Ocean Biogeochemistry Virtual Institute (OBVI)

Expressions of Intent: Informational Webinar

May 4, 2023

Schmidt Futures Virtual Institutes

A Virtual Institute is a **distributed network of carefully selected scientific and technical talents** focused on solving hard and important problems by working across institutions and disciplines.

For example:

- Virtual Earth System Research Institute (VESRI) aims to improve global climate models through enhanced software, mathematics, and algorithms
- Virtual Institute for Astrophysics (VIA) focuses on accelerating discovery in astrophysics through advanced computing and technological innovation.

OBVI

The Schmidt Futures Ocean Biogeochemistry Virtual Institute (OBVI) aims to improve the breadth and rigor of ocean biogeochemistry research, capacity to manage ocean resources, and environmental decision-making in order to better respond to the changing climate.

OBVI seeks to tackle some of the most challenging biogeochemical data and modeling problems across systems and scales by developing novel approaches for ocean data collection, integration, and synthesis.

Phytoplankton bloom in the Tasman Sea captured by th NASA Moderate Resolution Imaging Spectroradiometer (MODIS) instrument on the solution on 21 November 2 brodt: NASA/Ocean Biolog Processing Group, Goddar Space Flight Center

Our Approach

- In partnership with **Schmidt Ocean Institute**, OBVI will convene an international network to carry out complementary research projects
- Project teams will operate in an integrated manner to tackle technological, cultural, and logistical challenges that are pervasive in this field.
- We are seeking Expressions of Intent (EOI) for research projects that advance understanding and predictions of the ocean carbon cycle and resilience of marine ecosystems by innovating in the following areas:
 - Integrated Ocean Observation and Modeling
 - Ocean Data Synthesis

Expressions of Intent - General Overview

- EOIs should come from teams of researchers or consortia interested in pursuing high impact, high risk ideas over a **5-year timeframe.** The following types of projects can be included:
 - a site-focused project,
 - a project that studies a process across existing sites
 - o a data-centric or modeling project with no explicit field effort, or
 - a project that leverages an existing field effort or historical data to study a particular biogeochemical process
- We desire projects that have the potential to deliver **new foundational data** and integrated data products, **flexible strategies** for organizing and synthesizing diverse datasets across scales and geographic locales, **software and tools** for the research community and other users of ocean data, and **methods of collaboration**.

Expressions of Intent - Shiptime, HPC, and Collaborations

- Through collaboration with the <u>Schmidt</u> <u>Ocean Institute</u>, shiptime may be provided at no additional cost.
 - <u>HPC</u> access may also be provided.
- OBVI encourages collaborations, particularly international and transdisciplinary collaborations, that are difficult to fund through existing mechanisms.



Information to Include

- primary area of innovation and engagement with the virtual institute and key challenges being addressed in support of OBVI's mission;
- 2. why addressing this process or component is critical to advancing science and technology for society and how the proposed work may inform/support environmental decision-making, management, investment, and/or policy;
- 3. scientific ability, relevant expertise, scientific project management experience, and capacity of the PIs and partner institutions to run a large project;
- 4. project approach, including observational and computational needs; and
- 5. collaborative teamwork approach, **plan for coordination across research methods and disciplines** within the team; ideas regarding how your team may interact with other research teams to ensure that you have effective cross-cutting collaborations as members of the VI community.

Submission Process

- The EOI is expected to be short (2 pages) and should include all elements detailed in the Request for EOIs document.
- Detailed budgets are not requested at this stage, but project budgets are intended to be approximately up to USD 10 million distributed over a 5-year period.
- EOIs must be submitted through the <u>form</u> linked in the <u>Request for EOIs</u> <u>document.</u>
- If you would like to request the translation of this EOI call to your native language, please reach out to <u>obvi@schmidtfutures.com</u> and state "OBVI EOI Translation Request" in the email subject line.

Evaluation and Award Process

- EOI Submission Deadline: Thursday, June 1, 2023, by 11:59 pm EDT
- **Review Process:** EOIs will be anonymized for a blinded evaluation by a committee of peers, Schmidt Futures, and SOI staff.
 - Please refer to the FAQ document for additional information.
- **RFP Invitations:** In late July 2023, we will reach out to teams who will be invited to submit full proposals for evaluation.
 - Invited teams will have 60 days to submit a full proposal.

Q & A

All questions from the webinar will be added to the FAQ document by early next week (week of May 8).

If you have any additional questions, please feel free to e-mail

obvi@schmidtfutures.com.

