



**GLOBAL RESEARCH ON GLOBAL PROBLEMS:
CARBON SEQUESTRATION IN ICELAND**

**Address
by
the President of Iceland,
Ólafur Ragnar Grímsson,
at
the Carbon Capture and Storage Conference
in Hellisheiðarvirkjun
7 September 2009**

(The speech was delivered partly without notes. This is a transcript of the recording)

Distinguished Professors, Scientists,
Researchers, Ambassadors,
Ladies and Gentlemen.

It is a great pleasure for me to welcome you to Iceland and be present at the opening of this International Conference on Carbon Capture and Storage. With its global scope, it is indeed a strong and important indication of how, together, we are determined to battle against climate change.

As I mentioned to most of you last night at Bessastaðir, Iceland is in many respects an ideal place to study and examine this challenge. Just like our neighbours in Greenland, we are able to observe the unnervingly rapid retreat of the glaciers. As you might know, the glaciers here in Iceland are the largest in Europe, and also among the thickest, but our scientists have concluded after decades of study that even with just the present rate of climate change, they will have almost completely disappeared by the beginning of the next century.

Every year we also observe new species of insects and birds arriving in Iceland due to these fundamental changes. Although many of them might be welcome they are, - however, a startling warning that things are not normal. But above all, the system of ocean currents driven

by the Gulf Stream which has for centuries, even thousands of years, been sent to us by the courtesy of Mexico, is slowing down and perhaps stopping altogether. The melting of the ice in Greenland and the Arctic now takes place much faster than most people thought three or four years ago – since we began this project, our knowledge is better.

There are some people, although gradually there are becoming fewer of them, who still agree that these changes are natural rather than caused by human activity; that they would occur regardless of anything that we do. Of course there is some chance that this might be true, but the overwhelming evidence of science and research, now and in previous years, has convinced leaders and communities, universities and scientific institutions all over the world that we have to take into account the reality that disastrous irreversible climate change might indeed be happening.

One of the most neglected aspects of this transformation is that similar changes are indeed happening in the Himalayan regions as are happening here in the north. It is worth reflecting why it is that until quite recently most of mankind, and definitely India and China, have not recognized sufficiently that with the present rate of climate change the 15,000 or so glaciers in the Himalayas will probably have completely disappeared within the next thirty years. The state of research in India, a country which I love and respect, is such that fewer than ten glaciologists are working in that country.

It was on the basis of this startling fact that I helped to instigate cooperation between Icelandic, Indian and American scientists to start working on what is happening to the Himalayan glaciers. Their disappearance within the next thirty years could be the most disastrous environmental aspect of climate change, revolutionising the situation of over a billion people in India, China, and Bangladesh, mostly destroying the great rivers that drive the agricultural production and the food resources of two largest countries in the world; affecting the economic basis of India and China.

Although the leaders of those two great countries might argue that climate change is the responsibility, the moral responsibility as well as the economic responsibility, of us in Western Europe and the United States, they are perhaps the countries that will be most dramatically affected by what could happen within the next twenty or thirty years.

The problem of global warming, climate change, has perhaps in previous years been misnamed by all of us. It would have been more correct, wiser and politically more productive to name it as it really is: The future of energy – how we change our energy systems in a fundamental way to prevent this from happening; how we can move from

non-sustainable to sustainable practices, from fossil fuel to green energy such as wind, solar, and geothermal sources.

As was mentioned here this morning and as we can see here before our eyes, Iceland has been blessed, like over one hundred countries in the world, – sometimes people forget, that we are not in a unique situation – blessed by a geological endowment that has enabled the people of Iceland to harness this resource. But let me also emphasize that this development has taken place in a relatively short time.

When I was growing up as a young boy in the West Fjords in Iceland, over 80% of our total energy came from coal and oil. I lived in a community which did not know any other energy resource than coal and oil. I have been able to witness how, throughout my short life, the energy business in Iceland has been transformed from imported energy to what we all know today is a leading global position in the utilization of clean energy.

We were driven in the 1970s by the oil crises and the financial crises of those times. I have often mentioned in recent months that if we hadn't gone through this energy revolution in the last thirty years or so, the effect of the global financial crisis today would be much more difficult for our country. It is a fundamental proof that clean energy transformation is a major pillar to prevent dramatic fluctuations in the global financial community.

In recent years, I have had the privilege to support international cooperation in this area, both with respect to discussion and research on climate change but also on the subject that we are going to discuss in the coming days: carbon-capture and storage. I have discussed the possibility of treating carbon in this way with the leaders of China and India, the United States, many countries in Europe and in other parts of the world. I can assure you that there is a great anticipation, almost a fascination, in many important quarters of the political leadership in every continent with the possibility which this research and scientific cooperation could indeed offer.

Several years ago, when together with Jeffrey Sachs and others at Columbia, I was privileged to help in forming the Global Roundtable on Climate Change, the purpose was to try to bring together the leaders of big corporations, primarily from Europe and the United States, scientists, researchers, scholars and representatives of non-governmental organisations, to discuss in the beginning whether climate change was really happening. Then in the first session we discovered that there was really an agreement by all, so we could move very quickly, in the second session, to what we should do about it.

It was within that discussion and the framework of the Global Roundtable on Climate Change that I invited Wally Broecker to come to Iceland together with Klaus Lackner and others to give the first lecture in the Presidential Series on the future, especially how science could help us to create a more sustainable future. During this visit, Wally and his team came into contact with Sigurður Reynir Gíslason at the University of Iceland and others. Thus started the Carb-Fix project; a vision, an idea, a hope. It was not easy in the beginning, but here we are today to celebrate not only the success of that project but also the vast international scientific cooperation in the area of carbon storage and capture.

It is a fascinating question whether this research could indeed be a major contribution to save the world from the disastrous consequences of climate change. There is a possibility that it might make a very significant contribution. I can assure you that leaders, many of them in countries like the United States, India and Russia, where basalt is present in large quantities in the ground, are looking with anticipation at what would come out of the project here in Iceland.

During those discussions I was often asked whether it would succeed. My answer was honestly that I had absolutely no idea whether it would or not. But my guarantee was that I doubted that people like Wally or Klaus or Sigurður Reynir and others would be spending their time and their efforts and also risk their reputation if there was not at least some likelihood that it would work.

I am therefore very pleased that we can now here greet Ph.D. students from seven countries who have decided to work within this project. I reiterate my congratulations this morning to the first successful Ph.D. student within the programme.

We know that nothing in this area will happen quickly, but let me emphasize again, as I did last night, that time is indeed running out. We do not have more than twenty or thirty years, at the most, to produce a successful transformation of our energy system or carbon storage.

There is no single solution that can help to prevent this problem. Windmills will not do it alone, solar-cells will not do it alone, geothermal power will not do it alone and carbon storage and sequestration will not do it alone, but when we put them all together we have more a more reasonable chance of being able to deal with this problem.

In this way I think we should follow the leadership from the vision of Abu Dhabi, the oil-rich country which decided a few years ago that the oil will run out within the lifetime of the young Abu Dhabi generation and decided to become a leading clean energy and carbon storage and

capture country in the world, successfully seeking the headquarters of IRENA and being in the process of building Masdar City, the first zero-emission and zero-waste city in the world.

We have been privileged here in Iceland to cooperate with Abu Dhabi and contribute to the reality of this vision. There is an important lesson and a signal to the rest of the world that if countries like Iceland and Abu Dhabi can cooperate on creating a sustainable clean energy future, every country in the world can cooperate in that area. We have to seek new solutions, and your conference here today and your cooperation in the coming years is indeed dedicated to that aim.

I therefore want to take this opportunity to thank you all for participating in this very important and significant scientific endeavour. Also to thank the outstanding scientists who have led the project here in Iceland and in the cooperation between the University of Iceland, Columbia University and the people in Toulouse. But above all, I want to thank Reykjavík Energy for the support the company has given to the Carb-Fix project from the very beginning, from the first meeting we had with them some years ago when this was just an idea, a vision of the future. It could not be taken for granted that a company like Reykjavík Energy would support it, and I think their support has demonstrated that this is a company not just interested in making profit and a good economic living but also dedicated to creating a new future.

I don't think that there is any other place more appropriate to convene this conference on carbon storage and sequestration than the location here in this new geothermal, technologically cutting-edge power plant where already this year 70,000 visitors have come from all over the world to witness what clean energy is all about. This indicates that during the first ten years probably one million people will come here to Hellisheiði to witness the future; three times the entire population of Iceland. All of them will learn about the carbon storage and sequestration project, the combination of energy production from geothermal resources and the vision of putting the carbon away down in the ground; the inspiring vision that brought us together.

So I congratulate you again. I hope your success and your work will help countries all over the world to give mankind a better, more secure and more sustainable future.