

**WOMEN LEADERS DRIVING SCIENCE AND INNOVATION FOR  
AGRICULTURAL TRANSFORMATION IN AFRICA**

**Panel Moderator:** *Lindiwe Sibanda*

October 14, 2016 - 10:00 a.m.

*Introduction*

**Ambassador Kenneth M. Quinn**

President - World Food Prize Foundation

So I want to move to another exciting group and invite our next panel to come to the stage. Women Leaders Driving Science and Innovation for Agricultural Transformation in Africa.

You know, when Norm Borlaug had reached his last few days of his life and on the last day he was drifting in and out of consciousness, he at one point said, "I've got a problem." And his family went to him, thinking he meant—"I've got a problem being uncomfortable," or "I need something." And they said, "Daddy, what is it?" And he said, "Africa." And always his dream was to take the Green Revolution to Africa. And the last few years we have endeavored to bring Africa and continue Norm's mission and his passion and his goals here at the World Food Prize.

And for the last few years, we had panels dealing with Ebola. And my good friend, Florence Chenoweth, then the Minister of Liberia was here with Monty Jones who is now the Minister of Agriculture in Sierra Leone. And here we brought a focus to it through the session they had. So we're continuing that today, and we're very honored to have Her Excellency, President of Mauritius, Dr. Ameenah Gurib-Fakim, who is not only president but a biodiversity scientist and accomplished researcher who received numerous degrees. And if I may, Madam President, say—You're the model we all hope for. Just imagine if the presidents of most countries were scientists, and dare I say, and were women scientists? That'd be a real reason for hope.

Also here is my wonderful friend Ruth Oniang'o, Chair of the Board of the Sasakawa Africa Association and the Sasakawa Africa Fund for Extension Education. We have a big group here. I was just with them in Nairobi. And some new friends, Dr. Dominique Charron of Canada, the Director of Agriculture and Environment at the International Development Research Centre. I've been up to several programs you all have done. They're wonderful, and the leadership of Canada on this is terrific. Dr. Fatima Denton, the Director of Special Initiatives Division of the United Nations Economic Commission for Africa. Dr. Jemimah Njuki, Senior Program Specialist at the International Development Research Centre. And the facilitator and moderator, my wonderful friend, Dr. Lindiwe Sibanda, the CEO and Head of Mission of FANRPAN, the Food, Agriculture, Natural Resources Policy Analysis Network (I would say FANRPAN because it's too long for me to remember), but a food and nutrition security think tank coordinated from South Africa. And she facilitated a Borlaug Dialogue Symposium panel on the Ebola crisis one year later.

So this is put together and organized by the IDRC and FANRPAN and IDRC funds and research in developing countries to create lasting change on a large scale. And this is what we are looking for and anxious to hear the panel. Lindiwe, to you.

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*Panel Moderator*

**Lindiwe Sibanda**

CEO and Head of Mission, Food, Agriculture, and Natural Resources Policy Analysis Network (FANRPAN)

*Panel Members*

**H. E. Ameenah Gurib-Fakim** President, Republic of Mauritius

**Dominique Charron** Director for Agriculture and Environment, Canada's International Development Research Centre (IDRC)

**Fatima Denton** Coordinator for the African Climate Policy Centre (ACPC) of the United Nations Economic Commission for Africa (UNECA)

**Jemimah Njuki** Senior Program Specialist, International Development Research Centre

**Hon. Prof. Ruth Oniang'o** Chair of Boards of Sasakawa Africa Association (SAA) and Sasakawa Africa Fund for Extension Education (SAFE)

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Thank you very much, Ambassador Quinn, for the kind introduction. Excellencies, as we celebrate 30 years since Dr. Borlaug's first visit to Africa, it's fitting that we try and complete some of the unfinished business in Africa. This cannot be complete without women leading other women. As Josette Sheeran said yesterday – "If hunger is the world's major problem, then women hold the secret key to unlock better solutions that can get us to our destination to end hunger and hidden hunger."

I'm so happy to say a bold new story is emerging in Africa. It's a story of change and empowerment. It's a story that begins with recognizing the enormous role that women play in Africa's agriculture and their potential to transform Africa's agriculture and growth. Across the continent and beyond, emerging African women leaders are driving science and innovation to transform African agriculture. Whilst inequalities still persist, the growth of women's leadership in agriculture in Africa is already transforming the sector and encouraging investments in women and girls in science and innovation.

The panel that we have for you today brings prominent women who are leading and driving innovations in the agricultural sector, as well as prominent managers and leaders that are investing and promoting gender equality in agriculture, science and innovation in their own organizations in the farms and continent and globally.

This panel will explore three major questions:

1. How are women leaders driving science and innovation to transform African agriculture?
2. How are African women leaders poised to deal with the current challenges of transforming African agriculture?

3. How does the future look like for women's leadership in the continent, and what kind of investments are we making now to build the next generation of African women leaders?

I hope this will be a conversation amongst girls but will also give you an opportunity, if you've got some burning questions. There are mics at the end, so I will pause halfway into the discussion to allow for some Q&A with the audience, time allowing.

Now, as Ambassador Quinn has said, this session is co-sponsored by IDRC and FANRPAN, and really the emphasis is on supporting women leaders of today and tomorrow.

I want to say I have my own testimony of how I've been supported. In the 1980s when I was ready to start my PhD, I'd always enjoyed the one piece of meat that my grandma and that my [inaudible] in Zimbabwe used to give us. And it was always my quest that when I grow up, I will make sure that I can afford more pieces of meat for my children. So I wanted to study the improvement of indigenous Matabele goats.

I then applied to the University of Zimbabwe, and suddenly I was told that improvement of indigenous goats, there is no precedence in that. Where are you going to do your literature review from? No one has ever studied the improvement of indigenous goats. If you were talking exotic goats, maybe there would be an opportunity. I was lucky, therefore, that at that time IDRC was funding original research program on small ruminants research. So I was able to register with the University of Redding in England but do my research in my own villages in Zimbabwe. Lo and behold, 30 years later, my thesis is the reference point for improving indigenous Matabele goats. More than that, I now know that it's not just improving the quantity of the goats but making sure that I provide a healthy diet – that is the medicine for my family.

I've gone on to be the first woman Board Chair of the International Livestock Research Institute, and it was manifest, first woman, youngest, and the first from the South. And this is what we mean by investing in leaders of today and tomorrow.

I took time to engage with one of my mentors, Her Excellency President Banda. I said in a quick snippet, "Tell me, what are your biggest worries?" and she said, "Woman leadership is under threat." I said, "What do you mean?" She said we were three, at one time, three women presidents in Africa. We are down to two. If we are not careful, it will be zero." We are honored today to have one of two, Her Excellency President of the Republic of Mauritius. We are keen to understand – how did you get where you are, and how do we get more of you? As Ambassador Quinn said – Can you imagine an Africa where 54 heads of state are not just women but are scientists, evidence-based policies for food and nutrition security. You are the key that can unlock those opportunities. How did you make it happen?

Over to you.

H.E. Gurib-Fakim

Thank you, Lindiwe, for this question. I think before I go into this issue of leadership at the political level, I fully concur with your story that people don't trust traditional knowledge. And I had the same kind of pathway as you. Because when I went back to Mauritius, I trained as a chemist in the UK, and I went back to work at the university. I quickly realized that I could not do chemistry as I was used to doing, so I was looking for this passion, which was chemistry, and then I ended up doing phytochemistry. And phytochemistry led me to medicinal plant, because at the time I was lucky; there was a program that was being funded by the European Commission, and I was to get the seed grant to start a lab. And I started working on traditional knowledge.

Again, I come back to your story. You're can't be credible when you're working with weeds, especially when you train as an organic chemist. So I was coming to the lab with all these weeds, extracting essential oils and building this database; and, you know, you become the laughingstock of your colleagues because you are diluting the science by the multidisciplinary science. But, you know, as your scientists, we have the thick skin. So I carried on. I completed the database on traditional knowledge of Mauritius and the Indian Ocean by 1995. And after this, then I realized that just extracting molecules here and there will not make a difference. You can improve your CV by getting hundreds of publications, but it wasn't there. Because while I was interviewing the people, I realized that there was a lot of truth behind traditional knowledge.

So I started validating, and then towards the end of my academic career... Because I'm a retiree now; I retired from academia. And so I said to myself – It's time to do something. And I met a likeminded person retired from university as deputy vice chancellor, and I started my own business. And this home business was translating this database, which I got on herbal medicine, into a business for providing innovative ingredient to industry. And not only that but also to put the scientific framework around this very important area of traditional knowledge, because it can make a seed change on the continent by providing cheap and effective medication. When you have put in the scientific framework around it, the dosage and side effects and all the rest of it. And I also published the very first African Herbal Pharmacopoeia to do that.

Then chance would have it that the country was going for election, and the political world chose me. I didn't choose it. So I could say that I'm an accidental president.

Sibanda We need more accidents.

H.E. Gurib-Fakim

Thank you, but I'm happy to be in this position, because this provides me with a very powerful pulpit to address precisely the needs of African empowerment, African women empowerment. Because you mention transformation of the agriculture, you know, the profile in Africa. We need more women on board, because women are the major producers on the continent.

Now, how do we empower them with the necessary tools, with access to land, access to credit and access to technology, which is already there? You know it's available. How do we put all these together within the framework of a changing climate? I mean, this is a very, very important challenge that we have to address if we want to not only empower the women but those who ensure food security on the continent. So this is where we are.

Sibanda Thank you very much, so we need more accidents so that we can get those voters to do the right thing when they get to the ballot box. Thank you very much, Madam President. Dominique, Dr. Charron, we are worried by the statistics. There's only one in seven science leaders. You are well poised to change these metrics. We need more women leaders. We already have them, and they're making a difference, but it's not enough. What are you doing where you are sitting at IDRC about that?

Charron Well, thank you, and it's really a pleasure to be a part of this discussion, I think an important discussion. And I'm very fortunate to be working for an organization that's been focused on capacity building in science in developing regions of the world for 45 years or more. And we are part of Canada's international assistance, for those of you who don't know, Canada's International Development Research Center. We represent about 3% of Canada's investment in aid, and we, as was mentioned earlier, make research grants. But as part of our grant-

making in developing regions of the world, we also work to strengthen the capacities of institutions and individuals around the world to do excellent research, to produce results that can be used, and to make sure that those results are used.

Why is it so important to invest in capacities for research and capacities in science and not just to fund the science? Particularly, if we're speaking about Africa and the challenge that Africa faces and the challenge of food security that Africa faces, we're looking... Now, who am I quoting I say it's the missing 50%? I think I'm quoting you, Lindiwe, when we're talking about the need to make sure that women farmers in Africa are brought into the economic activity of farming, that they are producing and connecting into value chains.

Well, in order to capture that missing 50%, we heard in the previous panel that we need more innovation, more ideas, more solutions. And we are missing 50% of the gray matter by not incorporating those women in science to help bring those ideas, new ideas and new solutions to bear. And so that's why we believe at IDRC that it's extremely important not only to invest in capacities for science but to proactively ensure that we are recruiting into research, into social science, into agricultural science, into environmental science, which are my areas of responsibility, but across the board, that we are strengthening the participation and the leadership of women in science.

Sibanda Thank you, thank you. Now, you are sitting globally – Canada, looking at the whole terrain. We've got Dr. Fatima Denton. You've worked on projects with IDRC on adaptation to climate change. And, Madam President, Her Excellency, has articulated the need to be climate smart. We need to make sure that our agriculture response to the already-changed environments adapts, mitigates and there is resilience. Now, you are managing special initiatives on the green economy, science and technology at UNECA, United Nations based in Addis. What are you doing for Africa and for women?

Denton Thank you very much, Lindiwe. May I just start by telling a very short story, because I always have a sort of nervous tension on the word "scientist" and what that means. Basically, you've just been asked an existentialist question on – who is a scientist? And some five years ago, my son who was then eight came home from school, and he was giddy with excitement about a science project that he was doing, looking at volcanos and how they erupt. And as he was trying to explain what happens when a volcano erupts, he was using words that made me remember my geography classes back in school. So I then said to him, "But doesn't this have to do with the surface of the earth in terms of volcano eruption?" And he looked at me in some kind of bewilderment and said, "Hang on, Mommy. Let me finish explaining. You're not a scientist."

So to me, I mean, that really somehow struck a chord. Because I think that as women scientists you do have a very hard time sometimes demonstrating the value of the science. You have to make an intellectual case with the science that you're trying to put forward and to explain what that means and how that can also be a credible value proposition.

So in terms of your question relating to climate change and climate-smart villages, I guess what we're doing at the level of the United Nations Economic Commission for Africa is basically starting from a premise that Africa is going to be the continent. I mean, there is a famous saying, "The least least." The continent that has least contributed to climate change is going to be and has the least adaptive capacity in terms of insulating itself from the shocks of climate impacts.

And so our premise is basically, for Africa to be able to withstand the shocks and the stresses related to climate change, it has to be able to have in place the relevant infrastructure, the relevant knowledge infrastructure. And for us we're starting from the premise again that

climate information and climate data is very relevant in terms of planning. And so we are working with countries in Africa. We have a number of countries on our radar – Ethiopia, Rwanda, Gambia and several other countries – whereby we're saying to them that strengthening your data and data infrastructure so that you can in turn advise farmers in terms of them making strategic decisions about when to plant, how to plant, is going to be fundamental.

So we are helping countries install the relevant equipment. Sometimes it's automatic weather stations. But we're also trying to see how we can somehow intersect climate data not just for the pure production of data, because data is important, access to data is important, but to be able to say that the data that you are producing has to feed into the agricultural sector. You have to be able to maximize agricultural productivity, and you have to be able to support your energy sector. So in several ways, data production is important, and having the relevant infrastructure in place is going to help you plan better so that you're not taken by surprises when it comes to climate shocks and climate stresses.

So our own basic premise is that agriculture is fundamental for Africa's development and that we have to aspire to an Africa that can somehow gradually, you know, work its way to structural transformation. And structural transformation means that we have to be able to support other sectors. We've been in the agricultural sector for a long time, and it's an important sector, but we also have to look at sectors like energy, sectors like water, and to be able to see how we support governments in building these sectors.

We know that without agriculture we cannot aspire to a green economy, which is very important, especially since we are talking about emissions reductions. We know that without agriculture also we can't create the kind of jobs we would want to create. We know that annually on a yearly basis we're going to see at least ten million people, young people, that will be added to the African labor force, so that's quite an important statistic. And we know that also in terms of job creation and generating new jobs and also in terms of us aspiring towards industrialization, which is a key imperative for the continent, agriculture has to be that sort of foundational stone.

And so our work is mainly in terms of climate change, but we do not have a silent approach in terms of climate change. We're trying to see how a continent that is so rich in mineral resources and so rich in terms of water, aquifers, so rich in terms of the extent of land that we have, to be able to see how all of this together can support Africa's development but especially working toward structural transformation.

Sibanda Thank you, Fatima. You've touched on knowledge infrastructure, and you are responding to issues of climate change, which Her Excellency Madam President has articulated as a major challenge. I relate to presidents. Yesterday two presidents spoke about the challenge of malnutrition. You speak about knowledge infrastructure. Dr. Akinwumi Adesina spoke about gray matter infrastructure. Professor Oniang'o, you've been leading, leading on nutrition, leading at the university level, leading as a parliamentarian, leading in the community through your NGO. Where are we, and what are you doing to make sure that that gray matter stays gray and will reduce and eradicate stunting in Africa? Antonio has to be invited to address this seminar. That's what I had. So what are you doing about that?

Oniang'o Thank you, Lindiwe. I'm the oldest one here. I thank you for inviting me to be on this panel, truly. I just want to say that I started off, I value science because I was a mathematician right from class one. At that time one teacher believed women could do much mathematics. I was a mathematician, and I used to beat the boys. Yeah, yeah. And I beat them physically as well, yeah, yeah. Because I used to beat them in class, then they would waylay me, and then I would climb a tree with stones, and then, you know, throw it at them. You see what I mean.

Sibanda No, I don't, no. In today's world, that would be foolish.

Oniang'o So what I wanted to say is that I value science, and I know, and I always advise parents, that so long as your child is good in mathematics and in science, they can be good at anything else. We saw the young lady, the doctor, playing the violin. You know, you can be good at anything else, and that's what I encourage. Right now I can't even be called a scientist, because I did my PhD, lab work and field work; and then I went to the field, and I found my nutrition in Kenya. I could not believe it, but - I could not believe it. For a country, we choose to boast of being self-sufficient in food and I say goodbye to lab. So now I only go to laboratories in schools, in our local universities. And as Dr. Gebisa said, "They are really, really run down." And it doesn't make sense to me that when you have all these universities in the USA trying to pair up with the universities in Africa that you cannot transfer some of the equipment, one year old, which you don't use anymore, to African universities and the big African universities, and let them stay there.

Until you've also boasted of having attended land-grant universities... By default I found myself in Washington State University. You know, got an American scholarship. Five Kenyans. I was the only woman, and I was in Washington State University, went back home with the three babies, you know, back to Kenya. So I remained on the continent, but I value what this country has to offer and the possibilities of changing the African Continent. And so when I left Washington State University, it was like I am going to solve hunger and malnutrition in Africa. I'm 70 years old, and I'm still trying to do that. I mean, it just doesn't make sense to me. I know things are improving, but they can be better, they can be a whole lot better. You know what? Yeah, so that's what I've been doing on that continent. And I know we need to encourage women, because when you do women...

I'm a politician now – right? I'm a politician, not a parliamentarian. I was a parliamentarian, but I'm now a politician. So when it comes to issues of hunger and malnutrition, I talk politically, because it is an injustice we should not see in this world. And it is only women who can talk like this. When you talk about indigenous knowledge, who are the custodians of indigenous knowledge? We are. We are the ones who are strong enough to say – look, we have our own local foods.

I didn't see malnutrition when I was growing up, by the way. I saw my mother lose six children to malaria. And children are still dying from malaria, so women encompass everything. We can become scientists, we are doctors, we do everything. We take care of everybody, until we lose the science. But everything needs to be based on the science, if it's policy, on science. And the beauty of being where I am age-wise – I'm not afraid to say my age – is a man finally can listen to me.

Sibanda Thank you.

Oniang'o And so malnutrition... Yeah, yeah, they can finally listen to me. And I love us women. We help support women. I think women have had their time. I believe we have to have women, but we need the men. The president of the World Bank is a man. President Akinwumi Adesina is a man – right? You saw that?

Sibanda Yes.

Oniang'o Ambassador Quinn here is doing an amazing job. He is a man. We need the men to support the women. And in my community I have an award for the men, so long as they support the women.

Sibanda Excellent. Now, men in Kenya, careful—you can't throw stones anymore. You will get an award for doing the right thing. Thank you very much. Now, we need men who do the right thing. Jemimah, you are a gender expert. You've moved from CGIAR Centers where I've seen you champion the cause of women livestock owners. You've moved to an international intergovernmental organization, CARE. You are now with IDRC as a grant-maker, so you are well placed to put action to where your heart has always been. We need men who make sure women can deliver. What are you doing?

Njuki Thank you very much, Lindiwe. And I talk about the connection between us women who are scientists and leaders and the women that we work for and we work with on the farm, the farmers and the consumers. And I want to start with where I started myself. I grew up on a farm, which was a very good thing, because it led to my interest in agriculture. But what it also did is it exposed me to the unfairness. At that point I didn't have the right word to call it. Now we have all the big words—women's empowerment, gender inequality. At that point you just look at it was the *unfairness* the women and girls would go through in the sector. And I have two examples.

So we would go to the farm. We were six sisters and two brothers, but when we got back home from the farm, my sisters and I had another job to start—collect the water, collect the firewood, make dinner for everybody, clean up, get ready for school the following morning. My brothers would be studying and playing. We worked on the farm with my mom. My father at that time was an agriculture extension officer, but when the money came from the farm, my father was in charge of it, not my mother. He made the decisions on how that money would be used.

So I had a lot of interest in agriculture. I had a lot of interest in trying to correct this injustice, but I didn't know how. So I went to university and got a degree in livestock sciences, came back to Kenya, started working with the government. And the same issues that confronted me as a girl were now confronting me as an adult woman working in rural areas. So I went back to school, because in the universities we have now, we are training people on botany and pathology and everything else but not how to deal with some of these gender issues. So I went back to school and got a PhD in development studies, specializing in gender and farming systems. So for the last 15 years, that has been—it's why I wake up in the morning—women's empowerment, refusing some of the gender inequalities that we see.

And I would say there are four big things that we need to do right now. We've been doing them, because it seems like we've been chipping away at a rock, and it is not falling. We've been talking about women's empowerment since Beijing in 1995. We have made a lot of progress. It is not the kind of change... I'm sure all of you who work on farms, who work with women, you know what I am talking about, that we still have so much more to do.

First thing, technology. We know 60% of the economically active women in Africa are in agriculture. What is the image of agriculture right now, Dr. Banda? It is a woman with a child on her back and with a hoe. We cannot transform the sector, building on women with children on their backs and a hoe. We've got to get technology to women. We have to mechanize agriculture. We have worked even with IDRC that has worked very well. If you go to Africa during the harvesting season, women and children all over the place, beating beans with stakes, beating cowpeas with stakes, beating sorghum and millet over rocks. It is what is causing some of the post-harvest losses we see. So there is something we have to address.

The second thing is women's economic empowerment. We have evidence—for every dollar earned by a woman, 90 cents goes back to their family. For every dollar earned by a man, 40 cents goes back to their family. I'm still yet to have that conversation with the men about the



other 60, the other 60 cents. Putting money in the hands of women has important implications for child nutrition, for the economic wellbeing, for the wellbeing of their families. We have to improve access to credit; – 1.1 billion women around the world that don't have a bank account. They're not banked. That means they cannot access credit. They cannot access other financial services. We have to change that. We have to make markets work for women.

We have an interesting project in Kenya working with women bean farmers, and I'm sure Dominique will talk about it. Yeah? Working on the two ends, making sure output markets work for women but making sure they have the resources that they need to do this.

Third thing – political commitment, government policies that actually work for women. How is it that women are producing most of the food we are eating on land that they cannot claim ownership to? So gender responsive policies, policies that allow us to unlock this productivity and nutrition gains that we want to see.

The fourth thing – this is usually a very sensitive topic – the social and gender norms that are holding women back. Even now, just like back then when I was a young girl, girls are spending 160 million more hours per day than boys doing care work, doing domestic tasks. They are more likely to drop out of school because of that. So how can we watch that and then expect that those young girls are going to be sitting here, leading the conversation in the future? We have to recognize. We shouldn't be blind to it, because it's still happening. You've got to reduce it. We've got to redistribute it. Those norms that are defined in what boys and girls should do need to break, so that our girls can compete equally with boys, so that next year, in the few years to come, they'll be sitting here – they're the leaders of tomorrow.

Sibanda Mechanize, improve the income of women, good, bold leadership, and our social norms. They need to be revisited. The answer is in our hands. We can do it with the right leadership. Ladies and gentleman, I'll invite you now, if you have burning questions that you would like to pose to the panel, I'll take a couple of questions, and they will come back to you with responses as they respond to a key question I have for them. I'll give you a couple of minutes to think about – what are you doing personally to build the pipelines of the next generation?

As you come up with your questions, I want to share my own testimony. I have had the wonderful opportunity of being loved by mothers. I have seen a lot of you boast about knowing Dr. Borlaug, working side by side with him, and I want to believe, being in animal sciences and not being a breeder, I was not privy to that opportunity. But thank God, there is Jeanie Borlaug who has embraced me as a daughter. And on the 27<sup>th</sup> of September in Mexico, she spent a whole hour with me in Norm's old office, which CIMMYT has reconstructed. As we walked through that office and she reminisced about the time with her father, I was able to touch the speeches that Dr. Borlaug gave. I was able to touch his Pakistani hat that is sitting on a corner. I was able to touch the handsets telephone, old-fashioned, that he used to use. But most precious was his red cardigan, and that's when Jeanie said, "My dad loved red. This was his cardigan." This is the Norm that I was able to touch. Thank you, Jeanie, for embracing me as your daughter, but I want to thank you specially for passing on the baton to Julie.

It's when women love other women and pass on the baton that we can conquer and win and end hunger. So we are looking for women champions who are doing the same. In my own professional life, I've made sure I keep a database of powerful women like you – right from grassroots as farmers to private sector to policymakers to scientists. And I'm proud to say in the six boards where I retired last year, I was succeeded by women from my own database. When women don't love other women, I'm told there's a special place in hell where girls, you're going to burn and burn and burn. So you better have a plan.

Over to the questions. I'll take two this side and another two from this end. Please go ahead.

Q Well, I want to say thank you to all of you. Twenty years ago I was here and I was listening to the discussion as a teacher, and I said we need to give women more rights in Africa. And you could hear a pin drop. Dr. Borlaug went, "Ooh." I touched some nerves. Well, what I wanted to say is—how do you break some of those barriers down between the men and women in Africa that will help make it easier for women to just, be good farmers and all those things that need to be done? Thank you.

Sibanda Thank you. Next question, please.

Q Thank you. My name is Gilbert. I am a visiting student from Uganda, Makerere University. I want to build onto his question, especially on the practical things that can be done to break the social norms that are existing, because for sure this challenge is existing in our communities. What I have noticed, and I have an interest in gender issues, is that a lot of the efforts that have been championed, especially by the women, the women movements in Africa and I would say most specifically in Uganda, they tend to blame the position of a man in the struggle to achieve gender equality. And I kind of think we do not live in a vacuum. The African setting is more of a family setting. So I feel like the efforts that have been championed, especially by the women movements, they tend to cite, say, blame the position of a man. Now, how can we be able to achieve gender equality if we do not put the man at the position of this struggle? Because all of the discussions that we hear... And some of them will want to portray a man as very bad. They want to give the man the bad picture. So I want to understand, in an effort to break the barriers that are existing, how can we again redirect our efforts to bring the position of a man in the fight for gender equality.

Sibanda Thank you very much. I got a cue from that position of the men, so I hope we can hear that position of an African man—what is it? Thank you. Two men we've got, and over to ladies on that side.

Q Hi. My name is Macy. I'm a student at Washington State University studying ag and food security. I suppose the things I find interesting as I'm listening, is I find that different areas are focused on, as we talk about tackling this issue and specifically I remember Nigeria as we discussed at one point Nigeria was reaching out for health and development and they wanted to move forward. And I wonder how you guys propose the issue of spreading that further and going from those places that we'll be getting in and how we spread that across the entire continent of Africa.

Sibanda Thank you.

Q My question kind of builds off of hers. I'm an agriculture communications student at the University of Georgia. My name is Sarah. And so the picture that you paint of this woman farmer with a child on her back and the hoe in her hands—how do we reach her? How can we communicate with her? How can we get the technology that we have into her hands so that she can be successful? And what are some practical ways that ya'all have seen that be carried out in your countries? Thank you.

Sibanda Thank you very much. Over to you panel.

H.E. Gurib-Fakim

Thank you, Lindiwe, for these very interesting questions. Well, I'll just look at one aspect, because you precisely talked about addressing the pipe and showing that we have many women coming out. But how do we ensure that we're getting a lot out of the pipe upfront,

we're not putting enough. And if you go back to the education of the girl child in Africa, I mean, there are issues that have to be done upfront. One of them, one of the issues is stereotyping. When I was a child, younger, and I went to see the careers guidance officer, for example, I said, "You know, I want to go and study chemistry." The guy looked at me and said, "Why do you want to do chemistry? Because this is for boys. And when you come back, there'll be no job for you."

So this stereotyping has to be addressed, that women... And the damage is done much earlier on, because the girls don't have equal opportunity to education. So classroom, sometimes you have to look at the classroom; you have to look at the books and why the books... Again, I'll just come back to... Well, this year our women's day, there was a survey made in Mauritius, and we're asking girls to give the names of women inventors and women Nobel Prize winners. Not a single one could come up with the names of even famous people like Marie Curie. So there is an issue that women... And I come back again to this question of whether you're a scientist, so this issue has to be looked into.

Then you've talked about the environment of the girls growing up, but I think it goes further. It goes back to the home. And I can say that my biggest cheerleader has been my father, and he gave equal access to education, so it goes back to that level as well. And then you make the girl evolve, access to education, and looking at the environment in which the girl is growing up. Basic issues like access to toilets, for example, can make a difference whether a girl stays at school for a whole month or absent for a few days of that month. So these are basic issues that we have to address if we want to ensure that the girl has access to basic education.

Then you talk about access to science education. Again, you have to make science alive. You have to show the girl that agriculture, for example, is not about this African researcher with a hoe. We have to make agriculture become more sexy, and that it appeals to both genders, you know. And the other thing, building the pipe, again, you need to make the girl have access to scholarship. And this is something that we are doing in Mauritius. We are making science become relevant to the schoolkids, making them appreciate, for example, that science is alive, is around us. But to build up curiosity, you need to make science alive, and this again comes down now to teachers who have this responsibility of making science alive and science is everywhere and science has answers to many questions. Then you start building the pipe.

But then again, the is at least in my country, this issue of saying that women, they always stay at middle management level; they don't emerge. Why don't they emerge? They don't emerge because the societal pressures are such that women have to be at home. We have to do the home, we have to do cooking, we have to do everything. But again to address this, you need to back again to grassroots, to the basics of how do you teach boys and girls that, you know, both of them can do it.

So there is a whole series of things that we are doing. And down, further down the line in terms of access to tertiary education, again we are doing something about it. You said, "How do I use the pulpit?" And we are collaborating with academies like the African Academy of Science to address the challenges from Africa and why the challenge from Africa is so important; because if we are going to solve African problems, we can no longer accept the scenario that 12% of humanity generate less than 1% of knowledge. And we need policy, we need data, we need to frame the policy base on our data. So we need to generate this data. It has to be done on African soil.

Sibanda      Excellent. Thank you. Prof.

Oniang'o Too many things, I guess pick a few. When you are a trailblazer like I have been all my life, you just stay a woman, and you have to be the example. So when I visit schools, I really encourage boys and girls, but you really want to pick out the girls and encourage them and say, "Look, you can still do mathematics," and you use yourself as an example, and it moves forward.

When I was in the Kenyan Parliament, there were only 18 of us, and during the days of the late Wangari Maathai, and we fought the constitutionality and genderized our constitution. And now you have to have in the public sector – and now it's going on to the private sector – anytime you have a group of people, like here we would be disqualified, at least one third of either gender. It's not just women; of either gender. So that eventually we don't tilt this balance the wrong way. And then you actually find that in the Sasakawa African Association, we transformed everything. It's more African. It's woman-led now by the chair; the managing director is a woman. And I tell you the majority of the workers now – we try to bring in women as well – so that whatever you do, wherever you are, you actually are able to do all that.

And so it's very, very important that you make sure that you support the women as well. And in my own community where I came from, where when I was younger the men would not listen to me, I worked and I made sure that we actually got women chiefs. So actually women became chiefs. There was no way a woman was ever going to become a chief. But then you make it your clarion call, and you have to make sure that you move ahead with it, yeah.

And then, finally, mentoring – mentoring. Wherever I go, I'm mentoring, I'm adopting girls everywhere. Okay, boys I can also adopt, too. I call them my children. But just passing baton. I used to be a runner, and my best sport was relay race. I've seen America lose the relay race and beaten by Jamaica because of passing the baton badly. So the way of passing the baton is real. And so wherever you are, you know, make yourself accessible, especially as a woman.

But, finally, men, we love you. I mean, I love you. I have children with the man, and I love you, we love you, we love you. A survey done in Kenya one time of the top women showed 80% had been inspired by, supported by fathers, brothers, uncles, by men. So we need you. And the young man in an African setting, I normally say the man wants to be head of household, yes – let him be head. The woman is the backbone. I'm telling you the head is going nowhere without the backbone. Yeah, so we just do that – it's the reality.

Sibanda Thank you, thank you. We love you, men, and you are the heads, but we are the backbone. Over to Dominique.

Charron Great, well, thank you, and I think you asked about the pipeline, and so I think it was Sarah who asked about – how do we get these technologies into the hands of the women on the farm? And those, we're talking about building the pipeline of leaders, women leaders, men leaders, who have feminist-minded approaches to science and to their work. And we are also talking about the type of research that needs to happen so that the tools and the innovation and the solutions are appropriate for women are available to women are developed by women are understood by women. So that whole value chain, pipeline, if you wish, is something I'd like to speak to.

Personally, at IDRC where I work, the way I personally take this forward is to walk the talk, not in a militant way but in a way to strengthen IDRC's already-positive approach to making sure that women are at the center of the Center's mandate in terms of improving the lives of the poor in the world. But also to make sure that we are doing the best science that's going to

achieve results as much or more for women as for men and by hiring people like Jemimah and by making sure that we are measuring outcomes.

And this leads me to the second major thing that we can do as donors in particular. I have this great big carrot called “funding,” and with that great big carrot I can shape how research is done. I can insist that female graduate students are part of the research projects. And in our food security programming, which is now at about \$180 million in the last, well, let’s say since 2009, we have 560 students; more than half of them are women, and in fact 25% of them are African women, graduate students at the masters and PhD level. That doesn’t happen by accident; that happens deliberately.

And if we think about that agency that those early career awards and how important that early career support can be, we’re very proud to be able to say at IDRC that our early career support has helped people who went on to win the World Food Prize, for example. And you have, one of them received the World Food Prize this year, and Robert Mwanga, also Gebisa Ejeta and others who have benefitted from IDRC support, early career. So that early career is important. And what it leads to then, again thinking with the donor’s mind of—how can I make sure that that early career support leads to careers in research?—is to insist that we have adequate gender representation in all of our research teams, not just the gender expert but the principal investigator. So 17 of our... I think it’s more than 20% of our principal investigators in over 70 projects are women in Africa. So the agency of women can be supported by institutions and by structures. The changes that we seek in Africa in terms of institutions and context for women to achieve can be shaped and supported by donors who are coming at it with the perspective that this is important and one of the key outcomes and deliverables.

Sibanda Thank you very much. Fatima.

Denton I think we can’t take for granted some of the softer skills, and I think very often we take those for granted. And I think one of the first things that we need to do in terms of building that pipeline is to not just demonstrate to our younger women that they can be in a position of authority but to also find opportunities for them so that they can grow their confidence.

And I remember very vividly a couple of years ago doing some fieldwork on the intersection of energy and poverty in West Africa. And we were just about rounding up on that discussion. We were talking about how important it is that women have access to energy. And again just coming to the field with our own hypothesis of what it meant—you know, give a woman a cook stove and you’ve solved the problem. And just as we were about to finish the discussion, an older lady came up to me and said very quietly—and I had trouble understanding what she was saying—and she said to me, “What are you going to do about the lavatory situation?” So I said, “The lavatory situation.” She said, “Yeah, what are you going to do about the lavatory situation? Don't come to us and talk about energy and how important it is. How can we pay attention to energy poverty if we don't have proper toilets.” And that for me was an indication that she could not articulate her point properly when everybody else was around.

But this is again a key issue, that we have to really pay a lot of attention to how we build skills and how we empower women and how we make sure that their confidence can grow. And it’s a lifelong exercise. It’s not something we’re going to do today, but it’s something that we have to pay a lot of attention to.

And the second point I wanted to make is the point that Her Excellency has mentioned. I think we really need to start rebranding agriculture differently. We really need to see the opportunity, the business model in agricultural development. We can’t, Jemimah said this

very poignantly – we can't continue to think we're going to transform the agricultural sector with cutters and hoes. And we can't continue to see as a part of our landscapes, a mental landscape, women who are holding huge amounts of wood or whatever on their backs as the kind of pictures that will transform and develop Africa.

But part of the story is not basically saying that – yes, these odds are stacked against you. Part of the story is basically to try to say – what are the business opportunities in agriculture that we can begin to tap into? How can we begin to harvest some of these stories? So we have to look for that cultural story and build on that.

Sibanda Thank you, Fatima. We're going to end on a high note where Jemimah, who is an author, well published, has got another present for us. Over to you, Jemimah, and on the screens.

Njuki Thank you, Lindiwe. So we saw for a lot of people working around the issues of agriculture and gender inequality... Right now we know the question is not whether there's a link between gender equality and food and nutrition security – right now we know the answer to that question is yes. The biggest question is what has been asked in the audience. So how do we do this? How do we engage men? How do we engage boys for gender equality? What are some of the practical things that we see working in the field?

And this book is actually a response to that question. It is why I haven't talked a lot about that. And what this book tries to do is look at what people have been doing in Asia, in Latin America, in Africa in terms of achieving gender equality and women's empowerment and the linkages between that and ag and food security. But also there are approaches that can actually work for people working in agriculture. Because one of the biggest things we always have around gender and women's empowerment in the agriculture sector is even the capacity for people to address those issues that I was talking about. How do we address social norms when you are working in an agriculture and food security project? And what this book has done is it has collected some of the empirical evidence that we have around this.

And we were very enthusiastic that we would get the book to you in hard copy. Unfortunately, the Canadian customs were not as enthusiastic as we were, so it didn't come. But it is available for download and reading as the lead editor of this book, what I really wanted to do was inspire people that are working in this sector, that we can do this – we can support women farmers, and we can do it in a sustainable way that gets us to better food and nutrition outcomes.

So enjoy reading it, get inspired, and let's go out there and change the situation of women in the sector. Thank you.

Sibanda Thank you very much, Jemimah.

Charron ...the book is available for download for free from IDRC's website.

Sibanda So the book is available online, and if we're being climate-smart, it's a good thing that we didn't get the hard copies. Go online and download the book. Let me end by quoting our laureates. Jan Low says, *Passion combined with purpose can never be swayed within the passion that you have for what you do.* Dr. Mude says, *Much has been given. Much will be required in return.* And I'd like to end by quoting one of my mentors' sayings. Catherine Bertini says, *You are the invisible women. Go ye and multiply your good fruits.*

Join me, ladies and gentleman, in congratulating this excellent panel. Thank you.

## **Ambassador Quinn**

Wow, that was terrific. So, Lindiwe, we started talking about Dr. Borlaug; and if he were here, I think he would say a couple of things to you about how to promote women, more education and better nutrition, and he'd say – Build roads. Because everywhere you build a hard-top road, girls stay in school longer, nutrition gets better, child mortality goes down. The second is – Just imagine if there was a World Food Prize Youth Institute in every African country, because our Youth Institute, yeah, attracts ... 70% of the participants are young women, and they are inspired. And imagine then all of them coming together in Des Moines or in Africa or both, and this is the way to attract young women. When Ruth and I were in Uganda two years ago and we saw some of these young students debating, and, wow, the girls from the high school debaters, they were so tough and aggressive. And they were talking about genetic modification and biotechnology – remember, Ruth? So thank you again, and thank you so much, Your Excellency, for your participation in words.