CHAPTER-7

CONCLUSION & SUGGESTIONS
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7.1. Conclusion

The foregoing discussion and analysis made in this study reveals that the economic reforms announced by the government have changed the direction of the country from the socialistic pattern to the market driven economy. Under the influence of globalization a transition is gradually taking place in the role of the state from active regulator to passive intervener in the spheres of social, economic, agrarian and industrial relations. A clear shift in the governmental attitude from being a close ally of the farmers for the last forty years and more, to becoming a strong promoter of the industry, leaving the underdog to fend for itself can easily be seen. This transformation creates new complexities and challenges in the agrarian relations leading to a discernable crisis in agrarian relations.

Since the Government is now recasting its role in tune with on-going economic transformation and new economic regime, it cannot be expected to continue its active role in future.

However, as India is in the midst of implementing Structural Adjustment reforms, a sudden withdrawal of the policies cannot be expected and it is too late to go for a reversal of the globalization
process. So pragmatism demands initiating necessary measures to counter the negative impacts of these economic policy reforms. It would be apt here to quote the former Prime Minister P.V.Narasimha Rao, from his address to the World economic forum at Davos, Switzerland, in February 1994, that “Change has to be accepted as a result of deliberate and objective thinking. In the new-found enthusiasm for change, governments should not go overboard and plunge large chunks of their people into mass misery; they have no right to do that ......each society has to find its own ‘middle way’ suited to its genius and circumstances; and, this should be the approach that accepts change”.

Clearly the Indian case-in terms of both magnitude and complexity of the challenges—calls for a different strategy than elsewhere. This change in the attitude is clearly not in consonance with the ideals of socio-economic justice inherent in the Constitution of India. As observed by the Supreme Court of India:

“Freedom of trade does not mean freedom to exploit. The provisions of the Constitution are not erected as barriers to progress. They provide a plan for orderly progress towards the social order contemplated by the preamble to the Constitution. They do not permit any kind of slavery, social, economic or political.”

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According to the Noble Laureate economist Prof. Amartya Sen, the State has greater responsibility and not a minimal role in a democratic Government, which is honest and sensitive to the needs of the citizens. While supporting post-1991 economic liberalization polices, Professor Sen identifies “the central issue” as “expanding the social opportunities open to the people.” He stressed the need for social safety nets to profit from globalisation.

For welfare States, social justice must be an integral part of all developmental planning. Approaches such as, growth first and justice later are as contentious as, ‘chicken or egg, which came first?’ Exhortations by political leaders to ‘sacrifice today for a better tomorrow’ fall on deaf ears in societies where the rich continue to get richer and the poor poorer. As the United Nations Development Programme, 1987 (UNDP) declared, “Economic development should be the means and social development should be the goal.”

Very recently, the then Prime Minister of India, Shri A.B.Vajpayee, while addressing the Asian Summit on Youth Entrepreneurship & Employment on October 30, 2003 at New Delhi, opined that “Both globally and locally, we have to reorient our economic thinking, planning and implementation to achieve the goal of full employment everywhere. We should be prepared to reform anything that needs to be reformed to achieve this central

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4 Supra Note 1 at p.166
goal--be it the global financial architecture, the world trade regime, or the growth-obstructing laws and institutions at national and local levels”.

It is, therefore, submitted that while making any attempt to reform anything the Government and policy makers should keep in mind the postulates of economic and social policies envisaged by the Constitution. Otherwise, the reformatory process will lead to a serious constitutional crisis and further hamper social harmony and the progress of the nation.

Finally, the following inferences can be drawn from the discussions and analysis made in this work.

The economic reforms announced by the Government under the influence of globalization process has changed the policy directions of the country from socialistic pattern to market economy. The dominant role played by the state, since independence, in social, economic, agrarian and industrial relations fields seems to be diminishing. The country is forced to opt for a residual model where the State accepts no direct responsibility for ensuring the well-being of its people. As a result, the entire policy directions of the State becomes incompatible with the policy prescriptions of the Indian Constitution.

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5 Yojana, December, 2003, p. 26
The introduction of diverse forms of intellectual property rights in the agricultural field is on the whole completely novel in India and mainly linked to the necessity to comply with India’s existing international obligations and to the general trend towards the privatization of knowledge in recent decades. This new system is in complete contradiction with the previous system of agricultural management which privileged the sharing of resources and knowledge concerning plant varieties by all actors from local farmers to those at the international level. In this context, while individual property rights over state-of-the-art inventions are being strengthened in large part in response to WTO related obligations, the development of strong and effective farmers’ rights is of increasing importance. This should allow them to defend their interests against fraudulent appropriation and to allow them to defend their own knowledge in a legal and commercial sense if they so wish. Farmers’ rights should, however, not be conceived strictly along the lines of existing intellectual property rights such as patents and plant breeders’ rights. In fact, while the commercialization of food crops may be important to all actors engaged in agriculture management, it is by far not the only relevant consideration. Much broader issues such as the conservation and sustainable use of agro-biodiversity and food security for each and every individual are as important and probably much more central than commercial considerations in a field which directly concerns the fulfillment of basic food needs. In
this sense, the introduction of farmers' rights fulfils a number of significant functions from a socio-ecological point of view:

- Farmers' rights contribute to making the legal system fairer by providing property rights to all relevant actors in plant variety management.

- Farmers' rights contribute to the recognition of the contribution of farmers to food security, to conservation and sustainable agro-biodiversity management and to innovation in agricultural management; and finally,

- Farmers' rights will make an enormous contribution to food security by fostering control, not only over resources and land but also over knowledge for the dozens of crops of people who are directly engaged in small-scale agricultural management.

Conversely, the development of farmers' rights provides an opportunity to reexamine patents and plant breeders' rights. This should contribute to make these more 'traditional' intellectual property rights more relevant to the field of agriculture by, for instance, imposing new conditions on rights holders concerning both traditional knowledge and biodiversity conservation.

As a result of international obligations in this field and with a view to foster food security, a comprehensive plant variety protection regime should include the following elements:

- The protection of commercially relevant knowledge;
• The conservation and management of biological resources and genetic resources;

• The protection through property rights of traditional knowledge;

• The recognition that plant variety management and protection should be intrinsically linked to the fundamental human right to food.

In other words, a legal regime concerning plant varieties should not stop at what is commercially useful today but should incorporate, for instance, human rights consideration linked to food security.

7.2. SUGGESTIONS:

Some indication of the possible shape of a comprehensive farmers' rights regime at the domestic level can be given:

1. Farmers' rights should be conceived as a positive mechanism giving traditional knowledge holders property rights and therefore full control over their knowledge. This involves allowing farmers to commercialise their own knowledge. In this sense, farmers' rights are based on the recognition that all economic actors should have commercial rights over their knowledge, and not only one specific category of inventors. A further justification for the introduction
of farmers' rights is the role that property rights play in fostering the sustainable use and the conservation of resources due to the intrinsic link between the knowledge and the resource and the requirement of ownership of both to foster their conservation. In this sense, farmers' rights are perfectly suited to play a multiple role in granting full property rights to farmers which allow commercialization if desired, in contributing to agro-biodiversity conservation, and simultaneously fostering food security at the local level. Overall, farmers' rights should be conceived from the point of view of farmers and in accordance with their view of sustainability and commercial use. If this is not achieved, there is a significant danger that farmers' rights will be used only as a way to force poor farmers to maintain agro-biodiversity for the global good of humankind with minimal personal rewards.

2. In the context of the multiple goals of farmers' rights, other actors involved in agro-biodiversity management should also have duties towards the promotion of food security, agro-biodiversity conservation and sustainable use. While farmers directly benefit from agro-biodiversity conservation, the global community also benefits in direct and
indirect ways. This calls for the sharing of conservation obligations on an equitable basis between all actors benefiting from the exploitation of agro-biodiversity. This burden should not only be spread amongst farmers and local firms marketing seeds, foodstuffs and other crops but also at the international level, given that outside firms, individuals and eventually the international community benefit from these conservation activities.

3. The question of the introduction of farmers' rights includes important issues concerning the holders of the rights. Intellectual property rights such as patents are often conceived as purely individual rights even though in practice, they can easily be shared among several individuals or entities. Intellectual property rights can less easily lend themselves to shared management in the case of an unidentifiable number of rights holders. Farmers' rights present specific problems in this field. In some instances, specific individuals may make individual contributions to the development of a new or improved plant variety. In this situation, the model provided by individual rights can be applied in the case of farmers' rights. This case is, however, likely to be most infrequent given that novelty is very often the product of direct or indirect
collaboration between different individuals and/or communities. As a result, farmers' rights are likely to be of communal nature. The usual intellectual property rights model is not well suited to the recognition of common property rights over knowledge because it generally seeks to individualize contributions to the development of science and technology. As a result, it will be necessary to develop new tools to take into account the special nature of knowledge pertaining to plant genetic resources. Even in cases where contributions by specific individuals can be identified, it may not be equitable to assign rights to specific individuals because the subject matter of farmers' rights is closely linked to food security which is of direct interest to each and every individual in the local community and beyond. One way to solve the problem of allocation in countries like India which have institutions of local democratic governance is to determine that panchayats or their equivalent elsewhere should be the center/entity for locating the ownership of farmers' rights. With appropriate safeguards to ensure that panchayats do not replicate economic inequalities between members of a local community, they can constitute an appropriate institutional framework for ensuring that everyone benefits from any existing entitlements. The
rationale for not following the usual individual allocation model is that knowledge pertaining to plant genetic resources is directly related to the fulfillment of basic food needs for all individuals, landowners, farmers, manual labour and non-farming individuals in a given community. Farmers' rights seek to give control to individual and local communities over their knowledge and resources. This does not imply that the rights conferred must be to the exclusion of any other similar right elsewhere. In terms of the possible commercialization of the product, this indicates that instead of a monopoly right, all rights holders are entitled to separately manufacture and commercialise their own products without infringing anyone's right.

4. The question arises of the uses to which farmers' rights can be put. From a broad perspective, these can be summarized under 'defensive' and 'positive' functions. The former will be there to help farmers fight the appropriation of their resources and knowledge with legal tools. Today, the whole of "traditional knowledge" is deemed to be in the public domain because it cannot be assigned towards re-establishing a fair playing field in which all actors have claims over their knowledge, farmers' rights will also constitute the basis for claims of benefit-sharing
as recognized at the national levels. The positive function of farmers' rights is the most innovative and important in the long run. In a world where all resources and knowledge are being assigned, it is imperative for reasons of equity and food security that farmers and farming communities acquire control sanctioned by the law as this constitutes one of the few ways in which incentives for agro-biodiversity conservation and innovation at the local level can be maintained. The commercial use of the protective knowledge may serve as an added bonus which traditional knowledge holders may or may not use.

Farmers' Rights as of now does not entail, in legal terms, a "right" and a related "obligation" (because the International undertaking adopted by the FAO conference in 1983 is a non-binding instrument)⁶, but only the acceptance of the notion that such a right should be recognized and implemented. If Farmers' Rights were to become effective legal rights, there must exist an obligation imposed on all or some third parties. There is no right without a corresponding enforceable obligation. Very different views have been expressed with respect to the content of the rights to be conferred, and on whom these rights should be conferred (national governments, the international community, or both), and

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⁶ The current negotiations for the revision of the International Undertaking may conclude, however, with the adoption of a binding instrument, possibly a Protocol to the CBD.
by whom they should be realized. According to Riley\textsuperscript{7} for instance, the realization of Farmers' Rights should mean the recognition of the rights to:

- save seeds;
- have access to "the latest technology\textsuperscript{8};
- receive information on and duplicate samples of the materials collected by third parties;
- receive public credit for having provided genetic resources;
- contribute to or facilitating the realization of public sector plant breeding and agricultural research objectives.

The following proposals may be made for ensuring effective Farmers' rights including different kinds of rights/obligations that may constitute the basis of those Rights. Such proposals include the following possible measures.

\textbf{7.2.1. By the international community}

\textbf{Assistance to governments}

Assistance by the international community, as a beneficiary of the PGR developed and conserved by farmers, should be given

\textsuperscript{7} Riley, 1996, p.59
\textsuperscript{8} It may be noted, however, that it may be extremely difficult to satisfy this demand, and that traditional farmers generally do not need the latest technology.
to national governments for the purpose of ensuring/encouraging equitable benefits to present and future generations of farmers and farming (and indigenous) communities.

Support of farmers

· By establishing an international fund and developing its operational mechanism: to ensure conservation and sustainable use of plant genetic resources, and traditional farmers' knowledge; to facilitate and ensure access to new technologies and equitable sharing of benefits derived from the products obtained through the use of plant genetic resources for the benefit of present and future generations of farmers; and to make appropriate efforts to mobilize adequate financial resources to support farmers' activities to conserve and use sustainably plant genetic resources for food and agriculture;

· By ensuring that international aid programmes benefit farmers by furthering their activities to conserve and sustainably use plant genetic resources for food and agriculture.

Recognition of rights in knowledge

· By promoting the establishment of the development of an international sui generis system for the recognition, protection and compensation of knowledge, innovations and practices of farmers and traditional communities.
7.2.2. By national governments

Assistance to farmers and promotional measures

- Adoption of appropriate measures reflecting national capacities and needs, which are non-discriminatory and non-trade-distorting, and which are necessary for Parties and/or farmers to continue to conserve, manage and improve plant genetic resources for food and agriculture.

- Assistance to farmers and (traditional) farming communities, especially in areas of origin/diversity of plant genetic resources, in contributing to the evolution, conservation, improvement, evaluation and sustainable use of plant genetic resources for food and agriculture, through the participation in and establishment or strengthening of appropriate arrangements, and the participation of farmers and (traditional) farming communities therein such as:
  
  (i) national (and regional) germplasm programmes;
  (ii) initiatives that promote the use of, and research into, crops which are not widely used.

- Adoption of support measures for research, training and institutional capacity building activities at the local level, with the participation of the communities concerned, particularly focusing on women farmers, and measures for credit facilities and market provisions governing farmers'
access to plant genetic resources for enhancing traditional genetic resources, development and the exchange systems through, *inter alia*, the removal of financial and market barriers against such systems, for conservation, development and sustainable use, and transfer of technology that protect, integrate, enhance and develop traditional farmers' knowledge, know-how and practices.

- Ensuring that international aid programmes benefit farmers by furthering their activities to conserve and sustainably use plant genetic resources for food and agriculture.

**Recognition of rights in knowledge**

- To promote legal protection systems (and/or other mechanisms) on the national level in order to render effective the rights of farmers and the fair and equitable sharing of the benefits arising out of the utilization of plant genetic resources for food and agriculture.

- To establish national systems, including *sui generis* systems, as appropriate, to ensure/promote the fair and equitable sharing of the benefits arising out of the utilization of plant genetic resources for food and agriculture.

- To ensure that the (individual and/or) collective knowledge and plant genetic resources for food and agriculture held and developed by farmers and local farming communities are
protected and promoted by adopting and implementing appropriate legislation in the form of collective rights regimes that provide for the adequate protection of traditional or indigenous knowledge, innovations, materials and practices of and by farmers and farming / local communities and promote the equitable sharing of benefits arising from the utilization of their plant genetic resources for food and agriculture.

- To review, assess and, if appropriate, modify intellectual property rights systems, land tenure, and seed laws in order to ensure their harmony with Farmers' Rights.

**Prior consent**

- To ensure that the prior informed consent of the concerned farmers and local communities is obtained before the collection of plant resources is undertaken; adapt current variety registration systems so as to identify and record, as appropriate, varieties of plant genetic resources provided by farmers and farming communities; and require disclosure of the origin of plant genetic resources utilized in the development of commercial varieties.

**7.2.3. By national/international action**

- To enhance the productivity/efficiency of farmers by promoting the integration of farmers' traditional knowledge, know-how and practices, with modern technologies, as
appropriate.

· To promote national and international scientific and technological agricultural research that supports and enhances, as appropriate, farmer-based knowledge systems related to plant genetic resources for food and agriculture.

· To recognize and protect the traditional rights of farmers and their communities to use, exchange, share and market their seeds/landraces and other plant reproductive material including the right to reuse farm-saved seed.

· To encourage/recognize and ensure the rights of farmers in sharing the benefits arising from the direct use of plant genetic resources on a fair and equitable basis including, through the transfer of technology, participation in research, and access to the results of research and development, where appropriate, derived at present and in the future, from the improved use of plant genetic resources through plant breeding and other modern scientific methods, as well as from their commercial use.

· To promote/ensure the participation of the farmers and local farming communities in the reviewing and implementation of measures provided under the International Undertaking and the International Fund which may/shall include the initiation of flexible consultative processes to meet this aim and participation in the development and implementation of
legislative measures on Farmers' Rights at national and international levels.

In sum, the proposals made during the revision of the International Undertaking indicate that Farmers' Rights may be realized through a variety of actions and measures at the national level. Possible options in this regard are further explored in the next Section.

7.3. A consensus text: implementing farmers' rights at the national level

The "Contact Group" established by the Chairman of the FAO Commission on Genetic Resources For Food and Agriculture in order to advance negotiations on the revision of the International Undertaking, agreed, during the Eighth Regular Session of the Commission (3-7 April 1999, Rome) on a text for Article 15 on "Farmers' Rights". This text (see Annex I) stipulates that the responsibility for realizing Farmers' Rights rests with national governments, which should adopt, according to their needs and priorities, and subject to national laws, measures to protect traditional knowledge, benefit-sharing and to ensure the participation of farmers in decisions on PGRFA. The agreed text also clarifies that nothing in Article 15 will be interpreted as restricting the rights of the farmers to conserve, use, exchange and sell propagating material held on their farms, in accordance with national legislation.
The proposed text has found broad support among FAO member countries, including developed and developing countries alike. Several elements of the agreed text need to be highlighted. In doing so, it is useful to compare the agreed draft text with the concepts contained in the Annexes to the Undertaking adopted through FAO Resolutions 4/89 and 5/89 (see Annex II) which introduced the notion of Farmers' Rights.

First, the text recognizes the "enormous contribution" that has been made for the "conservation and development" of PGRFA, thus closely following point 3 of FAO Resolution 4/89. Second, while only "farmers" were mentioned in the Annexes to the International Undertaking, the agreed text alludes to "the local and indigenous communities and farmers", in line with the terminology of the CBD. This is a clear indicator of the growing recognition of the role played by such communities in the creation and preservation of knowledge of value for the society as a whole. Third, the agreed text states that the responsibility for realizing Farmers' Rights rests with national governments. This is a major difference compared with the original FAO text, which had emphasized the global nature of farmers' contributions and the primary role of the

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9 See, for example, the Report of the Third Meeting of Commission I of the 30th Period of FAO Conference (Rome, 16 November 1999) and in particular the statements supporting the agreed text on Article 15 made by Turkey, Rep. of Korea, India and Finland (in the name of the European Community and its Member States), Algeria, Ethiopia, Norway, Republic of Congo and the United States, among others.
international community in realizing Farmers' Rights. FAO Resolutions 4/89 and 3/91 had established, in this regard, that Farmers' Rights would be implemented through an International Fund. However, the implementation has not yet materialized for the negotiators have apparently agreed not to insist on this idea.

It is clear in the agreed text that Farmers' Rights are to be established in accordance with "the needs and priorities" of each Party "as appropriate, and subject to its national legislation". Governments should (and not "shall") take certain measures. This means that the implementation of the measures indicated in paragraphs (a) to (c) will be largely dependent upon each governments' judgment on what is appropriate in the light of its own priorities and consistent with its national law. The nature and scope of the said Rights is, therefore, likely to differ significantly among countries. Some countries may, given the flexibility offered by the agreed text, even opt not to implement this provision.

The measures to be established must aim to "protect and promote" Farmers' Rights, that is, there should be measures relating to the legal recognition of such Rights as well as to encourage that they achieve their intended goals. It is important to note that paragraphs (a) to (c) of draft Article 15.2 are only illustrative of the measures that should be adopted, but they do not exhaust the list of modalities under which Farmers' Rights may be realized. The possible scope
of such measures is examined below.

Finally, draft Article 15.3, offered by the United States delegation as a compromise solution, apparently satisfied those who expected a positive recognition under the revised International Undertaking of certain rights of farmers in relation to saving, using and exchanging seeds, and those who feared that the Undertaking could limit the breeders' rights that would be inconsistent with UPOV and UPOV-like legislation. The agreed draft text only states that Article 15 is neutral in that respect, that is, while it could not be a sufficient legal basis for claiming rights in relation to saving, using and exchanging seeds, at the same time Article 15 does not restrict the options that may be adopted by national governments in that regard. Clearly, the agreed text does not exclude the possibility that national laws (including PBRs and seed legislation) limit farmers' rights in relation to saving, using and exchanging seeds/propagating materials.

In the following subsections the different elements of article 15.2 and 15.3 are examined.

7.3.1. Protection of traditional knowledge

Conceptual and implementation issues

Different alternatives have been proposed to deal with indigenous/traditional knowledge or some components thereof.
This is the case, for instance, regarding proposals relating to "tribal" or "communal" or "community intellectual rights", and "traditional resource rights".

Draft Article 15.2(a) of the revised International Undertaking requires measures for the protection of "traditional knowledge" but, in view of the scope and purpose of the Undertaking, it only refers to knowledge "relevant to plant genetic resources for food and agriculture". Thus, Article 15.2 is narrower in scope than Article 8(j) of the CBD, and would not apply, for instance, to knowledge relating to medicinal or industrial uses of plant genetic resources. Under this approach, the issue of protection of traditional knowledge may be circumscribed to knowledge incorporated in farmers' varieties ("landraces") and certain associated knowledge (e.g. specific cultivation practices).

The development of a *sui generis* regime for the protection of farmers' varieties becomes, in this context, one of the possible components of Farmers' Rights. This issue, as mentioned above, has received considerable attention in the literature, though little progress has been made in terms of actually implementing that kind of protection.

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10 Berhan and Egziabher, 1996, p.38A model of *sui generis* national legislation that would give communities property-like rights over their collective knowledge was developed by the Third World Network (Community Intellectual Rights Act) in 1994.

11 Posey and Dutfield, 1996.
The establishment of a *sui generis* regime poses, in fact, complex conceptual and practical issues. On the conceptual level, it is not clear whether the protection of farmers' varieties under an IPRs system would have any positive impact on their conservation or stimulate breeding activity, and whether protection would serve the purpose of strengthening the rights of communities and traditional farmers over their resources. There may be more appropriate non-IPR methods of protecting such varieties, for instance, via access legislation or a misappropriation regime as discussed below.

On the other hand, the impact of protecting farmers' varieties under an IPRs-system will vary according to the nature and characteristics of the national seed supply system in a particular country. Moreover, seed supply arrangements may be crop-specific. Hence, IPRs can play a different role depending on the crop at stake.

If it were deemed that an IPRs-type of protection for farmers' varieties were desirable, a number of issues would need to be addressed:

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12 IPGRI, 1999, p. 16
13 These differences had been, in fact, recognized by the UPOV Convention until its revision in 1991. Member countries were allowed, under UPOV 1978, to decide on which crops PBRs would be applicable. Article 4 made it obligatory to protect a minimum of 24 genus or species within eight years of the entry into force of the Convention in a member country (Article 4.3).
**Definition of subject matter (what is protected?).**

The delimitation of the subject matter is a critical and complex issue, since traditional agriculture does not conserve specific genotypes or populations, but rather a total complex of genetic diversity in evolution and flux. Such agriculture uses and manages genetic diversity in a dynamic system of continuous change and adaptation. Farmers' varieties are continuously replaced, introgressed and introduced to new environments and new selection pressures.\(^\text{14}\)

Although modern techniques (molecular markers) facilitate a detailed description of the heritable material of plants and populations, it is apparently extremely difficult (if not impossible) to define individual landraces, which continuously evolve. In any case, a system of protection should be based (as in the case of breeders' rights) on the material existence of an identifiable variety.

**Requirements in order to grant protection**

What level of novelty, if any, would be required in order to grant protection? One specific problem posed by farmers' varieties is that most of them have been in actual use for a considerable time, and therefore they can not be deemed "new" as required, for instance, under PBRs legislation.

\[^\text{14}\text{ Hardon, 1997, p. 46}\]
Since farmers' varieties are more heterogeneous than varieties produced through classical breeding, the "uniformity" and "stability" requirements provided for under PBRs would not be suitable in most cases. A possible approach may be to define minimum genetic distances with regard to the composition of varieties with overlapping claims, or to define a maximum level of genotypes that can be shared by the two varieties.

**Who is the titleholder?**

This question as to who is the titleholder is likely to be one of the main problems to be faced in efforts to make Farmer's Rights effective. The collective nature of innovations or creative works is not, per se, an obstacle to the recognition of protection. The problem is that farmers' varieties generally have no single origin and they are the result of the interaction of multiple farmers, often in different regions or countries. Possible approaches to this problem may include one or more of the following options.

**Possible right-holders of Farmers' Rights**

- Informal plant breeders from developing countries
- Landowners where PGRFA are conserved and developed, if different from plant breeders

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15 See, for example, the UNESCO Model Law on Folklore.
Farmers located in the centers of diversity of PGRs

Indigenous and rural communities

Individual farmers, where identifiable

Traditional small farmers

National States

The researcher advocates the recognition of Farmers' Rights as collective rights, that is, as rights that belong to communities or groups of farmers and not to individuals or to States. Another possible option is that the rights be administered by a State-sponsored or other kind of organization on behalf of farmers. For instance, a royalty could be charged at the national level on traded seed and the funds collected, administered and distributed by such an organization.16

**Territorial validity of right**

Patents and breeders' rights are territorial rights, in the sense that they are only valid in those countries where registration has been obtained.17 An important problem for a sui generis system is the spreading of landraces in several countries. If protection is restricted to a national jurisdiction, the varieties protected there could be in the public domain elsewhere. In order to ensure cross-

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16 Collective entities for the collection and administration of authors rights are common in the field of copyright and related rights. See WIPO, 1990.

17 This is a major difference with copyrights, which do not require registration and have an
border protection, similar substantive rules should be adopted by other countries unilaterally or on the basis of bilateral or plurilateral agreements.\textsuperscript{18}

\textit{How would the system operate?}

Issues such as examination and registration should be carefully analysed, as well as the costs involved in the operation of a system of protection. The registration of the varieties as a condition for protection, though advisable in order to attain some degree of certainty, may pose a very heavy, often insurmountable, burden on farmers, especially the poorest. It would also require the establishment of new public functions, with their associated costs.

\textit{Enforceability}

The availability of rights is useless if the system cannot be actually enforced. This depends on how easy it is or not to cheat; on the existence of preventive measures and remedies; and, above all, on the capacity to monitor and support the costs of administrative and judicial procedures. Given the essentially variable nature of farmers' varieties and the fact that providers and users thereof may be located in different countries, enforcement problems may be very substantial.

\textit{Duration}

\footnote{The review of the TRIPS Agreement may provide an opportunity to develop a \textit{sui generis} system with an international reach. However, this is unlikely to happen in the near future.}
Another very important issue is that of determining the duration of protection for an intrinsically evolving material for which, in addition, the date of "creation" cannot be established?

*Compensation*

As noted in respect of other aspects of the implementation of Farmers' Rights, various options exist in connection with the type of compensation to be granted. Such compensation may be based on funds generated from different sources as laid down below.

**Possible funding for compensation**

- Royalties on seed sales
- Taxes on seed sales
- Collection fees (for materials held *in situ*)
- Access fees (for materials held *ex situ*)

The definition of the possible forms of compensation needs to take into account complex issues raised by the calculation thereof and by the allocation of funds to different farmers, groups or communities. Since many PGRs have been developed by different groups/communities, including in several countries, determining the "credit" of each group/community may be extremely difficult, if not impossible.
Moreover, the economic benefits derived from the commercial exploitation of germplasm provided by traditional farmers' may be difficult to estimate and "tax" and this may be insufficient to "really solve the problems of rural communities in terms of their economic needs, employment and management of natural resources. Royalties will be minor in comparison to what will go to the people who are engaged in the production and sale of seeds" 19.

Another issue that may require consideration is the use to be given to the funds received, if any, on the basis of Farmers' Rights. Should such funds be applied to conservation/development activities, or could the beneficiaries individual or collective freely dispose of them as they wished? It would seem that the latter solution should apply if decision-making by farmers is to be reinforced, unless it is too difficult to identify the group that should receive the compensation.

In any case, in designing a new system of protection adequate consideration should be given to the expected benefits and costs for society, as well as the direct costs to be borne by the government.

Possible approaches: (1) A dual system

As noted above, a crucial issue in the establishment of a sui generis regime would be the definition of the protected subject

19 Shankar, 1996, p. 171-172
matter. Article 27.3b of the TRIPs Agreement requires the protection of "plant varieties", but does not provide (as in the case of inventions) a definition thereof. Therefore, national laws have ample room to determine what is to be deemed a plant "variety" for the purposes of protection. There have been lengthy discussions on the concept of "plant variety", particularly in the framework of UPOV. The scientific notion does not necessarily coincide with the legal concept. The law may require certain characteristics for a protected variety that may not be essential for a scientific definition.

One option may be to distinguish different levels of protection depending upon the degree to which the uniformity and stability standards are met. Thus, varieties which meet such standards may be subject to rights broader than those applicable to varieties essentially characterized by their heterogeneity and variability. As mentioned, these are the features that confer great value on farmers' varieties as a source of germplasm for agricultural use.

A *sui generis* regime may, thus, provide for a dual system of protection,\(^{20}\) which includes both "modern" as well as farmers' varieties. Under an UPOV-like legislation,\(^{21}\) the requirements would include novelty, distinctness, uniformity and stability. For

\(^{20}\) In Switzerland, for instance, a register for groupings of cereals that do not meet the ordinary homogeneity requirements has been established.

\(^{21}\) UPOV 1978 provides a model for legislation that is more flexible and adaptable to the needs of developing countries than UPOV 1991.
other cases (farmers' varieties) the requirements may be less stringent and be limited, for instance, to sufficient identification and distinctness.

The inclusion of farmers' varieties as a protectable subject matter would imply a radical departure from existing IPRs regimes. One of the major difficulties in dealing with such varieties, however, is their essentially variable nature. The definition of the subject matter and, consequently, the enforcement of rights become more difficult and complex than in cases where uniformity and stability are present.

Nevertheless, the subject matter of protection under IPRs law need not always be defined with precision for the acquisition of the relevant rights. Thus, trade secrets are protectable without description and registration. It is a matter of proving in each individual case whether or not there has been infringement.

It may be convenient to make it clear, in any case, that protection should be granted with respect to a variety as such and that, therefore, it would not extend to any constituent of the plants, including their genetic information, nor to specific characteristics of the plants or of the harvested materials. In some jurisdictions, patents have been accepted on the basis of characteristics or functional specifications, a possibility that a sui generis regime should clearly prevent.

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22 Correa, 1994
In the case of farmers' varieties, the creation of the variety is generally a collective endeavour and, therefore, the rights should not be granted to individuals, but to the community that has developed and used the variety. Of course, the collective nature of these rights, and the dissemination of farmers' varieties in different areas or communities, may create controversies about the entitlement to the respective rights. This situation is not essentially different, however, from cases in which two or more persons or firms claim to have developed a given piece of technology or information. Co-ownership is also a possibility.

An important aspect of a *sui generis* regime relating to plant varieties would be the scope of the rights conferred on titleholders. In most cases, IPRs grant exclusive rights, that is, the faculty to prevent third parties from exploiting the protected subject matter. Some modalities of IPRs, however, do not entail exclusivity, but other types of rights. Even the TRIPs Agreement does not require the granting of exclusive rights in a
number of instances, such as with respect to undisclosed information.

In the case of farmers' varieties, national legislation may recognize a "remuneration right", that is, an entitlement to receive compensation in all cases of use of a protected variety for propagating purposes outside the respective farming community or communities. This formulation would amount, in practice, to an open licensing system whereunder any interested party may utilize the protected variety for planting or multiplication, against a payment in favour of the titleholders. Consideration should also be given to the status of any derivatives of farmers' varieties, including essentially derived varieties, and the remuneration if any to be paid for these.

Possible approaches: (2) A misappropriation prevention regime.

Another possible way of protecting farmers' varieties would be through a regime that aims to prevent the misappropriation of such varieties. This type of regime would not imply the establishment of any form of monopolization that could contradict farmers' practices and values, but the legal faculty to prevent
multiplication or commercialization of propagating materials acquired in a manner that is contrary to the applicable rules on collection, transfer and use of germplasm.

Thus, national legislation may establish that no intellectual property rights shall be conferred with respect to farmers' varieties. In the case of infringement of this rule, the conferred title should be declared void. A delicate problem to be addressed is the extent to which derivatives from such varieties, particularly essentially derived varieties, should be also excluded from IPRs protection, or subject to the control of the original suppliers of the varieties.

If such a regime were established, national laws would be free to determine the means to prevent misappropriation, including criminal and civil remedies, and how to empower communities for the exercise and enforcement of their rights. Protection would not be subject under the proposed scheme -- like as in the case of trade secrets -- to any kind of registration. Protection would last for as long as the conditions that justify it subsist. Given the collective nature of these rights and that farmers communities generally lack a legal personality, a possible mechanism for enforcement may be to establish an "ombudsman" empowered with the right to act on behalf of the communities so as to enforce their rights.

Some of the main features of such a regime as proposed, are the following:

- it would recognize the informal, collective and cumulative
systems of innovation of local and indigenous communities and farmers;

· no novelty, inventiveness or secrecy would be required;

· there would be no arbitrary time limit for protection;

· the conferred rights would be "non-monopolistic" and would not hinder the non-commercial use and exchange of germplasm within and among communities;

· no registration, and therefore, administrative machinery, would be necessary;

· it would not oblige farmers or communities' members to keep secrecy or change their traditional practices;

· since no monopolies would be recognized, possession of the same knowledge by different communities would be perfectly legitimate;

· the rights against infringers would arise when a variety has been acquired in a manner contrary to certain rules, such as national access legislation or other accepted practices on the collection of germplasm;

7.3.2. Benefit-sharing

The FAO Resolution 5/89 introduced the concept of "benefit-sharing" as one of the components of Farmers' Rights.
This concept was incorporated later in Article 15 of the CBD and given a broader scope. This article applies in relation to "the results of research and development and the benefits arising from the commercial and other utilization of all kinds of genetic resources". The CBD also added that such sharing should be "upon mutually agreed terms".

The fair and equitable sharing of benefits is a major goal of the CBD. It is also an important element in the International Undertaking. The draft text on Article 14 which was agreed (with a number of remaining brackets) by the Contact Group at its First Inter-sessional Meeting (Rome, 20-24 September 1999) provides that the benefit-sharing within the Multilateral System that is to be established will take place through the transfer of technology, capacity building and the exchange of information. Differences still exist on whether funding and a fair and equitable sharing of the results of R&D and of commercial exploitation of PGRFA would be included (Article 14.2, Document CGRFA(CG-1/99/TXT).

The same draft provision states that the benefits arising from the use of PGRFA should flow "directly or indirectly, to farmers in all countries, particularly in developing countries and countries with economies in transition who conserve and sustainably utilize PGRFA". However, it is not agreed whether such flows should "primarily" benefit such farmers or only "inter alia".

In April 2000 further discussion took place in the Contact
Group on the monetary dimension of benefit-sharing and the following text was developed:

14.2 (d) **Sharing of [monetary] benefits on commercialization**

(i) [Parties agree, under the Multilateral System, to [share]/[promote] commercial benefit[s]-sharing through measures that involve the private sector in activities identified under Article 14 of the International Undertaking through partnerships in research and technology development.]

(ii) [Whenever the use of PGRFA accessed under the Multilateral System results in a product protected by patents, or any form of commercial protection that restricts further access to the genetic material involved for research and plant breeding, parties agree that a fixed share of royalties shall be paid into a mechanism to be decided by the Governing Body as a contribution to the implementation of agreed plans and programmes as established in accordance with Article 16.]

At this stage of the negotiation of the International Undertaking it is still uncertain how this issue will be finally solved, and the extent to which farmers will participate in benefits-sharing at the international level. As indicated above, however, one of the elements of Farmers' Rights to be realized at the national
level, in accordance with draft Article 15.2(b), relates to benefit-sharing.

National governments may implement such sharing through a variety of modalities. One option is to include specific provisions in access legislation, as appropriate. Benefit sharing may also be implemented through farmers' access to funds arising from taxes or levies associated with trade in seeds, or through other charges imposed on breeders that benefit from farmers' contributions. This latter approach may be based on a general contribution (for instance, registration fees imposed on all breeders), or on payments associated with the specific use by a breeder of materials for which the contribution of traditional farmers may be determined and valued.

For this purpose, national patent, PBRs and seed laws may establish the obligation to reveal the source of a genetic material used for the creation of a new variety and, if appropriate in the particular case, to prove that the applicant has complied with rules relating to access and sharing of benefits. This type of requirement ("certificate of origin"), would not be inconsistent with the TRIPs Agreement, which does not limit the States rights to make the grant of a patent conditional on complying with certain obligations (such as the payment of a registration fee).

Whichever approach is followed, national governments should carefully examine the costs and benefits of any policy to be
implemented and, in particular, of its likely impact on farmers, breeders and consumers. For example, taxes, or levies applied on seeds are likely to increase the prices charged to farmers, who may or may not transfer this extra cost to consumers, depending on market structure and conditions and regulatory requirements.

7.3.3. Participation of farmers in decision-making

One of the components of Farmers' Rights, according to draft Article 15.2 (c) would be "the right to participate in making decisions" at the national level "on matters related to the conservation and sustainable use" of PGRFA.

This right, which would benefit "the local and indigenous communities and farmers", should be recognized, according to Article 15.2, "as appropriate" and subject to "national legislation". This means that national governments have considerable scope to determine the extent of such right.

The importance of ensuring the participation of local, indigenous and farming communities in decision-making concerning PGRFA has been stressed in various fora. In particular, the Draft UN Declaration on the Rights of Indigenous Peoples developed by the Working Group on Indigenous Populations recognizes the communities' rights to political and legal autonomy and the rights of indigenous peoples over cultural and genetic resources as follows:
"Indigenous peoples are entitled to the recognition of full ownership, control and protection of their cultural and intellectual rights... They have the right to special measures to control, develop and protect their sciences, technologies and cultural manifestations, including human and other genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs and visual and performing arts" (article 29).

Some national laws have begun to incorporate these principles. In the Philippines, the Indigenous Peoples Rights Act contains a broad recognition on community rights. Access legislation adopted in some countries also provides for some form of participation in relation to the collection of genetic materials. In accordance with the Philippines Executive Order No. 247, for instance, the rights of indigenous and local communities must be taken into account with regard to informed consent procedures.

The relationship between indigenous peoples and national governments is, however, problematic in many countries:

"Some indigenous peoples understand themselves to be a nation within a nation or a nation whose peoples cross the borders of two or more nations. Some governments consider themselves to be the sole and entirely sufficient voice of all the peoples within their sovereign territory". 23

23 The Crucible II Group, 2000, p. 77.
The realization of Farmers' Rights in relation to farmers' participation in decision-making will be dependent, in the last instance, upon the nature of the relations between local, indigenous and farming communities, on the one hand, and national governments, on the other hand. A wide range of scenarios can be considered in this regard. Some tension may be expected between the exercise of such a right and the operation of a multilateral system, which requires a free flow of the germplasm in question. In any case, the formal recognition of Farmers' Rights in the International Undertaking would certainly constitute an important step towards the reaffirmation of farmers' and communities' rights to take decisions that essentially concern the kind of farming system that they wish to keep as an integral part of their culture and lifestyles.

7.3.4. The right to save, sell and exchange seeds

As indicated above, farmers' rights with regard to saving, selling and exchanging seed is a controversial issue. One view is that farmers should be freed from any restriction with regard to the use and disposition of seeds, including those protected under IPRs. This view is not shared, however, by those who believe that the unrestricted use of IPRs-protected materials by farmers will erode the incentives to commercial breeding and create a threat to future world food security.
As indicated above, a clear distinction must be made according to the types of materials involved. There can be no objection to the idea that one of the components of the Farmers' Rights should be the right to reuse non-protected seeds and to commercialize their own produce.

However, the distribution of non-protected farmers' varieties may be restricted by the relevant national seed legislation, which in many countries imposes constraints, based on agronomic considerations, aiming at ensuring the dissemination of adequate and safe seeds. It does not seem reasonable to think that this type of regulation pertaining to seeds could be overridden by a general concept of Farmers' Rights, but measures may be adopted in order not to unduly prevent farmer-based exchanges.

The implementation of this aspect of Farmers' Rights needs to distinguish between the various kinds of materials that may be involved in farmers' practices and the role of IPRs.

Farmers' varieties

There is no doubt that farmers can use, exchange, sell or otherwise dispose of the varieties that they have developed and which are not subject to third parties' IPRs. In fact, farmers' varieties ("landraces") are today outside the IPRs system. They are within the "public domain". Hence, the farmer that has developed such varieties cannot be prevented from any action relating to
them. At the same time, he/she has no legal faculty to prevent others from using or reproducing such varieties; this is precisely one of the problems that some proposals for *sui generis* protection aim to address.

**Farmers' own produce**

Similarly, farmers are free to dispose of their own produce, whether it has been obtained from their own varieties or with varieties protected by IPRs (unless this right is curtailed by contractual obligations imposed by seed distributors). In this sense, the recognition of the right to dispose of the "farm produce" as proposed, for instance, in the Indian law on PBRs, does not mean any significant concession to farmers, since they legally already enjoy the right to sell it.

**Protected varieties**

The situation may be substantially different, however, in relation to the sale or other forms of distribution of seeds for propagating purposes, when such seeds are protected by third parties' IPRs. Though PBRs legislation has generally admitted an exception for the reuse of protected seeds in the farmers' own exploitation ("farmers' privilege"), it has normally prevented acts that may lead to further propagation without the consent of the PBRs titleholder.

The scope of the "farmers' privilege" varies in different
national laws. Under UPOV 1978, most countries allowed such privilege in broad terms. The 1991 revision of UPOV has narrowed the scope for such exception, which can be established under national law, within reasonable limits and safeguarding the legitimate interests of the breeder (Article 15.2).

Since UPOV 1991, national laws have tended to restrict the scope of the farmers privilege to different degrees, both in developed and in developing countries. Thus, the European Community Plant Variety Rights (Council Regulation EC No. 2100/94) limits the "farmers' exception" to certain species and requires the payment of an "equitable remuneration" to the breeder for planting-back protected seeds, except in the case of "small farmers" (Article 14.2 and 14.3). In Brazil, law No. 9456 (1997) has established that such exception does not apply in relation to sugar cane. It only benefits small farmers, who can provide or exchange seeds on a non-commercial basis with other small farmers. In sum, PBRs provide some room for the farmers' practice of saving seed, but the recent legislative trend has been to restrict the room available for following such practice. Under product patent protection the restriction on such practice is straightforward and stronger than under PBRs. In principle, the patent owner may prevent such practice or require additional payment for the reuse of seeds.

Some options that would reconcile IPRs with the farmers'
right to save, sell and exchange IPRs protected materials may be considered, such as the following:

1. To distinguish different groupings of farmers with regard to the planting-back of protected material, on the basis of volume of output, size of landholdings, species concerned, etc. Thus, a broad farmers' exception may be granted to "primarily-subsistence farmers", or to "small" farmers who customarily reuse seed because they lack access to or financial resources for new seed every growing season. Large farmers in the commercial sector may be subject instead to other, more stringent, rules.

2. To exempt exchanges of seed that take place within the same community or with neighbours, and between farming communities.

3. To allow certain sales of seeds as propagating materials, for instance, those that take place within the farmers' customary market area.

All these activities may be important to maintain genetic diversity and enhance local plant breeding. Those activities under 2) and 3) may be seen, however, as a threat to PBRs and inconsistent with obligations under UPOV (where this convention is applicable), if such activities were not really an expression of traditional practices and were just used as a means to circumvent
PBRs\textsuperscript{24}.

7.3.5. Other promotional measures

As mentioned, the agreed draft Article 15.2 is merely illustrative; it indicates only some of the measures that States could take for the protection and promotion of Farmers' Rights, but it does not exclude other measures. Some promotional measures that may be adopted at the national level are as follows:

Measures that may be undertaken for the promotion of Farmers' Rights at the national level

- Support of conservation and development of PGRFA by traditional farmers
- Research
- Training
- Integration of traditional and modern knowledge
- Technical assistance and training
- Transfer of technology
- Improvement of access to credit
- Participation of farmers, e.g. via prior consent for access to PGRFA

\textsuperscript{24} The Crucible II Group, 2000, p.99
As shown above, there is a wide range of possibilities for promoting the realization of Farmers' Rights. Of course, any promotional measure would imply costs that many developing countries will not be in a position to bear. The development of international cooperation may be essential to implement promotional policies effectively.

Several interesting experiences made in a number of developing countries, offer possible approaches to be followed elsewhere, including the following examples.25

· Participatory plant breeding26.

· Agroecological-based natural resource management for low-income farmers27.

· Reintroducing farmers' varieties to replace modern varieties and reduce the vulnerability created by genetic uniformity (for example, experience with rice cultivation in the Henwal Valley, India)28.

· Farmer-centred research and extension with a view to combining the knowledge and research capabilities of local farmers with those of R&D organizations (for example, centres for propagation in the region of

25 See also Srivastava, Jitendra, Smith, Nigel and Forno, 1998.
26 Eyzaguirre and Iwanaga, 1996; Smith, Weltzein, Meitzner and Sperling, 2000
28 Singh, 1999, p. 12
Moramanga, Madagascar)²⁹.

- Low-External-Input Sustainable Agricultural Practices based on participatory development and support of farmers' experimentation (for example, experiences in northern Ghana, Andean valleys and Indian Deccan Plateau)³⁰.

The concept of Farmers' Rights, first introduced by the FAO in 1989, has been reaffirmed in a number of international instruments and is gaining growing recognition in some proposed national laws and regulations. Efforts to win full acceptance of this concept and its implication have been at the very heart of the negotiations for the revision of the International Undertaking.

The progress made in defining and realizing Farmers' Rights since the concept was adopted, has been slow. There are complex conceptual and practical problems that need to be addressed, including the relationship with IPRs. Opinions diverge, Farmers' Rights can be regarded as a "non-IPRs mechanism", but, in fact, the rationale for the recognition of Farmers' Rights significantly differs from that applicable to IPRs. The clarification of such rationale seems essential in order to characterize and define the content of Farmers' Rights. Equity, conservation, and the preservation of farmers' traditional practices, provide sound justifications for the establishment of such Rights.

²⁹ Tucker, 1999, p.106
³⁰ II.EIA, 1999, p.5
Farmers' Rights may be seen as a moral recognition of farmers' past and present contributions to making agriculture sustainable. However, they can also play a significant role as concrete instruments to protect and promote traditional farming activities and communities' culture and lifestyles. To this end, important issues need to be clarified in relation to the scope, content, title-holders, duration and other aspects of such Rights.

The discussions and several proposals made in the context of the revision of the International Undertaking have contributed to the identification of the nature of certain actions that may be taken at the national level in order to implement Farmers' Rights. The possible scope and characteristics of such measures need to be further developed so as to provide more concrete guidelines to governments on how best to comply with their responsibilities in this field.

The preliminary consensus reached on a draft of Article 15 of the International Undertaking, has been an important step towards the definition of Farmers' Rights as a component of national policies. That Article also provides possible elements for the realization of those rights, while leaving considerable room for national governments to determine how to implement them through protective and promotional measures. Though this may lead to very different ways of approaching the matter, it also ensures that each country can adapt the concept to its own reality and needs.
There is still considerable work to be done to ensure that Farmers' Rights are recognized in practice. This will require, *inter alia*, capacity building, training, transfer of technology and a fair reward for farmers' contributions. Though the issues which are pending are important and complex there seems to be a gradual movement from the realm of ideas towards the design of such measures that can be realized in practice and which supports and promotes farmers' activities in the conservation and improvement of plant genetic resources for food and agriculture.