SUMMARY OF THE FSN FORUM DISCUSSION No. 50
STRENGTHENING FOOD SECURITY BY EMPOWERING FARMERS TO CONTRIBUTE TO SEED BIODIVERSITY
FROM 12 JANUARY TO 8 FEBRUARY 2010

Proceedings available at:
http://km.fao.org/fileadmin/user_upload/fsn/docs/PROCEEDINGS_empowering_farmers_to_seed_biodiversity.doc

A summary prepared by the topic raiser can be found in the proceedings

I. ISSUES RAISED

The discussions focused mainly on the importance and on possible ways to ensure seed conservation and biodiversity while empowering farmers' and improving their livelihoods.

As a general introductory note, the benefits seeds entail can be grouped into 3 sets, described below (Lipper and Cooper):

- Private benefits to farmers via the consumption and production values they derive from seeds. These are shaped by their own preferences and constraints, but also policies affecting the demand and supply of crop genetic resources;
- Local or regional benefits to farmers, and ultimately, consumers, when the choices of varieties (and their genetic content) make farming more resilient to biotic and abiotic stress;
- Global benefits to future farmers, plant breeders and consumers, when the choices they make protect against genetic erosion.

II. COMBINING AGROBIODIVERSITY CONSERVATION AND LIVELIHOODS OF FARMERS

There is not one simple solution on how to encourage and compensate farmers for conserving agrobiodiversity and specific country situations may require differentiate actions.

At the global level this issue has been addressed by the international Treaty on Plant Genetic Resources for Food and Agriculture; this initiative specifically focuses on ensuring access and benefit sharing of plant genetic resources (R.Cavatassi).

Many possible ways to encourage traditional seeds conservations have been outlined:

- Local agricultural markets: recent case studies conducted in different countries have shown that local agricultural markets can also represent a key vehicle for improving the farm-level supply of seeds and the genetic resources they embody (R.Cavatassi)
- Agriculture research institutes: seed supply is a constraint for rural farmers that often rely on informal methods for preserving seed biodiversity (such as drying seeds after harvest for re-use), therefore agriculture research institutes should have deliberate programs for mobilizing the existing genomes in the wild or within the community and engage the communities to identify "orphan crops" (E. Mutandwa); this has to be done bearing in mind the importance of building a collaboration that empowers farmers other than using them as a conduit for collecting seeds (J. Opio-Odongo)
- Extension services: should educate and inform farmers to make them able to choose which method best suits their needs and gives them most economic benefit
- Local seed reproduction and multiplication: supporting the creation of seed reproduction and multiplication centers of their local varieties, directly run by the farmers (C. Buscaroli).

- Preserving land for traditional crops: encourage farmers to keep portions of land for local crop production while committing the rest to market production; this would help in preserving availability of local foods and seeds (S. Kanyiri Mbaabu)
- Adopting a wider set of criteria to select and popularize a variety: other than only yield, taste, pest and disease resistance, fodder quality and duration, tolerance to stress conditions as well as seasonality should be also systematically considered as important parameters for a variety (B.P. Gangadhara Swamy)
- Community banks: following the example of India for ensuring food and seed security and conservation of biodiversity a linked series of community banks could be established, such as farmer level field gene banks (owned by the community, where landraces with distinct characteristics are stored for long term together with information on the property of each variety), seed banks (a facility for storage of excess seeds of farmers, which can be accessed during times of shortage or can be lent to other needy farmers who return seeds with a small interest) and grain banks (a facility for storage of excess grain, which can be lent and returned with interest to families in need, to ensure food security and reduce the danger of seeds being consumed in times of stress) (M. Singh).
- Seed fairs: generally take the form of temporary markets organized by NGOs to promote the trade of seed between farm households. In principle here farmers who had lost access to traditional varieties or crops could regain seed from their neighbours (M. Singh).
- Other initiatives that have been taken in India: opinion movements such as Save the Seeds Movement in Uttrakhand and awards for Seed Sovereignty (M. Singh).

In some cases preserving seed biodiversity happens to be particularly challenging; in Nepal for instance, agrobiodiversity is challenged by the introduction of intensive use of fertilizer as well as the reduction of farm manure production, that is leading to the progressive abandon of traditional varieties (B. Dhakal)

III. EMPOWERING FARMERS TOWARDS AGROBIODIVERSITY CONSERVATION

Undoubtedly local farmers have a wealth of knowledge on their crops that needs to be sustained and promoted; also keeping in mind though that the responsibility of agrobiodiversity protection does not lye only on them.

Seed biodiversity should be supported and promoted within participatory approaches, where the farmers' can take part together with other stakeholders (S. Kanyiri Mbaabu, BP Gangadhara Swamy).

Promoting exchanges between farmers from developing and developed countries is certainly a way of raising their profile and expertise (C. Buscaroli).

It was also suggested that the media as well as labeling of farmers' products could help to raise the profile of farmers (B. Dhakal).

IV. PRIVATE COMPANIES AND INTELLECTUAL PROPERTY REGIMES

Plant varieties should be managed as common properties accessible to all; it is felt that formal intellectual property rights mainly benefit companies to the detriment of the farmers (C. Buscaroli).

In general to prevent large companies from influencing decision makers' policies to monitor the quality of seeds, public pressure and good governance are essential (B. Dhakal).

V. HOW TO DISCOURAGE MONOCULTURES

When talking about monocultures it should also be kept in mind that their expansion is causing greater susceptibility of cultivations to large scale diseases as their limited genetic variety lowers the plantations resistance (M. Dublaska) and that the increase in pesticides use has lowered diseases barriers (C. Buscaroli).

Looking at the food system and at the models of food consumption more globally, it should also be considered how the high and increasing intake of meat protein is affecting agriculture production systems and landscapes: in fact the expansion of monocultures and transgenic crops is driven by a large amount from the meat industry for industrial livestock feeding. Strengthening consumer movements, local markets, and nutrition education on how to reduce meat consumption with a view to changing consumption patterns are some ways to look at to limit the treats this is causing to crop biodiversity (R. Rifici).

VI. REFERENCES

International Treaty on Plant Genetic Resources for Food and Agriculture, http://www.planttreaty.org/

FAOs webpage on Seeds, diversity and development http://www.fao.org/economic/esa/seed2d/sedidehome/en/

Lipper, L. and Cooper, D. (2009), Managing plant genetic resources for sustainable use in food and agriculture: balancing the benefits in the field, in Kontoleon, A., Pascual, U., and Smale, M. (eds), *Agrobiodiversity, conservation and economic development*, Routledge, New York: 27-39.

Lipper, L., Anderson, L. and Dalton, T. (eds.) (2009) Seed Trade in Rural Markets *Implications for Crop Diversity and Agricultural Development, Earthscan and FAO, London UK and Rome.*

Lipper, L., Cavatassi, R., and Keleman, A., (2009) The contribution of PGRFA to food security and sustainable agricultural development, Chapter 8, SOWPGRFA-2, FAO, Rome

D.I Jarvis, L. Myer, H. Klemick, L. Guarino, M. Smale, A.H.D. Brown, M. Sadiki, B. Sthapit and T. Hodgkin (2000) *A training Guide for In Situ Conservation On-farm*, IPGRI, Rome

B. Dhakal (2009) Carbon Liability, Market Price Risk and Social Impacts of Reducing Emission from Deforestation and Forest Degradation (REDD) Programme**.** *Journal ofForest and Livelihood*. 8(1): 67-77

Edmonds, E. (2003) Development assistance and the construction of government-initiated community institutions. *Economic Development and Cultural Change*. 51(4): 897-930

Ives, J and Messerli, B. (1989) *The Himalayan Dilemma Reconciling Development and Conservation.* The United Nations University and Routledge, London & New York.

Hausler, S. (1993) Community forestry: a critical assessment: the case of Nepal. *The Ecologist* 23(3): 84-91.