Workshop on Climate Change and its relation to Organic Agriculture

Date: Thursday, May 15 2008
Hour: 1:00 – 5:00 PM
Organizer: IFOAM

First Part – Mitigation and Adaptation

Jan van Aken "Agricultural Campaigner" (Greenpeace, Germany)

Major contributors to climate change in Agriculture according to the publication of Greenpeace "Cool Farming"

- Impact of agriculture on climate change – you can find figures in the study "Cool Farming", such as 17-32% of all GHG-Emissions (8.5 to 16.5 billion) are produced by agriculture. Land use changes its half of it. Another half agricultural per se.
- Biggest contributors: fossil fuel based fertilizers (use and production)
- Second biggest contributor: Methane gas from cows/ sheeps/ pigs

Questions:

1. Is industrial farming the only contributor or organic agriculture too?

Every form of Agriculture has impacts: It is not only a problem of industrial agriculture (Interesting Fact sheet in the presentation: Figures – average numbers in CO2 equivalents)

2. How can we reduce GHG emissions in agriculture (in general)?

Land use change: stop forest destruction (not part of the presentation)

Mitigation – overall 6. Billion tonnes – almost 100% GHG of the agriculture sector (without land use) could be reduced.

Mitigation - key strategies to reduce greenhouse gas emissions in Agriculture

Core strategies:
- Use less fertilizer (both, chemical and organic fertilizers) and avoid overuse!!
- Implement cropping systems (eg. Rotation with legumes, etc.)
- Soil carbon : recovers degrades soil… very positive for agriculture and harvesting – many positive effects, not only carbon dioxide reduction

Among other options can be mentioned:
- No burning of crop residues in the field
- Rice management
- Eat less meat

GHG Emissions in Organic agriculture

- Let's not fall into the carbon trap! Organic farming has a wide range of positive effects:
  - Direct fossil use is lower than in industrial Agriculture.
  - However, organic is not automatically more climate friendly than industrial agriculture.

- Many organic practices increase soil carbon:
  - Less emissions per hectare, but not necessarily per unit product
  - Study UK animal products – organic and industrial is almost the same (eggs, meat)
  - However, on field products (corn, wheat etc.) organic is better

- There is more to organic farming than GHG Emissions – don't let it reduce on this point!

Discussion

1. Organic agriculture is not automatically better than industrial Agriculture.

In Germany there is a study (FIBL) which says that organic agriculture produces approximately 20% less GHG (total) – but that's still not much. Even though, a wide diversification of the local situation is necessary.

2. High GHG-Emissions are mainly a problem of the agriculture in industrial countries.

There are big organic farms with mono-cultures and cooperatives. In the southern countries it is more local and small scale structured and focuses on food sovereignty

Eating less meat – Discussion in Europe / USA. That Greenpeace slogan is good for public awareness and headlines.

The real campaign is against fertilizer use – that's the main part for a solution. Organic fertilizers are necessary to soil carbon.

Miguel Altieri (Professor University of Berkeley, USA)

"How to create resilient systems based on traditional peasant knowledge systems in Latin America"

Agriculture – especially industrial monocultures are the first victims of climate change patterns, because they have neither non flexible crops nor mitigation or adaptation possibilities.

Diversity is the solution

- Diversity in growing, mix of water and field farming and diversity in farming at different elevation levels.
- Local varieties are necessary for the future – to keep the variety of plants/ crops. Traditional crops are way better in adaptation e.g. to water shortages.

Agroforestry

- Can help to stabilize the local climate or make it more humid, therefore water management can be easier.
- Soil carbon – agricultural in marginal areas do benefit and the yields are more.
- Water harvesting – get the chance to water even in the dry season, as well as natural fertilizers.

Agroecology

- There are many benefits from this form of Organic Agriculture in a system/ cycle.
- Without this form of Organic Agriculture almost nobody would have the chance to live there.

- The system of agroecology provides Farmers / Families to stay in these regions and help build up the systems
- One important point of agroecology is the use of knowledge of industrial countries - combined with tradition – to get the best results for all.
- This shows that agroecology systems can help to reduce GHG emissions in many ways.

Questions

1. In Peru they have long tradition in organic farming. This is helpful to adaptation and helps saving GHG emissions as well. What are the borders of the agroecology system?

It is a whole system which conserves everything from seeds to soil. So it is per se climate friendly.

2. Because of the variety of conditions world wide – and the erosion of traditional knowledge is agroecology transferable at all?

Only 10 % are model areas. Therefore – instead of generalizing we have to look very clear/ point on where the systems can be used.

We can use that system every where in the world. The principles of the system need to be understood. It can be taken and adapted everywhere.

Clara Inés Nicholls (University of Berkeley, USA and Nacional de Colombia, Colombia)

"Diversification of agroecosystems: An agroecological strategy against climatic variability and pest outbreaks"

- Biodiversity has many benefits for farming. For example, crop growing with a variety of plants which complement their growth as well as they are great shelters for biological biodiversity.
- The scientific research in this field has to be developed – to get more information how this can be used.
- One example Ms. Nicholls shows are weeds corridors which are planted in between the agricultural crops, so bees are located there to pollinate the plants. They natural resources in use.
- The vegetative cover maintains soil and water conservation. It is also helpful for wind protection.
- Weeds can have a positive ecological control.
- Complement plants can also be a natural barrier against pest – for example tomato and coriander planted together.
- With this natural barriers and vegetative cover, the use of pesticides can be reduced and the infestation of pest decreased. Diversity is therefore very important – especially in closed circles.

Questions

1. How can we increase species diversity and how can we extend the system?
2. Climate change and agroecology – how do we relate climate change and biodiversity - ?

The right way is to promote such systems. It is easier to persuade people what great effects such systems have, than tell them "eat less meat" to save our climate

Lupine is one example for how agroecology can be part of climate protection strategies.

Johannes Kotschi (Agrecol, Germany)

"Adapting agriculture to climate change - consequences for seed conservation and plant breeding"

- Adaptation is urgently needed.
- What is the road for seeds to protect them and keep them for future needs? Climate Change is a big danger for keeping the variety. And as well it takes 12-15 years to create a new source.
- Genetic resources are mainly in tropical countries. For preservation we have to concentrate on these regions. Gene banks have technical and organizational problems, so they are not the only answer on saving genes.
- The consequence: we need seed farming to conserve the genetic variety. Organic Agriculture is very important. There are many local initiatives which are very important and often are supported by the church (Bread for the World, Misereor).
- However, local communities and farmers may have problems keeping the whole varieties.
- Support by governments is important – not only for breeding local varieties. It is necessary for future needs in general and gets even more important for adaptation
- There are major problems like heat or flood resistance, which have to be solved.
- Organic farming plays a big role on conserving and breeding genetic resources. But on the other hand it is difficult to find investment/ support for breeding.

Question

1. Participation of consumers to get a better variety. Demand and supply plays a key role in all markets – and that applies to genetic resources too. Until now this was not enough attended in the discussions?

There are a few Organizations like Kultursaat (a German Association) where consumers have some influence.

2. Can variety in plants have negative impacts in local systems?

You can't generalize. Food supply can improved in marginal areas. Therefore you need a bigger variety to increase the results.

Organic Agriculture is the most effective form of agriculture in poor countries and in the southern hemisphere.

3. How can we stop biopiracy?

The only way is to make it public and register the genetic resources in official registers. It is a big fight.

Comment from the audience: The reason for breeding at farm is the taste or flavor of the product – not the biological needs. Farmers often don't think about biodiversity.

4. How can adaptation work, when climate change forces very instable situations – like a very wet spring, a hot and dry summer?

Breeding organizations start to use mixtures and as well use them in their sowings. The wider the variety, the bigger the chances of success are. We have to be flexible, not uniform – in both at organic farming as well as in science.

Second Part. - Food miles/ Market/ Organic Trade

Juan Lopez Villar (Friends of the Earth Europe, Biosafety Coordinator, Spain)

"Food miles vs. local economies"

- There is no special position from FEE on food miles. But he would fully agree with the sentence: "The closer we eat- the better for the climate".
- His example is the import of genetically modified food to Zambia, which was forced by the UN and the US, even there where local alternatives are available.
- There are more examples which show, that local markets are under pressure, because of UN-food banks, even there is no need for food in those countries. The real reasons for such deliveries are often the interest of the rich countries e.g. export of GMO's food.
- Local markets are often threatened or destroyed.

Wanjiru Kamau (Kenya Organic Agriculture Network, Kenya)

"Food Miles, separating facts from myths: A Kenyan Case study"

- The Soil Association launched a consultation to tackle the impact of air-transport of organic products. It was commissioned by Tesco (a UK based-supermarket chain).
- The consequence of the study was that Tesco abstained from products coming from Kenya, especially of the flower market.
- Many families lost their income and the market almost collapsed. We want trade, not aid!!
- There were more than 4 million people affected by the ban of the products.
- In Kenya the local organic market is growing – especially in sectors in the local supermarkets.
- *Fact*: Why trade is necessary and does not affect climate change?
- Products are transported in passenger aircrafts, if cargo aircrafts are used – only if they have a return fright too.
- The view on GHG-Emissions – Kenya has less than 1 tone/ person. It is 15 times less than in the US
- *Result*: Kenya has initiated several projects in the horticultural sector to lower GHG, including the use of renewable energies. They start to promote organic agriculture.
- Kenya must have the chance to export its products. The GHG-emissions of the transport are not that important – compared to the already existing GHG-saving projects in producing horticultural products.
- It is necessary to have a more ethical code – eco-fair-social-fair-trade!

Comment Audience:
Import of organic products is necessary. If you can't buy all organic food year round, consumers would change to conventional products in between during two weeks.

Conclusions

Pipo Lernoud (IFOAM World Board Vicepresident)

- It is true, GHG has many sources- use of fossil fuels, farts of cows, etc. The most important is what is getting in, what is the result of the outcome.
- Organic farming instead is a thinking of a whole system. It is not only the view – in/output.
- We (the organic sector) have not started yet climate change and organic agriculture as a whole system/ cycle.

- Greenpeace says chemical and organic fertilizers have the same impact.

- In organic farming organic fertilizing is recycling and use of waste.
- How can we give more information about the system / how can we compare systems (feet lock?)
- The same happens to the food mile topic. There is not a clear data to study on this things.
- The conclusion has to be, that diversity means, that every problem needs a special solution. It is important to find individual solutions and keep the variety.

Strategy from the audience:

- At the 2009 climate conference in Copenhagen – climate negotiations – parallel there is a grassroots' movement on land use and agriculture.
- Invitation to all to start a process and have already at the negotiation in Posnan a clear position to bring into this process.
- Contact and further information: Bente Hessellund Andersen, NOAH-Friends of the Earth Denmark bente@noah.dk

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