Arctic Data Center:
Call for Synthesis Working Group Proposals
Due May 23, 2018

In this document you will find all the information needed to submit a *Synthesis Working Group* proposal to the Arctic Data Center.

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Overview and Deadline

To promote the analysis and synthesis of Arctic data, as well as to inform ongoing development of the data repository, the Arctic Data Center is soliciting requests for proposals for a *Synthesis Working Group*, with research to begin *by October 2018*. Funding of up to $54,600 is available to support one Working Group, hosting two meetings of 3-5 days, with approximately 15 participants each at the Arctic Data Center in Santa Barbara, California, over an anticipated 1-1.5 year period. Proposals must focus on Arctic-related research issues, and primarily (but not necessarily exclusively) involve the analysis and synthesis of data contained within the Arctic Data Center Repository (https://arcticdata.io/proposals).

This year we request that all synthesis proposals *explicitly address factors related to one or more human dimensions of the Arctic experience*, in addition to environmental aspects. These can include synthesis investigations into social-cultural processes, economic factors, Arctic indigenous peoples' perspectives, etc., relative to the unique biophysical challenges of life in the Arctic region.

Proposals will be reviewed by the Arctic Data Center's Science Advisory Board for intellectual merit and broader impacts, but consideration will also be made as to the availability and sources of data needed by the project, as well as how the project will serve to evaluate and inform future directions for the Arctic Data Center's contents and services. Principal Investigators are strongly encouraged to contact the Arctic Data Center (proposals@arcticdata.io) to briefly discuss ideas before submitting proposals.

The Arctic Data Center (https://arcticdata.io/) is an NSF-funded archive for Arctic science data and related research documents. Operational since March 2016, the Arctic Data Center is a national partnership, led by the National Center for Ecological Analysis and Synthesis (NCEAS; https://nceas.ucsb.edu) at the University of California Santa Barbara, in collaboration with the National Oceanic and Atmospheric Administration's National Centers for Environmental Information (NCEI; https://www.ncei.noaa.gov) and the NSF-funded Data Observation Network for Earth (DataONE; https://dataone.org). The long-term Arctic Data Center Repository allows for the preservation and sharing of data spanning many disciplines from the Arctic, now and into the future.

The Center provides excellent on-site meeting facilities and support for remote collaboration; comprehensive capabilities for computing on advanced servers; and consultation and training for associated researchers on collaborative analysis, data collation, scientific workflow construction, and both in-person and virtual collaboration techniques. The Arctic Data Center is supported by National Science Foundation award #1546024.

Proposal Deadline

Proposals for Working Groups should be submitted **by end of day Wednesday, May 23, 2018**. Decisions will be announced in early July, with work to start by October 2018.

Who Should Apply

Proposals may be submitted by individuals who hold a position in a USA-based academic institution, federally funded research and development center (FFRDC), free-standing research institution, scientific society, governmental or policy agency, non-governmental organization, or consortium of such institutions. Some travel support for international participants may be possible. Working Group members should generally include scientists who are familiar with Arctic research and the data that will be used in the analyses. For synthesis research that will require a large effort to integrate multiple Arctic datasets, Principal Investigators are strongly encouraged to consult with and potentially include as participants the original Data Set Creator(s) or Contact(s) (as listed in Arctic Data Center metadata), or other individuals who are deeply familiar with those data. Please refer to the description below of *Synthesis Working Groups* for additional guidance regarding Working Group size and composition.

Funding

The budget for Arctic Data Center *Synthesis Working Groups* is $54,600USD, to support 1 new Working Group over a 1-1.5 year period. Working Groups are expected to meet at NCEAS in Santa Barbara, CA, where resident staff can provide significant logistical and technical support during your meeting. Funding is intended to offset meeting travel, lodging, and per diem expenses. One or more meetings at other venues will be considered if well justified. The Center also encourages and provides technical and logistical support for the use of virtual meetings and remote participation, to reduce project costs and carbon footprint.

Working Group budget requests should not exceed the $54,600USD total, unless the proposers can bring in additional funds from other sources. This level of funding is typically adequate to support a Working Group of 15 individuals meeting twice, for 5 days per meeting, in Santa Barbara, California. Working Group costs may vary, however, depending on group size, number of international participants, number of in-person vs. virtual meetings, and meeting duration. Proposals may involve activities with partial support from other institutions or agencies, and co-funding is welcomed.

Please [download](#) and use the provided template to estimate your Working Group budget and participant support costs.

What We Will Not Fund

- The Arctic Data Center will not fund projects if the activity should be funded by another entity.
- The Arctic Data Center will not fund the collection of new data or field research.
- The Arctic Data Center will not fund proposals requesting overhead or funds to be spent by the investigator at the investigator's home institution.

Data Expectations

We expect the Synthesis Working Groups to emphasize use of existing Arctic Data Center data resources and associated services. Arctic Data Center data sets must constitute a

significant portion of the data to be used in the synthesis activity, *however additional data resources from other sources are also acceptable and encouraged*.

The Arctic Data Center has a strong commitment to developing means to locate, access, analyze and make data broadly available, and to imbuing scientists and other users with a sense of sharing information. To this end we require that Working Groups agree, prior to initiating their activities at the Center, that all data products developed through the sponsored activities must comply with the Arctic Data Center's "Terms of Use" for data licensing and distribution, and that all derived data (data resulting from analyses from which the original data cannot be reconstituted) are made publicly available within the Arctic Data Center Repository, following conclusion of Working Group activities.

Reporting

We ask PIs on the approved project to provide an initial summary of research objectives, anticipated work and desired outcomes. Arctic Data Center support should be cited in publications, and copies of articles accepted for publication should be sent to the Arctic Data Center's Support Team. Questionnaires requesting updates on Arctic Data Center products are sent periodically to participants. The products resulting from Arctic Data Center research activities are very important to measuring the success of Arctic Data Center Synthesis Working Groups.

Guidelines for Proposals

Arctic Data Center Synthesis Working Group proposals are relatively short – fewer than 2000 words, excluding cover sheet, citations, references, figures, tables, and CVs – yet need to include enough information in an effective form to allow for an accurate evaluation. Please follow the formatting and submission instructions provided below.

Include the following information in your proposal, where applicable:

COVER SHEET
Date of Submission
Descriptive Title
Short Title – Two or three words for use as a project name (25 characters max)
Working Group Leaders' Name(s) and complete contact information
Project Summary – A brief scientific abstract of your project. (200 words maximum)
Proposed Start and End Dates – Proposed start and end date of your project (month, year)
Proposed Data Release Date – Date you expect to submit data set(s) to the Arctic Data Center (month, year)
Is this a resubmission? – Yes/No (If yes, provide date(s))

BODY OF PROPOSAL (2000 words max)
Problem Statement – Clear and concise statement of what is to be done, why it is important, and how it will be accomplished.
Data Sources – Brief summary of key data and data sources, with URL's or DOI's as appropriate.
Proposed Activities – Brief description of methods and why they are appropriate.
Names of Participants (maximum of 20)
Indicate whether participants are confirmed.
Identify a technical liaison in the Working Group to work on data/analysis plans with Arctic Data Center/NCEAS computing staff – This participant should have considerable analytical expertise.
Identify one participant who will be responsible for ensuring that the requirements of the Arctic Data Center's Data "Terms of Use" are met.
Timetable of activities.
Anticipated results and benefits – Include description of data and software products, and the proposed public release date.
Is this proposal (or a closely aligned proposal) under consideration elsewhere? If so, please briefly describe the circumstances.
Literature Cited (does not count for 2000 word limit).
Curriculum Vitae for each Working Group Leader – Two (2) page maximum, "NSF-style" biosketch (does not count for 2000 word limit).

Proposals will be accepted in digital format only, as a Microsoft Word or PDF file. Proposals should be submitted as single, complete documents, formatted to standard letter size (8.5"x11") with graphics embedded directly in the document. Information to be included in the cover sheet and body of the proposal is provided in the table above. Please address each question in the order it is presented. The proposal body should not exceed 2000 words, and should follow the cover sheet. Do not send compressed collections of files, such as .ZIP files.

To submit your proposal, e-mail the final proposal document to proposals@arcticdata.io. All those who submit proposals will receive an email confirming receipt within 24 hours of submission. If you do not receive a confirmation email, please call (805) 893-2500 with the first PI's name and proposal title and

someone will follow up with you shortly. Please contact proposals@arcticdata.io if you have difficulty submitting your proposal, or if you have extenuating circumstances that would prevent you from uploading a digital version of your proposal by the deadline.

For answers to questions not addressed in this Call for Proposals document, please email proposals@arcticdata.io or call (805) 893-2500.

Proposal Review Process

Proposals are evaluated for scientific merit, novel approaches, contribution to Arctic Synthesis Science, as well as potential for assessing the effectiveness of the Arctic Data Center services and informing the Center's future directions and priorities. The Science Advisory Board (SAB), consisting of Arctic researchers, will be the review panel, read all proposals, and make recommendations to the Science Advisory Board Chairperson as to funding. These recommendations will be vetted with the Arctic Data Center leadership team and cognizant NSF Program Officers. Potential reviewers will recuse themselves from proposal review when there is a conflict of interest. At the request of the Science Advisory Board, the Arctic Data Center may obtain additional reviews from other individuals with expertise of special relevance to the proposed research, or if the number of proposal submissions proves unwieldy.

An anonymous summary of reviews by the SAB members will be returned to the proposal PI(s). While reviews are provided to applicants, these may not reflect the full breadth of discussions from the review panel meeting. The final funding decision will be made by the Arctic Data Center lead PI, in consultation with the Chair of the Science Advisory Board. Based upon panel discussions, the Arctic Data Center may request modifications to the funded proposal (e.g., adjustments to Working Group size or composition, inclusion of additional data resources) before funding is awarded.

Proposals received after the deadline will be returned without review. Proposals that are clearly inappropriate for Arctic Data Center funding (e.g., those that do not involve analysis of Arctic Data Center holdings; or that include requests for overhead, funds to be spent at the investigator's home institution, or funds intended for new data collection, etc.) will also be returned without review.

Proposal Tips

To help you develop successful proposals, here are a few tips:

- Proposals this year should explicitly consider some human dimensions in the research, such as syntheses involving sociocultural, economic, ethnological, or other aspects of human/environmental interactions in the Arctic region.

- Proposals are evaluated on the significance and novelty of the idea(s) under consideration and should be question-driven (i.e., not purely descriptive).

- Provide a clear rationale for why this should be, or can only be, done using Arctic Data Center holdings, or might significantly contribute to assessing the effectiveness and informing future directions and priorities for the Arctic Data Center services.

- Be clear and concise. Give brief examples of major points you are making or approaches you are using. "Trust me" proposals are not effective.

- Include a **diverse** array of participants who are committed to the project. Pay attention to gender balance and include individuals from underrepresented institutions and groups, as these factors are known to positively impact Working Group success and productivity. For each participant, specify the expertise brought to the project and whether he/she has agreed to participate.

- Indicate where the data used in your project will come from and its availability, using URL's and DOI's as appropriate.

Synthesis Working Groups

Based on over twenty years of experience at NCEAS, we have identified a few characteristics of Synthesis Working Groups that contribute to their success:

- Groups of 8 -16 scientists (20 maximum) work at the Center for 3-7 days, concentrating on specific issues that require in-depth analysis of data and synthesis of ideas. Each Working Group typically meets 2 times a year. It has been the experience at the Center that Working Groups of 15 or fewer individuals meeting for about 5 days, are the most productive.

- Working Group proposals must designate at least one Working Group member as the technical liaison with the Arctic Data Center/NCEAS scientific computing staff, to clarify best approaches to data management and use of the Center's computational resources.

- It is expected that all Working Groups will involve a diverse group of participants, including sensitivity to gender diversity, diversity in career stages, and inclusion of members of underrepresented communities.

- The Arctic Data Center is interested in increasing opportunities for early-career scientist and graduate student participation in its Synthesis activities.

- Funding occurs through an [NSF](#) grant to [UC Santa Barbara](#), which reimburses actual expenses (i.e., the Center does not award grants to other institutions). Applicants are encouraged to consider additional funding sources to leverage Arctic Data Center resources.

The following paper examining NCEAS Working Group productivity may be of interest: Hampton, S.E., and J.N. Parker. 2011. Collaboration and productivity in scientific synthesis (PDF). BioScience 61: 900-910. [DOI: 10.1525/bio.2011.61.11.9](#)