Integrating Activities for Advanced Communities

D12.3 EPQ Requirement No. 3

Project No.871120– INTERACT

H2020-INFRAIA-2019-1

Start date of project: 2020/01/01 Duration: 48 months
Due date of deliverable: 2020/02/29 (M2) Actual Submission date: 2020/03/09

Lead partner for deliverable: Lund University
Author: Margareta Johansson

Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the Consortium (including the Commission Services)	
CO	Confidential, only for members of the Consortium (including the Commission Services)	

Table of Contents

Publishable Executive Summary 3
1. Introduction 4
1.1. Reducing environmental impacts from running research stations 4
1.2. Reducing environmental impacts from research 4

Publishable Executive Summary

INTERACT is a network of terrestrial research stations that hosts more than 5,000 scientists every year. The Stations are owned by different institutions for example Universities, Academies of Sciences and they can also be privately owned. When hosting so many scientists there is a risk that the environment around the research stations are impacted by the research conducted in two ways 1) through the running of the research station 2) through the research carried out by the scientists. INTERACT has taken mitigation actions for both possible impacts by producing a report on how to minimize environmental impact when running a research station and by developing an application module in INTERACT GIS that collects information needed to prevent impacts from science.

1. Introduction

INTERACT is a network of terrestrial research stations that hosts more than 5,000 scientists every year. The Stations are owned by different institutions for example Universities, Academies of Sciences and they can also be privately owned. When hosting so many scientists there is a risk that the environment around the research stations are impacted by the research conducted in two ways 1) through the running of the research station 2) through the research itself.

1.1.Reducing environmental impacts from running research stations

In INTERACT II, we developed a guide for station management (Deliverable D3.11 "INTERACT Report on Reducing Environmental Impacts at Arctic and Northern Alpine Research Stations" available at https://eu-interact.org/app/uploads/2019/07/D3-11.pdf) where station managers could learn how to minimize the impact from the research stations on the local environment. The report deals with everything from energy, greenhouse gas emissions, water use, water waste and solid waste and how to treat these in remote and harsh environments. INTERACT collaborated with a research station in Antarctica who manged to build a new zero-emission station in one of the coldest and most remote places on Earth. Many of the lessons learned from this construction are directly applicable at the INTERACT research stations located at the other pole – in the Arctic.

1.2.Reducing environmental impacts from research

Researchers that are carrying out research in the Arctic can potentially also impact the environment in a bad way. To have an overview of where visitors of the stations are working in the field and what they are doing, INTERACT has developed an INTERACT GIS system (see Deliverable D3.15"User manual and software documentation for INTERACT Station GIS system" available here: https://eu-interact.org/app/uploads/2019/04/D3.15.pdf). This system includes an online application form where visitors of the Stations that are using this module are reporting where (what coordinates) they will carry out their work and what they will do. They also need to declare if the research itself is impacting the environment and what the measure are to restore the environment if any impact is expected. The visitors need to provide all this information beforehand and by gathering this information at an early stage, the station managers can prevent some research in the area if it is harming the environment.

In addition to the mitigation actions that can be taken using the information collected from INTERACT GIS, many of the research stations have additional mitigation actions. For example, some stations are monitoring endangered bird species and coordinates where the birds are located are stored in closed databases to protect the birds from disturbances. As INTERACT is a network of 88 research stations in all Arctic countries and in neighbouring alpine and forested areas, there are many different protocols and mitigation actions that are taken within the INTERACT network.