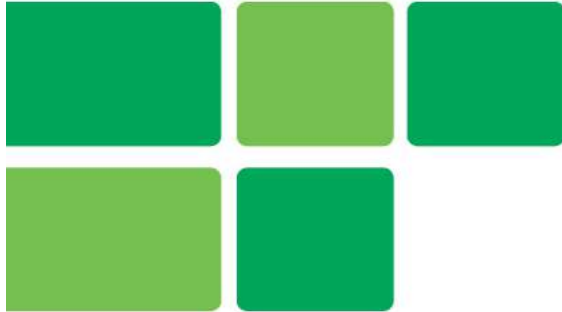




# 丽江拉市海波多罗 生物多样性保护与可持续生计项目

Biodiversity Conservation and Sustainable Livelihood  
Project of Boduoluo Village in Lashi Watershed, Lijiang



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(绿色流域)

Green Watershed







# 机构简介

## 绿色流域

云南民间环保组织

2002年，在云南省民政府厅注册为民办非企业单位

项目包括：

- ◆绿色信贷
- ◆社会影响评估
- ◆丽江拉市海参与式流域管理



Green Watershed is a environmental Non-governmental Organization based in southwest China, registered in 2002

Projects Include:

- ◆ Green Credit Advocacy Project
- ◆ Social Impact Assessment of Large-Scale Project
- ◆ Lashi Lake Participatory Watershed Management Project



# 拉市海概况



拉市海高原湿地位于云南省丽江市玉龙县拉市镇境内。拉市海流域总面积257平方公里，有人口近2万人，包括纳西族和彝族等少数民族。也是60多种越冬水鸟的重要栖息地。2005年初拉市海正式列入国际重要湿地名录。



Lijiang Lashi Wetland is 15 kilometres away from the World Cultural Heritage site of Lijiang Old Town, comprising 82 Naxi villages and 8 Yi villages. The total area is about 250 square kilometres , In2005,it has been listed in Wetlands of International Importance.







# 拉市海流域管理

拉市海参与式流域管理项目

拉市乡流域管理委员会

◆湿地渔业协会

◆东灌区用水户协会

◆西湖村小流域治理项目

◆彝族山村扶贫与流域保护项目



▶ Lashi Participatory Watershed Management Project

Watershed Management Committee at Lashi township

◆ Fishery Association of Lashi Wetland

◆ Water Users Association of East Irrigation Area of Lashi

◆ Micro-Watershed Management Project in Xihu Naxi Village

◆ Poverty Alleviation and Watershed Protection in Boduoluo Yi Villages

▶ 彝族波多罗村，西北接玉龙雪山，南依长江第一湾，北靠虎跳峡，西与香格里拉隔江相望，村落海拔在3000米—3200米之间，属于拉市海湿地水源保护区，也是长江上游天然林保护区以及玉龙雪山保护区缓冲区。





# 项目背景



▶ Bodoulou is a Yi ethnic village located in an altitude of approximately 3000 –3200 meters. This village plays an important role as the ecological barrier for downstream wetland and farmland .



▶ 波多罗三面环山，森林和土地资源共2万亩，乔木以云杉、冷杉和栎树为主，山脊分布有十里杜鹃林，其中不乏珍稀品种。还蕴藏有三百多种药用植物，栖息着熊、猕猴、獐子等野生动物。属于生物多样性保护价值较高的地区。

▶ Bodoulou has forest and land resources at total area of 20000 mu. Most of trees are oaks, firs, spruce , rhododendrons, as well as over 300 species of herbs medicine, some are precious varieties. It is also a habitat of wild animals such as bear, macaque and river deer. This area is with high biodiversity conservation value.







# 项目背景

波多罗是一个传统的彝族山村，总户数31户，总耕地面积约600亩，但是耕地主要是坡地，村民承担着森林生态保护的成木，不能砍伐林木，并且多数耕地已经还林。由于海拔较高、气候恶劣、交通不便，山区经济、社会发展程度都相对滞后，生活水平普遍偏低



波多罗是一个传统的彝族山村，总户数32户，120名村民。大约有560亩可耕地，然而，由于高海拔、恶劣天气和难以到达，整个村庄都处于贫困水平。



绿色流域采用农村参与式评估（PRA）让村民们一起来分析贫困的原因，突破发展的瓶颈，寻找出路。村民选出五位代表组成流域管理小组，监督环境保护，保证进入村庄的每一个项目为所有家庭充分知情。村民拥有知情、监督、参与、决策的权利。

PRA was adopted by GW to analyze the source and solution of poverty with villagers. Five representatives elected by villagers formed a committee to supervise environmental protection and development, and secure villages' rights to information, participation and decision making.





# 项目背景



路、水、电及粮食保障，成为横亘在波多罗前的发展瓶颈。在香港乐施会及南都基金会的支持下，村民投工修建了连通拉市坝区的山村公路，修建水池，埋设水管，使每家都有了便捷清洁的饮用水。改良土豆籽种，增收的土豆使村民全年都有了基本粮食保障。在GTZ支持下，村庄修建太阳能发电站，小山村结束了无电生活。在之后的十余年中，项目又支持村庄安装太阳能热水器，改换节柴无烟的火炉，改善了村民的生活品质。

For ten years, with the support of Oxfam HK, Narada Foundation and GTZ, road, water pipe and photovoltaic station were built, each household install solar water heater firewood efficient stove. All these improve villagers' quality of life.







## 项目介绍

波多罗生物多样性保护与可持续生计项目  
Biodiversity Conservation and Sustainable Livelihood  
Project of Boduoluo Village in Lashi Watershed



◆ 2014年，拉市海项目得到联合国全球环境基金小额赠款项目的资助，项目期望实现以下目标：

1、发展生态旅游、高山经济作物等多元生计，使村民增加经济收入，社区的森林、牧场等自然资源也得到可持续的利用。

2、人工种植高山药材，开发更多的生态农产品，使珍稀的野生药材得到保护。

3、两万亩生物多样区域得到保护，社区中生态脆弱区的植被得到恢复；

4、推广以生物多样性保护、可持续生计为中心的最佳社区发展实践。

◆ Since 2014, the project obtained support from GEF, with the goals of:

1、Diversified livelihood. Exploring new sources of income through developing eco-tourism and cultivating alpine medicinal herbs.

2、Rare wild medicinal herbs conservation. Cultivating alpine medicinal herbs and developing ecological agricultural products.

3、Protecting the biodiversity area, which covers the area of 20000 mu, and restoring vegetation in fragile ecology area.

4、Promoting good practice for community development in both ends: biodiversity conservation and sustainable livelihood.





### 项目介绍

生物多样性保护及植被恢复

Biodiversity Conservation and Vegetation Restoration



◆ 榿木是国家二级保护的濒危树种。种植榿木既可带来保护物种的长期生态效益，又可带来经济收入。

在GEF支持下，购买了1000棵榿木及130棵雪松，分发给波多罗31户村民，每户负责种植管理30棵。

并在榿木林下套种中草药。



### ◆ Biodiversity Conservation and Vegetation Restoration

Kayanoki is endangered species.

Planting kayanoki can bring both ecological and economic benefit.

1000 kayanoki and 130 cedar trees were purchased and planted in Boduoluo, herbal medicines were interplanted under these trees.







### 项目介绍

## 生物多样性保护及植被恢复 Biodiversity Conservation and Vegetation Restoration



2014年初，当地政府在波多罗新开了一条进村的道路，由于山高坡陡，到了雨季极易发生滑坡和泥石流，2015年-2016年，波多罗每户一个代表，在进村约三公里的道路旁种植杨树，以保持水土，恢复植被，防止灾害的发生。为达到快速保持水土的作用，还在杨树树下种植大麦草。

### Biodiversity Conservation and Vegetation Restoration

In early 2014, the local government built 3 kilometer earth road into the village. Due to steep slope, landslides easily happened in rainy season. To prevent soil erosion and Landslides, the whole village was mobilized to plant about 1000 poplar trees and grasses along 3 kilometer road, about 300 mu area return to green.





## 项目介绍

生态旅游与自然教育  
Ecotourism and Nature Education



### ◆ 生态旅游培训：

西南林业大学生态旅游专家段炼副教授到波多罗彝族村进行生态旅游培训。

### ◆ 民宿客栈管理培训：

为了提升彝族村民的接待和卫生水平以及服务意识，并改进村庄的住宿环境条件。10位村民代表进束河客栈，请冯梅老师从环境到庭院卫生，从床被标准到食物安排，对村民进行培训。



### ◆ Ecotourism and Nature Education

**The ecotourism training:** Professor Duan Lian, ecological tourism expert from Southwest Forestry University conducted eco-tourism training for villagers.

**Home inn management training:** In order to raise reception skill, service consciousness and improve sanitation, accommodation condition of Yi households, 10 villagers visited home inns in Suhe tourist village, and homestay management, bed standard, food quality, sanitation, and courtyard amenity training were given.







## 项目介绍

### 生态旅游与自然教育 Ecotourism and Nature Education



#### 到百花岭学习观鸟旅游

拉市海流域有300多种鸟类，8位村民来到保山高黎贡山百花岭社区学习观鸟旅游业经营方法。

#### 环境教育培训

“野性大理”（NGO）的刘斌老师向村民做了生态旅游中如何进行环境教育的培训。

#### Environmental Education and Training:

Liu Bin from "Wild Dali" (NGO) trained villagers how to do environmental education during ecotourism process.

There are more than 300 bird species in Lashi Watershed, villagers learn how to manage bird watching tourism from Baihualing community.





### 项目介绍

生态旅游与自然教育  
Ecotourism and Nature Education



- ◆ 村里建起展示中心，将房屋装饰上彝族画。
- ◆ 连通了从波多罗到文海的旅游步道，
- ◆ 每户建起一个垃圾池
- ◆ 在村口建起马厂，每天约接待20多位游客



- ◆ Built village culture exhibition center, and each household was painted Yi culture symbol as decoration.
- ◆ 5 kilometers eco-tourist trails was built to connected the village to Wen Hai wetland.
- ◆ Each household built a trash pool
- ◆ The village set up horse-riding center, receives more than 20 visitors every day.







### 项目介绍

## 生态旅游与自然教育 Ecotourism and Nature Education



波多罗三面环山，拥有两万亩原始森林，阿则雄吉古是拉市海流域最高峰。山顶上可俯瞰上百公里长的金沙江河谷、玉龙雪山、哈巴雪山和拉市海。与阿则雄吉古相望的是白头山，危崖峭壁怪石林立，山间有杜鹃群，玉龙雪山近在咫尺，是登山探险的好去处。并且，波多罗还保持了传统的彝族文化特色，是开展生态旅游的理想之地。生态旅游具有保护自然环境和维护当地人民生活双重责任。它不会破坏自然，还会使当地从保护自然资源中得到经济收益。开展生态旅游，为波多罗的绿色发展又开创一条道路。

Boduluo is surrounded by mountains, with 20,000 mu of virgin forest. In the village one can make a bird's eye view of Jinsha River Valley and Lashi Lake, can face to face with Jade Dragon snow mountain and Haba snow mountain. With diverse landscape and rich in traditional culture, the village become the ideal place for cultural and eco-tourism. Villagers recognized that eco-tourism not only could protect natural environment but also enhanced their life standard. Eco-tourism, become one of their green development pathways.







### 项目介绍

人工培育中草药

Cultivation of Chinese Herbal Medicine



► 2014年9月，绿色流域邀植物研究所吴之坤博士和丽江高山经济作物研究所杨少华上山，五位村民代表跟随，沿海拔3900米的阿则雄吉古及海拔4000米的白头山路线，对山区植被进行了全面的调查。识别其中的药用植物，并培训村民人工种植中草药。

► According to preliminary botanic investigation, there are 385 species of herbal medicine surrounding the village. After investigation and training, villagers realized wild herbal medicines are precious plant resources, cultivation of these herbs can not only protect biological diversity, but also use unique geographical conditions for another source of sustainable livelihood.







## 项目介绍

### 中草药种植 Herbal Medicine Planting



经初步考察，波多罗村周边植物有中药材种类为385种，野生药材是珍贵的植物资源，将这些药材进行人工培育，既可以保护生物多样性，又能利用波多罗独特的地理气候条件，为村民带来生计来源。在GEF的支持下，波多罗已种植近百亩中药材：云南重楼、云木香、粗茎秦艽、桔梗、川芎、附子、白及、川续断等。

With the support of the project, the village has planted nearly hundred acres Chinese herbal medicine: Yunnan Manyleaf Paris Rhizome, Saussurea costus, Gentiana dahurica Fisch, Platycodon grandiflorus, Ligusticum chuanxiong hort, Aconitum carmichaeli Debx, Bletilla striata, Dipsacus asperoides.







**成果**  
Outcome



如今，波多罗修了路，通了电，改良畜牧业、种植高山中草药、引进适应高寒山区的经济作物，成立生态旅游合作社开展文化和生态旅游，建立了多元的生计模式，走上绿色发展的道路，提高了村民的经济收入。村民盖了瓦房，买了汽车，生活有极大的改变。

Today, the villagers built a road, installed solar power, developed animal husbandry, grown Chinese herbal medicines, introduced in alpine economic crops, set up ecological tourism cooperatives, created multiple mode of livelihood and several pathways of green development. These help villagers earn more income. Every household built tile roofed house, some bought a car, life has a great change.







### 知识传播与交流

Knowledge Dissemination and Experience Exchange



- ◆ 2015年，丽江拉什海项目（包括波多罗项目在内）荣获UNDP赤道奖。11月24日至12月9日，于晓刚及孙敏赴巴黎参加颁奖仪式，与各国获奖者交流了拉什海环境保护、多元发展和气候适应的经历和经验，并参加气候峰会中UNDP组织的原住民社区气候应对分会。
- ◆ 2016年6月，《中国周刊》以拉市海项目为主题，进行了长篇报道，使拉市海项目获得了更广泛的社会认可。

- ◆ In 2015, Lashi Lake Watershed Program (including Boduoluo project) has the honor to receive the UNDP Equator Prize.
- ◆ In June, 2016, <China Weekly> reported the project, largely increased social awareness of the project.







**挑战**  
Challenge



► **玛咖的冲击：**

- ◆ 使用农药化肥
- ◆ 使用塑料地膜带来的污染
- ◆ 大规模单一种植带来的市场风险



► Challenge

The impact of Maca cultivation

Use chemical fertilizers and pesticides, plastic sheets bring pollution and

Large-scale single crop planting bring market risk.





教训

Lessons

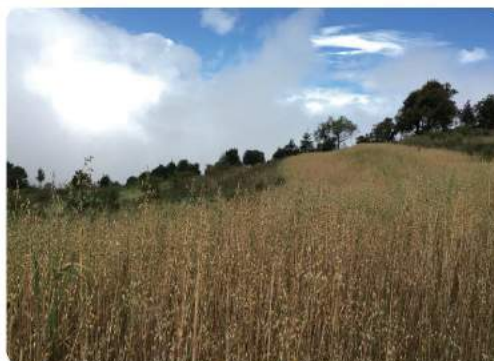


### 成立生态种植小组，保证绿色种植的底线

- ▶ 保护好环境和自身的安全，保证产品的安全，在市场下滑的情况下保证收益。
- ▶ 经历市场波动，村民认识到多样化的种植才能防范市场风险，传统的自然农耕法，带来稳定收入。
- ▶ 如今农户又恢复了一些传统作物的种植（荞麦、燕麦、紫土豆），使得种植的作物更多多样化，种植方式也更为绿色自然。

#### Lessons

- ▶ The villagers group, set up a bottom line for ecological cultivation to protect environment and their health safety, to ensure safety of products, and prepared for market risks.
- ▶ The villagers to realize diversified crop cultivation can prevent them from market risks, the traditional natural farming method and products bring more sustainability for their livelihoods.
- ▶ Now the villagers resumed some traditional crops (buckwheat, oats, purple potatoes), increase more diversification of crops, planting technics are also greener.





总结

波多罗生物多样性保护与可持续生计项目  
Biodiversity Conservation and Sustainable Livelihood  
Project of Boduoluo Village in Lashi Watershed



如今，这个小小的村庄保护了两万多亩山林，野生动植物数量得到恢复，滑坡泥石流减少了，森林得到修养生息，生活环境得到很大的改善。



Today, Boduoluo community protect well more than 20,000 mu of mountain forest, number of wild animals and plants preserved, landslides reduced, forest coverage increased, living condition greatly improved.







### 致谢

波多罗生物多样性保护与可持续生计项目  
Biodiversity Conservation and Sustainable Livelihood  
Project of Boduoluo Village in Lashi Watershed



- 波多罗村民和绿色流域诚挚地感谢 全球环境基金小额赠款项目和UNDP的项目官员及中国专家组对我们的大力支持。
- 相信波多罗村将会走上一条绿色、包容、繁荣的发展之路。

Boduoluo villagers and Green Watershed sincerely thank Global Environment Facility Small Grants Programme, UNDP project officials and China experts group for strong support. We believe that Boduoluo is and will be on greener, inclusive and prosperous development road.



绿色  
包容  
繁荣  
发展

