



THE AHA MOMENT IN THE CLIMATE DEBATE

**Speech
by
the President of Iceland
Ólafur Ragnar Grímsson
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Ladies and gentlemen
Dear friends

It is indeed a great honour and profound pleasure to be invited to speak to you at the Harkin Institute for Public Policy and Citizen Engagement, especially to give the first public lecture at this new institute.

For thirty years I have enjoyed the privilege of having Senator Harkin among my closest American friends, learned to value his wisdom and insights, his idealism and his supreme sense of what is politically possible.

Throughout my career, I have met and worked with public leaders from many continents, but only a few have combined idealism, dedication and political craftsmanship in the same extraordinary way as has been the hallmark of Tom Harkin's long service in the US Senate.

He is truly a statesman in the most excellent sense of that term, an inspiration not only to young people in America but also to others all over the world.

These words should not be seen as a praise for an old friend. They are simply true. I can assure you that when Tom retires from the Senate both I and others in many parts of the world will eagerly want to engage

him on the global stage. There he is needed. There his voice must be heard. There his wisdom and experience will be of utmost importance.

Last weekend, Senator Harkin sent a message to the new international Assembly, Arctic Circle, which came together in Reykjavík. He described the various ways in which the people of Iowa have moved towards a clean energy future; are taking a responsible position towards the threat of climate change.

There have of course been multitudes of forums and conferences; dialogues and discussions on this subject. The world's diplomats and negotiators have met at jamborees and made proposals and speeches, in Kyoto, Bali, Copenhagen, Cancun and Durban. Presidents have taken office and departed: Clinton, Bush and Obama, now now well into his second term; Al Gore was awarded an Oscar and the Nobel Peace Prize; yet we are still far from taking the necessary action.

As the Greenland glaciers and the Arctic sea ice continue to melt faster than ever and NASA issues extreme warnings 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 has moved higher on the global agenda, 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 and 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, 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.

But 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, China and India have in the last three 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 week in Reykjavik, at the first Assembly of the Arctic Circle we not only discussed the recent scientific discoveries, the resource utilisation and business cooperation and the opening of new sea routes linking Asia to Europe and America through the North, but also how the nations in the Himalayan region could learn from the success of the Arctic institutions.

That Arctic-Himalayan dimension threw a light on the interaction between glaciers and vegetation, water and soil, between people and the ice, on the fate of communities.

Last year the Polar Research Institute of China sent the icebreaker Snow Dragon from Shanghai along the Northern Sea Route to Iceland and back to Shanghai across the North Pole. Aboard were about sixty young Chinese scientists who had, along the way, carried out research on the transformations taking place in the Arctic.

They studied the relationship between the melting of the ice in the Arctic and weather patterns in middle and low latitudes in China, because data had demonstrated that there was a correlation between the freezing rain in Southern China during the winter of 2007-2008 and the Arctic sea-ice minimum of 2007. Then again in January and February of this year, China suffered its worst winter in decades due to the 2012 melting of the Arctic sea ice, destroying fields and food production, freezing almost 200,000 cattle to death out in the pastures. Thus, what happens in my Arctic neighbourhood has within a few months profound effects on the daily lives of people in China.

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 director of the Chinese Polar Research Institute, Dr. Huigeng Yang, has also 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 listen to these young Chinese scientists I feel that we have arrived at a historic crossroads. In open public forums, in the presence of representatives of

many countries, China is 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 all. The icebreaker Snow Dragon carried the message and the Arctic-Himalayan dialogue has reinforced it.

It is 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.

Leaders in many Asian countries are becoming increasingly aware of how the melting of the ice 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.

These are 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.

These are also the reasons why China is actively seeking cooperation on clean energy projects with other countries, a transformation surprising many, but never the less a fundamental shift, strongly felt in China's

relations with my own country and its desire to learn from our clean energy system.

In recent decades, Iceland moved away from oil and coal which during my younger years accounted for 80% of our energy usage to now having 100% of our electricity production and 100% of house heating provided by domestic, renewable resources: hydro and geothermal. Along the way, this clean energy transformation has made the economy more diversified, helped to establish strong aluminium and other high-tech industries, dynamic IT companies and growing tourism.

Our clean energy economy allowed the people of Iceland to survive the banking collapse better than other nations, especially because the cost of heating and electricity for ordinary families, homes and business companies is very low compared to what it is in other European countries. But also because it makes Iceland an attractive location for industrial investments.

This has indeed been a revolutionary transformation, not only allowing us to build an economy with an inherent long-term strength but also to make significant contributions to the rest of the world. The geothermal sector has now become one of the major pillars of Iceland's global position, our foreign policy and our diplomatic efforts.

The United Nations Geothermal Training Programme, founded three decades ago in Iceland, has strengthened the capabilities of more than 40 developing countries and Icelandic energy companies and engineering firms have participated in geothermal projects in China and India, in East Africa and Central America, in Western and Eastern Europe, in the Middle East, Russia and the United States. Just a few weeks ago an Icelandic company with American partners reached an agreement to build a 1,000 megawatt geothermal power station in Ethiopia, potentially the largest to be constructed in Africa.

As the climate crisis calls for a global energy revolution, a comprehensive transformation from fossil fuel to green energy resources, there has been a predominant tendency to concentrate primarily on electricity production and overlook the multiple economic advantages and business opportunities derived from a clean energy economy.

In this respect Iceland can be of great service, inviting visitors to witness for themselves the various aspects of a clean energy economy as well as its contribution to bringing a country out of a profound financial crisis within a few years and onto a road of recovery, economy growth and low unemployment.

Let me, therefore, in the short time allowed, list briefly a number of ways in which clean energy has strengthened and broadened the Icelandic economy, making a strong practical case for the vision that clean energy is indeed good for business.

Cheap electricity and heating for households and companies have made our energy bill far lower than in other countries, being also a magnet for foreign investment, industrial, high-tech and IT companies.

Geothermal greenhouse agriculture has diversified the farming sector, enabling us to enjoy the domestic production of tomatoes, cucumbers, peppers and a variety of other vegetables while also fascinating tourists. Indeed, tomato production has been so successful that Iceland could within a few years begin exporting tomatoes to Europe.

Geothermal heat is also used in fish farming for adjusting seawater and fresh water temperatures to suit various species. The most recent example is the construction of a 2,000-ton Senegal sole farm close to the famous Blue Lagoon – another application of our geothermal potential which now attracts more than half a million tourists every year; nearly twice as many people as live in Iceland.

The relationship between the transformation of our energy systems and our ice-dependent world is perhaps the most urgent connection that needs to be made in the global debate, a connection which also offers many fascinating new economic and business opportunities, for the US, the people of Iceland and in fact nations all over the world.

It is important that we in Europe and America should recognize 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 Antarctic 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, China and India can, as we have in recent 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!