

**Identification***Nomination*

The Rice Terraces of the Philippines Cordilleras

- 1 The Rice Terrace Clusters of Banaue: Battad and Bangaan
- 2 The Rice Terrace Clusters of Mayoyao: Mayoyao Central
- 3 The Rice Terrace Clusters of Kiangan: Nagacadan
- 4 The Rice Terrace Clusters of Hungduan

*Location*

North-East Luzon Island

*State Party*

Republic of the Philippines

*Date***Justification by State Party**

The rice terraces of the Philippines Cordilleras are an unmistakable example of a landscape resulting from the combined works of nature and man, illustrative of the evolution of human society and settlement over time, under the influence of physical constraints presented by their natural environment and of successive social, economic and cultural forces. The four clusters presented in this nomination are the best surviving examples of tribal management still in practice. Traditional methods are used in the maintenance of environmental balance, the buffer zone of private forests ringing the terrace group, the terraces themselves, the villages, and the sacred groves. The cultural practices of the tribes remaining within these clusters reinforce the traditional maintenance methods.

The rice terraces are an expression of the Ifugao's mastery of the watershed ecology and terrace engineering. It is also a complex farming system consisting not only of the terrace ponds but also the swidden farms and the *muyongs* (private forests). All these components of the terrace systems must be taken together if the rice terraces are to be conserved and maintained. They are therefore nominated for the World Heritage List as a cultural landscape as defined in paragraph 39 of the *Operational Guidelines for the Implementation of the World Heritage Convention* (WHC/2 Revised February 1994), criterion ii, sub-category 2: "... the organically evolved landscape [which] results from an initial social, economic, administrative and/or religious imperative and has developed its present form by association with and in response to its natural environment ... a continuing landscape is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time, it exhibits significant material evidence of its evolution over time."

**Category of property**

In terms of the categories of property set out in Article 1 of the 1972 World Heritage Convention, this nomination constitutes a *site*.

**History and Description***History*

The rice terraces of the Cordilleras are the only monuments in the Philippines that show no evidence of having been influenced by colonial cultures. Owing to the difficult terrain, the Cordillera tribes are among the few peoples of the Philippines who have successfully resisted any foreign domination and have preserved their authentic tribal culture. The history of the terraces is intertwined with that of its people, their culture, and their traditional practices.

The terraces, which spread over five present-day provinces, are the only form of stone construction from the pre-colonial period. The Philippines alone among south-east Asian cultures is a wholly wood-based one: unlike Cambodia, Indonesia, or Thailand, for example, in the Philippines both domestic buildings and ritual structures such as temples and shrines were all built in wood, a tradition that has survived in the terrace hamlets.

It is believed that terracing began in the Cordilleras some two thousand years ago, though scholars are not in agreement about the original purpose for which it was employed. It is evidence of a high level of knowledge of structural and hydraulic engineering on the part of those who built the terraces. The knowledges and practices, supported by rituals, involved in maintaining the terraces are transferred orally from generation to generation, without written records. Taro was the first crop when they began to be used for agriculture, later to be replaced by rice, which is the predominant crop today.

#### *Description*

The terraces are situated at altitudes between 700 and 1500 m above sea-level and are spread over most of the 20,000 km<sup>2</sup> land area covered by the provinces of Kalinga-Apayao, Abra, the Mountain Province, Ifugao, and Benguet. The population density of the region is 100-250 inhabitants per square kilometre. The nomination covers four clusters of the best preserved terraces in the region.

Each cluster still remains complete, with its basic elements of a buffer ring of private forests (*muyong*), terraces, village, and sacred grove.

Terraced rice fields are not uncommon in Asia. To contain the water needed for rice cultivation within the paddies, even gently rolling terrain must be terraced with stone or mud walls. High-altitude paddies must be kept wet and have to rely upon a man-made water-collecting system. The principal differences between the Philippines terraces and those elsewhere are their higher altitude and the steeper slopes (70° maximum as compared with 40° maximum in Bali). The high-altitude cultivation is based on the use of a special strain of rice, which germinates under freezing conditions and grows chest-high, with non-shattering panicles, to facilitate harvesting on slopes that are too steep to permit the use of animals or machinery of any kind.

The construction of the terraces is carried out with great care and precision. A course of marker stones is first laid out on a concave slope, backed by heavy broken gravel fill set into cuts into the natural slope to prevent slippage. As each course of dry-stone walling is added, the level of fill is raised. An underground conduit is placed within the fill for drainage purposes. When the level of fill reaches within a metre or so of the desired height, a layer of hard-packed earth is laid down on the gravel fill, as the base of the 20-30 cm of soft, thoroughly worked clayey topsoil. The stone walling is on average about 2 m high, though some walls may rise to as high as 6 m.

The groups of terraces blanket the mountainsides, following their contours. Above them, rising to the mountain-tops, is the ring of private woods (*muyong*), which are intensively managed in conformity with traditional tribal practices. These recognize the existence of a total ecosystem which assures an adequate water supply to keep the terraces flooded. Water is equitably shared, and no single terrace obstructs the flow of water on its way down to the next terrace below. There is a complex system, of dams, sluices, channels, and bamboo pipes, communally maintained, which drain into a stream at the bottom of the valley.

The villages or hamlets are associated with groups of terraces, and consist of groups of single-family tribal dwellings which architecturally reproduce the people's spatial interpretation of their mountain environment. A steeply pitched thatched pyramidal roof covers a wooden one-room dwelling, raised above the ground on four posts and reached by a ladder which is pulled up at night. Clusters of dwellings form small hamlets of interrelated families, with a centrally located ritual ricefield as their focus. This is the first parcel to be planted or harvested; its owners makes all the agricultural decisions for the community, manages its primary ritual property, which includes a granary housing carved wooden gods (*bul-ol*), and the basket reliquary in which portions of consecrated sacrifices from all agricultural ceremonial rites are kept. A short distance from the cluster of dwellings is the ritual hill, usually marked by a grove of sacred betel trees round a hut or open shed where the holy men (*mumbaki*) live and carry out traditional rites.

## **Management and Protection**

### *Legal status*

Individual terraces are privately owned and protected through the ancestral rights concept of ownership. Ownership is rigorously enforced by tribal law, which is administered by *mumbaki* (holy men). Ownership of terraces and *muyong* (private forest) can only be transferred to next-of-kin by inheritance.

The rice terraces were declared National Treasures in Presidential Decrees 260:1973 and 1505:1978. They are also fully protected by Republic Act No 7586:1991, which provides for "the establishment and management of national integrated protected areas system."

### *Management*

The 1991 Act requires there to be "a general management planning strategy to serve as guide in formulating individual plans for each protected area" (Section 9) and a Protected Area Management Board for each (Section 11). Section 8 requires the creation of buffer zones.

The Ifugao Terraces Commission (ITC) is a Presidential Commission mandated to preserve the rice terraces; it was set up in February 1994. The ITC has commissioned a Six-Year Master development and Conservation Plan for Ifugao Province, which was completed in October 1994. A detailed Three-Year Master Plan for the Municipalities of Banaue, Mayoyao, Kiangnan, and Hungduan followed in December of the same year. These are now with the provincial and municipal authorities for passing into appropriate implementing legislation.

## **Conservation and Authenticity**

### *Conservation history*

The concept of conservation is hardly applicable in the case of the Philippines rice terraces, since they have been at the core of the socio-economic structure of the peoples of the region for the past two millennia. It is only in the later decades of the 20th century that the social equilibrium of these communities has become profoundly threatened.

Some terrace clusters continue to be impeccably worked and maintained, many are being abandoned and left to decay. The successful Christianization campaign of the 1950s brought to an end immemorial pagan tribal practices and rituals that are essential to maintaining the human commitment to balance nature and man in the landscape. Today only the older generations remain to work on the terraces and the agricultural workforce is inadequate. The economic circumstances of all but the most affluent terrace owners do not permit them to hire additional workers. The fragrant terrace-grown *tinawon* rice is now a status symbol, served on special occasions: lowland rice is purchased for everyday consumption.

The environment has also been severely damaged by deforestation, and as a result streams have run dry; massive earthquakes have also changed the locations of water sources. As a result terrace dams have had to be moved and the water distribution system re-routed.

In the past attempts to preserve terrace economies have been made sporadically, but have focused on single factors from the complex of interacting factors involved, and as a result have had little, if any, positive impact. The new Master Plan that went into effect at the beginning of 1995 under the guidance of the Ifugao Terraces Commission is the first to adopt a holistic approach.

### *Authenticity*

As with the concept of conservation, authenticity is not a factor that can be called into question with the Philippines rice terraces. They can function only the direct result of the achievement of a delicate balance between a wide range of factors - climatic, geographical, ecological, agronomic, ethnographic, religious, social, economic, political etc. Once these are disturbed the whole system begins to collapse, but so long as they all operate together harmoniously, as they have over two millennia, the authenticity is total. The authenticity of the

four areas proposed in the nomination is so far intact, and it is intended that it should be maintained as a result of the implementation of the current Master Plans.

One discordant element in the landscape of the terraces is the use of corrugated iron sheets for roofing in place of the traditional thatch.

## **Evaluation**

### *Action by ICOMOS and IUCN*

A joint ICOMOS/UNESCO mission visited the Philippines in May 1994 and visited the rice terraces; meetings were held with officials at central and local government level (including the ITC). ICOMOS consulted Professor Peter Fowler (University of Newcastle upon Tyne, UK), a leading expert on early agricultural systems.

During the Regional Thematic Study Meeting of UNESCO on the Asian Rice Culture and its Terraced Landscapes (Manila and Banaue, 28 March-4 April 1995), the Chair of IUCN's Commission on National Parks and Protected Areas, Professor Adrian Phillips, visited the area in order to add an IUCN perspective to the assessment.

### *Qualities*

The claim by the State Party in its Justification (see above) that the rice terraces of the Cordilleras qualify as cultural landscapes in the terms set out in the *Operational Guidelines* is fully substantiated: they conform precisely with the intentions of the Committee and its advisers in defining the sub-category of "continuing landscape."

The terraces are of great significance in that they are outstanding examples of landscapes devoted exclusively to one of the three staple crops that cover most of the world - rice, wheat, and maize. Rice production falls essentially into two main groups - high-altitude and low-level production. The Philippines terraces are outstanding examples of the former group.

They also illustrate a remarkable continuity, since archaeological evidence reveals that this technique has been in use in the region for some two thousand years, virtually unchanged. The social, religious, and economic structures within which they have operated successfully for that period are still in place, especially in the areas that are the subject of the nomination, although under intensive threat from 20th century development.

From IUCN's position, the rice-terraces of the Cordilleras are of special interest as an example of sustainable land-use in steep, mountainous terrain, involving protection of the watershed forests, careful use of water, extensive soil conservation, and development of cultivars suited to the conditions. The near-total absence of chemicals in rice production is an added feature. That this system has endured over two millennia is remarkable; it offers many lessons for application in similar natural environments elsewhere.

### *Comparative analysis*

A regional meeting on high-altitude rice-cultivation landscapes was held in the Philippines in April 1995, one of the objectives of which was to initiate a comparative study. ICOMOS and IUCN feel, however, that the special qualities of the terraces included in this nomination is so high as to obviate the need for the results of this study to be taken into account in deciding on their claims for inclusion on the World Heritage List.

### *ICOMOS and IUCN comments*

The main problem that faces the areas of intact and viable high-level rice terraces that are the subject of this nomination is a social one - the flight of the younger generations in the communities concerned to the cities. They are sent there by their parents to better themselves and find the life-style more congenial, so do not return to their villages except as visitors. Given the problems in the Philippines cities, notably Manila, as a result of this flight from the countryside generally, there is a pressing need for positive action on the part of the State authorities there, as well as in the villages.

There is also a problem associated with the disintegration of the traditional societal structures in much of the region, as a result of Christianization and late 20th century consumer pressures.

These two factors are faced squarely in the Six-Year Master Plan, which accepts (page 99) that "Social change is inevitable and reconciling traditional and modern attitudes would require careful balancing of the socio-cultural and economic concerns based on the cultural templates or mental constructs of what the Ifugao people believe in and consider as important." It goes on to express the belief that "There are definitely positive entry points which will allow dynamic adaptation and chances for sustaining positive attitudes and values and developing stronger cultural identity."

The tourism potential of the rice terraces is already beginning to be exploited, and the Six-Year Master Plan devotes a substantial section to analysing it. There is no doubt that it can be a source of considerable economic advantage to the rice terrace communities. However, it is an asset that needs very careful exploitation, since insensitivity would bring with it the risk of destroying the social structure of the landscape that attracts tourists.

It is hoped that every effort will be made by the responsible authorities to discourage the use of corrugated iron roofing in favour of the traditional thatch.

In addition to the problem identified by ICOMOS, IUCN would stress the danger of mismanagement of the watershed forest. Indeed, there is some evidence that this has already affected water flows. The protection and rehabilitation of the forests above the terraces is absolutely essential if the whole system of land-use, and the cultural traditions associated with it, are to survive.

IUCN therefore welcomes the policies for watershed management in the Master Plan for the Ifugao Rice Terraces: these must be pursued with vigour.

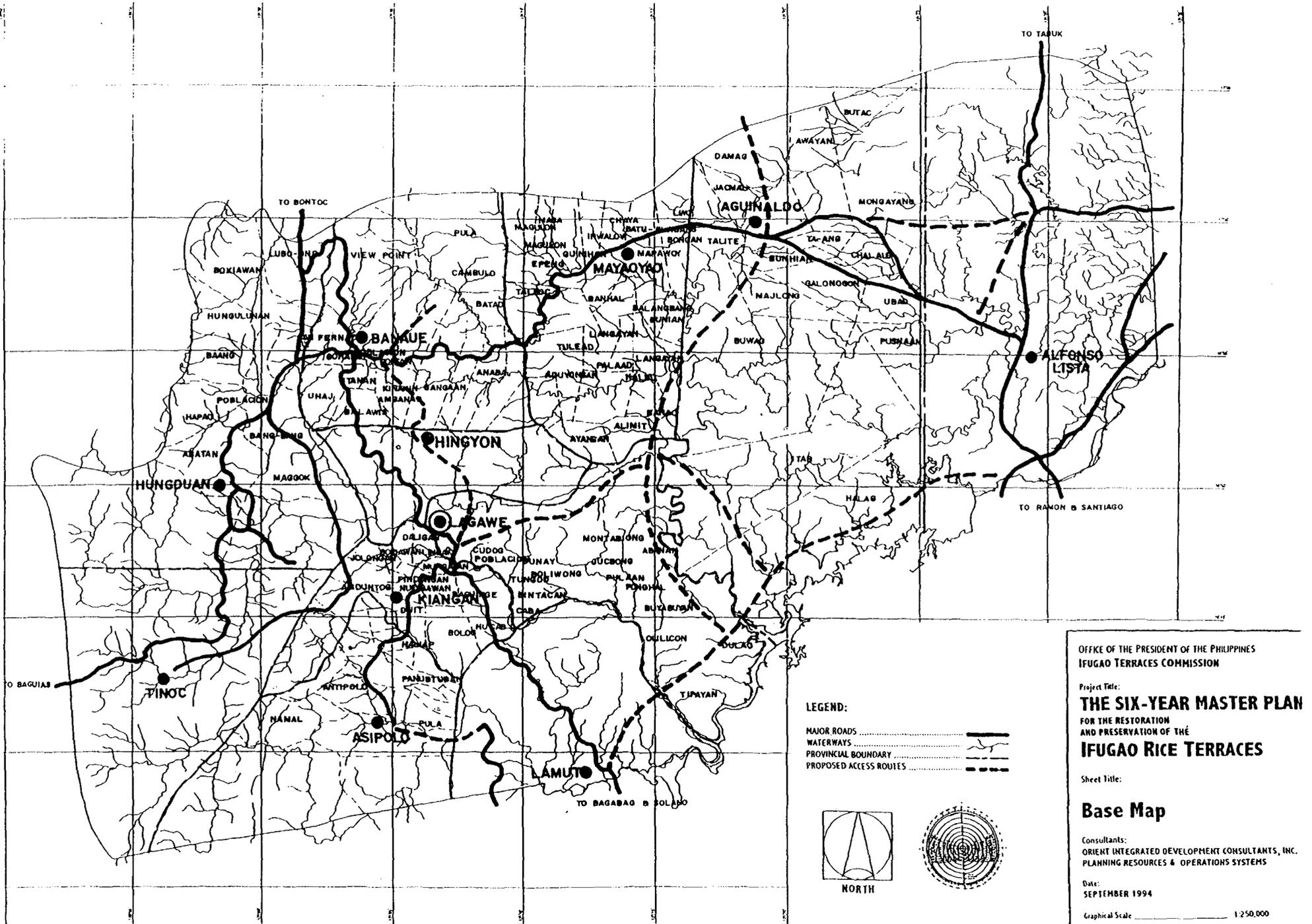
### **Recommendation**

That this property be inscribed on the World Heritage List on the basis of *cultural criteria iii, iv and v*.

The rice terraces of the Philippine Cordillera are outstanding examples of living cultural landscapes devoted to the production of one of the world's most important staple crops, rice. They preserve traditional techniques and forms dating back many centuries, but which are still viable today. At the same time they illustrate a remarkable degree of harmony between humankind and the natural environment of great aesthetic appeal, as well as demonstrating sustainable farming systems in mountainous terrain, based on a careful use of natural resources.

ICOMOS/IUCN, September 1995

Rizières en terrasses des Philippines :  
 carte indiquant la localisation des rizières en terrasses Ifugao /  
 Philippines rice-terraces :  
 Map showing the location of the Ifugao rice terraces



OFFICE OF THE PRESIDENT OF THE PHILIPPINES  
 IFUGAO TERRACES COMMISSION

Project Title:  
**THE SIX-YEAR MASTER PLAN  
 FOR THE RESTORATION  
 AND PRESERVATION OF THE  
 IFUGAO RICE TERRACES**

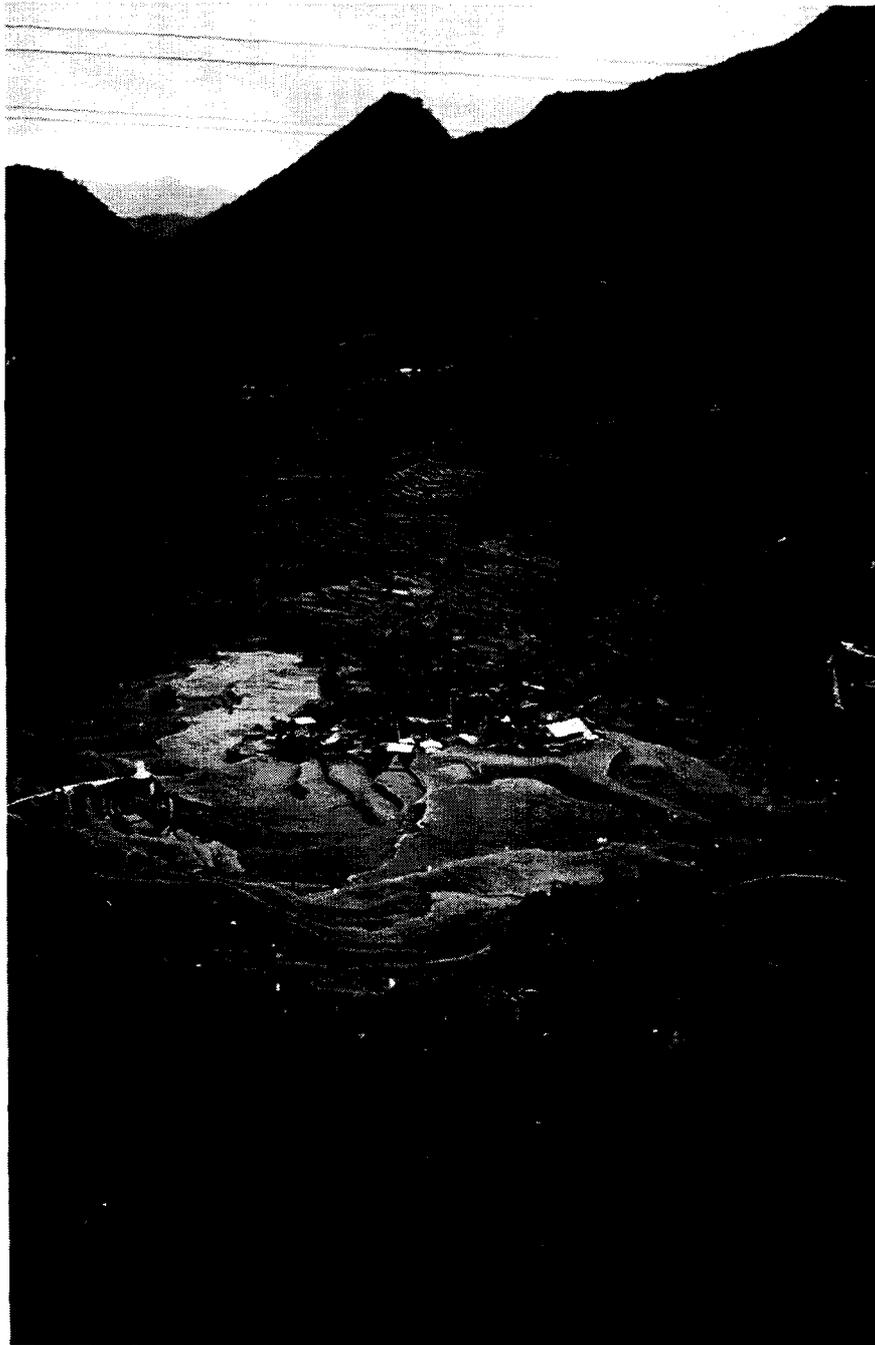
Sheet Title:  
**Base Map**

Consultants:  
 ORIENT INTEGRATED DEVELOPMENT CONSULTANTS, INC.  
 PLANNING RESOURCES & OPERATIONS SYSTEMS

Date:  
 SEPTEMBER 1994

Graphical Scale 1:250,000

0 5 10 15



Rizières en terrasses des Philippines :  
vue d'ensemble avec un village,  
municipalité de Banaue /  
Philippines rice terraces :  
general view with a village,  
Municipality of Banaue



Rizières en terrasses des Philippines :  
terrasses soutenues par des murs de pierres /  
Philippines rice terraces :  
terraces showing stone walls