“The management features of Satoyama-like landscapes in I.R.Iran and their benefits for biodiversity conservation and human well-being”

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Overview

1. Traditional Agricultural system

2. Modern Agricultural system

3. Emerging Sustainable Agricultural system

4. Characteristics of the successful management for Satoyama initiative, Iranian case
Traditional Agricultural system in Iran

- Boneh, Harase, Sahra, ..( in desert, mountainous areas, plain, adjacent to rivers, wetlands and marine ecosystems)
- Human Adaptation to Nature- HAN( well-suited with environment)
- Ecological: wise use of resources in farms, gardens, rangelands, forests, marine,…
- Carrying capacity considerations (an ecological resilience )
- Almost no waste, ( ..,even burning dung and woods as an anti-insect product in the evening)
Traditional Agricultural system

- **Irrigation:** aqueduct (Ghanat), putting pitcher near the roots of the tree,..
- **Social:** fitness of social institutions to ecological processes, collective interest, participation even in the feudalistic order, …
- **Spatial distribution of activities** followed environmental logic as well
“Modern” agricultural system

- Population growth, segmentation of farms
- Land reform (1963)
- No replacement for traditional management
- Rural - Urban migration
- Green Revolution (Introduction of Chemical fertilizer, Pesticide..)
- Quasi-industrial growth (Imbalanced growth)
- Negative impacts of fertilizer and pesticide on the health of ecosystems and humans
“Modern” agricultural system

- Simplification of agricultural diverse activities
- Biodiversity erosion (increasing vulnerability of fauna and flora, loss of species, genetic loss, reduction of ecological services and goods)
- Led to fading of environmentally adaptable agricultural system
## Changes in Science and Politics (adapted from Iverson 1993b)

<table>
<thead>
<tr>
<th></th>
<th>Enlightenment Thought</th>
<th>Ecosystem Management</th>
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<tbody>
<tr>
<td><strong>Nature</strong></td>
<td>Domination, mastery</td>
<td>Harmony, synthesis, interrelated</td>
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<td><strong>Decision-making</strong></td>
<td>Rigid, chain of command.</td>
<td>Adapted to context of problem, interrelated to other problems.</td>
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<td>Authoritarian: experts and professional opinions were the only ones that counted. Science provides “the answer.”</td>
<td>Deliberated: all stakeholders’ opinions count. Science provides information. Science alone cannot provide answers.</td>
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<td>Institutions:</td>
<td>Hierarchical, top-down bureaucracies.</td>
<td>Adaptive, bottoms-up, open, cooperative</td>
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<td>Management:</td>
<td>Centralized or decentralized; rigid, little focus on incentives or innovation.</td>
<td>Interrelated teams, adaptive, much focus on incentives and innovation</td>
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<td>Participation</td>
<td>Influence, money</td>
<td>Discursive, deliberation</td>
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<tr>
<td>Ethics</td>
<td>Compartmentalized, interrelationships - minor</td>
<td>Holistic, interrelationships important</td>
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Emerging Sustainable Agriculture

- Integrated pest management/farm management
- Health of farmers and consumers (Healthy products)
- Sustainable development and agriculture (farming, forestry, aquaculture, husbandry, etc.)
- Growing demand for SD agriculture, still no organized and comprehensive action inside government
- Problematic point: fitness of social institutions to ecological processes
- Small Grant Program as a conceptual framework (pattern) and relatively organized action
4- Attributes of a successful management for Satoyama initiative, Iranian case
4.1. Ecosystems’ services and goods

(From: MEA)
Mountain

- Food
- Fiber
- Fresh Water
- Erosion control
- Climate regulation
- Recreation and ecotourism
- Aesthetic Values
- Spiritual Values
Rivers and wetlands

- Fresh water
- Food
- Pollution control
- Flood regulation
- Sediment retention and transport
- Disease regulation
- Nutrient cycling
- Recreation and ecotourism
- Aesthetic Values
Forest & woodlands

- Food
- Timber
- Fresh water
- Fuel wood
- Flood regulation
- Disease regulation
- Carbon sequestration
- Local climate regulation
- Medicines
- Recreation
- Aesthetic values
- Spiritual values
Dry lands

- Food
- Fiber
- Fuel wood
- Local climate regulation
- Recreation and ecotourism
- Spiritual values
- Cultural heritage
Marine

- Food
- Climate regulation
- Nutrient cycling
- Recreation
Coastal

- Food
- Fiber
- Timber
- Fuel
- Climate regulation
- Waste processing
- Nutrient cycling
- Storm and wave protection
- Recreation and ecotourism
- Aesthetic values
Cultivated

- Food
- Fiber
- Fresh water
- Dyes
- Timber
- BioFuel
- Pest regulation
- Medicines
- Nutrient cycling
- Aesthetic values
- Cultural heritage
4.2. Attributes of Small Grant Program concept and Satoyama initiative
Attributes of the organized management

- Small Grant Program / Global Environmental Facility
- 7 years
- All stakeholders are Iranian
- Cost effectiveness (regarding both governmental and UN MSP/FSP)
- Promotion of multi stakeholders participation
- New methodology different (action research) from conventional procedure
- Many of the countries of the region involve in SGP
Iranian SGP Staff
Impacts

- Change of development attitude among stakeholders (NGOs’ and GO’s experts, academicians)
- Enabling local communities
  - Access to different layers of societies
  - Government increasing acceptance of SGP methodology
- Linkage of global concerns with wide local activities
Impacts

- Cost effectiveness (regarding both governmental and UN MSP/FSP)
- Support GEF MSP/FSP
- Growing cooperation and coordination of government with GEF/SGP
- Increasing credibility of GEF/SGP among governmental Ministries and offices
- Growing socio-economic impacts of the projects
Knowledge products and services in 7 years

- Traditional knowledge; (combining with science)
- Thesis;
- Books: About 60 in 7 years
- Booklets;
- Reports;
- Newsletters;
- Films;
- Workshops and FDGs (on capacity development)
- University course (Action research); It has started recently in Tehran university;
- Technical knowledge (handbook);
- Projects websites;
Peoples Participation for Plant Biodiversity Protection in Central Zagros Region
Rehabilitation and conservation management of rangelands with Gavan Gazan plant
Identification and introduction of touristic potentials to develop agro-tourism in Khafr area (Zagros mountain)

با حمایت: دفتر برنامه عمران، صندوق کمک‌های کوچک سازمان ملل متحد و محيط زيست جهانی

زمستان 1384 - تابستان 1386
Project:
Sustainable development fund,
Obato’s rangeland
sustainable (participatory) management
In Kurdestan province
2008
Incorporated management in the Caspian forests through local community participation

IRA-G52-2003-032(IRA98G52)
Project Name: Pilot Project for Rehabilitation of Marine Resources of the Persian Gulf in Salakh Region (Qeshm Island)

Project No. IRA-G52-2002-005(IRA98G52)
Participation of local fishermen

The structures are built by the villagers of Salakh and they are in the form of pyramids made of reinforced concrete. The three surfaces of the pyramids are made separately and then carried onto their dhows where they are fitted together to make the pyramid structure.
Recommendations for promotion of Satoyama Initiative Concept

- Regarding climate change impacts on health of ecosystems and human (food and health), effective policies and actions should be taken seriously
- Using existing mechanisms (Sustainable development principle)
- SGP is a paradigm, mostly based on the experiences of developing countries
- Existing SGP/GEF program will be ended in few years but the conceptual framework and methodology can be sustained
- It is vital to sustain the nature of stewardship in this model
Recommendations for promotion of Satoyama Initiative Concept

- Formulation of strategy and action plan for capacity development along with project implementation on the rehabilitation of traditional agricultural knowledge in company with scientific findings, in the region
- Support and promotion of satoyama-like initiative based on the SGP model by CBD
From medium term SGP to long term Satoyama initiative
Thank you all