



## **THE AHA MOMENT**

**A Speech  
by  
the President of Iceland  
Ólafur Ragnar Grímsson  
at the  
Plenary Session of the  
4<sup>th</sup> International EcoSummit  
on  
Ecological Sustainability**

**Columbus Ohio  
4 October 2012**

Distinguished scientists,  
policy makers, activists

Once again we come together to discuss climate change, its effects on food security and our way of life, on our communities, our cities, our nations, indeed the fundamental challenge it poses to the future of humankind.

There have been multitudes of forums and conferences; dialogues and discussions in abundance. The world's diplomats and negotiators have come together in jamborees of proposals and speeches, in Kyoto, Bali, Copenhagen and Cancun. Presidents have taken office and departed: Clinton, Bush, Obama now up for re-election; Al Gore was awarded an Oscar and the Nobel Peace Prize; *An Inconvenient Truth* was shown in moviehouses and on TV screens in many countries. And yet we are still far from taking the necessary action.

The Greenland glaciers continue to melt faster than ever and the Arctic sea ice has never been thinner. NASA issues extreme warnings and some of us ask, a bit bewildered: Why does the political and corporate leadership of most countries honour and respect the Space Agency

because it landed a man on the Moon and recently a robot on Mars but ignore it altogether when it gives us alarming news about Mother Earth?

The answer is, of course, complicated, but the question highlights the fact that the core problem regarding climate change is one of perception: the absence of a comprehensive and compelling vision. While we see the Moon and Mars as a whole, we have always had a fragmented view of our own planet.

This is especially so with respect to glaciers and the ice-covered regions. In Iceland we have traditionally been preoccupied with our own glaciers, which are, admittedly, the largest in Europe. Though the Arctic nations are now cooperating, the significance of Greenland is not generally understood. It is a glacial ice mass, close to Canada and the United States, half the size of Europe; larger than Germany, France, Italy and Spain combined.

Most maps hanging in classrooms show Antarctica as a narrow line at the bottom while North America dominates the upper-middle to the left and Europe is prominent to the right. Generations have thus been unaware that the Antarctic ice in fact covers a greater area than the United States; to make up the difference, you have to add on a good part of Mexico.

The Himalayas, with their thousands of glaciers, harbour water reservoirs for the great rivers of India and China. This hospitable harmony might soon be threatened and yet the world has not comprehended that horrific prospect, though the Chinese are now using a striking expression, *the Third Pole*, in order to make the Himalayas, as well as the Arctic and Antarctica, central to our concerns.

By the end of this century, the freezing vaults of The Ohio State University, so splendidly guarded by the great glaciologist Lonnie Thompson and his colleagues, could be one of few locations where it will be possible to find ice cores from numerous high altitude continental glaciers.

We have culturally, historically and politically, in all nations, been brought up with a view of Mother Earth in which the ice is peripheral. We have not acknowledged that in fact we all live in an ice-dependent world.

Our weather, our climate, our crops, our cities are dependent, in one way or another, on what happens to the ice. The glaciers are not divorced from our fate; they are at the core of our future.

The Arctic, the Himalayas and Antarctica are not isolated and separate parts of our global homeland. Their fate and our fate, their future and our future, are closely connected.

Unless we bring them together and to the centre of our joint scientific and political concerns, the discussions and the dialogues on climate change will probably continue to be of little consequence.

When we succeed in linking the Arctic, the Himalayas and Antarctica and all the other ice-covered areas of the Earth together, making them central to our vision, we will achieve what I light-heartedly call our global 'AHA' moment.

We are all familiar with numerous 'aha' moments in our lives and have witnessed others in similar situations; when suddenly we comprehend a new truth, understand a new reality, recognize the meaning of the other fellow's actions. Yes, aha! – we have finally got it!

The global dialogue on climate change urgently needs such an 'aha' moment and I strongly believe from recent experience that by linking our concerns and our efforts on the Arctic, the Himalayas and Antarctica together we, the people on Mother Earth, have a new opportunity to bring forward the necessary actions.

My optimism is strengthened by how Iceland and China have in the last two years come together in joint analysis of the ice-dependent world, especially the Himalayas and the Arctic, with scientists from Europe and America also taking part.

Last year I hosted, together with the University of Iceland, a meeting of the Third Pole Environment Workshop, attended by numerous scientists from across the Himalayan region, as well as from Europe and the United States. The Third Pole Workshop constitutes a new cooperative venture, led by Dr. Yao Tandong of the Institute of Tibetan Plateau Research in Beijing, Dr. Lonnie Thompson of The Ohio State University and Dr. Volker Mosbrugger of the Senckenberg Institute in Frankfurt.

After discussing for a few days the retreat of the Himalayan glaciers, and the consequences for water systems, soil and vegetation, the scientists made a field trip to the largest Icelandic glacier, observing how it is possible to gain insights into what is happening in the Himalayas by doing research on the Icelandic glaciers. They are more easily accessible, with explorations starting at the height of a few hundred metres, whereas in the Himalayas it is necessary to mount major expeditions, climbing first up to inhuman heights.

The Iceland-Himalaya dimension can also throw light on the interaction between glaciers and vegetation, between people and the ice, on the fate of communities.

Following the Third Pole meeting, the participants remained in Iceland and joined the Open Assembly of the Northern Research Forum, an association of scholars, scientists, policy-makers and political and community leaders from the eight Arctic countries. This is a venue I helped to establish twelve years ago. When the Third Pole experts came to this Northern assembly it was in fact the first time in history that the scientific and research communities of the Himalayas and the Arctic countries joined hands in such a way.

The Polar Research Institute of China then decided to send the icebreaker Snow Dragon from Shanghai along the Northern Sea Route to Iceland and back to Shanghai across the North Pole.

When it arrived in Reykjavík two months ago, it was the first visit by a Chinese icebreaker to an Arctic state. Aboard were about sixty young Chinese scientists who had, along the way, carried out research on the transformations taking place in the Arctic.

I was honoured to receive them all, with the crew of the icebreaker, at my Residence and to attend the Chinese-Icelandic Symposium hosted by the University of Iceland. There we listened to fascinating presentations by young Chinese scientists. Two of these were truly historic, since never before had representatives of a leading Chinese institute demonstrated publicly in the West how all of us, including the Chinese, live together in an ice-dependent world.

The first described the relationship between the melting of the ice in the Arctic and weather patterns in middle and low latitudes in China, showing data demonstrating how the freezing rain in Southern China during the winter of 2007-2008 derived from the Arctic sea-ice minimum of 2007. Thus, what happens in my Arctic neighbourhood has profound effects not 20 years later but within a few months on the daily life of people in China.

The shrinking of the sea ice in the summer of 2007 had been a record. But on the 26<sup>th</sup> of August this year, a few days after the Snow Dragon departed from Iceland, this record was broken. The extent of the sea ice was now at a new low. What will happen in China this coming winter as a result of this? We should all pay attention, because the Chinese scientists journeyed for months along the emerging Arctic Sea Routes to wake us in Europe and the United States up to a new reality: economic and social conditions in China are already closely related to the fate of the Arctic ice.

These Chinese conclusions are indeed consistent with the findings of Jennifer Francis of Rutgers University in New Jersey, an expert on

atmospheric science who showed that there is a correlation between increased heat in the Arctic and jet streams which in turn cause extreme weather events at lower latitudes.

The other presentation, by the director of the Polar Research Institute Dr. Huigeng Yang, showed how the melting of the ice in Greenland and Antarctica could, due to rising sea levels, shift the coastline of China 400 km inland. A large number of Chinese cities, including Shanghai, Tianjin and Guangzhou, would then be totally under water. Beijing would probably become a coastal city and the most populated and prosperous regions in China completely disappear to the bottom of the ocean.

I have, my friends, participated in conferences and discussions on climate change for more than two decades but when I listened this August to these young Chinese scientists I felt we had arrived at a historic crossroads. In an open public forum, at a European university, in the presence of representatives of many countries, China was now bringing the following dark warnings to the Western World:

- First, the melting of the Arctic sea ice is creating severe weather hazards in China, affecting food production and economic and social well-being.
- Second, the retreat of the Greenland and Antarctic ice masses poses a monumental threat to the future of China and could wipe its historic and most populous cities off the Earth's surface.

We have all heard doubters in the Western debate justify the lack of action by using China as an excuse.

But now we have witnessed an undeniable shift. China has brought a wake-up call to us. The Snow Dragon carried the message on a journey instigated by the President of China, Hu Jintao, and announced by the Prime Minister, Wen Jiabao, on a previous visit to my country.

It is now up to us, in Europe and the United States, to show whether we are ready to follow China to the historic crossroads where we all acknowledge that the Arctic, the Himalayas and Antarctica come together in the interrelated fate of Mother Earth.

That is the question. The new reality in the global debate.

All these things – my cooperation in the last two years with the Polar Research Institute of China, in visits to its headquarters in Shanghai and on board the icebreaker, listening to descriptions of its 28 expeditions to Antarctica and 5 expeditions to the Arctic; the productive relationship we

have established with the Institute of Tibetan Plateau Research in Beijing, headed by Yao Tandong, a close friend and collaborator of Lonnie Thompson and other Ohio scientists; my discussions with the President of China, Hu Jintao, Prime Minister Wen Jiabao and Vice-President Xi Jinping – all this has led me to conclude that China is ready and willing to exercise leadership in furthering global understanding of our ice-dependent world.

The question is therefore: Are we in the West ready and willing? Have we realized our own AHA moment – an understanding of how the Arctic, the Himalayas and Antarctica will determine the future of humankind?

Leaders in many Asian countries are increasingly aware of how climate change will affect the fate of their people, causing profound changes in the ecology of their regions, affecting atmospheric circulation, agriculture and hydropower.

Glacial melting contributes up to 45% of the total river flow in the tributaries of the Indus, Ganges and Brahmaputra. Water from these three rivers is crucial for the food security of 500 million people; they are the life-lines of some of Asia's most densely populated areas, from the arid plains of Pakistan to the thirsty metropolises of Northern China 3,000 miles away. Around two billion people in more than a dozen countries – nearly a third of the world's population – depend in one way or another on rivers fed, at least partly, by the snow and the ice of the Himalaya region.

It has been predicted that by the mid-21<sup>st</sup> century, increasing temperatures and water stress will lead to a 30% decrease in crop yields in Central and Southern Asia.

It is alarming that even if the health of the glaciers has been analysed to some extent, the relevance of snow and glacial melting for the Asian river basin hydrology remains largely unknown, as does how climate change could affect the downstream water supply and food security. Only two years ago was it fairly conclusively established in an article in *Science* that, among the great Asian rivers, the Indus and Brahmaputra are most heavily dependent upon glacial meltwater and therefore particularly sensitive to climate change. Let us not forget that those two rivers run through areas sensitive to possible regional and even military conflicts.

It is impossible to predict with any degree of accuracy when the glacier retreat will translate into a sharp drop in runoff. This will depend on local conditions, but the collateral damage across the region will be devastating, causing acute water and electricity shortages, diminishing

food production and, in the face of ecological challenges, widespread migration and possible conflicts between the main Asian powers.

These are some of the reasons why China, and also India, are now putting funds and enhanced scientific resources into monitoring their ice-dependent world; why Nepal and Bhutan are profoundly concerned.

We in Europe and America should similarly become increasingly aware of how the melting of the glaciers in our global neighbourhood, especially in Greenland and the wider Arctic, also affects weather patterns and our own economic future.

The interaction between the Atlantic, the Pacific and the Indian Oceans at the Antarctica crossroads also demonstrates the importance of how the global seas meet the Earth's largest ice mass.

Thus my message here today is that I strongly believe that finally now we should all come together in a new awareness that nations large and small must realize their shared fate in the ice-dependent world.

If Iceland and China can, as we have in the last two years, join forces in the analysis of the Arctic, the Himalayas and Antarctica, then others have run out of excuses.

Admittedly I have always been an optimist, but somehow I am convinced that in the global dialogue on climate change, the AHA moment has finally arrived!