Climate change and food Security in Africa - Report

What can research and third world aid policy do?

14. May 2008, 19.00 hrs
In the Hochholzerhof, 1010 Vienna, Seitzergasse 2-4, 1 Floor

Africa has at least to the doing live gases contributed, however, will suffer mostly from the consequences of the climate change. The consequences will be different; thus global warming causes that dry regions become drier, humid areas even more humid. Immediate consequences in Africa are dryness, floods, desertification and with it linked a decline of the yields in the agriculture, insufficient supply of the people with food, a stronger spreading of malaria and still less clean drinking water. However, beside consequences on the environment changes are also to be expected in the society and economy: social riots, expulsion, and migration. At the same time has Africa on account of the prevailing poverty only very much restricted capacities to adapt itself to the climate change.

The panel discussion wants to illustrate the consequences of climate change on the small farmers in Africa and deals with what the different communities can contribute to improve the position.

vidc lent a voice to people from the south in Austria, by performing this arrangement and contribution.

Welcome Speech: Mr Walter Posch, Director, vidc

Keynot Speech: Josef Eitzinger, Institute of Meteorology at the University of Natural Resources and Applied Life Sciences, Vienna; Founder member of International Society of Agrometeorology.

"Climate change and its foreseeable results for the global food production"

How serious is the problem and what can we do about it?

The various reasons of climatic changes can be melting Arctic ice. Greenland ice is melting. Sea level is increasing. There are radiations and more warming conditions. Carbon dioxide is increasing. Draught is becoming heavier and growing faster. Soil is degraded due to relative changes and heating effects. There are changes in the rainfall patterns. Lots of soil erosions are taking places.
In the developed countries where there is increase in food crops, are the winners and the developing countries where the population is growing are the losers. The better irrigation facilities in developed countries and same old method in developing countries is also one of

the reasons why the cash crop production is reducing. The increasing price in the world market also makes it difficult to increase the productivity.

The weeds and pests are increasing causing many diseases. The yield in different regions will affect world market prices even more.
To increase productivity and adapt to the changing climate, there are different classes of adaptations,

- change in the sowing date
- different varieties of crops spices
- changing in inputs, fertilizers etc.
- change group varieties
- training and education to farmers
- technical changes and improvement in production
- solutions for the low input in agriculture
- recovering traditional techniques (low cost and high technology solutions)
- using systems e.g. high agro-forestry system to optimize climate

Micro insurances for the poor farmers.

Mary Jo Kakinda, **Uganda**, Coordinator of Pan Africa 2000 Network in East Africa, working in East and South African improvement programme.

"The role of Sub-Saharan NGOs in mitigating food insecurity resulting from climate change"

There is serious problem of food insecurity in Sub-Saharan region.

- Reduced incomes
- Most people rely on agriculture
- There are lower profit
- Food insecurity that means more people are living without proper food and proper meals.

Mostly women are involved in farming and food production (80% of food is produced by women)
Therefore, the women are mostly affected by climatic changes. They are overworked.

- Lack of water management techniques in the areas where there is excessive rain, especially in the lowlands where the crops are flooded mostly and destroyed.
- There is needed to show the farmer for raising their own seedlings.
- Controlling soil erosions- there is need to bring the solution for the problem which erodes their crops.
- Decreasing rainfall and measures to protect the soil
- There is need of new variety of crops which can tolerate the new conditions arising from climatic changes, i.e. hot and dry weather (e.g. Cordenirea rice- cross breed of Asian and African rice. It is also draught tolerant.)
- There is need for planting materials and techniques which will stop the new diseases and multiplication of pests which has resulted due to climatic conditions in Sub-Saharan regions.
- Investing in irrigational methods.
- Demonstration in the training institution about water harvesting, weather forecast - this will help women who have to go to long distances for bringing water for the household purposes and farmers to know when to plan and when not to plan.

- Need to address food security through collective action, where women in a group help each other to plant crop for household purpose and farmers working together to market there produce and bargain the better prices. Also training and learning together to improve their skills so that they are able to come up with the soil and water conservation.
- Measures to process the produce to fetch high price in the world market.
- Preservation technology should be improved (drying food plant) which was supported by Austrian development agency.
- Labour saving technologies to help women.
- Need to have demonstrations in the training institute as most of the farmers are illiterate.
- Need to help NGOs helping increasing irrigation schemes.
- Need to help NGOs and other communities who are involved directly to help farmers in all aspects.
- Problem of funding is also one of the causes of food insecurity in Sub-Saharan regions as Govt and NGOs do not work together.
- Poor road conditions make transport of crop very difficult.
- There is no food production policy made by government to show what is to be done. Therefore, there are no guidelines.
- Since NGOs are not able to do research so they have to rely solely on research institution to come up with the ways to increase the productivity.
- NGOs are not properly funded. When donors find that NGOs are project specific the fund for 2 to 3 hrs, that means after 3 hrs in most of the cases NGOs are not able to get funding for the same activities. So there is funding problem which lead to no sustainability. Some times there very good activities and projects which make lots of impact on community level. But when finding ends that also ends the project and activities. Therefore, NGOs are facing lots of big challenges. They still continue with some of the activities but there is no other option to the communities so that they can benefit from it. This also another challenge for the NGOs.
- Maintaining soil quality.
- There is need to do research together with farmers on the farms, so that the farmers learn together with researchers and try out different technologies and identify each of them and how are they achieved.
- Need to document success stories so that many more communities are made aware of the activities which are being implemented in various parts of Sub-Saharan region. Therefore, many NGOs are working with many communities on this field.
- There is also need to link the food production with the Local government structure as government and NGOs are not working together, therefore, they cannot cope with the problem of food insecurity. In many parts of Africa there is centralised government and many communities can be linked to funding at local government level.

Robert J. Delve, Zimbabwe, Agriculture in and with developed countries, working as soil scientist, participatory research with farmers.

"Climate change and food security in Sub-Saharan Africa: Working out who gains and who loses through research for development"

- Research always comes out of the forecast that is done for the climate changes at the Global level.

- The top most Global models e.g. Canadian, Austrian, American and the rests, have won. Though they have different scenario, they have agreed somewhere. They can predict over the sea, part of the globe, the best credibility to understand the climate changes and that is the challenge, which we are still having.
- In the east Africa there is more rain in the high lands, more soil erosion, more flooding and the challenges to cope with this problem have increased.
- By loosing food the farmers are loosing cash crop is another very big problem.
- Alternative crops with are draught tolerant such as Kasava but people do not use it so there is need for adaptation as per the climate changes.
- There are also the challenges in front of the scientists to predict and analyse and working out what is going to happen in future.
- Water shedding issues, community level issues to adapt to the climate change.
- To figure out, giving advice to farmers who could well understand cope with the situations.
- Mitigation- avoiding deforestation which was also due to industrial problem. And this leads to climate change.
- Land degradation, overuse of resources, deforestation issues (reforested).
- Voluntary payment of the carbene is also the challenge. Volunteers can book or contact through internet or online.
- Crop stimulation and climate change modelling and risks involved in the production. That is how risky is to produce crops e.g. maize in Zimbabwe and middle Mozambique. This who system is to workout what we need to work with the adaptation.
- Changing management practices- prior to the development from the research perspective is the key. By technology in traditional sense is the key. There is lots of donation to build the capacity to do breeding traditionally. There are issues where we should breed and select. In Columbia they have their research station, global mandate for the common being. They have been breeding for years and now much bigger, better and robust.
- Draught tolerant screening programme
- Fertilizer and green revolution is an issue, how the nutrients inputs can be increased into this degraded soil of Africa.
- The technology like “Coca-cola and bottle methods”, just add one station to your maize. It is only adding 15-17 kg of nitrogen per hectare. This lowers fertilizer application, no pollution, and no risk of loosing crop. But the problem is when to put fertilizer. There are variations in the season and it becomes difficult to manage.
- People want to be sure about the weather condition and then invest.
- Weather insurance and credit- need to support banks that provide loans and insurances to small and poor farmers. But the question is how you know when to pay. Farmers must know what is too much and what is little rain, so that they can work out the risks of insurer loosing his interests of the fertilizers that was bought through the loan.
- Areas of intervention
    1. Research- Breeding programme- breeding animals, breeding for crops which are dry and draught tolerant. But at the same time not loosing its nutrients and taste.
    2. Weather forecast- to ensure farmer when to invest decision in agriculture.
    3. Training extensions in numbers and improving capacities.
    4. Changing crops from Kasava to Millet. Needing different people with different experience giving recommendation to farmers.
    5. Planning- Common resource management- scaling up of the issues and challenges. Micro dam and water sheds as well as flooding in water sheds is also a big problem.

Panel discussion:

The main criteria of the panel discussion were:
1. How big is the problem? What is the magnitude? Who are affected from climate changes? Who are the winners and who are the looser?
2. What are the adaptation measures? How can researchers support farmers in climate change? What is the new climate change development agenda that development policies have to forward?

What do you expect from the NGOs point in Africa from the EU concerning development and cooperation to climate changes?

Mary Jo: According to Mary Jo, it is very clear that some interventions can have communities to address food security which is now every where in Africa. Most of the funding and support is done by UK union for projects. There are most of the projects which are very basic and don't need millions of dollars, e.g. water pumps. This way more countries have interventions, supporting these communities based activities, so that these are able to implement projects that are addressed to food and security. Basically, research institutions work together with NGOs to increase food productions.

What is African government opinion on climatic change and food problems?

Robert J. Delve: There was recently a fertilizer summit, massive Africa wide conference looking at the increasing access to fertilizers in Africa for increasing nutrient supplies to the systems hosted by the President of Nigeria in Nigeria where many commitments were done by the donors. The figures show that Nigeria serving well is 7 times tripled in the last 2 yrs and other part of the developing world. Kenya is investing in weather insurance and stabilizing banks against the risks involved in lending to farmers. Malaria issues against the donors recommendations and spent 45 millions of dollars on fertilizer subsidies vouchers and said this is our and we need to spent were we think is best spent, that is increasing production and not feeding people in the Hungry later in the season. So there are man responses to this. Countries are spending large amount of money in this. But the scale and the complexity of the problem goes to other question so diverse the solutions are that it is eluding us in many cases.

What is the role of research in development?

Policy research: There are many publications informing us about Global trade, Inactive trade, predicting all the food process with changing diets in the big development countries.
The main problem is that these issues are so big that that little we can do to deal with that ion the daily basis. Recent food process has been caused by 8 or 9 factors which were in press for long time from the people profiteering from the facts that some of the markets are very small for any reduction in Export prices and effect prices are global issues. Some countries are now investing in rice production in large scales for global markets. Most of the countries can't organise even the moving grains from the area of surplus to the area of deficiency. Infrastructural problem is also the main cause. Lack of proper roads. Movement is affected, cannot have access to the markets, regional level and Global level and local level- nothing moves making inputs and outputs worse.

With the changing times who are the winners rich or poor farmers?

Josef Eitzinger: The farmers who have money are easy to adapt. They have more possibilities, so the farmers in the developing countries are winners. But it depends also on the climate, the region, the soil etc. The impact of adaptability is on a global level.

Mary Jo: the poor farmer is not able to change their situation. The rich farmer f can invest and increase production. Poor farmer cannot do that because they cannot afford more land. The y also cannot have loan because of lack of security and because of high rate of interest. The locus technology will help them.

How inequality amongst society, within family brings food insecurity?

Robert J. Delve: "We will all win if we get it right.**"**
If we must address the policies which make agriculture sustainable and profit attainable then balance it with reasonable price food because if it is cheap food then we will benefit growing it. If we get it right there will be subsidies there will be support we can all win with it otherwise it can go horribly wrong.

What men are doing when women are working in the farms?

Mary Jo: it is important that agriculture interventions as much as possible try to involve both men and women. When we work with communities we call both men and women to participate in the activities. Of course, it is difficult in the beginning, despite of some imbalances, it still works, and in time both participate. If activities will bring money, men will rush to participate, as they always do. So what ever is done should be beneficial. In many household intervention basically involves women but later men come on board because they see the benefits, so it is up to us to make both men and women to participate. We first work on the inventions that address gender issues. Actually men don't that women are being overworked they think that it is normal. They don't realise that they getup earlier then they do, go to bed late after them, do the work when they are not really involved.
To overcome this problem, we make men sit in their own group and women in their own. What do men do on daily basis, they realise together that actually women d o more work then they do. They are grown up seeing women working this way and for them there is nothing wrong with this. To make them realise this, women should be given leadership positions and sharing responsibilities, otherwise men will again dominate every position. Therefore, it is also very essential to decrease gender inequalities in the context of climate change.

In the end the conclusion is that work should be done not only on Africa but globally especially in Africa where agricultural productivity should be increased by adding nutrients to the soil at local level. To do it in a better way it is essential to empower and facilitate NGOs to work at the local level and also question Government if the targets are not achieved.