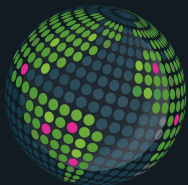


# India

*Traditional Agriculture Systems, Koraput, Odisha*





Linn Borgen Nilsen

The GIAHS dynamic conservation approach:

- Allows farmers to continue nurturing and adapting the systems and biodiversity they have developed while still earning a living;
- Supports government policies and incentives, while working for *in situ* conservation of biodiversity and traditional knowledge;
- Supports active and informed participation of indigenous and local communities in biodiversity management decision-making;
- Recognizes cultural diversity and achievements of local communities and indigenous peoples;
- Crystallizes the need for approaches that integrate the *in situ* conservation of genetic resources with related traditional knowledge and local technologies as a means to ensure continuous co-adaptation to changing environments and human pressures by maintaining the evolutionary dynamics of agricultural species in the human and agro-ecological habitats in which they have evolved.



Linn Borgen Nilsen

## *Traditional Agriculture Systems, Koraput, Odisha, India*

### *The landscape of Odisha*

Odisha is a picturesque state located in the Eastern part of the sub-continent, between the Bay of Bengal and the Eastern Ghats. With its gorgeous rivers, captivating lakes, alluring waterfalls and awe-inspiring temples, it is a land of unique and fascinating beauty. At the heart of the tribal belt in Southern Odisha lies the Koraput district, also known as *Jeypore Tract*, a highland plateau with a number of hills and hillocks of incredible scenic beauty forming part of the Eastern Ghats. The district is divided into four natural areas: the central plateau of over 900 meters on which the Koraput district is situated, the 600 meter plateau, the Malkanagiri plateau, and the valleys and hill ranges in the Rayagada and Gunupur subdivisions.

### *Tribal communities and their society*

Tribal communities represent an extremely important category of the Indian social structure. They are considered as the original inhabitants of India, who have been carrying forward a legacy of rich and distinct cultural traits for many decades. The Koraput district is home to approximately 62 tribal communities, most of which belong to the Proto-Australoid ethnic stock and speak their own language. Each tribe possesses its distinct identity in terms of social organization, culture and economy. This bewildering variety is fully reflected in their culture, which like a mosaic, evokes the admiration of social scientists

fascinated by the dynamics of their society. The religion of tribes is a mixture of animism, shamanism, fetishism, anthropomorphism, and nature worship. They observe a variety of religious and socio-cultural functions aiming at ensuring family well-being and happiness as well as community welfare and harmony. Their cyclic rituals and festivals descend from ancient times and have been preserved unimpaired to the present day. They are mainly centered on agricultural operations, human livestock and crop welfare, and are celebrated throughout the year. Tribal communities have also retained a rich and varied heritage of colourful dances and music.



## *Globally Important Agricultural Heritage Systems (GIAHS)*

*are defined as*

*"Remarkable land use systems and landscapes which are rich in globally significant biological diversity evolving from the co-adaptation of a community with its environment and its needs and aspirations for sustainable development" (FAO, 2002).*

In order to safeguard and support the world's agricultural heritage systems, FAO launched in 2002 a global partnership initiative for the conservation and adaptive management of Globally Important Agricultural Heritage Systems (GIAHS). The overall goal of the partnership is to identify and safeguard Globally Important Agricultural Heritage Systems and their associated landscapes, agricultural biodiversity and knowledge systems through catalyzing and establishing a long-term programme to support such systems and enhance global, national, and local benefits derived through their dynamic conservation, sustainable management and enhanced viability.

### *World Agricultural Heritage Sites*

In a preliminary inventory of the World Agricultural Heritage Systems, some 200 unique and Globally Important Agricultural Heritage Systems were identified following rigorous selection criteria. Among these sites, the GIAHS initiative has selected pilot systems located in several countries both in developing and developed countries. The values of such systems reside not only in the fact that they offer outstanding aesthetic beauty, are key in the maintenance of globally significant biodiversity, and include resilient

ecosystems that harbour valuable cultural inheritance, but they also have sustainably provisioned multiple goods and services, food and livelihood security for millions of poor and small farmers, local community members and indigenous peoples, well beyond their borders. In these pilot systems dynamic conservation and management approaches are developed and implemented by national authorities and local communities themselves.

Numerous examples of GIAHS around the world are among the following broad traditional agricultural systems:

- *Andean Agriculture (Peru)*
- *Chiloé Agriculture (Chile)*
- *Ifugao Rice Terraces (Philippines)*
- *Oases of Gafsa (Tunisia)*
- *High Atlas Mountain Oases (Morocco)*
- *El-Oued Oases (Algeria)*
- *Rice-Fish Agriculture (China)*
- *Hani Rice Terraces System (China)*
- *Wannian Traditional Rice Culture System (China)*
- *Traditional Tea Forest and Tea Gardens (China)*
- *Qanat Irrigation System (Iran)*
- *Maasai Pastoral System (Kenya)*
- *Maasai Pastoral System (Tanzania)*
- *Noto, Satoyama and Satoumi (Japan)*
- *Sado, Satoyama (Japan)*
- *Ancient Tank System (Sri-Lanka)*
- *Lemon Gardens of the Amalfi Coast (Italy)*
- *Traditional Agriculture Systems, Koraput, Odisha (India)*



## *Agricultural biodiversity of global significance*

The Jeypore tract of Odisha, is famous for the genetic diversity of Asian cultivated rice and has been considered as the center of origin of *aus* ecotype of rice (*Oryza sativa*). The landraces or traditional varieties growing here are thought to be harboring dominant genes for biotic and abiotic stresses, aroma and palatability, and hold promise for their utilization in future plant breeding and biotechnology programs. The tribal farm families inhabiting this area have been responsible for the domestication and conservation of rice genetic resources for several generations. Traditional cultivation practices suitable for diverse agro-ecological zones are still carried out by the tribal communities, providing their indigenous technical knowledge in rice farming and antiquity of rice in the region. These practices, which are of great value for sustainable agriculture and food and nutrition security, have not been largely recognized for sharing of benefits or rewards accruing to the community for conserving these landraces. Besides rice, a number of food crops are grown under traditional agricultural practices: minor millet (finger millet, little millet, Italian millet), pulses (black gram, green gram, pigeon pea, cow pea), oil seeds (niger, sesame, castor, mustard), spices (ginger and turmeric), various indigenous vegetables and fruits.



©FAO/Walter Astrada

## *Recognition and awards*

The tribal and rural families of this area have been developing and conserving plant genetic resources from immemorial time with their traditional knowledge. Today's landraces, evolved naturally with the changing environment and agricultural practices, are the products of careful and continuous selection by tribal women and men. These tribal people's merits should be better recognized and awarded.

The tribal communities of the Jeypore Tract won the *Equator Initiative Award* at the World Summit on Sustainable Development (WSSD), held in Johannesburg in 2002, for community conservation aimed at poverty reduction.

The Protection of Plant Varieties and Farmers' Rights Authority, Government of India, awarded these tribal communities with the *Plant Genome Savior Community Award* in 2006 for their contribution in conserving, improving and making available plant genetic resources for the development of new plant varieties.

*Traditional agriculture has its own merits. When the traditional crops or cultivation practices are replaced with modern ones without adequate consideration of the local people and existing ecosystems, the expected impacts are not realized. Therefore, to develop sustainable agricultural practices, the people, their social traditions and cultures should be well understood. In-situ on-farm conservation of crops is the best way not only to conserve the biodiversity but also to make the best use of traditional knowledge and experience for its utilization and to safeguard the intellectual property rights of the community. The local genetic diversity not only helps to meet the changing requirements of the farmers, but also helps the local genotypes to adjust themselves under the ever-changing biotic and abiotic stresses and climate change.*

To learn more about the GIAHS Initiative:

India  
M.S. Swaminathan Research Foundation  
Regional Centre: Phulbad, Jeypore (RS)  
Koraput District, Orissa State,  
India - 764 002  
E-mail: [mssrfjey@gmail.com](mailto:mssrfjey@gmail.com)

FAO  
Land and Water Division (NRL)  
Food and Agriculture Organization of the United Nations  
Viale delle Terme di Caracalla, 00153 Rome, Italy  
E-mail: [GIAHS-Secretariat@fao.org](mailto:GIAHS-Secretariat@fao.org)  
[www.giahs.org](http://www.giahs.org)