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Preface

Traditional forest knowledge: Challenges and opportunities

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Innovative forest management practices, based on traditional knowledge (TFK)¹ and developed by rural communities over the centuries, have contributed significantly to the world's natural and cultural heritage by creating and maintaining landscapes of outstanding beauty while helping to sustain production of multiple goods and services that enhance livelihood security and quality of life. Traditional forest knowledge is an integral component of a network of linkages and relations, supported by an overall framework of signs and meanings. It is often based on long historical experience and deep insight into the dynamics of forest ecosystems, and the behavior and characteristics of animal and plant species that are of special economic, social, cultural, and spiritual significance to communities. Strongly rooted in the past, this collective knowledge is critical to the survival and future well-being of local communities, and especially, of indigenous peoples as they try to maintain their distinctive cultural identities and livelihoods, and the integrity and health of the forest ecosystems on which they depend. For many developed societies, the conservation of traditional knowledge and their related landscapes supports the economic development of rural areas, tourism, promotion of local products, the conservation of biodiversity generated by human influence on the landscape, and the quality of life of the population.

That indigenous communities in particular have historically been wise stewards of forests should come as no surprise - most of the world's "primary forests" and biodiversity "hotspots" are located in regions with the highest diversity of indigenous cultures and their associated traditional knowledge and wisdom. Rural areas with a long history of activities that

integrate forestry into farming activities have also created a biodiversity that is closely connected to landscape patterns. Cultural landscapes fashioned by traditional practices often shows a high level of habitat diversity due to many different management forms and species introduced over the years to develop specific economic and social functions.

Considering the future scenarios that global warming presents, conservation of TFK should be closely evaluated, as it is often the result of centuries of adaptation to difficult environmental conditions. Its efficacy in coping with challenging environmental conditions depends on the interaction among several factors that must be carefully considered in order to understand their historical success achieved through internal logics that have rarely been formalized into formal science. In traditional rural communities different types of forestland, from scattered trees in the fields to dense forest cover, are viewed as unique ecological systems providing a variety of products and environmental services, including the conservation of water resources. Marginal and apparently non-productive areas, such as steppes and marshes, provide significant quantities of food, water resources, fodder and fertilizer, while specific landscape patterns allow the production of multiple goods with reduced use of external energy inputs. These areas, as well as open spaces used for pasture, are rapidly shrinking, especially in Europe. Greater recognition of their environmental, socioeconomic, and cultural values should lead to greater support for their preservation rather than conversion into high forests, as is often suggested.

The holders and users of traditional knowledge in many parts of the world face significant challenges - continuing encroachment and/or expropriation of their lands, degradation of their forests, and the erosion of their cultures, values, and traditional lifestyles. In many developed societies, technological development, the abandonment of marginal lands, renaturalization, and inappropriate policies are rapidly erasing cultural values and contributing to the globalization of landscape, which are being simplified into areas either managed

¹ "a cumulative body of knowledge, practice and belief, handed down through generations by cultural transmission and evolving by adaptive processes, about the relationship between living beings (including humans) with one another and with their forest environment" (United Nations Forum on Forests 2004; adapted from Berkes et al., 2000).

for commercial exploitation or left to natural succession. This trend has been supported by the historical development of forestry, particularly in Europe. Since the early 19th century, the development of modern forestry promoted industrial plantations favoring species suited for timber production, as occurred in Europe with large-scale afforestation of conifers through artificial regeneration and producing even-aged forests. These ideas were spread throughout the world during the 19th century, largely through the colonial administrations of the European imperial powers. This process changed the features of many cultural forest landscapes created by traditional preindustrial societies, both in developed and developing countries. In the 1970s, forestry passed from a phase favoring almost exclusively economic aims, to one paying greater attention to the ecological roles of forests and the value of biodiversity. Unfortunately, the assessment of biodiversity has often neglected components arising from human influence, while monitoring and conservation have focused on "natural" species. The abandonment of traditional landscapes has reduced the diversity of forest management forms, creating simplified landscapes often with reduced biodiversity of habitats linked to land uses and related forest management practices. This neglect of the biodiversity associated with cultural landscapes has also influenced directives and international processes on nature conservation, as well as sustainable forest management strategies.

The protection and preservation of traditional forest knowledge and cultural heritage is an uphill battle for most societies. This is a particular challenge given socioeconomic development pressures, rising exploitation of indigenous forest resources, imbalanced economic and political power relations that usually put local and indigenous communities at a distinct disadvantage, global cultural homogenization, economic globalization, and many other challenges including unfavorable forestry policies (IAITPTF, 2005; Agnoletti, 2006). Traditional forest knowledge and their related landscape are even more vulnerable to threats due to the exclusion of cultural factors in sustainable forest management strategies at the global level. The UNCED conference in Rio de Janeiro in 1992 declared its Agenda 21, formalizing an agreement on a set of forest principles. Although the forest principles do not constitute a legally binding international agreement, they reflect a global consensus that forests should be managed sustainably. Many other meetings, a range of multilateral processes and a plethora of documents at international, regional, and national levels reflected the resolutions of the Rio Conference. Various multilateral processes that concern particular regions or types of forests and now cover 90% of the world's forests, attempt to clarify sustainable forest management and explain how it could be applied in different regions, presenting in effect a hierarchy of values for the management of forests and woodlands. These processes have also promoted forest certification standards that are applied in several parts of the world.

Certification was introduced as a market-based effort to foster sustainable management of forests, including aspects such as human rights of indigenous populations, poverty alleviation, and respect for conservation legislation. It was

initially driven mainly by concerns over the exploitation of tropical forests and reported losses of species from these forests. These protocols, particularly the criteria and indicators included in their structures, do not fully identify landscape histories or culturally important landscapes as central considerations for future management decisions. The fact that cultural values currently play such a limited role indicates the scant consideration given to the role of culture and history in the overall valuation of forests within the paradigm of sustainability developed in recent decades. This paradigm emphasizes the negative role of man in the environment, as an agent degrading the ideal state of "naturalness", which is considered to be the most desirable condition for biodiversity conservation and the overall health of the biosphere. Environmental degradation is without question a real threat affecting the planet. However, several investigations carried out in the fields of forest and woodland history and historical ecology, today generally included into the wider framework of environmental history, reveal a large number of cases where man has created valuable landscapes. Not only from a cultural value standpoint, but also from an ecological point of view, enhancing the overall diversity and improving the conditions of the environment. Failure to coherently address culture and history may very well be a growing weakness that will have to be reconciled if the public is to have confidence in the protocols designed to recognize well-managed forests and, ultimately, sustainable management.

There are, however, some hopeful signs and emerging opportunities. Over the past decade, there has been a marked growth of initiatives by indigenous peoples' organizations, NGOs, intergovernmental organizations and others related to traditional knowledge, and specifically to traditional forest knowledge (cf. ICSU, 2002; UNCCD, 2005). In recent years, the importance of this topic has been emphasized by scientific bodies, non-governmental organizations, national governments, and intergovernmental organizations and policy forums such as the Convention on Biological Diversity, the UN Convention to Combat Desertification, and the United Nations Forum on Forests. One reason for this development is the increasing public support, commitment of local and national governments, and the international forest policy community, to principles of sustainable forest management, based on defined criteria and indicators for ecological, social, economic, cultural, and spiritual sustainability.

At the global level the 1972 UNESCO World Heritage Convention (concerning the protection of the world cultural and natural heritage) promotes the identification, protection, conservation, presentation, and transmission to future generations of the cultural and natural heritage of 'outstanding universal values'. The Convention includes cultural landscapes, considering both material and immaterial elements, but is specifically designed for sites having special importance.

An approach with a different perspective is the one reflected by the European Landscape Convention, an international treaty signed in Florence (Italy) in 2000, now ratified or signed by 33 countries. The convention aims to care for all landscapes, independently of their significance, developing policies for

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