

## Integrating Activities for Advanced Communities



### D7.2 - Outreach film 2

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

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## Publishable Executive Summary

The scientific awareness of the accelerating changes to the Arctic and what this means to the rest of the world is not matched by public awareness who have various perceptions based on limited access to scientific understanding. It is therefore essential to communicate science understanding of the rapidly changing Arctic and its global implications to the public in general and within education. To have maximum impact, within work package 7, we have worked with a world leading organization to create four short films visualizing four different yet critically important aspects of Arctic change. Deliverable D7.2 described in this report is a film entitled “Extreme Causes for Concern” showing examples of extreme events that are dangerous to people and ecosystems. The components of the film include coastal tsunamis, wildfires, extreme winter warming events. Some of these events have killed people while large areas of vegetation have been destroyed and many animal deaths have occurred. The film is presented by international experts with the aid of video clips and graphic animations.

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## 1. Introduction

The scientific awareness of the accelerating changes to the Arctic and what this means to the rest of the world is not matched by public awareness who have various perceptions based on limited access to scientific understanding. With often misconceived perceptions of climate change causes and impacts, actions to reduce human influences on the Arctic will be limited. It is therefore essential to communicate science understanding of the rapidly changing Arctic and its global implications to the public in general and within education. Films that graphically illustrate the Arctic, changes to the environment, impacts on people and the research carried out there are an extremely effective communication tool, particularly if shared on social media. To have maximum impact, films should be professionally developed and the communication with scientists should be accessible to a wide audience. We therefore, within work package 7, worked with a world leading organization to create four short films visualizing four different yet critically important aspects of Arctic change. Deliverables D7.1 – D7.4 are films produced by the BBC Natural History Unit (NHU) and INTERACT researchers, external experts and Indigenous Peoples. Deliverable D7.2 described in this report is a film entitled “Extreme Causes for Concern” which focuses on extreme events that are difficult to predict and record yet can be catastrophic to local populations.

## 2. Production of the film

The start of the process was to negotiate a sub-contract from Sheffield University (Partner 2) to the BBC NHU. The topic of the film was developed by work packages 7 and 1 and communicated to the BBC NHU. Extensive discussions among this production team resulted in the development of a story line that was continuously evolved as participants and various media became available. The INTERACT producers suggested appropriate researchers as well as relevant conferences such as INTERACT Consortium meetings where BBC NHU producers could interview INTERACT partners who could contribute to the film.

A mass of material was accumulated but over time, the story line was focused to a few main messages. These messages were described in interviews, video clips and animations and were accompanied by a carefully crafted script in time with the video sequences. Following this compilation, the whole film was narrated by partner 2 and sub-titles were added. Because the film was developed by the BBC NHU the whole process was highly professional with the same producers, sound engineer, sound recording laboratory as the “Planet Earth” series of films (Figure 1, 2).

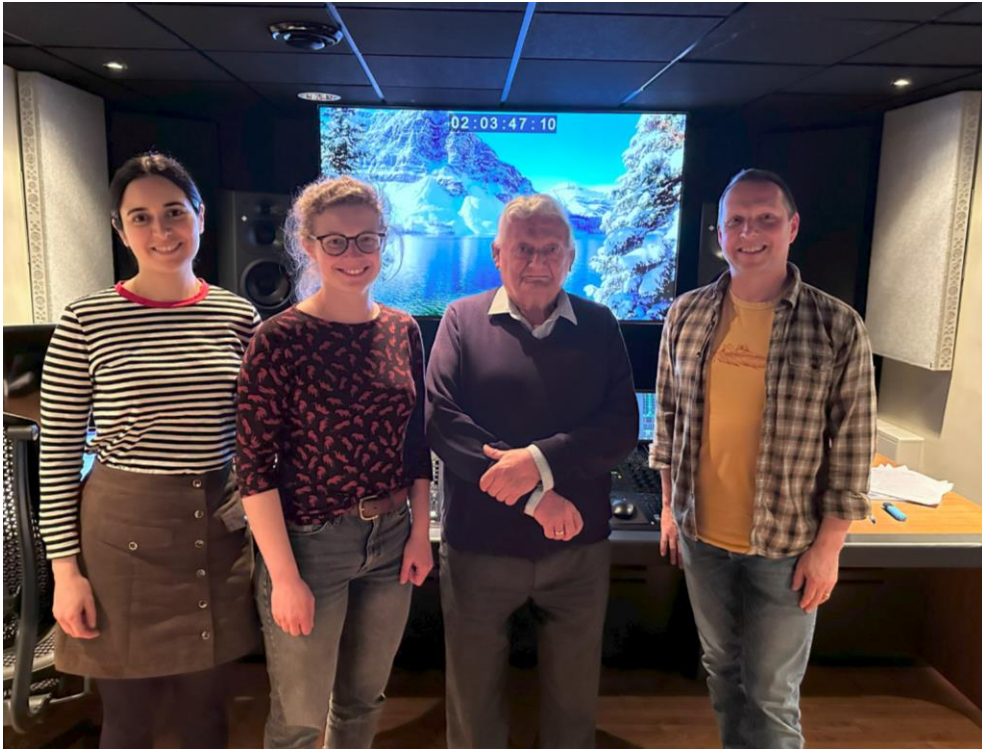


Figure 1. The BBC NHU Production team in the sound studio in Bristol.



Figure 2. Recording of the narration (left, in Sir David Attenborough's chair!).

### 3. Content of the film

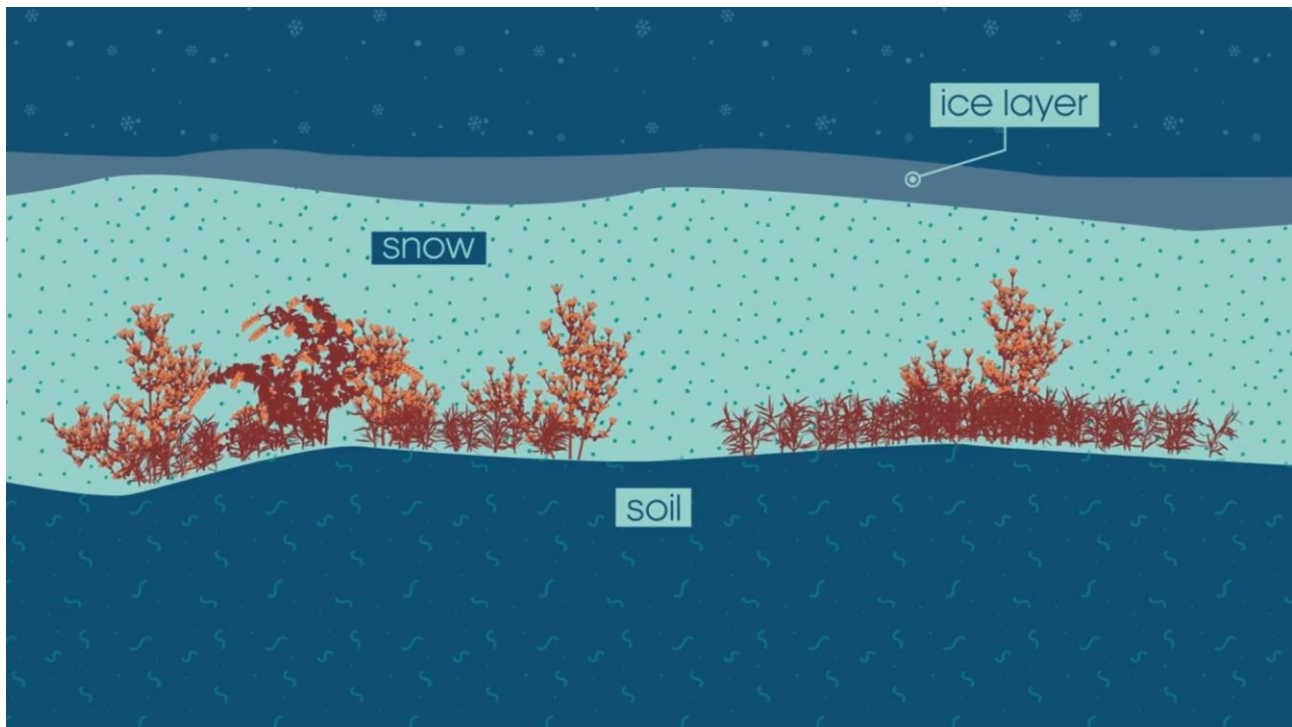
The first extreme event described in the film is a mega-tsunami off the Greenland coast that destroyed a village and killed people. Professor Mateusz Strzelecki from University of Wrocław in Poland, presents graphic footage of the tsunami hitting the village of Nuugaatsiaq carrying houses with it. He explains how rock falls on the opposite side of the fjord lead to this tsunami and shows the research he is undertaking to understand and predict the instability of mountain sides that could lead to future tsunamis (Figure 3).



Figure 3. Prof Mateusz Strzelecki explaining the danger of tsunamis in the Arctic.

Away from the coast, an extreme increase in the frequencies in lightning strikes and wild fires together with warm periods in winter damage vegetation and soils. Professor Gareth Phoenix of Sheffield University, United Kingdom, working at the INTERACT Station Abisko Scientific Research Station in northern Sweden, describes how winter warming events are followed by low temperatures which lead to the formation of ice layers in the snow. These ice layers when they cover plants lead to the death of plants, reduced carbon uptake and reduced food for grazing animals (Figure 4).





*Figure 4. Animations show how ice layers, when they cover plants, lead to the death of plants, reduced carbon uptake and reduced food for grazing animals.*

Ice layers at the surface of the snow pack also created by rain on snow events in warming Arctic winters. Professor Bruce Forbes of the University of Lapland describes how these ice layers trap lemmings and lead to their death. He also describes the tragedy of the mass death of reindeer that are essential in many ways to Indigenous Peoples of the Arctic (Figure 5).



*Figure 5. Reindeer, a key resource of many Arctic Indigenous Peoples, killed by an extreme winter warming event.*

The importance of the extreme winter warming events for reindeer herding is described by Niila Inga who is a Sami reindeer herder working with the INTERACT Tarfala research station, northern Sweden. He points out that the current extreme winter conditions are beyond the experience of even older generations of herders (Figure 6).





Figure 6. Niila Inga, a reindeer herder from northern Sweden, describing how extreme winter warming events impact reindeer herding and the Indigenous Sami Peoples.

#### 4. Planned distribution of the film

The premiere of the films is planned for the Arctic Circle meeting in Reykjavik, Iceland in October 2023. This is the major Arctic venue that brings together politicians, diplomats, Royalties, business representatives, Indigenous Peoples and scientists. We have applied for a session for a “movie night” to showcase the films and to reach major stakeholders. Following the premiere, the films will be made publicly and freely available on Youtube and will be linked through INTERACT’s web site, Facebook and Instagram accounts as well as the INTERACT twitter account. It is also intended that these films are used for education at school level through the network of schools in over 60 countries operated by partner 17 (IGF-PAS) and at university levels through the University of the Arctic that consists of over 200 universities. The films are produced in English with optional English subtitles which will allow non-English speaking countries to translate the storyline. Because the BBC NHU provided films in different formats for all possible purposes it is our imagination that limits the further distribution of the films but we will explore additional opportunities.

