



Regional Workshop Summary

**How can Governments Better Cope with Climate Risk
in Agriculture?**

**Querétaro, Mexico
9 October, 2008**

***Antonio Pineda
LCSAR, World Bank Consultant
November, 2008***

TABLE OF CONTENTS

1. INTRODUCTION.....3

2. AGENDA.....4

3. LIST OF PARTICIPANTS.....5

4. WORKSHOP INAUGURATION AND PRESENTATIONS.....7

4.1 Inauguration.....7

4.2 Conceptual Framework for a Comprehensive Management of Agriculture Climate Risk, Rodney Lester, World Bank.....7

4.3 The World Bank and the New Financial Instruments, Dolores López-Larroy, World Bank.....8

4.4 Innovative Financial Instruments and Mechanisms for Transferring Climate Risks, Carlos Arce, World Bank.....13

4.5 Preconditions for Accessing the Reinsurance Markets, Ramiro Iturrioz, World Bank.....15

4.6 CCRIF, What is it and how and why it works?, Matthew Pragnell CEO, CGM Gallagher Group, Director Caribbean Risk Managers Ltd....16

COUNTRY EXPERIENCES

4.7 Mexico: “Index Based Rainfall and Livestock Insurance for State Governments”, Jesús Escamilla, Agroasemex.....17

4.8 Malawi: “Managing Agriculture Climate and Price Risks”, Joana Syroka, World Bank.....19

4.9 Mongolia: “Public-Private Livestock Insurance Program”, Mr. Odkhuu, IBLIP.....20

5. SUMMARY AND REPORT OF THE EVALUATIONS COLLECTED AFTER THE EVENT FROM PARTICIPANTS.....22

6. PROPOSALS ON FUTURE TRAINING EVENTS AND IMPROVEMENT ON SIMILAR WORKSHOPS TO BE HELD IN THE FUTURE.....29

7. CONCLUSIONS.....30

1. INTRODUCTION

The Bank organized a regional workshop on “How can Governments better cope with Climate Risk in the Agricultural Sector?”, held in the City of Querétaro, Mexico, on October 9th, 2008. The event’s objective was to foster south-south cooperation and increasing knowledge with the public sector of the new mechanisms and financial instruments available to governments to manage and transfer agriculture climate risk.

In light of the food crisis, the increasing trend in severity of natural hazard events, and the need for increasing investments in fostering the competitiveness of the agricultural sector, Governments of the Latin America and Caribbean Region have been seeking solutions for managing agriculture production risks and thus ensuring a stable income for farmers and increase financing in the sector. Within Latin America and the Caribbean as well as in other regions such as Africa and Asia, there have been innovative mechanisms and approaches by the public sector to manage and transfer such agriculture climate risk.

The Workshop intended:

- (i) provide an overview of the conceptual framework to dealing with agriculture climate risk from a public perspective;
- (ii) present real case experiences of countries currently adopting innovative mechanisms to financially manage climate risk in the agricultural sector; and
- (iii) exchange south-south experiences among participants.

2. AGENDA



Regional Workshop How can Governments Better Cope with Climate Risk in Agriculture

CIUDAD DE QUERETARO, MEXICO

October 9, 2008

Agenda

- 8:00 Participants sign-in
- 8:30 Inauguration of the Workshop. Welcoming words by:
Diego Arias, World Bank
- 9:00 Conceptual Framework for a Comprehensive Management of Agriculture
Climate Risk
Presenter: Rodney Lester, World Bank
- 10:00 Coffee
- 10:30 The World Bank and the new financial instruments
Presenter: Dolores Lopez-Larroy, World Bank
- 11:30 Innovative financial instruments and mechanisms for transferring climate
risks
Presenter: Carlos Arce, World Bank
- 12:30 Lunch
- 2:00 Preconditions for accessing the reinsurance markets
Presenter: Ramiro Iturrioz, World Bank
- 3:00 Country Experiences
Moderator: Diego Arias, World Bank
Mexico: "Index based rainfall and livestock insurance for State
Governments"
Presenter: Jesus Escamilla, Agroasemex
- 4:00 Coffee
- 4:30 Malawi: "Managing agriculture climate and price risks"
Presenter: Joana Syroka, World Bank
- 5:30 Mongolia: "Public-Private Livestock Insurance Program"
Presenter: Mr. Dalai, Director IBLIP
- 6:30 Conclusions
Presenter: Diego Arias, World Bank
- 7:00 End of the Day

For More Information please visit: www.worldbank.org/mexicoworkshop

3. LIST OF PARTICIPANTS

How can Governments Better Cope with Climate Risk in the Agricultural Sector Queretaro, Mexico - October 9, 2008

Participants

Name	Institution	Country
Daniel Fernando Miguez	SAGPyA - Ministerio de Economía y Producción	Argentina
Denia León	Secretaría de Agricultura	Honduras
Domingo Orozco	FIDES	Honduras
José Luis Moncada	FIDES	Honduras
Carl McDowell	CGM Gallagher Group	Jamaica
Carlton Wedderburn	Ministry of Agriculture Economic Planning Division	Jamaica
Matthew Pragnell	CGM Gallagher Group	Jamaica
Alicia Acosta Long	Unidad de Desarrollo Agrícola de la CEPAL-México.	México
Angelina Torres Bencomo	SAGARPA	México
Antonio Pineda	DIG - Dinámica en Interacción Global AP	México
Cesar Bustamante	IADB	México
Eduardo Ramírez González	SAGARPA	México
Jesús Escamilla	Agroasemex	México
José de Jesús Romo Santos	SAGARPA	México
Juan León	Universidad Autónoma Chapingo	México
Marcela Denisse Cruz Rubí	Agroasemex	México

Name	Institution	Country
Mario Cuesta	Agroasemex	México
Nadja Turbeck	Universidad Autónoma Chapingo	México
Naisheli Figueroa Ruiz	SAGARPA	México
Oscar Ramírez	LatinRisk SA de CV	México
Raúl Lase	LatinRisk SA de CV	México
Víctor Celaya del Toro	SAGARPA	México
Dalai Odkhoo	IBLIP	Mongolia
Claudio Taboada	LAFISE	Nicaragua
Gerardo Rivera	LAFISE	Nicaragua
Javier Montero	Ministerio de Agricultura	Perú
Julio Castillo	Ministerio de Agricultura	Nicaragua
Guy Faucheux Benoit	Ministry of Agriculture	Haití
Erick Valbrun	Ministry of Finance	Haití
Lourdes del Carpio Gómez de la Torre	La Positiva Seguros y Reaseguros	Perú
Carlos Arce	World Bank	
Dianelva Montas	World Bank	
Dolores López Larroy	World Bank	
Joana Syroka	World Bank	
Pablo Valdivia	World Bank	
Ramiro Iturrioz	World Bank	
Rodney Lester	World Bank	

4. WORKSHOP INAUGURATION AND PRESENTATIONS

4.1 Inauguration

Mr. Diego Arias, World Bank, gave the welcoming words to the participants of the workshop on “How Can Governments Better Cope with Climate Risk in the Agricultural Sector”. In his remarks, Mr. Arias underscored the importance of risk management among agricultural producers in the region, in light of the increasing uncertainty in their production, which has translated into increasing uncertainty in livelihoods. He set forth the grounds upon which the World Bank supports the development of agricultural insurance markets as many producers worldwide continue to lack formal risk management tools despite the recent developments of the agricultural insurance market.

Further, in closing, he also laid out the objectives of the workshop, which were: (i) provide an overview of the conceptual framework to dealing with agriculture climate risk from a public perspective; (ii) present real case experiences of countries currently adopting innovative mechanisms to financially manage climate risk in the agricultural sector; and (iii) exchange experiences among participants and establish south-south cooperation arrangements.

4.2 Conceptual Framework for a Comprehensive Management of Agriculture Climate Risk, Rodney Lester, World Bank

This presentation focused on giving a general world picture on how countries will be affected by climate change in the coming years, underlining the impact of global warming on world agricultural output by 2080. Although there are some estimates, projections and pricing are uncertain and models incomplete. Therefore, a comprehensive value chain approach is required, since it can reduce risk, as shown in the case studies herein presented. With the goal of raising farmers’ income, the Procurement Center Franchise Model is just one example.

On the one hand, savings and credit have a key a function in inter-temporal consumption, but not in relatively infrequent severe systemic events. On the other hand, non-traditional Insurance plays a significant role for production risk as seen by Kyoto, Rio and IPCC.

To this end, the two possible approaches that the World Bank currently supports are: Parametric (Based on objective weather or related metric) and Index-based (based on area yields or animal census data). Many donors are now engaged in these types of technical assistance for insurance.

For more information and to access the complete presentation please visit the following link:

During this session there were no questions raised.

<http://siteresources.worldbank.org/LACEXT/Resources/RodneyLesterOueretaroMexicoOct2008.ppt>

4.3 The World Bank and the New Financial Instruments, Dolores López-Larroy, World Bank

Natural catastrophes can have substantial fiscal and developmental implications for low and middle-income countries. In the aftermath of a catastrophic event, governments face shortage of funds as emergency funds are not always available to the affected countries immediately after the catastrophe. Insurance Markets provide catastrophe insurance coverage only to a limited number of governments, and natural disaster insurance premiums are high and volatile. As a result of market imperfections, governments of developing countries are often deprived of natural disaster insurance.

World Bank Group products can address the immediate liquidity needs of clients and can help manage and transfer catastrophe risk to financial markets. CAT DDOs and DPL DDOs are new World Bank instruments that are available to IBRD countries. These instruments are contingent credit lines that can be draw-down in case of a natural disaster or specific policy change. Another new financial instrument available is the intermediation arrangement the World Bank offers countries for weather and commodities derivatives.

Comments and Discussions:

Raúl Lases, Latin Risk, Mexico. During the discussions of this session, the importance of advising governments and the private sector on the instruments to face climate adverse situations was underlined by the Mexican firm Latin Risk, which added that, in the face of the current

world financial situation; these financial instruments are even of greater value.

The relevance of these instruments was confirmed as well as the important role that the public sector can play within CAT agricultural insurance. One of the main points discussed during this presentation was linking these instruments to, and determining the roles of insurance institutions and the public sector.

Latin Risk stated that, although nowadays there are many types of agricultural insurance available, most of them are confronted with a number of limitations and governments seem to support this status quo. We have to learn from traditional insurance, and despite the fact that traditional insurance is expected to continue to grow, the focus should be on index-based output insurance by area or component, so as to determine the levels of losses with the advantages of traditional services. While considering the cost price reduction, there are still high costs in agricultural insurance because of two elements: On the one hand, the catastrophic level of risks (floodings, icings, etc), and on the other hand, the lack of information, which simply does not exist and if the research is ultimately charged to the insured as a cost. These are the main reasons for the high premiums and therefore the lack of access for small producers.

As a result, a scheme with government participation that combines traditional with index-based instruments; and that only deals with CAT risk for small and medium size producers is desired. One way to solve this may be that the government act as quasi insurer, or as insurer of last resort, where damages can be absorbed, first by the insurance company, and then by the government for CAT losses. Unfortunately, there are a handful of governments that have this type of reinsurance scheme.

Instruments such as contingent credit lines can be used (with more effectiveness) in a type of reinsurance government schemes, ex-ante, to offer protection to insurance companies in a higher layer of CAT losses. This in return, could help to reduce the high cost for insurance and would also stimulate insurance and reinsurance companies, since this would set limits on possible losses, and governments could do this, even without the use of their annual budgetary resources, since this responsibility would be dealt with, in the case that it is activated, through contingent credit lines that the World Bank offers for this purpose in a very expedite fashion, and are of a long term nature. It is an insurance for insurance for small producers, and only under these

circumstances the government can participate. Another way to see it is as if there was a certain level of insurance that lay in hands of the government, and the government does not pass it to the market but differs it in time (30 years).

Diego Arias, World Bank. The World Bank and the Mongolian experience have a scheme like the one proposed, we will talk about it later in the afternoon session. What we, the World Bank, do first is to carry out the initial work as discussed during the presentations titled *Conceptual Framework for a Comprehensive Management of Agriculture Climate Risk*, by Rodney Lester and *The World Bank and the New Financial Instruments*, by Dolores López Larroy. Their presentations focused on how to analyze risk and up what level an insurance company can often participate, and where the role of the government starts and where it ends. Therefore, an instrument such as a contingent credit line (CAT DDO) could be used, but it has restrictions; it cannot be used for large CAT events. The strategy should be to reinsure the most CAT layers of the specific risk.

Rodney Lester, World Bank. South Korea has a scheme like this one for typhoons. In their Agriculture Insurance program in the year 1999 or 2000 they had a loss ratio of 500%, so the insurance cost increased. The Government decided to enter the market with a coverage, where the government did not finance everything. The private companies had to pay up to 180% in loss ratio, and then the government would participate, covering the reminder.

These are good questions. If you see the different projects; they need these sort of mechanisms to address hedging and liquidity issues. One has to get the insurance companies involved and then you can agree on such schemes.

Bernando Pineda, CEIBA Guatemala. How much do post-disasters loans represent to the World Bank, and how much of the amount is recovered?

Dolores López Larroy, World Bank. We do not have a division for post reconstruction, since most of the countries have World Bank loans for a specific type of investment or for budgetary support. There is no division that overlooks that, but I know where you are going. How

much money is recovered from that credit line? Well, the World Bank has not had many cases of this kind, but loans are normally repaid fully. Default is not common thing.

Denia León, Ministry of Agriculture, Honduras. Expressed her interest in many aspects, but wanted to underline the fact that insurance companies have to understand that in a globalized world everything is different, and they must not have any perverse incentives against the country's development.

On the one hand, three products caught her attention. The one oriented to DPL DDO and CAT DDO, which are very interesting products, she stated. One, contains the fiscal deficit triggered by CAT. This is the one where Costa Rica participates, but I understand that the country is the one who receives the coverage, not the agricultural workers. In Honduras, we have been advancing a new Bill on a regional agriculture policy for Central America and the Dominican Republic, and this is a very interesting product. I will take these excellent news to Honduras, to gather interest in this product, which goes hand in hand with the Food Policies that we currently have in place.

On the other hand, the CAT and Index-based insurance foresee the establishment of infrastructure and serious ex-ante analysis. Insuring regions is good; Mexico's experience is very useful and interesting. I bring with me the experience in the insurance schemes, not only for agriculture, but for social security. The point here is for the public sector to get insurance, and eventually, little by little support insurance companies.

I excuse myself if this does not go with the vision of some of you, but we need data infrastructure as a priority. In my country it is incredible because insurance companies use this lack of information to their advantage. We have to work with the Banking and Insurance Commission for a more transparent regulation according to current times that protect the insured. We are not the lenders of last resort, so we have to reduce our exposure by protecting ourselves. We need to arrive at an optimal use of public resources, because, independently from the World Bank guidance, this has to be managed with independence, transparency and efficiency.

Dolores López Larroy, World Bank. If the resources for hedging risks come out from the countries, in principle, we assist them to put together their general framework for risk analysis, and then each country looks at its own budgetary situation, policies, institutional framework and decides what to do, and if there is a financial gap, they can come to us and ask for a contingent credit line.

Erick Valbrun, Ministry of Finance, Haiti. Clarification, the product instruments relates to climate change for developing countries to face global warming? Is it possible for the private sector to access these products?

Dolores López Larroy, World Bank. The World Bank deals directly with countries and sub national entities, I should have made the clarification.

Jesús Escamilla, Agroasemex, Mexico. CAT/DDO proposes to use the credit line at once, very soon, regardless of having the level of losses defined, be it with reserves or funds, you will be limiting the risk transfer capacity through insurance or reinsurance.

This credit line, once we have plotted the curve of losses, could be used in the remaining 90-95 % distribution, only in the case of extreme losses. This goes against with what Diego Arias stated; return periods of 5 to 7 years. This could be retained by the government and by the market.

This line and type of risks are not very frequent, and therefore are difficult to be taken by the international market. Sometimes it's better to hire contingent credit lines with multilateral institutions such as the World Bank. Can the World Bank do this?

Dolores López Larroy, World Bank. We are not just talking about medium frequency risks. For other more frequent risks there are products in the international market to transfer them. We have seeing that reserves are difficult to put together. If a country needs a loan, a contingent credit line is valid. In principle it can be used them, but it is necessary that they enter in this sort of loans have their own reserves to cover frequent risks. The CAT limit for this is 25% GDP, therefore for some countries is more than this and it is not sufficient,

we have to reinforce that it is an instrument together with others that can help, but this will not resolve an extreme situation.

Rodney Lester, World Bank. There are two big projects in my department. One is on the role of government in this whole area, the paper has just been finished and should be in the way very soon. The second research project is exactly on climate change and insurance. How can insurance or reinsurance come up with a CAT premium rate, which incorporates climate change? Premiums could be high, because of the trend and reinsurance markets go up and down like a yoyo and stability is needed.

For more information and to access the complete presentation please visit the following link:

http://siteresources.worldbank.org/LACEXT/Resources/258553-1219355092131/Dolores_PPT.ppt

4.4 Innovative Financial Instruments and Mechanisms for Transferring Climate Risks, Carlos Arce, World Bank

During this presentation, the topic of innovative insurance coverage was discussed, where the question of whether the design and implementation of agriculture insurance schemes could be possible, with the following characteristics: cost effectiveness, easy to administer and operate, fast liquidity, coverage, financial sustainability and outreach to low-income producers.

The topics discussed during this presentation included: climate volatility management, how do deal with stratified risk, as well as the difference between Traditional versus Index-based insurance in agriculture.

Moreover, the crucial role of the public sector in this new focus was underlined, so as to being able to transfer risks to the international market. The question of how governments can work with insurance companies to support low-income communities so as to coordinate financial and developmental efforts was also explained in detail.

Comments and Discussions:

Eduardo Ramirez, SAGARPA, Mexico. The Ministry of Agriculture has a program, via direct supports, for climate contingencies. Catastrophic insurance is to State Governments and serves as a protective scheme for public finances. Is there a scheme that can protect/cover everything that was presented, which could work in climate contingencies? If so, it would have to be a combination of parametric and traditional insurance. Parametric is more efficient and opportune, because through a trigger, payments are made to those affected. The most important thing is the lack of historical information and coverage of the schemes so to define the indexes. In Mexico, we cover sorghum, barley, corn and beans. What else is out there, like satellite images or other kind of tools?

Carlos Arce, World Bank. One of the main issues has been the access to a trusty net of meteorological stations, where a better measurement could be made. In Central America, they do it through meteorological stations, but they are not necessarily located where the farmers are. Stations are located in airports and dams, and what we have seeing as solutions to this, is that this is possible in certain areas since there have been many advances in creating data for zones where data was not available. Data can be obtained through mathematic calculus and satellite images to create historic data, and hitherto build a meteorological station for accurate measuring for the future. But this instrument still has limitations and we can see them now. When we were with Agroasemex, they have advanced in creating a data grid with satellite information from NOAA; and therefore, historic data can be estimated in areas where no data has ever been collected.

There is a pilot program in Panama, with CATALAC, where a type of data using satellite imagines is generated. We are looking forward to implementing it in Guatemala with CEIBA, we are almost there, calibrating this measurement mechanism, so to start with the pilot program. Meteorological stations have to increase in numbers so as to advance with the generation of estimates and registries, through satellites images. There is a future here.

Raúl Lases, Latin Risk, Mexico. Mr. Lases broaden on how SAGARPA deals with contingencies, administrates risks in agriculture and catastrophic insurance, but not based in parameters of the meteorological stations or field studies. The difference is that in

Mexico it is done through agrarian nucleuses, producing zones and average output per area of that nucleus which is the trigger per se and is not determined by adding together the crops harvested in those zones, since occasionally months go by without the authorities doing these measurements. The reason why direct field studies are carried out is to get faster results, reduce the asymmetry, since the field component allows the farmer to know what job is done, and then, the farmer has to sign an official document, together with the inspector, so as to determine whether an indemnification takes place. This is a catastrophic insurance where State governments are financed to transfer resources to support producers directly. Currently, there are more than one million hectares with the direct participation of insurance companies, hired by the State governments with SAGARPA's support. This is an ex-post support, a traditional catastrophic Insurance combined with field studies and performance indexes.

Diego Arias, World Bank. Thanked the participants and summarized that the idea is to disseminate what the World Bank has been doing in this regard, which by no means is the panacea. Insurance has a lot of potential to cover CAT risks, farmers, but the key is how to deliver them.

For more information and to access the complete presentation please visit the following link:

http://siteresources.worldbank.org/LACEXT/Resources/258553-1219355092131/Carlos_Arce.ppt

4.5 Preconditions for Accessing the Reinsurance Markets, Ramiro Iturrioz, World Bank

This presentation expanded on the existing market and opportunities for insurance and reinsurance in the agricultural sector and its products.

As there are a number of different types of agriculture insurance available in LAC, such as those for Crops, Greenhouses, Forest Crops, Livestock, Bloodstock and Aquaculture, it is sometimes difficult for the insurer to choose the best protection scheme. To this end, the presentation underlined the main points and processes that the insurer has to consider while selecting a specific type of insurance and coverage.

Insurers have to pay attention at selecting the risks (hail, droughts, fires, icings, floodings, etc.), the types of risks (independent, medium-independent and systemic), and how to pick the best insurance contract. Furthermore, the presentation focused on the information needed from the reinsurer (production, insurance, reinsurance, regulatory framework, incentives and rural credit, and profile of the insurance company), and insurance ratings (volatility, deductions, loss cost, taxes, fees, etc.)

There were no questions raised during this presentation.

For more information and to access the complete presentation please visit the following link:

http://siteresources.worldbank.org/LACEXT/Resources/258553-1219355092131/Ramiro_IturriozPPT.ppt

4.6 CCRIF, What is it and how and why it works?, Matthew Pragnell CEO, CGM Gallagher Group, Director Caribbean Risk Managers Ltd.

When Hurricane Ivan hit Grenada and the Cayman Islands in 2004, CARICOM Heads of Government asked the World Bank to design and implement a cost-effective risk transfer program, since were prompted by the almost 200% GDP damage inflicted. During the discussions and negotiations for a viable framework, all parties identified the high exposure to natural hazards that existed across the region in the small island economies, and the consequential risk to sustainable development. To this end the Caribbean Catastrophe Risk Insurance Facility was created, whose aims are:

- To cover the post-disaster liquidity gap faced by governments between immediate emergency aid and long-term redevelopment assistance.
- To enable governments to receive money quickly, with the amount calculated completely in objectively manner.
- To minimize the burden on governments to provide exposure information prior to coverage being initiated and loss information after the disaster.

Although CCRIF does not cover agriculture risks or asset exposure in the agriculture sector, it was clarified that the motivation of presenting the CCRIF mechanisms in the workshop was to show concrete working examples of macro-level insurance coverage based on index triggers.

There were no questions raised during this presentation.

For more information and to access the complete presentation please visit the following link:

<http://siteresources.worldbank.org/LACEXT/Resources/258553-1219355092131/CCRIFpresMattPragMexicoOct08.ppt>

COUNTRY EXPERIENCES

4.7 Mexico: “Index Based Rainfall and Livestock Insurance for State Governments”, Jesús Escamilla, Agroasemex

Due to its geographic location, Mexico is a country highly exposed to natural catastrophic shocks, and in the last years we have seen an increase in number of these events. Agriculture activity is highly sensible to systemic hydrometeorology events and therefore, requires risk pooling and transfer.

This presentation gave a broad picture of agriculture catastrophic risks worldwide, followed by a presentation on Mexico’s particular experience underlining the following two instruments:

- Catastrophic climate insurance against drought: This type of insurance offer protection against climate catastrophes related to the lack of rain; and
- Insurance for grasslands based on remote sensors: This type of insurance offers protection against the damages associated with lesser grassland availability (NDVI) for small cattle producers.

Comments and Discussions:

Rodney Lester, World Bank. Asked why Mexico is the most advanced country in these sorts of products?

Jésus Escamilla, Agroasemex, Mexico Responded that it has to do with the willingness and involvement of the authorities in this scheme. In part, this was created with the unconditional support of the government of Guanajuato, then SAGARPA was invited, and they were convinced of the benefits of the project and decided to play an important role in transferring CAT risks not only with fiscal resources but to the market. We are now doing it with the National Fund for Disasters (FONDEN); we are going to include here agriculture and hydraulic infrastructure. We proved the private sector that this is a profitable market, so private insurers entered in 2004 and 2005 offering CAT coverage to State Governments, and we are opening ourselves more.

We consider that the government realizes that the cost is less, and it is better to budget costs ex-ante than live with uncertainty. Moreover, inter-institutional cooperation, among ministries, metrological stations, etc, is a key factor. The authorities assumed the commitment that this is an efficient mechanism to manage risks.

Erick Valbrun, Ministry of Finance, Haiti. It was mentioned that this program is intended to help farmers, but then it was said that during the years 1994-2000, US\$64 million were paid out. How does this differ from a subsidy program of the government?

Jesus Escamilla, Agroasemex, Mexico Mr. Escamilla explained that 900 million pesos were via direct aid without insurance and these primes represented half of the amount that was normally paid. The point is not to spend less, but to spend better and make the most out of it. The scheme remains the same, but the difference comes from the financing source, it is not the government or the country, but the international market through insurance.

Mathew Pragnell, CGM Gallagher Group, Jamaica. On the Model of Rainfall, the problem is that the measurements are done remotely. For earthquakes we use the national center, but we have to measure physical Rainfall, tamperproof. There is a lack of maintenance or tampering and we have lost data in the last few years. This is a radical departure, but there is a lot of work to be done.

For more information and to access the complete presentation please visit the following link:

<http://siteresources.worldbank.org/LACEXT/Resources/258553-1219355092131/agroasemesx.ppt>

4.8 Malawi: “Managing Agriculture Climate and Price Risks”, Joana Syroka, World Bank

Malawi is a country with low economic growth, significant volatility and the economy is highly vulnerable to adverse weather shocks. In Malawi, agricultural activity accounts for approximately 40% of GDP and the long-term impact of the volatility is substantial as economic uncertainty hampers investments and economic growth. For this reason, Malawi saw the need to implement an *ex ante* plan for contingencies. To this end, the Malawian government created an Agricultural Development Program (ADP), focusing on strengthening maize markets so as to respond to production shocks.

This presentation concentrated in explaining the weather risk management strategy, limitations of the approach, as well as the role of the World Bank as a value-added intermediary.

Comments and Discussions:

Diego Arias, World Bank. Why is it a derivative and not an insurance coverage?

Joanna Syroka World Bank. The World Bank could not be the intermediary to attract insurance market participants, so the World Bank Treasury had to do it in a derivative form, a very familiar language to the World Bank. However, there's not a practical difference between insurance and derivatives in this case.

Jamaica Carl McDowell, CGM Gallagher Group, Jamaica. Asked if there is a water deficit in Malawi, and if irrigation systems would alleviate this problem?

Joanna Syroka World Bank. Mrs. Syroka responded that there are no irrigation systems in Malawi. There is a fresh water lake, and in theory

it could provide water for irrigation, but it needs investment. The World Bank and the Government agreed to invest in irrigation. Insurance is a tool that must be in conjunction with broader economic policies and adaptation policies, for a good transition.

For more information and to access the complete presentation please visit the following link:

http://siteresources.worldbank.org/LACEXT/Resources/258553-1219355092131/Malawi_PPT.ppt

4.9 Mongolia: “Public-Private Livestock Insurance Program”, Mr. Erdenedalai Odkhuu, IBLIP

This presentation explains index-based livestock insurance project financed by the World Bank, put in place by Mongolia. The importance of this project is based on the fact that livestock represent 87% of Mongolia’s agricultural GDP, and due to the extreme climatic shocks, there are high rates of livestock mortality.

Mongolia is a country with frequent droughts and severe weather shocks known as *dzuds*, which in the past have caused the loss of one third of Mongolia’s livestock. Since 1995, the Mongolian government has attempted to create and implement mandatory livestock insurance with no success due to the lack of enforceability and the high administrative costs. The Index-based Livestock Insurance (IBLI) was then implemented as a response to the large *dzuds* that hit the country during the 90s. IBLI’s motivation was to provide incentives for herders to hedge their exposure of raising herds, access credit, and to give a swift catastrophe indemnity payment response. Current progress, updates, outreach and challenges of this pilot program were discussed in detail.

Comments and Discussions:

Erick Valbrun, Ministry of Finance, Haiti. Mr Valbrun inquired about why this program is not extended to the rest of Mongolia.

Mr. Odkhuu, Director IBLIP, Mongolia. Responded that US\$5 million of the budget for this program came from the World Bank, and that it is a pilot in its first phase. The government wants to extend the number of pilots, but more money and resources are needed.

Rodney Lester, World Bank. Mr. Lester commented that satellite images are very weak in this case. We assumed we were going to look at a weather product, but we discovered that there are complex patterns for mortality since there are 25 to 36 million animals in Mongolia.

Mr. Odkhuu, Director IBLIP, Mongolia. During the year 2000 or 2001 there were terrible *dzudes*, droughts and cold weather fronts, but the real killer is a combination of a bad drought follow by cold weather fronts, therefore the government was interested in this scheme. When we looked at these patterns we saw that there was not convenient way of measuring 4 types of different climate events, so we went back to using the mortality index.

Conclusions

Presenter: Diego Arias, World Bank

The four case studies that we saw show that problems are different, instruments implemented are different, risks are different, but the concept is the same. How to manage risks ex-ante, and transfer them out of the country to international markets? This needs to be complemented by physical investment, but the idea is that the public sector can think about moving to these programs to cover the most vulnerable farmers.

The World Bank provides this financial support and technical assistance. Financing of these new financial tools was just approved. The idea is to support efforts in moving to ex-ante type of mechanisms, but doing it in a holistic way, not only with financial instruments.

Thank you.

For more information and to access the complete presentation please visit the following link:

<http://siteresources.worldbank.org/LACEXT/Resources/258553-1219355092131/IBLIPEnglishOct092008.ppt>

5. SUMMARY AND REPORT OF THE EVALUATIONS COLLECTED AFTER THE EVENT FROM PARTICIPANTS

SUMMARY AND REPORT OF THE EVALUATIONS COLLECTED AFTER THE EVENT FROM PARTICIPANTS

Prepared by Antonio Pineda, Consultant LCSAR

Regional Workshop How Can Governments Better Cope with Climate Risk in Agriculture?

9 October, 2008, Querétaro, Mexico

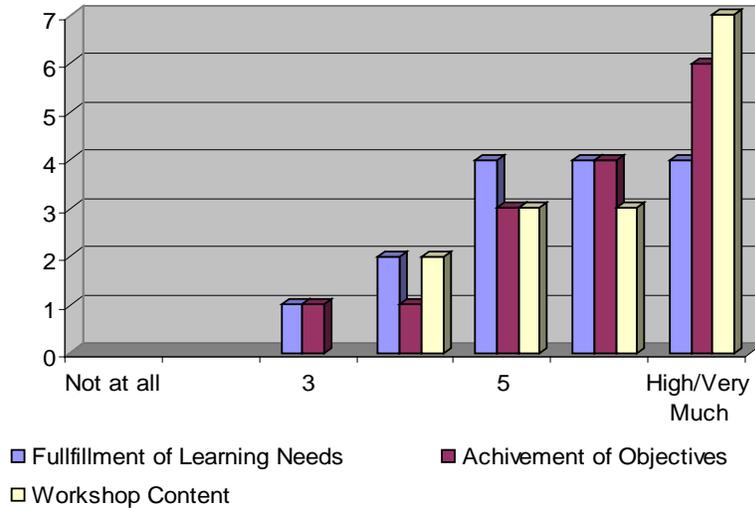
Upon registration, an Evaluation Questionnaire for Staff Learning was given to all participants together with their materials. A total of 39 people participated in the Workshop. At the end of the meeting 50% of the evaluations were filled out and submitted. The Evaluation Questionnaire consisted of a total 25 questions. 20 multiple questions (17 scale grading and 3 with options to choose from) and 4 open questions.

Overall, according to the responses submitted, the Workshop on *How Can Governments Better Cope with Climate Risk in Agriculture* did achieve its objectives of:

- (i) providing an overview of the conceptual framework to dealing with agriculture climate risk from a public perspective;
- (ii) presenting real case experiences of countries currently adopting innovative mechanisms to financially manage climate risk in the agricultural sector; and
- (iii) exchanging south-south experiences among participants.

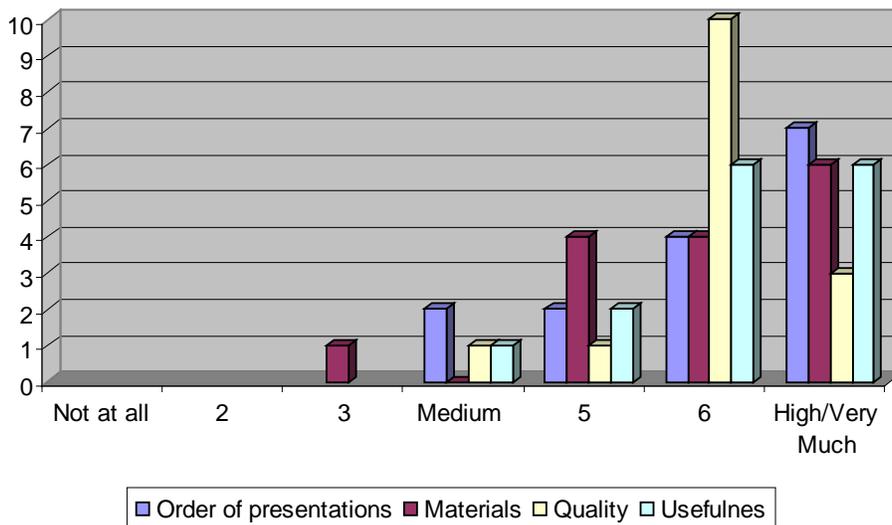
When participants were asked whether the objectives were achieved, 87% responded that that they had from a medium to a very high degree. At the same time, an equal percentage, 87%, agreed or strongly agreed with the Structure and Content of the Workshop, and 80% responded that the Workshop had fulfilled or highly fulfilled their needs. (See Chart 1)

Chart 1
Evaluation Responses According to: Fulfillment of Learning Needs, Achievement of Objectives, and Workshop Content.



The chart below showcases that 94% of participants agreed that the quality was high or very high; 94% of them thought that the workshop was useful or very useful; 90% of participants agreed or strongly agreed with the materials used during the workshop; and 87% agreed or highly agreed with the order of that the presentations were made. This reflects the substantial impact that the workshop had on participants and their knowledge of the subject matter. (See Chart 3)

Chart 2
Responses to Evaluation Questionnaire: Order of Presentations, Materials, Quality and Usefulness.



Overall the Balance of the Workshop was adequate, scoring 94% for pace of training, 87% for time for participation, 54% for time for instructors' presentations, 80% for practical content, and 80% for theoretical content.

Chart 3
Balance of the Workshop

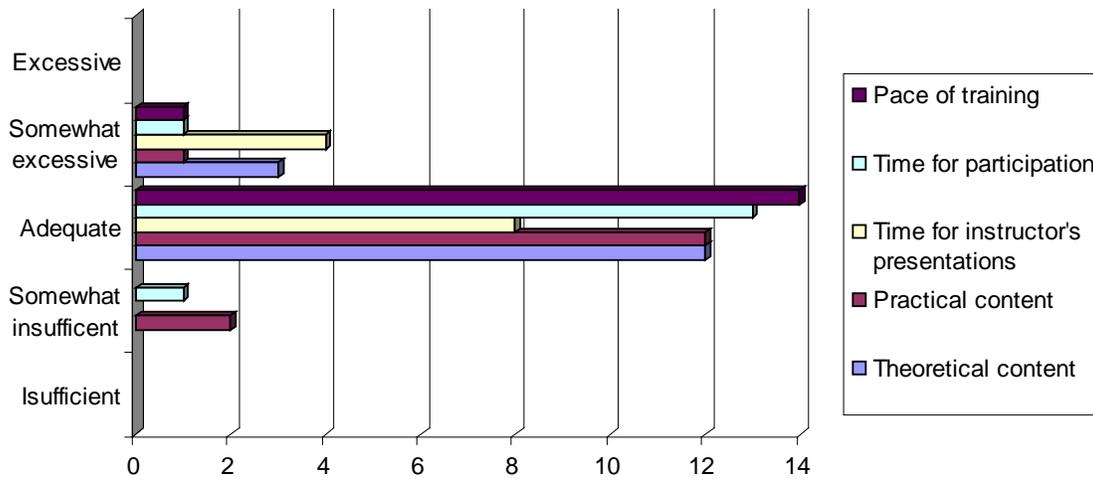
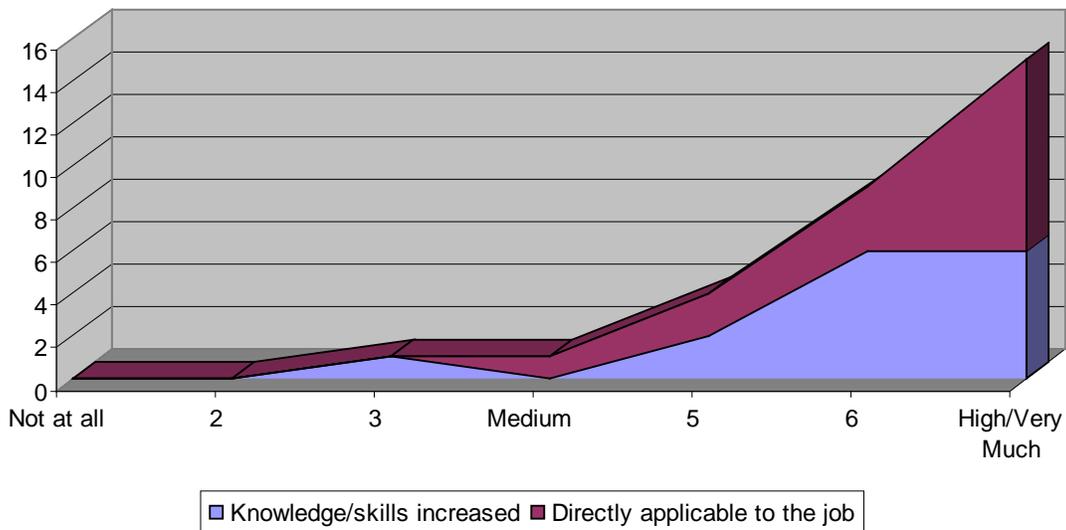


Chart 4

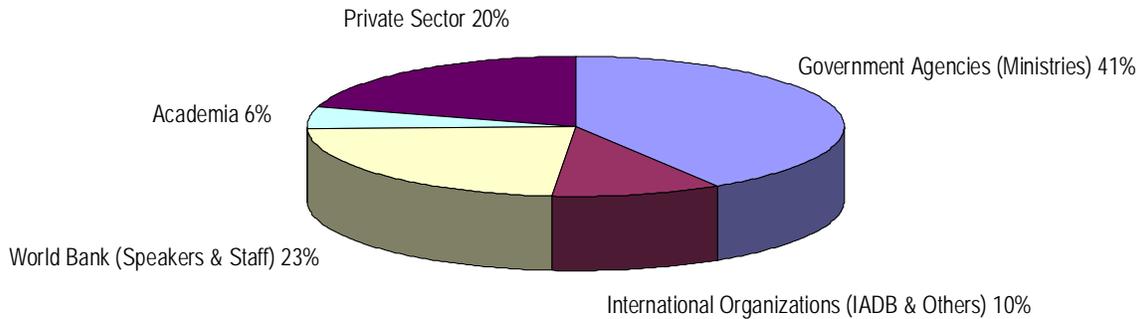


94% of participants sought that their knowledge skills had increased after the workshop, and 87% that the training was directly applicable to their job.

At the same time, with the aim of enhancing the transfer of useful tools and first-hand experiences, among experts and participants, one of the main goals of this one-day Workshop was also to generate technical discussions between private sector and government experts who participate in the design and marketing of agricultural climate risk programs. Participants came from diverse sectors, from the Government Agencies, Ministries of Finance and Agriculture, to Private Sector and Academia. (See Chart 2)

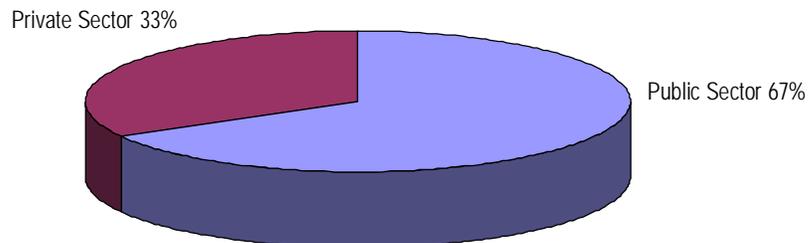
**Chart 5
Composition of Participants**

Table 5.1 Distribution Total Participants by Sector



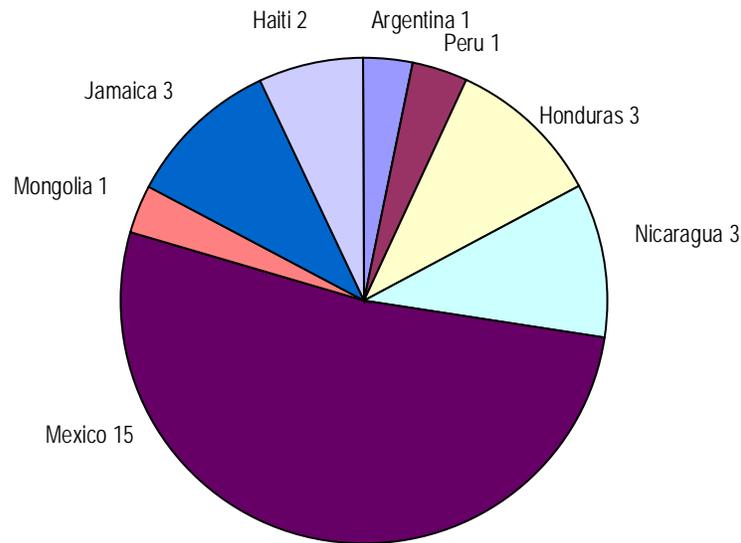
And, for the purpose of the Evaluation Questionnaire for Staff Learning, the composition was the following:

Chart 5.2 Distribution of Participants who submitted Evaluation Questionnaire for Staff Learning (By Sector)



The data collected from the Evaluation Questionnaire showcase that 67% of the participants currently work for the public sectors, mainly in the Agriculture and Finance Ministries, in their home countries. 55% of the people responded that the main reason to attending the Workshop was to enhance their performance on current and planned assignments, while 27% responded to network and share information, and 18% for professional interest/growth or other.

Chart 6. Participating Countries

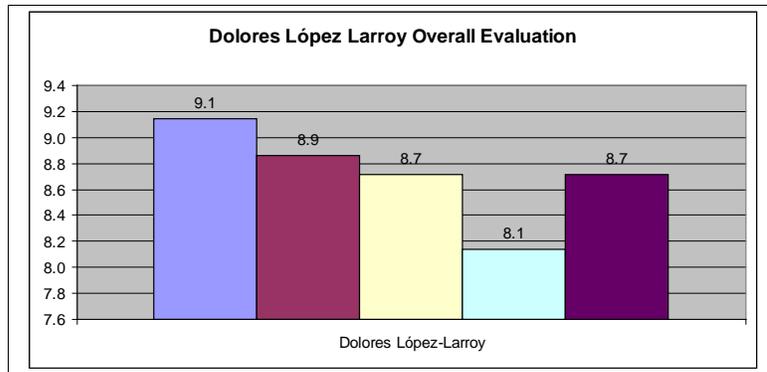
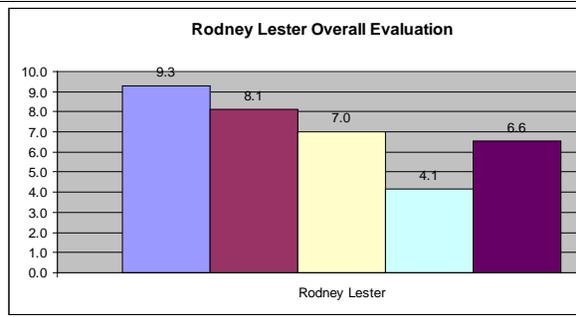
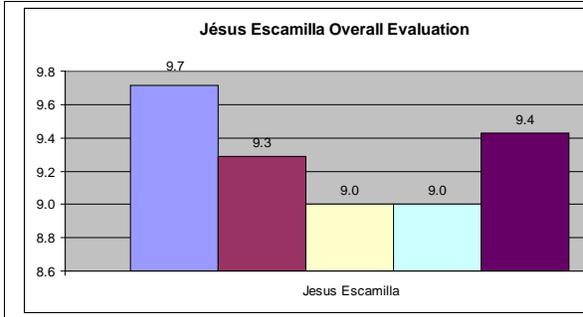
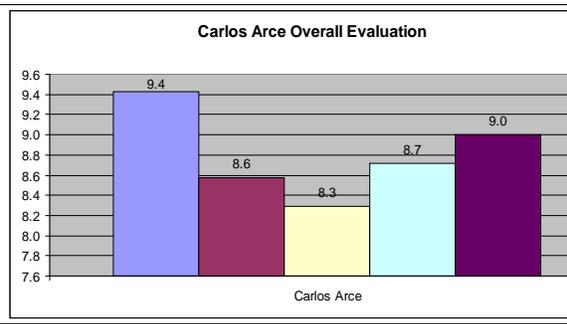
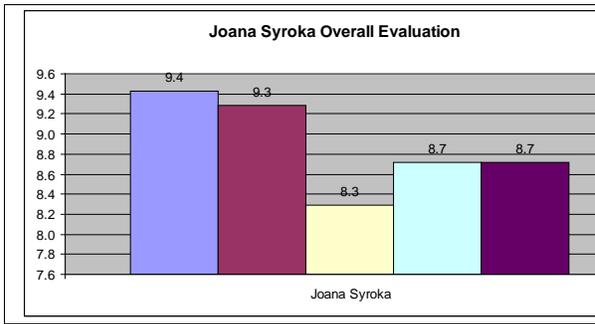
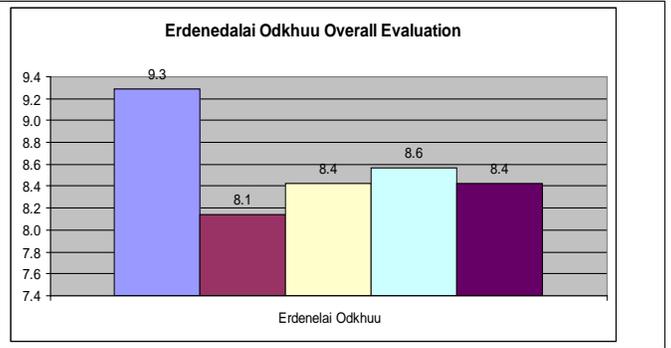
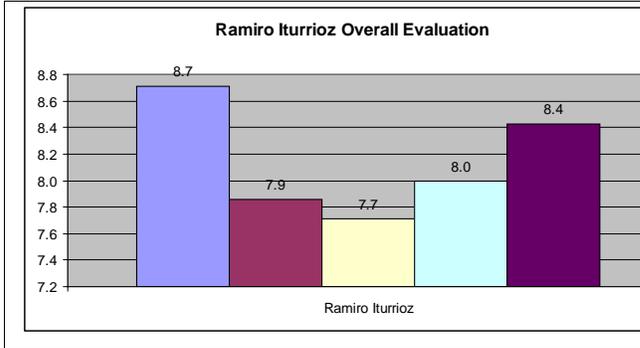


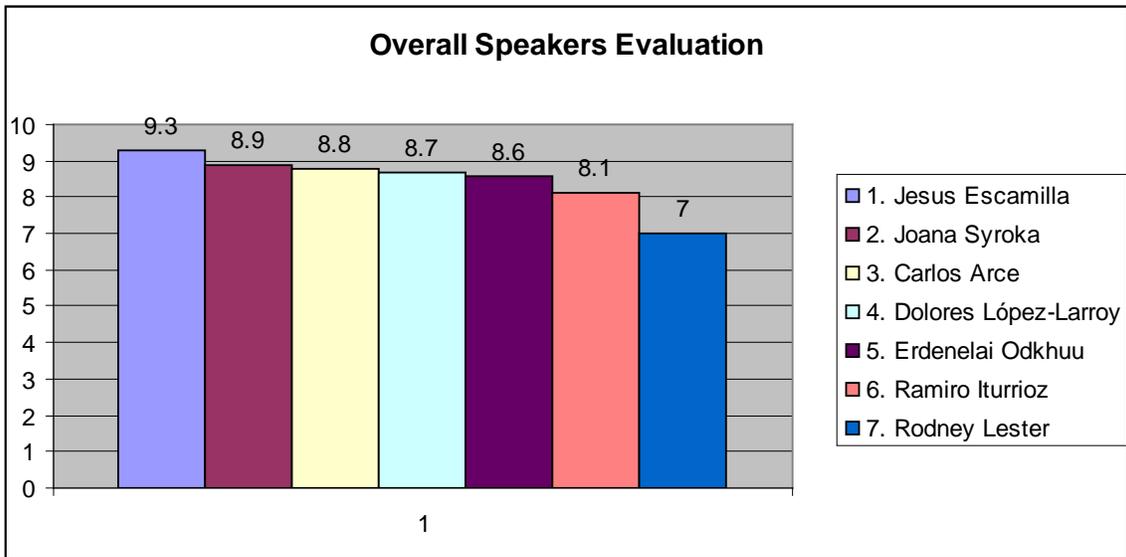
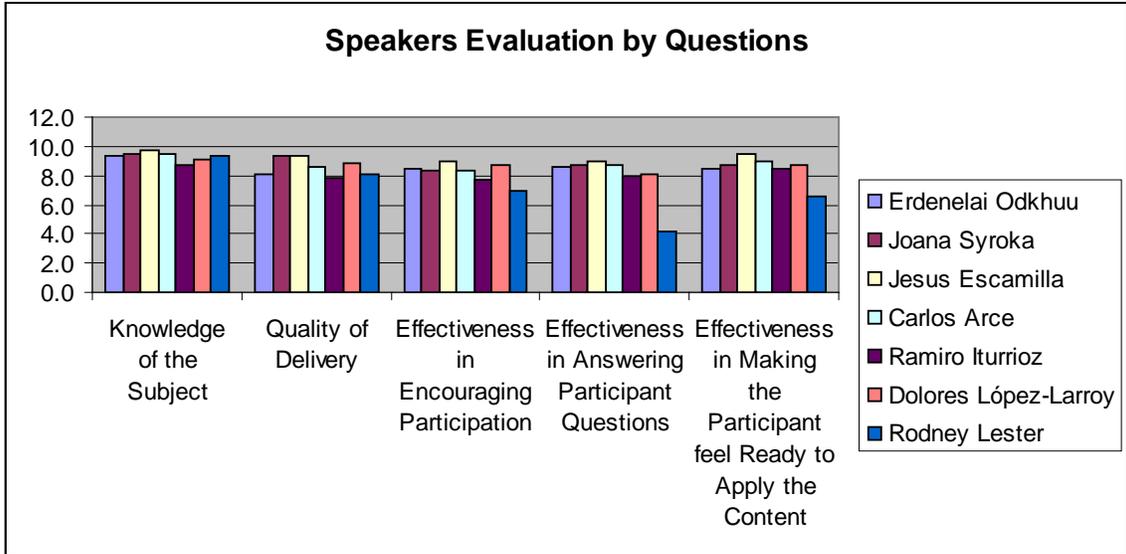
SPEAKERS EVALUATIONS

Participants graded speakers on the base of the following:
Scale from 1 (poor) to 10 (very good)]

COLOR CODE

-  **Knowledge of the Subject**
-  **Quality of Delivery**
-  **Effectiveness in Encouraging Participation**
-  **Effectiveness in Answering Participant Questions**
-  **Effectiveness in Making the Participant feel Ready to Apply the Content**





6. PROPOSALS ON FUTURE TRAINING EVENTS AND IMPROVEMENT ON SIMILAR WORKSHOPS TO BE HELD IN THE FUTURE

Knowledge/Skills acquired from the training to be applied on the job

1. Financial instruments available to help the agricultural sector
2. Difference between parametric and crop insurances
3. Government participation to develop particular models
4. Importance of the data to create models
5. Shape a mechanism like this for my country

What type of support would the participant need to apply the newly acquired knowledge/Skills?

1. Technical Assistance and Training by the World Bank
2. Get the presentations
3. Information via e-mail
4. Models to estimate climate risks (Parametric insurances)
5. More Risk Maps

What worked best during the Workshop?

1. Case studies
2. Information very complete
3. Quality and capacity of presenters

Improvements for this Workshop in the future

1. Make it a 2 day workshop

7. CONCLUSIONS

Overall, as shown during the Workshop, there are different programs in which governments can cope with climate risk in agriculture, which represents a challenge and an opportunity for rural economies worldwide, for the private agricultural insurance market to develop, lessening the direct effects on producers and the population as a whole in the face of the food and financial crises.

Coping with climate risk presents a real opportunity for managing agricultural production risk. Index-based insurance eliminates the problems of asymmetric information, is affordable to administer and implement and has US\$5 billion in international capital available for market development.

The role of the public sector was found to be important, but its interventions must be ex-ante explicitly defined with respect to natural disaster aid.

There's a set guidelines for public support to the development of agricultural insurance markets. Programs and policies for the development of the agricultural insurance market should be more effective and efficient, improving the regulatory framework and data availability, facilitating the management and transfer of agricultural risks, motivating innovative insurance products that can facilitate and accelerate the development of the market.

Finally, it was understood and agreed that with agricultural insurance, growth in the agriculture sector can be attained. Furthermore, traditional and index-based agricultural insurance can be complementary, and by no means mutually exclusive of traditional insurance, and must be considered jointly to develop and expand coverage to small agricultural producers.