Integrated Arctic Observation System

Research and Innovation Action under EC Horizon2020
Grant Agreement no. 727890

Project coordinator:
Nansen Environmental and Remote Sensing Center, Norway

Deliverable 7.13

Contribution to ERL Special Issue

Start date of project:	01 December 2016	Duration:	60 months
Due date of deliverable:	30 November 2021	Actual submission date:	30 November 2021
Lead beneficiary for preparing the deliverable:	USFD		
Person-months used to produce deliverable:	2 pm		

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Version	DATE	CHANGE RECORDS	LEAD AUTHOR
1.0	14.10.2019	Template	Donatella Zona
1.1	30.08.2021	1st Draft	Donatella Zona
1.1	26.11.2021	Final Draft	Donatella Zona
1.2	30.11.2021	Technical review and submission	Kjetil Lygre

Approval	Date:	Sign.
X	30 November 2021	Coordinator

USED PERSON-MONTHS FOR THIS DELIVERABLE					
No	***Beneficiary***	***PM***	***N***	***Beneficiary***	***PM***
1	NERSC		**2**	TDUE	
2	UiB		**2**	GINR	
3	IMR		**4**	UNEXE	
4	MISU		**2**	NIVA	
5	AWI		**2**	CNRS	
6	IOPAN		**2**	U Helsinki	
7	DTU		**3**	GFZ	
8	AU		**3**	ARMINE	
9	GEUS		**3**	IGPAN	
10	FMI		**3**	U SLASKI	
11	UNIS		**3**	BSC	
12	NORDECO		**3**	DNV GL	
13	SMHI		**3**	RIHMI-WDC	
14	USFD	***2***	**3**	NIERSC	
15	NUIM		**3**	WHOI	
16	IFREMER		**3**	SIO	
17	MPG		**4**	UAF	
18	EUROGOOS		**4**	U Laval	
19	EUROCEAN		**4**	ONC	
20	UPM		**4**	NMEFC	
21	UB		**4**	RADI	
22	UHAM		**4**	KOPRI	
23	NORCE		**4**	NIPR	
			4	PRIC	

DISSEMINATION LEVEL		
PU	Public, fully open	**X**
CO	Confidential, restricted under conditions set out in Model Grant Agreement	
CI	Classified, information as referred to in Commission Decision 2001/844/EC	

EXECUTIVE SUMMARY

This document describes the main goals of the special issue, which aims to summarize the scientific knowledge about climate change across the Arctic in layman terms which can be used for communicating science to policymakers. The goal of the special issue is to summarize the scientific knowledge to native communities and be vehicle for improving the exchange of knowledge between scientists, the public, and the native communities. The cross disciplinary nature of the special issue and the involvement of partners from different EU projects will allow wide dissemination of the outreach activities within ITRAOS. A paper has already been published, and we expect several other manuscripts to be submitted by the end of November 2021 (which is the current deadline for the special issue).

Table of Contents

1. Introduction

There is an increasing interest in including a human dimension into the impact of climate change on the Arctic and improve communication of scientific knowledge to native communities. This special issue has the goal to be vehicle for improving the exchange of knowledge between scientists, the public, and the native communities, by summarizing the scientific knowledge about climate change across the Arctic in layman terms which can be used for communicating science to policymakers. This special issue is housed in Environmental Research Letters (ERL) which is an open-source journal, supporting the free exchange of information.

2. Description of the Outreach Special issue on Environmental Research Letters (ERL).

Proposal for the ERL Outreach Special issue

Below is a description of the special issue goals, and a list of the guest editors involved.

Title: Effective communication of scientific & place-based knowledge of Arctic change: understanding interactions between indigenous & local knowledge, and natural & social science perspectives

World-wide an increasing number of research projects focus on the challenges associated with changes across the circumpolar Arctic. The need for trans-disciplinary approaches has been progressively recognized to study the numerous impacts of global warming on Northern high-latitude ecosystems, given the complexity of the multiple interacting processes. Humans are an integral part of these systems, and community-based monitoring has also been increasingly integrated with other scientific approaches. It has also become increasingly acknowledged that science results should be effectively communicated to the public and stakeholders in terms of outreach and education.

The goal of this special issue is to gather contributions focusing on, but not limited to, the following themes discussing and presenting novel creative ways to enhance:

- science communication, education and outreach tools, and co-production of knowledge
- integration of social and natural science approaches
- indigenous and collaborative approaches to adaptation, mitigation, and risk perception
- socio-economic modelling in relation to Arctic environmental change,
- examining the impacts of permafrost degradation (thaw, erosion) and other phenomena on health and pollution as well as on infrastructure stability (e.g., buildings, roads, airstrips).

This special issue invites papers that bring together researchers from both social and natural sciences who are involved or interested in reaching out to stakeholders and to the general public and share successful experiences. Examples from past, ongoing and future initiatives that include traditional indigenous knowledge and scientific tools and techniques are welcome. Submissions may focus on physical, biological, chemical processes, or human dimensions. Particularly encouraged are submissions reporting on studies integrating multiple approaches within the same research project and novel ways to achieve this integration, as well as initiatives summarizing the scientific knowledge about climate change across the Arctic in layman terms which can be used for communicating science to policymakers.

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3. Literature

Hauser, Donna D W et al Co-production of knowledge reveals loss of Indigenous hunting opportunities in the face of accelerating Arctic climate change 2021 Environ. Res. Lett. 16 095003 https://iopscience.iop.org/article/10.1088/1748-9326/ac1a36

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INTAROS

This report is made under the project
Integrated Arctic Observation System (INTAROS)
funded by the European Commission Horizon 2020 program
Grant Agreement no. 727890.

Project partners: