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For Mountains For River

The Demonstration Project of Climate-Smart Agriculture in Xundian County, Yunnan Province

Background Introduction

The survival of human is directly threatened by global warming and climate change, which are caused by the massive emission of CO_2 and many other greenhouse gases. To protect the global environment which human depends on for living, to reduce greenhouse gas emissions and prevent global warming have gradually become the consensus of human. Agricultural carbon emissions account for 14% of global greenhouse gas emissions, and have a huge impact on global warming. It is not only because the agricultural production will release CO_2, methane, nitrous oxide and other greenhouse gases, but also the investment in agriculture may also be a major driver of deforestation. Agricultural land-using way also has a certain impact on carbon storage. Therefore, agriculture influences climate change; on the contrary, climate change also seriously affects agricultural development. It's a delicate balanced relation. Farmers play a key role in reducing agricultural carbon emissions.

Climate-Smart Agriculture

How can we get the output we want from agriculture, while protecting the natural environment and species diversity, and preventing unnecessary carbon emissions? The Climate-Smart Agriculture is FAO's solution to the problem. It is a comprehensive approach to treat agriculture and grain production system.

In order to cope with the increasingly severe climate change in a better way, “Climate-Smart Agriculture” is firstly proposed in the report released by FAO on October 28, 2010. Climate-Smart Agriculture is an agricultural production and a development model that is able to sustainably improve work efficiency, enhance adaptability, reduce greenhouse gas emissions, and achieve national food production and security at a higher level. If we want to tackle climate change while eradicating poverty, we have to focus on agriculture.

Origin

The Xundian Hui and Yi Autonomous County, under the jurisdiction of Kunming City, Yunnan Province, lies in the northeast of Yunnan Province, and its county seat is 90 kilometers away from Kunming. The Niulan River is flowing through Xiaojie Village, Hekou Town, Xundian County, is an important tributary of the Jinsha River system, also the water source of Niulan River-Dian Lake Water-Replenishment Project to replenish ecological water demand for the Dian Lake and improve the water source of the water environment in the Dian Lake. Supported by American Blue Moon Fund, Humana People to People began to carry out projects of Climate-Smart Agriculture in 2015. The project aims to reduce greenhouse gas emissions in agricultural production and prevent global warming, also focus on improving the technological level of local agricultural production, improving the production and living conditions in the village, increasing the villagers' income and protecting the local environment, warmly welcomed by the villagers.

Since the promotion and implementation of Climate-Smart Agriculture Project could play an active role in protecting the ecological environment along the Niulan River and maintaining the livelihoods of local farmers, the Yunnan Environment Development Institute worked together with Humana People to People to get the financial support of the GEF Small Grants Programme (GEF-SGP), and carried out the demonstration project of Climate-Smart Agriculture in Xundian County, Yunnan Province in in Xiaojie Village of Xundian County in 2017. It is hoped that through the implementation of the project, the farmers along the Niulan River in Xundian County could learn to adopt a new environmentally-friendly farming practice, thus reducing greenhouse gas emissions during agricultural production, reducing the impact of agricultural production on environment, and protecting the ecological environment along the Niulan River on the premise of ensuring the livelihoods of farmers.

Project Profile

The demonstration project of Climate-Smart Agriculture in Xundian County, Yunnan Province is the first “Climate-Smart Agriculture” project driven by community, funded RMB 291,780 by GEF-SGP and jointly implemented by the Yunnan Environment Development Institute and the Federation of Associations connected to the International Humana People to People Movement (Switzerland) Yunnan Office. The experts from Yunnan Academy of Agricultural Sciences, Yunnan Academy of Scientific and Technical Information, Xundian County Science, Industry & Trade Bureau and some other governmental agencies and research institutions carry out cooperation on the project, making “Climate Smart Agriculture” practicable for every small farmer in central Yunnan. The project involving 200 peasant households is implemented in Xiaojie Village, Hekou Town, Xundian County, and lasts for two years from October 31, 2016 to September 30, 2018. Five Farmers' Clubs have been established in the Xiaojie Village; the project takes the supporting groups as a platform, provides financial support and technical training, sets up experimental units of agricultural conservation tillage, increases the yield of rice, broad beans and other crops, and reduces the use of chemical fertilizers and pesticides, thus helping farmers reduce carbon emissions during agricultural production and contributes to the prevention of global warming while increasing their income.

Introduction to Project Donor

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

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.

The GEF-SGP provides RMB 291,780 for the following project activities: precise and quantitative rice planting, interplanting of maize, planting of vetiver grass, rice- broad beans rotation and green manure planting; carrying out environmental protection and agricultural technical training; employing experts for carbon emission reduction assessment, etc.

Project Implementing Organizations

Yunnan Environment Development Institute (YEDI)

Yunnan Environment Development Institute, a non-profit social organization officially approved by Kunming Civil Affairs Bureau on January 24, 2003, is mainly committed to supporting environmental protection activities in Yunnan Province and actively promoting the overall sustainable development of the region. Currently, YEDI is focusing on the studies in ecological environmental protection, studies on recycling economy, low carbon economy and cleaner production, plateaus, lakes, rivers and wetlands conservation, the supply of clean drinking water in rural areas, urban and rural environmental pollution improvement, the policies related to environmental protection and sustainable development, the development and promotion of clean energy technology, and publicity, education and training for environmental protection.

Humana People to People

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The“Federation of Associations connected to the International Humana People to People Movement (Switzerland) Yunnan Office" is the representative office of the Federation of Associations connected to the International Humana People to People Movement (hereinafter referred to as Humana People to People) in Yunnan. Humana People to People is an organization focusing on rural development, aiming at helping China's poverty-stricken areas to achieve endogenous sustainable development. Currently the Humana People to People carries out projects mainly in 4 provinces in China (including Yunnan, Sichuan, Chongqing and Hubei) for comprehensive poverty alleviation and development work in the fields of rural sustainable industry poverty alleviation, community development, community-based Preschool of the Future, and total control of the epidemic. More than 3.2 million people have benefited from the projects since its launch in 2007.

Project Activities

Rice Precise and Quantitative Cultivation

Rice precise and quantitative cultivation technique is to produce high-quality rice population through breeding healthy rice seeding, expanding row-spacing and sparse planting, transplanting shallowly in clear water, N application at later stage, dry-wet alternate irrigation, integrated pest management and other technical measures, thus achieving the comprehensive production goal of high yield, high quality, ecology and safety. The application of rice precise and quantitative cultivation technique can not only increase the yield of rice, but also effectively reduce the methane emissions from rice fields to achieve the emission reduction of greenhouse gases. Meanwhile, the technique is helpful for reducing the consumption of rice seeds, workloads for rice transplanting and the consumption of irrigation water, thus reducing the cost of rice cultivation.

In 2017, the project carried out rice precise and quantitative cultivation in the targeted village, mobilizing and training farmers to apply rice precise and quantitative cultivation technique for rice cultivation. The project provided rice seeds for villagers for free, successfully mobilizing 114 rice-planting farm households in the project village to apply rice precise and quantitative cultivation technique to plant 174.7 mu of rice. Professor Yang Congdang from the Rice Research Center of Yunnan Academy of Agricultural Sciences and Mr. Zhao Xu from Xundian County Bureau of Agriculture were invited to provide technical support for the project and technical training for farmers. The project actively guided villagers to irrigate rice according to the dry-wet irrigation method of rice precise and quantitative cultivation, so as to reduce methane emissions from rice fields. Dr. Gu Jianlong from Yunnan Academy of Scientific and Technical Information conducted measurement and evaluation for methane emission reductions in rice fields in the project, and he will also analysis and evaluate carbon emission reductions in other planting activities in the project.

Yang Congdang from Provincial Academy of Agricultural Sciences gives training on rice precise quantification planting

Rice transplanting

Mr. Zhaoxu from Xundian County Buredu of Agriculture is guiding villagers for rice field management and pest control in Changjiaba Village.

Project Activities

Maize Interplanting

Maize is widely cultivated. Interplanting maize with leguminous crops (like soybeans) can not only improve land utilization rate and integrated production benefits, but also fix nitrogen in the air through the nitrogen fixation of rhizobia carried by the root systems of leguminous crops, thus achieving the purpose of fertilizing land. Many farmers have had the experience of interplanting maize with leguminous crops. But now, with the rising cost of labour and villagers' growing reliance on chemical herbicides for weed control, the interplanting of maize is rarely applied by farmers. Through publicity and mobilization, farmers were aware of the hazards of long-term and large-scale use of chemical herbicides and fertilizers, and were encouraged to interplant maize with leguminous crops for maize cultivation to reduce the use of pesticides and chemical fertilizers and protect soil and environment. In 2017, 200 farm households in Xiaojie Village were mobilized to plant 200 mu of maize by the interplanting technique.

An instructor giving statistics on interplanting in the field.

Exuberant maize and beans

Interplanting of maize and beans

Vetiver Grass Planting:

Vetiver grass has strong adaptability, fast speed of growth and reproduction, and developed root system; moreover, it is drought-enduring and barren-enduring. Therefor it is regarded as an ideal plant for the conservation of water and soil in more than 100 countries and regions. Currently vetiver grass has been introduced and promoted in more than 10 provinces and regions in Southern China, and successively applied to the protection of roads, river levees, terraces and so on. It is reported that the 2-year-old vetiver grass covering 1000m bank in length is able to store 2 tons of carbon dioxide per year, which has a significant effect on reducing greenhouse gas content in the atmosphere. The project provided seedlings of vetiver grass, and mobilized farmers of Farmers' Clubs of Changjiaba, Jinfa, A'nafa and others in Xiaojie Village to plant vetiver grass spreading 2,000 metersin slope wasteland along the two banks of Niulan River and mountainous regions with serious water and soil loss, to prevent soil erosion, and protectcultivated land and the levees of Niulan River.

Villagers are getting seedlings of vetiver grass.

Project personnel is guiding villagers to plant vetiver grass

Vetiver grass planted along the NiulanRiver

Project Activities

Project Activities

Ducks and Fish Farming in Rice Fields

Rice-ducks and rice-fish farming is an efficient, three-dimensional and ecological agricultural mixed cropping-breeding mode. Under a specified condition, the mode utilizes the growth characteristics of rice-ducks and rice-fish and creates rice-ducks and rice-fish symbiotic systems in the same field. Ducks and fish feeds on aquatic organisms and insects, and excretes excrement, and then the consumption of feed fed to ducks and fish as well as the consumption of chemical fertilizers and pesticides for rice will reduce. At the same time, the movements of ducks and fish could activate the water, increase oxygen content in water and soil, thus increasing the yield of rice, and realizing the ecologicalization of rice production. It is a good mode for developing eco-friendly rice production.

The project promoted experimental base for the ecological cropping-breeding mode of rice-ducks and rice-fish farming in Changjiaba's Farmers' Club, controlled the occurrence and hazards of rice diseases and insect pests through biological control, increased the organic content in rice fields, reduced the application of pesticides and fertilizers in rice planting, and improved the quality of rice. Dr. Chen Anqiang from Yunnan Academy of Agricultural Sciences has successful experience in rice-ducks farming, providing great technical support for the project. 752 ducklings were purchased to provide farmers of Changjiaba's Farmers Club for raising in more than 60 mu of rice fields. Xundian County Science, Industry & Trade Bureau coordinated other departments to provide fry of 60 kg for free for famers involved in the project, consequently, 3 mu rice-fish farming pilot project launched in Changjiaba Village.

Releasing fish fry

Duck farming in rice field

Fish farming in rice field

Project Activities

The broad beans are growing well

The villager is checking the emergence of broad beans

Vicia faba harvest

Rice-Broad Beans Rotation:

Crop rotation is the practice of growing different types of crops or conducting multiple cropping in the same area in sequenced seasons. Combined utilization with the maintenance of land, it is a biological measure conducive to the balanced use on soil nutrients and prevent & cure diseases, insects, and weed problems. It can effectively improve soil's physical and chemical properties, and regulate soil fertility. Farmers in the project village used to implement the crop rotation, yet mainly rice-wheat rotation which has low economic benefits, and influenced cultivated land badly. As a kind of food, vegetables, feed and green manure crops, broad beans have higher economic value. In addition, the rhizobia of broad beans can fix nitrogen, leading a decreased utilization of chemical nitrogen fertilizer, and play a prominent role in protecting the soil and environment. During the implementation of the project, we guide villagers to implement rice-broad bean rotation by providing seeds and carrying out technical trainings, to raise their profits while realizing scientific rotation and protecting the cultivated land.

Project Activities

Vetch Cultivation:

Hairy vetch, a leguminous plant whose rhizobia has the effect of nitrogen fixation, with a widespread adaptability,
can be used as livestock feed and green manure which is widely cultivated.
During the budding period, the fresh grass's fertilizer components of hairy vetch are as follows: total nitrogen: 0.50%, phosphoric anhydride: 0.13% and potassium oxide: 0.43%.
According to 2,000 kg of the yield per mu of fresh green manure, fresh grass per mu contains nitrogen fertilizer of pure N 10 kg,
Phosphorus fertilizer: P2O5 2.6 kg, potassium fertilizer: K2O 8.6 kg,
If converting the nitrogen fertilizer into 21 kg of urea. Phosphate fertilizer into 18 kg of superphosphate.
Potassium fertilizer into 17 kg of potassium sulfate, then planting one mu of green manure (hairy vetch) can reduce the amount of chemical fertilizer 56kg in total.

We will provide villagers with hairy vetch weeds for free in 2017,and guide them to grow 200-mu green manure on the hillsides which could not only decrease utilization of chemical fertilizer and prevent from the water loss and soil erosion but also result in obvious economic and environmentally-friendly benefits.

Project Activities

Treatment of Tail Water in the Rice Field:

Dr. Chen Anqiang and Miss Mao Yanting from the Yunnan Academy of Agricultural Sciences have given great support to the implementation of the treatment activity of tail water in the paddy field in the Changjiaba Village. According to the program designed by the two experts, we built a tail water treatment pond (10 meters in height, 9 meters in width and 0.8 meters in depth) in the lowest paddy field near the riverside of Niulanjiang River. Meanwhile, we have started to excavate irrigation canals and ditches around for collecting tail water, to collect the tail water discharged from the other paddy field. Planting hydrophytes like water spinach, water lettuce and Chinese arrowhead in the treatment pond and irrigation canals and ditches can purify the collected tail water from the paddy field, along with the pump for extracting water from the treatment pond to irrigate the surrounding paddy fields repeatedly, so as to reuse and purify the water. Project personnel carries out the collection preservation of water every week. The water sampling will be sent to the Yunnan Academy of Agricultural Sciences to be detected after the completion. The staff will evaluate the effect of the tail water treatment system of paddy field on the paddy field tail water treatment by comparing the change of routine indexes of water samples through different water sample detection.

Partners

The United Nations Development Program

UNDP partners with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in more than 170 countries and territories, UNDP offer global perspective and local insight to help empower lives and build resilient nations.
UNDP has drawn on world-wide experience for over three 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.

Empowered lives.
Resilient nations.

GEF Small Grants Programme

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.

(The United States) National Geographic Air and Water Conservation Fund

In 2012, National Geographic Society announced the establishment of “National Geographic Air and Water Conservation Fund” (of the U.S.). The Fund will fund the Chinese scientific workers for the field scientific researches for solving the water resource and air environment problems in China. It covers funding projects of: scientific research, community protection project, technical innovation, and the promotion directly influencing the innovation scheme of air and water environment protection. The Alibaba Group is the co-founder.

Yunnan Academy of Scientific & Technical Information

Yunnan Academy of Scientific & Technical Information was established in 1971, a subordinate public institution of Yunnan Provincial Science and Technology Department. A comprehensive scientific & technical information research institution mainly engaged in scientific & technical services of scientific & technical management, scientific & technical strategy and policy research, scientific & technical information database resource, service of novelty search and consultation, service of network system, international technology transfer and foreign scientific & technical cooperation, technical service of clean development mechanism, project evaluation and review, scientific & technical statistics, engineering consulting service, information and advisory service of enterprise competition, and publication of periodical. The only official service organization approved of the establishment by Yunnan Development and Reform Commission and Yunnan Provincial Science and Technology Department for clean development mechanism technology, achieving energy conservation and emission reduction for Yunnan Province, developing recycling economy and seeking for technical and financial support; meanwhile, constantly expanding the researches and consultation services in fields of low-carbon development, cleaner production, energy conservation and emission reduction, and development and utilization of new energy.

Institute of Agricultural Environment and Resources, Yunnan Academy of Agricultural Sciences

The Institute of Agricultural Environment and Resources, Yunnan Academy of Agricultural Sciences is a public welfare provincial scientific research institute, mainly researches and solves the application foundation and applied technology problems for the plant protection, soil and fertilizer, and the protection and utilization of agricultural environmental resources in the agricultural production process, and promotes the science and technology achievement transformation to serve the “agriculture , farmer and rural area” through scientific & technical innovation and service. The research direction includes: new technology for sustainable prevention and control of main pests in crops, warning & prevention & control of major alien invasive pests, R & D and application technology of environment-friendly pesticide, exploration and application of disease resistance characters in main crops, mountain comprehensive development and water saving agriculture technology, low carbon agriculture and recycling agriculture technology, and agricultural non-point source pollution control technology.

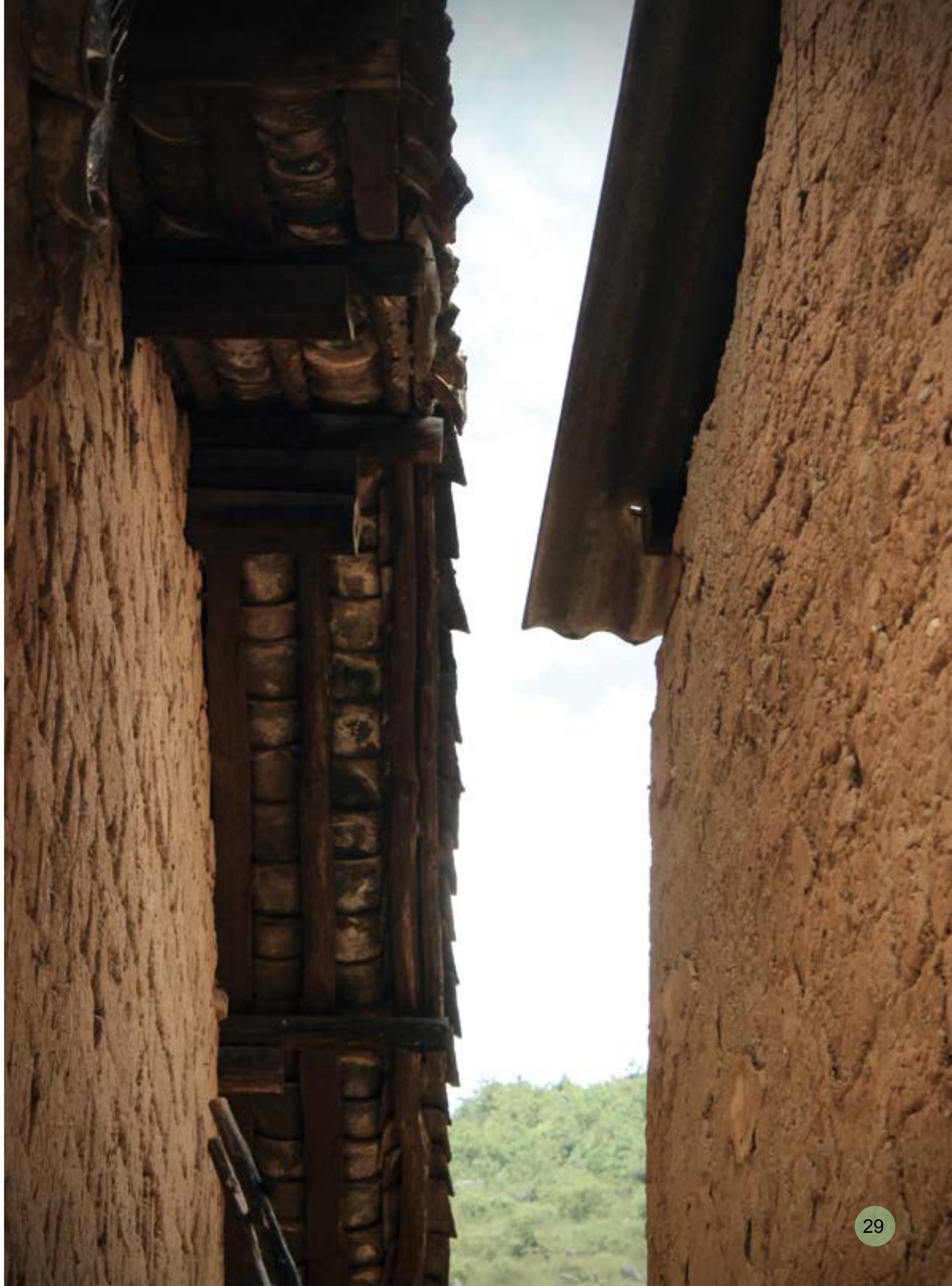
Partners

Blue Moon Fund

The Blue Moon Fund was established in April 2002. Its predecessor was Alton Jones Foundation. The founder, Alton Jones (1891—1962), was a business leader in the field of American energy public utility. The Blue Moon Fund pays most attention to the projects about resource utilization, energy utilization and new culture and economic means for the city development. In the meantime, all the three fields complement each other, with a common aim of improving the living quality of people, and making a harmonious development with nature. The Fund has provided certain supporting funds for the project activities in 2017, including precise and quantitative rice planting technology, breeding ducks in rice fields, green manure planting, villager trainings, etc.

Bureau of Science and Technology, Trade and Industry of Xundian Hui & Yi Autonomous County

The Bureau of Science and Technology, Trade and Industry of Xundian Hui & Yi Autonomous County (“Bureau of Science and Technology, Trade and Industry of Xundian” for short) has carried out the laws & regulations and policies & guidelines of the government, country, province, and city about industry, informatization, middle and small-sized enterprises, domestic and foreign trade, international economic cooperation, science and technology, opening up, investment promotion, and foreign affairs; worked out the scientific & technical development planning of the whole county, organized and implemented the scientific & technical of economic society construction; taken charges of the management of county-level operating expenses of science, science-technology three-expense, science-technology special fund, and science-technology development fund, and researched the measures for increasing scientific & technical investment. It organizes experts to process early pre-research, argumentation and evaluation for major technology introduction, technical transformation, and key scientific & technical construction projects. It provides policies, measures and suggestions for scientific & technical resources’ reasonable configuration, and promotes the optimal configuration of scientific & technical resources. It is responsible for matters concerned the absorption and re-innovation plan of introducing advanced technology and key equipment by financial fund.



Case Story

Measuring the Fields

After the chilly weather, Xundian County was in bloomy spring February, when villagers, getting used to weather changes, were preparing for spring ploughing. Meanwhile, the demonstration project personnel of Climate-Smart Agriculture were busy in introducing and promoting the technique of precise and quantitative rice planting technology to people in villages one by one, urging them to be involved in and verifying the actual planting areas for the purpose of providing the accurate amount of seeds for free.

We carried out the training in related villages, inquired about the actual planting areas and the seed amounts needed to get, and verified the applied planting areas door to door. Informed that the project standard is to provide 1.5 kg hybrid rice seeds per mu, the peasants all felt it was not enough. What they wanted is 3kg. After a further explanation about the reference and standard, they, in hope of getting more seeds, even denied the previous applied planting areas and claimed that the actual sizes would be much bigger. We know that they were not driven by greediness, but affected by the planting habit, randomness, since they had no idea about how many seeds and how much pesticide and chemical fertilizer should be needed. For example, worrying that the rice seedling is not enough, they will sow more seeds at will, which would not only waste the seeds, but also make the quality poor for intensive seeding, thus the transplantable and available rice seeding would be not enough.

Such "randomness" is largely different from the "accuracy" required by the project of precise and quantitative rice planting technology, which is not only important to the project alone, but also essential to carry out modern agriculture and realize sustainable development in rural regions. We gave a flat refusal to their requirements, but told the villagers that we would measure the planting areas door to door and provide seeds based on the actual sizes. They didn't oppose but accepted the seeds giving out referring to the fact. With surprising faces, they might have thought that it would not be a big deal to provide one or two more kilograms seeds to each family, why we spent much time in measuring the field one by one? But for us, it is a must since we need to help these villagers get rid of "randomness" and be guided by "accuracy" concept.

The work of measurement had been done smoothly, and the villages were all actively coordinated with us during the process. The results were somewhat different from the applied ones, since some were more while some were less. But nobody had any counterview since they believed in the measuring instrument and us alike.

Worn Hands of Rural Farmers' Hard Work

Such are the hands of a farmer, broken nails, fingers covered with visible scars. At first glance one would think they have never been washed but that is not the case, the hands have seen a lot of hard work throughout the years. These are common hands in the countryside. I cannot imagine how long these hands have suffered loads of hard work day in and day out. Raising my eyes I saw a calm and happy smile behind the owner.

Huang Shu, the owner of these hands, is Piloting Carbon Financing Development for Community Driven Climate Smart Agriculture in Yunnan" Project , a man of about 50 years. He has been with the project since 2014.

The main objective of the project is to mobilize farmers to use the new "Rice Precise Quantitative Planting Technology" which involves wet and dry cycles where the amount of water in the rice paddy is alternated. This avoids the roots to decompose due to lack of oxygen. The technology also involves spacing the plants and planting them when they are still small, about 15cm. This is an experimental project that might influence the future way of growing rice. We look forward to developing further reliable ways to reduce agricultural production costs while increasing rice production, reducing methane emissions and promoting environmental-friendly agricultural production .

The villagers had never heard about this technology before the project started and they were a little skeptical. Huang Shu was the first to accept the program and willing to try it out. I asked him why he decided to try and he answered that a village should always have someone who stands up and go forward to try out new things. I then asked if he was not worried that his rice production would be affected negatively, but he said that his family had enough to eat until the following year. Huang Shu is one example of many farmers who dare to try new ways to increase production and protect the environment.

Huang Shu also became a pioneer in another project, a "rice tail water treatment project" which successfully was implemented in his village. He was the first farmer to offer the project the experimental field where the project should be set up. This meant that his field could not be used for cultivation and no crops could be planted. He said that although he did not fully understand everything about the treatment pool he knew that the project was aimed at reducing pollution caused by the tail water running into the Niulan River - and to improve the agricultural planting technology. He felt that it was important for many people who lived in this village. He was not only willing to give out his land, but also to voluntarily help the project in weekly sampling of water from the pool.

In my past work experience, I have found out that direct economic growth is undoubtedly an effective way of stimulating farmers' participation in project activities. However, when farmers think that there is a certain risk or a contradiction of interests in certain project activities it is hard to mobilize them. This is also caused by many experimental projects in rural areas which do not produce positive results or which fail to continue promoting the main purpose.

Fortunately in Yunnan Province, Xundian County, Changjiaba village, we encountered a person such as Huang Shu who is willing to take risks at the expense of his family and his livelihood. He accepted our program of tail water sampling with both his hands for the sake of improving rural environmental protection. He accepted the program and fulfilled the project's objectives of developing rural work and improving rural environmental protection."

Capacity Building - Mutual-Help Group Conference & Training

Precise and Quantitative Rice Planting Technology Training Conducted by Yang Congdang in the Provincial Academy of Agricultural Sciences

Promot and mobilize farmers to breed ducks on the rice field

Training of the Famer's Club

Field Guidance of Pest Control

Project staff promots and mobilze farmers in Changjiaba Village on the project

Rice Seed Sowing Training Carried Out by Zhao Xu in Changjiaba Village

Vision

We hope that the implementation of the demonstration project of Climate-Smart Agriculture in Xundian County (Yunnan Province) will create an environment-friendly agricultural production model and find a good balance between environment protection and the maintenance of the living of peasants; reduce unnecessary resources consumption or waste in agriculture production, relieve the damage or negative affect on agriculture production to ecology environment as well as increasing both production and income for peasants. In doing this, we have urged the peasants to be involved in and helped them to play a positive role in protecting environment and reducing carbon emission in agriculture production. Additionally, the “Climate-Smart Agriculture” could be applied in many regions in Yunnan and the rest of Southwest of China, for the purpose of realizing sustainable development in rural regions, reducing greenhouse gas emission and thus stopping global warming.