

# Policy Brief

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## Traditional Farming Practices and Farmers' Rights in the HKH Region



**Agriculture without independent and self-responsible indigenous farmers will end up in severe ecological disaster**

- Dr Toni Hagen

### BACKGROUND

The Hindu-Kush Himalayan (HKH) region is the largest and most diverse mountain setting in the world, comprising 3500 km long complex landscape of mountains, plateaus, river gorges, and plains. The region includes Afghanistan, Northern Pakistan, China's Xizang Autonomous Region, Western Sichuan, North West Yunnan and Chengdu, the northern hilly region of Burma, Chittagong Hill Tracts of Bangladesh, Indian Himalayas, Bhutan and Nepal. This vast tract of landmass includes such ranges and chains known as the Himalayas, the Karakoram, the Hindu-Kush, the Hengduan Mountains, and the Tibetan Plateau.

The mountains in the region are young and fragile and in terms of land use 39 percent is pasture, 21 percent is

forest, 11 percent is covered under protected areas and five percent is used for agriculture. Over 150 million people representing scores of ethnic groups live within this fragile and marginal landscape and another half a billion inhabitants depend on its resources, downstream in the hinterlands. The region is primarily characterised by richness in biodiversity and associated indigenous knowledge, antiquity of agriculture, niche opportunities and human adapted to harsh environments. The economy of the region's hills and mountains is primarily agriculture-based. Farming systems in the HKH region present a mosaic of distinct agriculture and livestock production systems, representing various agro-ecoregions. Pastoralism and agro-pastoralism cover a vast part of the HKH in the highland areas, notably in Tibet (China) and some northern areas of Pakistan, India and Nepal. In the sedentary farming dominated by food grain and mixed crop farming systems, livestock play crucial role providing draft power,

manure, meat and milk. Shifting cultivation is prevalent in the eastern Himalayan region—North-east India, and bordering areas between China and Myanmar. Here livestock farming is a part of the livelihood of the shifting cultivators.

Agriculture that includes production of cereals, grain legumes, oilseeds, fruits, vegetables and spices; management of cattle, poultry, goat, sheep and pig; and pro-



duction of agro-forestry along with mixed cropping, mixed farming system and shifting cultivation significantly contributes to food security in the mountain economy. Because of the varied ecosystem, off-season vegetable production, quality seed production and orchard farming have also tremendous potential.

Notwithstanding these potentials, a majority of people are deprived of basic necessities of the present day life. Widespread poverty and food insecurity are their major concerns.

Despite movements initiated to apply modern agricultural practices and systems in recent years, traditional farming practices still have intrinsic value in the agricultural system of the region. They have been significantly contributing in maintaining a balance in the nature by promoting interdependence of agro-horticultural crops, forestry, animal husbandry and medicinal and aromatic plants in the mountains. Farming communities of the HKH region attach great value to the forest ecosystem as well as to the integration of livestock into the mountain farming system. The communities in the region have been practicing traditional farming systems for harnessing ecological potential of land and conserving natural resources for millennia. These traditional practices not only contribute to the development and advancement of farming systems but also help them meet their specific needs of life.

However, much to the dismay of these mountain farmers, the protection and promotion of such practices are not a priority for their governments. In the national plans and policies, they are, more often than not, ignored. Countries in the region have not been able to devise appropriate policy instruments and legal mechanisms that protect and promote traditional farming practices. Such a policy and legal constraint has severely limited farmers' freedom and their ability to practice traditional

farming systems, thereby directly affecting their rights and livelihood options. In addition, in recent years, due to globalisation and the World Trade Organisation (WTO) system, new challenges are surfacing. Different WTO agreements deprive farmers from enjoying their right to exercise traditional farming practices. Among the WTO implications on traditional farming practices and farmers' rights, the implications of intellectual property right (IPR) rules are most profound.

This is also because WTO rules are binding. Countries, which are members or are seeking membership, are required to modify their national agricultural plans, policies and acts in tune with WTO rules, including IPR rules. The challenge lies in interfacing national interests while complying with WTO commitments. This is a very complex task for the HKH countries for two main reasons. The first reason relates to national strategy. Countries in the region have not developed adequate and proper policy instruments and legal mechanisms that respect and reward traditional farming practices and farmers' rights. The second reason relates to international rules. Governments in the region are still not well equipped to understand WTO and its IPR rules, let alone capitalising them in the interest of farmers.

At the international level, there have been some praiseworthy initiatives in relation to the establishment and enforcement of the international rules that call for the protection and promotion of traditional farming practices and farmers' rights. Among them, most significant are the International Undertaking on Plant Genetic Resources (IUPGR), 1989, the Convention on Biological Diversity (CBD), 1992 and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), 2001 (*discussed below*).

## INDIGENOUS MANAGEMENT OF AGRICULTURE AND NATURAL RESOURCES

Indigenous knowledge and traditional practices in the agricultural systems have been in existence in the HKH region for millennia. Farmers with their practical knowledge have developed several production systems suited to marginal and fragile mountain environments. The eco-friendly agriculture and sustainable soil management are practiced even in such harsh environments through terracing, composting, mulching, mixed cropping, mixed farming, etc.

Traditional knowledge about plant species in the local communities has opened up the whole gamut of ethnobotanical studies. An array of edible wild plant species from the forest is consumed as the sources of starch, protein, vitamins and minerals in rural life. Medicinal and aromatic plants are collected from forest and used for treating human and animal diseases and nutritional disorder. Rangelands and pastures are being managed for raising livestock in the high mountains. Farmers have in depth knowledge about which plants are useful for

what purposes, when they can be used, where they can be grown and from where they can be obtained.

These farming communities have also good understanding of diverse agro-ecosystems in a watershed since parcels under their possessions are scattered. Normally, watershed contains large variations in terms of soil texture, fertility pattern, moisture regime, drainage, temperature, precipitation and vegetation. Management of the variability, one of the important tasks in the agricultural system, is accomplished based on the experience passed from generation to generation and innovativeness of the farming communities. They select crops (species diversity) and varieties (genetic diversity) to plant and select seed for on-farm planting (ecosystem diversity).

Use of compost and diverse cropping patterns are age-old practices in soil fertility management. Recently, combinations of compost and chemical fertilisers are also being used to optimise productivity levels. Farming communities have developed general perception about the combination that the compost enhances the efficiency of the inorganic fertiliser by reducing the leaching and increasing the availability of the nutrients, hardening of soil and preventing the fertiliser from making the soil acidic. Scientific studies also indicate the similar phenomenon and recommend the use of combination of compost and inorganic fertilisers for sustainable soil management.

Similarly, understanding of seasonal pest occurrence, distribution and its management exists in the rural communities. The contributions of traditional knowledge to the modern agriculture in food production, crop yields, pest management etc. are quite significant.

The other important aspect of traditional farming practices includes the issue of seed management. There is no denying that seed is the most essential agricultural input in the traditional farming system. Many studies on seed supply system reveal that farmers extensively use farm-saved seed. However, their dependence on formal seed supply system is extremely low. Rather farmer-to-farmer seed dissemination culture is the most common feature. They exchange, buy, borrow and sell seed with their neighbours and also offer them as gifts to relatives.

The hills and mountains have comparative advantage because of niche opportunities for production of low volume and high value crops. They have a tremendous

production potential to contribute globally in sustainable utilisation of diverse mountain ecosystems. Farming communities are aware of the variability in micro niches and possess knowledge on the management and use of the niche specific diversity.

### STATEMENT OF THE PROBLEM

In the present era, the tendency to ignore/underestimate traditional materials, methods and knowledge by the HKH governments and research and development agencies has severely affected the mountain economy in general and farmers' livelihood in particular. The gradual disappearance of local knowledge and traditional farming practices is a common phenomenon. There is no respect and reward for farmers and their rights are ignored. Several credit schemes and market forces act against local genetic resources and traditional farming practices. The genetic resources are being eroded particularly in high production domain of fertile valleys. Highly toxic and health hazardous chemicals are being used to control insect pests.

Governments have not initiated measures to involve knowledge-rich farmers in the decision making process. Farmers are still not seen as partners. In research and development, they are not involved. Countries have not developed adequate provisions of officially registering farmers' varieties/landraces/traditional knowledge. This has not only re-

stricted farmers/communities from ownership over resources and knowledge but has also encouraged unauthorised piracy. Governments have not developed a proper mechanism to generate a fund for traditional farm-based initiatives.

Moreover, as mentioned above, the globalisation process and the WTO system have further exacerbated these problems. In the name of globalisation and the WTO, the benefits of farmers' knowledge and practices are being reaped by other communities outside the local domain. Multinational corporations (MNCs) engaged in plant breeding, pharmaceutical and biotechnology have been making every effort to exploit the traditional knowledge of the local farming communities. But the poor farming communities are still far from enjoying the fruits of their age-old knowledge and practices.

There is a significant cultural variation between traditional communities and so-called modern communities in the way they view this subject matter. While traditional knowledge in traditional communities is mostly in public domain, i.e., freely accessible, modern com-





munity, which has not made any significant contribution for the preservation of such knowledge, has been using them for own benefits and patent them for obtaining proprietary rights, thereby perpetuating the notion of private property over these knowledge systems.

Given the increasing trend of globalisation and its intrusive nature, if governments in the region do not devise mechanisms to safeguard traditional farming practices and farmers' rights well in time, the mountain economy will suffer much heavier burden of adjustment in days to come.

### INTERNATIONAL AGREEMENTS SUPPORTING TRADITIONAL FARMING PRACTICES AND FARMERS' RIGHTS

In recent years, global communities from the developed as well as developing world have recognised indigenous knowledge and traditional farming practices as a cornerstone of research and development in agriculture. In this regard, in order to be able to develop appropriate policy and legal instruments, it is important for the governments of the HKH region to properly understand the international agree-



ments and rules that relate to traditional farming practices and farmers' rights.

The IUPGR adopted in 1989 by United Nations Food and Agriculture Organisation (FAO) Intergovernmental Commission on Plant Genetic Resource, Resolution 5/89 has defined farmers' rights as the "rights arising from the past, present and future contributions of farmers in conserving, improving and making available plant genetic resources particularly those in the centers of origin/diversity. These rights are vested in the international community, as trustees for present and future generation of farmers for the purpose of ensuring full benefits to farmers, and supporting the continuation of their contributions as well as the attainment of overall purposes of the International Undertaking."

The CBD, 1992 is the international agreement that for the first time incorporated the principles of ethics and equity in the

conservation and utilisation of global biodiversity. The vital roles of indigenous peoples/local communities are addressed in the Article 8 (j) of the CBD as follows: "Subject to its national legislation, respect, preserve, and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional life style relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage equitable sharing of benefits arising from the utilisation of such knowledge, innovations and practices".

The ITPGRFA, 2001 while recognising farmers' rights also underscores the need to protect traditional knowledge. Article 9 of the ITPGRFA mentions that the contracting parties agree that the responsibility for realising farmers' rights, as they relate to plant genetic resources for food and agriculture (PGRFA), 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:

- Protection of traditional knowledge relevant to PGRFA;
- The right to equally participate in sharing benefits arising from the utilisation of PGRFA; and
- The right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of PGRFA.

The same Article also mentions that nothing in this Article shall be interpreted to limit any rights that farmers have to save, use, exchange and sell farm-saved seed/

#### Box: 1

#### UPOV AND FARMERS' RIGHTS

The developing countries have criticised the UPOV model on several grounds, not least because becoming a member of UPOV or enacting the legislation in tune with this model is not a requirement of TRIPS.

Farmers in the developing countries practice subsistence farming and have been saving and reusing seeds for time immemorial. They have been exchanging their seeds with their neighbours. Some farmers, who do not have enough land to engage in full-fledged agricultural productions, are engaged in production of seeds, though in a very limited quantity, and do sell them at the local market to eke out their living. Thus, saving, exchanging, reusing and selling seeds are the means of their livelihood. The UPOV Convention, however, restricts the ability of farmers to exercise these livelihood options.

UPOV's Article 15.2 allows farmers to reuse protected material only if the 'legitimate interests of the breeders' are taken care of - the legitimate interests being nothing but the royalty that the breeders should be paid. The FAO views it as 'downgrading of the Farmers' Privilege'.

Adapted from: Adhikari, Ratnakar and Kamalesh Adhikari (2003), *UPOV: Faulty Agreement and Coercive Practices*, Policy Brief, SAWTEE, Kathmandu.



propagating material, subject to national law and as appropriate.

## INTERNATIONAL AGREEMENTS AGAINST TRADITIONAL FARMING PRACTICES AND FARMERS' RIGHTS

Within the WTO system, the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) has profound implications for the traditional farming practices and farmers' rights. Article 27:3 (b) of the Agreement is the most controversial provision in the entire agreement, which states:

"Members may exclude from patentability plants and animal other than microorganisms, and essentially biological processes for the production of plant and animal other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by effective *sui generis* system or by any combination thereof..."

The definitional construct of this Article precludes recognition of technologies, innovations and practices of local farming communities and their collective ownership for common social good. The obvious implication is that the traditional knowledge and creativity of local farming communities cannot be protected and rewarded. This provision provides legal cover to the corporations to get involved in theft of traditional knowledge and bio-piracy.

Similarly, since there is no interpretation of "effective *sui generis* system", the HKH countries find it difficult to enact an effective *sui generis* system for the protection of new varieties of plants. Precisely because of this ambiguity, the developed countries have been exerting pressures on the developing countries to enact their legislation in tune with International Union for the Protection of New Varieties of Plants (UPOV), which they refer as the only effective *sui generis* system. The UPOV Convention, however, does not respect or reward farmers' rights and their traditional practices. Rather it promotes the interests of the MNCs and breeders. The developing countries have criticised UPOV on several grounds (*See Box: 1*).

To counter the clout of UPOV, India has taken a bold initiative by enacting the Protection of Plant Varieties and Farmers' Rights (PPVFR) Act in 2001. The Act has balanced the rights of both the breeders and farmers. In line with Article 27.3 (b) of TRIPS, the Act aims to establish "an effective system for the protection of plant varieties, the rights of farmers and plant breeders to encourage the development of new varieties of plants". Within the provision of the Act, farmers' rights are protected by safeguarding the interest of farmers and other village and local communities engaged in plant breeding in two ways: (i) by protecting their own on-farm activities; and (ii) providing incentives in the form of rewards for their contribution to farming.

The Act states, "farmers are entitled to save, use, re-sow, exchange, share or sell his/her farm produce including seed of a variety protected in the same manner as he/she was entitled before the coming into force of this legislation". The Act also seeks to reward the farmers who are engaged in the conservation and preservation of genetic resources of landraces and wild relatives of economic plants and their improvement through selection and preservation.

## ISSUES FOR CONSIDERATION

International treaties and agreements are as diverse as ecosystems of the HKH region. The people of the mountain region understand the use of diverse ecosystem around them, but cannot follow the language and understand the implications of international treaties and agreements on their livelihoods. The gaps are obviously

### Box: 2

#### POLICY OPTIONS FOR THE HKH REGION

Given the present and future threats to traditional farming practices and farmers' rights, the HKH governments must devise policy and legal instruments that recognise, respect and reward the following farmers' rights:

- The right of farmers to protect their traditional knowledge associated with plant genetic resources from being misappropriated.
- The rights of farmers over plant varieties and local knowledge over and above the corporate breeders' rights.
- The traditional rights of farmers to save, use, sow, re-sow, exchange, sell and improve farm-saved seed of all plant varieties.
- The right of farmers to receive equitable benefit sharing, both monetary and non-monetary, for the use of plant genetic resources created and conserved by them for the development of new commercial varieties, with due regards being given to the economic valuation of the plant and seed varieties developed by them during the process of evolution since centuries.
- The right of farmers to be informed of the market opportunities so that they could better assess the marketing options for the outputs they derive from the use of traditional knowledge.
- The right of farmers to get protected against bio-piracy and theft of their traditional knowledge.
- The right of farmers to be aware of national and international agreements and legal systems affecting their livelihoods directly or indirectly.

Adapted from: The resolution adopted at the Regional Seminar on *Evolving Sui Generis Options for the Hindu-Kush Himalayas*, Organised by SAWTEE and International Centre for Integrated Mountain Development (ICIMOD) on 24-26 March 2003, Kathmandu.

because of illiteracy and ignorance. The farming communities are cognisant of their capacity in producing food for humankind. The reservoir of ethno-engineering knowledge for the management of soil erosions through terracing on sloping areas has provided a greater base for sustainable agriculture to the global community. The indigenous knowledge they possess is freely available to all. Their intellectual property is meant for service, not for business. Several scientific advances have been



made based on traditional knowledge of the farming communities.

However, of late, the scenario is undergoing a metamorphosis. Resource poor and illiterate farmers are being asked to compete globally and follow international rules and regulations. There is a dire need to boost public and private partnership for increased investment in agriculture research and development but not at the cost of poverty-stricken farming communities of the mountain region. It is time that the global community put serious thoughts on what can be done to provide small scale farmers and farming communities their due share of benefits.

The governments of the HKH region should understand that unless they do devise policy and legal instruments that protect traditional farming practices and farmers' rights, the farmers in the mountains will remain vulnerable, poor and marginalised (*See Box: 2*).

Launched in December 1994 at Nepal by a consortium of South Asian non-governmental organisations, SAWTEE is a recognised, registered, non-profit and non-governmental organisation. Its goal is to enable South Asian communities to benefit from and minimise the harms of changing regional and global economic paradigms. It operates as a regional network through its secretariat in Kathmandu and 11 member institutions from five South Asian countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lanka.



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## POLICY RECOMMENDATIONS

Traditional farming practices are the repository of indigenous knowledge. Relevant traditional farming practices and knowledge must be utilised in research and development endeavours. Partnership with farmers on an equal footing in the management of agriculture and related natural resources has to be considered. Therefore, the following policy recommendations are worth considering:

- An institutional mechanism should be put in place that recognises and rewards farmers for their contributions in the area of agricultural development and environmental conservation that they have made through their indigenous farming knowledge and practices.
- Provisions of officially registering farmers' varieties/landraces/traditional knowledge would help establishing the ownership of communities/farmers over resources and knowledge. It would discourage unauthorised piracy.
- Farmers should be allowed to save, reuse, exchange and sell seeds of protected plant varieties. Resource poor farmers (small scale farmers) must be facilitated in terms of access to technology and decision making. There should be a mechanism to generate a fund for traditional farm-based initiatives.
- The countries of the HKH region must be allowed to devise their own *sui generis* system for plant variety protection.
- Wider consultations should take place at all levels, involving the farmers as well as local and indigenous communities in the process of designing legislation aimed at protecting farmers' rights and their traditional knowledge. UPOV is not the only option. References of other international agreements and treaties, and other countries' legislation such as India should be taken. ■