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Opening statement at Melting Ice: Regional Dramas, Global Wake-Up Call

Tromsø, 28 April 2009

Fellow Ministers, Excellencies, Ladies and Gentlemen - and my distinguished co-host, Nobel peace prize laureate Mr. Al Gore,

I want to welcome you to Tromsø. And I want to welcome you to these discussions on the global phenomenon of ice melting, on the impact that it will have on our lives and around the globe; and especially on the message we must send to the world community on the urgency of addressing it.

A special welcome to Dr. Ole Henrik Magga, who will also give some introductory remarks, and to Dr. Robert (Bob) Corell, who has kindly accepted the invitation to moderate the discussions we will have later today.

We, who live at the polar extremes of this planet, or at high altitudes of the Andes or Alps or the Tibetan plateau, live with snow and ice in our daily lives. Some resent its arrival in winter. Others long for it each year, as we head out with skis in hand to our winters. Others still, like the Arctic's Inuit, live with ice and snow year round and have built their lives around it. All of us see it as a natural part of our lives.

But what if we are among the last generation to do so?

Climate change is happening faster and in a dramatically more visible way in the Arctic and Antarctic than anywhere else on earth. Here, in the very region hosting this meeting, the average temperature has risen over twice the rate of the rest of the globe.

We have already seen rapid - and unexpected - loss of Arctic sea ice. Scientists who track Arctic sea ice cover from space announced a few weeks ago that this winter had the fifth lowest maximum ice extent on record.

The six lowest maximum events since satellite monitoring began in 1979 have all occurred in the past six years (2004-2009). Ice-free summers in the Arctic may now be inevitable. Scientific reports have steadily moved estimates for when this might happen closer and closer to present time.

Maybe even more dramatic, research shows that Greenland is also experiencing accelerated warming, with increased melting of the ice sheet as a result. As is the case for the Arctic sea ice, scientific reports have steadily brought more dire findings about the pace of melting on Greenland. We do not know when we might reach a point of irreversible meltdown of the Arctic's biggest ice sheet, but it may be closer than we think.

In Antarctica, several ice shelves have retreated in the past 30 years - some collapsing completely. The Larsen B became the most well-known of these, disappearing in just over thirty days in 2002. And a few

weeks ago, an ice bridge connecting the Wilkins Ice Shelf on the Antarctic Peninsula to Charcot Island collapsed. The event follows a series of breakups that began in March 2008 on the ice shelf, and highlights the effect that climate change is having on the region.

This combination of two satellite images posted on April 08, 2009 on the NASA Earth Observatory website shows the narrow ice bridge connecting Charcot Island and Latady Island, the last remnant of the northern part of Antarctica's Wilkins Ice Shelf, breaking apart in early April 2009.

In the lower image, taken by NASA on March 31, 2009, the ice bridge was still intact. The ice appears to be smooth, an unbroken surface. Less than a week later, late on April 6, NASA captured the top image. The smooth bridge is gone, replaced by chunks of ice.

Whereas for a while Antarctica seemed impervious to the warming seen by the rest of the globe, some recent measurements indicate that mean annual temperatures have risen on parts of that continent as well over the past 50 years: recent studies shows almost three degrees Celsius on the Antarctic Peninsula, making it the most rapidly warming region in the Southern Hemisphere. It is reasonable to predict that continued warming in the Polar regions would have significant regional as well as global impacts.

But the full story of "melting ice" does not end here. This is – as you know – not a conference on the melting of ice on the Poles only. We must also look to the mid-latitudes, where the impacts of increased glacial melting in the Himalayas and the Tibetan Plateau – also known as the "Third Pole", and of land glaciers elsewhere in the world, may hit millions more of the world's population far sooner.

Nowhere else on Earth outside of Greenland and Antarctica is such a concentration of freshwater stored as ice and snow. Some of the world's most populated areas are dependent on the water supply from the roof of the World - coming at the right time and volume. In Asia alone, about 2 billion people rely on water flowing to the oceans via major rivers.

Scientists tell us that the glaciers in this region are shrinking at an alarming rate – some estimate faster than the ice on Antarctica and Greenland have so far. Individually, these glaciers are relatively small, but the collective impact of the melting could be devastating.

Around 70% of the water in the Ganges River comes from the Himalayas. Most of India's river water is said to be used for irrigation. These glaciers are water towers – they collect water during the monsoons and release it in the dry season. But their effectiveness depends on how much water is collected in these water towers.

Some of the first and most painful impacts of melting ice will be felt there among some of the most vulnerable populations of the world. As these glaciers melt, some of the world's poorest will experience floods from increased melt water, and then water shortages that will devastate local agriculture and drinking supplies. Indeed, the populations of South Asia may face the ultimate tragedy of flooding not only from the melting of the Himalayas, but also from rising sea level due to ice melting at the poles as well.

Yet as we, representatives of these very different ice environments gather together here today, I believe that we can put forward a message of hope, as well as a word of warning. For we are not helpless against this threat, and indeed there is much that we as nations and as peoples living in these realms of snow and ice can do. I want to highlight a few of these actions for you today.

The first is by now apparent and recognized globally by most nations: deep cuts in global greenhouse gas emissions. No other remedy we know can ensure that we avoid dangerous man-made climate change and that we preserve the polar and alpine environments as we know them today. Global warming drives polar warming. Sustained and deep reductions in CO₂ and other greenhouse gases need to serve as the backbone of any meaningful effort to reduce warming in the polar regions and globally. We are all engaged in the process to ensure success at the UN Climate Change Conference in Copenhagen this year.

It is crucial that we agree on an outcome that is an adequate response to the severe long-term challenges facing the world. We must all go to Copenhagen not questioning or doubting whether or not we can succeed, but with the inner conviction that we will – and that it is imperative to do so.

However, even if we manage to turn the rising curve of global greenhouse gas emissions in the coming years, the reduction will not occur quickly enough to preserve the polar and alpine environments as we know them today. Preservation of our realms of snow and ice require measures that lead to results far more rapidly.

That leads me to a second way to respond: actions that will make a real impact in the near future, and most especially, addressing short-lived climate pollutants such as black carbon, methane and tropospheric ozone. Especially for the glaciers of the Himalayas and Andes, these pollutants come from sources that already cause great harm to human health, such as cook stoves estimated to kill millions of people annually due to respiratory illnesses – mostly women and children. Therefore, reducing these climate drivers would bring tremendous health co-benefits to the homes, villages, towns, factories and farms that produce them.

Recent and ongoing research has indicated that these common pollutants have warmed the Arctic nearly as much as CO₂ over the past century. Similar research has begun to show the same result for the Himalayas, and is proceeding as well in Antarctica, for example through a joint Norwegian-U.S. team traversing the continent and sampling for black carbon – or soot.

Since they have such short lifetimes – from a few days for black carbon, to a decade for methane -- reductions in these pollutants would show an early climate response. It might give regions of ice and snow a chance to survive long enough for greenhouse gas reductions to have an impact.

Just as important, these pollutants often come from sources within our own regions. This means these are actions that our regions can take themselves: Arctic and near-Arctic nations at 40 degrees north and above; or the countries bordering the Himalayan plateau or the Andes.

The technologies we need to deal with these short-lived pollutants already exist. They involve such logical steps as retrofitting diesel trucks with particle traps to halt black carbon emissions, or ceasing springtime burning of crop residues.

The members of the Arctic Council will discuss new joint efforts to address these climate drivers tomorrow. As the outgoing Arctic Council Chair, Norway firmly believes this work shows that the Arctic Council is a key organisation for addressing Arctic challenges proactively in a rapidly changing environment. If Arctic nations, individuals and organisations can work together to address these pollutants as a regional initiative, finding the best means and technologies, that may provide a model for addressing them in other regions such as the Himalayas.

My third point is a more somber one: despite all our efforts, we likely cannot prevent some changes in the Arctic and glacier environments. Unfortunately, some level of adaptation is inevitable.

In the Arctic, this means supporting indigenous people in order to preserve their unique traditions in a changing environment; preserving infrastructure such as roads and buildings due to permafrost melt; and putting into place new and responsive regulations or legal instruments so that increased economic activity does not further damage already fragile Arctic ecosystems.

Around the Himalayas and the Andes, the situation will prove even more critical. We must begin to address the increased risks of drought, flash floods and seasonal shortages of water.

The people who live in these regions cannot face these challenges alone – effective adaptation to climate change requires efforts and cooperation at both national and international level. It is one of the reasons why the issue of adaptation is an important topic in the climate change negotiations, and why it is closely linked to development and disaster risk reduction. Industrialised nations must assist by becoming part of the solution, not least because they bear the main responsibility for the man-made climate change we have seen so far.

My fourth and final point is the need to ensure that political action is based on scientific findings – and to ensure that science is steadily improved and updated. During Norway's chairmanship of the Arctic Council, this has been one of our key priorities.

We are fortunate enough to have with us at this conference here today representatives of the world's foremost scientific expertise on the topics of climate change and ice melting. You will provide us with updated knowledge that is crucial for policymakers in this room, and which is one of the main reasons for arranging this conference.

Let there be no doubt: we know enough to act now. But it is also important that we acknowledge the importance of continued monitoring and research – which in this area to a large degree will benefit from international cooperation. As one of the immediate outcomes of this conference, a scientific task force will be established and asked to prepare a state-of-the-art report on the melting of ice globally. This report will then be presented during the UN Climate Change Conference in Copenhagen.

These four points – far stronger policies to reduce global emissions of greenhouse gases; reducing short-lived climate drivers rapidly and effectively; proactive efforts at adaptation; and intensified research – could provide the basis for an integrated effort to slow the melting of ice around the globe, both in the short and the long term. Strong and rapid decreases in global emissions of greenhouse gases must be our main message to the UN Climate Change Conference in December.

In addition, particular measures aimed at reducing emissions of methane and black carbon, and strong adaptation plans to deal with the changes that nevertheless will occur, are also important responses to the challenges of ice melting.

With these steps, I believe we can face the great challenge of preserving the Arctic, Antarctic and the “Third Pole” and other land-based glaciers: a challenge our great-grandchildren may consider as the most important ever faced by those living in the earlier decades of this century.

There is indeed a risk that we will be among the last to live in a time of bountiful ice and snow; but such a future is not inevitable. I sincerely believe that today will mark one important step towards a different future, one where longing for the first winter’s snow remains a basic part of the human experience.

Thank you.