

ASIAN RICE CULTURE AND ITS TERRACED LANDSCAPES

REPORT ON THE REGIONAL THEMATIC STUDY MEETING

Manila (Philippines) 28 March to 4 April 1995

1. Purpose of the meeting

Following a decision by the World Heritage Committee at its seventeenth session in December 1993 to undertake regional thematic studies on cultural landscapes, the Philippine National Commission for UNESCO, the Department of Foreign Affairs, the Department of Tourism and the National Commission for Culture and the Arts, hosted the expert meeting "Regional Thematic Study Meeting on the Asian Rice Culture and its Terraced Landscapes".

The meeting was held in Manila and Banaue from 28 March to 4 April 1995. The results of this meeting are here presented to the World Heritage Bureau for consideration. The full report will be made available to the nineteenth session of the World Heritage Committee.

2. Introduction

Throughout the Asia-Pacific region mountainous terrain has been, over the centuries, shaped into landscapes of terraced pond fields for the cultivation principally of rice, but also of taro and other crops. These landscapes exist, both as archeological sites and as living landscapes which continue to be used and maintained by the people who created them. It is essential to conserve outstanding representative examples of these landscape that are found in almost all Asian countries, both for their intrinsic value and for what they can teach about enduring systems of human-nature interaction. However, it is not only the physical structure of the sites that must be conserved. It is necessary to analyze the different factors that are integrated in these structures. Over the centuries, traditional culture has developed a sophisticated support system of cultural, socio-economic, ecological, agricultural, hydraulic and other practices that continue to exist up to the present day in order to maintain these sites. To preserve the life of these sites, including wild living organisms (biodiversity) and their specific habitats, it is necessary to continue the delicate interrelationship between the culture and its traditional systems.

These are monuments to life itself. These landscapes celebrate the traditional lifestyle of the Asian people. It is this particular regional culture's special imprint on and relationship with nature manifested with significant aesthetic and harmonic values. It is a landscape that is being renewed daily and will continue its existence for as long as the unbroken line of this lifestyle continues.

Asians celebrate rice as an important staple and as the basis for many of their traditional practices, myths and beliefs.

It is appropriate that any cultural heritage conservation program be inter-agency, multi-disciplinary, and inter-governmental in nature. This regional meeting examines the special Asian relationship to rice as expressed in the rice-growing landscapes found all over the region.

3. Case studies and regional comparative overview

19 delegates from Asia made presentations about rice culture in their countries (China, Korea, India, Indonesia, Japan, Myanmar, Philippines and Thailand). Cultural landscape studies from other parts of the world (Australia, Europe, South America) provided an additional context for discussions. In addition, a number of theoretical papers were presented, on both cultural and natural aspects including the importance of community involvement. Presentations by UNESCO, IUCN-CNPPA, and ICOMOS outlined the Global Strategy within which the identification, evaluation and conservation of specific regional landscape types are to be considered. A summary of these presentations can be found in ANNEX III.

There was an in-depth examination of the Ifugao rice terraces of the Philippine Cordillera, including a field visit to the terraces themselves, which have been nominated by the Philippine Government for inclusion on the World Heritage List as a continuing cultural landscape. The Ifugao Terraces Commission established by Philippine President, Fidel Ramos, in 1994, presented its master plan for the conservation and development of the site. During the course of the meeting, this case study of the Ifugao

terraces served as a "type-site" against which propositions of the experts were tested and evaluated.

This wide-ranging background on both the ecology of rice landscapes and diverse cultural manifestations of terraced pond-field agriculture underscored for the experts the complexity of the relationship between nature and human cultures which has shaped the distinctive terraced pond-field agricultural landscapes of Asia and the Pacific. It was noted that, in addition to the case-studies presented at the Manila meeting, terraced pond fields are characteristic of the Himalayas, central and south China, Java, Sumatra and Sulawesi, many of the high islands of Polynesia and Melanesia, as well as many other areas of the Asia-Pacific region. A substantial body of ethnographic, archaeological and ecological literature is available on the various aspects of this landscape type, as a result of decades of research by scholars. The experts felt that it would be important for the Committee to consider the full body of this interdisciplinary scholarly research in its evaluation of future nominations of specific terraced pond-field agricultural landscapes.

4. Issues considered by the experts

4.1 Asian Terraced Landscapes

4.1.1 Definition

The Asian rice culture and its terraced landscape should be seen as a component in a wider series of those landforms transformed by human action through agricultural practices. The entire Asia-Pacific region is characterized by the technique of pond-field agriculture, which modifies and shapes the landscape. The application of the technique to mountainous terrain has created a cultural landscape of terraces. These terraces provide habitats modified by humankind. Archaeological evidence indicates that the earliest terraces may have been used for the cultivation of root crops (e.g. taro), which continue to be important staples for some of the region. The development of this technique has been widely applied to the cultures of the region for the production of rice. These relationships are explained in the following diagram:

AGRICULTURE

Asia/Pacific

pond-fields (hydrology)

slope (terrace)

rice

There are two broad categories of Asian rice-production landscapes: wet and dry rice cultivation. Irrigation and water management is a key issue in both types of cultivation. The typical, lowland rice paddied landscape is commercially viable, producing most of the Asian requirement for rice.

The most spectacular terraces are found in the mountainous areas of the region, where the difficult terrain demands a very laborious method of terrace construction. In response to the harsh environmental conditions for rice growing and maintaining a lifestyle in the mountains, strong cultural traditions have evolved, governing all aspects of daily life and agriculture.

These factors are essential in maintaining the terraces and the lifestyle of its inhabitants and ensure an enduring relationship with nature itself.

The meeting therefore focused on high-altitude, pond field cultivation rather than the lowland rice agriculture landscape.

Four types of terrace wall construction are to be found in the Asian rice landscapes. In the gently sloping topography of the lowlands, the paddy walls are constructed of packed earth to an average height of approximately 0.50 meters. When the slopes are steeper, the lower part of the paddy wall is constructed of stone and topped with a low packed earth wall. Both wall types are also found in terraces on the gentler slopes of the highlands. The terracing on steeper slopes is more visually spectacular and more difficult to construct. The steep terrain no longer allows the use of packed earth walls and so two types of stone construction are employed. The first is a vertical wall constructed of stone; the second is a canted wall for steeper slopes. Since the ponds are constantly flooded, the lips of walls are constructed to contain the water, considerably higher than the water level or

concave to prevent water spillage.

4.1.2 Evaluation of terraced landscapes

4.1.2.1 Specific attributes of terraced pond-field agriculture

Some kinds of modification and transformation of the natural surroundings that are significant for evaluating pond-field terraced agricultural landscapes in the Asia-Pacific region, with emphasis on their cultural and ecological integration in relation to continuing evolving local systems of knowledge and technology include:

Climatically-related (water)

- * watershed management (in particular forest protection and rehabilitation);
- * irrigation works (weirs, dams, sluices, canals, tunnels, reservoirs);
- * heavy engineering works especially for drainage (self-standing stone walls, deep channels);
- * hydraulic controls of internal as well as external water flow;
- * hydraulicking (movement by water) of rock, soil, earth and organic material from higher sources.

Edaphically-related (soil)

- * major earthworks in mountainous terrain (excavation, leveling, filling, dyking of terraces);
- * embankment walling and buttressing with boulders, stone;
- * devices used for repairing damaged terraces (due to avalanches, earthworm-induced seepage, earthquakes, cloudbursts, river flooding);
- * recycling of soil nutrients by field-to-field transport.

Biotically-related (biomass, biodiversity)

- * organic residue management of weeds including water ferns, aquaculture of fish and other edible fauna (snails, shell-fish, mole crickets, etc), blue-green algae, and varied forms of edible flora other than the principal cultivars (rice and taro);
- * transport and distribution of organic fertilizers of domestic and wild origin (including green manure);
- * intercropping of legumes and other vegetables, root crops, spices, and lesser known plants of food and medicinal value;
- * development and maintenance of adjacent woodlots;
- * routinely selected and appropriately placed varieties of major cultivars (rice, etc).

Ethnoecologically-related (in general)

- * fine-tuning, synchrony, and interlocking of cropping cycles and resource flows with the organization of labour;
- * linkages and integration of religious and social traditions and adaptations with the modifications and transformations of the landscape noted above.

4.1.2.2 General evaluation indicators

In addition, the following broad indicators were defined, on the basis of the study of terraced landscapes, as being among those that should be taken into consideration in the evaluation of specific examples of continuing cultural landscapes in general:

- * Traditional knowledge and technology and cultural-ecological integration.
- * Involvement of local people in active maintenance and modification of the landscape.
- * Degree of transformation of the natural landscape.
- * Evolution and survival over time.
- * Completeness of physical unit.
- * Cultural tradition/identity.
- * Comparative value within region.
- * Significance in cultural, economic, social, and/or religious development of region.
- * Representative nature of landscape type.
- * Degree of enhancement of biodiversity (fauna, flora, domesticated livestock, and cultivated crops).
- * Authenticity/integrity.
- * Necessary management and support conditions in place.

4.1.3 Management and Conservation

1. Objectives of conservation policies for Asian Rice Terrace Landscapes
An overriding principle of conservation is the sustainability and continuity of the balanced cultural and ecological integration between humanity and nature which gives rise to the landscape. In particular the following objectives should be pursued:

- * environmental sustainability (in space and time), i.e. the protection of natural processes and cycles and the ecological system in place (including the protection of soils, water and biodiversity in fauna, flora and domesticated crops);
- * protection of characteristic landscape features including technological aspects such as water channels, irrigation and terracing;
- * maintenance and strengthening of living cultural traditions, including increased awareness of the value of these traditions;
- * maintenance of the economic viability of farming and traditional landuse systems using traditional knowledge-based technology;
- * strengthening the capacity of the local community to cope with external pressures and forces.

2. Means and mechanisms for conservation planning for Asian Rice Terrace Landscapes

It is particularly important to develop policies in the following key issues:

- * Greater community empowerment, so that local and indigenous communities, especially those people directly involved in the evolution and maintenance of the shaped landscape, are able to determine to the maximum extent possible the content of the conservation plan and to participate in its implementation;
- * Awareness building of the potential impacts of tourism on the local community, the landscape and the environment; community determination of the form of tourism which takes place; redistribution of tourism revenues so that the local community benefits; and information to, and education of visitors of the significance of the culture and the landscape of rice terraces;
- * Determination of appropriate zones (including buffer zones) and their boundaries which identify the outstanding features themselves, ensure the protection of the ecosystem upon which the landuse system depends and which recognize also the interactions between cultural, social and administrative factors.

In addition, the following organizational principles should be followed as far as possible:

- * The presence of a strong body, representative of and responsive to the local community, responsible for overseeing the conservation of the area;
- * This body should ensure a partnership and dialogue between all interests involved, including arrangements for participation by the private sector, NGOs and international organizations;
- * The body should be responsible for developing programmes of financial and other support for the conservation of the landscape, policies for the control and regulations of incompatible activities, and arrangements for monitoring, feedback and review of the effectiveness of the conservation plan.
- * All sectors of public policy need to be integrated and coordinated to achieve the objectives of the conservation of the cultural landscape.

4.2 General considerations on Continuing Organically Evolved Landscapes

Asian rice terrace landscapes are representative of a living culture. If one or more such areas are to be inscribed on the World Heritage List, this will be under the category of "continuing, organically-evolved landscapes" (Operational Guidelines, para. 39 (ii)). A number of more general questions arise from the Asian case studies, which will be relevant to the assessment of other continuing, organically-evolved landscapes.

This category of cultural landscapes presents particular challenges. Whereas intentionally-designed landscapes, "relict" organically-evolved landscapes and associative landscapes are, by their nature, more likely to be confined to a relatively few areas of limited geographical extent, continuing organically-evolved landscapes are very widespread : all agrarian landscapes can be considered in that light, and some other landscapes which have been fashioned by humanity (e.g. managed by fire regimes) can be similarly

regarded.

The first challenge, therefore, is to find an approach to the classification or typology of such landscapes so that a basis for selecting from such a potentially vast field can be made.

The second major challenge is to develop meaningful guidance for comparative evaluation of the quality of such landscapes. Without such guidance, which will need to be based on the agreed criteria in the Operational Guidelines, it will not be easy to establish whether or not a particular site has outstanding, universal values.

The third challenge is perhaps the most daunting of all. Because the essence of this type of cultural landscape is its dependence on a living culture, the management of such landscapes has to be through the community, rather than of the landscape as such (see section 4.1.3).

Consideration on Typology

Rather than try to develop a world-wide categorization of cultural landscapes, a more pragmatic approach is suggested. This would involve recognition that relatively few organically evolved cultural landscapes are likely to exhibit outstanding, universal qualities and that the World Heritage community should concentrate its attention upon these. The indicators which might be looked for in selecting priority types of landscape include the following examples: the demonstration of outstanding techniques for coping with extreme environmental conditions (e.g. steep slopes, low rainfall), the excellent examples of the adaptation of cultural and land use to the natural conditions, the sustainability of land use over a long period of time, and the enhancing or sustaining biodiversity in fauna, flora and cultivated crops and domesticated livestock.

Evaluation of Continuing, Organically-evolved landscapes

Within any one priority landscape, there will be certainly be a number of potential sites worthy of nomination. The task of choosing which satisfy the World Heritage criteria will require the development of a set of evaluation indicators. It is desirable that these be standard (i.e. apply to all nominated continuing organically evolved landscapes). Examples are given under section 4.1.2.

5. Recommendations

5.1 In order to complement and further extend the valuable discussion and results of the Expert Meeting in Manila it is recommended that an interdisciplinary, technical paper be commissioned to provide as wide a context as possible for the evaluation of future nominations of terraced pond fields. This paper, which should consist of a search of the wide body of already published literature on the subject, would extend the context to include the entire Asia-Pacific region in which terraced pond fields are widespread. Such a widening will serve both the Bureau and Committee in their deliberations on the nominations of cultural landscapes.

5.2 It is recommended that as soon as possible a small interdisciplinary and intercultural meeting be held under the auspices of UNESCO, and advised by ICOMOS and IUCN, to address the typology and evaluation tasks, and more specifically to develop a list of criteria for the selection of priority landscape types of a continuing, organically-evolved nature, to draw up a list of such priority landscape types for the attention of the Committee, and to prepare indicators for assessing individual nominations under these priority landscape types.

5.3 It is recommended that the World Heritage Committee invite ICOMOS and IUCN to develop draft principles and guidelines on the management of continuing, organically-evolved cultural landscapes based on the initial ideas generated through the meeting on Asian rice terrace landscapes, but these need to be elaborated further and made general to all continuing, organically evolved cultural landscapes.

6. Acknowledgement

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7. Annexes:

- I List of participants
- II Programme of the meeting

III Summary of country studies