



# **Gender relations, livelihoods and supply of eco-system services: a study of Lashi Watershed, Yunnan, China**

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## **Summary**

This paper is about a study in a watershed (Lashi Lake- a wetland area) close to Lijiang Dayan, Yunnan, the world cultural heritage site in southwestern China. In particular it is about gender relations and livelihoods from the ecosystem of the watershed managed historically by the Naxi (94%) and Yi (4%) ethnic groups. These ethnic groups constitute 18,000 people in 3,250 households who have managed quite well with a subsistence agricultural system, characterised by a variety of crops (rice, wheat and maize in the valley and potatoes and buckwheat in the uplands). Agricultural produce is subsidised by fish from the lake, animal husbandry, and agro-forestry; and timber provided a substantial contribution to cash incomes until a ban on logging was introduced in 1998. Non-Timber Forest Products include many varieties of mushrooms, including the expensive *songrong* variety, and, in the wetland area, 11 kinds of medicinal plants. Some households own small-scale food-processing mills and the local government offers incentives for developing eco-tourism.

Overall per capita income is just above the poverty line, but 1,800 people in the valley basin, 300 people inhabiting the wetlands, and 500 people in the mountain area live below the poverty line and rely on food aid from the government. The focus of the paper is of a Naxi community of 1,500 people in three fishing villages.

The wetland area, in particular, has an abundance of species, some of which are of the rare, endangered variety. Direct benefits come from fishing, wetland agriculture and use of aquatic plants for food, fodder, medicine and fertiliser. The lake is also used for irrigation and transport and as a tourist destination.

The paper is a collection of case studies carried out in these villages through group discussions with women and two individual discussions about women in wetland agriculture and men in the fishing occupation. These are typical since women are generally responsible for wetland agriculture and men for fishing. The text carries the reader through the spatial traditional management system and the villagers' perspective on their total environment. Classifications include soil types, based on the frequency (or infrequency) of flooding and collective and individual household cultivation. In this classification system used by the author, land types 1-4 are used collectively, 5-6 are common pastureland in winter and used for fish spawning in spring (these are free of tax). In the household responsibility system, the state allocated land types 1-5 to each household based on the number of family members. Types 1-4 were registered and taxed with a limit of about 3 mu\* per person being allocated.

Basically, this paper is descriptive and goes into details of different case studies carried out in the wetland area. The author is at pains to describe the impact of the wetlands being declared used for eco-system services such as water for the town (a cultural heritage site) and downstream agriculture and the bird sanctuary. The fisher folk are experiencing increased unemployment, particularly as the fact that the wetlands have been made into a bird sanctuary has led to a ban on fishing. Hence there are obvious conflicts between the villagers' need to earn a living and wildlife conservation. The paper describes how girls and women are working cheap in the tourism service sector and the older women as cheap farm labour. The Lashi women have to face a dual-edged sword. On the one hand there is not as much fishing opportunity as in the past, and some women who sold exotic fish species cannot make a living out of it any more; and, on the other hand, the men believe that fishing is a male activity any way, and not suitable for women. The men believe that, notwithstanding the flooding of the farmlands, there are other income-earning opportunities for women such as making handicrafts, tourism, and collection of non-timber forest products. It is also quite obvious that fish resources are limited and men fear that, if women fish, the few resources there are will be over-exploited. The women believe that before the dam was built women did fish for the smaller fish and to collect aquatic plants. Women marketed the fish in any case and used the wetland for a variety of purposes.

However, these gender-focused arguments would seem to be somewhat nullified by the over-riding fact that the government constructed a trans-watershed supply project to improve ecological services and supply 18.28 million cubic metres of water annually to Lijiang valley – irrigating 65,000 mu of arid land and providing 10.78million cubic metres of water to Lijiang town, a world cultural heritage site. The project includes a three-kilometre long tunnel through the mountains and eight kilometres of elevated water channels and a dam. Lashi wetland has thus been converted into a man-made and

\* Chinese measurement of land area (15 mu = 1 ha)



controlled lake which is administered by the Hydraulic and Electricity Bureau of Lijiang County. Large amounts of agricultural land were submerged and the government compensated the local people for this at the rate of approximately three dollars per head; barely sufficient to cover the loss of livelihood.



The Lashi wetlands' case is a typical example of cases of conservation for selected sectors; in this case, it is tourism because of the world cultural heritage site nearby. The provincial wetland nature reserve established in 1998 has no doubt boosted tourism and brought in revenue for the state and county. However, fishing bans were enforced through force of arms, migratory birds destroyed crops and the local people have been increasingly marginalised – politically and economically. Women suffered more from these changes since they were mainly engaged in agriculture. Attempts to participate in fishing led to gender conflict. Unless the local people themselves are allowed to use the wetland resources in a sustainable manner then chances are that the wetlands will become degraded and conflicts over resources will ensue. As is evident, there is almost complete distrust of the government on the part of the local people, and such distrust does not encourage activities likely to aid conservation of the wetland environment.

## Conclusion

The author carried out a traditional investigation into the roles played by men and women in the wetlands, and how women crossing over into the outside male sphere of fishing was seen as a challenge to men's masculinity and social position; thus seen negatively by men and society as a whole. This investigation was carried out against the background of a fish market and fish resources that have been limited by changes induced by government. On the other hand, the author posited that these outside forces were transforming a traditional masculine culture and women are being seen as talented people who can earn cash income in a variety of ways because of their knowledge of the market – a traditional one since previously they took part in the fishing culture as assistants to men. The author states that traditionally Naxi women did have a high social status, and this had been negatively impacted over the last 300 years by the Chinese culture.

No matter, the overall picture is one of a community under siege and in great need to find assured means of improving economic and social security. This can only be realised if the Naxi have control over the wetland resources. It can be argued that a community will not destroy an environment that provides their sustenance. The author suggests a payment system for water and other ecosystem services and control over the natural resources being given to the local community. The author also advocates establishment of local community-based organisations to promote natural resource management. Such organisations can then address the ban on fishing in the reserve and

control over other natural resources such as forest products. A shift to high-input agriculture on the little cultivable land available is also advocated.

Overall the author points out that the overall livelihood system and the position of women were adversely affected by watershed development. There is a conflict between conservation and the traditional livelihood system. When agricultural land was flooded, women moved into fishing – and this had an impact on the perceived ‘correct roles’ in the society. There is a suggestion that this shift in terms of gender equality may not be as disruptive a change as it is perceived to be by men, but merely a resumption of the status quo ante. What is obviously the case, however, is that conservation activities that do not involve the people who are indigenous to the proposed conservation area not only impact gender roles but have a negative impact on whole communities if they are not balanced against the traditional cultural and economic interests of the people and their future needs.

