

SECTOR INNOVATION PROGRAM Info Sheet - Intake 6

This document outlines details for the sixth intake of the Sector Innovation Program (SIP6): the focus of the intake, intake-specific parameters and eligibility criteria, and the timelines. Note that this document is a supplement to the Sector Innovation Program - Program Guidelines. Unless specified otherwise, the program parameters, eligibility and evaluation criteria indicated in the Program Guidelines apply.

I. INTAKE FOCUS

The focus of Intake 6 of the Sector Innovation Program is environmental DNA (eDNA). The intention of this intake is to support genomics¹ research which will address gaps in eDNA analyses that pose barriers to extract and utilize environmental information. Specifically, research supported through this call will focus on the development and validation of eDNA techniques, standards and methods to drive and facilitate the adoption of eDNA by industry and government organizations. This intake builds on the discussions held with industry partners, including end users, and academics at the eDNA workshop held at Genome BC on May 2, 2019.

eDNA is DNA or genetic material of an organism that is present and extracted from environmental samples such as from water, soil, excrement and other sources. It can provide significant information on the prevalence and abundance of species today and in the past (sediment eDNA) and the health of ecosystems as well as help track diseases.

The robustness of eDNA as a species indicator and its adequacy to meet monitoring needs suggest that for several applications eDNA tools can be more cost effective than conventional monitoring tools which require extensive and costly sampling protocols and analyses. However, eDNA can be reliably and routinely utilized only when it is standardized, reproducible and offers opportunities for a broad scope of assessments. Outcomes of the research supported through this competition could help inform decisions in water quality monitoring and environmental management as it relates to baseline biodiversity assessments, environmental impact assessment, reclamation, restoration and conservation programs.

Projects funded through this competition must include research aspects that are developed with input from end-user entities capable of implementing or utilizing the deliverables of the project such as regulators, regulatory intermediaries such as environmental consulting companies, industry and/or the Canadian Standards Association.

For SIP6, applicants must clearly specify how their research will help advance the development or use of eDNA techniques, standards or methods in their Statement of Interest (SOI) to be considered eligible to move forward in this competition. See Appendix I for some examples of eligible research. Contact sip@genomebc.ca with any questions.

II. INTAKE-SPECIFIC PARAMETERS AND ELIGIBILITY

The funding envelope for this intake is \$1M. The intake-specific parameters and eligibility criteria are indicated below.

- 1) Project budget must be in the range of \$75K to \$250K,
- 2) Project term must be in the range of 12 to 24 months,

¹ The term genomics is defined here as the comprehensive study of the genetic information of a cell or organism, including the function of specific genes, their interactions with each other and the activation and suppression of genes. For ease of reference, it includes related disciplines such as bioinformatics, epigenomics, metabolomics, metagenomics, proteomics and transcriptomics.

- 3) Project Leaders who are leading an active project funded through the Sector Innovation Program are eligible to apply to SIP6, and
- 4) The Project Leader and Co-Project Leader(s) cannot be listed in a leadership role (Project Leader/Co-Project Leader) on more than one Statement of Interest (SOI) submitted to this intake.

III. INTAKE TIMELINE

Date	Activity
September 2019	Launch of SIP-Intake 6 info sheet
October 30, 2019	Deadline for submitting Statements of Interest (SOI)
November 14, 2019	Applicants notified if their SOI is eligible for this intake
December 12, 2019	Deadline for submitting Applications
February 28, 2020	Recommendations presented to Genome BC’s Board of Directors
March 16, 2020	Applicants notified of results of their application
July 1, 2020	Anticipated start date for successful projects

APPENDIX I. EXAMPLES OF ELIGIBLE RESEARCH AREAS

SIP6 intends to support robust methodology development and standardization of whole community as well as indicator species eDNA sample collection.

Eligible research topics include:

- questions regarding origin, transport, state and fate of eDNA as well as technical questions (e.g. isolation of eDNA);
- PCR-based and PCR-free methods for species assessment;
- quantification of degradation and age of eDNA;
- data analysis including species abundance, interpretation, validation of data; and
- determining thresholds required for decision-making such as would be required for Environmental Impact Assessment for large development projects.