

## EU-PolarNet Town Hall Event Statement

### “Towards the 1.5°C climate goal. Perspectives from the Polar Regions”

*Brussels, Belgium, 27<sup>th</sup> September 2016*

Polar research is at the forefront of understanding the future impacts of climate change – both at high latitudes and beyond. Through studying these regions, which have warmed twice as fast as the global average, polar researchers investigate how entire ecosystems are altered as carbon dioxide concentrations rise and temperatures increase. The changes in these regions are relevant for the entire global climate system – affecting the hydrological cycle, sea level rise, weather patterns and ocean circulation. Activities in the rest of the world are, in turn, are also strongly affecting the Polar Regions, by adding to the increasing temperatures through anthropogenic activities.



EU-PolarNet Town Hall Event in Brussels (RBINS – TH Hubin)

These rapidly changing Polar Regions have been rising higher in the political agenda across Europe and beyond over the past decade. Increasing levels of investment at both poles demonstrate the critical nature of polar research for elaborating policies, including those relating to climate change, energy security, innovation and economic growth.

Polar research will need to play an active role for achieving the ambitious climate goal set out in the Paris Agreement – stating the need to “to limit the temperature increase to 1.5°C above pre-industrial levels”. The question thus arises how Arctic and Antarctic research can best support post-COP21 mitigation efforts to limit global warming to 1.5°C?

To find [some of] these answers EU-PolarNet, a Horizon2020 Coordination and Support Action, hosted a Town Hall Event themed “Towards the 1.5°C climate goal. Perspectives from the Polar Regions” on 27th September 2016 in Brussels. The event hosted 110 participants and engaged a wide range of polar stakeholders, including national policy makers, representatives from the international science and policy communities, industry, Arctic communities, indigenous peoples and the civil society. The objectives of the event were to provide insights on how polar research can contribute to the 1.5°C target and to facilitate a dialogue that will generate a deeper understanding of what society needs from polar scientists.

As discussions progressed, the participants of the EU-PolarNet Town Hall identified five overarching topics that European polar research needs to address in order to give a valuable contribution to global mitigation and adaptation efforts in the pursuit of limiting global warming to 1.5°C above pre-industrial levels:

### **1. Regarding Polar Regions in a global context**

The Polar Regions are very often referred to as the symbolic “canary in the coal mine”, indicating their function as a global early warning system. While global efforts strive to limit global warming to 1.5°C, areas of both the Arctic and Antarctic are facing [substantially higher] temperature increases [of 3.5°C], which in turn hold implications for the global climate system. Understanding, for example, the effects of retreating Arctic sea ice cover and the melting of the Greenland ice sheet are thus fundamental for elaborating a realistic global climate strategy. Special attention in this regard should be given to thresholds of major change and especially so-called tipping points, which mark the point at which any further changes in an ecosystem cannot be reversed. Going forward, polar research needs to put a special focus on answering scientific questions within the context of a global climate system. This requires both investigating the effects human actions in the middle and lower latitudes have on polar ecosystems and sustaining long-term observations in the Polar Regions.

### **2. Increasing multi-level collaboration**

The tasks at hand require effective collaboration on multiple levels, which will benefit the understanding of the causes and consequences of changes in the polar areas. Special attention was given to two areas of cooperation that hold untapped potential and thus necessitate increased efforts: multi-stakeholder collaboration and multi-national collaboration.

#### **Multi-stakeholder collaboration:**

- ***Indigenous peoples and local communities***  
Indigenous peoples and local communities are directly affected by changes in the polar areas, especially in the Arctic. Living in these areas and having adapted to past changes, these peoples and communities hold a rich source of local knowledge and indigenous peoples’ traditional knowledge. Increased collaboration with indigenous peoples and local communities is thus vital to understand processes in the high latitudes, to predicting future changes and to finding appropriate mitigation and adaptation measures. These collaborations require sustained relationships that build on mutual respect and trust.
- ***Industries and businesses***  
Economic development in the high latitudes calls for a holistic Arctic policy that guarantees sustainable utilization of resources, protects the sensitive ecosystems and fosters innovative technologies. Public-private partnerships offer one way of inclusively approaching these aspects.

- ***Policy makers***

Sustainable development depends on informed decision making. There is thus a need, on one hand, to build stronger bridges between research and decision making and, on the other hand, to facilitate multi-stakeholder discussions that can add to a more holistic and far-sighted view of the issues at hand.

### **Multi-national collaboration:**

Research in the Polar Regions faces a number of issues, including being cost-intensive, logistically challenging and concentrated on a few areas. In order to more effectively use resources and expertise and avoid unnecessary duplication, national polar research plans need to be synchronised. Additionally, international co-funding mechanisms need to be in place to enable and encourage further multi-national collaboration. This also includes sharing and giving access to national infrastructures and developing new, accessible international ones.

### **3. Improving public engagement and communication efforts**

Improved public engagement and open and transparent communication is needed in order to enhance an understanding of why the changes occurring in the Polar Regions are important globally and how mitigation efforts in the lower latitudes in turn affect and benefit the higher latitudes. It needs, in addition to increased communication efforts, also messages that are targeted and meaningful to various audiences. Messages should therefore acknowledge challenges, and be phrased in the spirit of achieving the ambitious climate goals set out in the Paris Agreement.

### **4. Building capacities**

Changes in the Polar Regions will affect future generations globally. Even if all emissions were to be cut today, climate change-induced processes, such as thawing permafrost, will continue for a long time into the future. Engaging young people through educational efforts, supporting early career scientists and building capacities on all levels are therefore urgently needed.

### **5. Exploring climate intervention options**

Limiting the mean global temperature increase to 1.5°C requires a substantial reduction in greenhouse gas emissions. The question thus arises as to when this will be possible and will it be fast enough to reach the ambitious climate targets outlined in the Paris Agreement? Climate interventions will be needed. However, so far carbon dioxide removal mechanisms have not been investigated on a large enough scale. In order to scale-up climate interventions, extensive research and development efforts [in the polar regions?] are indispensable.

## **About EU-PolarNet**

EU-PolarNet is a Horizon2020 Coordination and Support Action. Its ambition is to connect science with society. Seventeen countries are represented by 22 of Europe's internationally respected multi-disciplinary research institutions. As the world's largest consortium of scientific expertise and infrastructure for polar research, the consortium aims to develop effective research strands and successful partnerships that will address the urgent need for knowledge about changes in the Polar Regions. Outcomes from this research will inform policy decisions that address the global imperative for a low-carbon future. Grant agreement number: 652641.