



GEF/SGP全球环境基金小额赠款计划

海南省儋州市老市村湿地生态修复及垃圾管理项目

project of Wetland Restoration and Waste Management in Laoshi Village of Danzhou City, Hainan province



目录

Contents

海南省儋州市老市村湿地生态修复及垃圾管理项目

01 前言

Foreword

03 背景

Background information

06 项目介绍

Project introduction

07 项目资助方

Sponsors

09 执行机构

Institution of Project Implementation



目录

Contents

海南省儋州市老市村湿地生态修复及垃圾管理项目

10 要解决的问题与对策

Problems and Solutions

19 项目实施工作与成果

Implementation and Achievements

29 项目特色亮点

Highlights of the project

33 鸣谢

Acknowledgment



前言

生物多样性是人类赖以生存和发展的重要基础，也是城市发展的自然底色。在城市化进程中，保护生物多样性对于维护城市生态平衡、促进人类可持续发展

蓝丝带海洋保护协会自成立以来，就投身到海洋生物多样性保护和可持续利用议题中，在14年发展历程里，不断探索，积极推动开展“渔业社区保护地”行动，希望为解决“海洋资源可持续发展与社区生计发展之间的矛盾”摸索出一条新路，引导沿海社区居民兼顾人与环境共同持续发展，尝试向人与环境和谐共生模式转型。在开展沿海社区海洋生态资源与环境保护的同时，推动渔业社区生态发展，

2019年12月，在联合国开发计划署全球环境基金小额赠款计划（UNDP-GEF-SGP）的支持下，“海南省儋州市老市村湿地生态修复及垃圾管理”项目在海南省儋州市老市村落地，旨在通过项目，完成红树林湿地修复及生态养殖技术推广和实施试点；通过环境治理体系建设及活动开展，减少社区失控垃圾，推动老市村陆源污染防治；搭建公众参与与海洋保护平台，加强公众教育和项目宣传，提高当地居民和青少年环保意识；通过为村民赋能，提高社区环境治理和公共事务治理能力。项目执行期自2019年12月至2022年1月。



我们编写的这个总结报告，是实施《海南省儋州市老市村湿地生态修复及垃圾管理》项目的重要组成部分。也希望可以作为向有关部门及社会各界呼吁湿地保护、社区可持续发展等思考的建议书，希望可以在海洋生物多样性保护和可持续利用议题中起到积极推动作用。

Foreword

The important basis for human survival and development is biodiversity, which is also the natural background of urban development. In the process of urbanization, the conservation of biodiversity plays an important role in maintaining the ecological balance of the city and promoting the sustainable development of human beings. Since its establishment, the Blue Ribbon Ocean Conservation Association (BROCA) has been committed to the conservation and sustainable utilization of marine biodiversity. During the 14 years of development, it has continuously explored and actively promoted the "Fishing Community Protection Area" action, hoping to find a new way to solve the "contradiction between the sustainable development of marine resources and the development of community livelihoods". It has guided the residents of coastal communities to take into account the sustainable development of people and the environment, and tried to help transform into a model of harmonious coexistence between people and the environment. While protecting the marine ecological resources and environment of coastal communities, the BROCA promotes the ecological development of fishing communities, raises their environmental awareness, and helps their sustainable development.

In December 2019, with the support of the Small Grants Program (UNDP-GEF-SGP) of the United Nations Development Program (UNDP), the "Wetland Ecological Restoration and Waste Management in Laoshi Village, Danzhou City, Hainan Province" project has been made substantial progress in Laoshi Village, Danzhou City, Hainan Province. This project aims to accomplish the following tasks. Mangrove forest wetland restoration and pilot projects for the promotion and implementation of ecological aquaculture technology. Through the construction and activities of the environmental governance system, the out-of-control garbage in the community is reduced, and the prevention and control of land-based pollution in Laoshi Village is promoted. Build a platform for the public to participate in marine conservation, improve public education and project publicity, and raise environmental awareness of local residents and youth. By empowering villagers, the community's capacity for environmental and public governance is enhanced. The project implementation period is from December 2019 to January 2022. The summary report we wrote is an important part of the implementation of the project Wetland Ecological Restoration and Waste Management in Laoshi Village, Danzhou City, Hainan Province. It is hoped that it can be used as a proposal to appeal to relevant departments and all walks of life for wetland protection and sustainable community development, etc.. And it is hoped that it can play a positive role in promoting the conservation and sustainable utilization of marine biodiversity.

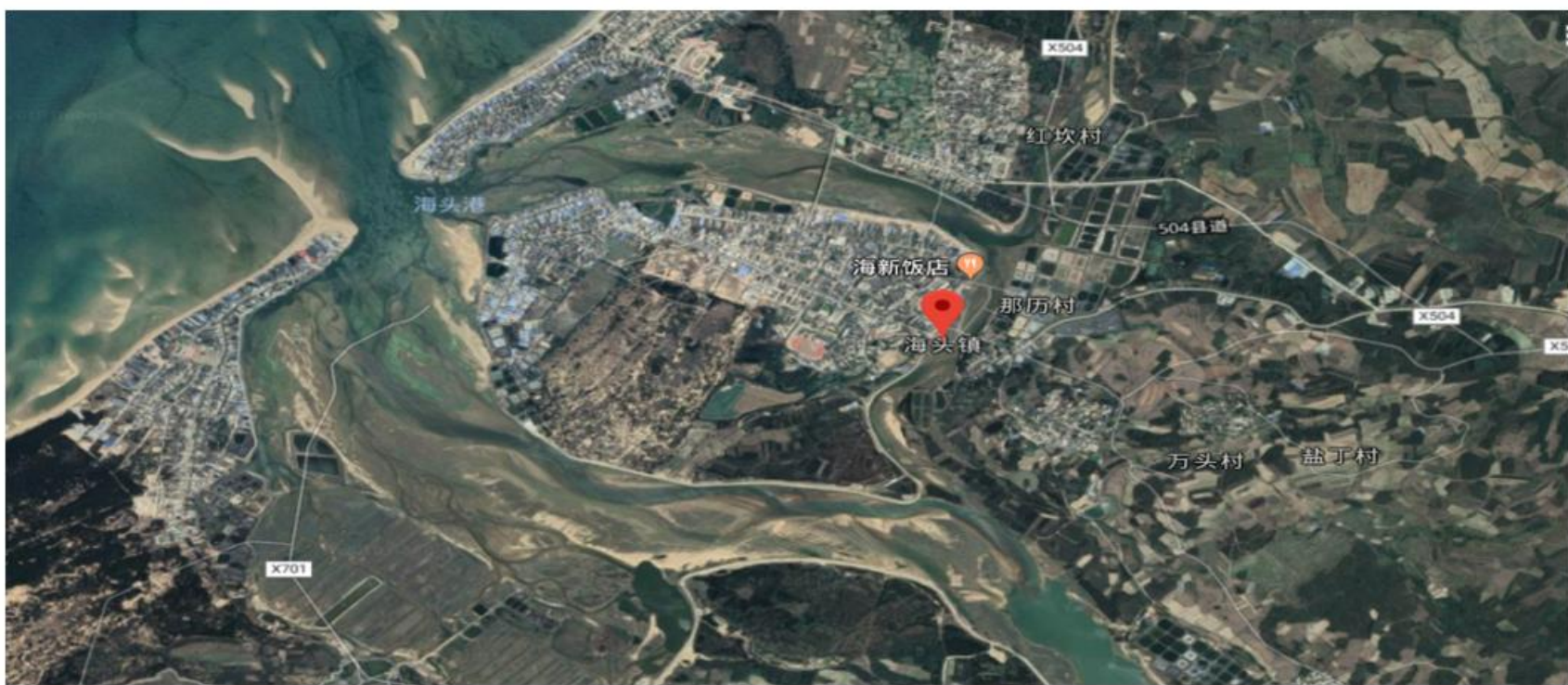


背景介绍

项目地老市村，位于海南省儋州市海头镇，其地理位置为东经108.95北纬19.50，据《儋县志》记载，清朝时期是海头镇政治经济文化中心，建有商铺百余间、镇公所及小学，现存清代乾隆钦使监造的康王庙及冶炼铁铜矿遗址，古河道有大船通过，贸易繁盛。建国后日渐没落成一村落。自古传承的儋州调声，感情热烈，可歌可舞，被誉为"南国艺苑奇葩"，2006年5月20日经国务院批准列入第一批国家级非物质文化遗产名录。

项目地老市村，处于典型的河口区域，珠碧江环绕，淡水和海水在此处混合，河流生态系统和海洋生态系统在此处相互交错，形成了独特的生态环境，是各种水生动物的重要栖息地。现居住人口共88户，多以出外务工维持生计，常住人口约300人，以儿童、女性、老人为主。。该地原世代以盐田为主要产业。1996年受政府管控暂停，挖塘养殖鱼虾，原有湿地生态受损严重，红树林锐减，树种单一，污染严重。项目前走访发现，村内湿地生态遭到破坏，生物多样性受损；村落垃圾失控，露天堆积，部分失控流入朱碧江，并进一步汇入北部湾；村民环境保护、垃圾管理及分类意识淡薄，环保主动性及能力匮乏，收入渠道单一。

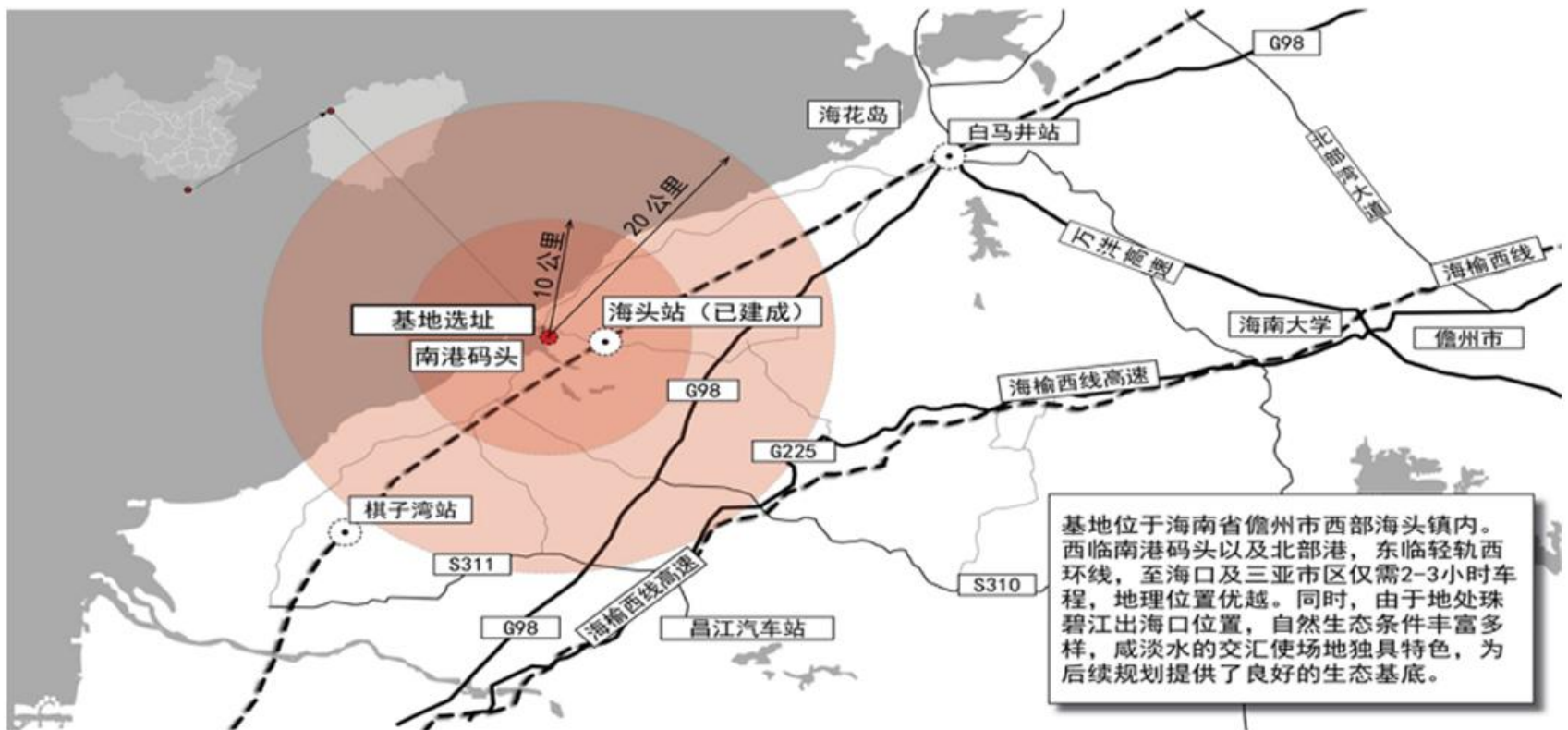
结合以上问题及社区需求，项目设计开展了一系列工作计划，致力于推动社区建立环境治理体系，以生态优先为原则共建、共治、共享，实现生态环境修复与可持续生态资源利用相结合的综合效益发展体。



Background information

场地区位 City Location

海南儋州老市村 本土未来
初步设计工作坊



织地社 | ZDS WEAVING GROUND

The project site is Laoshi Village. It is located in Haitou Town, Danzhou City, Hainan Province, and its geographic location is 108.95 E 19.50 N. According to Dan County Chronicle, it was the political, economic and cultural center of Haitou Town during the Qing Dynasty, with more than 100 shops, town halls and primary schools. There were still the ruins of the smelting iron and copper mine and the Kangwang Temple built under the supervision of the imperial envoy sent by Emperor Qianlong of the Qing Dynasty. There were large ships passing through the ancient river, and trade was prosperous. After the founding of the People's Republic of China, it gradually declined into a village. The Danzhou tune, which has been passed down since ancient times, has great passion and can be used for singing and dancing. Danzhou tune is known as the "Wonderful Flower of the South Art Garden", and was included in the first batch of State-Level Non-Material Cultural Heritage List with the approval of the State Council on May 20, 2006.

The project site, Laoshi Village, is located in a typical estuary area, surrounded by the Zhubi River, where fresh water and sea water are mixed. Because the river ecosystem and the marine ecosystem are intertwined here, a unique ecological environment is formed,





which is an important habitat for various aquatic animals. There are a total of 88 households living here, and most of them go out as migrant worker to make a living. And there are about 300 permanent residents, mainly children, women and the elderly. In Laoshi Village, salt pans were the main industry for previous generations. In 1996, due to government control, the salt pans were suspended, and they began to dig ponds to breed fish and shrimp, which caused serious damage to the original wetland ecology, sharp decline in mangrove forest, single tree species, and serious pollution. The visit before the project found that the wetland ecology in the village was destroyed and the biodiversity was damaged. The village garbage was out of control, accumulated in the open air, and some of the out-of-control garbage flowed into the Zhubi River and further into the Beibu Gulf. Villagers had weak awareness of environmental protection, waste management and classification, lacked of the initiative and ability of environmental protection, and they had only a single source of income.

Based on the above problems and the needs of the community, the project has designed and carried out a series of work plans. The project is committed to promoting the establishment of an environmental governance system in the community. Taking ecology as the priority, the project leads community residents to build, govern and share together, and realize a comprehensive benefit development community that combines ecological environment restoration and sustainable ecological resource utilization.

项目介绍

通过项目，完成红树林湿地修复及生态养殖技术推广和实施试点；通过环境治理体系建设及活动开展，减少社区失控垃圾，推动老市村陆源污染防治；搭建公众参与海洋保护平台，加强公众教育和项目宣传，提高当地居民和青少年环保意识；通过为村民赋能，提高社区环境治理和公共事务治理能力。



Project introduction

This project aims to accomplish the following tasks. Mangrove forest wetland restoration and pilot projects for the promotion and implementation of ecological aquaculture technology. Through the construction and activities of the environmental governance system, the out-of-control garbage in the community is reduced, and the prevention and control of land-based pollution in Laoshi Village is promoted. Build a platform for the public to participate in marine conservation, improve public education and project publicity, and raise environmental awareness of local residents and youth. By empowering villagers, the community's capacity for environmental and public governance is enhanced.



项目资助方介绍

Sponsors

联合国开发计划署

United Nations Development Program (UNDP)

联合国开发计划署是联合国系统为终止贫困、不平等和气候变化而工作的主要机构。与全球170多个国家的专家和伙伴组成的广泛网络合作，联合国开发计划署帮助各国建立人与地球和谐的综合性和持续性解决方案。

四十多年来，作为联合国从事发展的全球网络，联合国开发计划署充分利用其全球发展经验，支持中国制定应对发展挑战的解决之道，并为中国开展南南合作和参与全球发展提供协助。联合国开发计划署目前在中国的重点工作领域为：减少贫困、善治、危机预防与恢复及能源与环境。

UNDP is the leading United Nations organization fighting to end the injustice of poverty, inequality, and climate change. Working with our broad network of experts and partners in over 170 countries, we help nations to build integrated, lasting solutions for people and planet.

UNDP has drawn on world-wide experience for over four decades to assist China both in developing solutions to its own ongoing development challenges, and in its south-south cooperation and engagement in global development. Domestically, our work focuses on Good Governance, Energy & Environment, Poverty Reduction and Disaster Management.



GEF北部湾项目实施机构合影

> 保护海洋生态 人海和谐共生

全球环境基金小额赠款计划

The Global Environment Facility (GEF) Small Grants Programme (SGP)

小额赠款计划成立于1992年，是全球环境基金的共同项目，由联合国开发计划署负责实施。小额赠款计划在全球125个国家，向当地民间组织，特别是原住民、妇女、青年实施的可持续发展项目提供资金，以促进基于社区的创新、能力建设和赋能。小额赠款计划在全球已经支持了20000多个社区项目，工作领域包括保护生物多样性、减缓和适应气候变化、防止土地退化、保护国际水域、以及减少化学品的影响，同时发展可持续的生计。

The Small Grants Programme (SGP) is a corporate programme of the Global Environment Facility (GEF) implemented by the United Nations Development Programme (UNDP) since 1992. SGP grant-making in over 125 countries promotes community-based innovation, capacity development, and empowerment through sustainable development projects of local civil society organizations with special consideration for indigenous peoples, women, and youth. SGP has supported over 20,000 community-based projects in biodiversity conservation, climate change mitigation and adaptation, prevention of land degradation, protection of international waters, and reduction of the impact of chemicals, while generating sustainable livelihoods.





项目执行机构

海南省蓝丝带海洋环境保护协会

海南省蓝丝带海洋环境保护协会的前身是2007年6月成立的三亚市蓝丝带海洋保护协会，基于机构发展战略需要，于2018年4月在海南省民政厅注册成立。是一家以“保护海洋生态，人海和谐共生”为使命、以“保护海洋就是保护我们自己”为价值观，以“团结一切力量，保护美丽海洋”为行动纲领的中国民间公益社会团体，致力于构建全球化、开放性海洋保护公益生态平台。

蓝丝带海洋保护协会自成立以来，持续在全国各地开展海洋生态资源保护、海洋污染监测与治理、海洋科学教育、海洋保护网络建设等海洋保护工作；逐步树立起海岸线监督治理品牌、海洋卫士品牌、红树林宣传保护品牌、社区精准环保品牌、渔业社区环境改善等多个品牌项目。同时，更积极助力海南生态自贸港建设，全力推进“山水林田湖生命共同体”生态文明建设，持续践行“绿水青山就是金山银山”的新时代生态文明价值理念。

Institution of Project Implementation

Blue Ribbon Ocean Conservation Association (BROCA)

The Blue Ribbon Oceanic Conservation Association was founded in 2007. It is an Non-Governmental Organization with the mission of "protecting the marine ecology and the harmonious coexistence of human and the sea", the value of "protecting the ocean is protecting ourselves", and the action of "uniting all forces to protect the beautiful ocean". The Chinese non-governmental public welfare social organizations of the program are committed to building a global and open marine protection public welfare ecological platform.

Since its establishment, it has continued to carry out marine ecological resource protection, marine pollution monitoring and management, marine science education, marine protection network construction and other marine protection work all over the country; gradually establishing coastline supervision and management brands, marine guards, and mangrove publicity and protection brands, Community precision environmental protection brand, fishery community environmental improvement and many other brand projects. At the same time, it has actively assisted the construction of Hainan's ecological free trade port, fully promoted the construction of ecological civilization of the "Landscape, Forest, Field and Lake Life Community", and continued to practice the value concept of ecological civilization in the new era of "Green water and green mountains are golden and silver mountains".

要解决的问题与对策

Problems and Solutions

要解决的问题:

(一) 湿地生态遭到破坏，生物多样性受损，村民收入渠道单一：

根据走访了解，项目地老市村原以盐田为主要产业，原始湿地生境近400亩，后挖塘养殖鱼虾，原有湿地生态受损。养殖期间，大量含有药物及饲料废水直排入海，导致近海生态及物种多样性遭到破坏，环境受到污染。现存600平方米红树林生境状况较差，树种单一，污染严重。村民收入渠道单一，多外出务工，社区空心化严重。

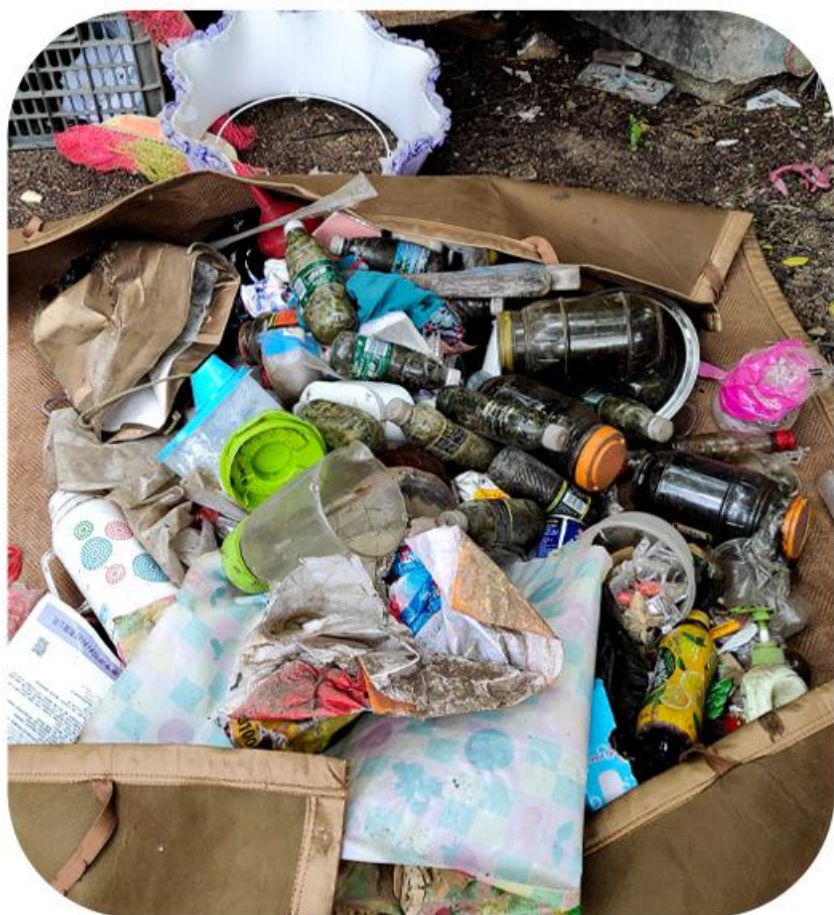


污染严重，红树林生境受损

(二) 村落垃圾失控，露天堆积，垃圾失控流入大海：

村落失控垃圾较多，虾塘边、红树林下、百年酸豆林内等均有多处垃圾露天堆积。失控垃圾以生活垃圾、历史留存的养殖废弃物、海漂垃圾及建筑垃圾等混杂堆放，以塑料垃圾为主。越来越多难以降解的垃圾，随涨潮浸入湿地，部分失控流入珠碧江，并进一步汇入北部湾，生态遭到污染破坏。





村落垃圾失控，露天堆积



虾塘边垃圾失控

> 保护海洋生态 人海和谐共生

(三) 村民环境保护、垃圾管理及分类意识淡薄，环保主动性及能力匮乏：

村民缺少环境保护理念和意识的引导，海洋及环境保护教育匮乏，公众教育下沉不足，海洋及环境保护的活动及工作参与途径不清晰，公众环境保护意识淡薄，环境治理能力不足。

Problem to be solved:

(1) Wetland ecology and biodiversity have been destroyed. Villagers have only a single source of income:

According to the visit, the project site, Laoshi Village, originally used salt pan as the main industry. The original wetland habitat is nearly 400 mu. Later, the original wetland ecology was damaged due to digging ponds for breeding fish and shrimp. During the breeding period, a large amount of waste water containing medicines and fodder is discharged directly into the sea, which destroys the coastal ecology and species diversity and pollutes the environment. At present, there are 600 square meters of mangrove forest with poor habitat condition, single tree species and serious pollution. Villagers have only a single source of income, and most villagers go out as migrant worker, resulting in serious hollowing out of the community.

(2) The village garbage has been out of control and piled up in the open air. Garbage has got out of control and flowed into the sea.:

There is a lot of out-of-control garbage in the village. There are many places where garbage is accumulated in the open air, such as by the shrimp pond, under the mangrove forest, and in the century-old tamarindus indica forest. Out-of-control garbage is mixed with domestic garbage, historical aquaculture waste, sea drifting garbage and construction waste. They are dominated by plastic waste. More and more garbage that is difficult to degrade is soaked into the wetlands with the rising tide. Part of the garbage has got out of control and flowed into the Zhubi River and further into the Beibu Gulf. Therefore, the ecology is damaged by pollution.





村落垃圾堆积

(3) Low awareness of environmental protection, waste management and sorting among villagers, and lack of environmental protection initiatives and capabilities: Villagers lack guidance on the concept and awareness of environmental protection, lack of education on marine and environmental protection, inadequate public education downstream, unclear ways to participate in activities and work on marine and environmental protection, low public awareness of environmental protection and lack of capacity for environmental management.

对策:

(一) 红树林生境生态修复及保育, 建设红树林生态养殖试验田:

邀请生态湿地保育专家对项目地湿地生境进行调研, 开展红树林湿地综合修复试点工作, 并对村内项目地制定整体湿地修复方案, 通过开展专业讲座及实地操作技术指导; 协助老市村村委会建立并推广社区环境治理模式, 设立项目管理委员会, 配合专家带动当地村民共同参与村内湿地综合修复与保育工作。



开展关于老市村与湿地的讲座



村民积极参与种植红树林

(二) 组织开展村民环境治理行动, 清除堆积垃圾, 减少陆源污染:

在项目管理委员会职能中明确职责, 引导村民由被动的受管理转型为主动保护和自治模式, 搭建公众参与海洋环保平台, 定期组织海洋垃圾清理行动, 减少失控垃圾的入海量, 保护海洋生态。



村民进行环境清理



> 保护海洋生态 人海和谐共生

（三）搭建村民赋能课堂，邀请专家指导，技术培训：

邀请专家结合社区实际，开展生态养殖、生态修复、自然导赏、垃圾分类等不同主题培训，引导海洋保护知识与意识教育，增强社区环境治理能力，助力老市村陆源污染防治。并以妇女为主要受众，发挥“半边天”作用及能量，提高妇女参与劳动的能力，提高妇女地位，增加收入。同时，配套儋州市政府与老市村村委关于废弃虾塘改造、生态修复计划工作，邀请专家开展生态经济专业指导和技术支持，并组织村委和村民代表前往技术成熟、模式可复制的试点区进行交流；推动生态产业试点，促进生态转型，助力社区可持续发展。



垃圾分类培训



生态养殖异地参访



Countermeasures:

(1) Ecological restoration and conservation of mangrove forest habitats, and construction of a mangrove forest ecological farming trial field:

Experts in wetland conservation will be invited to conduct research on wetland habitats in the project area, carry out pilot work on integrated wetland restoration in the mangrove forest, and develop an overall wetland restoration plan for the project area in the village, through professional lectures and technical guidance on field operations; assist the village committee of Laoshi village to establish and promote a community environmental management model, set up a project management committee, and cooperate with experts to motivate local villagers to participate in the integrated wetland restoration and conservation work in the village.

(2) Organize villagers' environmental management actions to remove piles of rubbish and reduce land-based pollution:

Define responsibilities in the functions of the project management committee, guide villagers to transform from passive managed to active protection and self-governance mode, build a platform for public participation in marine environmental protection, and organize regular marine litter clean-up operations to reduce the amount of uncontrolled litter entering the sea and protect the marine ecology.

(3) Building villagers' empowerment classes, inviting experts for guidance and technical training:

Experts will be invited to provide training on different topics such as ecological farming, ecological restoration, nature appreciation and rubbish classification, in order to provide education on marine conservation knowledge and awareness, enhance the community's environmental management capacity and help prevent and control land-based pollution in Laoshi Village. The programme also targets women as the main audience, bringing into play the role and energy of "Half the Sky", enhancing women's ability to participate in the workforce, improving their status and increasing their income. At the same time, we support the work of the Danzhou Municipal Government and the Laoshi Village Committee on the renovation of abandoned shrimp ponds and ecological restoration plans, invite experts to provide professional guidance and technical support on ecological economy, and organize trips for village committees and villagers' representatives to exchange with pilot areas where the technology is mature and the model can be replicated; promote pilot ecological industries, facilitate ecological transformation and help the community to develop sustainably.



女性巡护队





项目实施的工作与成果

在海南省生态环境厅、海南省自然资源和规划厅、儋州市自然资源和规划局、儋州市农业农村局的指导下，项目启动以来，按照项目计划，开展各项活动，整合资源，推动社区原住民及利益相关方共同参与。截至目前，得到了包括海口沓替湿地研究所、海南松鼠学堂自然教育工作室、儋州龙马环卫环境工程有限公司、海南东寨港国家级自然保护区管理局等单位的密切配合，以及社会各界的大力支持。

1. 修复红树林湿地生境，恢复自然循环体系，推动项目地生态养殖技术推广和实施；

项目初期，特邀专家进行湿地生境调研及指导方案设计，由专家团队带领村民代表共同组建，通过村民访谈、徒步考察、夜观、拍照、记录等形式对项目地开展实地走访调研及本底调查工作，通过调研，发掘社区智慧和能人，并出具鸟类和植物调查报告，由项目组设计印制《老市村植物图鉴》及《老市村鸟类图鉴》，便于调研结果可视化及可持续传播。项目开展过程中，专家团队前往项目地开展考察调研7次，制定整体湿地修复方案，组织村民种植白骨壤、桐花、红海榄、榄李、水黄皮、黄槿等共计6000棵红树苗、组建女性红树巡护队，开展1800平方米红树林湿地综合修复试点工作，助力红树林湿地生境修复，恢复自然循环体系，并出具《海南省儋州市老市村湿地生态修复项目成果报告》，项目验收一年后成活率达到75%以上。

建设30亩生态养殖试验田，选拔生态养殖带头人，引入养殖专家辅助开展科学养殖，异地参访经验交流，学习技术。项目期间，生态养殖村民代表试投放锯缘青蟹蟹苗40000余只，发掘生产规律，积累养殖经验，积极开展有关经验及技术交流、推广，探索社区生态经济发展，推动项目地生态养殖技术推广和实施。



村民积极参与垃圾清理

2. 搭建环境治理体系，减少社区失控垃圾，推动老市村陆源污染防治；

项目地老市村处于河流入海口，地理位置独特，但村内失控垃圾较多，虾塘边、红树下、百年酸豆林内…多处露天堆积。难以降解的垃圾随涨潮浸入湿地，部分失控流入珠碧江，并进一步汇入北部湾，生态破坏严重。

项目期间，联合项目管理委员会共同识别利益相关方，助力搭建公众参与海洋保护平台。在项目地增设分类垃圾桶3套，配合有关垃圾分类以及海洋垃圾污染防治宣传，增强村民和当地青少年的海洋环保意识，引导源头减量。同时，在项目管理委员会职能中明确村落垃圾管制，推动“养殖垃圾自治”纳入养殖塘租赁协议条款，引导村民由被动的受管理者转型为主动保护者，组织本村村民对湿地、养殖区、河岸堆积垃圾、历史垃圾进行集中清理打捞。通过实际参与，提升环境保护意识，减少陆源污染。



村内垃圾清理前后对比



3.搭建公众参与海洋保护平台，加强公众教育和项目宣传，提高当地居民和青少年环保意识；

经走访，村民环保意识淡薄、主动性低，村内环保教育及行为引导缺位等问题较为突出。项目期间，设立固定活动募点和信息窗口，悬挂项目横幅及项目牌匾，张贴海南省禁塑主题系列海报、儋州市生活垃圾分类倡议海报等，并发放《海南省禁止一次性不可降解塑料制品》宣传册50份、儋州市生活垃圾分类宣传册200本、项目垃圾分类行为手册100本，定期开展垃圾分类及海洋环保知识宣传活动、自然课堂及移动电影院等活动35次，加强公众教育和项目宣传，提高当地居民和青少年环保意识。引导村内儿童成为海洋小卫士，学习生态环保知识，参与海洋保护公益行动。



对儿童进行垃圾分类知识宣传



开展自然课堂活动



固定活动招募点



移动电影院，开展海洋科普教育

> 保护海洋生态 人海和谐共生



开展推介会

4.通过为村民赋能，提高社区环境治理和公共事务治理的能力

项目期间，通过民主选举推动社区组建项目管理委员会，共同研讨发布《老市村项目管理委员会岗位职责及工作机制细则》。整合社区资源，为村民搭建沟通交流平台，组织开展社区环境治理研讨会及推介会共计12次、村民赋能培训及技术指导8次、异地参访交流3次，主题涵盖红树林生境修复培训、锯缘青蟹生态养殖技术指导、垃圾治理技术培训、自然导赏课程研发及培训、环保意识普及、有机堆肥技术培训等，并编写印制《垃圾分类行为手册》。推动约80%家庭参与，培育村民参与感、拥有感，发挥其主观能动性，为生态经济发展奠定基础。同时，项目特别注重女性受众比例，着力培育女性成为社区环境监管主力军，提高女性参与环境治理及社区公共事务治理的能力。推动村民环境保护方面的共商、共建、共治、共享。项目实施2年以来，得到了社会各界的关注与支持，致力于以生态资源保护与海洋社区可持续发展为主题，形成一套政府认可、媒体关注、社会参与、持续生效的综合预警管理机制。在社区海洋生态资源与环境保护同时，也在探索着进一步兼顾社区可持续发展，促进海洋生态资源及环境保护与社区生计可持续发展并举，以此推动沿海社区生态发展、意识提升，以及社区可持续发展。



自然导赏赋能培训





Implementation and Achievements

Under the guidance of the Department of Ecology and Environment of Hainan Province, the Department of Natural Resources and Planning of Hainan Province, the Bureau of Natural Resources and Planning of Danzhou City and the Bureau of Agriculture and Rural Development of Danzhou City, the project has, since its inception, carried out various activities in accordance with the project plan, integrated resources and promoted the participation of community aborigines and stakeholders. So far, it has received close cooperation from units including the Haikou Duotian Wetland Research Institute, Hainan Squirrel Academy Nature Education Studio, Danzhou Longma Environmental Engineering Co Ltd and Hainan Dongzhaigang National Nature Reserve Administration, as well as strong support from the community.

1. Restoring the ecological environment of the mangrove forest wetlands, restoring the natural circulation system and promoting the promotion and implementation of ecological farming techniques on the project sites:

At the initial stage of the project, experts were invited to conduct wetland habitat research and guide the design of the programme. A team of experts led by villagers' representatives was formed to carry out field visits and research and background investigation work on the project site through villagers' interviews, walking expeditions, night observation, photography and recording, etc. Through the research, community wisdom and capable people were discovered, and a bird and plant survey report was produced, which was designed and printed by the project team as "Laoshi Village Plant Atlas" and "Laoshi Village Bird Atlas" to facilitate visualisation and sustainable dissemination of the research results.

During the project, the expert team visits the project site seven times, formulates the overall wetland restoration plan, organizes villagers to plant 6,000 mangrove saplings including *Aricennia marina*, tung flower, *Rhizophora stylosa*, *Lumnitzera racemosa*, *Pongamia Vent*, *Hibiscus tiliaceus* Linn and so on; forms a female mangrove patrol team, carried out a pilot project to restore 1,800 square metres of mangrove forest wetland, helps restore the mangrove forest wetland habitat and restores the natural cycle system. The project has produced a report entitled "Laoshi Village, Danzhou City, Hainan Province Wetland Ecological Restoration Project Results", with a survival rate of over 75% one year after project acceptance.

Construction of 30 acres of ecological farming test fields, selection of ecological farming leaders, introduction of farming experts to assist in scientific farming, off-site visits to exchange experience and learn techniques. During the project period, representatives of the ecological farming villagers place more than 40,000 saw-edge green crab fry on a trial basis to discover production patterns, accumulate farming experience, actively carry out relevant experience and technology exchange and promotion, explore community ecological economic development, and promote the promotion and implementation of ecological farming technology in the project area.



本底调查



本底调查

2. Building an environmental management system to reduce uncontrolled waste in the community and promote the prevention and control of land-based pollution in the Laos-hi Village:

The project site, Laos-hi Village, is in a unique location at the mouth of the river, but there is a lot of uncontrolled rubbish in the village, by the shrimp ponds, under the mangrove trees, in the century-old sour bean forest, and many are heap up in open piles. The rubbish, which is difficult to degrade, soaks into the wetland with the high tide, and some of it flows out of control into the Zhubi River and further into the Beibu Gulf, causing serious ecological pollution damage.

During the project period, the project management committee works together to identify stakeholders and helps build a platform for public participation in marine conservation. Three sets of waste separation bins are installed at the project site, with a series of activities, to support the promotion of waste separation and marine waste pollution prevention, to raise awareness of marine environmental protection among villagers and local youths, and to guide the reduction of waste at source.

> 保护海洋生态 人海和谐共生



At the same time, the project management committee has clarified village litter control in its functions and promoted the inclusion of "farming litter autonomy" in the terms of the farming pond lease agreement, guided villagers to transform from passive managers to active protectors, and organized villagers to clean up and salvage wetlands, farming areas, riverbank litter and historical litter in a centralized manner. Through practical participation, awareness of environmental protection has been raised and pollution from land-based sources has been reduced.



自然课堂培训

3. Build a platform for public participation in marine protection; strengthen public education and project publicity and raise the environmental awareness of local residents and young people:

Our visit showed that villagers have weak awareness of environmental protection and low initiative and that there was a lack of environmental protection education and behavior guidance in the village. These are prominent problems. During the project, we set up fixed recruitment sites and information windows, hung banners and plaques, posted posters related to plastic ban in Hainan Province and posters on household waste classification initiative in Danzhou. Besides, we also issued 50 brochures on Hainan Province Prohibiting Disposable Non-degradable Plastic Products, 200 brochures for household waste classification in Danzhou and 100 garbage classification behavior manuals. We also carried out 35 activities, such as garbage classification and marine environmental protection knowledge publicity activities, nature classes and mobile cinemas, to strengthen public education, promote the project and improve environmental protection awareness of local residents and teenagers. In same way, we helped children in villages to become marine guardians by learning ecological and environmental protection knowledge and participating in marine protection activities.



4. Empower villagers and improve communities' ability in environmental governance and public affairs treatment.

During the implementation of the project, a project management committee was promoted to be built through democratic election and its members worked together to issue Detailed Rules of Post Responsibilities and Working Mechanism of Laoshi Village Project Management Committee so as to integrate community resources and build communication platforms for villagers. We had organized and carried out 12 seminars and promotion meetings on community environmental governance, 8 training and technical guidance for villagers and 3 visits and exchanges in different places which covered such topics as training on mangrove forest habitat restoration, guidance to saurian crab ecological breeding technology, training on rubbish management technology, development and training of nature appreciation course, environmental awareness popularization and training on organic composting technology. We also wrote and printed Garbage Classification Behavior Manual. 80% of the families took part in the activity, during which time, villagers had a better sense of participation and ownership and be more initiative. These helped lay a solid foundation for ecological and economic development. At the same time, the project pays special attention to the proportion of female audiences so that women can become the main force of community environmental supervision and their ability to participate in environmental governance and community public affairs treatment can be improved. In this way, villagers are promoted to discuss environmental protection affairs together, to build and govern the community as well as share common results.

Since its implementation two years ago, the project, is committed to ecological resource protection and sustainable development of marine communities, has received attention and support from all walks of life. A comprehensive early warning management mechanism with government recognition, media attention, social participation and continuous effect has been formed. They not only protected marine ecological resources and community environments but also explored ways to promote the sustainable development of the community, marine ecological resources and environmental protection as well as the sustainable development of community livelihood. In this way, the mechanism helped develop ecological development of coastal communities, improved awareness of residents and achieved their sustainable development.



自然导赏培训



项目亮点

1.生态修复

通过开展，改善社区环境治理、修复红树林生境，生态宜居。红树林生态湿地修复初见成效，陆源污染治理效果明显，与项目开展前期相比，明显提高了珠碧江流域红树林湿地面积，生境改善，保护生物多样性。同时，积累经验，为西部地区较干旱、高盐度、砂质土壤等特性的红树生态修复提供种植技术、方法及经验支持；



红树林修复成果

2.体系建立

通过民主推选，组建以居民为主体的项目管理委员会，协助社区建立自治模式及体系，建立岗位职责与工作指导，培育社区共商、共建、共治、共享的文化营造及习惯培养，基于项目经验服务社区生态、生活、生计可持续发展；注重女性受众参与，培育女性社区环境监管主力军，提高女性参与环境治理、社区公共事务治理以及生态经济探索的能力。



女性红树巡护队

> 保护海洋生态 人海和谐共生

背景:红树种植

3. 社区赋能，意识提升

项目挖掘社区智慧，激活社区资源，组织异地参访、赋能培训，培育社区能人，通过开展，掌握在地本底生态资源有关信息及数据，学习红树林湿地生态系统知识，完成红树林湿地生态修复及保育、生态观察、自然教育、生态养殖、垃圾治理等方面一定的技能学习及经验积累，开展产业探索，为其开展自然导赏、研学、生态养殖等基于生态的生计活动奠定理论及技术支持基础。



生态养殖基地



红树巡护培训



1. Ecological restoration

The implementation of the project can improve the environmental governance of the community, restore habitats of mangrove forest to make it ecologically livable. We have now achieved initial results on the restoration of mangrove forest ecological wetland and obvious treatment effect of land-based pollution. Compared with the earlier stage of the project, the mangrove forest wetland area in Zhubi River Basin has been significantly expanded; the habitats have been improved and their biodiversity has been protected. At the same time, we have accumulated more experience, which provided planting technology, methods and experience support for mangrove ecological restoration in western China areas characterized by drought, high salinity and sandy soil.



异地参访

2. Establishment of the system

Through democratic election, a project management committee with residents as the main body will be established to assist communities in establishing autonomous mode and system. Post responsibilities and work guidance are also given to help community members to form culture atmosphere where villagers can discuss, build, govern and share related experiences. In this way, they can promote the sustainable development of community ecology, life and livelihood based on project experience. Attention shall be paid to the participation of females as the main force of female community environmental supervision and the improvement of their abilities in participating in environmental governance, governing community public affairs and exploring ecological economy.

> 保护海洋生态 人海和谐共生

3. Empower community and raise awareness

The project explores community wisdom and activates community resources through remote visits and empowerment training. In this way, it cultivates community talents. Through the implementation of the project, people mastered information and data related to local ecological resources and learned knowledge of mangrove forest wetland ecological restoration and conservation, ecological observation, nature education, ecological farming, garbage management and accumulated related experience. By carrying out industrial exploration, they laid a theoretical and technical support foundation for carrying out nature appreciation, research, ecological farming and other ecologically based livelihood activities.



失控垃圾治理前后对比





特别鸣谢：

联合国开发计划署（UNDP），全球环境基金（GEF）小额赠款计划（SGP）对海南省蓝丝带海洋环境保护协会申报和实施的《项目名称》项目给予的资金支持与项目指导！

项目实施过程中，得到了以下单位或个人的大力支持，在此表示诚挚感谢！

组织单位：海南省文明办、海南省生态环境厅、海南省自然资源和规划厅、儋州市自然资源和规划局、儋州市农业农村局、儋州市委宣传部、儋州市团市委、海头镇政府、海口沓替湿地研究所、松鼠学堂、海南智渔可持续科技发展研究中心、儋州龙马环卫等。

领域专家：卢刚、周志琴、蔡挺、张和平、罗理想、陈正平、卓齐辉、罗振华、吴广学、陆德泉、吉家钦、丘慧巧等。

项目管理委员会成员：谭喜云、梁运帮、谢国恒、梁宝翰、王贵、梁宝璜、陈爱花、薛东风、梁寿联等

及其他全体老市村民。

Acknowledgment:

We should be grateful to UNDP, GEF and SGP for their financial support and guidance for the Project applied and implemented by Blue Ribbon Ocean Conservation Association.

During the implementation of the project, we have received great support from the following units or individuals. We hereby express our sincere thanks to them.

Organizational units: Hainan Province Civilization Office, Ecological Environment Ministry of Hainan Province, Ministry of Natural Resources and Planning of Danzhou, Danzhou Natural Resources and Planning Bureau, Danzhou Agriculture and Rural Bureau, Publicity Department of Danzhou Municipal Committee, Danzhou Youth League Committee, Haitou Town Government, Haikou Dutoan Wetland Research Institute, Hainan Dongzhaigang National Nature Reserve Administration, Hainan Squirrel Academy Nature Education Studio, China Blue Sustainability Institute, Danzhou Longma Environmental Engineering Co Ltd, etc.

Experts in related field: Cai Ting, Chen Zhengping, Feng Erhui, Ji Jiaqin, Lu Dequan, Lu Gang, Luo Lixiang, Luo Zhenhua, Qiu Huiqiao, Wu Guangxue, Zhang Heping, Zhou Zhiqin, Zhuo Qihui, Qiu Huiqiao, etc.

Members of the project management committee: Tan Xiyun, Liang Yunbang, Xie Guoheng, Liang Baohan, Wang GUI, Liang Baohuang, Xue Dongfeng, Chen Aihua, Liang Shoulian and other villagers in the city.









蓝丝带海洋保护
BLUE RIBBON

保护海洋生态 人海和谐共生



蓝丝带海洋保护协会

地址：（1）海南省海口市龙华区国贸大道一号景瑞大厦21层

（2）海南省三亚市天涯区解放三路12号建行大厦2楼

电话：18089888672

网址：<http://www.ch-blueocean.org/>

E-mail：broca@ch-blueocean.org

欢迎关注BROCA微信公众平台:Lansidaixiehui

GEF/SGP全球环境基金小额赠款计划

海南省儋州市老市村湿地生态修复及垃圾管理项目

project of Wetland Restoration and Waste Management in Laoshi Village of Danzhou City, Hainan province



GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

SGP The GEF
Small Grants
Programme

30
YEARS



蓝丝带海洋保护
BLUE RIBBON