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# INFRASTRUCTURE'S ROLE IN AGRICULTURAL DEVELOPMENT AND POVERTY ALLEVIATION

**October 15, 2008 - 1:45 - 2:15 p.m.**
***Speaker:* Graham Stegmann**

**Sir Gordon Conway**
Chief Scientific Advisor, UK DFID

Graham Stegmann is an old colleague of mine. He currently serves in the office of President Donald Kaberuka of the African Development Bank. He has worked extensively in London and overseas for the British Government. And I knew him when I first joined DFID. He was principal finance officer at DFID, managing what is really a very large project these days. It's up to – DFID is now spending something to the order of $12 to $14 billion a year. He was then Africa director, responsible for our African programs for a couple of years, for four years, actually.

And then I think one of the most significant things he did was to provide a great deal of the input to the Commission for Africa, which as you all remember was launched at the G8 Summit in 2005 and got the sign-up from most of the donors. And the donors have more or less continued to agree to what they signed up for, which is always a great achievement.

And he's going to be talking tonight – no, it's not tonight, it's this afternoon; it's because the lights are off – he's going to be talking this afternoon about infrastructure. You'll recall that I argued that in Ghana one of the main reasons for success was infrastructure.

Graham, please come to the podium.

## INFRASTRUCTURE IN AGRICULTURAL DEVELOPMENT AND POVERTY ALLEVIATION

**Graham Stegmann**
Special Advisor to the President, African Development Bank

Well, thank you very much, Gordon. I'm not sure I can really follow that. Infrastructure is perhaps a rather drier subject. But what I want to do is to really just look at it as a potentially neglected area in this agenda, and also at the same to time to try to put it in its broader global context.

But first let me preface it by thanking you very much for inviting the African Development Bank to be here and to express on behalf of Dr. Kaberuka his apologies that he had to pull out at the last minute.

Now, unfortunately, Gordon and I did not have time to coordinate before coming in, but I think much of what I heard from Gordon you'll find that we broadly agree with, with one or two possible exceptions, starting with the Italians.

But let me then run quickly through some of the areas. Now, I'll go quickly through here so that we can have some comments and questions at the end.

I put up some of the basic facts about agriculture in Africa, which I'm sure are known to all of you. Africa is a rural continent; agriculture is extremely important. The majority of Africans rely on agriculture as a source of income, as a source of employment as farmers or indirectly as consumers.

Now, food prices have risen and risen very sharply, coinciding for Africa with a rise in oil prices. This is having a major impact, and I will come back to some of the action that is being taken by the international community, and indeed in Africa, to try and address this.

But I think for the Africans the food-price rise has presented also an opportunity. Food prices are going to be higher than they were a couple of years ago and, in our view, will remain high.

Now, 80 percent of African farmers are smallholders. So I think it's to that group that we really need to look for progress. The risk of the combined food and fuel crisis – and I'll come to the financial crisis at the end – is that it sets back Africa. The majority of Africa has had a decade of progress, not widely known, but it has been progressing. And the combination of crises – Gordon's cottage loaf – has the potential to set back that progress.

Now, agriculture has not been performing well in Africa. We at the Bank are not entirely sure why, so we, together with IFAD, are doing an evaluation, which we want to guide our future work. But it has had an impact on the investment in Africa in agriculture. As I put there, aid to agriculture declined from about 20 percent of total aid in 1980 down to 5 percent a year or so ago.

And the reasons weren't too hard to find – agricultural success stories were hard to come by; prices were falling; interest on the donor side in the international community shifted to the social sectors. Frankly, only IFAD and the ADB stayed engaged. Even the UK, for which I used to work, as Gordon said, largely moved out of agriculture in those years.

And for African ministers this also posed a problem. With very scarce resources, many countries in Africa, the smaller countries, still have economies of $2 or 3 billion a year. They face resource scarcity. For finance ministers, this poses a real problem. And when agriculture wasn't performing, they moved out of agriculture. And naturally, most politicians will respond to the loudest demands from their electors, and they happened to be in the urban areas.

So we have to reverse this trend. And I think for us we recognize that the global demand for food is going to rise by three to five percent a year. Productivity is well below that, productivity gain, at one or two percent. But the returns to new investment are high. Increasing farm income helps at the household level, at the community level, at the country level. It allows for investment into more productive and diversified farming, stimulates off-farming economic activity, and creates both direct and indirect pathways out of poverty for African farmers.

But I think a key point is that we haven't given sufficient attention in the past to agriculture being essentially a private-sector activity. And that makes a change to the way countries deal with it, the international community deals with it, and indeed the private sector engages.

Now, there's far more knowledge in this room than I have on agriculture. But the accepted wisdom, at least within our bank, is that the Green Revolution in Asia is not going to be immediately replicable in Africa. Therefore, we're going to have to push hard, particularly on the small scale, small-scale agriculture and small farmers.

There seems to be a growing consensus internationally that we know what needs to be done. And certainly within Africa I think there's a strong feeling that Africa itself, Africa's farmers, know what they want to do. And there is a program, and I think a colleague from NEPAD is certainly on the speakers list. Africa has its own priorities, has its own policies and programs set out in the Comprehensive African Agricultural Development Program. So there's a strong feeling that Africa knows where it wants to go, what it wants to do, and would like to move faster down that path.

Now, the topic that we were asked to talk about was infrastructure, because as I say, both agriculture is being neglected and then, frankly, infrastructure has been neglected. And why is it fundamental? Again this will be very familiar to all of you.

Smallholder capacity is limited not so much in Africa by farm size but by lack of physical assets, irrigation, transport, and other infrastructure. Without it, most farmers will not be able to enter a modern procurement system. Without being able to do that, without being able to enter into longer-term contracts, progress is going to be very slow.

The perishability of most agricultural products requires careful handling – transport, storage facilities, the ability to deliver quickly to consumers while maintaining quality and reducing losses. So these long supply chains that we have in Africa – poor access to roads, poor access to electricity – this inadequate infrastructure, inadequate services, severely limits the capacity for growth and growth quickly in African agriculture.

Now, let me put up some of the headline gaps in infrastructure in Africa. You'll see them on the screen, and I won't run through them all. But just let me put it in perspective.

Africa has one-seventh, one-seventh, of the world's population, but it generates only 4 percent of the world's electricity. Half of that electricity is generated in South Africa and consumed in South Africa. Now, any of you who are interested in football, soccer, will know that South Africa has the World Cup. There are serious concerns in South Africa that that level of electricity generation is not going to be adequate. Or to put it another way – the total generation within sub-Saharan Africa is equal to that in Spain.

The number of people without access to clean water has actually grown over the last few years. And as Gordon has pointed out, African soil has been degrading. Sixteen percent of soils are classified as having low nutrient reserves. Farmer productivity is 36 percent lower than Asia, 92 percent lower than developed countries.

Now, I don't want to turn this into a commercial for the Bank, but we have set up a new Africa fertilizer financing mechanism, which we hope will address some of the issues around fertilizer, providing access to technical advice, trying to stimulate markets and producers.

So we have a huge rural-infrastructure gap, much higher costs of transport, and very high costs of maintaining that infrastructure. As you'll know, the further you are from market, the higher – I'm sorry, the less of the potential productivity is realized, at least in the African context. Now, clearly some of this depends on the nature of the cropping and the elasticity of demand, but that is broadly true. And the returns to basic, boring infrastructure are really very considerable.

And with this increase in infrastructure would come gains not only economic but social. The access to clean water, as I say, has declined. But the access also to health facilities, to basic education, is dire in many parts of Africa. Far too many women die in childbirth, from simple complications which could have been treated had the woman been able to get to a basic health facility. Every day some 2,000 children in Africa die of a diarrheal disease, most of that easily preventable.

So the gains are great, but so are the resource requirements. And I've put at the bottom some indicative figures. $20 billion is what we estimated at the time of the Commission for Africa Report three or four years ago; $40 billion is a figure which will come out of a World Bank study this year. But it's not only the new investments which are going to be costly. Simple operation and maintenance, which has suffered badly, is reckoned to require the same level of resources.

Now, there are some countries in Africa, a few middle-income countries – and when I talk about Africa, we're talking about the totality of Africa, from north to south – some of the northern African countries, some of the middle-income countries, some of the oil producers may have the ability to increase their own investments to the level required. But for many of the low-income countries, this is simply impossible. For those countries now mired in conflict or coming out of conflict, frankly, it's simply going to be impossible.

So although I've been focusing on infrastructure as a neglected area, I think it is very important that we see infrastructure and the desired response to the agricultural crisis in the broader context, and it has to be dealt with as an integrated whole. Now, I'm not going to run through all of the issues which are put on this particular slide. Some of them are self-explanatory as to some of the policy issues which need to be addressed. But let me just draw attention to one or two of those.

First is to gender – again, neglected in many development programs, neglected, sadly, in some government programs. Many of the farmers, many of the heads of household are women. They have particular needs; they need to be addressed.

There are regional barriers. With small countries – 53, 54 small countries in Africa, by and large – many of the infrastructure demands (not only for transport infrastructure but to manage water resources, rivers, lakes, forests) require cross-border solutions. And in many cases we don't have good enough instruments to actually deal with those. We need to make progress in the Doha round to reduce the barriers to trade.

Now, let me move on, as Gordon did, to climate change. Climate change is real. It's impacting already in Africa. Arguably, Africa feels… well, not, "Arguably, Africa feels" – Africa does feel that it has made the least contribution to climate change, probably in the order of four percent. Yet, it is the continent which is now being most heavily affected.

And these costs are real. Increased rainfall variability made water management, sustainable water management, a pressing problem. We need to improve the resilience of farming systems to climate change. We need to improve the resilience of infrastructure to changes in climate. Africa has a very, very low level of irrigation – that needs to be stepped up massively. So Africa faces a prospect of much higher volatility in production, diminishing yields, and the reduction in the land suitable for cultivation.

Africa's farmers have very limited capacity to respond. Unlike farmers in the U.S., in Europe, there are virtually no safety nets. There's very little insurance. Risk mitigation is a serious problem. So the introduction of improved seeds, new fertilizer is great. You have to be able to access it; you have to be able to finance it. And for many African farmers, that's simply out of the question.

Let me draw attention to one other thing here, and that's the lakes and forests. Africa's contribution to global warming has largely been through changes in land use. We need to preserve Africa's lakes and forests, but there's an interesting question of how best to do so.

You have in many of those areas communities who depend on the forests; for instance, charcoal gatherers. They make their money by cutting and burning. If you want to preserve the forest, how do you deal with those communities? How do you ensure that there's a revenue stream that gets down to the individual, household, and community level? I think that's a major problem that the international community has yet to focus on.

And just give you one example of the impact, now, of climate change. Kenya suffered droughts and floods, as Gordon said; same area getting both droughts one year, floods the next. Over the four years from 1997 to 2001, Kenya suffered a loss of about $4.8 billion to damaged infrastructure and lost agricultural production. That is equivalent to a loss of some 22 percent of Kenya's GDP. So the costs are huge and need to be addressed.

I have just come from Washington, where one of the things the heads of the MDBs, the multilateral government banks, did was to lunch climate-investment funds. Now, these have significant headline numbers, but of that, the vast majority, over three-quarters, is going into looking at clean technology, technological solutions. What is much less resource at the moment is adaptation. And that is where there are crying, urgent needs within Africa at this stage.

Now, let me end where Gordon ended too, and that's on international architecture. If we are to address these multifaceted problems, we need to not only work better, we need to work smarter, and we need to work together. There's an enormous amount of fragmentation in the donor community. Gordon's circle of wagons that he showed in his last slide, I think, understates the problem.

Let me give you one small statistic. Vietnam has been doing well; it's attracted a lot of donor support. A lot of donor support means a lot of donors all wanting to do what they think they can do best and they may be the best ways of doing things – which meant Vietnam, with limited capacity in its own government, hosted 600 donor missions in just one year. That's simply not sustainable. And that's the case, very much, in Africa.

And an issue – and let me draw to an end – which I think is worth more attention is this question Gordon raised of a new partnership. I have to confess to being one of the more skeptical people with regards to this initiative, mainly because it has not yet been fully explained what it will do, which cannot be done now and cannot be done by increased resources.

And let me go back to a point I made earlier, that for many in Africa there are plans, there are priorities, there are programs. What they would like to see is more harmonized, complementary approaches where each of the organizations does what it does best and works jointly with others. And the "jointly" means not just the official donors, the bilateral donors, the multilaterals, the UN, but the big players: AGRA, Gates. These are really significant players, and we need to come together. But I think there's a question of how best to come together.

Now, we in our own bank have had a look at what we think we can do best. We had a high-level panel which produced a report earlier this year, and I'm very pleased to learn that one of the co-chairs of that, President Chissano, is going to join the board here. That panel concluded that we need to focus on infrastructure, on governance, on a few areas where we do well; and we're going to move out of other areas. But that puts a premium on doing it jointly with others.

So I think let me just finish by saying we need to give more priority to agriculture. Within that, we need to give more priority to infrastructure. But we must set this in the broader, local, regional, and the international context, and deal collectively with these issues. We feel that we need to do it a lot better, but we need to do it now.

So thank you. Let me end there, and perhaps Gordon will throw it open to questions.

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## Question and Answer Session

**Gordon Conway**

Thank you, Graham. We've got five minutes now in which I'd like to invite questions to Graham or even to myself. If you want to speak, the microphone is here in the middle of the hall, and you need to go up to the microphone and sort of say who you are and ask a brief question and will likely get a brief answer.

**Q** Ed Runge at Texas A&M. I didn't hear either one of you talk about the need to educate people through grade school and high school and things like this, as part of this development progress. How do you see education fitting in?

**Stegmann** Let me just say I didn't cover it because I wanted to focus on one particular element. I think clearly education is fundamental. And Gordon perhaps can say something more on the content and quality of that education. But just going back to the Africa context, we're still at a stage where we're looking at access to primary education, particularly for girls; access to secondary education for both girls and boys; and then very limited higher levels of education, limited research and scientific capabilities on which to draw. So I think for me these are part of the complementarity issues, which we need to come together and address. But we need to come together behind, frankly, what are the regional and national priorities – and those have been broadly set by countries themselves. We need to work within those.

**Conway** We've done well at increasing primary education, but a great deal of the emphasis must now be on agricultural colleges and universities. At Rockefeller we had a major program with other foundations working, for example, with Makerere University. And Makerere, having gone through terrible years under very bad government, has now really blossomed and is on its way back to being what it used to be – the best university in Africa – with tremendous agricultural research going on there. And I think there needs to be a much greater emphasis on that. And I think it'll come out, I hope, in the next session we're going to have. Is there another question here?

**Q** Pat Binns, with Washington State University; a question for Mr. Stegmann. You mentioned that the African Development Bank has new fertilizer financing facility. And I'd like to know, does it have the flexibility to provide investment funds to smaller-scale-distributed, organic-fertilizer production facilities that might be owned and operated by farmers and village self-help groups?

**Stegmann** I think, very shortly, the answer is yes, but the mechanism is a new one. It's being established. It's designed precisely to try and build capacity in the private sector to get fertilizer down to lower levels. Now, I'm certainly very happy to send you – I'm not the expert in it; I suspect there are people from AGRA here who may know rather more about it than I do – but we can send you some of those details. What I think it is looking for is to look at pilots, new ideas, new initiatives which will actually achieve what we want, particularly for the smallholder.

**Conway** One more question.

**Q** Roberto Rodrigues from Brazil. Graham, your last sentence was we have the tools, we just need the will. How to get the will?

**Stegmann** That's a good question. I try to keep this at a more technocratic level. Having come back from meetings in Washington over the weekend, one of the points which my boss – I'm special advisor to the Kaberuka – which Kaberuka made in the meetings, and others made, is when we look at the financial crisis, which I didn't really touch on, the first-round effects are minimal, so far, in Africa. But the long-term effects on the real economy in the world – global slowdown in India, China, that may follow – is going to have an impact directly on Africa.

Now, what we've seen over the past week is commendable and perfectly proper attention being given to dealing now with the financial crisis. It's difficult to avoid the conclusion that where there's a political will to address it, it can be done. Now Gordon kindly referred to Gleneagles, the commitments made there, commitments by the G8. If I was cynical, I could say that I could read G8 commitments going back 10 or 12 years, a degree of similarity in some of them. I suspect that not all those promises have been met. And the sums involved are really quite small. I know in many countries, people seem to feel that aid budgets are huge. For most governments, they're less than one percent of their government budget.

So the capacity is there. I think the broad areas of what needs to be done are there. It's up to organizations, communities, gatherings like this, to help generate in their political leaders a view which will be sustained from one change of government to another. But this is something that needs to be addressed and can be. Results can be achieved.

**Gordon** I think the biggest challenge we face this week is, how can we exploit the food-price crisis? I mean, the danger, of course, is that people will say, "Oh, the food prices are going down now, we don't have to worry anymore." So how this sudden enthusiasm for feeding the world, which happened in the last few months, how can we take that and turn it into really sustainable programs? And maybe that could be a major subject for this week.

I want to thank Graham very much, and I'm going to now move on to the next session.