception(s) to the *Government Contracts Regulations* is (are) invoked for this procurement under subsection 6(d) - only one person is capable of performing the work.

The identified supplier, University of British Columbia, is the only one able to meet all of the criteria identified in paragraph 3 above.

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6. Ownership of Intellectual Property

- Ownership of any Foreground Intellectual Property arising out of the proposed contract will vest in the Contractor.

7. Period of the proposed contract

Le contrat proposé s'étend de la date d'attribution du contrat au 31 mars 2023

8. Cost estimate of the proposed contract

The estimated value of the contract, including option(s), is \$75,000.00 CAD (GST/HST extra).

9. Name and address of the pre-identified supplier:

Department of Forest Resource Management
Forest Sciences Centre. 2424 Main Mall.
University of British Columbia.
Vancouver, BC., Canada V6T 1Z4

10. Suppliers' right to submit a statement of capabilities

Suppliers who consider themselves fully qualified and available to provide the goods, services or construction services described in the ACAN may submit a statement of capabilities in writing to the contact person identified in this notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

11. Closing date for a submission of a statement of capabilities

The closing date and time for accepting statements of capabilities is: February 21, 2023 at 2:00 PM EST

12. Inquiries and submission of statements of capabilities

Inquiries and statements of capabilities are to be directed to:

Kaeli McCarthy, Procurement Specialist

Natural Resources Canada

Telephone: 343-571-9878

E-mail: Kaeli.McCarthy@nrcan-rncan.gc.ca