
Honghe Hani Rice Terraces (China) No 1111

Official name as proposed by the State Party

Cultural Landscape of Honghe Hani Rice Terraces

Location

Yuanyang County, Honghe Hani and Yi Autonomous Prefecture, Yunnan Province
People's Republic of China

Brief description

On the south banks of the Hong River in southern Yunnan, the Honghe Hani Rice terraces cascade down the towering slopes of the Ailao mountains'.

Carved out of dense forest over the past 1,300 years, by the Hani people who migrated here from further to the north-west, the irrigated terraces support paddy fields overlooking narrow valleys. In some places there are as many as 3,000 terraces flowing along contours between the valley and the lower edges of the forest.

The nominated area displays the most concentrated and best developed terraces in three different valleys.

As well as the terraces, the property includes the still forested mountain tops, and 82 villages that house the farmers, many within the traditional thatched 'mushroom' houses. The landscape reflects complex inter-mountain water systems, that distribute water garnered in the forested mountain tops throughout the terraces, and an integrated farming system involving buffalos, cattle, ducks, fish and eels that supports the production of the primary product, red rice.

Underpinning these systems are long-standing traditional social and religious structures, both based on a duality of approach between the individual and the community, and between people and gods, one reinforcing the other.

Overall the rice terraces are seen as an example of a resilient land management system that optimises social and environmental resources and demonstrating an extraordinary harmony between people and their environment in ecological and visual terms.

Category of property

In terms of categories of cultural property set out in Article I of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (November 2011), paragraph 47, the property is nominated also as a *cultural landscape*.

1 Basic data

Included in the Tentative List

28 March 2008

International Assistance from the World Heritage Fund for preparing the Nomination

None

Date received by the World Heritage Centre

20 January 2012

Background

This is a new nomination.

Consultations

ICOMOS has consulted its International Scientific Committee on Cultural Landscapes.

IUCN provided comments on this cultural landscape 19 December 2012. The information was carefully considered by ICOMOS in reaching the final decision and recommendation in March 2013, and IUCN has also reviewed the presentation of its comments as included in this report by ICOMOS.

Technical Evaluation Mission

An ICOMOS technical evaluation mission has visited the property from 8 to 14 September 2012.

Additional information requested and received from the State Party

On 19th December 2012, ICOMOS wrote to the State Party to request further information on the following aspects of the nomination:

- Including all villages within the boundary;
- Providing further details of the farming system;
- Augmenting the Comparative Analysis;
- Sustaining traditional building materials and techniques;
- Developing a Tourism strategy;
- Developing an Interpretation strategy.

This report includes information provided by the State Party in response to this request.

Date of ICOMOS approval of this report

6 March 2013

2 The property

Description

In the mountainous terrain of southern Yunnan, with its extremely high rainfall (around 1,400mm) and sub-tropical valley climate, is found the most concentrated area of steep rice terraces in China.

Responding to the difficulties and opportunities of this environment of high mountains and narrow valleys criss-

crossed by ravines, the Hani people have, over the past 1,300 years, created out of dense forest an extraordinarily complex system of irrigated rice terraces that flow around the contours of the mountains.

The villages to which they belong are normally constructed at the top of the terraces just below the mountain top forests. Overall this is said to be a four-fold integrated system of forests, water supply, terraces and houses.

The mountain top forests are the sources of the water, the clefts in the rocks channel the rainwater, and the sandstone beneath the granite mountains traps the water and then later releases it as springs. A complex system of channels has been developed to spread this water around the terraces in and between different valleys.

The terraces produce red rice on the basis of a complex and integrated farming and breeding system that is underpinned by symbiotic relationships between plants and animals, and supported by social and religious structures that reinforce communal obligations and the sacredness of nature.

The terraces system exists across a wide area of some 1,000 square kilometres. The nominated property consists of three blocks of terraces, Bada, Duoyishu and Laohuzui within three river basins (Malizhai, Dawazhe and Amengkong-Geta respectively). The characteristics of these three blocks differ, because of their differing underlying geological characteristics. The gradient of the terraces in Bada is gentle, in Duoyishu steeper, and in Laohuzui very steep.

It should be noted that while within the nominated area the people are mainly Hani, Hani also live outside the nominated area and not all of them farm on terraces: some practice slash and burn agriculture. Also many terraces exist outside the nominated area and some are farmed by Yi people along the Hong river.

A large buffer zone extends over three watersheds and thus protects the whole area within which water is supplied to the rice terraces.

Forest still covers about 50% of land area while the terraces amount to around 28%.

The nomination dossier states that the terraced area has not grown in size since the Qing Dynasty. It is considered that a balance has been reached between optimising the natural forest resources that supply the water and optimising the development potential of the terraces for rice production.

The area of the nominated property is 16,603.22 ha with a buffer zone of 29,501.01 ha.

The property consists of:

- Forest

- Water and irrigation channels (ditches)
- Terraces & farming practices
- Villages
- Traditional customs related to rice cultivation

All are tightly integrated to form an overall landscape.

These elements are considered in turn:

Forests

The forests are the lifeblood of the terraces in capturing and sustaining the water needed for the irrigation. There are four types of forests, the ancient 'water recharge' forest, sacred forest, consolidation forests, and village forests for the provision of timber for building, food and firewood.

The water recharge forests have been protected intensively from generation to generation, as have the sacred forests. The consolidation forests are where trees are planted to stabilise steep slopes and these are well maintained. Some of the village forests, on the other hand, were cut during the 1950s to provide extra land for vegetables in response to the need to increase agricultural production. Now a project to replant these village forests is underway.

In each village, there is forest guard, who is employed by the village and is responsible for over-seeing the traditional management of sacred and water re-charge forests.

The sacred forests still have strong connotations. Above the village are places for the Village God "Angma" (the soul of the village) and for the Land Protection God "Misong", where villagers pray for peace, health and prosperity.

IUCN notes that the Ailao mountains are home to the large, virgin, subtropical, montane, evergreen broadleaf forests. These hold a highly significant population of the Endangered Black Gibbon (*Nomascus concolor*), whose population is assessed in the IUCN Red List as decreasing. According to a recent survey, the majority of the region's gibbon population occurs in areas to the north of the property while there are several isolated small populations to the south.

There are also endangered plant species within the forests or near the property such as *Manglietiastrum sinicum* (not assessed on the Red List at present, but suggested as endangered) and up to four endangered endemic *Cycas* species. The Honghe valley is the geographical divide between the Southwest Mountains (Hengduan Mountains) and Yunnan-Guizhou Plateau. The river may also be important for the largest and most critically endangered freshwater turtle in the world, *Rafetus swinhoei*.

The nomination document offers little information on the biodiversity of global importance in and around the

nominated site, only a simple vegetation table and a few descriptive texts cited from the folk poem were presented.

Water and irrigation channels (ditches)

Water is collected from brooks and natural springs in and around the forests and distributed to the fields and villages through a gravitational system of dug out streams, ditches, canals and bamboo tubes/pipes. There are four trunk canals and 392 branch ditches which in length total 445.83km. Ditches are maintained communally.

Water distribution is organised by 'wood-cuts' on posts to indicate how much water is needed when water is plentiful, or by taking turns if it is in short supply.

In each village, there is a ditch watcher, who supervises the distribution of water. Their role is crucial in ensuring that water is fairly shared when it is scarce and that not too much is delivered when it is plentiful. The water allocation regulations are passed on through the generations and endorsed by the whole community as the collective will. Therefore, any violation of the system is a violation of the interest of the whole village. If a villager violates the tradition, the collective under the leadership of Migu and Mopi, the religious leaders (see below) will step in and penalize the person.

Artesian wells in the villages provide drinking water for humans and animals.

Villagers sacrifice various animals to the Well God, and pray for endless water to use all year round.

Terraces and farming practices

The terraces are constructed out of black clay. There are no retaining walls – merely the cut face of the clay.

Terraces are allocated to families through a traditional system implemented on a village basis. But at the same time as families have their 'own' terraces, they have as well an allegiance to working communally for the good of the whole system. This duality is evident in all aspects of their social and religious life.

The dominant crop on the terraces is red rice and this forms the economic basis of the villages. But growing the rice is part of a complex and diverse farming and breeding system that brings in cattle, buffalos, pigs, ducks, fish (which are also sold in considerable quantities), eels and snails, and the cultivation of vegetables, all of which are essential components.

Rice is grown from late April to late September. Fish are bred twice a year: first, small fry are put into terraces with the new rice seedlings and caught when the rice is pollen. Secondly in early October, after the rice has been harvested and the terraces plowed using cattle or buffalos, fish are again raised to control pests. Ducks are bred to protect young seedlings and ripe rice, as they eat

weeds, as do snails and finless eels that also inhabit the water-filled terraces.

Both fish and ducks improve land fertility and are sources of food for people and animals. Water buffalo and cattle contribute organic fertilizer to the terraces, are used for ploughing, provide villagers with meat. They are also a bridge that connects people with the gods being sacrificed at the Kuzhazha Festival and at funerals.

Each farmer may have one or two buffalos and a cow and its calf. When not being used to pull ploughs (only around 100 days a year) cattle and buffalo are taken to graze high level grasslands.

On field ridges above the terraces, soya and calla can be cultivated or edible wild herbs such as cress and *herba houttuyniae* collected. This cultivation helps to fertilize the paddy fields. Around the houses, pigs, dogs and chickens are bred. In the woods mushrooms and other fungi are gathered and most villages have a small tea plantation.

The growing of rice is thus part of a complex, socio-economic farming and breeding system that has sustained the landscape and its village communities for many centuries. The essential elements of this wider farming system, ducks, fish, snails, and water buffalo, are all part of an integrated ecological approach that supports the production of organic red rice.

Hani people choose different rice varieties and farming methods in different areas according to local conditions and altitude. There are apparently as many as 48 varieties of the local red rice, and some of these are specific to this area.

Where traditional red rice is planted no chemical fertilisers are used. As however the traditional red rice has a lower productivity than hybrid rice, in some low level terraces hybrid rice is planted and chemical fertilizer used. Hybrid rice does not survive at altitudes over 1,500 metres. Chemical fertiliser impacts adversely on the integrated system, in terms of the negative impact that it can have on fish and ducks.

Villages

Within the nominated property there are 82 villages, which house the farmers who farm the terraces. Of these 5 are said to be the most representative. They are: Shangzhulu Old Village, Quanfuzhuang Middle Village, Niuluopu Village, Azheke Village, and Yakou Village.

The villages are of relatively small size, most with between 50 and 100 households. Each household farms one or two 'plots' of the rice terraces.

The traditional vernacular buildings have walls built of rammed earth, adobe bricks or of earth and stone under a tall, hipped, roof thatched with straw that gives the houses a distinctive 'mushroom' shape. The houses are

of three stories: the lowest is for domestic animals, the centre is the family's living quarters and the top floor is for storage of grain. Overall 66% of houses in all the villages are said to be mainly or partly of traditional materials, while in a small number of villages the proportion of intact traditional houses is as high as 90%.

In the centre of each village is an open area, known as the *Moqiu* field on which is a building and these are used for festivities. Water powered mills (for grinding grain), and water-operated tilt hammers (for hulling rice) are found in most valleys.

Little specific information is provided on each of the settlements in terms of the number of houses, and their characteristics in terms of construction and materials, and who now has the necessary traditional building skills.

Quanfuzhuang village has houses that have been improved internally to provide better accommodation for their residents, whilst respecting traditional materials and techniques, and this has now become a demonstration village in this respect.

In some villages, new building materials have had a considerable impact on individual buildings, particularly in houses that have been adapted to accommodate tourists. Overall a large number of incremental changes can be observed. These changes relate to the difficulty of obtaining traditional materials as well as to the inherent constraints of the traditional buildings in terms of being adaptable to modern needs. To address these 'tensions', local government and farmers have reached a consensus on how to respect traditional forms, materials and planning – and this is detailed below.

Traditional customs related to rice cultivation

The Hani people's faith is based on a human-nature ideology. The harmony between people and nature underpins their thinking, actions and living. They worship the sun, moon, mountains, rivers, forests and other natural phenomena such as fire.

The sacredness of nature is reflected in sacrificial activities, offerings and sacrifices to water, fields and sacred woods at various times of year.

The main traditional festivals are those held in the forest in February to celebrate village gods and in June at the Moqui celebration grounds at the foot of the village to worship the god of agriculture and other natural deities and to pray for a good harvest. The harvest itself is celebrated with a Long Street Banquet and the Angmatu Festival. These festivals reinforce community cohesiveness.

Migu and *Mopi* are two types of priests; *Mopi* is a person with outstanding wisdom and is seen as the custodian of Hani culture for an entire clan, while *Migu* is related to a village and is considered to be the embodiment of village

gods and spirits. A *Migu* often performs leading administrative duties. *Mopi* and *Migu* are thus seen as complementary and reflect allegiance to both locality and to the wider community through blood relations.

History and development

The earliest history book in China: the Classic of History Yu gong refers to terraces in relation to Hani people, and to them being an independent ethnic group.

On the basis of oral traditions and ethnological research, it is currently considered that the Hani derive from the ancient Diqiang tribe who once lived in Gansu and Qinghai provinces in north-west China. From there, after migrations lasting several hundred years, they settled in Yunnan in the area they inhabit today.

A History of Yunnan, completed in 863 AD, mentions terraces in perfect condition as well as springs used for irrigation. It is not certain whether the people who created these terraces were the Hani, their ancestors or another group of people.

A dated well stone in Quanfuzhuang village suggests that by the 9th-10th century at the latest, the Hani people had begun to distribute water to villages and terraces by using water distribution stones.

In late Yuan Dynasty and early Ming Dynasty, a Native Chieftain System for ethnic minorities in south-western China known as the Tusi system began to be implemented. This established hereditary chiefs who were recognised as imperial officials. This system exerted positive influence on the development of terraces, stimulated their cultivation and management and played an important role in forming the present scale of Yuanyang rice terraces.

As a result of this expansion, by the Qing dynasty the terraces appear to have reached their current extent.

Since the founding of PRC in 1949, and its focus on agricultural production, laws have been passed and special agencies established to strengthen the protection of forests, terraced fields and watersheds.

Within Yuanyang county, as well as the Hani, there are also other people such as Yi, Miao, Yao, Dai, and Zhuang people, who practice terrace farming and still reflect their ancestral customs and traditional culture, although these are increasingly under pressure from modern culture.

In the past two decades, the value of the terraced landscapes as cultural heritage has been recognized by governments, scholars and residents. Governments at all levels have strengthened the protection and management of the property, and its regulation and conservation.

During the same period, a wealth of scholarly literature has been produced on the property that helps to inform its management.

3 Justification for inscription, integrity and authenticity

Comparative analysis

The comparative analysis compares the nominated property with other rice terraces around the world in Nepal, India, Vietnam, Japan, Bhutan, Thailand, Indonesia and the Philippines. Other areas could have been included such as Baltistan in Pakistan. Within China the property is compared to Longji Terraces, Guangxi, and Ziquejie in Hunan.

The analysis compares altitude, crops grown and irrigation arrangements and concludes that in each case there are marked differences in terms of altitude, drop of terraces and whether or not the social and economic functions are intact. The most similarities are found in the Rice terraces of the Philippine Cordilleras (1995, criteria (iii), (iv) and (v)) in terms of irrigation methods and overall physiognomy.

The analysis is limited mainly to the physical manifestations of the terraces, where they are sited and how they are watered and thus considers the image of the terraces rather than exploring the cultural, social and economic traditions that underpinned them. Several terrace systems could be said to have similarities with the form the Honghe Hani terraces.

And indeed the similarities are underlined in the Justification for inscription which states that the Honghe Hani terraces “*share similarities with other rice terraces in South China, South Asia, and Southeast Asia*” and therefore can be seen as “*mutually supplementary with its own characteristics to other famous mountainous rice terraces listed in World Heritage List or Tentative List of World Heritage*”.

If the Honghe Hani terraces are to be considered as cultural landscapes, they need to be understood for the ways in which their communities have interacted with their environment over time in cultural, social and spiritual ways as well as in terms of the practical outcomes of those interactions. Comparisons need to go beyond visual aspects. Any comparisons need to be based on a combination of the potential Outstanding Universal Value and the attributes that convey that value and thus bring in the social, economic and technical systems that underpin the traditional agricultural and water management processes.

ICOMOS considers that the Hani Terraces need to be valued for a combination of the physical terraces and the robust overall socio-economic-religious systems that underpinned their creation and which have persisted for many centuries.

Looked at in this way, ICOMOS considers that the extensive and dramatic terraces can be seen as a reflection of dynamic interactions between people and their environment, that are characterized by a four element system of forest, water-system, village and terrace, and are underpinned by a social and religious systems that reinforce relationship between the individual and the community and between people and nature and one that has persisted over at least a millennium. Such a precise combination of extensive terraces and a socio-economic-religious system, with a long historical perspective cannot be paralleled outside the Honghe area.

However it should be noted that not all Hani people cultivate rice by means of terrace farming. Some of those living in the Xishuangbanna area apparently cultivate their fields by means of slash and burn agriculture and other people who live in Yunnan province such as the Yi and other minorities along the Hong River also practice terrace farming,

The text states ‘*Where there are Hani people, there are terraces; where there are terraces, there are Hani people*’. In reality some 50% of Hani people farm terraces. The nominated area covers part of this Hani terraced landscape. The boundary has been chosen to reflect those areas with the most intact terraces and where the traditional system has persisted most strongly.

ICOMOS considers that a comparative analysis can justify consideration of this property on the World Heritage list.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Hani people have created a large-scale and harmonious style of living and production and a unique forest-water system-village-terrace system in a harsh mountainous region.
- The landscape still keeps great vitality and reflects the extraordinary creativity, willpower, optimism and respect for nature in extremely difficult living conditions.
- The landscape is just like a boundless beautiful painting; it is appreciated as ‘a great earth sculpture’.
- The rice terraces share similarities with other rice terraces in South China, South Asia, and Southeast and thus may be seen as mutually supplementary with their own characteristics.
- The structure, elements and natural and cultural environment of Cultural Landscape of Honghe Hani Rice Terraces have not been changed radically for thousands of years.
- The terraced landscape is a perfect model of harmonious ecological system and good lifestyle.

ICOMOS considers that the rice terraces undoubtedly share visual characteristics with other areas of rice terraces in China and south and south-east Asia. However in order to justify Outstanding Universal Value, it needs to be set out how the Honghe Hani terraces are different from these others if viewed as a combination of the physical terraces and the very specific social, economic and religious systems that produced and continue to support them.

Although the rice terraces are visually spectacular, valuable as a good ecological system, and still display vitality, these factors alone do not justify Outstanding Universal Value.

ICOMOS considers that the Honghe Hani terraces need to be considered as an exceptional reflection of a socio-economic-religious system that has allowed communities to farm successfully in harsh conditions using a finely tuned agricultural system supported by a spiritual respect for nature and by respect for both the individual and community.

Integrity and authenticity

Integrity

The nomination states that each of the four elements: forest, water system, villages and terraces are well preserved, that the internal dynamic of the system are still in place and that the buffer zone protects the visual setting and contains enough space to allow for coordinated social and economic development.

ICOMOS considers that the overall boundary is an adequate area within which the overall terraced system can be appreciated and all its attributes are present. None of the key physical attributes are under threat and the traditional system is currently robust and well protected although ICOMOS considers that the way that the traditional system adapts itself to modern demands, which are already drawing people away from the villages, and to the impact of tourism could lead to difficult tensions.

Authenticity

The State Party states that the terraced landscape has maintained its authenticity in relation to the traditional form of the landscape elements; continuity of landscape function, practices and traditional knowledge, and continuity of rituals, beliefs and customs. The one area highlighted where authenticity is or could be vulnerable is in the traditional materials for traditional houses, as these are said to be difficult to obtain.

ICOMOS notes that new materials in houses – such as concrete bricks that replace adobe or tiles that replace thatched roofs – are beginning to have a marked impact on the overall image of villages in the landscape as the colour as well as the forms of the buildings are subject to change.

There is a need for detailed guidelines in order to control the process of upgrading and improving houses.

ICOMOS also draws attention to the use of concrete in the main waterways, introduced between the 1960s and the 1980s. Since the topography is very steep, it is understandable that concrete was seen as a way to stabilise certain channels. However its use should be strictly controlled and if possible existing concrete channels reversed.

Overall ICOMOS considers that traditional practices are vulnerable to the desire for improved lifestyles amongst the farmers, and to the potential impact of tourism which currently does not have an overall defined strategy to ensure its sustainable development.

ICOMOS considers that the condition of and authenticity and integrity are met but it considers that the authenticity is vulnerable to increasing expectations which draw people away from the villages, and to the impacts of tourism, which needs to be subject to an overall sustainable tourism strategy.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (i), (iii), (iv), (v) and (vi).

Criterion (i): represent a masterpiece of human creative genius;

This criterion is justified by the State Party on the grounds that the skilful interaction of the Hani people with their environment has produced a landscape that could be considered as a magnificent earth sculpture, developed over a period of thousands of years.

ICOMOS considers that although the rice terraces might be considered by those viewing them from the outside as visually pleasing or even spectacular, the aesthetic value is not shown to be an outcome that was considered by those who created the terraces. It is thus a somewhat subjective reaction and not necessarily related to any aesthetic creativity by the generations of people who constructed this landscape. This is not to say that such an artistic sensitivity did not exist but this has not been demonstrated in the nomination.

ICOMOS considers that this criterion has not been justified.

Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that the terraced landscape reflects the Hani people's worship of nature, traditional production styles, including social structure, site selection and construction of settlements and buildings, water source protection and distribution, knowledge and understanding of the

farming season and rice farming, technology, etc. And also because the cultural traditions of the Hani people, in the form of sacrificial activities and festivals, support the ecological system.

ICOMOS considers that the terraces need to be seen as an outstanding reflection of elaborate and finely tuned agricultural and water distribution systems that are reinforced by a socio-economic-religious system that is a long-standing and distinctive.

Although the main crop of the Hani is rice, they also farm vegetables, fish and poultry and gather wild food from the forests. In a strong integrated system of food production, ducks fertilise the young rice plants, while chickens and pigs contribute fertiliser to more mature plants and water buffalo slough the fields for the next year's planting. Snails growing in the water of the terraces consume various pests. The rice growing is thus integrated into a much wider agricultural process. And this process is sustained by elaborate socio-economic-religious systems that strengthen peoples' relationship with the environment, through obligations to both their own lands and to the wider community, and affirm the sacredness of nature.

This system of dual interdependence known as the 'Man-God Unity social system', and its physical manifestation in the shape of the terraces, together form an exceptional still living cultural tradition.

ICOMOS considers that this criterion has been justified.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that terraced landscape dates back to the 7th century and is a most outstanding representative work, as well as an example of a sustainable, time-honoured agricultural civilization with profound significance, extensive influence, unique features and connotations.

ICOMOS considers that what has not been set out is how these landscapes can be seen to reflect a significant stage in human history. Their value is better reflected in terms of their continuity over time rather than in terms of a moment in history.

ICOMOS considers that this criterion has not been justified.

Criterion (v): be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the State Party on the grounds that the Cultural Landscape of Honghe Hani Rice Terraces features a perfect integration of the 'forest, water, village and terrace' four element system, showing a harmonious combination of human and nature.

ICOMOS considers that this criterion can be justified for the exceptional way in which the terraced landscape reflects a specific interaction with the environment mediated by integrated farming and water management systems and underpinned by socio-economic-religious systems that express the dual relationship between people and gods and between individuals and community, has persisted for at least a millennium, as can be shown by extensive archival sources.

ICOMOS considers that this criterion has been justified.

Criterion (vi): be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;

This criterion is justified by the State Party on the grounds that the core value of the Rice Terraces is related to the special cultural traditions of the Hani people, and that the rice terraces have become an important symbol of cultural identity for the Hani ethnic group.

ICOMOS considers that although the cultural traditions of the Hani people undoubtedly underpin the interaction between the Hani people and their environment, what has not been demonstrated is how these traditions might be said to have outstanding universal significance.

ICOMOS further considers that these traditions could be adequately reflected within criterion (iii).

ICOMOS considers that this criterion has not been justified.

ICOMOS considers that the conditions of authenticity and integrity have been met and that the nominated property meets criteria (iii) and (v).

4 Factors affecting the property

The population in the nominated area and buffer zones is slowly increasing. Currently few impacts of this slow increase can be seen in the landscape. The Xinjie town, the largest town in the area, is outside the nominated property.

Traditionally, some people used to work outside the valleys and return to villages to help in busy farming seasons. Such traditions, helped to maintain a relative balance between the population and the needs of the

farmland. However today more and more people, both men and women, are taking work outside the villages.

Traditionally organic manure is used for the rice terraces where red rice is grown – as outlined above. At some lower levels chemical fertilisers are used on crops of hybrid rice. However as the market for traditional rice is expanding, and the demand for pollution free organic agriculture products in general is increasing, traditionally grown hill rice is beginning to be advantageous. A private business group has recognized the advantages of red rice as a nutritious, organic food and has successfully turned it into high-end food product which increases its price.

Government policy also encourages farmers to promote organic products and a compensation scheme has been agreed to encourage farmers to adopt environment-friendly ways of farming so as to benefit the ecological and social functions of agricultural production. Increasing the value of red organic hill rice has thus become the main way to raise the social and economic level of local areas. The utilization of chemical fertilizers in the nominated property might remain limited.

Currently domestic sewage is discharged onto the fields. While this system might be sustainable for the current village communities, the demands of tourists could easily upset the delicate balance that now prevails.

It is not clear what arrangements are made for sewage disposal in connection with tourism facilities.

As people's demands for more amenities grow, it is anticipated that there will soon be a need for a sewage system for all villages.

The Management Plan states that projects have been launched to reinforce infrastructure construction in villages and to establish a rubbish disposal system, which it is presumed will include sewage. It would be desirable if environmentally sustainable systems could be explored.

In the Management plan it is stated that the local government has prepared strategies to increase the price of organic agricultural products, and thus protect the terraces but also the overall wider farming and forestry systems as part of the circulation of resources. (see section below on management).

Most rice terrace areas in Asia face similar challenges. If the Hani rice terraces can provide sustainable livelihoods for their villages through sustaining the traditional socio-economic-religious systems, while meeting the increasing expectations of residents, then it could be helpful if ways to achieve this are shared with other similar areas.

In all the villages but the most representative, development for tourist activities will be allowed. As the villages are within the overall terraced landscape – and

indeed occupy a strategic position in the four tier system – development could quickly lead to a change in building form and material that could have an adverse visual impact on the integrity of the overall landscape.

How to contain tourism pressure in the villages could become a major issue. The villages are small, one with between around 40 and 80 households and local infrastructure relatively poor.

Tourist numbers have already increased over the past five years from 240,000 per annum to 640,000 and within one year up to 2012 by 17.6%. It is stated that tourism facilities and tourism management are a challenge for the property.

Currently there are no adverse impacts as tourism is only just beginning and some of the villages are currently off the tourist trails.

However there is no specific tourism management strategy to guide development towards sustainable ecotourism. The Management Plan includes the medium term goal (2013-2020) of developing a tourist town at Xinjie. This existing town is just to the north of the nominated area, within the buffer zone. It provides the main access to the terraces. Such a new tourist town could rapidly escalate the numbers of people who visit as could inscription on the World Heritage List. Currently the property appears to be unready for such an impact.

The Management Plan also states that there will be no hotel within the property except *'where the people's government Panzhihua and Shengcun village committee are located'* and that there should be no catering or recreation facilities within the property.

The terraces are said to have high resilience against climate change and drought – as has been demonstrated during the major drought of 2005. They are however vulnerable to landslides as on average the terraces are constructed on 25% slopes.

ICOMOS considers that the main threats to the property are first the overall vulnerability of the integrated farming and forestry system in relation to how far they are capable of providing an adequate living for farmers that will allow them to remain on the land, secondly the potential adverse impact of tourism on the villages.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

The boundary of the nominated area is logical in the way it encompasses three large areas of terraces which reflect the most intense, most concentrated, and best developed terraces.

The buffer zone is also very logical and satisfactory as it encompasses the entirety of the watersheds that feed water into the nominated area. Both the property boundary and the buffer zone boundary are marked by stone markers.

ICOMOS considers that the boundaries of the nominated property and of its buffer zone are adequate to encompass the rice terrace areas and their watersheds.

Ownership

The majority of the land – 97.82% – is owned by collectives. The remainder is owned by the national government.

Protection

The property is listed in the application for the 7th batch of State Priority Protected Sites put forward by the State Council of China to be protected by law. This means that if the property is inscribed, and if the List is adopted, the property will be protected by law as one overall asset.

Meanwhile the property was designated in 2008 as a protected historic site by Yuanyang County People's government.

Furthermore, all property in China which is either inscribed or on the Tentative List is protected within the *Measures for Conservation and Management of World Cultural Heritage Sites*, issued by the Ministry of Culture, and the supreme legislation issued by the national authority of China. This legal instrument, along with conservation and management plans, special local laws and regulations, and village rules, are combined to constitute a complete system for identification, conservation, management and monitoring of World Heritage sites. This means that these sites need to be managed in line with requirements of the Ministry of Culture.

ICOMOS considers that the legal protection in place is adequate.

Conservation

The terraces are constantly maintained by the communities and are in an excellent state of conservation. So too are the forests.

Only some of the 82 villages were visited during the evaluation mission. The standard of conservation of traditional houses in the five most distinctive villages and in one other was found to be good.

The nomination dossiers notes that many new houses have been built and highlights the potential conflict between sustaining traditional houses and continuing to support traditional building material and techniques and meeting modern aspirations for domestic spaces and the way that in recent decades, extraneous architectural styles have entered into the villages, causing some negative effects.

In order to address these issues, the local government has issued the *Measures for Protection and Management of the Villages and Residences of the Cultural Landscape of Honghe Hani Rice Terraces* and *Guidelines for Conservation, Renovation and Environmental Treatment of Traditional Hani Residences in Honghe*. These two legal documents set out technical standards to be followed within all the villages to control development and construction activities. New construction projects within the property will be strictly examined and controlled, by the provincial authority. The Guidelines were developed in association with School of Architecture, Tsinghua University. They stress the need to acknowledge that buildings in different villages and areas have their own characteristics that need to be respected.

It is anticipated that buildings that are inconsistent with traditional style but not to the extent seriously threatening the overall landscape will be gradually improved in accordance with these guidelines.

ICOMOS considers that it would be helpful if overall conservation/development plans were developed for each of the villages to allow for a coherent approach.

ICOMOS considers that conservation of the property is satisfactory.

Management

Management structures and processes, including traditional management processes

The Hani Rice Terraces Cultural Heritage Protection and Development Management Committee is responsible for implementing the Plan. This includes members from many departments of the Honghe Prefecture. The Hani Terraces Administration of Honghe Prefecture set up in 2007 with 12 staff members services the Committee, oversees the day-to-day administration carried out at County level and liaise with local stakeholders.

Each of the villages is under the administration of village committees.

The Tusi Native Chieftain System is still an important part of the terrace culture in Ailao Mountain. Two Tusi governments, namely, Mengnong Government and Zongwazhai Government in Yuanyang County, are involved in the planned area.

As the basic unit of Hani People society, each village has developed a series of customary laws for managing natural resources and solving the inner discords of villagers and exterior grievances against other villages. Customary laws of Hani People involve almost any sections of lifestyle, as well as the utilization, management and protection of forest.

In most Hani villages within the nominated property, Migu and Mopi still perform their traditional functions as

spiritual and administrative leaders, and forest rangers and Ditch Keepers still preserve water resource and allocate water fairly as they did in the past. Such traditional practice is still accepted and continued by the government and villagers.

IUCN notes that from an ecological prospective, the water cycle between the Ailao Mountains and the Red River is significant in terms of biodiversity as well as agriculture. Awareness of this should be raised and should be emphasized in future landscape conservation and management.

Policy framework: management plans and arrangements, including visitor management and presentation

A Management Plan has been written for the property. After legal approval, it will be accepted as a legal and technical document for the protection, conservation and management of the property and included in Honghe Hani & Yi Autonomous Prefecture's *Urban System Plan, Master Plan for Towns* and related plans of local social and economic development.

The plan runs from 2011 to 2030, and is divided into short term, from 2011 to 2012, medium term from 2013 to 2020, and long term from 2021 to 2030, aims.

A tourism regulation principle of minimum intervention has been worked out for visitors that is based on a transport system for visitors whereby incoming visitors arrive at Xinjie Town in the buffer zone and then take low-emission small-sized buses for a round tour that encompasses visits to observation platforms at Laohuzui, Duoyishu and Bada. Villages that currently receive most visitors are Dayutang, Qingkou and Pugaolaozhai near this main route. The number of restaurants in these villages is currently limited.

Local authorities are formulating specific plan for tourism management and development of the region and this plan is expected to be completed by the end of 2013.

ICOMOS would be ready and willing to comment on this plan – as suggested by the State Party.

A major information centre is being developed at Xinjie Town that will focus on the terraces and their social and religious structures and this will be completed by 2020.

There is currently an Exhibition hall at the management centre that introduces visitors to the terraces in their context and there are also exhibition halls in Laohuzui, Duoyishu and Bada villages.

The State Party indicates that it would welcome comments to allow the overall interpretation to be improved in the second half of 2013. ICOMOS would commend the development of a wider Interpretation Strategy that included opportunities for visitors to interact with farmers and for structured walking trails for

sustainable numbers of people. ICOMOS would be ready and willing to offer advice.

Involvement of the local communities

Clearly local communities underpin this nomination. At village level villagers through their traditional leaders still manage decisions related to the traditional management of the terraces and their locality. Modern administrators respect the traditional managers, and do not intervene with the traditional systems of Mopi and Migu.

It would however be helpful to have more information provided on how residents participate in decision making at the macro level in terms of public projects, tourism policies and infra-structure development that are dealt with by village cadres.

ICOMOS considers that the management system for the property is adequate but would support the need for further development of sustainable tourism and interpretation strategies.

6 Monitoring

Detailed monitoring indicators have been developed for most aspects of the property including the income of farmers.

However, as IUCN notes, there is a gap in monitoring requirements related to biodiversity and ecosystem service, according to Table 6.1 of the nomination.

A monitoring centre for the property has been established within the property. This covers heritage, heritage records, and provides a scientific basis for protection and preservation.

A daily patrolling system has also been put in place, to check on instances of sand dredging, quarrying and earth borrowing etc.

ICOMOS considers that the monitoring system is adequate.

7 Conclusions

The visually spectacular Honghe Hani rice terraces reflect a long-standing interaction between communities and their environment over at least a thousand years.

The extensive scholarly research over the past decade that has allowed an understanding of their longevity and persistence as well as of their complex, integrated agricultural and water management systems and the way that these are underpinned by social-economic-religious systems lined to a duality between people and their environment and between individual and the community.

Although the terraces have many similarities in form and function with other rice terraces in Asia, they can be seen as entirely distinctive in terms of their very specific combination of farming and water management structure with socio-economic-religious systems and their spectacular scale.

The Hani rice terraces extend way beyond the boundaries of the nominated property, but the ones nominated encapsulate the best preserved examples from three valleys. Terraced systems are managed by other peoples besides the Hani such as the Yi, Miao, Yao, Dai, and Zhuang peoples, but some 50% of the Hani farm the terraces.

Rice terraces over Asia all face challenges as to how they can provide adequate resources for farmers to allow them to stay on the land, while meeting increasing social and financial expectations. While tourism could be an important strand in structuring a viable economy for the Honghe Hani terraces, it could also overwhelm the traditional villages unless it is structured to allow it to be dispersed throughout the area. These villages could easily become museumified and overwhelmed by tourists. If the Hani Honghe terraces are to survive as a true reflection for their distinctive, complex, farming, water management and socio-economic-religious systems, they will need to adapt to meet the 21st century needs of farmers and their families and avoid the more damaging impacts of tourism.

Sustaining the grand sweeps of the terraces ultimately relies on environmental micro-management and sustaining the commitment of farmers to work their land and contribute to the overall good of their communities.

The Management Plan presented puts forward a commitment to protect the traditional systems and to support the cultivation of red rice. ICOMOS considers that this needs to be supported by a detailed Sustainable Eco-Tourism Strategy and by an Interpretation Strategy so as to ensure there is a clear understanding of what is being sustained and how tourists can support the overall management process. ICOMOS is ready and willing to offer any help it can to the development of these.

Given the size and scale of the Honghe Hani terraces and the commitment that has been given to their support, ICOMOS would welcome the possibility of engagement between representatives of the property with representatives of other terraced properties in Asia in order that measures taken to sustain the traditional societies might be shared.

8 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Cultural Landscape of Honghe Hani Rice Terraces, People's Republic of China, be inscribed as a cultural landscape on the World Heritage List on the basis of **criteria (iii) and (v)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

On the south banks of the Hong River in the mountainous terrain of southern Yunnan, the Honghe Hani Rice terraces cascade down the towering slopes of the Ailao mountains. Carved out of dense forest over the past 1,300 years by Hani people who migrated here from further to the north-west, the irrigated terraces support paddy fields overlooking narrow valleys. In some places there are as many as 3,000 terraces between the lower edges of the forest and the valley floor.

Responding to the difficulties and opportunities of their environment of high mountains, narrow valleys criss-crossed by ravines, extremely high rainfall (around 1400mm) and sub-tropical valley climate, the Hani people have created out of dense forest an extraordinarily complex system of irrigated rice terraces that flows around the contours of the mountains.

The property extends across an area of some 1,000 square kilometres. Three areas of terraces, Bada, Duoyishu and Laohuzui, within three river basins, Malizhai, Dawazhe and Amengkong-Geta, reflect differing underlying geological characteristics. The gradient of the terraces in Bada is gentle, in Douyishu steeper, and in Laohuzui very steep.

The landscape reflects an integrated four-fold system of forests, water supply, terraces and houses. The mountain top forests are the lifeblood of the terraces in capturing and sustaining the water needed for the irrigation. There are four types of forests, the ancient 'water recharge' forest, sacred forest, consolidation forests, and village forests for the provision of timber for building, food and firewood. The sacred forests still have strong connotations. Above the village are places for the Village God "Angma" (the soul of the village) and for the Land Protection God "Misong", where villagers pray for peace, health and prosperity.

Clefts in the rocks channel the rain, and sandstone beneath the granite mountains traps the water and then later releases it as springs. A complex system of channels has been developed to spread this water around the terraces in and between different valleys. Four trunk canals and 392 branch ditches which in length total 445.83km are maintained communally.

Eighty-two relatively small villages with between 50 and 100 households are constructed above the terraces just below the mountain top forests. The traditional vernacular buildings have walls built of rammed earth, of adobe bricks or of earth and stone under a tall, hipped, roof thatched with straw that gives the houses a distinctive 'mushroom' shape. At least half the houses in the villages are mainly or partly of traditional materials.

Each household farms one or two 'plots' of the rice terraces. Red rice is produced on the basis of a complex and integrated farming and breeding system involving buffalos, cattle, ducks, fish and eels. This system is underpinned by long-standing traditional social and religious structures, based on symbiotic relationships between plants and animals that reinforce communal obligations and the sacredness of nature and reflect a duality of approach between the individual and the community, and between people and gods, one reinforcing the other.

The Honghe Hani rice terraces are an exceptional reflection of a resilient land management system that optimises social and environmental resources, demonstrates an extraordinary harmony between people and their environment in spiritual, ecological and visual terms, and is based on a spiritual respect for nature and respect for both the individual and the community, through a system of dual interdependence known as the 'Man-God Unity social system'.

Criterion (iii): The Honghe-Hani terraces are an outstanding reflection of elaborate and finely tuned agricultural, forestry and water distribution systems that are reinforced by long-standing and distinctive socio-economic-religious systems.

Red rice, the main crop of the terraces is farmed on the basis of a complex, integrated farming and breeding system within which ducks fertilise the young rice plants, while chickens and pigs contribute fertiliser to more mature plants, water buffalo slough the fields for the next year's planting and snails growing in the water of the terraces consume various pests. The rice growing process is sustained by elaborate socio-economic-religious systems that strengthen peoples' relationship with the environment, through obligations to both their own lands and to the wider community, and affirm the sacredness of nature. This system of dual interdependence known as the 'Man-God Unity social system' and its physical manifestation in the shape of the terraces together form an exceptional still living cultural tradition.

Criterion (v): The Honghe Hani Rice terraced landscape reflects in an exceptional way a specific interaction with the environment mediated by integrated farming and water management systems, and underpinned by socio-economic-religious systems that express the dual relationship between people and gods and between individuals and community, a system that has persisted for at least a millennium, as can be shown by extensive archival sources.

Integrity

The overall boundary encompasses a large area within which the overall terraced system can be appreciated and all its attributes, forests, water system, villages and terraces are present to a sufficient degree. None of the key physical attributes are under threat and the traditional farming system is currently robust and well

protected. The buffer zone protects the water-sheds and the visual setting and contains enough space to allow for coordinated social and economic development.

The terraces are said to have high resilience against climate change and drought – as has been demonstrated during the major drought of 2005. They are however vulnerable to landslides as on average the terraces are constructed on 25% slopes.

There is an overall vulnerability of the integrated farming and forestry system in relation to how far they are capable of providing an adequate living for farmers that will allow them to remain on the land. The overall farming system is also vulnerable to fluctuations in the price of red rice, but there are strategies in place to increase the price of organic agricultural products.

Currently there are no adverse impacts from tourism as this is only just beginning and some of the villages are currently off the tourist trails. But tourist numbers are increasing rapidly and it is acknowledged that the provision of tourism facilities and overall tourism management are challenges for the property in order that the villages are not overwhelmed by the more damaging impacts of tourism.

Authenticity

The terraced landscape has maintained its authenticity in relation to the traditional form of the landscape elements, continuity of landscape function, practices and traditional knowledge, and continuity of rituals, beliefs and customs.

An area where authenticity is or could be vulnerable is in the traditional materials for traditional houses, as these are said to be difficult to obtain. New materials in houses – such as concrete bricks that replace adobe or tiles that replace thatched roofs to – are beginning to have a marked impact on the overall image of villages in the landscape as the colour as well as the forms of the buildings are subject to change. There is a potential conflict between sustaining traditional houses and continuing to support traditional building materials and techniques and meeting modern aspirations for domestic spaces. In recent decades, extraneous architectural styles have entered into the villages, causing some negative effects.

Overall traditional farming practices are also vulnerable to increasing expectations amongst farmers which could draw them away from the valleys, and to the potential impact of tourism which currently does not have an overall defined strategy to ensure its sustainable development.

Management and protection requirements

The property is protected by law as a State Priority Protected Site designated by the State Council of China. The property was also designated in 2008 as a protected historic site by Yuanyang County People's government.

Along with all inscribed properties in China the property is protected within the *Measures for Conservation and Management of World Cultural Heritage Sites*, issued by the Ministry of Culture, and the supreme legislation issued by the national authority of China. This legal instrument, along with conservation and management plans, special local laws and regulations, and village rules, are combined to constitute a complete system for identification, conservation, management and monitoring of World Heritage sites. This means that these sites need to be managed in line with requirements of the Ministry of Culture.

The local government has issued the *Measures for Protection and Management of the Villages and Residences of the Cultural Landscape of Honghe Hani Rice Terraces* and *Guidelines for Conservation, Renovation and Environmental Treatment of Traditional Hani Residences in Honghe*. These two legal documents set out technical standards to be followed within all the villages to control development and construction activities. They cover the rice terraces, forests, irrigation systems, traditional villages and residences, and the traditional culture in the region. These measures are ways of delivering the obligations of the national protection for World Heritage. New construction projects within the property will be strictly examined and controlled, by the provincial authority. The Guidelines were developed in association with School of Architecture, Tsinghua University. They stress the need to acknowledge that buildings in different villages and areas have their own characteristics that need to be respected. It is anticipated that buildings that are inconsistent with traditional style but not to the extent seriously threatening the overall landscape will be gradually improved in accordance with these guidelines. Each of the villages is under the administration of village committees. The Tusi Native Chieftain System is still an important part of the terrace culture in Ailao Mountain. Two Tusi governments, namely, Mengnong Government and Zongwazhai Government in Yuanyang County, are involved in the planned area. As the basic unit of Hani People society, each village has developed a series of customary laws for managing natural resources and solving the inner discords of villagers and exterior grievances against other villages.

A Management Plan has been written for the property. After legal approval, it will be accepted as a legal and technical document for the protection, conservation and management of the property and included in Honghe Hani & Yi Autonomous Prefecture's *Urban System Plan, Master Plan for Towns* and related plans of local social and economic development. The plan runs from 2011 to 2030, and is divided into short term, from 2011 to 2012, medium term from 2013 to 2020, and long term from 2021 to 2030, aims. The Hani Rice Terraces Cultural Heritage Protection and Development Management Committee is responsible for implementing the Plan. This includes members from many departments of the Honghe Prefecture. The Hani Terraces Administration of Honghe Prefecture set up in 2007 with 12 staff

members services the Committee, oversees the day-to-day administration carried out at County level and liaises with local stakeholders.

Local authorities are formulating specific plans for tourism management and development of the region and these plans are expected to be completed by the end of 2013. A major information centre is being developed at Xinjie Town that will focus on the terraces and their social and religious structures and this will be completed by 2020.

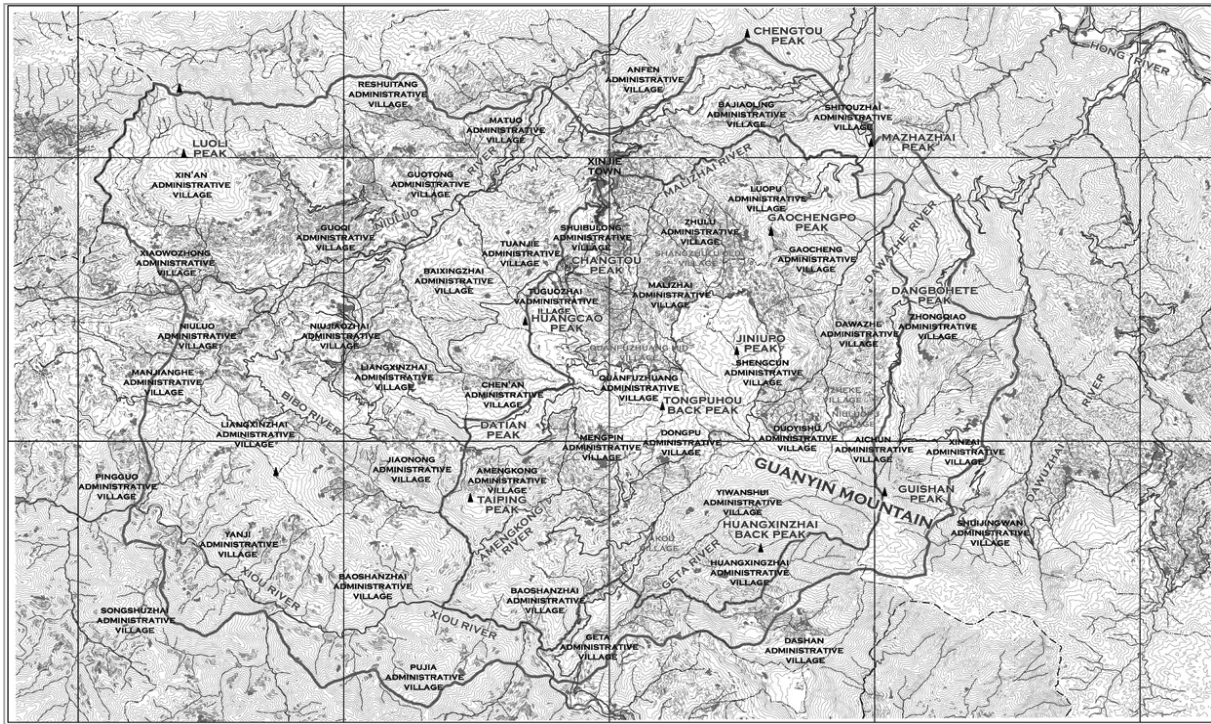
So as to ensure there is a clear understanding of what is being sustained and how tourists can support the overall management process. it would be desirable if the Management Plan could be supported by a detailed Sustainable Eco-Tourism Strategy for the property and its buffer zone and by an Interpretation Strategy that allows understanding of the complex farming and water management systems and the distinctive social-economic and religious systems of the Hani communities.

Additional recommendations

ICOMOS further recommends that the State Party give consideration to the following:

- Putting in place a sustainable eco-tourism strategy for the property and its buffer zone;
- Providing an interpretation strategy that allows understanding of the complex farming and water management systems and the distinctive social-economic and religious systems of the Hani communities;
- Submitting, by 1 February 2015, a report to the World Heritage Centre outlining progress made in the implementation of the demands and abovementioned recommendations to be examined by the World Heritage Committee at its 39th session in 2015, given the considerable pressure that the rice terraces could face from increased tourism, if the property is inscribed.

ICOMOS further recommends that consideration is given to arranging an international workshop on the management of extensive terraced landscapes so that the work done on putting in place sustainable management of the Hani Honghe terraces might be shared with other properties in Asia that face similar challenges.



Map showing the boundaries of the nominated property



View of the terraces



Forest in Aicun village



Irrigation system



View of Hani village and houses