

ASIA / PACIFIC

CHINA DANXIA

CHINA



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# WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

## CHINA DANXIA (CHINA) - ID N° 1335

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### 1. DOCUMENTATION

- i) **Date nomination received by IUCN:** 15<sup>th</sup> March 2009
- ii) **Additional information requested:** IUCN requested supplementary information after the mission regarding a range of issues related to the scientific framework for China Danxia, site selection, comparative analysis, integrity, protection and management of the property and the protection of wider catchments. A response to all questions raised was provided by the State Party.
- iii) **UNEP-WCMC data sheet:** Sourced from original nomination.
- iv) **Additional literature consulted:** Engels, B., Ohnesorge and Burmester, A. (eds) (2009) **Nominations and Management of Serial Natural World Heritage Properties, Present situation, Challenges and Opportunities.** Federal Agency for Nature Conservation, Bonn; Guizhou Institute of Architectural Design (2008) **Chishui of China Danxia Management Plan.** Guizhou Tongh Co Ltd on Planning and Consultation, Chishui; Grimes, K., Wray, R., Spate, A. and Household, I. (2009) **Karst and Pseudokarst in Northern Australia.** draft report to the Commonwealth of Australia Department of Environment, Water, Heritage and the Arts; **Optimal Karst Management.** Hall; Lockwood, M., Worboys, G.L. and Kothari, A. (2006); **Protected Area Management, A Global Guide.** IUCN and Earthscan, London; Longhushan-Guifeng National Park Heritage Coordination Committee (2008) **Protection and Management Plan for Longhushan World Natural Heritage Nominated Site 2008-2012.** Longhushan-Guifeng National Park Yingtan City and Shangrao City Jiangxi Province; OCWHN [Office of China World Heritage Nomination] (2009) **Joint Management Plan of China Danxia.** Office of China Danxia World Heritage Nomination, Changsha City, China; Ro, L. and Chen, H. (2009a) **Guangdong, Management Planning.** Planning and Research Institute Sun Yat-sen University, Danxiashan National Park; The Administrative Committee of Langshan National Park (2008) **The Management Plan of Langshan Nominated Site.** Xinning County, Shaoyang City, Hunnan Province; The People's Government of Taining County (2009) **Taining World Natural Heritage Nominated Site Protection and Management Plan.** Taining County, Sanming City, Fujian Province; Young, R.W., Wray, R.A.L. and Young, A.R.M. (2009) **Sandstone Landforms;** Cambridge University Press, Melbourne.
- v) **Consultations:** 15 external reviewers. The mission met a wide range of officials, community representatives, experts and from the State Party and the six provinces whose territory is included in the nomination, together with representatives of stakeholders and local communities.
- vi) **Field visit:** Graeme Worboys and Kyung Sik Woo, September-October 2009.
- vii) **Date of IUCN approval of this report:** 30<sup>th</sup> April 2010.

### 2. SUMMARY OF NATURAL VALUES

The nominated property, China Danxia is a serial World Heritage nomination comprising six areas found in the sub-tropical zone of SW China. The six areas are located in six different provinces within a c.1700 km crescent shaped arc from Chishui (Guizhou Province) in the west to Jiangliangshan (Zhejiang Province) in the east. Three of these areas consist of a single component with a single buffer zone, and three consist of two component parts with a single shared buffer zone. The total area of the nominated property is 82,151 ha, and additional 136,206 ha is included in the buffer

zones. Table 1 summarises the names and sizes of the six areas, the component parts and buffer zones, and also provides an indicative statement for lands which are either national park or national nature reserve.

China Danxia is stated as the name given in China to landscapes developed on continental red terrigenous sedimentary beds influenced by endogenous forces (including uplift) and exogenous forces (including weathering and erosion). It is characterised by spectacular red cliffs and a range of erosional landforms, including dramatic natural pillars, towers, ravines, valleys and waterfalls. The

**Table 1:** Areas, component parts and buffer zones of the nominated property.

Area	Area (ha)	Status	Buffer zone (ha)	Buffer zone status
Chishui	27,364	Two component parts: 1) part of Chishui National Park; and, 2) part of Chishui Alsophila National Nature Reserve; and, part of Xishui Central Subtropical Evergreen-Broadleaved Forest National Nature Reserve.	44,814	The buffer zone interconnects the two components 1) State land (the largest category); 2) Xishui Central Subtropical Evergreen-broadleaved Forest National Nature Reserve; 3) Chishui Alsophila National Nature Reserve; and 4) Chishui National Park.
Taining	11,087	Two component parts: 1) northern part of Taining National Park plus Geopark lands and 2) part of the southern part of Taining National Park plus National Forest Park land.	12,401	The buffer zone interconnects the two components and comprises parts of Taining National Park and National Forest Park Lands and Global Geopark lands.
Langshan	6,600	Predominantly within Langshan National Park, with some parts in State land.	6,200	The buffer zone is found within parts of Langshan National Park and State land.
Danxiashan	16,800	Located entirely within Danxiashan National Park	12,400	The buffer zone is located entirely within Danxiashan National Park.
Longhushan	19,690	Two component parts: Longhushan Section and Guifeng Section, both are within Longhushan-Guifeng National Park.	59,820	The buffer zone interconnects the two nominated areas and comprises part of Guifeng National Park, part Geopark Land and State land.
Jianglangshan	610	Recognised as Jianglangshan Scenic Spot.	571	The buffer zone surrounds the nominated area. Its status is assumed to be part of the Jianglangshan Scenic Spot.
<b>Total</b>	<b>82,151</b>		<b>136,206</b>	

process of its development is characterised by a particular rock sequence, tectonic background, climatic conditions, erosional processes and landforms and these processes have been presented as an interim model.

The geographical location of the Chishui area belongs to a transition zone between the Sichuan Basin and the Yungui Plateau, while the other areas are all located in the Jiangnan hill region of South China, distributed on both sides along the main ridge of Nanling Mountain and Mt. Wuyishan. All of these mountains are within an uplift zone which has been active since the Cenozoic, and this dynamic tectonic environment is a key factor in Danxia development. The nominated areas are all located on the South China plate. During the Middle Jurassic to Early Cretaceous extension in the southern part of the South China plate formed a series of extension fault basins allowing deposition of thick continental sequences of alluvial, fluvial and lacustrine sediments. The thickness and uniformity of the terrestrial basin sediments was a key factor for Danxia formation processes. In addition, due to the arid to semiarid Cretaceous climate in China, most of the sediments are red in colour. With the onset of the Himalayan mountain forming movements in

the early Neogene, the red bed basins experienced large scale and differential uplift. Climatic factors (especially rainfall) is a further critical factor in Danxia formation, influenced by China's South Asia subtropical humid monsoon climate during the recent geological past. High seasonal variations in river flows are experienced during the summer monsoon rainy seasons. The Chishui, Langshan and Longhushan Danxia sites are within the Yangtze river catchment, while Danxiashan, Taining and Jianglangshan sites belong to the Zhuajiang, Minjiang and Qiantangjiang river catchments.

Due to the combined endogenic (tectonic uplift) and exogenic (climatic, erosion, weathering) forces, and other factors the Danxia landforms have been developed in red sedimentary sequences continuously from the Neogene until the present. The six areas included in the nomination are stated in the nomination to represent the best examples of "least eroded" to "most eroded" Danxia landforms, providing a range of different aspects of the phenomenon, illustrating both the range of landforms in relation to the forces and processes that formed them. These sites have been classified in the nomination from "young" through "mature" to "old age". China Danxia is also noted as a natural

aesthetic landscape comprising red rocks, green vegetation, blue water and white clouds, whilst a range of cultural aesthetic associations are also noted.

The rugged landscapes in the nominated property has helped to conserve sub-tropical broad leaved evergreen forests and these forests are found within all six serial sites. A range of important micro-habitats are also found. The nature of the Danxia landforms lead to intensive fragmentation and isolation of ravine and mountain top habitats. The natural habitats host many species of flora and fauna including endemic, endangered and threatened species of conservation significance. They also include old and undisturbed vegetation communities. Species recorded within the property, and its buffer zone, are stated to include 5,772 higher plants (belonging to 293 families and 1,271 genera); 836 vertebrates, (129 families and 37 orders) and 3,073 insects. Around 400 species in the property are stated to be rare or threatened at the national or international level.

### 3. COMPARISON WITH OTHER AREAS

The nomination contains a comparative analysis which has been reviewed by IUCN, and has also been considered further by the State Party during the evaluation process. The process of developing a satisfactory comparative analysis is somewhat difficult as there is still considerable debate about the science of Danxia and even how the phenomenon is defined and described. A major conference on this subject was held in China in 2009, but after the nomination had been submitted.

IUCN requested supplementary information from the State Party to clarify these issues. In a detailed set of statements this information notes that Danxia refers to geological, biological and aesthetic factors, and that so far there is not a well recognised international geological and geomorphological definition of Danxia, the State Party suggests that it refers to “the physical landscape developed from continental (terrestrial) reddish conglomerate and sandstone (also known as red-beds)”. Additional definitions are provided, which also emphasise the importance of uplift and the influence of warm, humid monsoon climate. A series of quite subtle discussions are included regarding frames of reference for comparison, and a number of difficulties are noted re both the lack of adequate global knowledge, and it is said that “although the comparative analysis may not be definitive, there is sufficient information to know that [China Danxia] is a remarkable and unique geomorphological system that is of special note because it shows through a sequence of separate sites all of the variations of its formation”. The statement thus makes a virtue of having the different parts of the series telling a

whole story, and a parallel is drawn with the South China Karst in the area being a superlative example of how landscapes develop in red beds. It also emphasizes that China Danxia is distinguished by humidity from “dry Danxia” developed in deserts. A new conceptual model is proposed in the comparative analysis, which has been put forward for peer review, and appears to have a reasonable level of support. The six selected areas are considered representative of different stages in the evolution of the landform, and a useful diagram is provided to explain the connection between the different components.

IUCN considers it problematic that China Danxia does not yet have an internationally accepted definition and that the State Party considers even the revised comparative analysis is not definitive. IUCN also notes that developing conceptual models for serial nominations after their nomination, rather than prior to it, is a problematic practice. It makes it very difficult to both achieve overall comparison of the resulting property, and also the selection of appropriate component parts. The presentation of the Danxia phenomenon is more fully explained in the supplementary information and the conceptual model that has been developed may well lead to a better comprehension of the phenomenon, but neither is fully agreed or reviewed in international literature, and since this information was offered at a late stage in the evaluation, it has not been fully validated. Although IUCN accepts the understanding of terms in the model, it notes there are some shortcomings. For instance it does not seem relevant whether the rocks are terrestrial or marine in origin, but rather that they are relatively unresistant and unfolded. The statement that Danxia is unique is not fully justified, as for example the “ruined cities” of Northern Australia and butte landscapes of the Western USA also display features that are comparable with China Danxia. A stated claim that there being nowhere else that tells the story of tectonism and denudation is not accepted. Review comments suggest that, whilst there is considerable and growing interest in China Danxia, it is difficult to substantiate a case that the evolution of China Danxia landforms is any different to general evolution of sandstone/conglomerate landforms elsewhere in the world. IUCN notes that the International Association of Geomorphologists has recently established an expert working group on China Danxia, which provides the opportunity to consider further the appropriate scientific framework for recognising this phenomenon.

In aesthetic terms it is considered that China Danxia landforms are often arresting, inspiring and beautiful, but so are many sandstone landscapes and landforms in the world. Kakadu (Australia) is considered as a comparator for Danxia as described under criterion (vii), but with a much more extensive area. It is also noted that there are far more

extensive and dramatic areas of arid sandstone landscapes in the world, such as Canyonlands National Park (USA). IUCN considers that the comparative analysis at present is unconvincing, fundamentally because the concept of “China Danxia” has not yet been satisfactorily defined.

A further problem that is raised in this process is the selection of the component parts for the property. IUCN also requested supplementary information on this process. The State Party notes that a number of key factors for site selection were specified, and that the nomination is specifically focused on humid Danxia. At first 15 sites were selected, this was reduced to 9 and then 6 which were considered the minimum number to tell the Danxia story. This selection took place amongst 780 reported Danxia areas in China. The nomination is stated to show the distinctive character of each component and the information includes detailed tables, which summarise the stated natural values for each component.

IUCN considers that the key factors used for site selection have been carefully developed, and the process to select the sites is clearly explained and has been challenging. Nevertheless, there are points of concern regarding the outcomes of this selection process. It is surprising that the six areas selected are in six different provinces, and there is a need to exclude the possibility of political overlay to site selection. Lithological differences are also noted as a source of variation in Danxia that may not have been fully accounted for in the selection. Review comments consider that some of the landscapes chosen do not fit the stated model. Based on the model, Taining better represents early stage Danxia than Chishui, which is an area of largely fine grained rocks. The difference between Langshan and Danxiashan is not compelling, and the description of these components is very similar. Jianglangshan does not fit the old stage landscape shown in the diagram and model, as it rises from a hilly pedestal, not a base-levelled plain. Conversely, there is a consensus amongst reviewers that amongst the selected areas Langshan and Danxiashan demonstrate most clearly the features that are described as typical of China Danxia. Taining is also considered to be an important example by the majority of reviewers, whereas for the reasons mentioned above there is not consensus on the added value of the other components, or their coherence within the selected series.

Overall, there is considerable evidence from IUCN reviewers that there are significant natural values within the Danxia area that have sufficient specificity to have the potential to demonstrate Outstanding Universal Value in relation to earth heritage values. However, at this stage the nomination has not convincingly demonstrated

this, despite considerable discussion and invitation of supplementary information. There is a concern that the conceptual model developed after the submission of the nomination undermines rather than supports site selection.

IUCN carefully considered the biodiversity values included in the nomination, and in the wider region, in conjunction with UNEP-WCMC. IUCN notes that the nomination does not make a strong case for inscription under criterion (ix). The nominated components do not belong to Udvardy’s South Chinese Rainforest biogeographic province as claimed by the nomination although there might be some “azonal” subtropical rainforests in the valleys of the property; instead the component parts belong to the Chinese Subtropical Forest (3 component parts: Taining North and South, and Danxiashan) and Oriental Deciduous Forest provinces. Both these provinces are already well represented on the World Heritage List: Mount Emei, Sichuan Giant Panda Sanctuaries and South China Karst are in the Chinese Subtropical Forest province, while Huanglong, Jiuzhaigou, Mount Huangshan, Mount Sanqingshan, Mount Taishan, Mount Wuyi and Wulingyuan are all in the Oriental Deciduous Forest province. With the exception of a small part of Ha Long Bay, Viet Nam, the South Chinese Rainforest province is so far not represented on the World Heritage List.

The case for inscription under criterion (x) appears stronger, but only in relation to the total species numbers provided in the nomination, although these numbers have not been fully verified. In terms of threatened and endemic species, the nominated property does not stand out compared to other existing inscribed properties. The species numbers provided in the nomination are not only for the nine component parts but for a much larger area which includes, for example, the buffer zones to the property. The nominated property has few globally threatened plant and animal species. The species numbers provided in the nomination also indicate that the nominated property has far fewer endemic species than for example the Three Parallel Rivers of Yunnan. The nominated property has a similar number of endemic animals and only twice as many endemic plant species as Mount Sanqingshan, which is four times smaller, much poorer in overall species richness and has not been accepted under biodiversity criteria. Considering levels of endemism relative to richness, Mount Sanqingshan appears to have higher levels of endemism than the nominated property (16% vs. 10% endemism in plants). Far higher levels of endemism can also be found in the Central Highlands of Sri Lanka, another nomination currently under evaluation by IUCN. IUCN also notes that the model and methodology for selecting the components of the series did not consider biodiversity values explicitly, thus the confidence in this selection is not high in relation to biodiversity

criteria. The high species numbers indicated in the wider region might indicate potential to identify a differently configured property that could have a stronger claim for Outstanding Universal Value than the nominated property.

## 4. INTEGRITY, PROTECTION AND MANAGEMENT

### 4.1 Protection

The nominated property is state owned and its protected status varies between the six nominated areas: most have national park status, though land status also includes national nature reserve, national forest, geopark, scenic area and state land. As noted in Table 1, not all of the nominated sites have 100% protected area status. The State Party has advised that unprotected areas will be protected by the expansion of National Parks status during 2010, and in supplementary information advised on the establishment of an ecological forest reserve in Taining and the expansion of the national park at Langshan. The protected status of the Jianglangshan Scenic Spot is less clear and it is recommended that this site be formally recognised as a protected area.

IUCN considers that, whilst it could be further strengthened, the protected status of the property meets the requirements set out in the Operational Guidelines.

### 4.2 Boundaries

The boundaries of the six nominated sites and their associated buffer zones were adequately defined on maps as well as on-site. The State Party has gone to a great deal of trouble to achieve this outcome. The boundaries of the property itself appear to be adequate in relation to the nominated earth science and aesthetic values, however are not adequate in relation to biodiversity criteria. The smaller component parts of the property do not appear to provide adequate habitat to sustain viable populations of all their key species, whilst connectivity is absent between the component parts of the property.

Buffer zone boundaries are also clearly defined, but do not fully protect the larger catchments which influence the different components. This question was addressed in supplementary information provided by the State Party. Management of catchment scale impacts is noted by the State Party as a critical problem across five of the six components. Information is provided on each component regarding the so called "area of influence" which is either the whole catchment (if small) or a management part of a catchment (for larger catchments). IUCN considers that this

response is encouraging but notes the very large scale of challenge in fully addressing catchment scale threats. Smaller catchments should be included in revised buffer zones.

IUCN considers that the boundaries of the nominated property do not meet the requirements set out in the Operational Guidelines with regard to biodiversity values, but would be adequate for protection of aesthetic and earth science values.

### 4.3 Management

Planning for the serial property is advanced. An integrated management plan has been prepared for the property as a whole, as well as individual plans for the six areas in the series. These plans identify a clear rationale for management and mechanisms for the protection of the potential World Heritage assets. For staffing and budgets, satisfactory on-ground management appears to have been established based on the briefings and information provided. Governance mechanisms for integrated management of the six areas have been identified, and clear accountabilities defined. Governance arrangements are in place and operating for individual sites. Monitoring for management has been introduced including visitor use, fire, water quality and weather. Cooperative arrangements with research organisations are in place to advise on the natural values of the property. There is good provision of staffing and management budgets.

IUCN was informed that more than USD200 million has been spent by the State Party, including the provincial authorities, over the past three years in preparing for the World Heritage nomination. Investments have been made in all nominated areas and include new visitor centres and administration buildings have been constructed, monitoring systems, visitor access and education facilities installed, infrastructure improvements, eyesore removal and a major public relations campaign regarding the nomination. Local communities are aware of the World Heritage nomination, and six interviews were conducted with villagers and locals during the IUCN evaluation. All stakeholders interviewed were very supportive of the World Heritage proposal.

Research and adaptive management techniques, including baseline condition assessment and monitoring of change for species are critical to track and avoid any possible adverse impacts from tourism and human use. Other management techniques such as environmental impact assessment; restoration management; and, management effectiveness evaluation need to be more actively and routinely used.

Active conservation management of the buffer zones and wider catchments is critical for the

protection of the property, especially its biodiversity values, viewsheds and the health of the wider ecosystems that support the property.

IUCN considers that the management of the property meets the requirements set out in the Operational Guidelines.

#### 4.4 Threats

IUCN sought additional information regarding the threats to the integrity of the property. The resulting information provided by the State Party gives information for each component which are short but specific and indicate areas of intended improvement. The response indicates a mature understanding of conservation issues and requirements, and expands greatly on the information provided in the nomination. The State Party notes a number of points of overall concern mentioned in a number of the components of the property, which relate to intense and growing tourism pressure/overcrowding and deforestation around settled areas. Overall the level of management commitment appears adequate to the main challenges that could face the property, however continued vigilance and the maintenance of levels of staff and resources, up-to-date management plans and effective monitoring programmes are all essential. However, IUCN notes that one component, Longhushan, has a high population density and this component is much more modified than the other components. IUCN does not consider that this component of the property currently meets the expectations of integrity for a natural property.

Tourism is considered to be the greatest threat to the nominated property. This threat arises from possible tourism infrastructure development as well as from visitor overuse impacting landscape, aesthetics and biodiversity conservation values. As all of the six areas are relatively small, their natural values could easily be impacted by a growth in tourism use, and possible World Heritage status will potentially exacerbate this threat. The integrity of the property is also threatened by pollution of water courses, and thus integrity is dependent on the protection of streams and rivers with headwaters external to buffer zone areas. Effective implementation of protective measures at the catchment scale is likely to pose a major long-term challenge, and additional investments will be needed to help achieve responsible "off-site" protection for these upstream catchments.

In summary, IUCN considers that the property does not meet the integrity requirements set out in the Operational Guidelines.

## 5. ADDITIONAL COMMENTS

### 5.1 Justification for Serial Approach

When IUCN evaluates the nomination of a serial property it asks the following questions:

- a) What is the justification for the serial approach?

In principle, a serial nomination can be justified if no single area can recognize the full diversity of a phenomenon such as China Danxia. The successful nomination of the South China Karst provides an analogy to this approach. However, given the weaknesses in the current understanding of China Danxia, and the related comparative analysis, a full justification of the serial approach has not yet been established.

From a biodiversity perspective, the serial approach to this nomination does not appear to be justified, mainly as biodiversity factors were not an overt part of the selection of the components of the series, and the small size of many of the component parts casts doubt on the biological and ecological integrity and viability of the property.

- b) Are the separate component parts of the nominated property functionally linked in relation to the requirements of the Operational Guidelines?

Functional linkages between the nominated areas are related to their relationships in relation to the driving endogenetic and exogenetic factors that have led to the creation of Danxia landforms, however as noted above it is not clear that the component parts included in the nomination are all clearly linked to an established model for China Danxia, and some appear to not fit well with the model that has been proposed.

- c) Is there an effective overall management framework for all the component parts of the nominated property?

An integrated management framework has been developed to achieve the effective management of the six geographically disjunct serial sites.

### 5.2 Comments of ICOMOS

ICOMOS volunteered comments to IUCN on the cultural values of the property. ICOMOS noted that the justification put forward under criterion (vii) is very similar to the justification accepted for criterion (vi) for Mount Wutai, inscribed on the World Heritage List in 2009. ICOMOS notes the

care with which the State Party has integrated the cultural values of aesthetics and coexistence of humanity and nature in China Danxia into the nomination document. ICOMOS considers that the proposed justification for criterion (vii) in relation to Longhushan, in particular, goes far beyond the recognised use of this criterion for natural areas that are perceived to have natural beauty. The justification put forward is for cultural associations linked to religion and for cultural interventions in terms of rock caves, inscription etc. which more normally would be associated with criterion (vi) and other cultural criteria.

## 6. APPLICATION OF CRITERIA

China Danxia has been nominated under criteria (vii), (viii), (ix) and (x).

### **Criterion (vii): Superlative natural phenomena or natural beauty and aesthetic importance**

China Danxia is stated to demonstrate a consistent combination of natural features, which include prominent, sculpted and varied red Danxia landforms, sub-tropical broad leaved forests, blue waters of streams and the white of low clouds commonly found in the high humidity environment. Whilst individually a number of the component parts are highly attractive landscapes, and dramatic landforms, this is also true of a number of other sandstone landscapes globally. Comparative analysis has not provided compelling evidence to support a claim for outstanding universal value, and some stated human and cultural links are more relevant to consideration under cultural criteria. Not all of the components meet the integrity requirements expected for this criterion.

IUCN considers that the series as nominated does not meet this criterion, however it considers that there may be potential for a viable serial nomination of China Danxia, including some of the component in the present series under this criterion.

### **Criterion (viii): Earth's history and geological features**

The phenomenon of China Danxia may have sufficient specificity to be recognised as of Outstanding Universal Value in relation to earth science values, but at present there is not a fully agreed definition for this phenomenon, and thus no adequate and definitive comparative analysis has been able to be completed. There are many sandstone landscapes that are of equivalent importance to the components included in the nominated property, including areas that are more extensive and natural, although mostly in arid areas. Whilst some components are accepted as classic examples of the geomorphology of the

Danxia region, others do not appear to fit in the conceptual model proposed in the nomination, thus the nominated series does not appear to correspond to integrity requirements in the Operational Guidelines.

IUCN considers that the series as nominated does not meet this criterion, however it considers that there may be potential for a viable serial nomination of China Danxia, including some of the component in the present series under this criterion.

### **Criterion (ix): Ecological processes**

China Danxia includes nationally significant conservation samples of the sub tropical broadleaved evergreen forests of south China. The main biogeographic provinces represented in the property are already recognised on the World Heritage List, and the small size of the component parts and the wide separation between them does not correspond to the expected integrity requirements for a property recognised for ecosystem values. Ecosystem values were not a primary basis for the selection of the components of the series.

IUCN considers that the nominated property does not meet this criterion.

### **Criteria (x): Biodiversity and threatened species**

Whilst the high species numbers indicated in the wider region indicate important biodiversity values in this region of China, the nominated property does not stand out compared to existing inscribed properties. The species and subspecies numbers provided in the nomination are not only for the nine component parts but for a much larger area which includes, for example, the buffer zones to the property. The biodiversity values included within the selected components are not outstanding compared to the values of already listed World Heritage properties. The model and methodology for selecting the components of the series did not consider biodiversity values explicitly, thus the selection of components does not seem secure in relation to this criterion, and a number of the components are too small to meet the integrity requirements for biodiversity values.

IUCN considers that the nominated property does not meet this criterion.



## 7. RECOMMENDATION

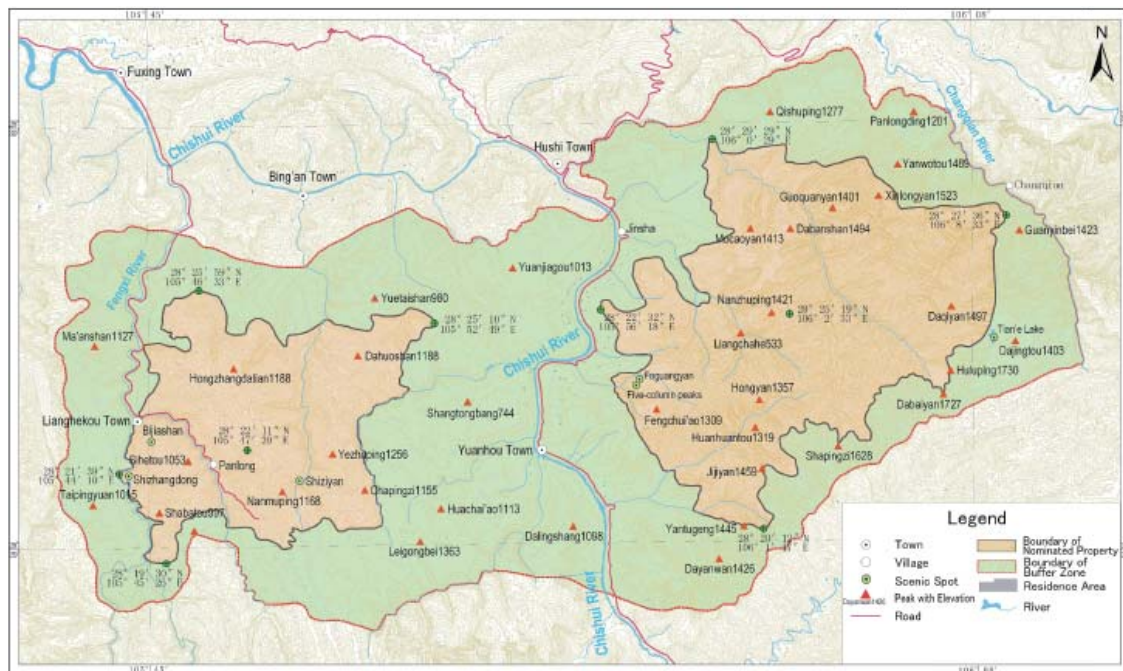
The World Heritage Committee.

1. Having examined Documents **WHC-10/34.COM/8B** and **WHC-10/34.COM/INF 8B2**,
2. Defers the nomination of **China Danxia, China** under natural criteria,
3. Invites the State Party, in reconsidering this nomination, to give particular consideration to refocusing the nomination on criteria **(vii)** and **(viii)**, and before a resubmission to ensure there is an agreed scientific framework for the phenomenon of Danxia landscapes recognised at the international level, which can support a rigorous global comparative analysis of any revised nomination;
4. Recommends the State Party, in any revised nomination, to include a coherent selection of the minimum number of the most significant components to convey the values of China Danxia, to include a clear justification for the inclusion of each selected component part within the property and to ensure that all selected component parts meet integrity requirements for natural World Heritage properties, and that they and the series as a whole are effectively protected and managed, and supported by both adequate and effective buffer zones and the protection of wider catchment areas;
5. Further recommends the State Party to invite IUCN and the International Association of Geomorphologists to contribute to the reconsideration of the nomination, including in relation to the above recommendations;
6. Also recommends the State Party to further consider the representation, protection and effective management of the important biodiversity values of the area, in conjunction with the above process and also through other international mechanisms.

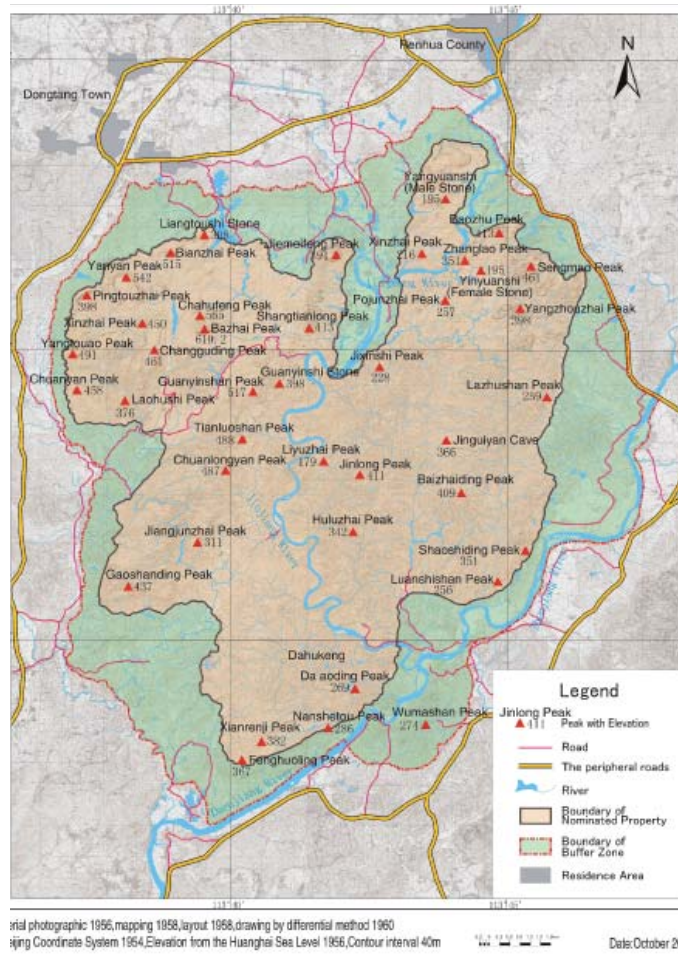
Map 1: Location of the nominated serial property



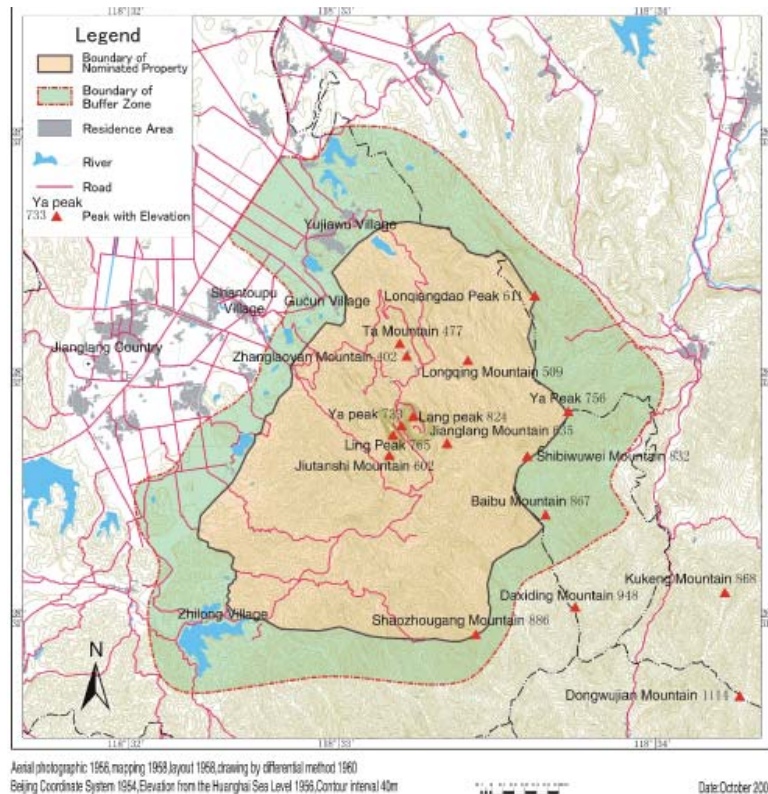
Map 2: Detailed map of Chishui Guizhou nominated component



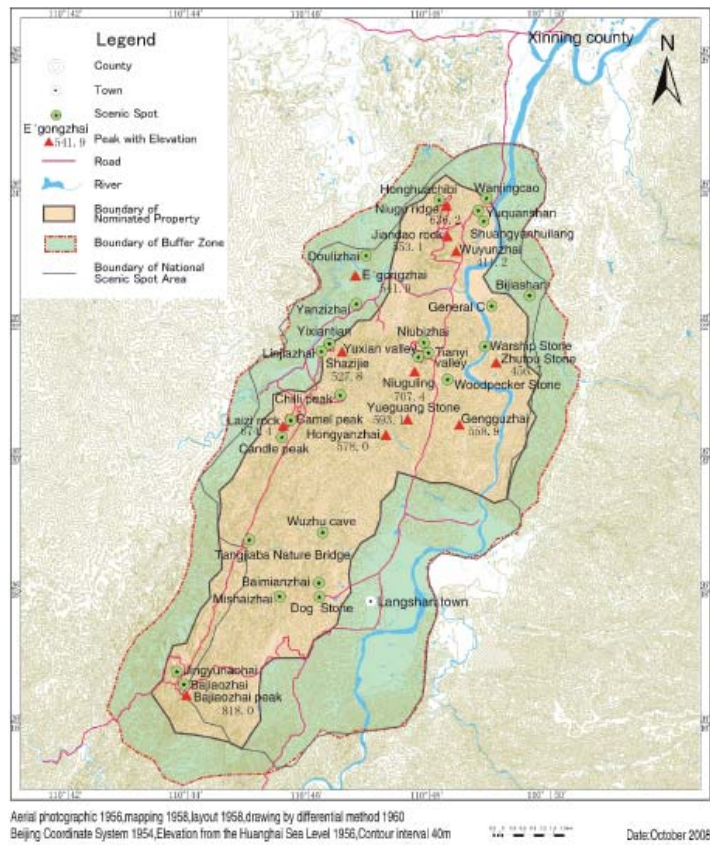
**Map 3:** Detailed map of Danxiashan Guangdong nominated component



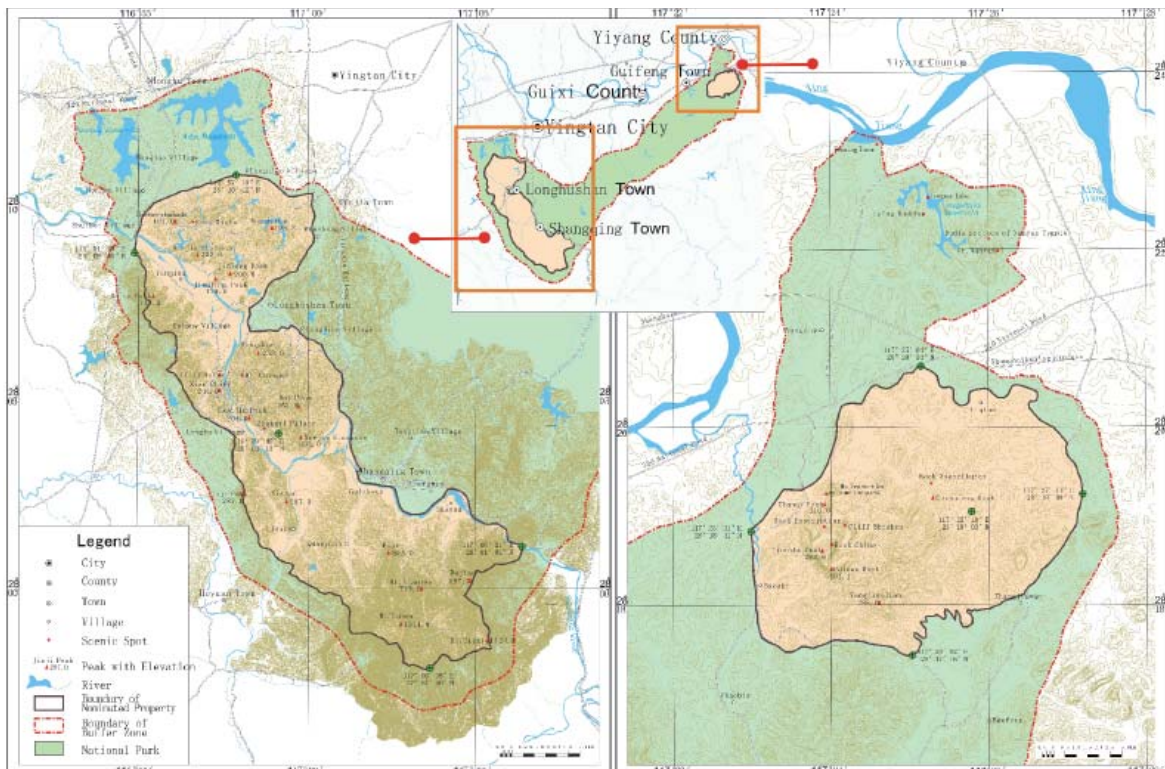
**Map 4:** Detailed map of Jianglangshan Zhejiang nominated component



**Map 5:** Detailed map of Langshan Hunan nominated component



**Map 6:** Detailed map of Longhushan Janxi nominated component



**Map 7:** Detailed map of Taining Fujian nominated component



Aerial photographic 1956, mapping 1958, layout 1958, drawing by differential method 1960  
 Beijing Coordinate System 1954, Elevation from the Huanghai Sea Level 1956, Contour interval 40m

0 0.5 1.0 1.5 2.0 2.5 3.0km

Date: October 2001