2013 THE "BORLAUG DIALOGUE"
October 16, 2013 – 9:30 a.m.
Speaker: ***H.E. Ólafur Ragnar Grímsson***

Introduction:

Ambassador Kenneth Quinn
President, The World Food Prize

So good morning. What a thrill and privilege it is to have His Excellency President Grímsson here to deliver our keynote address. And I met the President in Columbus, Ohio, at the Eco Summit two years ago. And he gave such an impassioned presentation that I thought we just have to have him at the World Food Prize. And so I then found out, in talking to him, that he was very close friends with Former Congressman Jim Leach who is here. Jim, thank you so much for being here, and with Senator Tom Harkin. And Senator Harkin, having put the U.S. Government back to work… and thank you for that, Senator. Although, as a former federal employee, I have to say that if I had known we were going to get paid anyway, I probably would have been calling, saying, "Hold out, hold out, don't compromise!" But now I'm back in Iowa – I'm much more sensible than that.

Senator Harkin is one of the most distinguished members of the United States Senate. Every handicapped person in America, and I think increasingly around the world, owes a tremendous debt to him for his leadership on the Americans with Disabilities Act. And he has been the chair of the Agriculture Committee in the Senate, now on healthcare in that regard. He is retiring, not running again, so this will be our state's loss, but he's given incredible, distinguished service. And since he is such a longstanding friend of President Grímsson, I invited him here to introduce the President. Please welcome Senator Tom Harkin.

Senator Tom Harkin
United States Senator

Thank you very much. Ambassador Quinn, thank you very much for that introduction, and thank you for your great leadership in your whole lifetime in service to our country and to our state and to the World Food Prize Foundation. Governor Branstad, Lieutenant Governor Reynolds, my longtime friend, Congressman Jim Leach, and of course John and Janis Ruan who are here this morning. Le Son, good to see you, too, Le Son, and all of you who are here.

I would like to say singlehandedly I did it all myself in opening the government. That's not so. A lot of other people involved, but it is good news, and it's good news that we're paying our bills, and we will maintain our record that never since the Revolutionary War has the United States ever defaulted on any of its debts. It's a proud thing for the United States of America.

So, President Grímsson, it's a pleasure and honor to introduce you today to my fellow Iowans and the World Food Prize attendees from around the globe. Ólafur Ragnar Grímsson has been many things in his remarkable career: University professor, newspaper editor, member of Parliament, finance minister, and since 1996 the President of Iceland, now in his fifth term. I would add one more title: Citizen of the world.

President Grímsson has had a lifetime dedication to action on the world stage, to create a more peaceful, just and sustainable planet. To that end, for over two decades he was a leader of Parliamentarians for Global Action, including as president of the organization from 1984 to 1990. It was in Parliamentarians for Global Action in 1981 that I first met an up and coming young legislator from Iceland, my longtime friend Olafur. And by the way, one of the many things that Iowans and Icelanders have in common is we like to go by first names, no matter how high or low your position.

And I might also add, as long as he's sitting here, the person that got me involved in Parliamentarians for Global Action in 1979 was Congressman Jim Leach, and I can honestly say – I think I can speak for Jim, too – that since those early 1980s when we first met President Grímsson, I can honestly say that our association with him and our collaboration with him on so many things has been one of the highlights, I think, of our entire public service career.

Parliamentarians for Global Action is a nonpartisan international network of legislators from more than 130 countries, working together to promote democracy, rule of law, human rights and peaceful resolutions of disputes. In the 1980s President Grímsson played a leadership role in persuading the then Soviet Union to move beyond Strategic Arms Limitation Agreements, the so-called SALT treaties to actual Strategic Arms Reduction Talks, culminating in the START treaty, the Strategic Arms Reduction Treaty signed by Mikhail Gorbachev and President Bush in 1991.

I will never forget being a member of a small delegation from Parliamentarians for Global Action led by President Grímsson in Moscow. We had a lengthy and constructive meeting with President Gorbachev and the Kremlin, to encourage him to move forward with reducing nuclear stockpiles and banning all nuclear tests.

More recently, President Grímsson has taken a leadership role in focusing world attention on the critical role of the Arctic in relation to a rapidly changing climate. He led the establishment of the Arctic Circle Assembly, which just had its inaugural meeting in Reykjavik this last weekend, which I was supposed to attend with Senator Murkowski, but because of the thing in Washington I couldn't attend. But I did learn that people from over 40 nations attended with over 700 people at this inaugural assembly in Reykjavik.

So that's how Olafur Grímsson operates in the world, working patiently, sometimes behind the scenes, building understandings and principles that lay the foundation for major bilateral and international agreements. Of course, President Grímsson has also been a great leader at home. Under his leadership, Iceland is the world's largest green energy producer per capita in the world. Nearly 85% of the total energy supply in Iceland is derived from domestically produced renewable energy sources, most of it geothermal.

I know he opened my thinking on this sometime ago when he pointed out that, no matter where you stand on Planet Earth, beneath your feet is an inexhaustible source of heat energy, and for producing electrical energy. And, yes, we do have the technology to tap into it.

I would also note that, beginning in 2008 President Grímsson led his nation out of a truly catastrophic banking crisis. After a decade of speculative trading, the three largest banks all went bankrupt. But President Grímsson refused just to bail them out at the expense of the ordinary Icelanders having to sacrifice their education, their healthcare, their retirement and their infrastructure investment. So my congratulations to President Grímsson for leading a nation where no bank is too big to fail.

So from his lifelong involvement in global affairs, and by the way, I was just in Iceland, and they're doing very well, thank you. From his lifelong involvement in global affairs, his deep commitment to a stable, just and livable planet, and his position as the leader of a nation that borders the most rapidly changing part of the globe climatically, the Arctic, President Grímsson is providing leadership to address this most vital issue of global warming, including the impact on food production and distribution and transportation.

So let me conclude with this. The world is a much better place because a small nation of 300,000 people produced such a remarkable leader as President Grímsson. So, World Food Prize attendees and my fellow Iowans, it's my honor to introduce a remarkable world leader, the President of Iceland, Ólafur Ragnar Grímsson.

THE TRIANGLE: ICE, ENERGY, FOOD

Ólafur Ragnar Grímsson
President of Iceland

Thank you very much. Please sit down, please. Thank you very much, Governor and ladies and gentlemen. Thank you very much, Tom, for this kind introduction. It almost sounded as my obituary.

But it has been an extraordinary privilege for the last 30 years to have Senator Harkin and Jim Leach as friends and fellow operators, if I may use that term. And I can assure that you always should be extraordinary proud to have had such distinguished public servants, not only at the disposal of the people of the state, but also inspiring and influencing and leading people from all over the world. Senator Harkin and Congressman Leach have proved that you can be an effective congressman and senator in the United States but also play an incredible part in inspiring fellow politicians, young people, scientists and activists from many countries, and to some extent to me personally to be with both of them today.

It is a part of my personal journey, which moves me in a very warm way, and I was profoundly honored last night to give the first public lecture at the newly established Harkin Institute at the Drake University. And if I may correct Ambassador Quinn on one thing – because he announced in his remarks here that Senator Harkin was going to retire at the end of next year. That's not so. He will be moved to a higher level of political operation, out of the U.S. Senate

onto the global stage where both I and many others will engage his experience and wisdom and mission and contribution while he, I'm sure, still continues to serve the people of Iowa in his good personal capacity. So I'm the bearer of the good news that Senator Harkin is not retiring; he's only going to be more effective than in the U.S. Senate in the years to come.

But it is indeed a great honor to be invited to participate in the Borlaug Dialogue here today and to be present at the World Food Prize, pay my tribute to a great scientist and the monumental effort on the global scene but also to present to you my analysis of the connection between our ice-dependent world, the needed clean energy transformation and the global food security. And I've chosen a title which I know has perplexed some, calling my talk "The Triangle: Ice, Energy, and Food," which are not often linked together. But I have done so in order to highlight the strong link between these three fundamental challenges of the 21st century and also how they could help us break the political deadlock in the debate on climate change.

We have to recognize that every nation now lives in what I call an ice-dependent world where the mass of the arctic sea ice in my neighborhood causes extreme weather on faraway continents in Asia, Africa and the Americas, destroying crops and urban infrastructure. But also that the retreat of the glaciers in Greenland and in Antarctica will through the rising sea levels threaten every coastal city in America, Asia and elsewhere.

We all know in this room that in recent decades there have been numerous occasions where distinguished leaders have come together, diplomats and experts, to discuss climate change and its effect on food security and our way of life on our communities and our cities, indeed, the fundamental challenges that it poses to mankind. There have been multitudes of forums and conferences, dialogs and discussions in abundance, while diplomats and negotiators have come together in what I sometimes call the jamborees of negotiations in Kyoto, Bali, Copenhagen, Cancun, and Doha. And presidents in this great country have taken office and departed – Clinton, Bush, Obama now in his second term. Al Gore was even awarded an Oscar and the Nobel Peace Prize. And yet we are still very far from taking the necessary action.

And as the Greenland glaciers and the arctic sea ice continues to melt faster than ever, and NASA, your great space agency, issues extreme warnings indeed, some of us have in recent times asked a bit bewildered – Why is it that the political and the corporate leadership of most countries all over the world honor and respect the space agency because it landed a man on the moon and recently a robot on Mars, but ignoring altogether when it gives us alarming news about our own planet, Mother Earth. The answer to that question is of course complicated, but I think the question highlights that perhaps the core problem regarding climate change is one of perception, the absence of a comprehensive and compelling mission. And, while we see the moon and Mars as a whole, we have always through our educational system, our culture, our political dialog, had a fragmented view of our own planet. And this is especially so with respect to the glaciers and the ice-covered regions.

And, for example, in my country, Iceland, we have always been preoccupied with our own glaciers, which admittedly are the largest in Europe, but it's not been until recently that we started to look at the glaciers in other parts of the world. And, though the Arctic, as Tom mentioned, has moved higher on the global agenda, the significance of Greenland is not generally understood. Of course, people know it's a glacialized mass close to Canada and the United States. It is in fact in your neighborhood. But very few people realize that Greenland is

half the size of Europe, larger than Germany, France, Italy, Spain, and a few other European countries put together.

And most maps hanging in classrooms show Antarctica as a narrow line at the bottom – that's how we were brought up to see it – while North America, of course, and Europe dominate the upper middle of the map. Generations have thus been unaware, and still are unaware, that Antarctica covers in fact a greater area than the United States. You have to add most of Mexico to the U.S. in order to get to the size of Antarctica. So we have Greenland half the size of Europe and Antarctica bigger than the United States, but still we have not made that connection in our perception of the world.

And then the Himalayas with their thousands of glaciers harboring water reservoirs for the great rivers of India and China and other Asian countries. And then this hospitable harmony might indeed soon be threatened, and yet the world has not comprehended that horrific prospect. So, interestingly enough, the Chinese are now using the very interesting and striking expression, the Third Pole, when they refer to the Himalayas, perhaps making us realize that there is Pole No. 1, Pole No. 2, and Pole No. 3 – the Arctic, Antarctica and the Himalayas. And all these three poles have to be made central to our concerns.

In this country, in the walls of Ohio State University there are ice cores from continental glaciers and Latin America and elsewhere, being brought together by the great American glaciologist Lonnie Thompson, but probably by the end of the century Ohio State University will have its as its frozen walls what remains of these glaciers.

We have all in this room been culturally, historically, politically, in all nations, been brought up with a view of Mother Earth where the ice is peripheral, somewhere faraway, almost off our radar screen. And we have not acknowledged the fundamental fact that we all, especially now in the 21st century, 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 far away from our fate. They are indeed, my friends, the core of our future. The Arctic, the Himalayas and Antarctica are not isolated on separated parts of our global homeland. Their fate and our fate are closely related, demonstrated perhaps by the enormous transformation taking place here in the United States due to the melting of the Alaska sea ice in the summer, that now you have an open border for three months of the year on a coastline longer than from Maine to Florida, where anybody on a boat can enter the United States without being checked or having to show their passport because the entire Homeland Security system has been based on the simple assumption and unspoken that the ice is not going to melt. But it is melting. So, despite all the efforts that have been made on your Homeland Security structure in the last ten years, you now have an open border in the coming years bigger than the coastland from Maine to Florida, as was demonstrated in the last two years by the great many people who enter the United States without ever having to show their passport. And the next Homeland Security official was over 1,000 miles away.

So whether you are talking about Homeland Security or crops and food and the coastal line of cities, we have to bring the glaciers and the ice to the center of scientific and political concerns where the discussions and the dialog on climate change have to make that transformation; otherwise, it will probably be of little consequence. We need to link the Arctic, the Himalayas

and the Antarctica and all the other ice-covered areas of the world together. And, as Tom Harkin mentioned in his introduction, last week in Reykjavik at the first assembly of what we called the Arctic Circle, a new venue for an international dialogue and cooperation on the ice-related issues. Over one thousand participants from more than 40 countries came together not just to discuss how the melting of the Arctic will open up new resources and the new venue linking Asia to America and Europe in a new way but also how the nations in the Himalayan Region would learn from the success and the cooperation in the Arctic. And this Arctic/Himalaya dimension threw a light on the interaction between the glaciers and vegetation, water and soil, between people, agriculture and the ice.

Last year the Polar Research Institute of China sent the icebreaker Snow Dragon from Shanghai along the northern sea roads to Iceland and then back to Shanghai, close to the North Pole, the first ever in world history to sail that route. But what was more important, aboard were about 60 young Chinese scientists who helped along the way, carrying out the 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 the middle and low latitudes in China because data had demonstrated that there was a close correlation between the freezing rain in Southern China during the winter of 2007 and 2008 and the arctic sea ice minimum in 2007.

And 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, crops and food production, freezing about 180,000 cattle to death out in the field – the most disastrous experience of extreme weather in living memory of the Chinese population – not covered very much by the European or the American media, although the destruction was bigger than Storm Sandy caused here in the United States.

So what happens in my arctic neighborhood has, not within 10 or 20 or 30 years but within a few months, enormous effects on the daily lives, the food production and the agriculture of people in China. And this is why 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 the 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 lifelines of some of Asia's most densely populated areas from the arid plains of Pakistan to the thirsty metropolis of Northern China more than 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 the 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 but also why Nepal and Bhutan are profoundly concerned. But these are also the reasons why China is now actively seeking cooperation on clean energy projects with other countries, including my country – a transformation which has taken place in recent years and has indeed surprised many, because it doesn't fit the traditional image of China in the global media. But nevertheless it is a fundamental shift, strongly felt in the relationship between Iceland and China.

In recent decades, my country, as Tom mentioned, has moved from oil and coal, which, during my younger years accounted for more than 80% of our energy. I was brought up with fossil fuel being the only energy resource in my part of Iceland. And now 100% of our electricity production and our house heating comes from domestic clean energy resources. And along the way this has also enabled our economy to become more diversified, helped to bring aluminum companies like Alcoa to Iceland, but has also been the basis of many high-tech industries, dynamic IT companies, and growing tourism.

Our clean energy economy is one of the main reasons why we have recovered so soon and so effectively from the banking crisis, because the energy was cheaper and the country was still an investment target for aluminum smelters, data storage centers, high-tech industries, and all the thriving enterprises. It has indeed been a revolutionary transformation, but it has allowed us to build an economy that many are now seeing as an inspiration to the rest of the world.

And the geothermal sector has become one of the major pillars of Iceland's economy and position, I would even say paradoxically of our foreign policy, illustrated, for example, by the United Nations' geothermal trading program, which is based in Iceland and operated out of Iceland for the last 30 years and has already strengthened the capabilities of more than 40 developing countries. And Iceland energy companies and engineering firms have now 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 also here in the United States. Just a few weeks ago an Icelandic company with American partners signed a deal to build a 1,000 megawatt geothermal power station in Ethiopia, potentially the largest of its kind on the African Continent, allowing Ethiopia to become an exporter of clean energy to the neighboring African countries.

And as the climate crisis calls us, we all know, for a green energy revolution, a comprehensive transformation from fossil fuel, it has, however, been a predominant tendency to concentrate in that debate (and I am as guilty as everybody else in this respect), to concentrate primarily on electricity production and overlook the multiple economic advantages and business opportunities derived from what I call a clean energy economy, with the emphasis on economy rather than energy. And in this respect, Iceland can be of great service, inviting visitors within a matter of a few days to witness many examples of how this can actually be done.

So let me, towards the end of my talk, illustrate and mention briefly a number of ways in which this clean energy has strengthened and broadened our economy, making therefore, I hope, a strong practical – I emphasize that – a practical case for the vision that clean energy is indeed good for business. I mentioned before cheap electricity and heating for households and companies, which have made the energy bill far lower than in other European countries but also allowed us to build aluminum smelters, data storage centers, IT companies and many others.

Geothermal greenhouse agriculture has also diversified our farming sector, enabling us to enjoy the domestic production of tomatoes, cucumbers, peppers and a variety of other vegetables, and perhaps raising the possibility that within a few years Iceland could become a net exporter of tomatoes. So I hope when you start going to Whole Foods in the coming years, you will remember to buy the absolutely environmentally friendly Icelandic tomatoes.

But we have used geothermal also in fish farming to adjust the seawater and the freshwater temperature from the cold North Atlantic to the needs of our species. And the most recent example of this is the construction of a 2,000-ton Senegal sole fishing farm. And as the name indicates, the Senegal sole is not a North Atlantic fish. But by using the geothermal heat to warm up the North Atlantic Ocean, we fool it a little bit and make a good living out of them. And then of course there is the Blue Lagoon, which has now become one of the most famous tourist sites in the world, visited by over half a million tourists every year. The *National Geographic* put it on the list of the 25 natural wonders in the world. What they forgot to mention is that it is fundamentally a spill of water from an electricity power plant. And we charge people 40 euros to actually get an access to that spill of water.

So there are many such examples that illustrate that clean energy is a fascinating, ongoing journey of good business. But towards the end in my speech I want to illustrate another aspect, and that is how our clean energy experience would allow people all over the world to enhance their food security. As we all know, mankind's oldest way of preserving food has been to dry it outdoors, and it's been a long process, takes months. And this is a practice that can be found on every continent in the production of fish, meet vegetables, and we all know examples of this method.

But we also know that in warm and hot countries all over the developing world, a big part of the food that is produced gets spoiled within a few days because there is no method to store it. So then I'm not talking about wasted food, I'm talking about foods that get spoiled because of lack of efficient storage methods. And in India, for example, about 20% of the food produced in India gets thus destroyed within a week.

So the biggest challenge, in my opinion, in the present state of food security in the world is not how we produce more food but how do we preserve the food we already produce and make sure there is 100% utilization, whether it's fish, meat, fruit or vegetables.

And in this respect, Iceland offers a very interesting example in how we have used geothermal clean energy to dry fish products, especially fish heads and backbones, actually things we threw away before, until 30 years ago. We started the process of using the geothermal heat to dry what was before thrown back into the ocean. And the beauty of it is that, whereas it takes months to dry food outdoors, this only takes five days. And it has grown into a multimillion-dollar export market where the fish that is thus dried in Iceland is exported to Nigeria and brought there into the localized market, down to the street vendors, the women who sell it in the mud streets in Nigeria, making a good living like the Icelandic fisherman. But the core of it is that you can store it, after drying it for five days in Iceland, for up to two years, with zero infrastructure. And I say it again – with zero infrastructure.

This is a method, and as you see on the screen, the packages go from Iceland in the container, they're received in Nigeria. They're then distributed into the market, and there are more pictures of the Nigerian markets where you see the local women making a good living year in and year out, out of selling these dried fish products, with no infrastructure, as you can see, just out there in the localized market. And this can be done not just with fish, it can be done with any type of food – meats, vegetables, fruit and whatever.

The problem is, however, that this is so simple that most people don't really believe it to be a good way to go forward. Because culturally and politically, and perhaps also in business terms, we have all been accustomed to favor complicated, high-tech solutions and forget that the simple way can often be much better and more productive. And through drying, fish and other food can be preserved, as I have mentioned for up to two years, but also the bulk and the weight is reduced, making transport and storage easier. And when the dried Icelandic fish is finally, two years later, cooked in Nigeria in a stew, you only need warm water, and you go out and you pick some vegetables and spices and throw it in. So even the poorest of the poor can get pure health food through this method, because it is entirely consisting of protein.

The great advantage of drying food indoors in closed rooms in this way is that the process can go on nonstop, every day and every night of the year, and the drying takes only a few days. It offers consistent quality. Flies and insects are prevented from contaminating the product, and localized energy resources – we use the geothermal, but you can also use solar or wind. And in most countries it is quite fascinating that the tradition of drying food outdoors is in fact very common. In China, for example, they have done it for centuries. In South Africa dried meat is very common; all over Asia you have dried fish. But they have been done in an expensive long-lasting process, as we did in Iceland for a long time.

Therefore, finally, as mankind moves towards the ten billion mark, the challenge will be, as we all know, not only how to access food but how to preserve it, how to make sure that everything we produce is in fact consumed and utilized. How we stop what we did in Iceland before where we threw half of the fish that we caught back into the ocean because we had no way of getting it in a preserved form to the market.

So therefore I believe, looking towards global food security in the coming decades, the most important question is to preserve and bring to the market the food which we already produce. And quite frankly, no other method than drying – this simple, traditional, old method of drying, using modern, clean energy, localized resources – is most effective but also the beauty of it, with the lowest cost, zero infrastructure for the storage and the ability to benefit the local… and the poor people along the way.

And although we in America and Europe are used to buying frozen food, and that is how we live, there is no way that we can bring that mechanism of freezing storage to Asia and Africa and the Americas. And even if we did so, it would have a tremendous negative impact on the global climate.

So my message here today is that the only way forward is to combine the oldest method known to mankind with localized, low-investment cost, clean energy drying of fish, meat, fruit and vegetables, according to the example that we have developed in Iceland in recent decades. And it has been a mission of mine in the last 12 to 18 months to bring together an informal global coalition – and I emphasize informal – for this effort. And now, already including the FAO, the UNDP arena, and its strong support from the Secretary General of the United Nations, Ban Ki-moon. And it would be not only an honor but also inspiring if the host associated with the Borlaug Dialogue would also join this informal effort.

And the reason why it is informal is that I believe we need the two years of proving to the established leaders of the world that this can indeed be done, because quite frankly most of

them think it's too simple to be a real option. And after these two years of having these projects all over the developing world, we can come together in a great, comprehensive global effort in this solution of the global food security challenge in the coming years.

So, my friends, it's all interrelated: The effect of the melting of the ice on food production and agriculture in faraway countries; the need for clean energy solutions at the local level as well as the national level. And it can come together in a beautiful way in what I believe is the most important, the most effective contribution to solve the food crisis facing people in every continent in the years to come.

Thank you very much.

Ambassador Kenneth Quinn

Thank you, Mr. President. I think you have shown and demonstrated today the similarities between your country and our state. Not only do they both begin with the letter "I" and they're both kind of small places, not in the mainstream, but they also produce great global leaders. And you clearly have demonstrated that today with your presentation and all that you are doing on this vital topic. We have Governor Branstad who's here, Congressman Leach, Senator Harkin. Governor Ray couldn't be here. We are so proud to have that special connection with you. So thank you again for delivering the keynote.