Designation date: 07/12/2004 Ramsar Site no. 1437

Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 version

Available for download from http://www.ramsar.org/ris/key ris index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

- 1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands.* Compilers are strongly advised to read this guidance before filling in the RIS.
- 2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.
- 3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:	FOR OFFICE USE ONL	Y.
Name: Tingfa Huang Address: Lashi Township, Nassi Autonomous County 674107, Lijiang City, Yunnan Province	DD MM YY	
Tel: 86-888-5441106 Fax: 86-888-5441106	Designation date	Site Reference Number
E-mail: lashinature@163.com		
2. Date this sheet was completed/updated:		
March 01, 2011		
3. Country:		
The People's Republic of China		
4. Name of the Ramsar site:		
The precise name of the designated site in one of the three official lang. Alternative names, including in local language(s), should be given in pare		
Lashihai Wetland		
N		
5. Designation of new Ramsar site or update of existing	g site:	

b) Updated information on an existing Ramsar site

✓

6. For RIS updates only, changes to the site since its designation or earlier update:											
a) Site boundary and area											
The Ramsar site boundary and site area are unchanged: ✓											
or If the site boundary has changed: i) the boundary has been delineated more accurately ii) the boundary has been extended □; or iii) the boundary has been restricted** □											
and/or											
If the site area has changed: i) the area has been measured more accurately ii) the area has been extended □; or iii) the area has been reduced*** □											
** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.											
b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:											
Compared with the previous RIS, the ecological character and application of the Criteria of the Ramsar site remain unchanged.											
7. Map of site: Refer to Annex III of the Explanatory Note and Guidelines, for detailed guidance on provision of suitable maps, including digital maps.											
a) A map of the site, with clearly delineated boundaries, is included as: i) a hard copy (required for inclusion of site in the Ramsar List): □;											

iii) a GIS file providing geo-referenced site boundary vectors and attribute tables \square .

ii) an electronic format (e.g. a JPEG or ArcView image) ☑;

b) Describe briefly the type of boundary delineation applied:
e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

This Ramsar site is located within Lashihai Plateau Wetland Provincial Nature Reserve and has roughly the same boundary with the Lashihai sub-area of the reserve.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

This Ramsar site is composed of 3 separate parts.

The North part:

Center: 26°58′52″N, 100°10′3″E

Extent: 26°57'51" -26°59'49"N, 100°9'11"-100°10'57"E

The Central part:

Center: 26°53′48″N, 100°8′6″E

Extent: 26°51'50"N-26°56'8"N, 100°6'34"-100°9'46"E

The South part:

Center: 26°45′19″N, 100°6′24″E

Extent: 26°44'34"-26°46'11"N, 100°5'25"-100°7'15"E

9. General location:

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town

Lashihai Wetland is located in the southwest of China. It belongs to Yulong Nassi Autonomous County in Lijiang City in the northwest of Yunnan Province. It is about 8 km away from the Yulong Nassi Autonomous County, northwest to the county capital.

10. Elevation: (in metres: average and/or maximum & minimum)

Average: 2,700 m;

Maximun: elevation: 3,100 m; Minimum: 2,440 m.

11. Area: (in hectares)

Total area: 3,560 ha.

North part: 687ha (with the main water body of 50 ha); Central part: 2,431 ha (with the main water body of 901 ha); South part: 442 ha (with the main water body of 93ha).

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Lashihai Wetland is located in the alpine valley area of the Hengduan Mountains, the upstream Yangtze River. It has a topography and climate with low-latitude plateau characteristics. This Ramsar site is a typical plateau wetland that composed of lakes, swamps and surrounding forests. This Ramsar site is composed of 3 separate parts, i.e., the north, central and south part. Each part include the main water body and surrounding natural ecosystems. The central part encompassing the Lashihai Lake is the main body of this site. The ecosystems are possessed of high integrity and rich biodiversity. Lashihai Wetland is an important site providing migratory birds with food supply. Every year, more than 100,000 waterfowls can be observed in this site. This Ramsar site preserves various wildlife under national Class-I and Class-II protection (e.g. Mergus squamatus, Ciconia nigra, Grus nigricollis, Grus Grus and Cygnus Cygnus), as well as the plateau wetland ecosystems.

13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the Explanatory Notes and Guidelines for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 •	2 •	3 •	4 •	5 •	6 •	7	8 • 9
V	\overline{A}	V	\overline{A}	V			

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criterion 1:

This Ramsar site is a representative of low-latitude plateau wetland in the Szechwan Highlands Biogeographic Province, Palaearcitc Realm. It is also a plateau wetland in the headstream regions of the Yangtze River. It plays a key role in hydrological regulation of Yangtze River drainage basin and biodiversity conservation.

Criterion 2:

Species Name	English Name	IUCN Category	CMS Appendix	CITES Appendix	National Protection Class	
		Birds				
Pseudibis davisoni	White- shouldered Ibis	CR	-	-	II	
Mergus squamatus Scaly-sided Merganser		EN	II	-	I	
Ciconia boyciana	Oriental Stork	EN	I	I	I	
Aythya baeri	Baer's Pochard	CR	II			
Grus nigricollis	Black-necked Crane	VU	I/II	I/II	I	
Grus monacha	Hooded Crane	VU	II	I/II	I	
		Plants				
Picea brachytyla var. complanat	-	VU	-	-	II	

Criterion 3:

This Ramsar site is situated in the Szechwan Highlands Biogeographic Province of Palaearcitc Realm, which is one of the major biodiversity hotspots of East Asia. There are 150 vascular plant species, 225 bird species in 130 genera and 44 families (including 89 waterfowl species), 14 amphibian species in 11 genera and 8 families, 17 reptile species in 13 genera and 4 families, and 25 fish species in 21 genera and 10 families.

Criterion 4:

This Ramsar site is located in the west flyway of migratory birds in China. It is the wintering site and stopover of many rare and threatened migratory waterbird species, such as *Grus nigricollis*,

Ciconia nigra, Mergus squamatus, Cygnus cygnus, Grus grus, Anas crecca, Fulica atra and Aythya fuligula. there are over 40 pairs of Little Grebe (<u>Tachybaptus ruficollis</u>) breeding in this site.

Criterion 5:

According to the observation records of waterfowls, there were up to 100,000 individuals in 2008, 150,000 individuals in 2009 and 110,000 individuals in 2010.

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

Mixed Mountain and Highland Systems with Complex Zonation, Szechwan Highlands Biogeographic Province, Palaearcitc Realm

b) biogeographic regionalisation scheme (include reference citation):

A Classification of the Biogeographical Provinces of the World (Miklos D.F. Udvardy, 1975)

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Geology and Geomorphology: This Ramsar site is located in the Hengduan Mountains of Qinghai-Tibet Plateau, and the geological structure is the rock-bend of West Yunnan Geosyncline with gravel, limestone and basalt distributed. The site is a plateau wetland in a rifted basin, with combined geomorphological characteristics of tectonism, glaciation and fluviation.

Origin: Naturally originated.

Hydrology: This Ramsar site belongs to the Jinsha River system. About 40 streams are gathering here. Precipitation and surface runoffs are the main water supply of this site. Lashihai Lake has an average annual water supply of 76.8×10^6 m³ and a volume of $3.8 - 18.4 \times 10^6$ m³. It has a mean annual water surface area of 933 ha.

Water quality: Water quality of the wetland in this site is good, at the Class-II of national standard. Mean pH: 7.8; total nitrogen: 0.4mg/L; total phosphorus: 0.01 mg/L; COD Mn: 4.1 mg/L.

Soil types: The major soil type is bog soil with neutral but a little alkalinity (pH 7.00-8.0). The organic matter content is rich and the nutrient content is high.

Water depth: The maximum water depth is 7.5 m and the mean depth is 4.55 m.

Water level: The perennial water level elevation is 2 440 m.

Climate: The climate in this Ramsar site belongs to warm temperate mountain climate. Its mean annual temperature is 11.8 °C. The hottest month is July with a mean temperature of 18 °C and the coldest month is January with a mean temperature of 3.9 °C. The frosty period is 160 days in a year. The wet and dry seasons are distinct. The dry season is from November to May and the wet season is from May to October. The precipitation mainly occurs during June-September. The mean annual humidity is 63%. The annual sunshine duration is around 2,500 to 2,750 hours and the annual precipitation is 900-1,200 mm. The annual evaporation is 1,200 mm.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

The Ramsar site belongs to the Jinsha River system with a catchment area of 265.6 km². The geological and geomorphological features are described as in Section 16. The main soil types are brown soil, dark brown soil, red soil, sub-alpine meadow soil, alluvial soil and paddy soil. The land use types are woodland, grassland and farmland. The climate of the catchment belongs to the cold temperate mountain climate, with an annual temperature of 8.8 °C. The mean temperature is 15.7 °C in the hottest month July and 1.4 °C in the coldest month January.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

This Ramsar site receives the runoffs from surrounding valley streams and precipitation, with lake water volume of over $3.8 \times 10^6 \,\mathrm{m}^3$. It makes great contributions to groundwater recharge, flood control and surface water resource supply. About $4-5 \times 10^4 \,\mathrm{m}^3$ sediments could be held by Lashihai lake every year, which ensures the hydrological safety of the upstream area of the Yangtze River.

19. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the Explanatory Notes & Guidelines.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N •
$$\boxed{\mathbf{Q}}$$
 • P • Q • R • Sp • Ss • Tp Ts • U • $\boxed{\mathbf{Va}}$ • Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

O (85%); Va (15%).

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

Lashihai Wetland is composed of lake and surrounding vegetations. There are 2 vegetation types (meadow vegetation and aquatic vegetation), including 6 subtypes and 11 formations. The main plant communities are *Juncus allioides* swamp meadow, *Ottelia acuminate* communities, *Acorus calamus* communities, *Azolla imbricata* communities, and *Salvinia natans* communities. Other dominant species of the aquatic vegetations include *Myriophyllum verticillatum*, *Schoenoplectus tabernaemontani*, *Potamogeton malaianus*, *Polygonum flaccidum* and *Acorus calamus*. The native plant communities around the lake are mainly composed of the forests dominated by *Castanopsis delavayi* and *Castanopsis diversifolia*.

The well conserved wetland provides habitats to threatened species, such as *Grus nigricollis*. There are numerous aquatic animals, such as snails, clams, shells fishes, which are foods of the waterbirds. This Ramsar site can serve as an important breeding and wintering site of many migratory birds.

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present* – these may be supplied as supplementary information to the RIS.

The flora in this Ramsar site belongs to the warm temperate mountain climate zone with the widespread communities such as *Phyllanthus oxyphyllus* community, *Schoenoplectus tabernaemontani* community, *Alectoria virens* community, and *Phragmites communis* community and north-temperate-zone communities, such as *Acorus calamus* community and *Myriophyllum spicatum* comunity. There are also East Asian type community of *Potamogeton tepperi* community, and *Ottelia acuminata* community which is endemic in Yunnan-Guizhou Plateau. There are 9 national key protected plant species, such as *Ottelia acuminate*, *Psammosilene tunicoides*, etc.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

Besides the bird species listed in Criterion 2 of Section 14, there are also 1 species under National Class-I Protection: Aquila chrysaetos, and 21 species under National Class-II Protection, such as Porzana bicolor, Aix galericulata, Ictinaetus malayensis, Elanus caeruleus, Milvus migrans, Accipiter gentilis, Buteo buteo, Circus cyaneus, Circus melanoleucos, Circus aeruginosus, Circus spilonotus, Falco tinnunculus, Bubo bubo, Asio flammeus, Ninox scutulata, Tyto capensis, Athene noctua, Chrysolophus amherstiae, Pucrasia macrolopha, Lophura nycthemera, Fulica atra.

23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

Lashihai Wetland is of high value of scientific research with its rich biodiversity; this Ramsar site is located in Yulong county of Lijiang city which is a Historical and Cultural Heritage and the scenery of this wetland is of high tourism value. The government and the public have been devoting many efforts in protecting the cultural heritage, which greatly benefit wetland conservation.

Nassi people living in this region are characterized by ancestor and nature worship. From ancient times, they treat cranes as the symbol of luck and happiness. Because of such traditional protection consciousness, animals such as cranes, storks and egrets were effectively protected in this Ramsar site and the local ecological balance was maintained. The Nassi culture plays an important role in wetland protection, especially the wildlife protection.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

No.

If Yes, tick the box \square and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

a) within the Ramsar site:

State ownership; Lashihai Plateau Wetland Provincial Nature Reserve has the tenure of land use.

b) in the surrounding area:

State ownership; the local government has the tenure of land use.

25. Current land (including water) use:

a) within the Ramsar site:

The main land use type within this Ramsar site is conservation. Also, there are some farmlands and human settlements covering a small proportion of this site. At present the Lashihai Lake is closed seasonally (April-June in each year) to better protect the wetland.

b) in the surroundings/catchment:

There are farmlands and mountainous forests in the surrounding area. These forests have been taken into the *Natural Forest Protection Project*.

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

a) within the Ramsar site:

The tourism activities produced some influences on the wetland. But the tourists are restricted within the experiment area of the reserve to minimize the negative impacts.

b) in the surrounding area:

Agriculture activities in the surrounding area might affect the water supply of the site, because the reduction of natural forests in the surrounding area may change surface runoffs into this site.

27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

Lashihai Plateau Wetland Provincial Nature Reserve was founded in 1998.

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

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c) Does an officially approved management plan exist; and is it being implemented?:

Master Plan for Yunnan Lijiang Lashihai Plateau Wetland Provincial Reserve (2009-2020)

d) Describe any other current management practices:

Since the reserve was established, the Management Office formulated clear management goals, covering various aspects as the follows: baseline resources inventory, formulation of the master plan, building institutional structures, as well as developing the management plan of the nature reserve. In accordance with the Management Plan, the nature reserve management office have implemented public awareness education of the relevant laws and regulations, including the *Forest Law, Pasture Law, Wildlife Protection Law, Nature Reserve Management Regulations, Wild Plant Protection Regulations*, etc. Meanwhile, a number of large scale activities have been conducted to track and punish illegal hunting and fishing. Management efforts and patrolling frequencies are intensified, which contributed to better regulated nature reserve management. The experts from Southwest Forestry University were retained to compile the master plan of the reserve in 2008-2009. The reserve had also finished the development of a GIS system and established a digital management platform.

The Reserve has carried out *Location Monitoring for Lashihai Wetland Ecological Environment* to monitor the ecological succession of plant communities in the site since 2010.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

None.

29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

With the financial support of The Nature Conservancy (TNC), the reserve conducted special investigations on aquatic plants, amphibian and reptile animals and planktons in this Ramsar site in 2005-2006, and completed a theme report. Since 2003, the reserve conducted the observations on wintering waterfowls and accumulated many years' observation data.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

The staffs of the reserve are regularly holding propaganda activities and emphasize the importance and necessity of protecting wildlife and wetland in the neighboring communities. Relevant laws and regulations, such as "Wildlife Protection Law", "Wild Plant Conservation Regulations", "Nature Reserve Regulations" and "Forest Law" were explained to the residents as well. Particularly, they explained the detailed aspects of Lashihai Provincial Natural Reserve Regulation Measures in relation to the compensation of harming wildlife, the forbiddance of summer fishing, and bird protection, which are closely related to the well being of the local people. Now, the public increased the awareness of the importance of protecting the nature reserve so that illegal hunting and wetland destruction are terminated. The Nature Conservancy (TNC, one of the largest NGOs of nature conservation in the world) is the major partner of the reserve, and it conducted environmental educational activities aiming to educate the students in middle schools and primary schools. The environmental educational activities have been conducted in the middle and primary schools in Lashihai and Wenhai during the past two years. Besides, the pamphlets on wetland protection knowledge were designed in 2009. The educational center of the reserve is now under construction and expected to be put into use in 2010.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Scenery-seeing and birds-watching in the winter are the main tourism forms at present. The daily number of the tourists is about 5,000, and they are only allowed to enter to the experiment area of the reserve.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

Territorial Jurisdiction:

The Government of Yulong Nassi Autonomous County, Lijiang City, Yunnan Province.

Functional Jurisdiction:

Forestry Bureau of Yulong Nassi Autonomous County, Lijiang City, Yunnan Province.

33. Management authority:

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Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Principal: Tingfa Huang (Director)

Institution: Lijiang Lashihai Plateau Wetland Nature Reserve Administration

Address: Lashi Township, Nassi Autonomous County 674107, Lijiang City, Yunnan Province.

Tel: 86-888-5441106 Fax: 86-888-5441106

E-mail: lashinature@163.com

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

The Investigation and Design Institute of the State Forestry Administration. 2002. Master Plan for Bitahai Nature Reserve

Southwest Forestry College. 2002. Bitahai Nature Reserve Integrated Scientific Investigation Report. Peng GH, Huang TF. 2003. Management Plan for Lashihai Nature Reserve.

Southwest Forestry College. 2002. Master Plan for Lashihai Plateau Wetland Provincial Nature Reserve.