

2007 Norman E. Borlaug/World Food Prize International Symposium
Biofuels and Biofoods: The Global Challenges of Emerging Technologies
October 18-19, 2007- Des Moines, Iowa

SESSION I. GLOBAL PERSPECTIVES

October 18, 2007 – 8:45 – 11:50 a.m.

Moderator: Nina Fedoroff

Speaker: Gloria Visconti

Ambassador Kenneth Quinn

President - World Food Prize Foundation

At this time I'd like to invite Dr. Nina Fedoroff to come up and join me here and I find that most interesting people I've met working in agriculture, because you know I'm a diplomat and I mention meteoric rise – 21 years in the State Department, and we're still struggling there. And it takes us a long to get up to the top, if we make it at all.

But I met Dr. Fedoroff, again, through Dr. Borlaug. We were at the announcement of Dr. Nelson being our Laureate, hosted by Assistant Secretary Dan Sullivan, who's going to be speaking later today. And afterwards Assistant Secretary Sullivan hosted a luncheon, with Dr. Borlaug and members of our Council and other experts, and Dr. Fedoroff was there. She was just coming to her new position at the State Department, and we had this terrific conversation across the table that went on for almost two hours. And I talked about what we were planning to do, and she said, "I want to be there and be part of it." So, knowing that to have somebody of her background and talent, I said, "Well, I encourage you to come," and then when she committed to coming, I said, "And we'd like to put you to work." So she is going to be the moderator of this morning's session.

And she is now the Science and Technology Advisor to Secretary of State Condoleezza Rice. And as a pioneer in molecular biology and plant genetics, Dr. Fedoroff has contributed to the development of modern techniques used to study and modify plants. She joined the Penn State faculty in 1995, was the founding director of the Huck Institutes of Life Sciences. She has taught and led research at UCLA, the Carnegie Institute of Washington, Johns Hopkins, and the Santa Fe Institute.

And her current work is directed at understanding the genetic organization and molecular dynamics of plant stress and hormone responses. And you probably have found out already that we diplomats, who have been trained in political science and international relations, are really afraid of people like you, because you're so smart and you know so much.

But in 2007 she was named to serve, as I said, as Science and Technology Advisor to the Secretary of State. She has the National Medal of Science, same as Dr. Borlaug, and is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the European Academy of Arts and Sciences. She did her undergraduate at Syracuse where

Catherine Bertini, our 2003 Laureate, is now teaching, and graduated summa cum laude with a dual major in biology and chemistry.

And she had a Ph.D. in molecular biology from Rockefeller University. And now you see why we're scared of her. Nina Fedoroff.

Nina Fedoroff

Science and Technology Adviser to U.S. Secretary of State Condoleezza Rice
Professor, Penn State University

Well, now that everybody's intimidated, I'm just a moderator here. Thank you, Ambassador Quinn, for that introduction. It's my pleasure to be participating in the Borlaug Dialogue. I'd like to invite our first two speakers, Miss Visconti, and Minister Rodrigues, to join me on the stage.

It's a particular pleasure to participate, given the great example that Dr. Borlaug has set for all of us in science and agriculture within the United States and around the world, and in particular his legacy of agricultural science as a basis for international discussion, understanding and cooperation. That is surely a message that I carry to the State Department, and more recently I've been asked to be science advisor to USAID as well.

So, going forward, I think the importance of science, from agriculture on up to everything we consider science and technology, has to be central to our efforts to interact with other countries.

To begin the symposium's conversation on some of the major issues – both challenges and promises – that biorenewable energy presents to global agriculture, food security and development, I will be joined by authorities from around the globe who represent high-level leadership and years of experience in food fiber, and fuel production and policy. Representing governments and research institutions in Europe, Latin America, Asia and Africa, our speakers each have particular interest in, and knowledge of, agriculture's relationship with food security, sustainability, poverty and development, as well as international cooperation and trade.

A conversation among us here will follow the presentations, along with interaction with the audience as time permits. The first speaker is Ms. Gloria Visconti. Ms. Visconti has served as Chief of Staff for the Director General of the Italian Ministry for the Environment, Land and Sea, and has also worked as a policy advisor for the ministry. She's been engaged in international negotiations relating to the Johannesburg Summit, preparation of the G-8 Summits, and the U.N. Commission on Sustainable Development, and on various bilateral cooperation agreements related to natural resource management and technology transfer.

Prior to working for the Ministry, Ms. Visconti was posted to the European Commission in Brussels and also spent two years at the Italian National Agency for the Environment and Energy, focusing on air quality legislation in E-U member nations. She is currently a Giorgio Ruffolo Fellow at Harvard's Kennedy School of Government, where her research focuses on

European and EU perspectives on biofuels and related policy and trade issues, which she will be discussing today.

Gloria Visconti

Senior Expert, Ministry for the Environment, Land and Sea, Rome, Italy

Good morning. I'm very pleased to be here, and I would like to underline that I replaced Mr. Corrado Clini. Mr. Corrado Clini is the Director General of the Ministry of Environment of Italy, and he is also the chair of the Global Bioenergy Partnership, something I will discuss a little bit later. And really, he deeply apologizes not to be here, but he had been expected in a business meeting in Rome. So I will do my best in order to give his presentation.

I would like to start giving you a really brief (I promise, brief) context, a brief framework. We see that we have five mega-trends that are endangering planetary sustainability, which are: water stress, random urbanization, energy demand, socioeconomic disparity, and climate change.

I don't want to scare you, but here maybe we have a problem, and we have to face this problem. Here we have 2050, but according to the International Energy Agency's world energy outlook that has been issued in 2006, here we have the scenarios for the world primary energy demand. And as we can see, here we have an increase of about 50 or 60 percent in 2030, and oil and coal will still represent a huge part of our energy demand that will be draining the emerging economy. But my colleagues, I am sure, will speak a little bit more about it.

So what does it mean? It means that our energy-related CO₂ emission will increase as well. And while we can see a kind of stabilization for OECD and the United States, here we see that for the rest of the non-OECD countries and China, we have a huge increase. And you can see that little circle, the black one, when China overcame the United States. It was foreseen in 2008, if I'm not wrong, but it already happened.

So we have some challenges to face here, and we have some questions that we should answer, which are, in my point of view, the policy framework that would be more effective in the near future. Who should be the main actors in order to deal with climate change? How to expand the market for low-carbon technology and also the dissemination of them? What is the time frame? And what is also – we should maybe be a little bit critical about the role of the U.S. and Europe.

Regarding the first point, we know that in November there will be the Conference of the Parties to the Climate Change Convention, and we are really facing a kind of key moment where we have to decide if we want to go forward with a kind of strict and kind of exclusive, if you want, policy framework, which is represented by the Kyoto Protocol at the moment, or a more inclusive and more standard framework will be maybe more effective. So it's something we have to decide now.

Who are the main actors? Is climate change an environment problem? Maybe not. Maybe we see that it is a problem that engages in discussion the agricultural minister, the economics, the defense – climate change is a national security issue – the industry, the transport. Key technology – technology is key, but is not the silver bullet. We have to go forward with research development, and innovation, especially in order to disseminate this new technology in the emerging and developing countries.

The timeframe – we have to act now because we have a long way forward, and we have to decide now on what we want to invest in order for there to be a new energy framework in twenty, thirty years. And what about the role of U.S. and Europe? Bioenergy, I think, is a kind of case study. Bioenergy maybe could be and is something that could change a little bit the geopolitics of the world. And we will go into it later on.

So European Union. Now we go to the focus on my presentation. What's the strategy of the European Union so far? Concerning the framework, we have a commitment to achieve at least a 20 percent reduction of greenhouse gas emission by 20 percent by 2020, compared to 1990. And this target would increase to 30 percent if other countries will decide to do the same or would commit to comparable emission reduction – a kind of shift.

What is very important – it was decided during the EU council in 2007 – but what is very important also is the endorsement of the energy policy for Europe, the European Council Action Plan of 2007-2009, focusing on the issues that you see listed. And I would like to focus here on renewable energy.

But let's have a good look before to the European Union primary energy mix. Here we have 2003 versus 2030, and here we have the business as usual scenario. As you can see here from here, oil still has a predominant weight, gas will increase, and renewables, according to this scenario, which is taken from the International Energy Agency World Energy Outlook of 2006, renewable energy would go from 4 percent to about 7 percent.

So what have we decided so far? What is the political picture regarding value fuels in European Union? We have a directive implemented in 2003 that called for a percentage of 2 percent of biofuel in the transport sector to be reached by 2005, and a target of 5.75 percent of biofuel within the transport sector to be reached by 2010. And during last spring, in March 2007, the ministers agreed to a 10 percent binding minimum target for the share of biofuels in the overall EU transport petrol and diesel consumption by 2020. This is binding, while the biofuel director didn't give to the European member states a binding target. So the 2 percent and the 5.75 percent is not binding, so this is the difference.

But going back to the target of 10 percent to be reached by 2020 – this binding target – it is conditional to the sustainable production, to the implementation of second-generation biofuel – they have to be commercially available – and also to the revision of the fuel quality directive that gives us the specification about the blend and all the technicalities about petrol and diesel.

Unfortunately, the voluntary target of the directive of 2003 didn't satisfy us too much. As you can see from here, the average of EU-25 was 1.4 percent, so some countries were very good in reaching a target of 2 percent – you see here Germany, Sweden – but others, including Italy,

were not so good. And here we have another picture, giving you a graphical perspective of the work that is going on with the consumption of biofuel in the EU when all the targets will be implemented – what it means now for consumption.

What about the production of biofuel in the EU? We can see from here that biodiesel is more predominant in the European Union and the feed used is rapeseed. While bioethanol is still a low share and that the feed is, of course, usually by cereals with a limited growth of sugar beets.

What can we do? Let me look into what are the policies that have been implemented in order to both increase the production and the consumption of biofuels in the European Union. We have reform of the Common Agricultural Policy, it's ongoing, and trying to develop and enhance the part of the sugar production. Before the sugar production was subject to set aside; well, now it's possible to produce it in the areas that were subject to set aside, if the sugar will be not be devoted to food purposes – so, that is, for energy purposes.

In the EU rural reform, there are also some measures in order to develop biofuels and also some financial support to the rural area of the EU-25 and some tax reduction. But it is not enough, and if we want to reach the targets that have been decided by the spring council, we have to look outside, so there are some opportunities for trade.

And trade, we know, is a sensitive and key issue. And so far instrument schemes, like the General System of Preference Plus or Everything But Arms, give very low tariffs or no tariffs to these developing countries for the import of biofuel in European Union and have worked quite well. And I would like to highlight that in GSP+ there is also a targeted link to the environment part of trade. It means that countries that will benefit from GSP+ need to have adopted a convention on labor or biodiversity, so there is a kind of link on sustainability – a weak link, but still, there is something.

But what about trade? We have problems because there is not a clear clarification in the WTO about biofuels. It is also something that maybe – we don't know – will be addressed during the negotiation, as biofuel could be considered as environmental good. So the issue is really complicated, and there is a need of clarification on classification and also a need of a kind of certification scheme that will work at the global level.

But again it's not only a matter of classification, it's not a matter of giving financial support for agricultural or rural policy. Here we have a huge problem. We don't want to push forward biofuels at any cost. We have to look at sustainability. And when I mention sustainability, sustainability means not only the environment, but it means also social equity, it means sustainable development, it means giving the possibility to developing countries and not to have this fight of fuel-versus-food.

As Mr. Grant highlighted before, we need to work together, and this is absolutely key. We have to get together all our competencies from the environment side, from the agriculture side, from the economic side. And partnerships are very important and are key in this matter.

The Italian government was a kind of key player, together with others, of course, during the G8 +5 Gleneagles Summit in 2005. And in the summit in 2005, the heads of state and prime ministers endorsed the idea to launch a Global Bioenergy Partnership to support wider, cost-effective biomass and biofuel deployment, particularly in developing countries where biomass use is prevalent. And this endorsement was again reaffirmed in the last G8 in 2007 in Germany.

The Global Bioenergy Partnership was then launched formally during the Commission for Sustainable Development in 2006. Italy together with Mexico, has the chairmanship of the partnership. And apart from the G8 countries, China and Mexico are involved, together with the U.N. Foundation, FAO, and all the other U.N. organizations. The Secretariat is housed at the FAO in Rome. This is an open process; this is not a club. So we are really looking forward to the participation of other key players here.

The functions of the Global Bioenergy Partnership – why is it important to work together, as I said? First we need to create a global, high-level policy dialogue on bioenergy. It is important, it is key that political willingness in order to move forward thinks in the right way.

Then we are working on developing project activities, so it is something very practical and pragmatic for developing efficient and sustainable use of biomass. We work on the exchange of information – we know how important that is – and facilitating bioenergy integration into energy markets. And also we work as a cross-cutting initiative – there are many initiatives in place, for example, the biofuel forum led by the U.N. Foundation and FAO, is an example. But there are so many, and it's really important to work together, not to duplicate, and really to have a win-win situation.

So which are our key priorities? The report on bioenergy policies, data, and best practices will be issued in November in Rome during the steering committee of the Global Bioenergy Partnership. We are working on methodologies for measuring greenhouse gas emission reduction from the use of bioenergy, and a meeting has been hosted by the Department of State last week. The U.S. has a kind of leadership on it. And lastly, raising awareness and facilitating information on bioenergy.

Thank you very much.