Policy Challenges and Implementation Arrangements of
GLOBALLY IMPORTANT AGRICULTURAL HERITAGE SYSTEMS

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Challenges of poverty, food security, and natural resources degradation

With present development trends

- In 2030 world population will double
- Majority of population will live in urban areas
- Arable land expansion will be restricted
- Water Scarcity will Arise at Local and Regional Levels
- Natural Resources Degradation Will Accentuate
Investment policies in General and particularly in Africa have favoured:

- Industrial and service sector development versus Agricultural and Rural Sector Development
- Urban development versus Rural Development,

» And Within Agriculture Sector:

- High potential areas and lowlands VS low potential areas/highlands
- Irrigation intensification VS water conservation and water management
- Irrigated agriculture VS rain fed and dry farming
- Single crop production VS total farm productivity
- Land and irrigation development VS land rehabilitation and water conservation
- Export crops VS food and local crops
Australia - The Browns of River View Food expenditure for one week: 481.14 Australian dollars or US$376.45

Great Britain - The Bainton family of Cllingbourne Ducis Food expenditure for one week: 155.54 British Pounds or $253.15

China - The Dong family of Beijing Food expenditure for one week: 1,233.76 Yuan or $155.06

North Carolina, United States - The Revis Family$342 USD
Tingo, Ecuador: The Ayme Family; $31.55 USD

Breidjing Camp, Chad: The Aboubakar Family; $1.23 USD

Cairo, Egypt: The Ahmed Family; $68.50 USD

India - The Patkars of Ujjain Food expenditure for one week: 1,636.25 rupees or $39.27
A major challenge and opportunity: The Small scale farmers

- Produce the bulk of the global food
- Are the largest number of stewards for the environment and its services, biodiversity
- Higher and sustainable productivity increase at their level will have a major impact on poverty reduction, economic growth and climate change mitigation and adaptation
Best options for the poorest?

• **Which work best for the poorest?**
  
  • great success in past... but still over one billion people are food poor

• **Key questions:**
  
  – to what extent can farmers improve food production with low-cost and locally-available technologies and inputs under climate change Scenarios?
  
  – What impacts do these methods have on environmental goods and services, and the livelihoods of people relying on them?
### Global temperature change (relative to pre-industrial)

<table>
<thead>
<tr>
<th>°C</th>
<th>0°C</th>
<th>1°C</th>
<th>2°C</th>
<th>3°C</th>
<th>4°C</th>
<th>5°C</th>
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</thead>
<tbody>
<tr>
<td><strong>Food</strong></td>
<td></td>
<td>Falling crop yields in many areas, particularly developing regions</td>
<td></td>
<td>Possible rising yields in some high latitude regions</td>
<td>Falling yields in many developed regions</td>
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<tr>
<td><strong>Water</strong></td>
<td>Small mountain glaciers disappear – water supplies threatened in several areas</td>
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<td>Significant decreases in water availability in many areas, including Mediterranean and Southern Africa</td>
<td>Sea level rise threatens major cities</td>
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<td><strong>Ecosystems</strong></td>
<td>Extensive Damage to Coral Reefs</td>
<td></td>
<td>Rising number of species face extinction</td>
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<tr>
<td><strong>Extreme Weather Events</strong></td>
<td></td>
<td>Rising intensity of storms, forest fires, droughts, flooding and heat waves</td>
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<tr>
<td><strong>Risk of Abrupt and Major Irreversible Changes</strong></td>
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<td>Increasing risk of dangerous feedbacks and abrupt, large-scale shifts in the climate system</td>
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**Projected impacts of climate change**
Malezas en floración de las familias compositae o umbeliferae atraen insectos beneficios en busca de polen y néctar.
Conditions of Success

• Integrated across sectors
• Promotes diversification
• Enhances positive externalities and reduces negative externalities
• Knowledge-based and nature-based
• Builds on renewable assets
• Participatory and bottom-up
• Use Mixture of instruments
  • economic, advisory, regulatory
Global ........ to local

and local ........ to global
Steps towards sustainability

- Diversify crops and animal enterprises
- Substitute ecological management for off-farm inputs (agrochemicals, fuel, etc)
- Maximize use and recycling of on-farm resources
- Conserve soil, water and genetic diversity
- Reduce energy use (machinery, equipment) and keep costs down
- Increase functional biodiversity at landscape level
Recognizing the importance and sustainable characters of such agricultural systems, in 2002 during WSSD, FAO launched an international partnership – the GIAHS Initiative with support from the GEF and in collaboration with UNDP, UNESCO, UNEP, CBD, UNCCD, and other partners.
What are GIAHS?

“Remarkable Land Use Systems and landscapes which are rich in biological diversity evolving from the co-adaptation of a rural community/population with its environment and its needs and aspirations for sustainable development (FAO, 2002)”. 
GIAHS are important for their contribution to:

- food security, health and nutrition of many poor, helpless and isolated people
- humankind and its agri-cultural diversity
- biodiversity and genetic resources
- agroecosystem and landscape diversity
- ecosystems services through functional diversity
- products and services diversity
- collective and individual knowledge systems
- resilience and adaptive capacity to climate 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 (oasis and qanat)
- Multi-layered home gardens and agro-forestry system
The Goddess Guan Yin took pity on humans and gave her milk and blood to create white and red rice.

Goddess Pavarti, the daughter of the mountains, was the first to grow rice.

Rice is associated with prosperity and with the Hindu Goddess of Wealth, Lakshmi.

People perform rituals to honor Dewi Sri. As goddess and guardian of rice and the rice harvest,

In China

In the Himalaya

In India

In Indonesia and Bali.

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

In Japan

In Vietnam

In Hindu Temples

It is said that the Sun Goddess Amatereshu-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.

For the Rungo people, the shadows on the moon are created by the Rice Goddess stacking up her freshly harvested rice in the shade of a Bo tree.

Large tapestries of rice cakes are made as offerings to Hindu temples.
Numerous examples of GI AHS exist across the world:

- Peru
- Indonesia
- Philippines
- Madagascar
10 pilot systems as basis for a long term program including up to 100 systems
THEY ARE UNDER THREAT BECAUSE OF:

- Inappropriate policies and legal contexts,
- Neglect of diversified systems and local knowledge
- Low community involvement in decision making
- Low priority given to in situ conservation
- Population pressure and cultural change
- Migration and neglect of small holders and family farming
Overall goal of GIAHS Initiative
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 dynamic conservation and adaptive management of globally significant agricultural biodiversity harboured in globally important agricultural heritage 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

Human Capital:
- the status of individuals - health, skills, knowledge

Physical Capital:
- infrastructure

Financial Capital:
- money, savings
Current Work of GIAHS Initiative

1. Chile - Chiloé agriculture
2. China – Rice Fish culture; rice terraces
3. Peru – Andean agriculture; pastoralism
4. Philippines – Ifugao rice terraces
5. North Africa (Algeria, Morocco, Tunisia) – Oases of the Maghreb
6. Kenya - Maasai Pastoral System
7. Tanzania – Upland agroecosystem
8. India - Tribal Systems
Examples ...

Native potatoes, Peru

Rice-fish culture, China

Gafsa oases, Tunisia
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 benchmark 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 through economic incentives
GIAHS is not about the past but it is about the future

Satoyama in Japan
Biodiversity is “The life insurance policy for life itself” (Koffi Annan)
Options for future collaboration between Satoyama Initiative and GIAHS

• Continuous partnership and advocacy whenever possible at global level

• More focused on specific countries and specific concerns such as Payments for Environmental Services, sustainable livelihoods approaches, indigenous and traditional farming communities, etc

• A UN-wide partnership including FAO, UNU, UNEP, CBD, etc. targeted at policy level.
Thank you

www.fao.org/nr/giahs