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Background Study 7

Success Stories from the Realization of Farmers' Rights Related to Plant Genetic Resources for Food and Agriculture

By Regine Andersen and Tone Winge

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Background Study 7

Success Stories from the Realization of Farmers' Rights Related to Plant Genetic Resources for Food and Agriculture

Regine Andersen
(Regine.Andersen@fni.no)
and
Tone Winge
(tow@fni.no)

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Abstract

This report presents a collection of success stories from the realization of Farmers' Rights as they are addressed in the International Treaty on Plant Genetic Resources for Food and Agriculture. Despite huge challenges ahead in implementing these rights, there are many examples of projects, legislation and policies which contribute to their realization. A success story is defined here as a project or activity that has resulted in substantial achievements with regard to one or more of the suggestions for the realization of Farmers' Rights addressed in the International Treaty. The chosen examples are not necessarily perfect; the main criterion is that significant achievements have been made and that they can provide inspiration for others. The success stories are sorted into four categories of achievements: the realization of Farmers' Rights to save, use, exchange and sell farm-saved seed; protection of traditional knowledge related to agricultural biodiversity; participation in benefit sharing and in decision-making. Within each of these categories a handful of stories are offered, 17 stories altogether, from 11 countries. The success stories in this report tell about achievements in different areas related to Farmers' Rights, but common features may be discerned. Farmer-scientist collaboration, capacity building, community based approaches and participatory approaches are all elements that have proved to be central. Different approaches to develop better legislation and incentive structures for Farmers' Rights are also important. The findings in this report suggest that NGOs and farmers organizations play an important role, and that networking can be very valuable. Last, but not least, this report notes the link between Farmers' Rights and development, and the importance of protecting these rights in order to ensure that what is left of agricultural biodiversity can be maintained, and to ensure the livelihoods of farmers throughout the world.

Key Words

farmers' rights, plant genetic resources for food and agriculture, ITPGRFA, agrobiodiversity, biodiversity, access to genetic resources, traditional knowledge, benefit sharing, intellectual property rights, participation in decision-making

Orders to:

Fridtjof Nansen Institute
Postboks 326
N-1326 Lysaker, Norway.

Phone: (47) 6711 1900
Fax: (47) 6711 1910
Email: post@fni.no

Internet: www.fni.no

The Farmers Rights Project: www.farmersrights.org

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Preface

Farmers' Rights are a cornerstone in the International Treaty on Plant Genetic Resources for Food and Agriculture. Despite the huge challenges ahead, efforts are underway regarding all measures on Farmers' Rights provided in the Treaty. This report presents a selection of 17 success stories from the implementation of Farmers' Rights aimed at providing inspiration to decision-makers and practitioners, offering examples of what the realization of these rights can mean in practice.

The report should be seen as a preliminary one, as the intention is to develop a more comprehensive book on the topic, with a more narrative style. A project to this end is already underway. In the meantime, this report will be distributed widely among relevant stakeholders in the hope of attracting further stories for the planned book volume.

This report is part of the Farmers' Rights Project of the Fridtjof Nansen Institute, Norway. Another component of the project is our official website www.farmersrights.org, which has been developed as a tool for decision makers and practitioners and as a source of information for researchers and other interested people. All success stories are posted at this website, which will be continuously updated with new stories, dependent on information from our readers.

If you know about a success story on Farmers' Rights, as defined in this report, or if you have additional information or comments, please contact us at farmers.rights.project@fni.no.

The concept of this report is developed on the basis of research carried out at the Farmers' Rights Project of the Fridtjof Nansen Institute, Norway (www.farmersrights.org). Part of the information was compiled in the History of Farmers' Rights, a guide to international documents and literature on the topic (Andersen, 2005a) and an international questionnaire survey on Farmers' Rights in 2005 (Andersen, 2005b). Furthermore, documentation of many projects and activities relevant to success stories has been collected at various meetings, conferences and gatherings around the world, providing a basis for selecting success stories. A questionnaire survey was conducted for the specific purposes of this report, and in some cases we contacted additional informants. The success stories presented in this report are largely based on the information provided to us by these respondents and informants.

The report has been made possible with the support of the Gesellschaft für Technische Zusammenarbeit (GTZ), Germany, and the Development Fund, Norway. I would like to thank both institutions for their support and for valuable cooperation. Let me also extend my thanks to the respondents to the questionnaire surveys mentioned above, all those who have helped with additional information, to Susan Høivik for language editing, Maryanne Rygg for layout, and last but not least, to Tone Winge, for valuable contributions and good cooperation.

Lysaker, 8 May 2008

Regine Andersen
 Senior Research Fellow and
 Director of the Farmers' Rights Project
 Fridtjof Nansen Institute

1 Background

Genetic diversity of agricultural plants is the very basis of farming. It provides the pool from which plant traits can be found which meet the challenges of crop pests and diseases, marginal soils and – not least – of climate change. Plant genetic diversity is probably more important for farming than any other single environmental factor, because it is what makes it possible to adapt food production to changing environmental conditions. Particularly for smallholder farmers, plant genetic diversity has the vital function of spreading the risks of crop failure, and is thus a key to food security, livelihoods and poverty eradication.



Seeds

Photo: Fulvio Eccardi

Ever since the dawn of agriculture, farmers have worked to develop agrobiodiversity through saving, selecting, exchanging, selling and improving seeds and propagating material. Increasingly, however, these customary practices are being restricted all over the world (Andersen, forthcoming, 2008). Recently enacted plant breeders' rights serve to restrict – to varying degrees – the use of farm-saved seeds and the exchange of seeds and propagating material from plants protected by such rights. Seed laws and seed certification rules in many countries exclude traditional varieties from the market by prohibiting exchange and/or sales of such varieties. In general, the incentive structures that have been established favour large-scale monoculture-based agriculture, seen as particularly important to feed rapidly growing urban populations. Only rarely has this development been accompanied by compensating measures to ensure the conservation and sustainable use of crop genetic diversity. As a result, much of the genetic diversity that existed in agriculture only 100 years ago has been lost, and genetic erosion continues at a rapid pace (FAO, 1998).

Farmers' rights are basically about enabling farmers to conserve, develop and utilize crop genetic diversity, and about recognizing and rewarding them for their contribution to the global genetic pool. These rights are

addressed in the International Treaty on Plant Genetic Resources for Food and Agriculture, which entered into force in 2004. The International Treaty is aimed at ensuring the conservation and sustainable use of crop genetic resources, and the equitable sharing of benefits from their use. Farmers' Rights are a cornerstone of the International Treaty, as their realization is a precondition for the conservation and sustainable use of the world's vital plant genetic resources. The Treaty recognizes the enormous contribution that farmers of all regions have made, and will continue to make, for the conservation and development of these resources as the basis of food and agriculture production throughout the world. It further stipulates that governments must protect and promote Farmers' Rights, choosing the measures to do so according to their needs and priorities. Certain measures are suggested in Article 9 (see Annex 3), covering the protection of traditional knowledge, benefit sharing and participation in decision-making. Also the rights of farmers to save, use, exchange and sell farm-saved seeds and propagating material are addressed in the Treaty, but without any particular directions for implementation.

Farmers' Rights are not defined in the Treaty, and there exists no official definition of the concept, except for the indications provided in the form of suggested measures in Article 9 (Andersen 2005 a). For this reason, and because of the somewhat vague provisions as to the implementation of Farmers' Rights, it has been difficult to define the role of the Governing Body of the International Treaty in this regard, and there is uncertainty as to how these provisions can be implemented at the national level. Following an international informal consultation on Farmers' Rights in Lusaka, Zambia, September 2007,¹ the Second Session of the Governing Body of the International Treaty adopted a resolution on Farmers' Rights (see Annex 4). In this resolution the Governing Body encourages Contracting Parties and other relevant organizations to submit their views and experiences on the implementation of Farmers' Rights as set out in Article 9 of the International Treaty, and requests the Secretariat to collect these views and experiences as a basis for an agenda item for consideration by the Governing Body at its Third Session, to promote the realization of Farmers' Rights at the national level.

The collection of success stories on Farmers' Rights presented here is offered as a contribution to the ongoing work of the Governing Body through the 2007 resolution and to all the national-level efforts being made to promote the realization of these rights, so vital for the future of humanity.

¹ Co-organized by the Governments of Zambia and Norway and the Fridtjof Nansen Institute, Norway. A report from the consultation is available at: www.fni.no/doc&pdf/farmers_rights_lusaka_consultation_final_report.pdf

2 What is a ‘Success Story’?

In light of the many negative developments for Farmers’ Rights, can we really talk about success stories? This question comes up frequently whenever the term ‘success’ is mentioned in the context of Farmers’ Rights. The answer is yes: despite the negative trends, there are many examples of initiatives, projects, legislation and policies which contribute to the realization of Farmers’ Rights. The crucial point is how we define success. Here we will first explain what is meant by *success stories* in this report, and how the concept can be used in the context of Farmers’ Rights (section 2.1). Then we explain what this means in greater detail with regard to the suggestions for the realization of Farmers’ Rights as formulated in the International Treaty. Finally, we outline the key questions which form the basis for the presentation of the success stories.

2.1 ‘Success Story’ as a Concept – and Related to Farmers’ Rights

By *success stories* we mean projects or activities that have resulted in substantial achievements with regard to one or more of the suggestions for the realization of Farmers’ Rights addressed in the International Treaty. These projects or activities are not necessarily ‘perfect’: problems or challenges encountered on the way can also stand as lessons from which others can learn. The main criterion is that significant achievements have been made, and that these can provide inspiration for others.

Achievements can be made at very different levels. It is often important to define intermediate goals on the way, smaller, more readily achievable steps leading towards that larger goal. In this sense, not only achievements of ultimate goals are relevant as success stories in our context. Also the smaller steps on the way to that goal – reaching partial goals of various kinds – can be seen as significant achievements that can inspire and motivate other stakeholders to take further steps. In this report we have gathered stories of smaller and greater successes, to display the wide range of achievements already being made on the path to the realization of Farmers’ Rights.

When the suggestions addressed in the International Treaty for the realization of Farmers’ Rights are taken as the point of departure for identifying success stories, what does this mean in operational terms? We are particularly looking for success stories that tell about:

1. policies or initiatives enabling farmers to save, use, exchange, and sell farm-saved seed;
2. projects or initiatives on traditional knowledge related to plant genetic resources for food and agriculture – such as projects documenting traditional knowledge to be shared among farmers in order to avoid loss of such knowledge; or projects to protect farmers’ traditional knowledge against misappropriation while also ensuring that such knowledge can be shared;
3. benefit-sharing measures – such as national-level funding mechanisms that support farmers in conserving and sustainably using plant

genetic resources; participatory plant breeding projects resulting in added value to farmers' varieties; community gene banks that are effectively used in farmers' breeding or farming strategies; marketing strategies to create a demand for diverse crop products; other incentive structures to motivate conservation and sustainable use of genetic resources; recognition of farmers' contributions, for example in the form of awards, or other measures;

4. farmers' participation in decision-making, for example involving farmers in national consultative processes related to the management of plant genetic resources for food and agriculture, or more specifically to Farmers' Rights; capacity-building activities leading to greater involvement of farmers in relevant decision-making; or advocacy by farmers' organizations leading to improved policies on genetic resources and Farmers' Rights. Also awareness-raising of the important role played by farmers in conserving and developing PGRFA is relevant here.

In the following, we will explore in greater detail what successes can be about within these four categories.

2.2 What are Successes Regarding Farmers' Rights to Save, Use, Exchange, and Sell Farm-saved Seed?

The International Treaty is vague on Farmers' Rights to save, use, exchange and sell farm-saved seed. Section 9.3 of the Treaty states that nothing in this article (Article 9 on Farmers' Rights) 'shall be interpreted to limit any rights that farmers have to save, use, exchange and sell farm-saved seed, subject to national law and as appropriate', which does not give much direction. The preamble sets out that 'the rights recognised in this Treaty to save, use, exchange and sell farm-saved seed and other propagating material (...) are fundamental to the realization of Farmers' Rights'. Since no specific rights are mentioned in the Treaty, the Preamble is not quite clear on this point. Despite the lack of precision, the general line of thought is clear. It is important that farmers be granted rights in this direction, although the individual countries are free to define the legal space they deem sufficient for farmers in this regard.

The freedom to define such legal space for farmers is also restricted by other international commitments. Most countries in the world are members of the World Trade Organization (WTO), and are thus obliged to implement the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). The TRIPS Agreement states that all WTO member countries must protect plant varieties either by patents, or by an effective *sui generis* system (a system of its own kind), or a combination. The limits to a *sui generis* system and the meaning of an 'effective' *sui generis* system are not explicitly defined in the text. In other words the countries have to introduce some sort of plant breeders' rights. The Union for the Protection of New Varieties of Plants (UPOV) has held that the most effective way to comply with the provision of an effective *sui generis* system is to follow the model of the UPOV Convention, and there are several proponents of this stand. There are several versions of the UPOV model. The most recent one (the 1991 Act of the UPOV

Convention) provides that plant breeders are to be granted comprehensive rights – to the detriment of farmers' customary rights to save, re-use, exchange and sell seeds. It is still possible to make exceptions for small-scale farmers to enable them to save and re-use seeds, but only within strict limits. Exchange and sale of seeds among farmers is totally prohibited. All this applies to seeds protected with plant breeders' rights, and not to traditional varieties. The UPOV model has met with resistance from some countries and many organizations fearing that joining UPOV would be detrimental to the rights of farmers to save and share propagating material. The TRIPS Agreement provides only minimum standards, leaving enough scope for the development of other solutions more compatible with the demand for Farmers' Rights (see e.g. CIPR, 2002; Helfer, 2002; Correa, 1998; Leskien and Flitner, 1997; Andersen 2008, forthcoming). WTO member countries must therefore meet their TRIPS obligations regarding plant breeders' rights, while at the same time creating the necessary legal space for the realization of Farmers' Rights under the International Treaty. So the question becomes what room to manoeuvre is left to countries within the framework of their international obligations, to grant farmers the right to save, use, exchange and sell seeds.

An additional constraint to Farmers' Rights in many countries is the introduction of seed laws, which require seed certification as a condition for bringing seeds out on the market, and in some cases even as a condition for exchange among farmers. As traditional varieties are normally not genetically homogenous enough to meet the requirements for certification, these varieties are then excluded from the market. Often these seed laws also stipulate that only authorized seed shops are allowed to sell seeds and that all other exchange is prohibited (sometimes with exceptions for horticultural plants or certain other species). This is the case throughout most of Europe. Such legislation together with strict plant breeders' rights represent a serious obstacle to Farmers' Rights to save, use, exchange and sell seeds. What possibilities are there to make such laws more compatible with these customary rights of farmers – which are so crucial to the maintenance of agro-biodiversity for food security, today and in the future?

An ultimate objective from the perspective of Farmers' Rights would be to grant all such rights to farmers. This would mean that farmers would be entitled to save, use, exchange and sell farm-saved seed, whether from varieties protected with intellectual property rights or not. Other solutions would be needed in terms of compensation to plant breeders for their efforts and to solve the issue of plant health concerns. The ultimate success story would tell about a country where all these rights have been granted. And indeed, this is the case for farmers in India, as we will see in chapter 3. India stands out as the country with the most extensive legislation on this topic in the world. In most other countries with legislation on plant variety protection, Farmers' Rights are more limited, often circumscribed by acts of legislation, such as plant variety protection acts and regulations concerning seeds and seed certification. In such cases, a positive achievement can involve making a regulation less stringent or avoiding the adoption of a stricter regulation. This has happened in Norway, as we will see.

In countries where regulations are very strict and there seems little scope for achieving legal changes, the question is how to proceed. Are there possibilities to enable farmers to save, use, exchange and sell farm-saved seeds despite existing laws? The story from Spain's Basque country provides an example where such possibilities have been identified and utilized.

2.3 What are Successes Regarding Traditional Knowledge Related to Agro-biodiversity?

Traditional knowledge related to agro-biodiversity is vital to understanding the properties of plants, their uses and how to cultivate them. One measure to protect and promote Farmers' Rights, as set out in Article 9.2 (a) of the International Treaty, involves the protection of traditional knowledge relevant to plant genetic resources for food and agriculture. However, the International Treaty does not specify this suggestion in greater detail.

At the informal international consultation on Farmers' Rights in Lusaka in 2007, various examples were given and proposals offered on how national or local governments could support such initiatives (see Ministry of Agriculture and Food, Norway, 2007). Ideally, farmers' varieties and associated knowledge should be documented and seeds stored in gene banks, in order to ensure that these valuable resources are shared and do not become extinct. However, several participants expressed concern about the legal status of such collections. If readily available, seeds could also be picked up by commercial actors and used without obtaining prior informed consent from the farmers, or benefit-sharing arrangements. There is widespread concern that local communities might lose control of their plant genetic resources, particularly if modified forms of these resources are made subject to intellectual property rights. This situation points to the difficult dilemma between sharing seeds and traditional knowledge to avoid extinction – and protecting it against misappropriation. Participants at the Lusaka consultation also expressed regret that it is deemed necessary to show such caution with activities so vital for further availability of genetic resources and related knowledge due to the fear of misappropriation. This fear basically hampers conservation work aimed at enhancing farmers' varieties and strengthening their seed systems – which is crucial to the future of our plant genetic heritage.

In light of these central considerations, an ultimate goal for activities aimed at protecting traditional knowledge related to agro-biodiversity would be to facilitate documentation and free sharing of such knowledge among farmers – while also ensuring that no misappropriation takes place. The community seed registry at Bohol in the Philippines is an example in this regard.

One challenge in registering and documenting traditional varieties of plants lies in the genetic heterogeneity of these varieties. They are difficult to describe as varieties, and that is part of the problem when it comes to the fear of misappropriation. For a plant breeder to be granted plant variety protection, it is sufficient to discover a variety and develop it, for example in terms of genetic purification. If the prior existence of

the variety cannot be documented, farmers will often not be in position to challenge such a right. For that reason, developing improved methods of documenting traditional varieties can represent important achievements for protecting traditional knowledge against misappropriation – as well as against extinction, as we will see in an example from Peru.

In other parts of the world, particularly in the North, farmers do not fear misappropriation of seeds, as they themselves have not experienced losing any rights to seeds through misappropriation. In such countries, the problems are different: the farmers involved in maintaining agro-biodiversity are getting scarce – and they are ageing. What they fear is that their traditional knowledge will die with them. Here an important objective becomes to ensure that the knowledge does not vanish from history – a point exemplified by a story from Norway.

If all legislative constraints and fear of misappropriation could be solved, the issue of protecting traditional knowledge boils down to the question of how this knowledge can best be maintained and developed along with the conservation of crop genetic resources. Switzerland provides a promising and inspiring example in this regard with its already famous *ProSpecieRara*.

2.4 What are Successes Regarding Equitable Benefit Sharing?

The next measure to protect and promote Farmers' Rights, as suggested in the International Treaty, concerns the right to participate equitably in the sharing of benefits arising from the utilization of plant genetic resources for food and agriculture (Article 9.2 [b]). Again, the Treaty provides no further details as to what this might mean in practice. However, elsewhere in the Treaty, in Article 18 on the Multilateral System on Access and Benefit Sharing, the most important benefits are listed as follows: (1) facilitated access to plant genetic resources for food and agriculture; (2) the exchange of information; (3) access to and transfer of technology; (4) capacity-building; and (5) the sharing of monetary and other benefits arising from commercialization. Moreover, it is specified that benefits arising from the use of plant genetic resources for food and agriculture that are shared under the Multilateral System should flow primarily, directly and indirectly, to farmers in all countries, especially in developing countries and countries with economies in transition, who conserve and sustainably utilize plant genetic resources for food and agriculture.

Whereas these provisions all relate to the Multilateral System and not directly to the provisions on Farmers' Rights in the International Treaty, they reflect a line of thought on benefit sharing which is relevant for interpreting Article 9.2 (b) on benefit sharing as a measure to protect and promote Farmers' Rights. First, we see that there are many forms of benefit sharing, where monetary benefits comprise only one part. Second, we see that benefits are not only to be shared with those few farmers who happen to have plant varieties that are utilized by commercial breeding companies, but farmers in all countries engaged in the conservation and sustainable use of agro-biodiversity. This reflects an approach that has

been prevalent in the FAO ever since Farmers' Rights and benefit sharing were first recognized officially in 1989 (FAO Conference Resolution 5/89).²

In seeking to operationalize the concept of benefit sharing with regard to Farmers' Rights, and based on the 2005 international stakeholder survey on Farmers' Rights (Andersen, 2005 b), the following goals could apply:

- a. Ensuring that *incentive structures* in agriculture favour farmers who conserve and sustainably use plant genetic resources for food and agriculture at an equal footing with, or more than, farmers engaged in mono-culture production of genetically homogeneous plant varieties. Such incentive structures might include extension services to support farmers, loans on favourable conditions for the purchase of farm animals and other required input factors, facilitation of the marketing of products from diverse varieties, and other infrastructure measures. An ultimate goal here would be to have incentive structures designed within each of these categories, fully supporting farmers who conserve and sustainably use agro-biodiversity. This has not been the case in any country so far, and generally the incentive structures offered by the authorities are negative to farmers' customary practices. However, there exist many local-level initiatives that can provide good models of how incentive structures could be designed on a larger scale, as examples from the Philippines and Zimbabwe will show.
- b. Creating *reward and support systems* which enable farmers to benefit significantly from their contributions to the global genetic pool through added value to the crops they grow, improved livelihoods and increased income. There exist many small-scale programmes and projects that demonstrate the enormous potentials in this regard – such as community gene banks (example from India), dynamic conservation coupled with participatory plant breeding (example from France), participatory plant breeding and farmers' field schools (example from Nepal), capacity-building (example from Kenya) and various marketing activities (example from Peru). Today, these benefits are achieved mostly through initiatives taken by Non-Governmental Organizations (NGOs), Intergovernmental Organizations (IGOs) and some extension services, and they reach only a limited number of farmers. A major challenge is to scale up these activities so that all farmers engaged in the maintenance of agro-biodiversity can participate in the sharing of these benefits. Funding is a crucial bottleneck, and has always been: smoothly functioning funding mechanisms are essential at the national as well as the international levels. At the international level, the Multilateral System and the Funding Strategy under the International Treaty are

² It differs from the bilateral and direct approach to benefit-sharing under the CBD, where benefits are to be shared between purported 'owners' and buyers of the resources. To date, there are no documented examples of benefits accruing to farmers for the use of genetic resources for food and agriculture as a result of such bilateral agreements. Thus, this avenue has so far not proven promising, and will not be further discussed in this report.

meant to generate funds. At the national level – in addition to funds from these two international mechanisms, which seem unlikely to generate the amounts required – private public participation and development co-operation are possible avenues. Thus far, there have been few examples of national-level funding mechanisms.

- c. Ensuring *recognition of farmers' contributions* to the global genetic pool, to express that these contributions are valued by society. Here the question arises: is it conducive to the realization of Farmers' Rights to grant exclusive intellectual property rights to farmers for traditional varieties? There are strong opinions on both sides. Proponents claim that farmers should be granted intellectual property rights on an equal footing with breeders, as a matter of fairness. Opponents stress that such a system would create disincentives for farmers to share seeds in the expectation that these could become economically valuable. Such a development could be harmful to traditional seed systems, and could negatively affect farmers' rights to seeds. As there has been very little experience with exclusive intellectual property rights to farmers so far (except for a few individual acts of legislation), we will not go into this topic here. Another way to recognize farmers' contributions could be to provide some sort of remuneration for farmers who register varieties in seed catalogues for free use among other farmers, but also here no cases are known so far.³ A more usual way of granting recognition to farmers and farming communities is through awards for innovative practices, as has been done in several countries. We will have a look at the Norwegian Plant Heritage Award and at an extraordinary recipient of this award.

2.5 What are Successes Regarding Participation in Decision-making?

A fourth measure to protect and promote Farmers' Rights, as suggested in the International Treaty, concerns the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture (Article 9.2 [c]). Also here, the Treaty fails to provide specific details as to what this might mean in practice.

To operationalize this measure, we need to specify the relevant matters in which farmers have the right to participate. Also the forms of participation should be specified.

First of all, the implementation of Farmers' Rights under the International Treaty is a matter of where farmers' participation would logically be required – at the national as well as international level. Consultative processes of various kinds are relevant, and the better represented farmers are, the greater legitimacy the results would have, and the more likely it is that they will constitute effective measures for the realization of Farmers'

³This was suggested by Maria Scurrah at the Lusaka Consultation on Farmers' Rights.

Rights. In particular, it would be important that farmers involved in the management of plant genetic diversity participate in such processes, since they constitute the main target group of the International Treaty. So far there have been no known cases of comprehensive consultative processes to mainstream and improve legislation and policies towards the realization of Farmers' Rights. However, there are several examples of processes related to single acts of legislation.

The development of laws and regulations related to the management of plant genetic diversity in agriculture is clearly relevant for farmers' participation. Central laws and regulations are seed acts; seed certification regulations; other regulations regarding seed distribution and trade; plant variety protection laws; patent laws; bioprospecting laws or regulations; laws on the conservation and sustainable use of bio-diversity in general or crop genetic resources in particular (also regarding specific crops); and legislation on the rights of indigenous peoples and traditional knowledge. But also legislation regulating mainstream agriculture is relevant, as these may produce incentive structures which are detrimental to Farmers' Rights, without any compensating measures. Extensive use of hearings at various stages in the process is an important measure to ensure participation. It is particularly important to ensure that farmers engaged in the management of plant genetic diversity are aware of the processes, and are explicitly invited to participate through their organizations.

The implementation of laws and regulations is also relevant to farmers' participation. The ways in which these are interpreted and implemented are often decisive to the effects on farmers' management of these resources and thus also on their livelihoods. Normally, boards and institutions are established through such acts and regulations, to oversee and/or administer implementation. Farmers' representation and participation in such bodies is thus central, and here the process by which farmer members are selected is of crucial importance. If they are appointed by a cabinet minister, for example, they can hardly be said to represent the farmers of that country. If appointed by farmers through their own organizations, it is more likely that they can be regarded as true representatives of farmers – depending on the share of farmers they represent and the process by which they were appointed. Again it is vital to ensure the representation of farmers actually engaged in agro-biodiversity conservation. There are few typical success stories in this regard, if any.

Developing policies and programmes in agriculture, particularly as related to the management of plant genetic resources for food and agriculture, requires farmer participation. Ideally, policies and programmes targeted at farmers should take farmers' situations and perspectives as points of departure, based on their participation. There are probably examples of such participation, but no cases have been reported to us.

There are two important preconditions for increased participation of farmers in decision-making. First, decision-makers need to be aware of the important role played by farmers in conserving and developing plant genetic resources for food and agriculture, in order to understand why their participation is central. Second, farmers are often not in a position to

participate effectively in complicated decision-making processes without prior capacity-building. Central measures in this context are thus awareness-raising among decision-makers on the role of farmers in agro-biodiversity management, and capacity-building in farmers' organizations. Whereas there are few examples of the former, there are probably more of the latter, including the case presented in this report from Nepal. A case from Malawi illustrates how an assessment of the current situation with regard to Farmers' Rights coupled with capacity-building, can be a first step on the way towards realizing farmer participation in decision-making.

2.6 Presenting Success Stories on Farmers' Rights

In this report, the success stories will be presented in a basically analytical way. We will first establish a picture of what the successes involved and why they can be termed successes. We will then ask what the main achievements were and seek to get an idea of the number of farmers affected. We will also ask how the achievements affected the management of plant genetic resources for food and agriculture.

As a next step, we will look into the reasons for the successes, as well as the barriers encountered. In particular we will ask whether legislation in the country affected the success in any direction. We will also seek to find out whether other projects or activities served as models or inspiration. Finally we will try to elicit important lessons for others.

This is the basic outline for each presentation. Some aspects will have greater emphasis than others from story to story, based on the availability of information.

3 Success Stories from the Realization of Farmers' Rights to Save, Use, Exchange and Sell Farm-saved Seed

Farmers' Rights to save, use, exchange and sell farm-saved seed are increasingly affected by regulations on plant breeders' rights, seed laws and seed certification. Generally, such legislation is most restrictive in the North, and least so in Africa, while countries in Asia and Latin America can be placed somewhere in the middle. In the European Union, for example, farmers are not allowed to use farm-saved seed from protected varieties on their own holdings, or they must pay a licence fee to do so.

In this chapter we will see how India has dealt with these challenges with regard to plant variety protection by establishing the legal space necessary for farmers to maintain their traditional practices and innovation in agriculture. We will also see how one Northern European country, Norway, decided not to introduce the 1991 Act of the UPOV Convention – in an effort to ensure Farmers' Rights. Finally, we will see how a Basque seed network has enabled farmers to exchange seeds despite detrimental regulations in Spain.

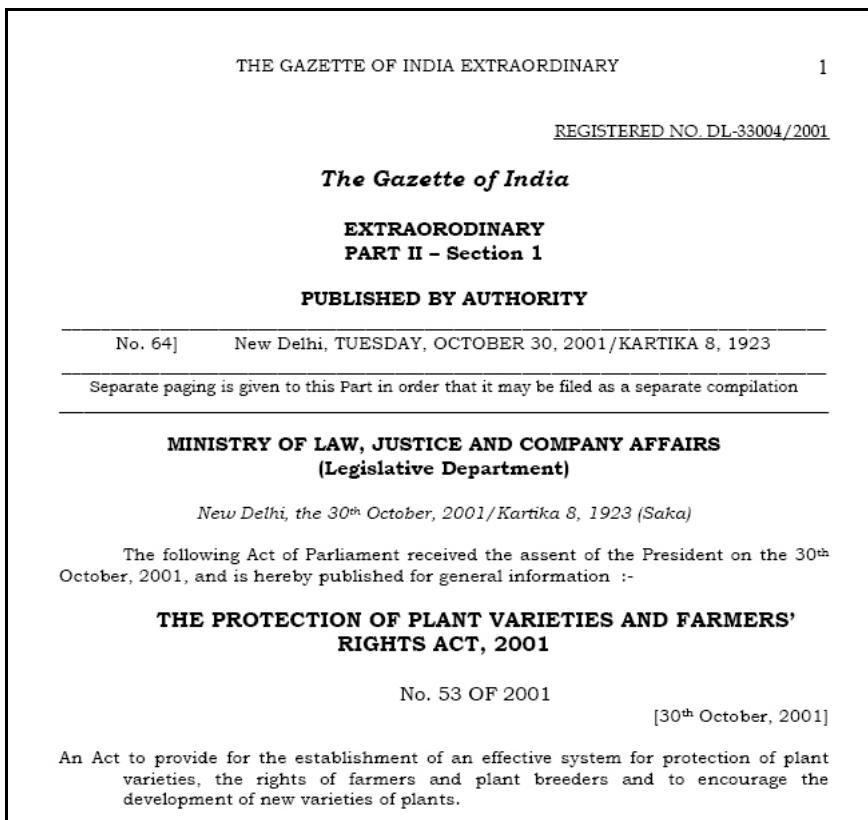
3.1 India's Protection of Plant Varieties and Farmers' Rights Act

India's Protection of Plant Varieties and Farmers' Rights Act of 2001 is the most far-reaching legislation with regard to establishing rights for farmers to save, use, exchange and sell farm-saved seed. A unique aspect of the 2001 Act is that it confers three concurrent rights – to breeders, to farmers and to researchers. When it comes to Farmers' Rights, the Act recognizes the farmer as cultivator, conserver and breeder. The Act establishes nine rights for farmers (Bala Ravi, 2004; Ramanna, 2006),⁴ of which the most important in this regard are the right to seed and the right to compensation for crop failure (Art. 39):

- The provisions on the right to seed specify that farmers are entitled to save, use, sow, re-sow, exchange, share and sell farm produce, including seeds of varieties protected by plant breeders' rights. They are, however, not allowed to sell seeds of protected varieties as branded packages. All the same, this stands as the most liberal legislation to date in this sphere, allowing farmers all the customary rights they previously enjoyed.
- The Act seeks to protect farmers from exaggerated claims by seed companies regarding the performance of their registered varieties. The breeder is obliged to disclose to farmers the performance of the variety under given conditions. If the material fails to perform

⁴The rights to (1) seed; (2) register varieties; (3) reward and recognition; (4) benefit sharing; (5) information and compensation for crop failure; (6) compensation for undisclosed use of traditional varieties; (7) adequate availability of registered material; (8) free services; and (9) protection from legal infringement in case of lack of awareness.

according to this information, farmers may claim compensation from the breeding company through the Authority set up to administer the Act.



The Protection of Plant Varieties and Farmers' Rights Act, 2001
Photo of original document

Not only does the 2001 Act protect the rights of farmers to save, use, exchange and sell farm-saved seed, it also seeks to ensure that these seeds are of good quality, or at least that farmers are adequately informed about the quality of seed they buy. In addition, safeguards are provided against innocent infringement by farmers (Bala Ravi, 2004; Ramanna, 2006). Farmers who unknowingly violate the rights of a breeder are not to be punished if they can prove that they were not aware of the existence of such a breeder's right (Art 42).

Ensuring Farmers' Rights to save, use, exchange and sell seed in this way must be seen as a success with regard to this component of Farmers' Rights, as these rights are basically fully ensured through the Act. Whether the provision on compensation in case of crop failure can be implemented in practice is another question, as there have been no cases so far. On the whole, India's Protection of Plant Varieties and Farmers' Rights Act is the most advanced in terms of Farmers' Rights to save use, exchange and sell seed to date. It applies to all farmers in India, and to all crop species. So far, twelve crop species have been brought under the scope of the Act, and more species will follow. The practice of saving, using, exchanging and selling seeds may well exist elsewhere, but India is the only country so far where a law has been passed establishing and securing Farmers' Rights to this extent.

How can this success be explained? First, India has been a central proponent of Farmers' Rights internationally, ever since the mid-1980s when Prof. M. S. Swaminathan chaired the FAO Conference, the highest body of the FAO. Prof. Swaminathan channelled the idea of Farmers' Rights into the international negotiations and has advocated these rights warmly ever since. He was also a key actor in framing the 2001 Act and ensuring that Farmers' Rights were properly dealt with in India (see also Swaminathan, 1994) When the bill was first proposed as a draft in 1993/1994, primarily in an effort to establish plant breeders' rights, it provoked massive protests (Ramanna, 2006: 10). It contained provisions on Farmers' Rights, but particularly farmers' organizations and NGOs found them to be too weak. The massive pressure they exercised over time proved successful, and after about five revisions the final bill with its rather strong protection of Farmers' Rights was adopted. Most of the major stakeholders who had lobbied for revisions ended up approving the final version (Ramanna, 2006:11).

The most important lesson for others is that it is possible to uphold Farmers' Rights to save, use, exchange and sell farm-saved seed, also within the framework of legislation on plant variety protection. India is a member of WTO and TRIPS and thus required to 'provide for the protection of plant varieties'. With its 2001 Act, the country complies with the provisions in the TRIPS Agreement on the protection of plant varieties.⁵ Other countries in the same position should therefore be able to pass similar laws without neglecting their obligations towards the TRIPS Agreement. It should be mentioned, however, that India has applied for UPOV membership on the basis of its 2001 Act. Although the application was made in 2002 the country has so far not been granted such membership, as its 2001 Act does not comply with the strict requirements of UPOV.

Furthermore; we note that massive and enduring advocacy can be required in order to succeed with demands for Farmers' Rights in the context of the development of plant variety protection laws. In India, M.S. Swaminathan Research Foundation has initiated, with the assistance of the government, a programme for capacity-building among farmers, grassroot democratic institutions, non-governmental and community organizations in order to enhance the implementation of Farmers' Rights as provided for in the the Protection of Plant Varieties and Farmers' Rights Act of 2001.⁶

3.2 Norway's 'No' to Stricter Plant Breeders' Rights⁷

In 2005, the Norwegian government decided to reject a bill proposing substantially stricter plant breeders' rights, which would enable Norwegian membership in UPOV based on its 1991 Act. Norway's commitment to Farmers' Rights was a main argument for turning down the bill.

⁵ India's Department of Industrial Policy and Promotion, <http://dipp.nic.in/ipr.htm>

⁶ Personal communication with S. Bala Ravi, M. S. Swaminathan Foundation, India, April 2008

⁷ The information in this chapter is based on Andersen 2008b (forthcoming).

UPOV was adopted in 1961 to ensure that member states would acknowledge the achievements of breeders of new plant varieties by making available to them exclusive property rights for a given period. There was a need to develop a system better suited than the existing patent system to the needs of plant breeders, to ensure continued access to plant varieties for breeding purposes. Therefore wide exemptions were to be allowed from the property rights for breeders and also for farmers. The Convention on which UPOV is based entered into force in 1968 and has been revised several times, each time with increasingly restricted exemptions for breeders and farmers. Today most member countries adhere to either the 1978 Act or the 1991 Act of UPOV. Norway is member of UPOV based on the 1978 Act and upholds its right to continue as a member on the basis of that Act.



*Farmer in a 'Svedjerug' field (traditional rye variety) in Norway
Photo: Norwegian Association of Biological-Dynamic Farmers*

There are important differences between the 1978 and the 1991 UPOV Acts with regard to coverage, period, scope and exemptions. The 1978

Act covers plant varieties of nationally defined species or genera, whereas the later Act covers plant varieties of all genera and species. The protection period is minimum 15 years under the first Act and minimum 20 years under the later Act. The protection scope under the 1978 Act is production for the purposes of commercial marketing, offering for sale and marketing of propagating material of a protected variety. To this, the 1991 Act adds, *inter alia*, exporting, importing, and stocking for the above purposes of the protected material. Breeders are free to use a protected variety to develop a new variety under the 1978 Act, but not if it requires repeated use of that variety. Under the 1991 Act this exemption is restricted, and it is not permitted to produce varieties which are essentially derived from a protected variety or which are not distinguishable from such a variety. Farmers are free to use their harvested material from a protected variety for any purpose under the 1978 Act. Under the later Act, however, national governments are entitled to decide whether farmers shall be allowed – within reasonable limits and safeguarding the legitimate interests of the rights holder – to reuse the harvest of protected varieties on their own land holdings without the authorization of the rights holder. Exchange or sale of such material is not allowed.

The Norwegian bill was put forward because the country's plant breeding industry had been privatized a few years earlier. The government then in power had expected that the breeding industry would gradually adapt to market forces, and that the costs could be covered through royalties on plant varieties. Therefore the breeding industry suggested changing the legislation on plant variety protection to conform to the UPOV Act of 1991, with Norway thereby becoming a member of UPOV'91. This would provide necessary but still not sufficient financial means for the small but vital plant breeding industry in the country. In January 2005, the bill was sent out on hearing. Firm protests came, particularly for two reasons: (1) If adopted, the new law would limit the customary rights of farmers to save, reuse and exchange farm-saved seeds and propagating material – which they still do to some extent. (2) It would transfer the costs to the Norwegian farmers, as they would have to buy propagating material for each season. For some species, small-scale farmers could reuse their farm-saved seeds or potatoes, but this would require payment of royalties. Even the breeding industry, while supporting the proposal, suggested further exemptions for farmers.

In September, a new Labour coalition government was elected, and an earlier board member of the largest farmers' union became Minister of Agriculture and Food. One of his first decisions was to reject the law proposal on UPOV'91 membership because, as he stated, it would be detrimental to Farmers' Rights. This caused great exultation among farmers. A few months later, the same minister ensured that financial allocations were made to the breeding industry in order to compensate for the lost income. As the breeding industry in Norway is small and hardly profitable, but still vital to the country's agriculture, this was an important move.

The decision to reject the bill, and thereby membership in UPOV '91, must be seen as a victory for Farmers' Rights in Norway. On the other hand, it does not mean that Norway has come even half as far as India in

this regard. Norway has adopted regulations from the European Union on seed certification and distribution which prohibit the exchange of seed and propagating material among farmers, to comply with its commitments to the European Economic Area (to which Norway, as a non-EU member, belongs). Neither the authorities, the breeders, nor other central stakeholders support this regulation,⁸ and consideration is being given to how this can be amended to be more in line with Farmers' Rights. Thus the Norwegian achievement must be said to be a partial success.

How can this (partial) success be explained? An important reason is probably that multinational seed corporations are almost non-existent in the Norwegian seed market, due to the very special agricultural conditions in the country (short growing season, but much daylight, even when it gets colder) and the limited seed market. Furthermore, the main breeding company is partly owned by a farmers' cooperative. Thus, there has been some, but not much, lobbying from the breeding industry in Norway. Furthermore, both the academic world and farmers' organizations were involved in the hearings, and could voice their analyses and concerns to the authorities. This process paved the way for the final no, when the new government came to power, with a new Minister of Agriculture and Food.

What can other countries learn from this experience? Countries belonging to the WTO are obliged to implement the TRIPS Agreement, and many argue that the best way of implementing its article 27.3(b) is to follow the model of the UPOV Convention. Some of these advocate compliance with the 1978 Act of the UPOV Convention and others with the 1991 Act. Those favouring the 1991 Act emphasize that this version provides the most extensive protection for plant breeders, whereas those endorsing the 1978 Act maintain that this was the version of UPOV in force when the TRIPS Agreement was adopted. In 1999, the International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL) arranged an international congress with representatives of more than 1000 seed companies, where they recommended that developing countries should adopt *sui generis* systems based on the 1991 Act (Crucible II Group, 2000: 92).

Norway's continued adherence to UPOV 1978 – while at the same time being a WTO member – shows that it is possible to comply with the provisions on intellectual property rights for plant varieties in the TRIPS Agreement on the basis of UPOV 1978. However, UPOV 1978 was closed for membership in 1998, and new memberships are possible only for UPOV 1991. Countries seeking to implement the provisions of the TRIPS Agreement pertaining to plant variety protection may use UPOV 1978 as a model, but will then not be accepted as members of UPOV. Nevertheless, the Norwegian experiences show that they would fulfil the requirements for compliance with the TRIPS agreement in this regard.

⁸Andersen, forthcoming, 2008b

3.3 Circumventing the Law in the Basque Country⁹

When the laws do not allow or facilitate the exchange and use of farm-saved seed, the options available to farmers might seem minimal. This example from the Basque Country in Spain will demonstrate how it is possible to achieve results with regard to the right to save, use, exchange and sell farm-saved seed even within such circumstances. The Basque Seed Network, officially a social movement, has managed to create operational space for such rights by circumventing the law.

The Basque Seed Network was started in 2001; as of 2007 it consisted of approximately 80 voluntary members. Many of these represent different organizations, such as farmer unions, while others are members in an individual capacity. The Network is aimed at raising awareness regarding farmers' seeds and Farmers' Rights. For this purpose it disseminates information, holds up for scrutiny national laws and proposals as well as international agreements with relevance for Farmers' Rights, facilitates information sharing regarding seed-saving activities, and advocates Farmers' Rights towards the Basque authorities and the general public. Inspired by the Australian Seed-Savers Handbook, the network has published its own seed-saving manual, as well as a seed catalogue. Members attend local markets and fairs to publicly exchange seed, encouraging people to use local seed varieties or buy food produced from local seed varieties. Exchange is also carried out through schools.

According to Helen Groome, member of the Basque Seed Network, the legislation derived from EU directives is severely detrimental to Farmers' Rights in the Basque Country. In general, it is not permitted to exchange or sell seeds among farmers, and this represents a serious constraint on all efforts at conserving and sustainably using plant genetic diversity in agriculture. According to the network, both legislation and agricultural policy have contributed to a loss of local seed varieties. In addition, local markets are gradually becoming smaller and scarcer, so local produce from local varieties has fewer outlets.

The main achievements of the activities of the Basque Seed Network have been greater acceptance and approval of farmers' customary practices of saving, using, and exchanging seed. For example, farmers who use, save and exchange local varieties are now met with greater understanding from various stakeholders, particularly local consumers, local environmentalist groups and the environmental department of the Basque Government. The Basque organic farming sector considers local varieties to be the basis for work in the organic sector. At a very local level, food producers and consumers have shown greater interest in the seed and produce from certain local varieties. Trainings in a dozen of schools every year contribute to this interest, along with the collaboration with other seed networks in Europe and elsewhere.

⁹The information in this sub-chapter was provided by Helen Groome, member of the Basque Seed Network, in response to the questionnaire survey on success stories from the realization of Farmers' Rights carried out in December 2007.

As a result of all these developments, there is heightened awareness of these issues in the local Basque Government, and a possibility that the Agricultural Department will take greater account of the question of local seeds. It has become clearer that the issues of Farmers' Rights, seeds and food sovereignty are closely interlinked.

The Basque Seed Network does not wish to label their achievements a success, as there is still a long way to go until Farmers' Rights are legally secured in the Basque Country. According to the network, the official Basque policy is still to rely on industrial and registered hybrid seeds, and they have yet to reach an agreement with the local government to lobby for change with regard to Farmers' Rights within higher-level institutions. In terms of achieving partial goals, however, the Basque Seed Network may serve as a good example of how otherwise detrimental policies can be approached from within. By showing the importance of farmers' vital contributions to the conservation and sustainable use of crop genetic diversity, the organization contributes to changing attitudes in this regard. The Basque Seed Network employs civil disobedience, in that it performs seed exchange publicly, and encourages farmers to follow their example – which is in turn increasingly regarded as legitimate, thanks to the information work of the organization. In this way, the Basque Seed Network paves the way for *de facto* acceptance of farmers' customary practices in broader circles and possibly including the authorities, thereby slowly undermining the detrimental laws.

How can these achievements be explained? In the opinion of Helen Groome, there is still considerable interest in food quality in the Basque Country, and thus also in local varieties. Also, the environmental movement understands the importance of farming based on local seeds. An important factor is that the Basque Seed Network not only provides information but actively makes seeds available, even if this is barely tolerated. Finally, the Basque Seed Network has been inspired by other seed networks and seed-saving groups, and their publications.

The Basque Seed Network coordinates its work with other seed networks and initiatives such as Grain (Genetic Resources Action International) and Vía Campesina. It works closely together with the Basque Farmers' Union, the Basque organic agriculture organizations, and Basque environmentalist organizations. The environmental department of the Basque Government is also involved, through financing some of the activities, and it is hoped that the network will be able to reach an agreement with the environmental department of the Gasteiz town council regarding allotments as well.

According to the Basque Seed Network, there are basically three lessons to be learned from their experiences. First, it is essential to keep close contact with farmers, as they are the backbone of the work. Furthermore, it is important to include as many stakeholders as possible in the network, to make it broad-based and thus facilitate awareness-raising. Finally, international coordination of the lobbying work is central, supporting the efforts at both the national and the local levels.

4 Success Stories on Traditional Knowledge Related to Farmers' Rights

Most countries in the South which have taken account of the protection of farmers' traditional knowledge relevant to Plant Genetic Resources for Food and Agriculture in their legislation have done so through legislation regarding the protection of biological diversity in general. Bangladesh, Bhutan, Chile, India and Vietnam are examples here. Several countries have provisions pertaining to the protection of farmers' traditional knowledge in their regulations on access to genetic resources – for example, Ethiopia and the Philippines. Some countries have included such protection in legislation pertaining to indigenous peoples, as in Peru. A few countries have relevant provisions in their legislation on plant variety protection, such as India. Nevertheless, little has been achieved in terms of protection with regard to implementing such legislation, and thus there are few successes to highlight in this report.

Whereas such legislation is often targeted at protection against misappropriation of traditional knowledge, there are a range of other measures, not subject to legislation, which aim at protecting traditional knowledge from extinction. Typically these concern documentation and maintenance of the knowledge and activities related to gene banking. Many projects and programmes are being carried out in the South, often by NGOs, and often supported by NGOs in the North. Also in the North there are various programmes of this type, frequently carried out by – or supported by – government agencies. In this sub-chapter we will look at examples from the Philippines, Peru, Norway and Switzerland.

4.1 Community Registry in the Philippines¹⁰

In the Philippines a local farmers' association has led the way in documenting and facilitating the sharing of the rice varieties grown and developed within the community and the associated knowledge. Many of these varieties have been developed through participatory plant breeding and are further improved every season. Farmers' knowledge concerns not only older varieties and practices, but also the innovations they carry out in their daily work, in selecting the best material for further propagation and improving varieties. Such knowledge is valuable, but it is not always easy to know how to ensure that it can be shared, while at the same time safeguarding it against misappropriation. Throughout most of agricultural history the idea that seeds and other propagation material are part of the 'common heritage of mankind' has dominated farming and breeding practices. This open access to plant genetic resources (PGR) was a central factor in the spread and development of crops globally and was also instrumental in laying the foundations for scientific research and the development of modern high-yielding varieties in the last century. It was

¹⁰This presentation is based on an article by Cisenio Salces and SEARICE (CBDC Bohol, Philippines) in a publication by the Community Biodiversity and Conservation Programme, 2006: 89–92, and the introduction by Paul Pedro I. Borja to the chapter Community Driven Policy Advocacy in the same publication, p 85.

this development that paved the way for the commercial seed industry, and with it, the demands for private property rights to plant genetic resources. As a response to this, efforts were made to ensure that sharing of knowledge and seeds could still take place. However, as we saw with the cataloguing of potatoes in Peru, it was in this example from the Philippines also deemed necessary to take steps to protect the knowledge and varieties against misappropriation.



Ricefields.
Photo: SXC

As a WTO member and signatory to the TRIPS agreement, the Philippines are required to fulfil the obligations of Article 27.3(b) and offer some sort of protection for plant varieties. When plant variety protection was introduced in the Philippines in 2002 with the Plant Variety Protection Act (PVP act), as a *sui generis* system in compliance with TRIPS, many small-scale farmers engaged in participatory plant breeding (PPB) reacted, fearing – among other things – that their innovations could be misappropriated by breeding companies. As a collective response to the Act, the Campagao Farmers' Production and Research Association (CFPRA) of Bilar on the island of Bohol decided to establish a community registry, as the community's way of asserting control over and access to seeds and propagating material. This was done in collaboration with the Philippines-based Southeast Asia Regional Initiatives for Community Empowerment (SEARICE), after a SEARICE information and education campaign aimed at understanding the implications of the law.

Following a series of group meetings and discussions, a community affidavit was formulated declaring that all rice varieties maintained in the community should be protected against the PVP Act, and that seeds of these varieties should remain freely accessible to farmers wishing to use, sell, save or exchange them with other farmers. The affidavit included a list of names and characteristics of rice varieties that the community had been using and developing since their PPB efforts started. It was supplemented by a resolution detailing the process of how entries in the registry should be updated every cropping season. After successful lobbying by the CFPRA, the local village council expressed its full support of the farmers' efforts and the community affidavit. An inventory of crop varieties was produced, a map of crop diversity developed, and material was collected for *ex situ* conservation. SEARICE project staff assisted the farmers in identifying and documenting the rice varieties used in the community.

By registering their varieties in this way, and continually updating the list, the farmers are protecting these varieties from misappropriation by commercial actors. For plant variety protection to be granted, the applicant must demonstrate that the variety in question is new. Varieties already registered in this way cannot be claimed as new inventions by others. Continual updating is therefore essential.

A special feature of the community registry project is the collaboration with the Central Visayas State College of Agriculture, Forestry and Technology, which provided back-up storage and documentation of the farmers' rice varieties, including those in the community registry. The College also provides free access for farmers to the materials stored in its seed bank and disseminates information on the characteristics of these materials through rice catalogues.

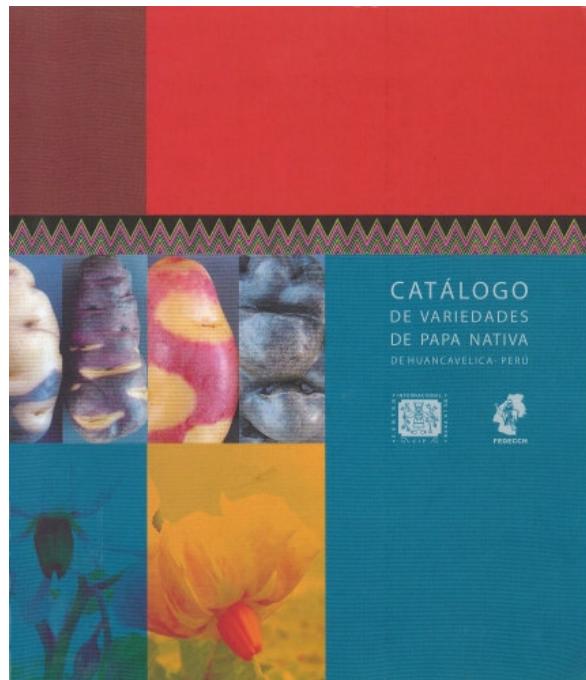
In the future, the CFPRA will work to increase the awareness surrounding the community registry and farmers' seeds at the levels of village, municipality and province. They also plan on lobbying the municipality for recognition of the CFPRA Community Registry, and work towards getting Farmers' Rights recognized at the provincial and national level.

The major achievement of the CFPRA project is that the material and the documented knowledge related to it remain in the public domain and can be widely shared in the spirit of 'common heritage'; while at the same time there are guarantees to protect against misappropriation. Among the main factors explaining the success we find the farmer-scientist collaboration, including the facilities of a gene bank, and the support of an experienced NGO like SEARICE. The most important lesson is probably that farmers do not need to fear sharing their seeds and knowledge if they take appropriate steps and register their varieties and associated information.

4.2 Cataloguing Potatoes and Traditional Knowledge in Peru¹¹

Experience from Peru shows that the seed quality and performance of farmers' varieties can be superior to that of certified propagating material. During farmer field school demonstrations of certified propagating material, farmers' material has often proven equally good as or better than the certified material. This shows that genetic diversity is particularly important for livelihoods in rural areas, and with it the traditional knowledge on its background, growing conditions, uses and traditions. However, the seed laws of Peru prohibit the sales of non-certified seed and propagating material, and the requirements for certification are generally not applicable to indigenous varieties. Thus, in practice it is not allowed to sell such propagating material on a commercial basis. This constitutes a threat to crop diversity in the Andes, a major centre of potato genetic diversity.

¹¹ The information in this sub-chapter is derived from a contribution by Maria Scurrah de Mayer, President of the Grupo Yanapai in Peru, at the Lusaka Consultation on Farmers' Rights (Norwegian Ministry of Agriculture and Food, 2007: 89, 25–26 and 29). In addition Maria Scurrah de Mayer, Stef de Haan and Manuel Ruiz Muller made comments on and contributed to the story.



*The Peruvian Potato Catalogue
Photo of book cover*

Andean indigenous knowledge is also eroding, for various reasons: government laws such as compulsory schooling, which takes the children off the farms; food aid that changes eating habits and thus actually increases malnutrition; aid in the form of agricultural chemicals, and the distribution of improved propagating material.

How can the erosion of traditional knowledge related to crops be halted? Such knowledge is typically oral, with many aspects concerning practices that are hard to record. Farmers often have unique and highly diverse seed mixtures adapted to the specific environmental conditions, creating crop resilience for biotic and abiotic stresses. They can make minor adjustments in their practices for each field, for changing situations, from year to year. All this is difficult to put down in documentation. The best way to protect indigenous knowledge is thus probably to preserve it alive and in practice, strengthening the aspects that make it viable.

On the other hand, cataloguing genetic diversity can serve as a means of strengthening the living traditional knowledge. In Huancavelica, Peru, a unique project has been carried out in close collaboration with farmers, to document their potato varieties and related knowledge. The project has resulted in an impressive catalogue co-published by Centro Internacional de la Papa (CIP International Potato Centre) and La Federación Departamental de Comunidades Campesinas, under the coordination of Stef de Haan (Centro Internacional de la Papa, 2006). The catalogue takes as its point of departure the communities of participating farmers, and describes the geographical and cultural contexts. It gives due recognition to the participating farming families, presenting them with names, brief interviews and photos. The uniqueness of the catalogue (in addition to its exemplary participatory approach and its beauty in terms of photos and descriptions) lies in the methodology of describing farmers' varieties. As

these varieties are highly heterogeneous genetically, it is often a great challenge to fit them into classical taxonomy and reveal their distinctness. The initiators have designed a method in the interface between farmers' own descriptions and modern molecular fingerprinting technology (which is considered a relatively simple technology). This approach grasps both the living knowledge around the varieties and the specifics of their genetics.

The federation of Andean communities of Huancavelica has signed a clause of 'Informed Consent', by which the farmers have agreed to put their varieties in the catalogue, knowing that this then makes the knowledge 'public'. This is a legal clause which the farmers consider extremely important, as it follows the Peruvian law that protects indigenous knowledge (Law No. 27811). Once in the catalogue, a variety cannot be misappropriated by third parties, due to this clause. Cataloguing in this way is a highly promising approach to protecting traditional knowledge from extinction and ensuring its further use.

As such, the method is in itself a major achievement. Probably equally important is the fact that such a process and the catalogue itself empower farmers considerably. They had central responsibilities in the project, and they see that their varieties and their knowledge are being recognized and valued. This is an important contribution to increasing the appreciation of traditional varieties and knowledge among the farmers themselves and in the region.

The success of this project is first and foremost a result of farmer/scientist collaboration, where scientists respected the local knowledge to the extent that they became involved in searching for genuinely new methods to record it. Also, it was important that a legal expert was involved (Manuel Ruiz Muller, Director of the Peruvian Society for Environmental Law, SPDA), in order to establish the legal clause preventing misappropriation. Legal council would most likely also be useful for other communities or organizations involved in conserving traditional knowledge. Another important lesson is that participatory cataloguing can contribute to strengthening traditional knowledge, and enabling it to be shared more widely among farmers.

4.3 Rediscovering Traditional Knowledge in Norway¹²

Documenting and sharing of traditional knowledge is not always a matter of ensuring farmers continued rights and protection against misappropriation. In some cases, it is more of a question of protecting existing knowledge against extinction. In Norway, most farmers buy seeds from commercial breeding companies. Very few are still engaged in maintaining agro-biodiversity, using their comprehensive knowledge of seed selection, cultivation and innovation. For those who do follow this path,

¹²The information in this sub-chapter is derived from a questionnaire completed by Erik Evenrud, leader of the Norwegian Association of Biological-Dynamic Farmers, and Johan Swärd of the Norwegian Ecological Grain Growers' Association.

the motivation is what they regard as the decreasing nutritional value of mainstream agricultural products, the increase in food intolerances and allergies among people and the general uniformity and flattening of taste among the dominant varieties. For these farmers, misappropriation is currently not an issue. Breeding companies do not seem interested in their varieties, and they know of no cases of misappropriation. The urgent issue in Norway is how to ensure that what traditional knowledge still remains in connection with the cultivation of crop genetic diversity does not erode further. To that end, some farmers and their organizations have developed a loosely structured project they call 'Cultivated Grain' (*kulturkorn*).



Johan Swärd and a group of Norwegian farmers on a theme day at Aschim Farm
Photo: Norwegian Association of Biological-Dynamic Farmers

The project and its associated activities have to a great extent been initiated and developed by farmers themselves. It all began with one farmer, Johan Swärd. He had worked for many years testing old varieties of grain in order to identify promising properties. This started out as a hobby, but increasingly it became apparent that some of the varieties were promising also in a livelihood perspective, as they had properties of value for ecological agriculture. Swärd therefore started to multiply and breed grain varieties systematically, and established a community gene bank with the aim of distributing these varieties to other farmers. His efforts have gained the support of the Norwegian authorities, and he is working closely with the Norwegian Association of Biological-Dynamic Farmers, the Norwegian Ecological Grain Growers' Association and Norwegian extension services for ecological agriculture (FABIO). Several other partners are also involved in the project.

Johan Swärd was inspired by the Swedish pioneer Hans Larsson, who has collected old varieties of grain from the Nordic countries and other European countries for a long time. It was he who coined the term

'kulturmorn' and the Norwegian network has entered into a close collaboration with the network of farmers that Larsson has built up in Sweden. Swärd is also collaborating with Jens Ussing, a Danish baker who for the last two decades has specialized in the breeding of grain with high nutritional value and developing recipes for bread and other products using older varieties of grain. Efforts like these are very important in a market perspective; moreover, the continued breeding and maintenance of older grain varieties is more likely to succeed if there is interest in the market.

The main goals of the 'Cultivated Grain' project are to breed and disseminate their varieties, to provide information to other stakeholders and to society at large, to maintain biological diversity within northern agriculture, and to establish a Norwegian gene bank at Swärd's farm. With his farm and its impressive diversity of grain, Johan Swärd seeks to spread information and awareness on the importance of genetic diversity for ecological agriculture as well as nutrition. He is establishing a broadly based network of farmers, researchers, consumers and other stakeholders, with regular gatherings, and through which the initiative can grow and knowledge be shared. In addition to creating a Norwegian network of farmers and researchers, collaboration with a wider Nordic network is seen as central. So far approximately 10 farmers have become directly involved in Norway, and 70 farmers altogether from the Nordic countries.

A core problem for the project is that it is actually not permitted to share seeds in Norway. This seed regulation was introduced in 2004, long after Johan Swärd had started his activities. Working on an idealistic basis, Johan Swärd now finds himself technically criminalized. It was not the intention of Norwegian authorities to halt activities such as this, and thus the regulation is not being enforced. However, the situation is far from ideal. The two organizations involved are therefore actively engaged in advocacy work towards the authorities to get this regulation changed. Because the knowledge level among the general public is deemed to be rather low, the network also sees it as crucial to bring the issues of seed control and Farmers' Rights onto the agenda as part of their efforts at generating change. In their work against detrimental legislation, the network is also aiming to join forces with NGOs.

The main achievements of 'Cultivated Grain' is that traditional knowledge related to older varieties of grain has been widely disseminated, resulting in a new drive for the use of these varieties and their dissemination among farmers. In a country like Norway, where plant breeders and researchers have almost all the say with regard to the development and introduction of new varieties, it is also a major achievement that these activities have all been established by farmers.

The main explanation for the success is the urgency of the matter: the rapid loss of traditional knowledge – combined with increased awareness of the need to produce grain with better nutritional values, using and conserving crop genetic diversity. According to the network, their strength lies in the practical work being done by a well-functioning organization as well as in the efforts to create markets for their products.

A central lesson is that it is vital to ensure support to individuals with a personal commitment in this regard. Furthermore, networks are crucial. Ideally, such networks should include participants from the entire food chain, from the field to the table, including consumers, and including relevant stakeholder institutions and researchers. Strong networks can provide the necessary support, while also serving as an important basis for making production economically viable. Gathering and dissemination of knowledge is important, as is patience. Particularly with regard to political change, the networks underline the importance of being patient, making haste slowly, and always keeping the long-term perspectives in mind.

4.4 *In situ* Conservation in Switzerland¹³



One of the many gardens where old varieties are grown
Photo: ProSpecieRara

Traditional knowledge can also be protected through *in situ* conservation of agro-biodiversity. By ensuring that traditional varieties of plants are grown and maintained, the knowledge associated with and necessary for the full utilization of these varieties is also conserved for future generations. In addition, protecting traditional knowledge by keeping it alive in this manner is a guarantee for its continued evolution. The following example from Switzerland will show how one organization, ProSpecieRara, has been successful in maintaining an impressive collection of varieties and the related traditional knowledge by focusing on *in situ* conservation.

ProSpecieRara, founded in 1982, works on conserving and maintaining a wide selection of plant varieties. With an emphasis on *in situ* conserva-

¹³The information in this sub-chapter is derived from a questionnaire completed by Béla Bartha, Director of ProSpecieRara.

tion, they have succeeded in building up a network of decentralized collections where different varieties are grown in fields and gardens throughout Switzerland. This network consists of about 1000 people who maintain and develop the varieties on their farms or in their gardens, and through a database that traces seed samples and keeps track of where the different varieties are being grown, the central office manages and controls the propagation and maintenance of the collection. The database has from 2002 been complemented by a labelling system that provides the involved farmers and gardeners with an extra incentive to ensure the continued quality of the varieties they grow. This labelling system can also be employed as a marketing tool, and currently about 150 farmers use it for this purpose.

Through their network of farmers and gardeners, comprising approximately 2500 individuals and institutions, ProSpecieRara has managed to conserve a collection of about 900 vegetable varieties, 1800 fruit varieties and 700 berry accessions. They are also building a collection of about 1000 ornamental plants. In addition to the farmers and gardeners who are part of the network maintaining and developing this diversity, ProSpecieRara also works together with genebanks, research institutions, food chains, organic farmers, breeder organizations and the Swiss Commission for the Conservation of Cultivated Plants. For inspiration, ProSpecieRara has looked to Garden Organic (the UK) and Arche Noah (Austria). To increase awareness about the importance of keeping alive the biodiversity of agriculture and associated traditional knowledge, ProSpecieRara has opened up part of their network of farms, gardens and orchards to the public. Every year about 300 000 people visit these places and learn about agricultural biodiversity. The organization also disseminates information, and contributes further to the preservation of traditional knowledge by collecting and publishing it in books. As a result of these activities, about 25 % of the Swiss population are now familiar with the name ProSpecieRara and its meaning.

In Switzerland, the sales and distribution of non-registered varieties are actually permitted. This provides organizations like ProSpecieRara with the legal space they need to carry out conservation projects that involve circulation of propagation material from traditional varieties. However, the varieties have to be registered on a conservation varieties list, and this type of registration also requires the varieties to demonstrate certain qualities. Compared to ordinary seed certification, it is nonetheless preferable and more suited to the conservation of traditional varieties.

A main achievement is the comprehensive collection of traditional varieties conserved and maintained *in situ*. In this way, ProSpecieRara is also conserving the traditional knowledge regarding the properties, uses and cultivation of the different varieties. The large number of people and institutions that are involved in the conservation work is both a part of and a reason for the success. Together, this network and the decentralized *in situ* approach of ProSpecieRara constitute the main reason for their accomplishments. The labelling system and the increased awareness among the general population concerning agricultural biodiversity have also been central and provided the farmers and gardeners participating in the project with additional incentives.

An important lesson from this example is that traditional knowledge can be preserved by *in situ* conservation. This need not be at the expense of written documentation: it is possible to pursue both options. *In situ* conservation is valuable because it has the added advantage of promoting the co-evolution of traditional knowledge and agro-biodiversity. Organizations involved in similar work might also note how ProSpecieRara has managed to generate interest among the public in general by welcoming them to a collection of the farms and gardens partaking in the conservation activities. Letting people experience agro-biodiversity on an actual farm might prove a strategy well suited for convincing the majority of the populations in northern countries, who tend to live their lives separated from the production of the food they consume, of the importance of conserving agro-biodiversity and traditional knowledge. The networking ProSpecieRara engaged in and their collaboration with different actors has also proven beneficial to the realization of Farmers' Rights.

5 Success Stories on Benefit-sharing Measures

In the South, policies on benefit sharing – if any – are provided in laws and regulations on access to biological resources, sometimes in legislation on the protection of biological diversity, and – in the case of India – in its plant variety protection law. Countries with legislation on indigenous peoples' rights often include provisions on benefit sharing in these laws, which then also cover indigenous farmers. Despite all these efforts, so far there have been no examples of direct benefit sharing between providers and receivers of plant genetic resources for food and agriculture resulting from such legislation.

There are, however, other ways of sharing benefits, which are mostly not provided for in legislation, and often implemented by or through NGOs. Farmers generally participate more or less in the sharing of *non-monetary* benefits. In the international stakeholder survey carried out in 2005 (Andersen, 2005), the most frequently mentioned non-monetary benefits were:

- access to seeds and propagating material, and related information
- participation in the definition of breeding goals
- participatory plant breeding in collaboration between farmers and scientists
- strengthening of farmers' seed systems
- conservation activities, including local gene banks
- enhanced utilization of farmers' varieties, including market access.

The 2005 survey showed that – for many reasons – benefit sharing is more promising when the point of departure is the farming communities that actually contribute to the maintenance of plant genetic diversity. In this sub-chapter, we will see a range of examples of how benefit sharing can be promoted, from the Philippines, Zimbabwe, India, France, Nepal, Kenya, Peru and Norway.

5.1 Creating Incentive Structures from the Ground in the Philippines¹⁴

Benefit sharing need not be initiated by the state and carried out through legislative reforms. NGOs can, as will be seen from the example below from the Philippines, be quite successful in carrying out benefit sharing schemes in cooperation with farmers. This example demonstrates how agro-biodiversity can be maintained and increased through such benefit-sharing mechanisms as participatory plant breeding, distribution of traditional varieties and related information, and conservation activities.

¹⁴This presentation is based on an article by Wilhelmina R. Pelegrina, Executive Director of SEARICE, the Philippines, published in context of the Growing Diversity Project in 2002. Available at: www.grain.org/gd/en/case-studies/cases/fulltext/as-full-philippines-searice-en.cfm



Ricefield. Photo: SXC

Agricultural production in the Philippines is a complex system. Land tenancy remains a major stumbling block, as major decisions, inputs and harvests are still in the control of a few landlords. Price control and control of inputs and processing are in the hands of the traders, and small-scale farmers are basically market tenants. Because the market economy now drives a significant portion of the agricultural sector, resource-poor farmers have come to focus on crops with market value. This shift towards production for sale has changed the pattern of varieties being grown. Due to the loss of agro-biodiversity and traditional knowledge, caused by the introduction of commercial varieties, farmers can also be said to have become technology tenants in many areas because of the dependency created by new technology.

In this context, SEARICE was founded in the 1970s as a social justice network composed of individuals and institutions from the Southeast Asia region, and focused on policy advocacy and concrete community work. The community interventions of SEARICE aim especially at the conservation, development and use of community plant genetic resources. This work started in 1989 and has included activities in community seed banking, variety selection, participatory plant breeding, and seed rehabilitation. Production issues like pest management, soil management, diversification, conversion towards sustainable agriculture, and on-farm research have also been addressed. Facilitating market access, networking and policy advocacy have complemented the activities. These can all be seen as examples of benefit sharing where the focus is on the farming communities that contribute to the maintenance of plant genetic diversity. Many of the non-monetary types of benefits can be recognized as part of the activities, including conservation, participatory plant breeding, enhanced utilization of farmers' varieties and access to propagating material.

SEARICE has employed various approaches and methodologies in organizing people and in strengthening their capabilities as individuals and institutions involved in managing local agro-biodiversity. A series of national consultations and workshops with stakeholders have been conducted, and a curatorship approach where farmers were made the curators and custodians of traditional seeds was employed to re-introduce the use of traditional varieties. This approach proved most successful in the marginal uplands where no improved high-yielding varieties had been introduced and where most production is still for home consumption. To increase the success also in other areas, the distribution of traditional varieties was coupled with efforts to change the production system. SEARICE also started to use the Farmers' Field School (FFS) approach, and this, along with discussions, sharing and hands-on field experiments, has served to strengthen the farmers' capacities to conduct their own crop improvement research and gain experimental knowledge.

SEARICE does not focus solely on rice but also works with root crops and corn conservation. Its work with root crops consists mainly of distributing propagating material to interested farmers and possible curators, and is oriented more to conservation than improvement.

The main success of SEARICE's community intervention is increased agro-biodiversity, specifically increasing the number of crops and varieties developed by farmers and planted in their fields. In 1998, 80% of the farms in the project site in Cotobato were using farmers' selections, with only 20% using modern varieties. This represents an increase from 45% in 1992. For upland varieties, 61% (175 out of 288 varieties distributed) were still used and maintained by farmers. In the lowlands however, only 19% (16 out of 86 varieties distributed) were maintained. In addition there are approx. 115 selections developed by farmers through participatory plant breeding. These achievements were made thanks to the creation of incentive structures from the ground, in a collaboration involving farmers, an NGO and scientists. The challenge is to combine the work on the ground with policy advocacy work and lobbying for policy reforms.

The main lesson for other actors interested in achieving the same type of success is that it is not necessary to wait for the authorities to impose incentive structures that favour farmers who conserve and sustainably use plant genetic resources. They can be shaped and introduced from below, in areas where the initiative is taken – if the institutional and professional capacity is at hand.

5.2 Community Seed Fairs in Zimbabwe¹⁵

The following example from Zimbabwe demonstrates how benefit sharing can be promoted through organizing community seed fairs. Once again it is an NGO that is the initiator of the project, and which through

¹⁵This presentation is based on information from an article by the Community Technology Development Trust (CTDT), Zimbabwe, presented in CBDC, 2006: 40–43.

the cooperation with and empowerment of farmers has succeeded in advancing several non-monetary forms of benefit sharing, among them access to propagation material and related information, conservation of genetic diversity and strengthening of community seed systems.



Seed Fair in Zimbabwe

Photo: Development Fund

Community seed systems are important in relation to on-farm crop diversity and for ensuring the local seed requirements of farmers. In developing countries, these local seed systems are traditionally strengthened by seed exchanges among farmers and communities, involving the exchange not only of planting material but also of the knowledge associated with it. This ensures that crop diversity is maintained and increased in farmers' fields. However, in recent years, local seed systems have in many places been put at risk by economic, environmental and socio-political factors that have endangered the food and seed self-sufficiency essential to the regeneration of local agro-ecosystems. In Zimbabwe for instance, farming communities in many areas are threatened by drought, increased commercialization and private-sector intervention in seed production, all of which result in narrowing down the genetic diversity in communities. In seeking to address this situation, the Community Technology Development Trust (CTDT) has used community seed fairs as an approach to facilitate access to and use of diverse and locally produced seeds to promote local seed security.

The seed fairs are organized and managed by farmers. The local extension service may offer support and facilitating organizations guarantee the prizes for the competitions, but it is the farmers that draft the programme of activities, and are responsible for the logistics and the venue. Seed fairs are usually set up by first identifying a farmers' organization which is willing to lead the planning and conduct the seed fair. Farmers then exhibit all their crop varieties on individual stands. The decision of whom to invite as guests is made by the farmers themselves. Judges might be sought from any relevant institution, such as the district agriculture office or an NGO, but the farmers define their own judgement criteria. The fair is held for a day, and both crops and livestock can be

displayed. The products can be displayed in any way desired: sorghum, for example, might be displayed as grain, seed or product.

Community seed fairs provide farmers with the opportunity to exchange knowledge and experiences on the old as well as the new crops they grow and to generate information about local-level seed-production capacities. They also enable the trading, exchange and sharing of propagation material among farmers and the creation of market linkages. Because of the seed fairs, it is possible to evaluate the level of diversity within the area and to assess and monitor the genetic erosion as well as seed availability before the next cropping season. In addition, healthy and productive competition helps to instil confidence among the farmers. Finally, the seed fairs allow farmers' organizations to showcase their capabilities and build social interaction.

CTDT has so far concentrated its work in areas of communal land where subsistence agriculture is practised in the districts of Tsholotsho and Uzumba Maramba Pfungwe. The aim of the seed fairs has been to promote crop and varietal diversity and seed security in these districts. The community seed fairs are arranged annually and are attended by more than 2000 farmers each year. They have been welcomed by the Minister of Agriculture in Zimbabwe, especially for their ability to make available seeds not found in the formal market. Every year increased diversity can be observed at the seed fairs. This steadily increasing diversity provides farmers with new strands to be included in their participatory plant breeding and participatory variety selection. A central aspect of this is the sharing of information regarding varietal characteristics that takes place, enabling more informed decisions in the breeding work.

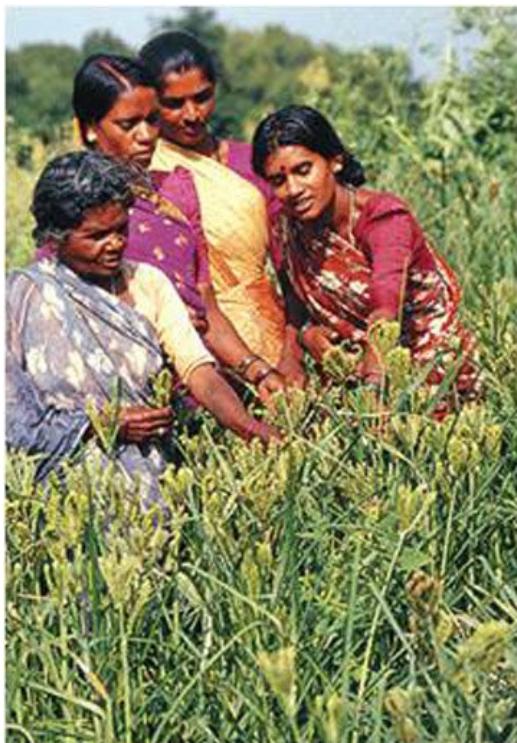
Community seed fairs can be viewed as a step on the way to achieving sustainable utilization of agro-biodiversity by creating incentives from the ground. The main achievement of the seed fairs is increased crop genetic diversity at the community level and greater capacity among farmers to judge and select plants and thus to make informed decisions in breeding. This example from Zimbabwe shows that it is possible for an NGO to succeed with benefit sharing of this kind by initiating something as 'simple' as seed fairs, working closely together with the farmers themselves and delegating much of the responsibility to them.

5.3 Community Gene Banking and On-farm Conservation in India¹⁶

Conservation efforts in relation to plant genetic resources are usually divided into two categories, *in situ* conservation and *ex situ* conservation.

¹⁶ The information in this sub-chapter is largely derived from an article written by Vanaja Ramprasad for the Growing Diversity Project, completed 2002, and available at: www.grain.org/gd/en/case-studies/cases/fulltext/as-full-india-en.cfm. Dr. Ramprasad has also been helpful and provided us with the GREEN Foundation publication 'Seed to Food. From subsistence to surplus' from 2008 which contained useful information.

In this example of benefit sharing from India, *in situ*, or on-farm, conservation is used as a means to revive old varieties and increase seed diversity, thus rewarding and supporting farmers' contributions.



Selecting the best varieties
Photo: Green Foundation

Traditional agriculture in India is one of the oldest and most advanced forms of food production. It has proved to be inherently sustainable over centuries and rates high in terms of total productivity, self-reliance, diversity and the depth of its indigenous knowledge. With the advent of the green revolution however, this changed. Together with the modernization of agriculture, changes in agricultural practices and cropping patterns, the green revolution led to the erosion of genetic diversity. It was in this context that Genetic Resource Ecology Energy Nutrition Foundation (GREEN) initiated a people's movement for *in situ* conservation aimed at moving beyond the limited scope of gene banks.

Working in the dry land regions of southern India, GREEN Foundation took the initiative to involve farmers in on-farm conservation of the subsistence crops of the area. Building farmer-based community seed-supply systems and campaigning for Farmers' Rights to biodiversity have been the main focus of this work, where a basic idea has been that on-farm conservation and sustainable agriculture could benefit from a partnership involving farmers, scientists and consumers.

The on-farm conservation efforts consist of interaction with individual farmers and community farms; focus on community seed supply, training of farmers as key seed keepers and the forming of an association of farmers to take the movement forward. Sustainable agricultural practices form a major component of the training. Since women play a major role

in the conservation of diversity at the farm level, the project took this into account when designing its strategy. It is women who decide on the amount of seed and selections of varieties to be stored and the various ways of storing them, and a gender-sensitive approach was therefore recognized as necessary.

One of the means employed by GREEN Foundation to conserve and revive old varieties, has been community seed banks. These community seed banks are low-cost, low-technology systems owned and managed by the local communities. The concept involves two major components: a seed store and germplasm repository for local crop improvement, and a field gene bank. Consisting of land-race material grown locally, the seed store becomes a backup to the local market networks where farmers normally exchange seeds and information. These can be crucial in ensuring a sustained supply of locally adapted seeds, thereby averting the potential loss of genetic diversity. Not only do the seed banks serve as repositories for seed, but they also function as places where the community can interact, exchange seeds and share information. As of 2008 there are 25 GREEN-initiated community seed banks; on average they have 15 to 20 members, most of whom are women. Together these banks conserve some 43 varieties of finger millet, 84 varieties of paddy, 24 sorghum varieties, 44 minor millets, 53 pulses, 14 oilseeds, 4 wheat varieties and 116 vegetable seeds.

From the beginning it has been important to GREEN Foundation to ensure through capacity-building that the farmers are able to carry the work forward themselves. As an important step towards seed conservation and the creation of a stable seed system, a participatory breeding programme was initiated to involve farmers in the variety-selection process. Farmers determined their selection criteria, for example the level of resistance to pests and diseases, drought tolerance or other plant characteristics, and then on-farm trials were performed before wider dissemination. Through these experiments, the farmers have witnessed the benefits of using traditional seeds and become motivated to carry on the conservation and maintenance of traditional varieties. In addition to the farmers who have participated directly in the on-farm conservation activities of the GREEN Foundation project, there are also many who have acquired seeds informally.

An external evaluation conducted in April 2000 concluded that, due to the efforts of GREEN Foundation, there has been an appreciable increase in seed diversity in the project region. More recently, GREEN findings indicate that there is now greater awareness of the value of using and conserving traditional varieties. In the combination of efforts that constitute a successful on-farm conservation network, the community seed banks occupy an important place. The aim of GREEN Foundation has been to increase diversity both in terms of species and varieties, and these efforts have proven successful in reviving the genetic resources so basic to the survival of small-scale farmers. In the course of the past decade, several indigenous varieties have once again found their way into the fields of farmers. This success can be seen as a way of achieving benefit sharing through the creation of a small-scale reward and support system. Farmers are encouraged and supported in their efforts to revive, maintain and

develop plant genetic diversity. As a result of the increased diversity, their food security is improved.

Again the collaboration between farmers, scientists and an NGO has proven valuable. Indeed, this is probably the most important lesson to be learned from this project, in addition to the fact that various measures employed together have strengthened *in situ* conservation in the region.

5.4 Dynamic Conservation and Participatory Plant Breeding in France¹⁷



*Seed Bank 2006
Photo: Bio d'Aquitaine*

In this example from France, four regional projects, all carried out by regional farmers' organizations in cooperation with the National Institute for Agricultural Research (Institut National de la Recherche Agronomique, INRA), will demonstrate how participatory plant breeding combined with dynamic conservation can create a reward and support system beneficial both to the farmers involved and to the conservation of genetic resources. These four projects were all initiated by farmers to create varieties more suited to organic agricultural practices than the F1 hybrids of modern agriculture. In collaboration with INRA they succeeded in re-introducing traditional varieties and adapting them to their own needs and to the local environments. From being almost lost and mostly conserved *ex situ*, these old varieties and land-races are now being conserved on-farm, as well as being developed further.

Reseau Semences Paysannes (RSP), established by a group of farmers in 2003, is a network consisting of about 40 groups and organizations of

¹⁷ This chapter is based on information from questionnaires completed by representatives from the mentioned organizations. See annex 2 for a full list of respondents.

organic and conventional farmers and gardeners, as well as NGOs and researchers, in various regions of France, but mainly in the south and west. The aim of the network is to promote on-farm dynamic conservation and management of genetic diversity, and to develop, multiply and distribute locally-adapted varieties well suited for low-input farming. It is also seen as important to foster knowledge exchange. The activities of RSP consist in collecting and disseminating existing information, as well as training of participants, evaluations of plants and taking part in research programmes.

RSP manages a project aimed at dynamic conservation and the breeding of wheat varieties for use in organic farming and traditional baking. Experiences from the cultivation and breeding of old varieties are collected and exchanged for use in modern farming systems. RSP seeks to adapt the old varieties to their needs in terms of the ability of the wheat plants to develop adequate biomass and root systems and adapt to different soils and climatic conditions, as well as the characteristics wanted in relation to suitability for millstone and traditional baking, the colours and aromas of the resultant flour and bread, and nutritional qualities. The project was started under the RSP in 2003, but some members have been cultivating these varieties at least 10 years now. The wheat project is a collaborative effort involving the various members of the RSP network, INRA and private foundations who provide some of the funding. Roughly one hundred farmers from the different regions in which the network operates are currently active in the project. In addition there is an unknown number of less involved farmers who participate in the meetings and use the varieties conserved and developed in the network.

Biocivam 11 is an organization of organic farmers in Languedoc Roussillon, France. Since 2005 it has been running a project on participatory breeding of vegetable species for use in organic farming. INRA has been involved in the project from time to time by helping with the collection of genetic resources. Through this project Biocivam 11 supports a group of organic gardeners producing vegetables for sale, helping them to find varieties adapted to local conditions and the preferences of their customers. So far the project has mainly focused on tomatoes, aubergines, lettuce and melon, but the plan is to expand the testing to include other species as well. To find suitable plants Biocivam 11 looks for varieties in *ex situ* and *in situ* collections. Then the chosen plants from these varieties are tested on the farms or in the gardens of organic gardeners. As part of the testing an agronomic follow-up is carried out, as well as gustatory tests. The most interesting and promising varieties are presented in an amateur catalogue, and the seeds are multiplied and conserved by an organic seed producer. A commercial structure, 'Graines del País', was set up in 2005 to handle the dissemination of seeds. Although the project focuses on the region of Languedoc Roussillon, it has had a national scope since 2007; and through a partnership with the '4 seasons of gardening' store, amateur gardeners from all over France have been given the opportunity to participate in the tests. In 2008 Biocivam 11 plans to expand its testing to include foreign seed collections as well. While perhaps a dozen producers from the Languedoc Roussillon region are involved in the evaluation work, approximately 100 amateur gardeners from France as a whole contribute to the experiments. About 400

consumers also take part in tests every year to determine the taste potential of the varieties. In addition to the assistance from INRA, Biocivam 11 also receives support from RSP.

Bio d'Aquitaine, located in the Aquitaine region of France, is another organization encouraged by INRA researchers. Bio d'Aquitaine is a farmers' organization which among other activities runs an extension service, and in 2001 it started the project 'L' Aquitaine cultive la biodiversité'. This project also focuses on dynamic conservation and breeding of varieties adapted to organic agriculture. The main objective is to provide farmers with the seeds and knowledge necessary for the cultivation of varieties adapted to an agricultural system requiring fewer chemical inputs. They are engaged in the preservation, multiplication and regeneration of these seeds and in the *in situ* creation of what they call 'peasant varieties'. Between 200 and 400 farmers are to some extent involved in the project, some of them growing and breeding a collection of varieties in their own fields. By placing farms and farmers at the centre of the management of genetic resources, the project hopes to offer an approach that is adaptive to changing environmental conditions and consumer demands. The focus is on an assortment of different species and varieties, especially maize, sunflower and soybean, and the goal is to introduce varieties with appealing nutritional and gustatory qualities. The work on maize was inspired by participatory breeding and the resultant varieties in Brazil, and the breeding and conservation plan has drawn upon the knowledge of indigenous communities in Central America. In addition to the encouragement from INRA, which has been particularly important in providing recognition to farmer breeding, the project also collaborates with RSP.

Inter Bio Bretagne (IBB), a regional umbrella organization for organic farmers, has been working together with INRA on the fourth project to be highlighted here: participatory cauliflower breeding for organic farming. Situated in the north of Brittany, France, the aim is to get farmers, researchers and other actors to define the goals of organic breeding together and collectively manage the seed production. This project was initiated by INRA and IBB in 2001, as a response to the lack of cauliflower varieties adapted to organic farming. At that time INRA had encouraged some of its researchers to start projects geared towards organic farming, and the cauliflower project was one of the results. Local cauliflowers and cabbages have been at the centre of the project, but other vegetables are being considered according to the needs of the farmers. Currently, some 30 farmers are involved in the participatory breeding of cauliflowers and cabbages, while around 250 organic vegetable farmers benefit from the increased availability of organic seeds resulting from the project. The breeding programme started out at PAIS, the agrobiological experimental station of IBB on the organic site of an agricultural school, where genetic resources from several gene banks were tested and evaluated. As a result of this project, organic farmers and traders have been able to take control of the breeding and seed production of the tested cauliflowers. Managing the seed production collectively makes it possible to obtain the machines needed for harvesting, as well as for the cleaning of seeds, in a financially viable manner, and it makes it easier to organize quality testing.



Old wheat varieties
Photo: RSP

All these four projects from different regions of France have managed to spread awareness of the demise of genetic diversity and the necessity of continued cultivation and *in situ* conservation. Through participatory plant breeding, they have helped to re-introduce some of the diversity that had vanished from the fields. Varieties that had disappeared from the countryside and were mostly or only found in *ex situ* collections are now being cultivated on-farm. This success came about as farmers and their organizations joined forces with the scientists of INRA and bred varieties suited to organic farming and in other ways adapted to the needs of the farmers. Farmers have organized themselves and are collaborating in seed production, and experiences and knowledge are being exchanged. Another successful aspect of these projects has been the marketing of the produce, with the consumers in some cases being involved in the testing to ensure that the products match the preferences of the market.

One factor contributing to the success of these projects has been the strong involvement of groups of organic farmers and what Bio d'Aquitaine terms the 'extraordinary motivation' of all involved stakeholders. Networks and networking have also played a crucial role, and the various organizations are all highly aware of the importance of the coalitions they have created and the cooperation they have achieved. The researchers at INRA have made useful contributions. Moreover, INRA's status as a national institute has helped to provide a degree of legitimacy and security in a situation where the projects, by encouraging dissemination of non-registered varieties, are actually breaking the law. Biocivam 11 also credits some of the success to the limited choice of hybrid varieties, their lack of adaptability to organic modes of production and the poor taste quality of the resulting products.

As mentioned above, these organizations are breaking the law in spreading non-registered varieties. The law prohibiting this has negatively affected all these four projects, making their work difficult. Under French law, which follows EU directives, only varieties that have been registered may be marketed, distributed and sold. But to be registered, the variety needs to meet certain criteria, as to distinctness, uniformity and stability, and the value of use and cultivation. For traditional varieties and land-races this is difficult, as they are normally too genetically heterogeneous and the certification system is fundamentally incompatible with the conservation and use of crop genetic diversity. In addition, registration is expensive, and in many cases not a viable option. There have been attempts at the EU level to solve this problem by drafting regulations for conservation varieties, but without success so far. The lack of recognition of the importance of on-farm conservation is a challenge that the organizations find difficult to overcome.

Projects like these can also be scaled up, and collaboration can be fruitful across state borders. RSP has in cooperation with partners from other countries launched a European extension of their project called '*Let's Liberate Diversity*'. This was done to bring their work for the cultivation of a wide selection of varieties and against the detrimental European regulations up to the EU level. In addition, both INRA and RSP are among the partners in the European project '*Farm Seed Opportunities*' launched in 2007. Since the laws affecting their work often are EU regulations, it makes sense to collaborate on the European level in addition to operating on a local and regional scale.

For initiatives and organizations wishing to copy the successes of these French projects and to create similar reward and support systems, one central lesson is to facilitate the exchange of knowledge among farmers and between farmers and researchers. It is important to remember that farmers are often talented at breeding their own varieties and in organising their own production, but that researchers can help them to identify useful genetic material with the capacity to adapt to environmental factors. Another lesson is the importance of creating smoothly functioning networks where the inputs and contributions of all stakeholders are taken into consideration and where information exchange and dissemination of knowledge can take place.

It should also be borne in mind that waiting to implement projects like these until favourable legislation is in place might mean a risk of losing more genetic resources. Thus, in other European countries covered by the same legislation, it might be necessary to go forward with projects involving the exchange of non-registered varieties along with lobbying for the laws to be changed. Similar projects might obtain the understanding and support from some government agencies or national research institutes, as the French projects received from INRA. All in all, this case from France shows that benefit sharing can be promoted and support and reward systems created, through participatory plant breeding, on-farm conservation and networking.

5.5 Participatory Plant Breeding Adding Value in Nepal¹⁸

One approach to benefit sharing involves creating reward and support systems that allow farmers to profit from the contributions they make to the global genetic pool. This can be done by adding value to the crops they grow, which again can contribute to improved livelihoods and increased income. As will be seen from this example from Nepal, this can be possible when farmers and scientists collaborate in participatory plant breeding (PPB).

In recent years Nepal has been giving greater priority and attention to the conservation of its rich biodiversity. Conservation efforts have largely been targeted at the country's many protected forest areas, national parks and reserves, but agricultural biodiversity is now gradually being recognized as an important component of the national biodiversity and worthy of conservation efforts. The value of agricultural biodiversity for Nepalese farmers and thus the importance of conserving it have been further established by research and development initiatives undertaken in the last 10 years. Local Initiatives for Biodiversity, Research and Development (LI-BIRD), a civil society organization, has been a pioneer in promoting on-farm conservation of agricultural biodiversity in Nepal since 1997. Working with several international and national partners, among them Biodiversity International, Nepal Agricultural Research Council (NARC), the Department of Agriculture and community-based organizations, LI-BIRD has identified various good practices for community-based on-farm conservation of agricultural biodiversity. This sub-chapter highlights some of them, focusing on participatory plant breeding.

Traditionally, farmers in Nepal have maintained a high degree of agricultural biodiversity on their farms and in their communities. More than 90% of their propagating material has come from their own production or farmer-to-farmer exchange. In addition to being vital to the maintenance of agricultural biodiversity the local seed-supply systems have been crucial for the food security of resource-poor farmers. But also in Nepal the agricultural production system has been affected by

¹⁸ This text draws largely on an article by Pratap K. Shrestha, Executive Director, Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Nepal, published in the Lusaka Report (Ministry of Agriculture and Food, Norway, 2007: 69–74). Mr. Shrestha also provided us with comments along the way.

technological changes and greater integration into the market economy. This has resulted in a gradual loss of agricultural biodiversity and a need to restore traditional knowledge and conserve biodiversity.



*Farmers participating in a LI-BIRD project
Photo: Pratap Shrestha*

LI-BIRD's experiences in Nepal show how strategies that provide farming communities with incentives to act together and that benefit farming households have been helpful in promoting on-farm conservation of agricultural biodiversity. These strategies capitalize on the opportunities for conservation inherent in the utilization of genetic resources for meeting cultural and development needs – especially strategies based on social values, and strategies based on economic incentives. The former promote on-farm conservation of agricultural genetic resources by increasing their uses in the socio-cultural rituals; and by providing social recognition and awards. Strategies based on economic incentives involve conservation through value addition aiming for increased production, desired traits of economic value, together with increased marketing and thus a higher cash income.

LI-BIRD has been promoting approaches which support farmers and farming communities in taking the lead role in the conservation and utilization of agricultural biodiversity. These approaches are referred to

as good practices for on-farm conservation of agricultural biodiversity and are collectively known as *community-based biodiversity management*. These approaches involve raising the understanding of local knowledge and practices on the cultivation and use of the community genetic resources, and building the capacities of local community-based organizations and farming communities to plan and implement conservation and utilization strategies. The measures employed include seed fairs, a community biodiversity register, a community biodiversity fund and a community seed bank. Here the focus will be on value addition, marketing and participatory plant breeding.

In Nepal, rural and urban consumers generally prefer local plants and their products for their taste, as well as their associations with family tradition and cultural rituals. However, due to low productivity and low volume of production, marketing of many of the local plants is difficult and usually not profitable. On-farm conservation of such plants is therefore often endangered because fewer and fewer farmers grow them. LI-BIRD has been working with several farming communities to improve the perceived value of many under-utilized crops by adding value through processing and packaging, and then marketing them as quality food. Local crops are also promoted by using them to make non-traditional modern food, like Western-type bread, cakes, cookies, noodles, and so on in an attempt to attract young people. Because of these interventions, the production area of local crops like finger millet, *anadi* rice (a sticky rice with medicinal and cultural value), buckwheat and taro has been steadily increasing in the farming communities participating in the programme.

LI-BIRD's extensive experience in participatory plant breeding has successfully been used for on-farm conservation of local rice varieties. The basic principle of the conservation-oriented PPB is to add value to the local plant varieties by further developing traits with economic or socio-cultural value and conserving the genes of these varieties in the process. *Jethobudho* – an aromatic rice land-race of the Pokhara Valley – was enhanced through PPB and has now been formally registered by the national variety release authority. As a result, farmers and farming communities in the area now possess ownership rights to *Pokhareli jethobudho*, the enhanced *Jethobudho* variety. Grassroots-based breeding programmes of this type have also promoted farmers' innovation in local crop development.

PPB has been used to combine the conservation of plant genetic resources with development goals. An example illustrating the success of this is the excitement displayed by one of the participants at the performance of some of the resultant rice varieties. Mrs. Radha Adhikari, a member of the PPB group at the Begnas project site in Nepal, is very happy with the three rice lines she has selected from a cross between *mansara* and *khumal 4*. *Mansara* is grown locally and is known as a poor farmers' variety. It performs rather well in conditions of low fertility and limited access to water, but the eating quality is poor and it does not pay well when sold at the market. To improve the eating quality of this variety, it was crossed with *khumal 4* – a fine-quality modern rice variety. The new rice lines selected and developed by Mrs. Adhikari have the good cooking and eating qualities of *khumal 4*, while retaining all the positive qualities of *mansara*. Many farmers from the village have approached

Mrs. Adhikari for information on, and seed from, the new varieties. As a result of successes like this, both farmers and scientists increasingly appreciate PPB as a viable strategy for combining conservation with development goals in farming communities

A key lesson from this example is that linking conservation with development is an important strategy for promoting conservation of agricultural biodiversity on-farm. By implementing a community-based approach to biodiversity management, it is possible to make farmers and farming communities important partners in the project and to secure their continued motivation to persist in these endeavours. When trying to take development into consideration in addition to conservation, the adding of value to traditional crops becomes particularly important. This project is also yet another example of how collaboration between farmers and scientists can prove fruitful, and how an NGO can be vital in initiating and facilitating such projects, rewarding and supporting farmers' contributions.

5.6 Capacity-building for Seed Potato Selection in Kenya¹⁹



*Harvesting selected plants one by one
Photo: Peter Gildemacher*

The following example of benefit sharing from Kenya demonstrates how information sharing and education of farmers can yield positive results. By spreading the knowledge of how to select the best seed potatoes through farmer group training, potato yields in this area of Kenya have increased substantially, thereby rewarding farmers' efforts.

¹⁹The information in this sub-chapter was gathered from an article by Peter Gildemacher, Paul Demo, Peter Kinyae, Moses Nyongesa and Pauline Mundia in LEISA, 2007: 10–11. This sub-chapter has also benefited from suggestions and additional information provided by Peter Gildemacher via e-mail correspondence.

The potato is an important food and cash crop for smallholder farmers in the highlands of Kenya. For their planting material, small-scale potato farmers rely on farm-saved seed potatoes as well as seeds purchased from neighbours. The problem with this continuous use of farm-saved potatoes as planting material is the build-up of diseases. Viruses and bacterial wilt are transmitted through the tubers. Ideally farmers should renew their seed stock periodically with disease-free seed potatoes from a reliable source. However, despite decades of efforts by government organizations and development projects, affordable high-quality seed potatoes remain largely unavailable to smallholder farmers in Sub-Saharan Africa. Farm-saved seed potatoes actually account for 96% of all seed potatoes planted in Kenya, and potato farmers in the country renew their planting material only every sixth season on average. These facts make it clear that a strategy to improve the quality of seed potatoes planted by farmers should focus on improving the process of farm saving.

The International Potato Centre (CIP), Kenya Agricultural Research Institute (KARI) and the public extension service of the Kenyan Ministry of Agriculture have been involved in such efforts for some time. A few years ago, a technique known as *positive selection* was pilot-tested by smallholder potato farmers as a way to improve the quality of their seed potatoes. The principle of positive selection is to mark healthy-looking mother plants for seed collection. This technique in itself was not new; it had been used by specialized seed potato multipliers in the production of certified seed potatoes. What was new was to teach this simple technology to smallholder farmers so that they could maintain or even improve the quality of their farm-saved seed.

In 2004 and 2005, positive selection was successfully pilot-tested in Kenya among smallholder potato growers in the Narok district. Over the next two years CIP, in collaboration with KARI and the Ministry of Agriculture, trained over 100 extension workers and farmer-trainers on all aspects of positive selection. This included broadening their background knowledge on the management of potato pests and diseases. After this training, the extension workers and farmer-trainers worked with more than 70 farmer groups, altogether involving some 1200 farmers. A participatory research approach was used, where a demonstration experiment formed the core of the training curriculum. Everything took place in the potato field, and the mode of teaching was learning by doing. The farmer groups would meet regularly for a total of eight training sessions. First the farmers were shown how to distinguish between sick and healthy-looking plants in the potato field. Next, a comparative study took place where the potato field was divided into two parts: one where positive selection was used and one where the farmers used their traditional methods. Tubers from the two different selection methods were planted separately the next season, and the group analysed the results.

This project proved to be a success, with potato yields increasing on average by 28%. A survey done two years after the project was initiated showed that over one quarter of the farmers trained had adopted the positive selection method on their holdings, and these farmers claimed to have doubled their yields. The training programme had improved the awareness of farmers regarding the degeneration of seed potatoes result-

ing from diseases, and for small-scale farmers positive selection emerged as a viable strategy. For these farmers, positive selection with its extra five days of labour per hectare is usually preferable to investing in commercial seed potatoes, either because they cannot afford the costly improved seeds, or because such seed potatoes are not available. Positive selection training of smallholder potato producers can be seen as an important strategy for improving potato yields, in addition to building a cost-effective specialized multiplication system for seed potatoes. An important factor contributing to the success was the involvement of the public extension service of the Ministry of Agriculture. They embraced the training method and the technology, and are currently training groups of potato farmers in several districts of Kenya. The simplicity and low cost of the technology, the good partnership between research and public extension, as well as the training method that convinced the potato farmers that this technology could actually improve their production, were among the other factors crucial to the success.

This example demonstrates how capacity-building and the teaching of rather simple techniques, such as positive selection, can be a vehicle for benefit sharing by substantially improving yields, and thereby the livelihoods of the farmers in question. In this case, capacity-building was promoted and organized by state agencies in collaboration with national and international research institutes, but also other actors can play a part. The close cooperation with CIP was one of the elements contributing to this success story. Those who wish to apply the same method and copy the success will be able to draw on the useful material that was published after participants provided their comments and the training programme was evaluated and improved.²⁰

5.7 The Peruvian Potato Park²¹

Conservation activities, the sharing of technology and information and access to propagation material are all non-monetary types of benefit sharing. In the following example from Peru, these benefit sharing mechanisms are all present to some degree. The Peruvian Potato Park conserves a substantial amount of potato varieties, thereby also ensuring access to a wider range of propagating material, and the re-introduction of lost varieties through virus-free seed potatoes is a way of sharing the technology and information of modern scientific institutions with local communities.

²⁰ The training material is currently only available in English, but French and Portuguese versions will be published during 2008. The material can be found at: www.cipotato.org/publications/publication.asp?cod=003812, www.cipotato.org/publications/publication.asp?cod=003811, www.cipotato.org/publications/publication.asp?cod=003809

²¹This text is based on information from an article written by Dieter Nill (2007) and a Press Release published by CIP 28 April 2006, available at www.cipotato.org/pressroom/press_releases_detail.asp?cod=23. Additional information has been provided by Maria Scurrah and Willy Roca through e-mail correspondence.



The Peruvian Potato Park
Photo: Maria Scurrah de Mayer

Even though most of the potatoes produced in the world today belong to one single species with a few varieties, estimates suggest that there exist approximately 6,500 potato varieties worldwide. It is only in the Andes region, the place of origin for the potato, that a wide diversity of species and varieties is still cultivated and used. This enormous diversity represents a gene reservoir of inestimable value for global food security. Even in this centre of diversity, however, there has been a dramatic decline in the cultivation of traditional varieties in recent decades, and some are on the verge of disappearing.

It was in this context that six Quechua communities in Peru came together to create the *Parque de la Papa*, the Potato Park. This Park covers more than 12,000 ha, situated between 3,150 and 5,000 metres above sea level. It was the Quechua-Aymara Association for Nature and Sustainable Development (ANDES in Spanish) which brought together these six Quechua communities, some of which had been struggling for land tenure for years, in this conservation project. The objective is to preserve the landscape and the traditional way of life of its inhabitants. Around 1200 different potato varieties are identified by name and used in the region, and a typical family farm grows 20 to 80 potato varieties. (About 750 varieties of native potatoes are grown in the Park, most of them unique to this habitat.) In addition to preserving this rich biodiversity, the Park is also being used to re-introduce varieties that have already disappeared from the region. For this purpose the International Potato Center (CIP) made an agreement with the Park and has to date

contributed 410 virus-free native potato varieties. These are already in full production and, according to CIP, yielding 10% to 30% more than varieties that have not been cleaned of viruses.

CIP's contribution is part of an agreement, signed in December 2004 with the authorities of the Potato Park and ANDES, addressing the repatriation and restoration of potato diversity and aiming to promote both the potato as a crop and the use and conservation of the Park's great variety of native potatoes. This collaboration also guarantees that the indigenous knowledge, ancestral technologies and intellectual property rights related to the Park's varieties remain under local control. The Potato Park is one of the few conservation initiatives in the world where it is the local people themselves who manage and protect local genetic resources and traditional knowledge.

Most potatoes in the Park are produced for the consumption of the Park's inhabitants, while a small part of the produce is exchanged for other products through a barter system not involving any money. To ensure the continued existence of the project, possibilities for an increase in income are being developed and efforts are being made to further the awareness among producers and consumers of the importance of potato diversity. The development of agro-tourism, a visitors' centre with a potato exhibit and restaurant, better storage options and the sale of colourful potato mixes at the local supermarket chain are meant to contribute to this.

The greatest success of this project is that it has been possible to repatriate such a large number of potato varieties that otherwise would have been gone from the fields. The fact that these varieties were disease-free contributed to an increase in the yields. Among the factors which brought about the success is the increased popularity of the older potato varieties, achieved due to marketing efforts and increased attention.

One lesson from this example is that gene banks can contribute to repatriating large amounts of plant varieties if farmers are willing to invest in them. Creative marketing efforts can also be useful, particularly if there is a potential for tourism. In addition, the Peruvian Potato Park has demonstrated how local communities can take the lead in conservation efforts and be in charge of the maintenance and utilization of their plant genetic resources and associated traditional knowledge. Once again it has also been shown how scientists of international institutions like CIP can play a positive role in relation to Farmers Rights' by sharing their knowledge and technologies.

5.8 Rewarding Best Practices in Norway²²

Providing awards for innovative practices can be a way of granting recognition to farmers for their contribution to the global genetic pool, and of showing that the contributions they make are valued by society. In

²²This sub-chapter is based on information provided by Åsmund Asdal, Scientific Advisor at the Norwegian Genetic Resources Centre, in a questionnaire completed for the purposes of this report in December 2007.

Norway one such award has been established to motivate the conservation and use of genetic resources and promote awareness around these issues.



Farmer Erling Olsen (right) receives the Plant Heritage Award from Per Harald Grue, Permanent Secretary of the Ministry of Agriculture and Food, Norway

Photo: Even Bratberg

The Norwegian Genetic Resources Centre is a government institution founded by the Ministry of Agriculture in 2006 to coordinate national efforts towards the utilization and conservation of plant genetic resources. In this context an annual Plant Heritage Award has been introduced, to be awarded individuals or institutions that have made special contributions to the conservation and sustainable use of plant genetic diversity in agriculture. In the officially appointed body that awards the prize, the farmers' organizations in Norway are represented.

In 2006 one of the recipients of the award was Erling Olsen, a farmer and formerly a breeder at a Norwegian research facility. He was given the award for his conservation of more than 170 older varieties of potato. These are varieties he raises on his little farm in Snertingdal and multiplies in order to distribute to a network of farmers and gardeners who contribute to maintaining this diversity. In addition, Erling Olsen also maintains a comprehensive diversity of grain, fruit and berries. He travels widely to lecture on genetic diversity, often focusing on the conservation and use of older varieties.

The award serves as a way to provide farmers and the public in general with information on genetic resources and biodiversity, and it can also supply farmers with valuable in-put on how to utilize such resources. It has also heightened the focus on conservation and sustainable use of older varieties of plants, and increased the demand for propagating material of such varieties. This ensures that the varieties are actually used, which is the best guarantee against genetic erosion.

One reason for the success of the award is probably its links to topics such as cultural history, food culture, environmental protection and the protection of biological diversity, which are all on the agenda in Norway these days. Seed Savers and other similar networks in various countries have served as an inspiration for the work of the Norwegian Genetic Resources Centre and the decision to set up the award. The idea is to mobilize people to care for both conservation of genetic resources and increased diversity in the production of food.

One problem with the award is that it grants recognition to people who to a significant extent are, at least technically, breaking the law, in that they base their activities on seed exchange. The law regulating this is considered to be a wrong signal from the authorities, and it is hoped that the regulation can be changed in this regard. In the meantime there seems to be a silent shared understanding with the responsible authorities that the regulation in question is not to be enforced unless absolutely necessary.

The most important lesson from this work, according to the Norwegian Genetic Resources Centre, is that individuals and NGOs are a major resource in the work for the conservation and sustainable use of plant genetic resources for food and agriculture. It has also demonstrated the role such awards can play when it comes to increasing the focus and attention on issues related to genetic resources and stimulating activities geared towards the use and conservation of these resources. By setting up awards such as this, the authorities can play a role in the promotion of Farmers' Rights, demonstrating their appreciation of the work done by organizations and individuals with regard to maintaining genetic resources.

6 Success Stories on Farmers' Participation in Relevant Decision-making

There are in general few examples of legislation on farmers' participation, although some countries in the South have extensive legislation in this regard. All the same, actual participation in decision-making processes seems to be marginal, and is often confined to large-scale farmers who are normally not engaged in the maintenance of plant genetic diversity. In the North, the participation of farmers in decision-making processes is more common, but without reference to specific laws or policies. However, farmers in the North claim that their influence is now decreasing, due to their countries' commitments to international agreements. In this chapter examples from Nepal and Malawi will be presented.

6.1 Successful Advocacy for Farmers' Rights in Nepal²³

Capacity-building is often a precondition for increased participation of farmers in decision-making processes. In this example from Nepal we will see how capacity-building among farmers, NGOs and the population in general, through networking and alliance-building, resulted in successful advocacy in relation to the protection of Farmers' Rights.

When Nepal was at the final stage of WTO accession in 2003, the United States exercised pressure on Nepal to adopt the UPOV model of plant breeders' rights as part of the WTO requirement to comply with Article 27.3 (b) of the TRIPS Agreement. South Asia Watch on Trade, Economics & Environment (SAWTEE), a regional network launched in 1994 by a consortium of South Asian NGOs, took action to counterbalance this pressure after the concerned ministry in Nepal approached the network for technical inputs concerning the demands from the USA. SAWTEE operates through its secretariat in Kathmandu and has 11 member institutions from five South Asian countries: Bangladesh, India, Nepal, Pakistan and Sri Lanka. The overall objective of SAWTEE is to build the capacity of concerned stakeholders in South Asia in the context of liberalization and globalization. This is done by equipping them with knowledge, information and skills so that they are able to voice their concerns. SAWTEE works with government institutions, the private sector, NGOs, farmers' and community groups, and community-based organizations. Farmers are involved through participation in project activities, including those relating to advocacy and during consultation meetings for the design of activities.

SAWTEE's advocacy work against Nepalese membership of UPOV was part of its 'Farmers' Rights to Livelihood in the Hindu-Kush Himalaya Region' project (FRP), which seeks to develop policy and institutional mechanisms to protect Farmers' Rights in the five member countries through advocacy, research, sensitization, capacity-building, information

²³ This sub-chapter is based on information provided by Kamalesh Adhikari, Research Director at South Asia Watch on Trade, Economics & Environment (SAWTEE), some of which can also be found in the SAWTEE Policy Brief on UPOV, Nr. 5 from 2003. Mr. Adhikari also provided comments along the way.

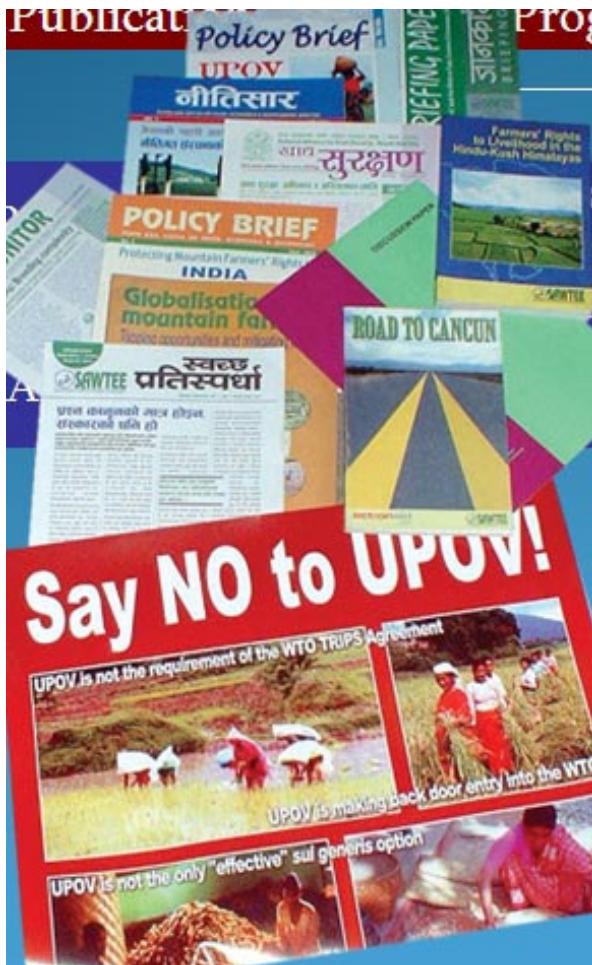
dissemination, networking and alliance-building. The mission of FRP is to protect the livelihoods of farmers by creating a favourable policy environment in its member countries. In connection with the implementation of FRP, SAWTEE has entered into partnerships with a range of national, regional and international organizations, such as public research organizations, Bioversity International, MS Swaminathan Research Foundation, International Centre for Integrated Mountain Development (ICIMOD) and LI-BIRD.

When the issue of joining the WTO surfaced in the late 1990s, the general attitude in Nepal was one of scepticism. SAWTEE, however, was strongly in favour of WTO membership due to their belief in the multi-lateral trading system and in its importance for developing countries. In their opinion, the WTO trading system provides a degree of certainty in terms of market access, while the enforcement of a rule-based trade regime increases transparency. It was also felt that the provisions on transit rights were important for a landlocked country like Nepal. Judging that Nepal's interests would be best served by WTO membership, SAWTEE therefore worked with a number of stakeholders, including government officials at the Ministry of Industry, Commerce and Supplies and the Ministry of Agriculture, to inform stakeholders and develop a proactive national agenda for the country's better integration into WTO. At the same time SAWTEE was highly critical to the bilateral trade negotiations Nepal would have to attend in addition to the multilateral ones, and the 'WTO-plus' conditions they feared Nepal would be pressured to agree to by the other member countries of WTO as part of these bilateral agreements. In particular SAWTEE was very much against Nepal becoming a member of UPOV, as they felt this would be detrimental to farmers.

Working to avoid UPOV membership SAWTEE organized a series of events and published various materials under its protest campaign *Say No to UPOV*. As part of this campaign, SAWTEE provided the Nepalese authorities with information on the negative implications of UPOV membership for the traditional agricultural systems in Nepal. In addition it worked closely with the Nepalese negotiators during the final accession negotiations with WTO in Geneva, to enable them to fend off the pressure to join UPOV. The network also launched advocacy and information dissemination programmes in cooperation with other NGOs under the umbrella organization National Alliance for Food Security in Nepal (NAFOS).²⁴ A collection of articles highlighting why a country like Nepal should not adopt plant variety protection based on the UPOV model was published in various newsletters and in the leading national dailies. In order to create a wider range of pressure groups and make the campaign more effective, SAWTEE also distributed two posters, one in English and one in Nepali, with the clear message: *Say No to UPOV*. The circulation of these posters helped to sensitize stakeholders, particularly the various farmers' groups and their leaders. NAFOS also organized a

²⁴NAFOS is a loose network of more than 20 NGOs working in Nepal on the issues of food security and rural development, many of which work with farmers. SAWTEE (www.sawtee.org) is the national secretariat of this alliance.

press conference that was attended by all the leading media institutions as well as farmers' groups, lawyers and other stakeholders. This press conference received considerable media coverage, and was also brought to the attention of the US representative in Geneva.



*A collection of publications and posters used in advocacy work
Photo: SAWTEE*

Ultimately, SAWTEE succeeded in helping the Nepalese negotiators to fend off the pressure, and Nepal decided not to become a member of UPOV. According to SAWTEE, Nepal's refusal to do so has sent a message to the international community that the country is not likely to compromise the rights of its farmers, even under a high level of pressure.

The main success in this case was that the NGO network with SAWTEE managed to convince the Nepalese authorities not to join UPOV. Thus, the form of regulation on plant breeders' rights that was recommended by US diplomats could be avoided. This success was achieved mainly through advocacy work and networking. By spreading knowledge and information and advocating their position, SAWTEE demonstrated how capacity-building can be essential for participation in decision-making processes.

From this example we learn that NGOs can play a meaningful role in influencing public opinion – as seen in Nepal both from the way SAWTEE managed to convince numerous stakeholders that WTO membership was necessary and from the way the network used advocacy in its work against UPOV membership for Nepal. To succeed with advocacy work, in the opinion of SAWTEE, it is essential to work with the authorities, in particular to provide them with suggestions and information; to gain strong public support; and to make use of the media in the entire capacity-building and sensitization process. The main lesson is that much can be done through networking. The inclusion and active participation of a wide range of stakeholders in a broad network is often necessary when advocating a certain position. According to SAWTEE, many organizations lack the tools needed for working together. SAWTEE feels that its strength lies in the groundwork it has invested in capacity building, networking and alliance-building at the local, regional and international levels.

6.2 Assessing Farmers' Rights in Malawi²⁵



A Malawian farmer displaying local seeds
Photo: CEPA

To ensure the participation of farmers in relevant decision making processes it is often necessary to increase the awareness of both farmers and decision makers regarding the various issues related to Farmers' Rights and their impact on agricultural production. As was mentioned in

²⁵ The information in this sub-chapter is derived from a questionnaire completed by William Chadza, Programme Director at CEPA. In addition, Gracian Zibelu Banda contributed with comments.

chapter 2, there are different matters and stages in the decision-making processes where farmer participation could be envisioned. Domestic implementation of the International Treaty, as well as the drawing up of national laws and regulations with an impact on the conservation and development of crop genetic resources are among the processes relevant in this regard. A maximum degree of participation would be ensured if farmers were included when these laws are developed as well as when they are implemented. A good starting point to promote the participation of farmers in these processes would be to assess the current situation and make farmers more aware of the various laws, policies and political processes that affect their livelihoods and their agricultural practices. This is what was done in this case from Malawi.

In Malawi, the non-profit organization Centre for Environmental Policy and Advocacy (CEPA) has been running a project where the goals were to increase the awareness of different stakeholders regarding Farmers' Rights and review the implementation and understanding of policy and legislation relevant to Farmers' Rights. Working on issues related to the management of natural resources and a sustainable environment, CEPA focuses on facilitating policy formulation, analysis and implementation in these areas. Their project assessing the implementation of policies and legislation related to Farmers' Rights in Malawi was research based, had a national scope, and was carried out between August and November 2007. Prior to this project CEPA had worked on Access and Benefit Sharing, and this work provided valuable background information. The project had three objectives; to assess the impact of agro-biodiversity related policies on Farmers' Rights; to assess the impact of the commercial seed sector on smallholder farmers; and to increase the awareness of policy makers, farmer organizations, traditional leaders and civil society organizations on the issue of Farmers' Rights and the relationship between these rights and agricultural production. To achieve these objectives CEPA conducted a desk study reviewing the existing policies, legislation and literature dealing with agriculture, biodiversity and food security, and developed a checklist to be used in their consultations with farming communities and other relevant stakeholders. After having identified the communities from five different districts that would participate in the case study interviews and awareness programmes, as well as a collection of stakeholders from the seed industry, the plant breeding industry, farmer organizations and institutions working on conservation of agro-biodiversity and Farmers' Rights that would take part in consultations, CEPA conducted the case studies and consultations and published the findings in a policy brief. The policy brief was then disseminated to various stakeholders.

The involvement of farmers was central to this project; their opinions formed the basis for the resulting report, with about 15 farmers visited and interviewed during the process. One of the participating farmers accompanied the Executive Director of CEPA to Rome when the report was presented at a side event at the second session of the Governing body of the International Treaty, and the report was also presented at the National Farmers' Technical Conference in 2007. This conference attracted around 60 farmers.

One of the successes of this project has been the increased awareness among farmers and policy makers at both the local and national levels of the need to enact legislation protecting Farmers' Rights. In addition, the issue of Farmers' Rights and their relationship to plant breeders' rights is now being debated. A draft for a Plant Breeders' Rights Bill has been pending for about five years. Receiving technical and financial support from CEPA, the Government of Malawi's Department of Agricultural Research Services (DARS) reviewed the draft and held stakeholder consultations. This led to the incorporation of Farmers' Rights in a new draft entitled Plant Variety Protection Bill, 2006. However, after internal consultations within the Ministry of Agriculture, DARS removed the chapter on Farmers' Rights from the Plant Variety Protection Bill and chose to include it in a revised Environmental Management Bill. According to CEPA this signalled the level of commitment to Farmers' Rights within the Ministry of Agriculture. More recently, a new stakeholder consultation recommended that Farmers' Rights should be brought back into the Plant Variety Protection Bill. CEPA has declared that it will continue to lobby the Ministry to ensure that Farmers' Rights are sufficiently protected by the authorities.

The project has also been one of the contributing factors leading to the preparation of a common position regarding Farmers' Rights for Southern Africa. Guidelines for Farmers' Rights in Southern Africa are now being developed based among other things on the project results. The findings from this project also suggest that most of the stakeholders, including the farmers themselves, did not fully understand the concept of Farmers' Rights, and that most commercial plant breeders are very skeptical to it. These findings underscore the need for information work and the type of assessment and awareness programmes CEPA undertook.

These results can also provide lessons for other actors working in the area of Farmers' Rights. In other countries as well, assessment and awareness programmes of the type carried out in Malawi would probably prove useful in the process of promoting the participation of farmers in decision making. As was done in Malawi, involving farmers and taking their views into consideration would be crucial. At the same time, this example from Malawi has demonstrated the need to also involve other stakeholders to get a correct assessment of the situation and the differing opinions on the issues. A thorough understanding of the attitudes of the relevant stakeholders makes it more likely that projects targeting increased awareness, introducing and changing policies and involving farmers in the process will be successful.

7 Conclusions



African farmer
Photo: G. Ulutuncok, GTZ

This report has shown that success stories can be found with regard to all measures proposed in the International Treaty for the realization of Farmers' Rights. It is indeed possible to uphold or create legal space for farmers to save, use, exchange and sell seeds. We have seen that it is possible to take steps to ensure Farmers' Rights while still complying with international obligations. Becoming a UPOV member, and thereby having to adhere to the 1991 Act of UPOV, is not the only way to implement the TRIPS Agreement, and it should therefore be possible for WTO member countries to look for more Farmers' Rights-friendly means of fulfilling their TRIPS obligations. For initiatives operating in countries with very strict laws on seed exchange, circumventing the law while lobbying for change or reaching an understanding with the authorities that the law will not be enforced can be other ways of ensuring seed sharing. We have highlighted examples of incentive structures which may serve as models for other projects, but it is clear that more creativity is needed to ensure beneficial funding mechanisms. Several stories showed how incentive structures can be introduced from the ground; it is not necessary to wait for the authorities to provide them. There are many examples of reward and support projects and programmes, serving as a basis for considering how to scale up such programmes. Although we find few examples of recognition, some appear promising in terms of bridging conflicts and rewarding farmers' innovations. The creation of an annual award can be one way of rewarding farmers, and spreading knowledge about their contribution in conserving and utilizing genetic resources. And we have found good examples of how awareness-building and capacity-building among farmers, and advocacy of farmers' rights, can serve as a basis for improving farmers' participation.

Some of the factors contributing to success in the different success stories presented in this report have proven important for more than one success.

One such factor is the collaboration between farmers and scientists. In many of the cases presented, the contributions of scientists and their cooperation with farmers have proved rewarding. NGOs have often had a central role as facilitators and/or initiators in these projects, and in general NGOs have been important contributors to the realization of Farmers' Rights. In addition to functioning as initiators of projects and facilitators of collaboration between other actors, various NGOs have also played a vital role by doing advocacy work, raising awareness, disseminating information and building capacity. Another important contributing factor has been the creation of broad stakeholder networks, particularly including farmers and their organizations. Networking and the creation of broad-based networks have been emphasized by the representatives of more than one success case as being central to the realization of Farmers' Rights. Another factor important in many of the success stories is the community-based nature of the projects. Local communities may take the lead themselves, or NGOs can ensure that the initiatives have a community-based profile. Placing responsibility with farmers and farming communities can increase the sense of project ownership, and make success more likely, as well as ensuring participation – a goal in itself. In many cases, participatory approaches, like participatory plant breeding or participatory seed selection, have been key components and part of the reason for the success.

When looking at these success stories from the realization of Farmers' Rights with a view to applying these experiences in other contexts, it is also important to bear in mind the link between the conservation and use of genetic diversity and development, especially with regard to food security. The erosion of genetic diversity has been shown to have a detrimental effect on food security, while the conservation of these resources can ensure the adaptability of poor communities to changing environmental conditions. Many farmers contributing to the maintenance and development of genetic resources live in economically poor communities in the South, and development therefore becomes an important issue. Both when setting up incentive structures and creating reward and support systems, this connection to development is important to remember. As we saw from the story from Nepal, adding value to traditional crops can be one way of ensuring the continued use of these varieties while also promoting development and food security.

All in all, the success stories in this report illustrate the many prospects for realizing Farmers' Rights, and the positive effects this can have on the livelihoods of farmers around the world. It is hoped that these stories will contribute to the work of the Governing Body of the International Treaty on how to implement Farmers' Rights, as well as inspire further national and local-level efforts to promote and realize these rights.

References

- Andersen, Regine (forthcoming, 2008): *Governing Agrobiodiversity: Plant Genetics and Developing Countries* (Aldershot, UK: Ashgate).
- Andersen, Regine (forthcoming, 2008b): *Farmers' Rights in Norway*, Background Study 6, (Lysaker, Norway: The Fridtjof Nansen Institute)
- Andersen, Regine (2006): *Realising Farmers' Rights under the International Treaty on Plant Genetic Resources for Food and Agriculture, Summary of Findings from the Farmers' Rights Project (Phase 1)*, FNI Report 11/2006 (Lysaker, Norway: The Fridtjof Nansen Institute)
- Andersen, Regine (2005a): *The History of Farmers Rights – A Guide to Central Documents and Literature*, FNI Report 8/2005 (Lysaker, Norway: The Fridtjof Nansen Institute).
- Andersen, Regine (2005b): *Results from an International Stakeholder Survey on Farmers' Rights*, FNI Report 9/2005 (Lysaker, Norway: The Fridtjof Nansen Institute)
- Bala Ravi, S. (2004): *Manual on Farmers' Rights* (Chennai: M.S. Swaminathan Foundation)
- Centro Internacional de la Papa and La Federación Departamental de Comunidades Campesinas (2006): *Catálogo de Variedades de Papa Nativa de Huancavelica – Perú* (Lima: CIP)
- Commission on Intellectual Property Rights (CIPR) (2002): *Integrating Intellectual Property Rights and Development Policy* (London: CIPR)
- Community Biodiversity Development and Conservation Programme (CBDC) (2006): *Pathways to Participatory Farmer Plant Breeding: Stories and Reflections of the Community Biodiversity Development and Conservation Programme* (Manila, the Philippines: SEARICE)
- Community Biodiversity Development and Conservation Programme (CBDC) (2007): *Farmers' Report on the Status of Farmers' Rights Realization. Consolidated Reports from Farmers' Consultation Processes on Farmers' Rights in Africa, Latin America and Southeast Asia* (Manila, the Philippines: SEARICE)
- Correa, Carlos M. (1998): *Implementing the TRIPs Agreement. General context and implications for developing countries* (Penang: Third World Network)
- Crucible II Group (2000): *Seeding Solutions. Volume 1: Policy Options for Genetic Resources: People, Plants and Patents Revisited* (Rome: International Plant Genetic Resources Institute, Uppsala, Sweden: Dag Hammarskjöld Foundation, Ottawa: International Development Research Centre)
- Department of Industrial Policy and Promotion, India (updated 2007): *Intellectual Property*, available at: <http://dipp.nic.in/ipr.htm>

- FAO (1998): *The State of the World's Plant Genetic Resources for Food and Agriculture* (Rome: FAO)
- GREEN Foundation (2008): *Seed to Food. From subsistence to surplus* (Bangalore: GREEN)
- Growing Diversity Project (completed 2002): All material, including a catalogue of activities, is available at: www.grain.org/gd/en/index.cfm
- Helper, Laurence R. (2002): 'Intellectual Property Rights in Plant Varieties: An Overview with Options for National Governments', FAO Legal Papers Online #31 July 2002 (Rome: FAO), available at: www.fao.org/Legal/prs-ol/years/2002/list02.htm.
- LEISA – Magazine on Low External Input and Sustainable Agriculture*, Vol. 23, No. 2, June 2007.
- Leskien, Dan and Michael Flitner (1997): 'Intellectual Property Rights and Plant Genetic Resources: Options for a Sui Generis System', *Issues in Genetic Resources* 6, June 1997. (Rome: International Plant Genetic Resources Institute)
- Nill, Dieter (2007): 'Promoting the diversity of useful plants and animal breeds through marketing. The example of potato diversity in the Andes', *GTZ Issue Papers: People, Food and Biodiversity* (Eschborn, Germany: GTZ)
- Norwegian Ministry of Agriculture and Food (2007): *Informal International Consultation on Farmers' Rights, 18–20 September 2007, Lusaka Zambia. Co-hosted by the Ministry of Agriculture and Food and the Fridtjof Nansen Institute, Norway, and the Zambia Agricultural Research Institute* (Oslo: Norwegian Ministry of Agriculture and Food)
- Ramanna, Anitha (2006): *Farmers' Rights in India – A Case Study*. The Farmers' Rights Project – Background Study 4, FNI Report 6/2006 (Lysaker, Norway: The Fridtjof Nansen Institute)
- SAWTEE (2003): Policy Brief on UPOV. *Policy Brief nr. 5, 2003*
- Swaminathan, M. S. (1994): *Farmers' Rights and Plant Genetic Resources – Recognition and Reward: A Dialogue*. (ed. M.S.Swaminathan) (Chennai, India: Mac Millan India)

ANNEX 1: Questionnaire for compiling success stories

This questionnaire is sent to organizations engaged in the realization of Farmers' Rights as they relate to plant genetic resources for food and agriculture (PGRFA). The aim is to identify success stories that may serve as inspiration or models for other stakeholders. Such examples are urgently needed, if progress is to be made in the realization of Farmers' Rights. The Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture has encouraged Contracting Parties and other relevant organizations to submit views and experiences on the implementation of Farmers' Rights as set out in Article 9 of the International Treaty. These will be collected and presented at its Third Session, first quarter, 2009. The Fridtjof Nansen Institute, supported by the German GTZ and the Development Fund of Norway, plans to present a publication on success stories from the realization of Farmers' Rights at a side-event during this session. Further, the publication should be made widely available to relevant decision-makers, practitioners and other interested parties. We will also produce a preliminary report based on the results from this questionnaire survey, and present the findings on a new web-site on Farmers' Rights, to be launched early in 2008 by the Fridtjof Nansen Institute.

What is a *success story*? With this term we refer to a project or an activity that has resulted in substantial achievements with regard to one or more objectives related to Farmers' Rights. We are not looking for 'perfect' projects or activities – indeed, they might not even exist. Rather we are looking for those that have produced significant achievements and that can provide inspiration to others. Any problems or challenges encountered on the way will stand as lessons from which others can learn.

What is a success story related to *Farmers' Rights*? Here we refer to Farmers' Rights in connection with PGRFA. Success stories related to one or more of the following topics are relevant:

- legislation enabling farmers to save, use, exchange, and sell farm-saved seed
- traditional knowledge related to plant genetic resources for food and agriculture, such as projects documenting traditional knowledge to be shared among farmers in order to avoid loss of such knowledge; or projects to protect farmers' traditional knowledge against misappropriation while also ensuring that such knowledge can be shared, etc.
- benefit-sharing measures – such as national-level funding mechanisms that support farmers in conserving and sustainably using plant genetic resources; participatory plant breeding projects resulting in added value to farmers' varieties; community gene banks that are effectively used in farmers' breeding or farming strategies; marketing strategies to create a demand for diverse crop products; other incentive structures to motivate conservation and sustainable use of genetic resources; recognition of farmers' contributions, for example in the form of awards, or other measures.
- farmers' participation in decision-making, for example national consultative processes related to the management of plant genetic resources for food and agriculture, or more specifically to Farmers' Rights, involving farmers; capacity-building activities leading to greater involvement of farmers in relevant decision-making; or advocacy by farmers' organizations leading to improved policies regarding genetic resources and Farmers' Rights.
- other projects/activities considered relevant for the realization of Farmers' Rights.

If your organization has or has had projects or activities in one or more of these areas which you deem successful, we ask you kindly to complete the questionnaire below and return it to us by Sunday 16 December 2007. Please use one questionnaire for each project/activity.

Kind regards from
 Regine Andersen
 Senior Research Fellow
 Fridtjof Nansen Institute

Questionnaire

1. GENERAL INFORMATION ON YOUR ORGANIZATION

5. Name of organization:.....

6. Contact data (address, email/fax/telephone):.....
.....
.....

7. Name of respondent, affiliation, title:.....

8. Brief presentation of the organization (incl. its objectives):.....

9. What kind of organization is it? Please check applicable categories:

<input type="checkbox"/> farmers' organization
<input type="checkbox"/> non-governmental organization (NGO)
<input type="checkbox"/> research institution
<input type="checkbox"/> government institution
<input type="checkbox"/> extension service
<input type="checkbox"/> seed company
<input type="checkbox"/> other, please specify: _____

2. PROJECT DESCRIPTION

a. Which of your projects/activities would you highlight as a success story (mention only one project/activity per questionnaire, please complete new questionnaires for any additional project/activity):

(name or designation)

b. Please describe the project/activity, including its objectives (please feel free to use more space than indicated here if required):

.....
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.....
.....
.....
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.....
.....

c. When did the project/activity start?

d. When did the project/activity end, or when is it scheduled to end?

e. Where is the project/activity located, and what is the geographical outreach?

.....
.....

f. Which stakeholders are involved in the project/activity as co-organizers, supporters, and collaborating partners, or in other ways?

.....
.....

g. In what way is the project/activity related to Farmers' Rights? It is targeted at (tick applicable categories):

	legislation enabling farmers to save, use, exchange, and sell farm-saved seed
	documenting traditional knowledge among farmers in order to avoid loss of such knowledge
	protecting farmers' traditional knowledge against misappropriation while also ensuring that such knowledge can be shared
	other measures related to traditional knowledge pertaining to PGRFA, please specify:
	establishing national level-funding mechanisms to support farmers in conserving and sustainably using plant genetic resources
	participatory plant breeding for adding value to farmers' varieties
	community gene banks for use in farmers' breeding or farming strategies
	marketing strategies to create a demand for diverse crop products, including for example infrastructure
	other incentive structures to motivate conservation and sustainable use of genetic resources and recognition of farmers' contributions – for example through awards
	other benefit-sharing measures, please specify:
	national consultative processes related to the management of PGRFA, or more specifically to Farmers' Rights, involving farmers
	capacity-building activities for greater involvement of farmers in relevant decision-making
	advocacy by farmers' organizations for more conducive policies regarding the management of genetic resources and Farmers' Rights
	other measures to ensure farmers' participation in decision-making, please specify: awareness-raising of the important role played by farmers in conserving and developing PGRFA
	other projects/activities you consider relevant for the realization of Farmers' Rights – please specify:

h. In what ways have farmers been involved in developing the project/activity?

.....

.....

.....

3. ASSESSMENT OF THE PROJECT/ACTIVITY

a. Roughly, how many farmers are affected by the project/activity, and in what ways (effects on food security, nutrition, income, capacity, empowerment, etc.)?

.....

.....

.....

.....

b. How has the project affected the management of plant genetic resources for food and agriculture – locally, nationally or regionally?

.....

.....

c. What crop species and varieties are involved (if this can be specified and/or quantified)?

d. What do you consider the main achievements or successes of the project/activity? (Please describe in detail and use more space if required)

e. How do you explain the achievements/successes? (Please elaborate in detail and use more space if required)

f. Have other projects or activities provided models or inspiration for your project/activity?

Yes.... No.....

If yes, please explain which other projects or activities and how they affected your work:

g. Did legislation or other regulations in your country affect the achievements in any direction?

Yes.... No....

If yes, please explain how.....

h. What do you consider the most important lessons from your experiences for others who would like to work in the field? (maximum 500 words)

4. DOCUMENTATION AND INFORMATION ON THE PROJECT/ACTIVITY

a. Do you have any documentation of the project/activity, which you can send to us?

Yes.... No.....

I attach the following documents:

.....
.....
.....

I attach them by:

Mail:

Fax:

Post:

b. Do you have any photos from the project/activity you have reported about, which you could send to us per mail?

Yes.... No.....

If yes, please label the photos, and indicate below how many you are sending us (please send one or few photos per e-mail, to avoid technical problems, you may rather send several e-mails):

I attach _____ (number) photos.

c. Do you agree to let the information you have provided in this questionnaire be compiled in a preliminary report on success stories from the realization of Farmers' Rights?

Yes.... No.....

d. Do you agree to let the information you have provided in this questionnaire be compiled in an overview on the new website to be launched for the Farmers' Rights Project carried out at the Fridtjof Nansen Institute?

Yes.... No....

e. We are planning to produce a publication on success stories, to be presented at the Third Session of the Governing Body of the International Treaty. Depending on the response to this questionnaire, we might have to make a selection of projects and activities to be presented in that publication. For each of the selected stories, we would contact the respondent to the questionnaire and the responsible organization, and propose that we jointly write a story on the project. Would you like your project or activity to be presented as a success story in such a publication for wide distribution, to be written jointly?

Yes.... No....

Any further comments.....

.....
.....
.....

Thank you for completing this questionnaire!

ANNEX 2: Lists of respondents and informants

List of respondents, in the order they appear in the report

Basque Seed Network, Karranza, Spain

Respondent: Helen Groome, member

Basque Farmers' Union (EHNE), Gasteiz, Spain

Respondent: Helen Groome, Technical Advisor

ProSpecieRara, Switzerland

Respondent: Béla Bartha, Director

Norwegian Association of Biological-Dynamic Farmers and

Norwegian Ecological Grain Grower Association

Respondents: Erik Evenrud and Johan Swärd, Leaders of the two associations

Institut National de la Recherche Agronomique (INRA), France

Respondent: Véronique Chable, Department of Science for Action and Development

Reseau Semences Paysannes (RSP), France

Respondents: Helene Zaharia, Administrative Manager; Guy Kastler, General Delegate

Biocivam 11, France

Respondents: Rosalie Geiger, Organic Seeds Coordinator; Jean-Luc Brault, organic farmer

Bio d'Aquitaine, Bordeaux, France

Respondents: Bertrand Lassaigne, Professional Coordinator; Patrice Gaudin, Technical Coordinator

Norwegian Genetic Resources Centre, Ås, Norway

Respondent: Åsmund Asdal, Scientific Advisor

South Asia Watch on Trade, Economics & Environment (SAWTEE), Kathmandu, Nepal

Respondent: Kamalesh Adhikari, Research Director

Centre for Environmental Policy and Advocacy (CEPA), Malawi

Respondent: William Chadza, Programme Director

List of other informants

S. Bala Ravi, advisor, MS Swaminathan Research Foundation, India

Gracian Zibelu Banda, Executive Director, CEPA, Malawi

Manuel Ruiz Muller, Executive Director, SPDA, Peru

Maria Scurrah de Mayer, President, Grupo Yanapai, Peru

Peter Gildemacher, Crop and Weed Ecology group Wageningen UR, CIP Sub Sahara Africa

Pratap K. Shrestha, Executive Director, LI-BIRD, Nepal

Stef de Haan, International Potato Center (CIP), Peru

Vanaja Ramprasad, GREEN Foundation, India

Willy Roca, International Potato Center (CIP), Peru

ANNEX 3: Excerpts from the ITPGRFA

PROVISIONS PERTAINING TO FARMERS' RIGHTS IN THE INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

From the Preamble

The Contracting Parties,

(...) *Affirming* that the past, present and future contributions of farmers in all regions of the world, particularly those in centres of origin and diversity, in conserving, improving and making available these resources, is the basis of Farmers' Rights.

Affirming also that the rights recognised in this Treaty to save, use, exchange and sell farm-saved seed and other propagating material, and to participate in decision-making regarding, and in the fair and equitable sharing of the benefits arising from, the use of plant genetic resources for food and agriculture, are fundamental to the realisation of Farmers' Rights, as well as the promotion of Farmers' Rights at national and international levels.

Article 9 – Farmers' Rights

9.1 The Contracting Parties recognise the enormous contribution that the local and indigenous communities and farmers of all regions of the world, particularly those in the centres of origin and crop diversity, have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world.

9.2 The Contracting Parties agree that the responsibility for realising Farmers' Rights, as they relate to plant genetic resources for food and agriculture, rests with national governments. In accordance with their needs and priorities, each Contracting Party should, as appropriate, and subject to its national legislation, take measures to protect and promote Farmers' Rights, including:

- d. protection of traditional knowledge relevant to plant genetic resources for food and agriculture;
- e. the right to equitably participate in the sharing of benefits arising from the utilisation of plant genetic resources for food and agriculture; and
- f. the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture.

9.3 Nothing in this Article shall be interpreted to limit any rights that farmers have to save, use, exchange and sell farm-saved seeds/propagating material, subject to national law as appropriate.

From Article 13 – Benefit Sharing in the Multilateral System

13.3 The Contracting Parties agree that benefits arising from the use of plant genetic resources for food and agriculture that are shared under the Multilateral System should flow primarily, directly and indirectly, to farmers in all countries, especially in developing countries, and countries with economies in transition, who conserve and sustainably utilise plant genetic resources for food and agriculture.

From Article 18 – Financial Resources

18.5 The Contracting Parties agree that priority will be given to the implementation of agreed plans and programmes for farmers in developing countries, especially in the least developed countries, and in countries with economies in transition, who conserve and sustainably utilise plant genetic resources for food and agriculture.

In addition, several other provisions are relevant, particularly on conservation (Art. 5), sustainable use (Art 6) and on the multilateral system (Part IV).

ANNEX 4: Resolution on Farmers' Rights by the Governing Body of the ITPGRFA

Resolution on Farmers' Rights adopted by the Governing Body of the International Treaty on Plant genetic Resources for Food and Agriculture at its Second Session (29 October–2 November 2007), 1 November 2007

THE GOVERNING BODY,

Recalling the recognition in the International Treaty of the enormous contribution that local and indigenous communities and farmers of all regions of the world have made, and will continue to make, for the conservation and development of plant genetic resources as the basis of food and agriculture production throughout the world;

Recalling the importance of fully implementing Article 9 of the International Treaty;

Recalling also that according to Article 9 of the International Treaty, the responsibility for realizing Farmer' Rights, as they relate to plant genetic resources for food and agriculture, rests with national governments;

Acknowledging that there is uncertainty in many countries as to how Farmers' Rights can be implemented and that the challenges related to the realization of Farmers' Rights are likely to vary from country to country;

Recognizing that exchange of experiences and mutual assistance between Contracting Parties can significantly contribute in making progress in the implementation of the provisions on Farmers' Rights in the International Treaty;

Recognizing the contribution the Governing Body may give in support of the implementation of Farmers' Rights;

Encourages Contracting Parties and other relevant organizations to submit views and experiences on the implementation of Farmers' Rights as set out in Article 9 of the International Treaty, involving, as appropriate farmers' organizations and other stakeholders;

Request the Secretariat to collect these views and experiences as a basis for an agenda item for consideration by the Governing Body at its Third Session to promote the realization of Farmers' Rights at the national level, and to disseminate relevant information through the website of the International Treaty, where appropriate;

Appreciates the involvement of farmers' organizations at this Second Session and affirms its commitment to continue to involve farmers' organizations in its further work, as appropriate, according to the Rules of Procedures established by the Governing Body.

The Fridtjof Nansen Institute is a non-profit, independent research institute focusing on international environmental, energy, and resource management. The institute has a multi-disciplinary approach, with main emphasis on political science, economics, and international law. It collaborates extensively with other research institutions in Norway and abroad.



FRIDTJOF NANSENS INSTITUTT – THE FRIDTJOF NANSEN INSTITUTE

Fridtjof Nansens vei 17, P. O. Box 326, NO-1326 Lysaker, Norway

Phone: (47) 67 11 19 00 – Fax: (47) 67 11 19 10 – E-mail: post@fni.no

Website: www.fni.no