

Analysis of Threats to Wetland Conservation and Local Livelihoods in NW Yunnan, China

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Abstract

The alpine lakes and wetlands in the mountains of south-west China in north-west Yunnan – one of 34 worldwide biodiversity hotspots – represent a unique but inadequately studied and protected aquatic ecosystem. Traditional communities, such as the Tibetans, the Naxi, and the Yi are the prominent groups, and they graze their livestock on the summer alpine mountain pastures where alpine lakes and wetlands are scattered from 2,400 to 4,000 masl or higher. Among these groups, the Tibetan and the Naxi regard many landscape features such as mountain peaks, lakes, and wetlands as sacred sites. The local communities' roles and interests in continuing to manage and have access to these areas are evident, their knowledge about managing natural resources and their cultural linkages with the landforms form the very foundations for local stewardship, as a contribution to maintaining the mosaic alpine ecosystems for the generations who live and will continue to live in north-west Yunnan. However new threats have emerged as a result of tourism projects and are posing problems not only for conserving the wetlands, but also for sustaining local communities' livelihoods. New policy tools and monitoring mechanisms need to be put in place to keep a close watch on wetland development.

Introduction

As a result of the continuous economic growth over the last 20 years, China has shifted rapidly from a centralised underdeveloped economy to a consumer-driven market economy. Fast economic growth in the market economy acts as a double-edged sword, however, it mobilises investment efficiently like a powerhouse for generating wealth, while, at the same time, it marginalises disadvantaged local communities and diverse natural resources which are common property and public goods.

Yunnan Province represents an economically less developed region in China, where rich natural resources and cultural diversity have long been mountain-locked. Now, however, it is facing an economic crisis and threats of unchecked investment as the result of the open-door economic policy and Greater Western Development Policy and Yunnan province's cry for greening Yunnan's economy*. Located in Southwest China, bordering

* The Greater Western Development Strategy covers the following provinces: Sichuan, Guizhou, Yunnan, Shaanxi, Qinghai, Gansu, Ningxia, Inner Mongolia, Guangxi Zhuang Autonomous Region, Tibet Autonomous Region, Xiangjiang, and the municipality of Chongqing. These areas constitute half of China's total area and are home to 25% of the population. The Strategy strongly stresses the significance of improved infrastructure, such as transport, telecommunications, oil pipelines, energy, and water control, as well as environmental protection and ecological restoration of the major river systems. Apart from the direct financial support of the central government, it also advocates private sector/initiatives in better-off regions, typically from the coastal areas as well as from overseas, to invest in the western region. According to the People's Daily, a major government newspaper, in 2000 the central government invested a total of 70 billion yuan in the Western Region in addition to 96.2 billion yuan on large-scale infrastructure project. In 2001, the total investment reached 300 billion yuan (www.people.com.cn/GB/jinji/222/2228/3106/20010808/530672.html). In line with the Strategy, Yunnan provincial government has developed a new set of strategies with two focuses – biological resources and cultural resources – both contributing jointly to the goals of building Yunnan as 'A Strong Province with a Green Economy' and 'A Great Province of Cultural Industry.'

Myanmar, Laos, and Vietnam, Yunnan covers 4.1% of China's total area and serves as the upstream region for several major international river systems that branch out south-eastwards through the Southeast Asian countries. These are the Salween (Nu) River, which flows between the Gaoligong and the Nu mountains, the Mekong (Lancang) River, between the Nu and the Yuling ranges, and the Yangtze River to the east of the Mekong. Northwest (NW) Yunnan, covering 15 counties and home to 14 ethnic groups, is squeezed by the Hengduan Mountain ranges hosting the upper stream watersheds of all the above-mentioned rivers and is facing an unprecedented dilemma between resource-based economic development and nature conservation. On the one hand, the government cry for modernisation in the official interpretation of the Shangri-la of commercial dreams has prompted waves of private investment in mining, tourism, and dams; and on the other hand, more and more international conservation organisations, such as the World Wildlife Fund (WWF), The Nature Conservancy, and Conservation International are present in the region, appealing on the need for biodiversity conservation. The clashes, in both ideological and practical terms, are evident and heated.

While efforts to conserve biodiversity in the eastern Himalayan mountain regions have increased rapidly, the attention given to alpine wetlands and lakes that feed into rivers and sustain local livelihoods along the Tibetan Plateau is static. This paper hopes to provide a rapid assessment of the conflicts and tensions caused by overheated development around selected alpine wetlands and lakes in NW Yunnan, and to provide a list of recommendations.

The context of wetland policy

The Millennium Ecosystem Assessment reports what wetland scientists and conservationists have feared – that wetlands are the most threatened ecosystems on the planet. The drainage of wetlands for conversion to other land types, the drying out of wetlands through diversion of water, the overexploitation and pollution of wetlands, and the influence of invasive species are the major threats. The status of wetlands in China confirms this alarming status: the deterioration of wetland health not only puts ecosystem safety in China in great doubt, but also has adverse effects on many South East Asian countries through the channels of regional rivers.

China was among the very first signatories to the international treaty on the Convention on Biodiversity. In 1992, China joined the Ramsar Convention. The Chinese government has since then tripled its number of wetlands of international importance by designating a great number of provincial and national nature reserves to the Ramsar List. In early 2005, another nine sites, of which four are from Yunnan, were added to China's Ramsar Site list, making 30 Ramsar Sites in all with a total surface area of almost three million hectares. As a result, China's designated wetland protected areas now account for nearly 10% of such sites world-wide, ranking first in Asia, and fourth globally. In total, China has identified 262 wetland areas covering 16 million ha with varied protection status, among which the forestry system alone is charged to manage 145 protected areas covering 11 million ha. According to a recent report and much to the credit of the State Forest Bureau, China's wetland resource inventory was completed after five years of hard work, and subsequently the national programme for wetlands' conservation and ten-year action plan were formulated.

Yunnan lies in the southwestern mountain biodiversity hotspot, the Hengduan Mountain Ecosystem of the Greater Eastern Himalayan zone. It hosts a large number of wetlands

and upland lakes that are home to many wide-ranging migratory and endemic bird species as well as freshwater fish species, amphibians, and reptiles sensitive to ecosystemic changes. Some of these are extremely endangered due to deterioration of habitat quality as a result of intensified human use. There are four major snow and glacier mountains in NW Yunnan: the Yulong (5,596m), the Haba (5,396m), the Baimaxueshan (5,430 m), and the Kawagabo (6,740 m), ranging from N27°-29°. The wetlands and alpine lakes are heavily concentrated between these four mountain ranges. The alpine aquatic ecosystems in this region, which include alpine wetlands, lakes, and rivers, are believed to be a) rich in biodiversity and high in species' endemism; b) important water sources for regional river systems and watersheds for China as well as the South East Asian countries; c) critical to local communities' livelihoods and cultures; and d) integral ecosystem units for alpine and low latitude glaciers instrumental to global climate change studies.

According to Wetland International, Yunnan Province has abundant wetland resources, including 134 bird species and 382 fish species. The number of black-necked cranes (*Grus nigricollis*) wintering in Eastern Yunnan exceeds 1,500. There are several tens of thousands of wintering water birds in wetlands located in western and north-western Yunnan. Most swamps in Yunnan Province are of the alpine type, and thus of great value for conservation. The lakes and swamps of Yunnan Province are the upper reaches of great rivers and the conservation of biodiversity in these river basins is of international importance. With the rapid increase in resource-based development projects, aquatic ecosystems in southwest China upland are under intense pressure. Many places have experienced scarcity of water resources, water pollution, the halt of water flow, wetlands' shrinkage due to agricultural land conversion, overgrazing, competing tourism land uses, mining, and badly designed and implemented flood control measures.

In February 2004, the China State Forestry Bureau, WWF, the Ramsar Convention Bureau, and ICIMOD jointly hosted an International Conference on Himalayan Alpine Wetland Conservation and Development. The conference pointed out that 50% of the Eastern Himalayan alpine wetlands are within China's boundary, but efforts and resource allocation to conserve the nearly 75,000 sq.km of alpine wetlands are insufficient. The case of wetland conservation in Yunnan serves as a reality check for alpine wetland conservation in the eastern Himalayan region.

Table 1 summarises the Chinese government agencies with wetland conservation mandates. The Annex briefly captures the bulk of Chinese legal and regulatory systems relevant to wetland conservation (Liu and Li 2002).

A brief assessment of regulatory systems and institutions is provided in the following (see the Annex for an inventory of related laws)

1. Wetlands and aquatic ecosystem conservation is a new area in government commitment to environmental protection and biodiversity conservation. Most laws and regulations were issued in the 80s and started to take effect towards the end of the 90s in the last century. However, most of these laws have not taken into account new drives and threats as a result of the market economy and the growing forces of the private sector.
2. There is no single legislation specifically issued to look at the coordination and conservation of wetland. Wetland is mentioned only sporadically and, at times, in rather ambiguous language in other laws and regulations. Efforts to conserve

Table 1: Summary of government agencies with wetland conservation mandates

Government Agency (including line offices and bureaus from central to county levels)	Roles and Functions
State Forestry Bureau	Coordinate and lead the major efforts towards designation, implementation, and management of wetland-related protected areas and compliance with the international treaty on wetland conservation
Ministry of Agriculture	Management of interfaces between agricultural land and wetland, conversion from one to the other; as well as oceanic fishery resources
Ministry of Water Resources	Coordination of uses of water resources
Ministry of Land Resources (including the State Oceanic Bureau)	Design, compile, and implement state land - resource strategies, general land-use planning, and oceanic resource management
State Environmental Protection Agency	Monitor status and processes of wetland conservation nationwide

wetland are still opportunistic and reactionary. There is no nation-wide conservation strategy that involves all the above-mentioned agencies in a holistic and concerted manner.

- Current wetland conservation efforts are primarily concentrated in northeastern China, the eastern coast area, and the middle to downstream reaches of the Yangtze River. The upland wetlands on the Yunnan-Guizhou Plateau and the Qinghai-Tibetan Plateau in the vast regions of northwestern and southwestern China have received inadequate attention, let alone developing a sound scientific understanding or implementing in-depth studies of the wetlands in these areas.

Concepts

In the Chinese western regions, where many ethnic groups have traditionally accessed natural resources on which their livelihoods depend, there are demonstrable linkages between the management of common property resources and sustainable livelihoods. Therefore, strong local stewardship in managing the vertically distributed natural resources in agro-pastoralist mountain ecosystems is the foundation for both sustainable livelihoods and biodiversity conservation.

Local stewardship in the sustainable management of natural resources is indispensable in clarifying property rights with the state, in recognising communities' customary access to state property resources, such as alpine pasture, and in sharing benefits fairly through transparent and participatory decision-making. While property rights have to be clearly defined in legal terms and demarcated on land, new stakeholders, such as emerging private investors, have to be encouraged by law to show respect to such location-based relationships between human beings and nature. This means that rights and mandated legal procedures to practice such rights have to be given to farmers; and these can include village elections introduced by the Organic Law and the Four Rights: namely, right to information, right to participation, right to make decisions on, and right to monitor affairs vital to farmers' collective interests. The increasing economic gap between the eastern and western regions, rural and urban, the problems of farmers, of villages, and of agriculture ('san nong wen ti') are becoming prominent concerns for social stability and social equity. Policies issued to

mediate such tensions come as opportunities when working with communities, government agencies, and private investors.

Tourism development in NW Yunnan, combining nature tourism and ethnic tourism, is still lacking alternatives or new initiatives to attract mass tourism. There is sufficient evidence about the current tourism market to show that mass tourism has delivered limited and monolithic tourism products and services, and its market-driven investment model has resulted in minimum benefits trickling down to grass-roots' communities, and at the same time it has degraded the environment. Whereas unchecked investment and planning procedures should be subjected to closer public and government reviews, a new approach that has been applied elsewhere should be tested; i.e., pro-poor tourism.

As defined by the 'Strategies for Pro-Poor Tourism' paper (Ashley et al. 2001), pro-poor tourism increases the demand for goods and services from the poor; reduces the costs paid by them for their basic needs; increases the asset base of poor people; decreases local vulnerability and risk; and results in increased government revenues that positively reinforce local development goals. Pro-poor tourism differs from mass, externally-operated and managed tourism in a number of ways. First, the purpose is not exclusively economic growth and amassing foreign exchange, but rather improving the local quality of life by providing a secure and tenable economic base through direct local results. Unlike supply-side economic development policies, which focus on greater corporate investment with the hopes that prosperity at the top will trickle down to the poor, pro-poor tourism seeks to redistribute wealth directly to the communities in need.

Four major actors are involved in constructing a pro-poor tourism policy in developing countries, and each serves in a different capacity depending on the strategy employed. Whereas the initiative may be led by a national agency or even an outside private firm, rather than being conceived and developed exclusively at the local level, the key is that local communities must have a direct role in managing the project. The national or provincial government plays either a leading role in top-down projects, or a supportive role in bottom-up initiatives. The second major actor in pro-poor tourism projects is the private sector. While the private sector is necessary to provide product development ideas, marketing services, local investment, and, to a limited extent, operations, it should be accountable to local communities rather than an exploitative actor.

Local non-government organisations (NGOs) and international development agencies also serve crucial roles as protectors of local cultures and the local environment, and as developers of small-scale sustainable development projects such as eco-tourism. Local communities themselves are the most integral component in developing pro-poor tourism programmes. The people are producers, employees, labourers, and operators of micro-enterprises. Communities are most effective when led by community organisations that have the legal and institutional capacities to manage local resource development, negotiate with private firms, work with the government, and receive and distribute collective income. When investors violate rights, the means to defend environmental justice are important for the benefit of the communities and their

* The term 'san nong wen ti' stands for deep-rooted, prevailing rural epidemiological problems, symptomatic of farmers' losing land to agro-business ventures, rights' violations, dwindling incomes, insufficient incentives to produce grain, and a static or depressing rural situation. This has caused great discontent among rural and urban people in many parts of China. Since 2001, the State government has attached greater significance to mediating such tense and worrisome situations in rural China. Yet efforts remain to be seen to distinguish between northern rural settings, where commercial grain

environment. Last but not least, effective local community management requires a conducive legal and institutional environment, a focus on local activities rather than resorts, and the development of locally-produced goods for sale rather than those that are externally-produced.

Study Methods and Findings

The assumptions in the study followed two paths: a) whether and how wetland management is having an obvious impact on land-use practice, and b) how land-use changes are a result of policy shifts or how new practices are influencing wetland conservation and other related agenda.

Altogether five sites were selected: four of them are Ramsar sites listed in 2005 – Napa Lake, Bita Lake, Lashi Lake, and Da Shanbao and the fifth, Qianhushan, is within the core zone of the Three Parallel Rivers' Protected Area and World Natural Heritage Site. Due to its wide distribution, high latitude, and the fact that it is a relative latecomer for tourism, Qianhushan remains the least affected and most pristine wetland and lake area of the five. Even scientific communities have not frequented the area enough to make a full report. In short, these five sites give a good idea of the wetland situation in Yunnan (Table 2).

Unlike most materials available on websites or obtained through protected area management systems, it appears that conflicts and tension around wetlands, particularly those listed as Ramsar sites, are not documented and reported. This author's personal communication with the Protected Area Management Division of the Yunnan Provincial Forest Bureau has confirmed that a wetland inventory for Yunnan has yet to be compiled due to lack of resources. This study therefore tries to provide a rapid assessment of local livelihoods, policies, tenure, and resource conflicts and critical issues pending for timely research or action.

Methods

This paper is based on the ongoing project activities in Jisha village in which the Centre for Biodiversity and Indigenous Knowledge started a community-based conservation and development project about five years ago. At different points in time, travelling to and from the project sites required frequent travel through NW Yunnan. Alpine wetland had been one of the concerns in Qianhushan and Jisha village, thus development issues concerning the wetland in NW Yunnan in general gradually came into focus.

Participatory rural appraisal and participatory observations were used to gather information regarding indigenous knowledge about grazing, forest management, sacred land practices, and cultural and productive handicrafts and resource mapping. Open-ended questionnaires were used to investigate village elections. Open-ended interviews were used in group meetings and individual households to understand various issues regarding resource allocation, management, festival preparation, and labour arrangements during guesthouse construction. Stakeholder analysis, consensus-building, and conflict management were carried out many times. Secondary information was referenced.

Findings and analysis

The Great Western Development Strategy has created a de facto open license for an unchecked private sector to exploit natural resources in the western provinces. The

Table 2: Brief survey of the five study sites

Name of Wetland	Location and characteristics	Local livelihoods	Local Policies	Tenure and Resource Conflicts	Critical Issues
La Shi Lake	1,002 ha Lijiang Prefecture 150,000 birds, 31 1 st and 2 nd rank protected species. Ramsar Site in 2005	1,800 local Naxi farmers living immediately around the lake are surviving on fishing and seasonally flooded agricultural land	<ul style="list-style-type: none"> - Enforcing wetland conservation: prohibition of fishing and hunting birds - Conversion of agricultural land to a 'birds' habitat with limited compensation to farmers - Tourism development: priority given to water supplies to ancient water town of Lijiang, as a result a dam was constructed on the wetland to reserve water, submerging farmlands around the lake 	<ul style="list-style-type: none"> - Fishing rights limited due to bird conservation - Loss of agricultural land and fish catches to tourism downstream by means of water diversion project 	<ul style="list-style-type: none"> - Conflicts profiled as 'wars between local people and birds' - Conflicts between conservation and tourism development, resource appropriation - Fair compensation and transparent decision-making on watershed management
Napa Lake	2,400ha Black-necked crane and six other kinds of 1st rank birds and 18 pheasants wintering. Recently significant increase in black-necked cranes wintering: 245 individuals observed in 2004 Ramsar Site in 2005	14 villages, 565 households, and 3,265 farmers living around the wetland; ranching on the wetlands has been a significant means of livelihood	<ul style="list-style-type: none"> - Protection of black-necked crane - City sewage drains into the wetland - Enlargement due to fear of flooding caused wetland to dry out and vicious cycles ensued - Monopoly concession to tourism investors - Engaging local farmers to give up sand harvesting for other alternatives 	<ul style="list-style-type: none"> - Local farmers harvest sand from around the wetland to sell in the town as construction materials - Tourism concession monopoly and exclusion of local farmers - Tourism use, livestock use, and wildlife use of the wetland cause heated tensions 	<ul style="list-style-type: none"> - Acute tensions between monopoly concessionaire and excluded villages - Acute tensions between excluded villagers and tourists - Bloodshed fights amongst villages who are for or against monopoly - Plan for Napa Lake management jeopardised and compromised - Opportunities for co-management for conservation and pro-poor tourism missed
Bitu Lake	2,000 ha Zhongdian county of Diqing, Tibet Autonomous Prefecture Alpine lake, meadows, Diptychus Steindachner black-necked crane, and temperate needle forest ecosystem Ramsar Site in 2005	<ul style="list-style-type: none"> - Customary access of summer alpine rangeland; - Spiritual sites, 	<ul style="list-style-type: none"> - Protection of Bitu Protected Area - Tourism activities implemented by county tourism bureau and Bitu Protected Area authority - Delivery of improved horse track on grassland - Tourism concession rights to outsiders to run boating business - Local communities participate in horse track business 	<ul style="list-style-type: none"> - Access to traditional rangeland reduced and controlled by authority - Concessionaires took long-term rangeland use rights from farmers through unfair deals - Conflicts between villages over horse track business distribution 	<ul style="list-style-type: none"> - Balance between local livelihoods and tourism development - Balance between tourism and wetland conservation - Lack of sound protected area management plan - Lack of sound scientific understanding of lake systems and species in it

Table 2 cont.					
Name of Wetland	Location and characteristics	Local livelihoods	Local Policies	Tenure and Resource Conflicts	Critical Issues
Qianhushan	39,630 ha Highest concentration of alpine wetland and lakes above 3,400 masl in Yunnan One of the eight core zones of the Three Parallel Rivers' Protected Area and World Natural Heritage Site	<ul style="list-style-type: none"> Over 2,000 Tibetan villagers, including 400 Jisha villagers, depend on Qianhushan their annual access to summer alpine grazing. Cultural and spiritual sites Traditional pastures of Jisha village occupy about 7,425 ha, forest is predominant, covering 60% of the total area. 12 summer grazing sites have been used by Tibetan herders for generations every year between May and October; the pasture areas cover 1,412.5 ha in total, accounting for 20% of the land area of Jisha. 	<ul style="list-style-type: none"> One of the eight zones of the Three Parallel Rivers' World Heritage Site, Protected Area and National Scenic Area Major mass tourism development depending upon outside private investment 	<ul style="list-style-type: none"> Customary access to grazing within state forest Spiritual access to sacred mountain and lake in state forest Unclear demarcation between state and collective forest and grassland Collective land with no property license Dubious development plan and land-use appropriation 	<ul style="list-style-type: none"> Lack of balance between long-term local farmers' livelihoods' needs for resources and short-term investment needs for resources Lack of transparent and scientific understanding of investment impact on biodiversity and wetland Lack of local farmers' participation in major decision-making processes and fair benefit-sharing
Da Shanbao	3,000 ha Zhaotong County, NE Yunnan Important wintering site, wetland and swamp sub-alpine ecosystem Ramsar Site in 2005	<ul style="list-style-type: none"> Over 20,000 farmers living within the black-necked crane's wetland habitats They treat the birds as sacred and feed them with corn. 	<ul style="list-style-type: none"> Fix and stabilise the holding of agricultural land Natural forest protection and upland conversion to forest and grassland Building reservoirs to safeguard sufficient water storage in order to restore swamp and wetland Resettle over 3,000 farmers in nearly 800 households from the core zone 	<ul style="list-style-type: none"> Land-use comprised by local livelihoods for protected areas 	<ul style="list-style-type: none"> Balance between conservation and local livelihoods Restoration of forest land undesirable for crane habitat

mountain ecosystem and local communities are particularly vulnerable. There is little evidence that current wetland conservation has any significant impact on land uses, except in Da Shanbao where wasteland or agricultural land were forested as a good intention to restore habitat for the black-necked crane. The remaining four cases have provided strong evidence that private investment in tourism programmes will have a deep-seated negative impact on wetland conservation; and will create heated conflicts with communities and jeopardise their means of livelihood. Lack of adequate attention to the following issues has posed serious threats to wetland conservation at the selected sites.

Inappropriate penetration of the private sector

In all of these five cases, almost without exception, there is a differing degree of private-sector involvement in tourism-related business ventures within the proximity of wetland conservation areas. In the worst case, physical fighting occurred between groups of people as conflicts intensified. The private sector is by no means an enemy to nature and communities, yet the current practices have resulted in appalling consequences. The private sector is harmful if a) government agencies become allies of the tourism company and at the same time belittle communities' rights and interests; b) privately initiated investment does not take into account local communities' needs for the very resources to be used as tourism capital; and c) laws are not effective in keeping the private sector accountable to environmental standards.

Problematic approval and planning procedures

Development plans that have the potential to affect world heritage, protected areas, or culturally sensitive areas must comply with sound principles and tight regulations. Approval procedures must be followed with the guidance of the appropriate authorities. In reality, however, development projects in Qianhushan did not follow proper procedures. In the absence of approval, investors can force government agencies to approve by making a de facto construction site. Fair and transparent assessments of environmental and socioeconomic impacts are either avoided or carried out to the advantage of the investor. Local government is supportive of the investor as investments are quantifiable indicators for evaluating an official's performance.

Pro-poor tourism remains lip service

Tourism plans mostly focus on sheer scale and numbers, ignoring the fact that local communities' livelihoods depend upon natural resources. Outside developers and local governments reap the main benefits; and local communities have been increasingly marginalised in terms of ownership of resources and sharing benefits from tourism activities, management skills, and the capacity to engage in the tourism industry. Examples from Bita Lake, Lashi Lake, Napa Lake, and Qianhushan all point to the need to include local communities for equitable benefit-sharing.

Village decision-making body has little impact on transparent resource governance

China's ambitious nation-wide village democracy programme created opportunities for grassroot level farmers to elect village committees and exercise local governance within a village administrative structure from 1998 onwards. In reality, the village committees have yet to learn to fully exercise their legitimate rights to manage their resources. The difficulty of the downward accountability of the village leadership structure to its village constituency is further compounded by heterogeneous community dynamics. Villagers themselves have great difficulties in exercising their collective decision-making power through the village authority, even though they elected it. Not knowing their rights, community members can be easily manipulated by investors. In Jisha's case,

villagers were cheated many times into signing deals detrimental to their long-term interests – such as losing their rights to summer alpine pasture and causing potential damage and disturbance to their sacred sites. With some village heads reportedly being bribed, the company hijacked the village decision-making body.

Conclusions and recommendations

The overall process of wetland conservation is still dominated by government. Despite farmers' legally defined rights and village governance authorities, great hurdles still remain in translating farmers' rights into planning, co-management of protected areas, equitable sharing of economic benefits, and protection of culturally significant land.

Government commitment to develop a regional strategy for wetland conservation in the Yunnan-Guizhou Plateau and Qinghai-Tibetan Plateau that promotes the integration of wetland conservation and sustainable livelihoods has yet to be seen. This should be realised through building a wide array of partnerships with scientific communities, law enforcement and legislative communities, local communities and development and aid organisations, the private sector, and government agencies to influence policies and to demonstrate the realisation of community-based livelihood benefits from wise use of the wetlands.

The following chart illustrates the factors critical for facilitating pro-poor tourism in the context of southwest China in order to ensure that equity and sustainability of livelihoods are adequately considered. In the future plan for an integrated wetland conservation programme, it is recommended that tourism demonstrate a strong pro-poor design.

In southwest China, it is not an unpopular view that policies and laws applicable to communities' sustainable livelihoods and biodiversity conservation – including wetland conservation – are contradictory and mutually exclusive. Until these two are perceived and approached holistically, efforts to combine the two to create a win-win scenario will remain a losing battle. The following are suggestions for further policy advocacy work.

1. A stronger and committed government mandate to link tourism development with community livelihoods as an important alternative to the mass tourism industry

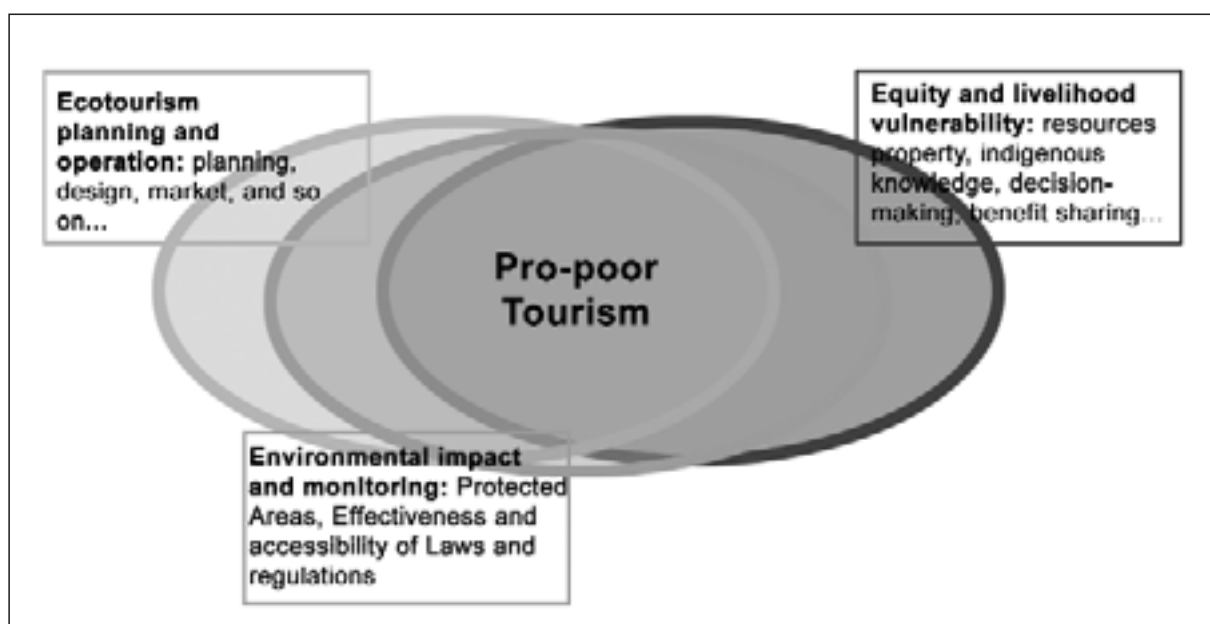


Figure 1: Factors critical for pro-poor tourism

2. Recognition in institutional and legal terms of the local community's roles and rights in natural resource management; including customary access to state resources
3. Designs for multi-stakeholder participatory planning of integrated wetland conservation should give special consideration to the specificities of communities' livelihoods and cultural meanings of resource management.
4. Easy access is needed to legal aid in resource conflicts; local communities urgently need more linkages and help to become better informed about laws and regulations; and state-sanctioned rights to information, participation, decision-making, and monitoring need to be realised.
5. Increased public participation and review of development plans

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Annex 1: Brief Review of Chinese Laws and Regulatory Commitment to Wetland Conservation

1. The following laws have shown varying relevance to wetland conservation.

Title of Law	Date
The Forest Act	1982
The Prevention of Water Pollution Act	1984
The Land-use Management Act	1986
The Law on Wildlife Protection	1988
The Water Act	1988
The Environmental Protection Act	1989
The Soil and Water Conservation Act	1991
The Gun Control Act	1996
The Oceanic Environment Protection Act	1999
The Organic Law	1998
The Agricultural Land Act	2002
Revision of Law on Water Resource Conservation	2002

2. The following administrative regulations are related to wetland protection.

Title of Regulation	Date
Scenic Area Management Regulations	1985
Regulations on Oil Survey and Exploration and Environmental Protection	1990
Regulations on Control of Ocean Pollution due to Shipping Spills	1990
Implementation Regulations on Terrestrial Wildlife Protection	1992
Implementation Regulations on Aquatic Wildlife Protection	1993
Regulations on Protection of Agricultural Land	1994
Regulations on Protected Areas Management	1994
Several 'Recommendations on Aquatic Ecosystem Conservation and Rehabilitation' issued by the Ministry of Water Resources circulated	2004

3. The following government commitments to conservation and sustainable development are relevant to water conservation and wetland protection.

Title	Date
China's Agenda 21 – China's White Paper on Population, Environment, and Development	1994
China's Action Plan on Biodiversity Conservation	1994
Action Plan of the Ministry of Forestry – China's Agenda 21	1995