

世界文化遗产哈尼梯田环境变迁调查研究

黄绍文 黄涵琪(英文翻译) (红河学院民族文化遗产研究中心主任、教授) The Investigation of Environmental Changes of the World Heritage Hani Rice Terraces

Huang Shaowen, Huang Hanqi

(Ethnic Cultural Heritage Research Center, Honghe University, Mengzi, Yunnan,)





引 言 (Introduction)

哈尼梯田于2010年6月被联合国粮农组织正式列入世界农业文 化遗产。2013年6月22日第37届世界遗产大会上, "哈尼 梯田文化景观"列入世界遗产名录。哈尼梯田文化景观遗 产是第一个以民族族称命名的世界遗产。

Hani Rice Terrace was officially included in the FAO World Agricultural Heritage in June 2010 and "Hani Rice terraced cultural landscape" inscribed on the World Heritage List in June 22, 2013,37th World Heritage Conference. Hani Rice terraced cultural landscapes is the first world heritage

site name after minorities .

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(一)哈尼族人口分布 Hani population distribution

- 全世界哈尼族有200多万人,其中,中国哈尼族163万余人, 主要分布在云南省红河哈尼族彝族自治州、普洱市、玉溪 市、西双版州。国外的哈尼族约50万人,分布在缅甸、泰 国、老挝、越南4国的北部山区。
- There are more than 200 million Hani people in the world. China has more than 163 million Hani people which is mainly in Honghe state, Pu'er City, Yuxi City and Xishuangbanna state, Yunnan province. There are 50 million Hani people located in the mountains of northern Burma, Thailand, Laos, Vietnam.

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(二)哈尼族梯田分布区域

The Hani Rice Terrace distribution area

哈尼族的梯田分布在滇南哀牢山区,总面积达140多万亩。其中,红河州有100多万亩,主要分布在元阳、红河、绿春、金平4县。普洱市有30万亩,主要集中在墨江县、宁洱县、江城县。玉溪市约有10万亩,主要分布在元江。

Hani rice terrace has more than 140 million acres in total which is distributed in Ailao mountain, southern of Yunnan. Among them, the Honghe state has more than 100 acres, mainly in Yuanyang, Honghe, Luchun and Jinping County. There are 30 acres in Pu'er City, which is distributed mainly in Mojiang County, Ning'er County and Jiangcheng County. Yuxi City has more than 10 acres, mainly in Yuanjiang County.

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哈尼梯田区域分布示意图

Hani Rice Terrace area distribution diagram





哈尼梯田立体分布

Hani Rice terrace three-dimensional distribution

- 哈尼梯田纵向空间分布,是在海拔300~2300米之间,集 中分布区是1400~1800米之间,从低海拔至高海拔连片的 梯田级数达3000多级。
- The vertical distribution of Hani rice terrace is between 300-2300 meters above sea level. The distribution area is concentrated between 1400 to 1800 meters above sea level and it is from low to high altitude terraces contiguous series of more than 3000 levels.



梯田立体分布图

Hani Rice Terrace three-dimensional distribution diagram





随山势展开的立体梯田

Hani Rice Terrace three-dimensional distribution diagram





哈尼梯田文化遗产保护问题

The cultural heritage protection in Hani Rice

Terraces

(一)生态系统功能下降,景区开发与景观破坏突出
(二)梯田面积萎缩,改变传统利用方式
(三)外来物种入侵造成梯田新的环境问题
(四)传统观念改变,梯田文化传承面临危机
(五)传统民居的变迁,导致梯田与村落和谐景观的 消失

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- (--) The decline of ecosystem function and the serious destruction of landscape
- (二) Terrace area shrinking
- (三) Environmental problems of alien invasive species
- (四) The traditional concept changed, the cultural heritage of terraces facing the crisis
- (五) Changes in the traditional residential areas, leading to the disappearance of the harmonious landscape between terrace and the village



(一) 生态系统功能下降,景区开发与景观破坏突出

The decline of ecosystem function and the serious destruction of landscape

哈尼梯田在海拔1500米以下均为保水田,也是哈尼梯田的 主体部分,但由于环境的变迁,每到枯水季,离沟水源较 远的部分保水田也变成干田,导致栽秧时令也无法移栽秧 苗。

The paddy field, is the main part of Hani terrace and it is below an altitude of 1500 meters of Hani terrace. Because of the changes in the environment, part of paddy field is far away the water resource, it will change to dry field in every dry season.



1、水源减少的三个因素

Three Factors of water reduction

一是在市场经济的驱驶下,改变水源林的生态结构。许多 村寨的旱地、荒山,砍伐灌木林后大量栽种了杉木林,从 涵养水分功能来讲,杉木虽然是经济木材,但吸水力强, 其林下较为干燥,从而导致水源林涵养水分功能的减退。

Under the driving of the market economy, the ecological structure of the forest is changed. Many villages began to plant Chinese fir. From the perspective of water conservation function, Chinese fir has a strong water absorption, and it will resulting in forest conserve moisture function decline.

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水田变旱地种植杉木

Planting Chinese fir in dry land





二是生态系统功能下降。元阳县1985年森林覆率只有12.9%,但灌溉水资源还是比较充足。2003年以来实施退耕还林等生态工程之后,至2014年森林覆率上升到43%,哈尼梯田遗产区的森林覆盖率达67%。但由于遗产区50%的植被属于次生退耕还林,涵养水源的生态功能下降,导致枯水季不能保证梯田水源。

Ecosystem function decline. In 1985, the forest coverage rate of Yuanyang county was only 12.9%, but the irrigation water resources were adequate. Since 2003, after the implementation of the ecological engineering of returning farmland to forest, the forest coverage rate rose to 43% in 2014, and the forest coverage rate of Hani's terrace area was 67%. But due to the heritage area 50% of vegetation is secondary returning farmland to forests, water conservation ecological function decline and can not guarantee the terraced field water in dry season.



三是全球气候变化,2009年以来连续干旱的背景下,哈尼 梯田的"绿色水库"水量缩减,导致工程性缺水较为严重 。导致栽秧时节无水流,雨水季节泛滥洪灾,由此水资源 平衡被打破,造成部分梯田得不到有效灌溉,面临干涸危 机。

Because of the global climate change and continuous drought since 2009, the water of Hani terrace reduced. This resulted in a serious water shortage and water resources balance is broken. Part of the terrace is not effective irrigation and facing a crisis of dried up as well.

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一年四季的保水梯田 Hani Rice Terrace





2、箐口梯田景观前后对比图

Qingkou terraced landscape

箐口地处梯田风景核心区,村落磨菇房与梯田合二为一体 ,民风纯朴,具有典型的哈尼族传统村落生态文化。凡是 来元阳游客都要在箐口村西南面的公路边停下来远眺东北 方向的箐口村落画面。

Qingkou village is the core area of the terraced landscape. It is a typical traditional Hani village.

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不同季节的箐口梯田景观

Hani Rice Terrace in different seasons

箐口冬春景观(2006年初春摄) Winter (2006) 箐口村初秋景观(2006年9月摄) Autumn(2006)





箐口村生态文化

Ecological culture in Qingkou village

箐口村祭山神的地点位于村西南4千米处的一座小山包丛 林中,森林面积约50亩,其周边还有约500亩的荒地,是 村民的放牧场,其下方有层层梯田分布。因此,这片神林 实际上既是宗教活动地点,又是生态系统良好的水源林。 The sacrificial ceremony site in Qingkou village is a hill which is located in the southwest of the village. On this mountain, there are 50 acres of forest area, 500 acres of wasteland and it has layers of terraced fields distribution. Therefore, this mountain is actually the site of religious activities, but also a good ecological system of water forests.

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sacrificial ceremony





"美丽家园"建设中等口景观被毁 "Beautiful home" policy destroyed Qingkou landscape

2013年实施"哈尼梯田小镇"建设选址就在箐口神山林周 边,由此破坏了梯田与森林层层相映的村落景观,神林外 围已盖起了一栋栋"蘑菇房别墅"。由于这座神林及缓冲 区的牧场植被破坏,其下方的梯田早已干涸。我们可以从 以下"开发"前后的图片中可得到印证。

In 2003, the site selection of "Hani town" was in the surrounding mountains of Qingkou. Because of the construction of "Hani town", the terrace and the forest layers landscape were destroyed.

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梯田景观破坏前后对比图

The comparison chart of Terrace landscape

景观破坏之前(13年6月5日摄) Before the damage of landscape (2013)

景观被毁之后(2014年5月28日摄) After the damage of landscape(2014)



A、
 森林—村寨—梯田美丽的箐口景观不复存了,新建的"别墅"及延伸的公路破坏了原有的箐口梯田自然景观。The new "villa" and the extension of the highway destroyed the original natural landscape. (2015年3月9日摄)





神山神林没有毁之前(2006年6月11日摄) Before the destruction of the forest(2006)





16月方代 Honghe University



(二) 梯田面积萎缩,改变传统利用方式 Terrace area shrinking

- 21世纪初期以来元阳梯田环境的另一大变迁是水田 改旱地。由于海拔1200米以下的土地适宜发展热带 水果,其中,香蕉是元阳县的水果支柱产业。
- Since the beginning of twenty-first Century, the other major changes in the field of Yuanyang terraces are the changes of paddy field to dry land. Due to an altitude of 1200 meters below the land suitable for the development of tropical fruit, in which the banana planting is the pillar industries in Yuanyang county.



- 2009年香蕉市场价格4元/千克,由此热区部分梯田成为开发香蕉基地的对象,如俄扎乡3000多亩哈播梯田,当地农民经营了数百年的水稻种植如今变成一年四季都是一片葱绿的香蕉基地。
- Because of the banana market price of 4 yuan / kg, some terraced fields change to banana fields, such as Ezha village. There are 3000 acres terraced fields before, but now become banana fields.



哈播梯田变成四季葱绿的香蕉地

Terraced fields change to banana planting





2009年以来的西南大干旱背景下,遗产区的部分梯田也 改为旱地种植玉米、黄豆等作物。最典型的是攀枝花 乡保山寨梯田和老虎嘴梯田先后有2000多亩梯田改为 旱地种植玉米、黄豆。

Since 2009, because of the drought in the southwest of China, the part of the field has changed to dry land to grow corn, soybeans and other crops. Baoshanzhai terraced field in Panzhihua and Laohuzui terraced field have more than 2000 acres of fields chang to dry land to grow corn and soybeans.



老虎嘴梯田是哈尼梯田世界遗产区的主要景观之一,2 每当秋收之后至第二年春季栽秧之前都是波光粼粼的 梯田景观,期中有一块造型远望形如奔驰的骏马,在 每当夕阳西下晚霞的映照下显得特别壮观。如今由于 水改旱地而骏马的胫部、腹部等许多地方出现了斑痕, 晚霞映照下神奇的骏马不复存了。

The Laohuzui is one of the main landscape of Hani rice terrace. One of terraced field in Laohuzui likes the galloping horse after the time of harvest to the spring of the coming year. But now, because of some terraced field change to dry land, a beautiful sight doesn' t exist any more.



据2015年3月调查,2009~2014年末元阳县梯田改旱地面 积共34557亩,其中涉及梯田遗产区新街、攀枝花、黄 茅岭乡的梯田改变土地利用方式的5118亩,占元阳县 改变梯田利用面积14.85%。如此下去,保护遗产区梯 田不容乐观。

According to the survey in March , Yuanyang terraced field change to dry land area is 34557 acres between the year of 2009 to 2014. It includes the terraced heritage area Xinjie, Panzhihua, Huangmaoling. Faced with such situation, to protect the heritage area of the field is not optimistic.











遗产区攀枝花乡螺丝田(2005年1月摄) Heritage area in Luositian, Panzhihua(2005)





遗产区攀枝花乡螺丝田(2001年2月6日摄) Heritage area in Luositian, Panzhihua(2001)










螺丝田周边梯田的变迁(2016年5月3日摄) Changes of Terrace in Luositian (2016)





(三)外来物种入侵梯田的环境问题

Environmental problems of alien invasive species

21世纪以来,外来生物物种入侵不得引起高度关注,其中克氏螯虾的入 侵造成梯田新的环境问题。克氏螯虾在当地俗称"小龙虾",原产北 美洲,虾产卵繁殖力惊人,一尾母虾孵化幼仔100~300只。小龙虾对 梯田的最大危害表现在以下几个方面:

Since the 21st century, the crayfish invasion caused new environmental problems in terraced fields. Procambarus clarkii in local commonly known as "crayfish", native to North America. The dangers of the crayfish in the terraced fields as following:

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第一,由于小龙虾善于掘洞,洞深可达1.5至2米,因而常常 威胁到田埂、堤坝的安全。导致梯田里的水关不住,甚至 使得田埂垮塌。

第二,除了掘洞,小龙虾还吞食梯田生物,严重地威胁到梯 田生物多样性。据调查,在小龙虾较多的田块,梯田鱼自 身已无法进行繁衍,泥鳅、黄鳝等也越来越少了。

First of all, the crayfish are good at digging. The depth of hole up to 1.5 to 2 meters, which often pose a threat to the safety of the ridge.

Secondly, crayfish eat the living beings in the terrace. It is a serious threat to the biodiversity of terraced fields.

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 小龙虾入侵元阳梯田的时间在2007年前后。入侵途径大致 是当地人到建水等地打工时见龙虾在街上被一盆盆地摆着 卖,认为市场前景好就将其作为美食引入元阳梯田。由于 龙虾具有惊人繁殖力和超强生存能力,种群规模扩展很快
Crayfish invaded Yuanyang terrace in 2007. The local people believed that crayfish would valuable in the market. So The crayfish were being introduced in the terraced field of breeding. But the crayfish has a remarkable fecundity and the number of crayfish has expanded rapidly.



外地市场大盆出售龙虾

crayfish





2015年2月当地居民从梯田中捉龙虾出售 crayfish



人大子氏(四) 传统观念改变,梯田文化传承面临危机
The traditional concept changed, the cultural heritage of
terraces facing the crisis

梯田农耕技术是哈尼族千百年来传承下来的治家本领,在20 世纪80年代,年轻人仍然一丝不苟地学习前辈的耕作技术。 按哈尼族传统衡量年轻人的人才标准,小伙子帅不帅,不 是看他的相貌身材,而是看他的耕田技术如何,如果小伙 子是犁田、耙田、筑田埂的能手,就会得到大众的称赞, 也就会赢得姑娘们的青睐。

Terrace farming technology has been handed down through the ages for Hani people. In the 1980s, young people still learning farming techniques from seniors. From Hani's traditional view, if a man has a good farming technique, he will get the love from girls.

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- 到了20世纪90代后,农民的温饱问题已解决。市场经济为 主导下的社会文化背景促使青壮年外出打工,由此引发传 统梯田农耕管理观念的改变,今天活跃在梯田里耕作的都 是中老年人,年轻人都在外面打工,甚至个别地区的梯田 被放荒,梯田文化的传承面临危机。
- During 1990s, for farmers, the problem of food and clothing has been solved. Under the background of market economy, young people have learned that they have to migrate if they want to survive. Only old people stay to farming in Hani village. Because of the change of traditional terraced farming concept, terraced fields culture faced a crisis.



(五)传统民居的变迁,导致梯田与村落和谐景观的消失

Changes in the traditional residential areas, leading to the disappearance of the harmonious landscape between terrace and the village

哈尼族传统民居村落星罗棋布地散落在半山腰间,远望其 形犹如朵朵蘑菇,故称"蘑菇房"。哈尼山寨的蘑菇房, 在层层梯田环抱下显得神奇美丽、生机盎然。在夕阳下余 辉闪闪的梯田和早晨哈尼山寨吹烟袅袅的蘑菇房成为人与 自然和谐的美景!

Hani's traditional villages scattered in the mid waist afar shaped like a mushroom, it referred to as the "mushroom house". Hani mushroom house, surrounded by layers of terraces is magical and beautiful.



20世纪90年代中期后,随着自然环境的变迁,建筑用材山茅 草逐年减少,梯田推广杂交稻后,稻秆短小,不宜做屋顶 覆盖的材料。到了21世纪初期,在西部大开发力度的加强, 蘑菇房成为落后的代名词,在当地政府彻底消除蘑菇房的 号令声中,哈尼山寨都变成白华华一片石棉瓦房,失去了 往日哈尼村寨的特色。

After the mid 1990s, with the changes of natural environment, the construction material of thatch is reduced year by year. When the promotion of hybrid rice terraces, rice straw becomes short and it is not suitable to do the roof covering material. At the beginning of the 21st century, the mushroom house becomes synonymous with backwardness. The local government ordered thoroughly demolition

of traditional mushroom room. As a result, there are many tile-roofed house in Hani village now and they lost the characteristics of Hani villages in the past.

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和谐的哈族尼传统村落景观(1990年12月摄) Hani traditional village landscape(1990)





2004年箐口村落景观: 错落有致的传统蘑菇房 Traditional Hani mushroom house





"专家"对哈尼族"蘑菇房"民居设计图 Hani mushroom house (designed by architecture experts)





当地政府主导下"专家"设计改造的蘑菇房 被当地居民称为"穿衣戴帽"工程 Hani mushroom house (designed by architecture experts)





"专家"设计的"蘑菇房"实践

Hani mushroom house (designed by architecture experts)





结论:水稻种植是梯田保护的核心

Conclusion: Rice cultivation is the core of protection of Hani Terraces

水稻种植是梯田可持续发展的标志,也是梯田活态遗产 的标识。多样性品传统种植,不仅体现生物多样性,而 且体现活态稻种基因库。

Rice cultivation marks sustainable development and the living heritage of Hani terraces. Traditional planting represents the biodiversity and reflects the living rice gene pool.



优质的传统品种,既是绿色食品,又能体现经济价值。 人们在水稻种植中获得较高的经济利益后,就能传承 梯田农耕文化,自然就保护了梯田,也就实现了可持 续发展。

Quality traditional rice variety is not only green food, but also valuable. If people get high economic benefits in rice cultivation, they will pay more attention to inherit farming culture. It will achieve sustainable development because of protection of Hani rice terraces.





最后用两句哈尼族语言结束我的发言 Finally,I will say a few words of blessing in Hani language:

Col jol bi sal, gaoq laoq bi meeq (Hani language)

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意为:身体健康,吉祥如意! Good health, good luck! 谢谢! Thank you!