Conservation and Sustainable Management of Globally Important Ingenious Agricultural Heritage Systems (GIAHS)

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Outline of Presentation

1. What are Globally Important Agricultural Heritage Systems
2. Threats to GI AHS
3. GI AHS Programme
4. GI AHS Approach
5. GI AHS Partners
6. How to Join GI AHS Programme
GI AHS Programme


The GIAHS program is a multi-stakeholder umbrella framework that engages governments and intergovernmental organizations, civil society and farmers’ organizations in a joint effort towards achievement of Agenda 21 and the MDGs in a vital but hitherto neglected area.

GIAHS: Heritage for the Future

Definition: Remarkable Land Use Systems and landscapes which are rich in biological diversity evolving from the ingenious and dynamic adaptation of a community/population to its environment and the needs and aspirations for sustainable development (FAO, 2002)

- Integrated Agricultural, Forestry, Livestock & Fishery systems
- Result of co-adaptation and co-evolution of plants, animals, humans and landscape under specific environmental circumstances
- Managed through highly adapted social + cultural practices and institutions
- Provide food & livelihood security and range of ecosystem services-social, cultural and environmental
- Important at local, national and global levels but under THREAT
GIAHS make a vital contribution to:

- Food security, health & nutrition of millions of poor, often isolated people
- Agri-"cultural" diversity of human kind
- Biodiversity and genetic resources
- Agro-ecosystem and landscape diversity
- Provision of Ecosystem services through functional diversity
- Products and services diversity
- Collective & individual knowledge systems
- Resilience and adaptive capacity to change over time

Tradition and culture has always been an integral part of rice based livelihood systems

- **In China**: The Goddess Guan Yin took pity on humans and gave her milk and blood to create white and red rice.
- **In the Himalaya**: Goddess Parni, the daughter of the mountains, was the first to grow rice.
- **In India**: Rice is associated with prosperity and with the Hindu Goddess of Wealth, Lakshmi.
- **In Indonesia and Bali**: People perform rituals to honor prosperity, as goddess and guardian of rice and the rice harvest.
- **In Vietnam**: Large tapestries of rice cakes are made as offerings to Hindu temples.
- **In Japan**: It is said that the Sun Goddess Amaterasu-Omi-Kami grew rice in the fields of heaven, giving the first harvest to Prince Ninigi. He was told to take it to "The Land of Eight Great Islands." Japan.
- **In Hindu Temples**: For the Rungo people, the shadows on the moon are created by the stacking up of freshly harvested rice in the shade of a fig tree.
WHY UNDER THREAT:

• Policy, legal + incentive environments
• Neglect of diversified systems & local knowledge
• Low priority given to *in situ* conservation
• Low community involvement in decision making
• Population pressure and cultural change

Examples:
• Rice based traditional farming systems
• Maize- and root crop- based agro-ecosystems
• Taro based systems
• Pastoral transhumant and nomadic systems
• Ingenious irrigation and soil and water management systems of drylands (oases, Karez and Qanat)
• Multi-layered home gardens & agro-forestry system
5 pilot systems as basis for a long term program including up to 100 systems.

agriculture (Peru)

Ifugao rice terraces (Philippines)
Chiloé agricultural system
Oases of the Maghreb
(Algeria, Morocco, Tunisia)

Numerous examples of GIaHS exist across the world:
- Peru
- Indonesia
- Andes
- Madagascar
GIAHS is not about the past but the future

Overall goal of GIAHS Project

to “protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements”, specifically within agricultural systems. CBD: Article 8(j)

Objective: to promote conservation and adaptive management of globally significant agricultural biodiversity harboured in GIAHS.
Biodiversity can be seen as a “life insurance policy for life itself” - Something specially needed in this time of fast-paced global change.

Kofi Annan

GIAHS APPROACH

- Promote traditional, family and community driven agricultural and indigenous knowledge systems
- Provide best-farmer practices for dissemination to other farmers and areas
- Provide criteria for technology development (local goals & priorities, gender, etc.)
- Provide leads for identifying alternative opportunities for technology development
GIAHS DEVELOPMENT GOALS:

- Improve understanding of agriculture systems - environmental, socio-economic policy & cultural dimensions
- Generate recognition for global significance of agricultural systems
- Build capacity of national / local institutions and promote dynamic conservation and sustained viability
- Conservation, sustainable use & rehabilitation of agricultural biodiversity (genetic patrimony, ecosystem services & landscape diversity)
- Recognition and safeguard the resilience provided by the knowledge systems and social organisation
- Mitigate threats of degradation & root causes of dysfunction and enhance environmental & socioeconomic benefits (local & global)
- Add economic, environmental & cultural value to products, artefacts and knowledge systems of GIAHS by supportive policies & incentives for their sustainability and viability

HOW?

- **At Global level** by identification, selection and recognition of GIAHS
- **At National level** by capacity building in policy, regulatory and incentive mechanisms to safeguard these outstanding systems and use them as sustainability bench mark systems
- **At Local Level** by empowerment of local communities and technical assistance for sustainable resource management, promoting traditional knowledge and enhancing viability of these systems
GIAHS is based on the five assets of rural systems:

- **Natural Capital**: nature's goods and services (waste assimilation, pollination, storm protection, water supply, leisure, wildlife)
- **Social Capital**: cohesiveness of people and societies - trust, reciprocity, rules and norms, networks and institutions
- **Physical Capital**: infrastructure
- **Human Capital**: the status of individuals - health, skills, knowledge
- **Financial Capital**: money, savings

Contextual factors:
- agro-ecological
- climatic
- cultural
- economic
- legal
- political
- social

Shaped by:
- external institutions
- and policies

Renewable natural capital

Social capital: vertical and horizontal

Knowledge and technology

Non-renewable inputs

Finance: income, credit, grants

Accumulation of:
- Natural capital
- Human capital
- Social capital
- Physical capital
- Economic capital

Farm, Livelihood or Community System

With access to and stocks of:
- Natural capital
- Human capital
- Social capital
- Physical capital
- Economic capital

Positive Externalities

God and other marketed produce

Negative Externalities

Depletion of:
- Natural capital
- Human capital
- Social capital

Assets-based model of agricultural systems
Assets-based model of agricultural systems – flows and outcomes in sustainable systems

Assets-based model of agricultural systems – flows and outcomes in industrial agriculture systems

Contextual factors:
- agro-ecological
- climatic
- cultural
- economic
- legal
- political
- social

Shaped by: external institutions and policies

Farm, Livelihood or Community System
With access to and stocks of:
- Natural capital
- Human capital
- Social capital
- Physical capital
- Financial capital

Renewable natural capital
Social capital: vertical and horizontal
New stocks and technologies
Non-renewable inputs
Finance: income, credit, grants

Positive Externalities
Accumulation of Natural capital
Human capital
Social capital

Negative Externalities
Deposition of Natural capital
Human capital
Social capital

Food and other marketed produce

Accumulation of:
Natural capital
Human capital
Social capital

Deposition of:
Natural capital
Human capital
Social capital
What are the best options for the poorest?

Which land use systems work best for the poorest (still 790 million people are food poor)

Key questions:
- to what extent can farmers improve food production with low-cost and locally-available technologies and inputs?
- What impacts do these methods have on environmental goods and services, and the livelihoods of people relying on them?

GIAHS and POVERTY REDUCTION:

GIAHS Pilot Systems
1. Andean agriculture (Peru)
2. Chiloe agriculture (Chile)
3. Ifugao rice terraces (Philippines)
4. Oases of the Maghreb (Algeria, Morocco, Tunisia)
5. Rice-fish agriculture (China)

(about 40 agricultural heritage systems around the world are on the initial list and there are more coming in)
GIAHS Partners...

- National Ministries and agencies
- Indigenous Peoples & their organizations
- Farmers communities
- Civil Society & Private Sector
- Scientific institutions & Universities

International Partners
Co-funding/technical assistance
- UNESCO
- IFAD
- IUCN
- Bioversity Internat’l
- IFPRI + other CGIAR
- UNU
- GTZ
- COMPAS / ILEIA
- Roman Forum
- and interested others

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Thank you for your attention