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Product



SEEING RESTORING ENPOWERING
—The 10th Anniversary of the SEE Foundation

2008-2018



CHINESE NATIONAL GEOGRAPHY

SEEING RESTORING ENPOWERING

SEE Foundation
10th Anniversary
Special Issue





The 10th Anniversary of the SEE Foundation

2008—2018

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The SEE (Society of Entrepreneurs and Ecology) consists of the SEE Conservation and the SEE Foundation (registered as the “Beijing Entrepreneurs Environmental Conservation Foundation”). Its mission is to “Unite entrepreneurship to preserve blue sky and clean water.” Its core value is “Standing in awe of nature for sustainable development.”

The SEE was founded on June 5, 2004. It is the first social group in China that takes social responsibilities as its own obligation. The SEE, is mostly made up of entrepreneurs with the single goal of ecological conservation.

In 2008, the SEE launched the SEE Foundation (registered as the “Beijing Entrepreneurs Environmental Conservation Foundation”), which has been committed to funding and supporting the growth of Chinese non-governmental environmental conservation organizations. The SEE is also committed to creating a social support platform for partnerships among entrepreneurs, environmental organizations, and the general public with the goal of promoting ecological conservation and sustainable development.

The SEE Foundation was upgraded to a public fundraising foundation at the end of 2014. Taking the development of the environmental civil society as its cornerstone, its emphasis lies in three areas: namely desertification prevention and control, green supply chain and pollution prevention, and ecosystem conservation and nature education.

As of December, 2019, the SEE has established 28 environmental project centers with over 900 entrepreneurial members. They have supported more than 550 Chinese non-governmental environmental organizations.

In the future, the SEE looks forward to further leading the efforts on the integration of entrepreneurs and other social resources, promoting public support and participation, and taking full advantage of the social support platform for the environmental conservation.

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80 “Noah’s Ark” Carrying Nature and Life

by Mo QI

The Yunnan golden monkey, Himalayan bee, Green peacock, Asian elephant... there is a such great diversity of life on earth. This life is not without equally great vulnerability. The SEE’s “Noah’s Ark” project looks at the planet as Noah’s Ark safeguarding this great diversity and vulnerable life. It also utilizes mankind’s civilization and wisdom to nurture a beautiful home where birds in the sky, beasts in the forest, fish in the water, and humans in nature thrive in harmony.

70 Save the Smile of the Yangtze River: Birth of the Finless Porpoise Stewards and Their Actions

by Zhengyi QIAN

The Yangtze Finless Porpoise, or finless porpoise, may be the only remaining aquatic mammal in the Yangtze river. It is the flagship species of the Yangtze River ecosystem and an indicator organism of the river’s vitality. Twenty years of scientific investigation has revealed the rapid decline of its population. The IUCN suggests that it’s reached the “critically endangered” level. The “Save the Smile of the Yangtze: Save the Finless Porpoise” Save the Smile of the Yangtze program promoted by the SEE is dedicated to the protection of the finless porpoise.

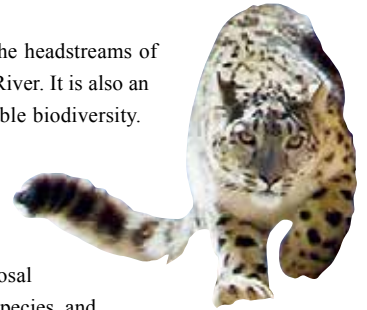




44 Conserving the Sanjiangyuan Region: A Multi-forced Guardianship of the Wonderland

by Xiang ZHAO

Sanjiangyuan is located in the hinterland of Qinghai Province. It encompasses the headstreams of China's three major rivers; the Yangtze River, the Yellow River, and the Lancang River. It is also an ecosystem with one of the highest altitudes in the world, and it exhibits remarkable biodiversity. The SEE "Conserving the Sanjiangyuan Region" program has created a conservation model with farmers and herdsman casting as the primary players. This is being achieved through searching, fostering, training, and funding of grassroots environmental organizations and individuals. Conservation activities include community-based monitoring and protection of endangered species, disposal of solid waste, nature photography, guarding against the poaching of endangered species, and water source solid waste contamination.



60 Free Flying Wings: Letting Birds Share the Nature with Human

by Shengnan LIU

In order to protect China's most endangered waterfowl and their habitats, the SEE Foundation launched this program in 2016. The program's goals are to establish a conservation demonstration base and to protect, from 2016 to 2026, more than 100 wetlands. The wildlife garnering this protection include 24 rare and endangered waterfowl as the program's priority species.

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Blue Defenders: Weaving a Blue Safety Net

by Shuren DING

While industrial development has been driving China's booming economy, it has also brought with it various pollution problems. Pollution makes up the country's major environmental concerns. The SEE, in conjunction with the Alibaba Foundation and the Energy Fund, launched "The Blue Defenders" ("The Blue Defend Fund") program to fight against industrial pollution. This program has been dedicated to promoting the disclosure of pollution information, public surveillance of pollution sources, corporate pollution reduction, and sustainable development, for the prevention and control of water, air, and soil pollution. The Blue Defend Fund also uses green supply chains and green finance as tools to promote business sustainability for private sectors.



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Green Supply Chain Initiative: SEE's Initiative to Green Enterprises

by Shuren DING



In 2016, the SEE, together with the real estate industry, launched the "Green Supply Chain Initiative in China's Real Estate industry." This initiative is committed to improving the environmental performance of the industry suppliers of steel, cement, aluminum alloy, lumber, stone, paint, and insulating materials through green procurement. The goal is to promote sustainable development and facilitate the reduction of harmful emissions and other pollution from various manufacturing enterprises.

120 Vitality in the Desert

by Yin SU and Ping HE



According to a survey, Alxa loses 78 square meters of land surface to desertification every second. The SEE has carried out the “100 Million Suosuo” and “Ren Millet” brand projects to promote water-conserving alternative crops. Through these projects, it explores a comprehensive management model of water-conserving agriculture, integrates crop species with technology and agronomy, and collaborates with the forestry department, local farmers, herdsmen, and cooperative associations. The goal is not only remediation of the Alxa desert ecosystem, but also to help local farmers and herders find sustainable subsistence.

136 Local Forces Protect Local Lands: SEE Environmental Programs across the Country

by Changhuan HE

As of December 2018, SEE had a total of 23 project centers in different regions. The SEE focuses on the local environment through the coupling of project centers with environmental projects, and it utilizes local advantages to carry out environmental projects to protect our blue sky and water. In addition to guarding the ecological environment of its homeland, each project center also collaborates with local environmental public welfare organizations and motivates more NGOs, the public, and entrepreneurs to join the environmental public welfare force. It has been a driving force for producing widespread participation. The SEE continues to spread environmental protection concepts over China.





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A Cornerstone: the Environmental Conservation Forces Breaking out of the Ground

by Shuang SUN and Yifan ZHANG

In order to foster new forces of environmental civil society in China, the SEE foundation has innovatively introduced the “Angel investment” model into the environmental world. “Angel fund” was established to support the development of environmental public welfare teams at their start-up period. The project is entitled the “Green Starters”. It strives to discover and nurture new participants in this field, provides assistance for startup teams that care about the environment and our homeland with the spirit of entrepreneurship to practice their environmental protection concepts, and awakens local environmental protection forces.





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Seedling of the Giant Wood: the Germination of the Backbone Force

by Dazhao SONG and Jingyi ZHAO



Studies have shown that many public welfare organizations encounter a “glass ceiling” six years after their establishment. This makes it difficult to grow upwards and results in a reduced effect of public welfare investment. Furthermore, a “glass ceiling” causes many delays in solving environmental problems. SEE’s “Growing Up Together” project provides non-restrictive funding to young environmental organizations up to a total of 300,000 RMB for three consecutive years. The project also provides them with entrepreneurial mentors and public welfare mentors to help the partners cope with development bottlenecks. Moreover, it features a powerful “hematopoietic” function, so that they can adapt to rapid changes in the external environment for sustainable development.



Preface

“Why” is More Important than “How”

by Xiaonian XU SEE Foundation, Chairman of Council

When the “Me Too” movement spread to well-known philanthropists, when public environmental welfare activities have become high-profile or even dramatic propaganda on the media home and abroad, when companies advertise their own products on a public welfare platform, and when official and local NGOs were at the center of each scandal, people naturally raised questions. What kind of public environmental welfare should we have? What standards should we place on non-profit organizations and public welfare activists?

Public environmental welfare requires the participation of the entire population, regardless of whether it's governmental or non-governmental, regardless of the occupation, regardless of the class, or even the motivation. We should encourage and support anything that helps to alleviate human's suffering, fosters cordial relationships, and improves the social environment.

We hope that the public will not ask those public welfare activists to be sages. They are, after all, still ordinary people unable to break away from the temptation. Like others, they have compassion, but they are not as merciful as Buddha. They make their best efforts to achieve higher moral standards, but they will never become

perfect saints. The public should not expect lofty nor ambitious public welfare activities, because public welfare can only ever be a supplement to government-sponsored public services and social welfare. It covers many trivial matters related to people's daily lives, like the basic necessities of life; food, clothing, shelters, sunlight, air, and the environment.

On the other hand, when engaging in public welfare activities, we need to constantly be asking ourselves: why are we devoted to this cause?

Human being is a complicated animal. Each life has multiple dimensions: material, social, moral, and spiritual. While these dimensions are interconnected and inseparable, they are, at the same time, independent from each other. One dimension can never be completely transformed into another. No matter how rich one's material life is, it is impossible to replace its moral and spiritual aspects, and vice versa. The so called utilitarian motives can be included within the scope of our material and social lives. Remember, while interests are material, the fame is social.

Although we do not have to exclude charity from utilitarian motives, we still hope to limit the

purpose of public welfare to social altruism. The purpose of public welfare should also extend to moral and spiritual self-improvement, thereby distinguishing it from purely utilitarian social and economic activities. Moral and spiritual cultivation can be considered as egocentric. Even social altruism can be interpreted as a self-interest. For example, improving public facilities and fostering social morality make for a more comfortable social environment. The nature of public welfare is therefore unlikely to be judged by altruism or self-interest. We still need to return to a multidimensional humanity.

The motivation for public welfare comes from compassion and sympathy, from the pursuit of a meaningful and moral life, and from the practice of spiritual beliefs. The purpose of engaging in public welfare is not to satisfy external social expectations, nor to fulfill external social responsibilities placed upon us, but comes entirely from the hearts of the people who choose to pursue public welfare.

According to utilitarianism, public welfare meets the needs of one's social life. The schooling of children in impoverished, mountainous regions brings me a happiness that material comforts can never produce.

The German philosopher, Immanuel Kant, said that what makes humans different from animals is a moral life, and that the highest good for humanity is complete moral virtue together with complete happiness. According to Mencius, we should, "Treat our elders as elders, and carry that forward to the elders of others. Treat our young ones as young ones, and carry that forward to the young ones of others." The benevolence of noble people comes from morality. Mother Teresa believed that charity is between the good and God; it has nothing to do with anyone else, including the beneficiary. Charity is the embodiment of faith and the need for a spiritual life.

It is exactly this inner non-utilitarian urge and the pondering of morality deep in our souls that our current society is devoid of. In an environment where materialism and jungle law prevail, public environmental welfare may be an ideal oasis for clearing our minds and attaining enlightenment.

During the first ten years of the SEE Foundation, it has enhanced the public's awareness of environmental protections through public offerings and increased public participation. There would be nothing better than having more dialogue with the general public regarding the value and merit of public welfare in the future.



Preface

Seeing is Change, Action is Power

by Luming AI Executive Director, SEE Foundation

Time passes swiftly. Looking back at the beginnings of the SEE, we saw a group of entrepreneurs with great aspirations. They ran about working together toward the common goal of controlling sandstorms. The scene, still vivid and often talked about, was how the first shot of battle against ecological and environmental deterioration was fired.

That became the awakening of environmental awareness among Chinese entrepreneurs. Chinese entrepreneurs, active in the business arena and striving in their respective fields, carried and drove the development of the Chinese economy in their own ways. They realized that there is only one beautiful home; only one blue planet, and that they and other entrepreneurs should assume the social responsibility of protecting the environment when it suffers from escalated deterioration.

For them, growing their own businesses was done by instincts, and taking on more social responsibilities was their duty. Combining the operation management of enterprises with environmental public welfare is not only innovative, but also leads to the creation of greater values.

With fourteen years of commitment to ecological conservation and 10 years of exploration to create

a social platform for environmental protection, the SEE continues to grow and make new breakthroughs. It is maturing, gaining more and more trust from the public, and expanding its influence through its ceaseless efforts.

Since the establishment of the SEE 14 years ago, the number of member entrepreneurs has increased to over 900, and the number of project centers has reached 23. It has supported more than 550 environmental organizations and individuals in carrying out environmental protection work nationwide. These environmental protection projects are backed by the development of an environmental public welfare workforce. These projects have been steadily proceeding with a focus on three areas, which include desertification prevention and control, green supply chain and pollution prevention, and ecological protection and nature education. It is actively pursuing international exchanges and cooperation. The pace of internationalization is accelerating, and it has been leading to remarkable outcomes.

The SEE's development has been attributed to all the organizations and individuals who have contributed. Member entrepreneurs have participated in projects in person, integrated resources, and constantly built a productive consensus. Executive team members have

had big hearts that have shown in their embracing of the ideals of environmental protection and public welfare with a spirit of full enthusiasm and professionalism. And there have been others major contributor, such as environmental NGOs, local governments, farmers and herdsmen, the news media. They have all combined their efforts to help us promote environmental protection and public welfare ideas. Lastly, what has been accomplished would not have been possible without the contributions of every single donor. This shared goal allows us all to grow ever closer. Staying together, we will make the future

extraordinary!

Blue water and green hills are a treasure trove. Healthy nurturing depends on the health of nature. In the future, we will continue to uphold the value of “standing in awe of nature for sustainable development.” Through actions big or small, we will utilize power from all sources and harness entrepreneurship to bring tangible improvements to our ecological environment. This shall be the inheritance we leave for our future generations; a beautiful home filled with blue sky, green lands, and clear water.

Remembering Where We Started; Moving Forward on the Public Welfare Path

The lost will eventually fade away
Most of the lost are clouds of dust
We refuse to lose our way
Noah's Ark will not stray
This planet needs to change
Our living environment needs a beautiful face
Be an unsung hero
The earth will crown us with a grand, green show

— “The Song of the SEE” by Xiaoguang LIU



Xiaoguang LIU (1955-2017)
Founding Chairman of the Society of Entrepreneurs and Ecology (SEE)

The SEE Environmental Protection Organization is the most significant institution in our lives and a public welfare gift to society! It not only evokes a sense of public interest and responsibility in our generation of entrepreneurs, but it also calls for and embodies the pursuit of dreams for the next several generations of young entrepreneurs. It represents the emergence of an effective public welfare organization and the creation of a modernization system of NGOs.

“One’s life will always face all kinds of challenges and complicated issues; sometimes even the choice of life and death. But the challengers will always be spiritual giants.”

— by Xiaoguang LIU



Jian LIU

Chief Scientist, the United Nations
Environment Programme (UNEP)

Executive Director, Science Division, UNEP

The world faces three major environmental problems: climate change, environmental pollution, and loss of biodiversity. These three issues are intertwined and interrelated. According to data from the World Health Organization, environmental pollution itself has caused more casualties than the total annual casualties of the Second World War, which shows the severity of these three problems.

In China, ordinary people are most concerned about climate change and pollution. In 2017, UNEP issued the “Climate Change Emissions Gap Report” and concluded that the total contribution of each country’s commitments to reduce emissions can only achieve one-third of the Paris Agreement’s targets. So, who will cover the remaining two-thirds has become a new problem. To solve this problem, entrepreneurs have been urgently called upon to play a leading role. We see from the SEE, which is composed of entrepreneurs, the innovation and leadership demonstrated by entrepreneurs in environmental public welfare coming at the forefront of the international stage. The Green Supply Chain Project is a good example. It is an advanced worldwide concept.

We have high expectations for such an organization. On the one hand, I hope that the SEE can rely on existing advantages to further exert its strength and expand its influence so that leaders and enterprise CEOs around the world gain the knowledge to be effective and participate in solving these problems. On the other hand, I hope that they will establish standards for programs such as the Green Supply Chain, and verify their feasibility. This way more countries and enterprises in the world can follow their example. To this end, the UNEP is willing to provide assistance in this process.

Under the guidance of Xi Jinping's ecological civilization idea of the new era, green, sustainable development and ecological conservation have received widespread attention from all walks of life. More and more institutions, groups, and individuals have devoted themselves to the great cause of building an ecological civilization. Among them, the SEE Foundation is undoubtedly one of the most influential nonprofit organizations.

During the ten years since its establishment, the SEE Foundation has evolved from a concept conceived by a few entrepreneurs into an environmental public welfare organization with extensive influence at home and abroad. The achievements are remarkable and have been widely recognized. The SEE has funded a variety of projects to protect the natural ecological environment, supported a variety of eco-environmental education and exchange activities, and committed itself to supporting the growth of China's grassroots environmental NGOs. Even more noteworthy, the SEE's promotion of the Green Supply Chains Projects in real estate and related industries has led the eco-friendly process in China's real estate sector. It has made solid progress in driving the formation of a green developmental model and a new industrial ecology.

In my communication and collaboration experience with the SEE, I personally felt their enthusiasm for environmental protection and public welfare, their responsibility and accountability as entrepreneurs, and their diligent and pragmatic attitudes. I look forward to seeing the SEE uphold the spirit and belief to deliver new achievements within the next decade. The ASEAN Center of the Ministry of Ecology and Environment is also willing to continue the support and assistance for relevant green projects. Let us work together for more contributions in the great cause of protecting our blue waters and green mountains.



Guomei Zhou

Deputy Director of China-ASEAN (Shanghai Cooperation Organization) Environmental Cooperation Center

Director of the China Environmental Science Society

Director of the International Ecological Alliance



Shi WANG

The 1st Executive Director of the SEE Foundation

Thanks to the SEE, as an entrepreneur, I myself have been inspired. The impact of the SEE on entrepreneurs is not only found in their participation in the fight against desertification and devotion to the wider ecological environment, but also having a role in encouraging and supporting Chinese grassroots NGO organizations. At the same time, we are a source of inspiration. Just as we are regarding our stance in the prevention of land desertification, we must begin with the prevention and control of our spiritual desertification. We must be rational and scientific.

As we mark the 10th anniversary of the establishment of the SEE Foundation, I am very happy to witness, together with my friends, the many beneficial

changes it has brought. There were changes that took place where we were witnesses. There have even been subtle changes that happened to ourselves. I used to say that if entrepreneurs can do a good job dealing with tough environmental challenges, there's nothing we cannot conquer. The Suosuo forest, which grows tenaciously in the desert, exhibits vigor and vitality. This is delightful. Looking to the future, the SEE's original intention to motivate entrepreneurs, to assume social responsibilities, and to protect the ecosystem will not change. It will blaze a trail through even greater challenges by exploring the integration of the humanities and ecology, coping with climate change, and promoting sustainable development.



Jiahuan HAN

The 2nd Executive Director of the
SEE Foundation

At the end of 2003, Xiaoguang came to me and talked about the establishment of the SEE to combat desertification. Xiaoguang was genuine and sincere. Moved by his sincerity, I agreed to work on the Chinese Taiwan side. Soon after, more than 20 Taiwanese entrepreneurs joined as founding members of the SEE. This gave me a deeper feeling of the blood ties between the two sides of the strait, "Blood is thicker than water." At the same time, the selfless dedication of these cross-strait entrepreneurs to environmental protection has deeply moved me.

In the five or six years since the founding of the SEE, these enthusiastic and socially responsible "big brothers" have also learned to compromise, to listen more humbly to the voice of nature, and to respect the ecological and human spirit. This laid the foundation of the values of our SEE as well as enriched and strengthened the DNA of our SEE.

Maybe next year, the members of the SEE will top 1,000 people. The SEE Foundation, established 10 years ago, with a well-rounded funding and auditing system, has been able to fund more than 550 environmental public welfare organizations. What a great influence this is, and how far-reaching impact it will bring! I believe that these entrepreneurial members will continue the legend and bring great impact on China's blue sky and waters!

Perhaps in the near future, the SEE Foundation will be awarded the Nobel Peace Prize for its great impact on the environment and society. We will join hands and stand under the blue sky and say, "This life is worth it!" Joining the SEE is the most precious memory of our lives!

In fact, the most important change in doing public welfare work is not changing others, but oneself. The SEE is the most successful charity. It is the charity that entrepreneurs donate the least amount of money to, but spend the most amount of time with. We are often anxious, and we worry about whether the things we do are practicable enough. We wonder whether there will be a sufficient effect in achieving public environmental welfare goals, and whether we can take on tasks in a more professional way. However I think that even if something seems to be trivial or simple at the moment, as long as we are on the right track, work at the problem meticulously and rationally and stick to it together for 100 years, then our efforts will turn into something that's not just great... but extraordinary. I always believe that, for environmental protection, every small effort counts. Therefore, every small progress we make depends on constant persistence. Our progress depends on our determination. Our progress depends on our willingness to never turn back. With the SEE, we have to do what is necessary. In the field of environmental protection, we have nothing to lose and everything to gain. Looking into the future, there's only one way out: to never turn back and never give up. Let's endeavor to win!



Lun FENG

The 3rd Executive Director of the
SEE Foundation



Zhiqiang REN

The 4th Executive Director of the
SEE Foundation

Everyone is pursuing happiness, but different people have different understandings and definitions of happiness. Some people define happiness as justice, some define happiness as sanctity, some define it as real life, and some define it as honor after death. The entrepreneurs of the SEE realize the value of their lives in pursuing the great mission of protecting the ecological environment and conserving clear water and blue sky.

In 2004, a group of entrepreneurs, who have shared the passion of protecting our planet earth, gathered in the Tengri Desert of Alxa. It was here where they took the first step to combat desertification and established the SEE. Later, with the strategic significance of “being based on Alxa, but not limited to Alxa,” the society added the conservation of the ecological environment and animal species in addition to the control of desertification to their responsibilities. The SEE’s work has spread to various provinces and cities across the country.

Ten years ago, the SEE Foundation was established for entrepreneurs to show their loving hearts. After a few years, it was transformed into a public fund where it was able to mobilize its social forces. Additionally, its entrepreneurs began to participate in social welfare and environmental protection, improve the environment, and carry on the great mission of “conserving clear water and blue sky.”

Human beings have only one earth to live on. Perhaps we don't have to leave quite so much money for future generations. However if we work together, we can leave a beautiful earth with clear water and blue sky for all of them, which is humanity's greatest wealth for survival and social development. The SEE Foundation is committed to the protection of the ecological environment, committed to the great mission of sustaining human survival, committed to changing the world with every little effort, and committed to forewarning everyone to pursue a happy future together!



Xiaohua QIAN

The 5th Executive Director of the
SEE Foundation

Taking the development of the environmental public welfare industry as its cornerstone, the SEE Foundation's emphasis lies in three areas: Desertification Prevention and Control, Green Supply Chains and Pollution Prevention, and Conservation & Nature Education. We have carried out three-dimensional and regional configurations in the implementation of ecological conservation projects.

The results are blooming everywhere; from the 100 Million Suosuo and water-saving millets that are helping desertification prevention and control, the Free Flying Wings in the coastal wetlands and clean ocean beaches of Taiwan and Zhoushan. They can be seen from the golden monkeys, gibbons, green peacocks, and white-headed langurs along the southwestern mountains to the snow leopards and Chinese leopards in the Sanjiangyuan National Park where a compensation mechanism for human-animal conflicts was officially introduced into the pilot content. They can be seen from the pandas, crested ibises, and the golden monkeys in the Qinling Mountains to the North China leopards in the depths of the Taihang Mountains and the finless porpoises of the Yangtze River and its tributaries. The "Blue Defenders" are guarding the water, sky, and land in more than 20 provinces and regions. Green Supply Chain Action in real estate industry in China is being carried out in a systematic manner. Within the initiative, implementing a green procurement plan has been implemented, active communication has been established with upstream suppliers, promoting the environmental performance of suppliers has been promoted, and a workable model designed to fight for a blue sky while reducing global greenhouse gas emissions has been established. We take serious responsibility as a public environmental welfare organization with more than 280 million people who have become active supporters and participants in environmental protection.

The SEE Foundation is advancing towards its goal of becoming a modern public environmental welfare organization, actively engaging entrepreneurs, guided by scientists, cooperating with the government, mobilizing social forces, and supporting the public environmental welfare.

SEE Memorabilia

2004

06.05.2004

The SEE was formally established on the shore of the Moon Lake in the Tengri Desert in Alxa.

08. 2004

The SEE's first ecological protection and community development project, the "Energy Alternative and Natural Suosuo Community Protection Pilot Project" was launched.

2005

04.22.2005

China's first non-governmental environmental protection award was established and named the "SEE Eco Prize." It aims to promote growing ecological conservation activities, and stimulates the participation of Chinese non-governmental forces in ecological conservation and sustainable development, thereby improving the ecological environment.

2006

03.04.2006

For the first time, the SEE organized experts to conduct strategic investigations in the Alxa area and formulates a strategic development directive for the Alxa regional project. This resulted in profound impacts on the development of the organization.

2008

06.02.2008

The SEE Fund was officially launched.

12.23.2008

The SEE initiated the establishment of the SEE Foundation (also known as Beijing Entrepreneur Environmental Protection Foundation).

2009

09. 2009

SEE was voted as the "Republic Landmark" by Sina. The reason is that it is "synonymous with China's environmental protection efforts, and represents the attempt of China's new entrepreneurial class to assume its social responsibility".

11.2009

The SEE's South China district was established (later divided into the Shenzhen-Hong Kong project center and the Pearl River project centers)

2010

02.2010

The SEE's Taiwan district is established (later renamed to the Taiwan project center)

03.2010

The East China district was established (later renamed to the East China project center)

12.06.2010

During the negotiations at the Cancun Climate Change Conference, the SEE, together with international NGO Climate Organizations, Vanke Foundation, Vantone Foundation, Lao Niu Foundation, and YuanDa Enterprise Group, hosted the "China Day" event. The SEE led the Chinese non-government environmental protection activities onto the international stage.

2011

06.2011

The North China district was established (later renamed to the North China project center)

09.08.2011

The SEE launched the Shenzhen Mangrove Wetlands Conservation Foundation.

10.2011

The Southwest district was established (later renamed to the Southwest project center)

2012

06.18.2012

Together with folk NGO organizations and Chinese enterprises, the SEE held a series of activities featuring "China Going Green" in the UNEP Exhibition Hall at the United Nations Sustainable Development Conference in Rio de Janeiro, Brazil..

09.2012

The "Green Starters" project started its first season

12.2012

The "Tough Grass Partner" project was launched

2013

2013

"The Blue Guard Fund" was initiated (strategically transformed to the "Blue Defenders" project in 2016)

10.31.2013

The Pearl River project center was established

11.08.2013

The Northwest district was established (later renamed to the Northwest project center).

2014

09.16.2014

The Hunan project center was established.

10.2014

The SEE's "100 Million Suosuo" project was launched. It is committed to planting 100 million psammophytes represented by the Suosuo in the key ecological zone of Alxa within a decade (2014-2023). It also commits itself to the recovery of 2 million acres of desert vegetation.

12.2014

The SEE Foundation was upgraded to a public fundraising foundation.

2015

Early 2015

The SEE formed a strategic partnership with a number of important companies, and establishes the social enterprise "Wei Xi." It launched the water-saving millet brand "Ren millet" to benefit the desert environment.

07.04.2015

The Hubei Project Center was established.

08.31.2015

The Inner Mongolia Project Center was established.

09.09.2015

On the first annual "99 Giving Day," the SEE received 17,000 person-time hours of support within three days and 4.23 million RMB in donations.

12. 2015

The entrepreneur delegation of the SEE participates in the United Nations Climate Change Conference (COP21), and it issued the "Beijing Declaration on Corporate Sustainable Development," which was submitted to UN agencies.

2016

2016

The SEE takes the development of environmental public welfare industry as its cornerstone and emphasizes three particular areas, including desertification prevention and control, pollution prevention and Green Supply Chain, and ecosystem conservation and nature education. A number of projects take shape, including "Free Flying Wings," "Noah's Ark," "Green Supply Chain," "Save the Smile of the Yangtze River; save the Finless Porpoise," and "Blue Defenders."

03.21.2016

The Hubei Province Entrepreneurs Environmental Foundation was established (renamed to Changjiang Conservation Foundation in June, 2017)

09.2016

UNEP Executive Director Erik Solheim met with the SEE's "Green Supply Chain Initiative" project team and praised it for opening up a new perspective in the global response to climate change.

09.09.2016

On this year's "99 Giving Day," the SEE received 179,000 person-time hours of support and 24.177 million RMB in donations. This ranked it in the top 10 among all public welfare organizations and No. 1 in environmental protection organizations.

10.12.2016

The SEE Ecological Conservation Museum was opened.

11.16.2016

A side event was held at the 22nd Conference of the Parties to the United Nations Framework Convention on Climate Change to release the latest results and environmental benefit assessment report of the Green Supply Chain Initiative in China's real estate industry.

2016.12.18

The Anhui project center was established.

12.28.2016

The SEE successfully filed two charitable trusts, one of which became China's first charitable trust with a charity organization as the single trustee. This was selected as one of the Top Ten Hotspots in the 2016 Charity Profession by the "Blue Book of Charity" published by the Chinese Academy of Social Sciences.

2017

01.12.2017

The Henan Project Center was established.

06.14.2017

The Ministry of Environmental Protection's "Green Consumption and Green Supply Chain Alliance" was formally established, and the SEE became the deputy governor of the alliance.

07.07.2017 — 07.08.2017

A delegation from the SEE participated in the G20 Foundation Alliance Conference (F20) held in Hamburg, Germany. The SEE was the only foundation in China to become the first member of the F20.

07.29.2017

The Shanxi Project Center was established.

09.06.2017

The initial 13th Conference of the Parties to the United Nations Convention to Combat Desertification is held in Erdos, Inner Mongolia. The desertification control of the SEE went on the international stage for the first time.

09.09.2017

On "99 Giving Day," 2019, the SEE received 570,000 person-time hours of support within three days, and receives more than 55.67 million yuan in donations, ranking No. 1 in the environmental field for another consecutive year.

09.22.2017

The Xi'an Entrepreneurs Environmental Conservation Foundation was founded.

09.23.2017

The Fujian Project Center was established.

12.04.2017–12.06.2017

The 3rd UN Environment Conference was held in

2017

Nairobi, Kenya. This was the debut of the SEE at the UN Environment Conference.

12.14.2017

The Shandong Project Center was established.

2018

01.23.2018

The Guangxi Project Center was established.

04.25.2018

The Sichuan Project Center was established.

05.27.2018

The Chongqing Project Center was established.

08.11.2018

The Heilongjiang Project Center was established.

08.19.2018

The Sanjiangyuan Project Center was established.

09.09.2018

On "99 Giving Day," 2018, the SEE received 450,000 person-time hours of support within three days, and receives more than 46.62 million RMB in donations.

09.17.2018

The Saishang-Jiangnan Project Center was established.

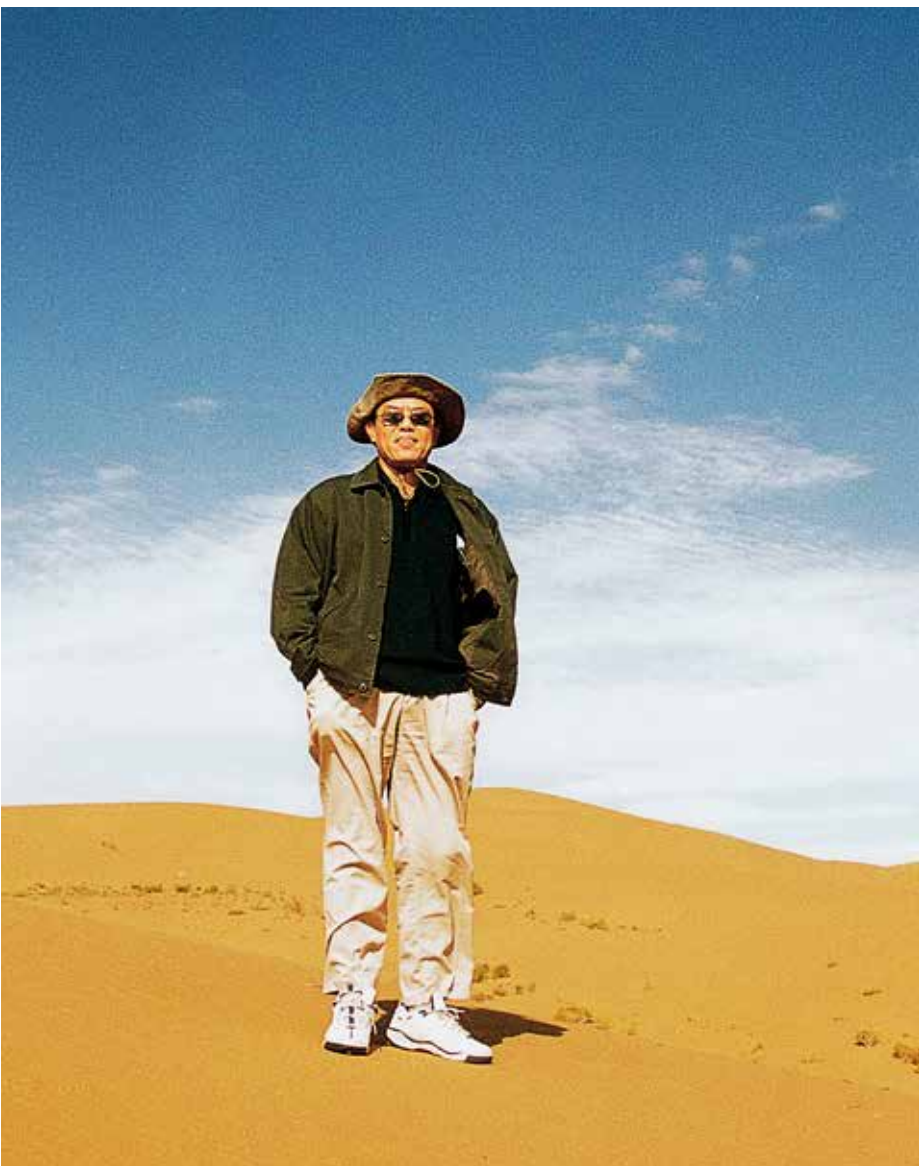
10.20.2018

The Zhejiang Project Center was established.

12.16.2018

The Poyang Lake Project Center was established.

A LOOK BACK ON THE JOURNEY



The SEE Foundation's Ten Year Covenant

by Min CHEN

We are naive and persistent, and we've always loved this green world.

The pulse of the earth will witness all our love and dedication.

Fourteen years ago, a group of entrepreneurs founded the SEE. With the spirit of idealists, they explored the desert, where they wished to enlighten the world with the spark of heroism.

Ten years ago, the SEE foundation was officially launched. We wished the land of our nation be covered by lush, green mountains and clear, blue water; full of life and vitality.

During these past ten years, we have realized that environmental issues cannot be resolved through mere donations or the sole control of desertification. What we need is the awakening of the public's environmental awareness. It is the participation by the general public that has driven, and will continue to drive, the progress of the environmental industry.

We are now facing even more complex environmental problems. Looking back at

where we started, we need to strive for a sustainable world. Otherwise, we will have no future.

Victor Hugo once said, "Progress is the goal, the ideal is the type." The meaning of our lives, in the end, is in the achievement of a succession of small goals which prepare us to fight for our ideal- our final goal. The SEE Foundation has not forgotten where we started, and it has used the past 10 years to practice our ideal.

In 2008, the SEE launched the SEE Foundation, and upgraded it to a public fundraising foundation in 2014.

Looking back on the past ten years, the SEE explored public welfare with a business mind; it has shone a unique light since the beginning.

Desertification control was the starting



Fig.1



Fig.2

•Figure 1: On June 5, 2004, the entrepreneurs of the SEE published the SEE Declaration in front of the “Confession Forest.” With this act, the SEE was formally established. Photo courtesy: the SEE Foundation

•Figure 2: On June 5, 2018, the SEE held the 6th China Enterprise Green Contract Forum in Beijing. This important event focused on global climate change and Green Supply Chain issues. It united various environmental forces for a discussion on how to cooperate in addressing contemporary climate change issues and create green competitiveness for the future. Photo courtesy: the SEE Foundation



point of the SEE's public welfare efforts. Every second, 78 square meters of land is desertified. The desert is quickly spreading and even engulfing people's homes. The SEE Foundation has committed to planting 100 million psammophytes, represented by Suosuo, within a decade to recover 2 million acres of desert vegetation.

One of the main causes of land desertification is the overexploitation of groundwater. The SEE Foundation introduced a high-efficiency water-saving millet species and drip irrigation technology to promote water-saving agriculture among the aborigines and to conserve groundwater by changing production methods.

In order to promote the scale and marketization of desert millet, the SEE Foundation initiated the establishment of the Weixi Social Enterprise in 2015. The foundation is responsible for project promotion, monitoring management, ensuring the safe production of crops, and creating a "Ren Millet" public welfare brand. Social enterprise is responsible for purchasing, product processing, and opening up sales channels. Indigenous people increased their income while conserving groundwater, making their participation active and enthusiastic. This kind of empowerment, by providing people with the necessary tools and not just the end product has become the SEE Foundation's charity business model. The foundation also utilizes its effective business models to promote the continued protection of the ecological environment.

Looking back on the past 10 years, the innovative, Internet-based, public welfare model has helped Chinese people gradually establish and improve their environmental awareness.

The SEE Foundation, together with the Ant Forest, innovated the "Internet + Public Welfare" model. Through every time we travel green and every online transaction, we make reduces the corresponding carbon emissions. Converting the reduction into green energy, a Suosuo can be planted in the Alxa desert. From the initial cooperation in August 2016 until May 2018, the number of public participations have exceeded 350 million. This game-like public welfare action has resulted in an unprecedented rise in the public's awareness of environmental protection. Every participant can feel that this world has benefited because of their own efforts!

For two consecutive years, the SEE's "100 Million Suosuo" project has received 284 million donations from 553,200 caring internet merchants through the Taobao Charity Baobei Platform resulting in a total amount raised of more than 10 million RMB.

Tencent has held the "99 Giving Day" event for four consecutive years. Public support for the SEE Foundation has risen from 17,000 person-time hours and 4 million in fundraising in 2015 to 570,000 person-time hours and more than 55.67 million in fundraising in 2017. It continues to lead the field of environmental protection in both the amount of fundraising and public support.

Looking back on the past 10 years, with

the strategic slogan of “being based on Alxa, but not limited to Alxa,” we have achieved success in both “public participation” and “industry recognition.”

“The SEE Foundation has extended the dreams and leadership of Chinese entrepreneurs, which has allowed our conservation of the ecological environment to spread from the Alxa region to the entire country.” We hired renowned environmental experts and scholars to join our “Scientific Advisory Committee,” thereby ensuring the rewards of publicly offered brand projects. Strategic planning switched from a “speakable, visible, and measurable” scientific project to a focus on branding of publicly offered products.

Starting with “100 million Suosuo” and “water-saving millet” in the Alxa desert, we used the “Save the Smile of the Yangtze River Project,” “Free Flying Wings,” “Noah’s Ark,” “Conserving the Sanjiangyuan Region,” and other environmental projects to cover wetlands, the ocean, and forests across China, protecting the country’s blue water and green mountains.

After 10 years of persistence, the SEE Foundation has been awarded a 5A-level Chinese social organization assessment and become one of the most transparent foundations in China. Our Foundation Transparency Index (FTI) has received full marks. After having been upgraded to a public fundraising foundation, the SEE has become more persistent on the open and transparent credibility of its financial audit and letter-sharing system. Publicly offered products have gradually gained widespread public recognition. This is the core practice of our initial

intention: “to have every piece of the blue sky protected by someone and have every river guarded by someone.”

At the same time, the SEE Foundation has promoted innovative experiments in public welfare finance and pioneered in innovations in both environmental public welfare and finance. On December 28, 2016, two charitable trusts were successfully filed. One of them became China’s first charitable trust with a charity organization as the single trustee. The foundation was selected as one of the “Top Ten Hotspots in the 2016 Charity Profession” by the “Blue Book of Charity” published by the Chinese Academy of Social Sciences.

Looking back on the past 10 years, the SEE Foundation has promoted the progress of the environmental protection industry, sought for the future layout of China’s environmental public welfare, and succeeded in becoming the most powerful driver of the environmental protection cause.

In 2008, China’s environmental protection industry strength stood at 508 private (including unregistered) environmental organizations, and environmental public welfare donations from China were estimated to be less than 50 million RMB per year. The total number of employees was no more than 2,000.

The SEE Foundation drew on a concept which is called “Angel Investment.” This concept stimulated the commercial field, uncovered and nurtured new forces in China’s environmental public welfare field, and built a healthy and sustainable public welfare circle through the “Green Starters” and “Growing Up Together”



The SEE Ecological Conservation Museum is located on the shore of Moon Lake in the Alxa Tengri Desert in Inner Mongolia. It was built by the SEE with the theme of ecological and environmental education. It has curated important explorational efforts achieved by the SEE in the field of desertification prevention and control as well as other environmental areas. Photography: Xuewen WU

projects. The SEE Foundation has supported a total of 331 environmental public welfare teams and approved a funding amount exceeding 40 million RMB.

The “Blue Defenders” project initiated by the SEE Foundation and its “Green Supply Chain Action in Real Estate Industry in China” have resulted in pollution reduction by more than 3,383 enterprises, with disclosed pollution source data covering 364 cities. Through promoting public supervision of the environment and motivating an environmental transformation in the real estate industry, the SEE Foundation has facilitated the transformation of China’s

social economy with its commercial powers.

The SEE Eco Prize has been held for 7 consecutive years. It is the first environmental public welfare award established by a non-governmental organization in China. It has cumulatively awarded 210 institutions, projects, or individuals, totaling 5.6 million RMB in prizes. The award has amassed interest from millions of people, and it has reflected the participation of nearly a thousand public welfare projects. Through an awarding mechanism, we have continued to witness the growth of Chinese non-governmental environmental protection forces.

Looking back on the past 10 years, the SEE has expanded its horizon to include the whole world. It has used public welfare to connect with the world and promote social progress. Environmental problems are not local problems, but a theme of globalization. The SEE Foundation has spent 10 years striving to transcend itself.

From the research of desertification control and water-saving agriculture methods from Israel in 2010, to the 2017 UN Convention on Desertification, the SEE Foundation has shared its experience in desertification control and contributed to the ecological recovery of desertified areas around the world.

From 2015's participation in the United Nations Climate Change Conference (COP21) and release of the "Beijing Declaration on Corporate Sustainable Development" to 2016's participation in the UN Framework Convention on Climate Change and the release of the "Latest Outcomes of the Green Supply Chain Action in Real Estate Industry in China and An Environmental Benefit Assessment Report", the SEE's delegation has received high praise from Erik Solheim, the UN Secretary-General and Executive Director of the UNEP. China's Real Estate Green Supply Chain Initiative opened up a new perspective for the global response to climate change.

In the past 10 years, the nature of the SEE Foundation's international exchange has changed from "input" to "output" and from "declaration" to "action." In the future, cooperating

with the whole wide world, there will be even more breakthroughs. In 2017, the SEE Foundation participated in the G20 Foundation Alliance Conference (F20) held in Hamburg, Germany. The SEE was the only foundation from China that received an invitation, and it became one of the founding members of the F20.

Later, at the United Nations Environment Conference, the SEE made its debut and shared its experience in pollution prevention. It began to have a voice in the international environmental field.

"The purpose of our voice in the international environmental arena is to spread the efforts and contributions of Chinese enterprises to the cause of global environment protection. It is also meant as a catalyst for fusion. Every Chinese citizen is also a world citizen who must have a deeper connection with the world." We will take the next step by ushering in a new decade of global environmental actions with a spirit of innovation; we will drive social progress with a focus on public welfare.

We will plant green hopes in the desert.

We will guard the smile of the Yangtze River finless porpoise.

Let the beautiful shades of migratory birds adorn the blue sky.

Let biodiversity be taken under our wings.

Thanks to the intrepid wisdom of the entrepreneurs and their spirit of innovation

that pilot our Noah's Ark.

Thanks to the like-minded environmental scholars

and volunteers with green dreams.

Even more thanks must be paid to every partner

who is "changing the world with every small effort."

Along the way,

we went through thick and thin

and ran into numerous mistakes,

but we never gave up.

Faith, value, and utter innocence are rooted in our heart.

Only pious efforts

will lead us to an immortal ideal.

SEE Environmental Projects - Framework

Taking the development of the environmental public welfare industry as its cornerstone, the SEE's emphasis lies in three areas: namely desertification control, pollution prevention and Green Supply Chain, as well as ecosystem conservation and nature education.

Desertification Prevention and Control	Conservation & Nature Education	Green Supply Chain Action & Pollution Prevention
<ul style="list-style-type: none">• 100 million Suosuo• Groundwater Conservation	<ul style="list-style-type: none">• Free Flying Wings• Noah's Ark• Conserving the Sanjiangyuan Region• Save the Smile of the Yangtze River Project	<ul style="list-style-type: none">• Blue Defenders• Green Supply Chain
Development of Environmental NGOs		
<ul style="list-style-type: none">• Green Starters• Growing Up Together		

Where We Started

by Yuqiu

Worshiping the sand dunes and the blue sky,
Pondering over the lost souls as time slips by,
I want to ask to where my heart belongs,
To where the Suosuo grow lush, that's where my dream comes true.

— Zhiqiang REN

Because we have hopes and dreams in our hearts,
We have hopes that the land of China will be covered by green
mountains and blue water, full of vitality.
We have hopes that the people of the world will live together in a
beautiful global village.
We dream of a world of great harmony where everyone has the
opportunity to achieve their goals.
We are willing to do our best to turn such hopes and dreams into reality.

— Excerpt from the “SEE Declaration”

On April 29, 2018, on a sand dune at the outskirts of Alxa League in Inner Mongolia, Zhiqiang REN and Shiyi Pan sat on the ground. They stared at the nearby Xiaoguang Forest Monument. They told everyone about Liu Xiaoguang. They told the story of Chinese entrepreneurs and of this desert land. This is the place where a generation of Chinese entrepreneurs started their journey of environmental protection.

“Worshiping the sand dunes and the blue sky, pondering the lost souls as time slips by, I want to ask to where my heart belongs. Where the Suosuo grow lush, that's where my dream comes true.” The SEE's

5th president, Zhiqiang REN, wrote this verse. The first person who “worshiped the sand dunes and blue sky” in Alxa was Xiaoguang LIU. In 2003, Xiaoguang came to Alxa for the first time where he attended a forum event. He was awed by the desert in front of him and could not help but to kneel down. On June 5, 2004, in front of the dead forest of Suosuo on the shore of Moon Lake, in order to witness the disaster caused by human beings' persistent plundering of nature, a group of entrepreneurs made a vow to “unite entrepreneurs to preserve clear water and blue sky.” The environmental protection journey of entrepreneurs set sail.



Moon Lake in the Alxa League of Inner Mongolia, the place where the Society of Entrepreneurs and Ecology collected its original intention to set sail.

In October 2003, Xiaoguang LIU drove into the Tengri Desert. Stepping on the yellow sand, he was awed by the scene in front of his eyes. He could not help but bend his knees and ask for forgiveness.

At that time, Beijing and even the entire North China region had always accepted the “scourge” of sandstorms in the spring. The place where Xiaoguang stood was the exact source of the sand and dust that made up the sandstorms. The three major deserts in the Alxa League, the Badain Jaran Desert, the Tengri Desert, and the Ulan Buh Desert, with a total area of about 80,000 square kilometers, are the largest centers and sources of sandstorms in northern China.

“When I approached the desert, my heart was shocked. I was thinking, we have always been demanding of nature; how do we give back to it? How do we lead Chinese entrepreneurs into the field of environmental protection? As an entrepreneur himself, Xiaoguang was determined to make a change.

Under his plan and “implementation,” on June 5, 2004, sixty-seven entrepreneurs embraced the ambition of “preventing desertification and controlling sandstorms”. They formally established the SEE on the shores of Tara Moon Lake in the Alxa Tengri desert. The society jointly published the SEE Declaration and made a promise of hope.



There are three major deserts in the Alxa League: the Badain Jaran Desert, the Tengri Desert and the Ulan Buh Desert. With a total area of about 80,000 square meters, these are the largest dust storm centers and sand sources in northern China. Photo Courtesy: the SEE Foundation

Honoring the Sky and Land, and Respecting the Sky and Land

“Honoring the Sky and Land, and Respecting the Sky and Land” is the enlightenment that the SEE attained in the desert.

Since 2004, the SEE has begun the exploration of desertification prevention. Starting from the first ecological conservation and community development project “Energy Alternative and Natural Suosuo Community Protection Pilot Project,” it has carried out ecological activities in five villages within the Yaoba area. It has also joined forces with the local community, attempted projects such as a greenhouse project, a dairy farming project, the drip irrigation project, the water-saving pepper project, the water-saving Jerusalem artichoke project, the community fund project, and the biogas project. However, it failed. In depth investigations revealed

that in addition to the natural factors such as drought, low precipitation, high temperature, strong evaporation, and frequent winds, there was one more fundamental factor. The key was the subsistence of the herders. How to adapt to the local conditions by finding alternative products for herders is the key to alleviate overgrazing.

After a series of arduous attempts and various practices, the SEE managed to consider the local situation of the region, and it settled on four guiding principles; let the farmers and herdsmen be the main players, keep prevention a priority and exert control in parallel, use scientific guidance but adapt it to local conditions, and primarily focus on socialized public welfare projects. Having farmers and herdsmen as the main players pays respect to the indigenous culture and will of the aborigines. This mobilizes their enthusiasm and empowers them to improve their own subsistence. Ecological

conservation must not be made at the expense of the aborigines right to survive. All ecological conservation projects must be based on improving the living standards of everyone. Otherwise, they will not be successful.

Strategically focused, with targeted aim

The way to success is through strategic focus, persistence, and meticulous operations. At the 2012 Board of Directors meeting, the SEE's fourth chairman, Lun

International Vision, Professional Science

"Specialization, scientific integration, branding, and internationalization" are the development directions and requirements given by the SEE.

In 2008, the SEE entrepreneurs visited the United States and met with former U.S. Treasury secretary Henry Paulson. "As an enterprise we need internationalization; as an environmental organization we need the same. I am making myself (my objective) clear," said Shi WANG, the then chairman of the SEE. Under the guidance of international standards, the SEE quickly developed a new configuration. After they took office, a delegation of more than 20 members, including Shi WANG and Xiaohua QIAN, arrived in the United States. Here, they visited 15 public welfare institutions, including the Hewlett Foundation, the Energy Foundation, Rockefeller Brothers Fund, Rockefeller Family Fund, and Conservation International, carrying out discussions and learning experiences in the management of public welfare organizations, project operation, fund management, financial monitoring and fundraising.

With an international perspective, the SEE has been actively participating in international affairs to make its voice

heard on the international stage. In June 2012, together with NGOs and Chinese enterprises, it held a series of activities with the theme "China Going Green" in the UNEP Pavilion at the UN Conference on Sustainable Development in Rio de Janeiro, Brazil. In that same year, it held the Chinese Enterprise Green Contract Dialogue and the I SEE U-Charity Night of Chinese Entrepreneurs, which marked the start of the SEE's effort in pushing for a green economy. In 2015, the SEE participated in the Paris Climate Change Conference, where its Chinese entrepreneurial representatives released the Beijing Declaration on Sustainable Development of Enterprises. The world started to notice this upstart Chinese environmental organization. In September 2016, Erik Solheim, executive director of the UNEP, met with the "Green Supply Chain Initiative" project team and praised the Green Supply Chain Initiative for opening up a brand-new perspective for a global response to climate change.

In July 2017, the SEE became the only Chinese Founding member of the Foundation Platform 20 (F20), and it also became a member of the executive committee. In September of the same year, the 13th conference of the parties

to the United Nations Convention to Combat Desertification opened in Erdos, Inner Mongolia, China. The SEE, together with nearly a hundred entrepreneurs and governmental representatives, participated in the conference and held side meetings.

"We hope that, through our collaboration with the UN, more countries will become aware of and work alongside the SEE and the Green Supply Chain model they are promoting," Said Jian LIU, chief scientist of UNEP. He also stated that the innovation and leadership shown by entrepreneurs of the SEE in environmental public welfare was at the forefront of the world's environmental protection industry. He said, "the SEE once mentioned that public welfare was not just about meeting the standards, but about getting ahead of the curve. A good example can be found in the Green Supply Chain. This is a global concept that is far ahead of its time. The UNEP is willing to provide any assistance needed." In November 2017, the SEE, as a member of the directory committee to the UNEP "Science-Policy-Business" Forum, attended the forum and shared environmental cases as well as the "Green Supply Chain" Project.

Feng, proposed a scaling strategy. “Our project needs to be speakable, visible, and measurable,” he stated. The scale effect will emerge with a strong focus.

In October 2014, the “100 million Suosuo” project was officially launched. The focus is to use two million acres of desert vegetation, represented by the Suosuo, to restore the key ecological zone of Alxa within 10 years. By the end of 2017, 714,000 acres of planting had been completed, under the hand of more than 280 million person-time hours of support. Concurrently, the planting of water-saving millet was introduced to conserve groundwater resources in the oasis area and achieve a balance between draft and recharge. By the end of 2018, a total of more than 464 farmer households had participated in the project and accumulated more than 20,000 acres of water-saving millet in the desert. It protected a total of 10 million cubic meters of groundwater. Simultaneously, these activities drove the growth of the local farmers’ economic income.

Back in 2009, the then acting chairman Shi WANG introduced desert millet to Alxa. This hearty seed is a water-saving grain cultivated by Zhihai ZHAO, the

father of hybrid millets. Compared with conventional millet species, its yield is one-third more per acre.

Assisted with water-saving irrigation technology, every kilogram of desert millet can save two tons of oasis groundwater compared with traditional corn crops. Entrepreneurs recognized that in order to continue to promote the cultivation of desert millet in Alxa, the market link must be straightened out. The SEE’s third chairman Jiahuan HAN had the foresight to set up a social enterprise as a bridge connecting desert millet production to the market. To this end, Han served as the chief designer; he conceived and designed the Beijing Weixi Agriculture Co., Ltd. (hereinafter referred to as Weixi). Weixi was founded at the beginning of 2015. At that time, Zhiqiang REN served as the chairman of the SEE. As a director of Weixi, he went to the Wharton Business School to study how to operate social enterprises. What he learned gradually shaped his ideas for the “Ren Millet” brand.

After strategic focusing, the SEE became more targeted and applied this effective method to other projects. A happy life is not just about the daily necessities, but it’s also about clear water and blue sky. The blueprint for environmental protection drawn up by the SEE slowly unfolded in front of people’s eyes.

Innovation and exploration

On July 23, 2016, the first public welfare finance class started its term. Two terms have been completed so far.

On December 28, 2016, two charitable trusts were filed by the SEE. One of them became China’s first charitable trust with a charity organization as the single trustee. This was selected as one of the “Top Ten Hotspots in the 2016 Charity Profession” by the “Blue Book of Charity,” published by the Chinese Academy of Social Sciences.

A Spark of Fire Spreads Across the Nation

Aristotle once said, “In all things of nature there is something of the marvelous.” Modern photographer Hoshino Kazuo wrote in the “Journey of the Wind”, “Behind nature’s might, there is always



Fig.1

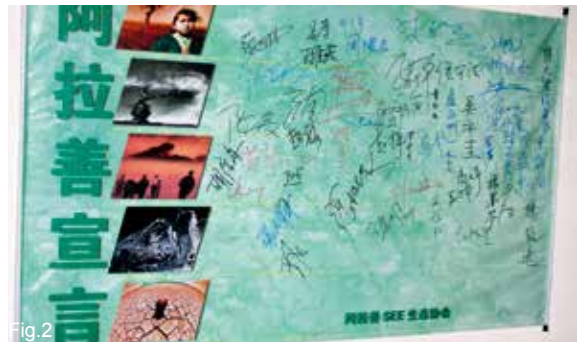


Fig.2

- Figure 1: On June 5, 2004, Xiaoguang LIU delivers a speech at the founding meeting of the SEE. Photo courtesy: the SEE Foundation
- Figure 2: All the founding members sign their names on the SEE Declaration, promising to devote sincere efforts to realizing the wishes and dreams advocated by this declaration. Photo courtesy: the SEE Foundation

hidden fragility. What attracts me is this fragility of life. The land of Alaska awakens the long-forgotten fragility of humanity. At this time, I am beginning to listen to the whispers of nature.”

Nature is subtle and fragile. It requires meticulous husbandry from human beings. The vision of the SEE is to become the most vigorous promoter of public environmental welfare, create an environment in which people and nature live in harmony, and develop a flourishing green economy coexisting with

the beauty of nature. As of December 2018, the SEE has directly or indirectly supported the work of more than 550 private environmental public welfare organizations or individuals in China.

At the end of 2008, in line with the concept of “Being based in Alxa, but not limited to Alxa,” the SEE initiated the establishment of the SEE Foundation (registered name; Beijing Entrepreneurs Environmental Conservation Foundation). SEE projects spread their productive ways from Alxa to the entire

SEE Eco Prize

The SEE, an environmental organization composed of entrepreneurs, has advanced the social responsibility of entrepreneurs as advocates of environmental responsibilities. In December 2004, the SEE executive board decides to launch the “SEE Eco Prize”. On April 22, 2005, the first “SEE Eco Prize” with the theme of “responsibility” was announced. It emphasized each individual and each organization’s re-

sponsibility for ecological conservation, while aiming to promote the emerging environmental actions. It has focused on motivation of the participation of Chinese non-governmental forces in the work of ecological conservation and sustainable development.

This is the first environmental public welfare award established by a non-governmental organization in China. So far, seven awards have

been held in 12 years. A total of 210 environmental groups, projects, and individuals have been presented with awards. These awards represent a total prize value of 5.6 million RMB. During this period, quite a few organizations and individuals who won awards have gradually grown into leading figures and become the backbone of China’s environmental protection industry.

country. This was the figurative “single spark that can start a prairie fire.” In December 2014, the SEE Foundation was upgraded to a public fundraising foundation. In 2016, the 6th governance team proposed “asset restructuring” and the focus of enterprise. Modeling its development cornerstone on the entire environmental public welfare industry, the SEE started to focus on three areas; desertification prevention and control, pollution prevention and green supply chains, and ecosystem conservation and nature education.

In the field of ecosystem conservation and nature education, the “Free Flying Wings” project saved 100 wetlands, protected 24 rare and endangered waterfowl, and allowed birds to share this beautiful planet with human beings. The “Save the Smile of the Yangtze River” project explored a new model for social participation; it saved finless porpoises through teamwork and helped to ensure the survival of the only remaining mammals in the Yangtze River. These 1,012 or so finless porpoises, swim freely in the Yangtze River. The “Noah’s Ark” project protects its flagship species, including the Yunnan golden monkey, the Himalayan bee, the green peacock, and the Asian elephant in Yunnan. The aim is to build a beautiful home where people and nature exists in harmony through the protection of the forest ecosystem, of the birds in the sky, of the beasts in the forest, of the fish in the water, and of humans in nature, so that all may thrive together. The “Guarding the Sanjiangyuan” project protects the source of three major rivers, the only one natural water tower in China, and the drinking water source for 700

million people.

The SEE has also actively carried out work for pollution prevention and control. In 2012, the “Blue Defenders” project was launched with the aim of recovering clear water and blue sky. It has been devoted to promoting the disclosure of pollution information, encouraging public supervision of pollution sources, facilitating corporate pollution reduction, and sustaining the development of solutions to pollution problems involving water, air, and soil. This project has directly supported 101 programs. It has been led by 53 first-line environmental public welfare organizations in the country, now known as the “Blue Defenders.” This project has been responsible for effectively rectifying the various pollution levels of 5,883 different enterprises.

At the same time, the SEE mobilized Chinese entrepreneurs to participate in Green Supply Chain. As of December 2018, green procurement standards have been established for industries in steel, cement, aluminum alloy, wood, stone, coatings, and insulation materials. The “white list” has been updated to include 575 enterprises, allowing enterprises to receive public supervision and publish timely information updates on their official websites and Weibo sites. The Green Supply Chain has formulated green procurement standards for industries, motivated suppliers to go through environmental rectification, and achieved large-scale reduction of pollution and carbon emissions. There have been 98 enterprises who have joined this action with more than 2,000 suppliers motivated to join as well.

The development of the SEE has been based on the development of the entire environmental public welfare industry. Entrepreneurs serve as judges for the “Green Starters” project and mentors for the “Growing Up Together” project. They hope to drive healthy development for the environmental public welfare industry and encourage more people to participate in their actions by providing assistance and support for them. Through 2018, the Green Starters project has supported a total of 277 environmental public welfare entrepreneur teams, in 31 provinces and cities across the country. Relevant environmental issues range from pollution prevention to species conservation, environmental education, and solid waste classification. It has helped to advance startup environmental public welfare organizations to break through development bottlenecks by employing the “Growing Up Together” project. This project not only provides financial support, but also matches more than 80 entrepreneurs and public welfare mentors to these new organizations. Mentors seek fame in the process, and they participate purely for the sake of project, their role is to benefit those who need help navigating in the environmental industry.

SEE’s environmental project centers keep growing and developing throughout the country. In November, 2009, the South China district was established and later divided into two major project centers; the Shenzhen-Hong Kong and the Pearl River project centers. Between November, 2009 and December, 2018,

the SEE has established a total of 23 project centers.

The advantage of coupling project centers with environmental projects gradually emerged in 2017. This was when the Northwest Project Center focused on ecological conservation and restoration in the Qinling region. The North China Project Center has continued to focus on “Free Flying Wings” and “North China Leopard Population and Habitat Protection” projects. The Hubei, Hunan, East China, and Anhui project centers have jointly launched and operated the “Save the Smile of the Yangtze River Project” project. Each project center guards and protects the ecological environment of its homeland. At the same time, they cooperate with local environmental organizations to carry out a variety of projects. These comprehensive actions allow for convenient, effective, and extensive participation so that environmental concepts of the SEE continue to spread green across the nation.

With our thoughts on where we came from, we also look forward to a bright future. As a responsible environmental organization, the SEE will continue to carry the banner of environmental protection and adhere to its commitment of protecting the blue water and sky. The SEE will also continue to connect with the frontiers of the world’s environmental industry, participate in long term practices to build an international exchange platform, and showcase China’s environmental actions to the whole world.

SPOTLIGHT ON ACTIONS



Focus on Environmental Conservation Themes and Promote Environmental Public Welfare

Green is the color of life, but green on this planet is receding little by little. Air and water are polluted, biodiversity is declining, and the climate is warming. While pursuing social and economic values, we are ignoring nature and the deterioration of our environment.

As the quality of life has improved, numerous environmental problems have followed. All forms of media are constantly reporting on heartbreaking stories and embarrassing scenes of animals, plants, and even people losing their lives due to industrial pollution, the untreated direct discharge of waste, and abusive use of pesticides. We are the perpetrators of countless tragedies. What did we gain from it? “Have we been treating others the way we want to be treated?” We are actually victims, the victims of reprisals.

We need to change and take actions to stop the ecological environment from deteriorating further.

It is the vision of the SEE to become the most powerful promoter of environmental public welfare. It is the vision of the SEE to enable people to live in harmony with nature, and to develop a green economy that coexists with nature. In the past ten years, the SEE has gradually moved its focus onto three major environmental issues: desertification prevention and

control, pollution prevention and green supply chains, and ecosystem conservation and nature education. It has made a significant impact in the Chinese environmental protection community.

Initial efforts began with desertification control. Together, the SEE, local government, and herders have developed an innovative way of sustaining ecological conservation; grafting Cistanche through Suosuo and shifting the herders’ livelihood from distress to success. Water-preserving agriculture was developed, groundwater preserved, and desertification was controlled from spreading. The establishment of the Weixi Social enterprises facilitated the scaling and commercialization of desert millet.

Under the strategy of “Being based on Alxa, but not limited to Alxa,” the SEE refined, integrated, and extended its themes. It has continuously developed a new environmental protection pattern; from protecting the water source of 700 million people along the hinterland of the Qinghai-Tibet Plateau to the conservation of the Yangtze River ecology. It has developed protection of wetlands and endangered waterfowl on the southeast coast to the conservation of biodiversity in the southwestern mountains. The SEE Foundation’s current project brand has

set forth a three-dimensional structure for environmental protection.

The cornerstone of the previously mentioned three environmental themes; the development of the entire environmental industry is to uncover and foster new forces in China's environmental public welfare, so that the SEE can truly nurture this environment.

The water and soil allow us to thrive, and we must protect our water and soil in return. More than 550 public welfare partners funded by the SEE are utilizing their efforts now to guard our blue sky and green water. The SEE Foundation has evolved from an executive foundation to an environmental public welfare platform that place equal focus on both funding and implementation. An equal amount of energy has been put into supporting the development and innovation of more public welfare partners and gradually awakening the public's environmental awareness.

Let this planet be full of hope and our lives full of vitality. Let people and nature coexist in harmony! This is what the SEE has been working endlessly towards for ten years. In the next decade, the next hundred years, the SEE will continue to move forward along the path of environmental protection.



Conserving the Sanjiangyuan Region: A Multi-forced Guardianship of the Wonderland

by Xiang ZHAO

Director of the Sanjiangyuan Project at the Shanshui Nature Conservation Center

Located in the hinterland of the Qinghai-Tibet Plateau, Sanjiangyuan contains the headstreams of the Yangtze River, the Yellow River, and the Lancang River. Its cool waters serve the 700 million inhabitants downstream, and its well-deserved moniker is the “Water Tower of China.” Sanjiangyuan has 395,000 square kilometers of snow-capped mountains, lush wetlands, green grasslands and thick forests. This is one of the most critical ecological service areas on the planet. It is the last habitat of endangered species like snow leopards and Tibetan antelopes. The ecosystem of Sanjiangyuan is very sensitive, and any small change in climate can be negatively reflected here. This in turn, harshly impacts Qinghai and most of China’s ecological health.

The SEE is the first foundation in the country to aid local environmental organizations in the Sanjiangyuan area and with the greatest funding volume. In 2010, the SEE made its initial attempt to

fund the Platts Gazelle Protection Project of Qinghai Lake, Gangcha County. It uses it as a pilot to set up an effective protection model. The SEE’s funding for ecological conservation, biodiversity conservation projects, and development of community-based conservation forces in the Qinghai-Tibet Plateau officially took its first steps.

Since then, in order to continuously monitor the area’s ecological change, the SEE Foundation has funded the Shanshui Nature Conservation Center (hereinafter referred to as Shanshui), the Greenriver Environmental Protection Association of Sichuan Province, the Qinghai Prairie Grass Nature Conservation Center, the Sanjiangyuan Association, GEI and other protection agencies. Through their scientific research and conservation work, the ecological changes and biodiversity in the Sanjiangyuan region have gradually become defined.



Located in the Yushu Tibetan Autonomous Prefecture of Qinghai Province, the Tongtian River is the main waterway of the Yangtze River headwater. The Tongtian River area also contains the headwaters of the Yellow River and the Lancang River; therefore, it is called the Sanjiangyuan. Photo credit: Jiansheng PENG

Since 2012, with the support of the SEE, Shanshui has integrated community-based conservation, scientific research, and policy promotion to carry out environmental projects in Sanjiangyuan. In the past few years, Shanshui has helped establish dozens of local villager resource centers, within which herders are the primary nature conservationists. At the same time, with scientific research, a set of ecological baseline data was constructed for the Sanjiangyuan region and used to monitor local ecological changes.

Moreover, with Shanshui's policy promotion and teamwork, the villager resource centers established some

degree of connection with the township, county, and state level governments and became officially recognized conservation institutions. Furthermore, with the help of the local governments, research experts, and other forces, they effectively influenced the governments' recognition of community-based conservation. Presently, "conservation with farmers and herders being the main players", "protocol conservation" and "community participation conservation" have become frequently used words in Qinghai Sanjiangyuan nature conservation documents, and have even been written into official Sanjiangyuan related policy documents.

“Xiang ZHAO, did we capture a photo of a Zie?”

At the beginning of 2016, I received this call in a Tibetan village in Sanjiangyuan called Angsai. The voice was not loud, but I heard it clearly.

“Zie” is the Tibetan name for a type of leopard. Tibetans traditionally recognize two common types of leopards, one is “Sa,” also known as the snow leopard. The other, called “Zie,” has been speculated to be the regular leopard. However, this has not been confirmed as Zie’s whereabouts have not been observed. This time, Angsai helped us to fill in this gap.

“For the first time, it has been evidenced that, in the eastern part of the Qinghai-Tibet Plateau, the habitats of snow leopards and leopards coincide.”

The leopard in the photo is posing with a “king’s style”. In contrast, the snow leopards that have appeared in this same place are relatively small and weak. In addition to these leopards, from the same observation point in Angsai, we also captured photos of a variety of top carnivores such as brown bears, baboons, wolves, Tibetan foxes, and red foxes, and identified at least 40 snow leopard individuals and 10 leopard individuals. Currently, this area has the highest density of snow leopard distribution, and it preserves the most complete carnivore community in China.

The presence of predator communities is evidence of an ecosystem’s health. They stand at the top of the food chain and only the healthiest, richest ecosystem can support such a healthy and large carnivore population. According to existing investigations, there are at least two regions in China that have preserved a good population of top carnivores. One of them is located in the Northeast Forest area and the other in Sanjiangyuan.

According to a survey conducted by the Beijing Normal University Tiger and Leopard Research Team, there are five types of large animals in the Northeast Forest area. According to our long-term observations, Sanjiangyuan has at least six types of large carnivores, including the snow leopard, leopard, brown bear, wolf, lynx, and baboons. It is the region with the greatest number of large carnivores in China. Because large carnivores require a greater home range and more food, their conflicts with humans are also the most intense.

In order to explore ways to promote the symbiosis between



The snow leopard is one of the most mysterious species in the feline group. They live in the Chinese provinces of Xinjiang and Qinghai where they feed on ungulates such as bharals. Their thick fur protects them against the cold weather and their long, thick tails help them keep their balance when walking on steep mountain slopes. Photography: Jiansheng PENG

humans and wild animals in the Sanjiangyuan area, we began our attempts in three directions. First, we actively addressed the conflicts between humans and wild animals, reducing herders' losses, and improving their tolerance for wild animals. Second, we advocated for the government to purchase herders' ecological conservation services. Such "purchases" were transacted in the form of wages. The government would pay wages to herders who would be responsible for prohibiting poaching and installing infrared cameras. Such a payment mechanism, in effect, functions like the government is "purchasing" the services of herders and asking them to serve in an ecological conservation role. Finally, we helped herders to develop industries, such as nature experience and upgraded the livestock industry, so that they may benefit from a better ecosystem while establishing direct connections to conservation.

With this new direction of conservation in mind, I came to Angsai in 2014. It was the fall season when I first arrived. The car drove slowly along the wandering river valley. The morning mist had not yet dissipated; fog was laid out before my eyes. Below the dirt road meanders the upper reaches of the Lancang River, the Rdza Chu River. The river water was clear and gentle at this time of the fall. But in the quiet canyon, I could hear the sound of running water outside the car window; the heavy wheels and crisp water exchanged dialogues between the water and the road. At that time, the sabina and willow branches in the river valley were starting to show some red. The colors were not yet at their peak. Between the reds and the greens of the foliage, a few babbler birds were jumping about. All of these natural sights created a beautifully tranquil scene.

Above the sabina forest lie the pastures of the herdsmen. The autumn grasslands



Environmental protection personnel are conducting monitoring of the number of bharals in the Yushu Prefecture, Qinghai Province.
Photo courtesy: the SEE Foundation

had begun to yellow, but the yellows were not yet dominant. The yaks that had just migrated from their summer pastures were grasping the last lush greens to supply their food storage for the winter.

Above the grass fields sits bare rock. Mist always floats along the middle of the bare rocks, and it veils the top of the mountain from one's gaze. The alpine rocks are the typical habitat for snow

Conserving the Sanjiangyuan Region Project

Sanjiangyuan is located in the hinterland of Qinghai Province. It contains the headstreams of China's three major rivers; the Yangtze River, the Yellow River, and the Lancang River. It is also one of the highest altitude ecosystems in the world with remarkable biodiversity. The SEE "Conserving the Sanjiangyuan Region" program has created a conservation model with farmers and herdsmen being the main players. This was achieved through searching, developing, training, and funding of grassroots environmental organizations and individuals. Conservation activities include community-based monitoring and protection of endangered

species, disposal of solid waste, nature photography, targeting problems such as poaching of endangered species, and solid waste contamination of water sources.

Since its establishment in 2012, the SEE Conserving the Sanjiangyuan Region program has funded seven partners, supported more than 100 grassroots environmental organizations or local farmers and herdsmen within the environmentalist network to conduct environmental protection activities, protected snow leopards, black-necked cranes, Meconopsis barbiseta, and other rare plant and animal species, and conserved 65,000 square kilometers of grassland and wetland

ecosystems. In the next five years, the SEE Foundation will continue to work with more environmental organizations to promote and replicate this effective localized conservation model, explore diverse ways of subsistence, promote public awareness, and form a synergy with the government, so as to achieve long-term conservation goals in the Sanjiangyuan area. On August 19, 2018, the SEE Sanjiangyuan project center was officially established. It will continue to promote cooperation between local entrepreneurs and local environmental organizations and individuals to protect the water sources of 700 million Chinese people.

leopards, but this area is not easy for one to see.

In addition to the large carnivores such as snow leopards, Sanjiangyuan also has many medium-sized carnivores such as golden cats, red foxes, Tibetan foxes, badgers, and hog badgers. There are even small-sized carnivores such as manuls, desert cats, bobcats, stone martens, fitchews, yellow weasels, and alpine weasels. This is a large, important, and diverse carnivore community.

In such a region where humans and animals coexist, the first thing to address is the conflict between humans and beasts. In 2015, Angsai Village saw an average of 4.6 cattle, per household preyed upon by snow leopards, leopards, lynxes, wolves, etc. The greatest loss to a single household was 23. The average economic loss per household exceeded 5,000 RMB. Although Qinghai Province introduced the “Compensation Method for Personal Property Damage Caused by Key Protected Terrestrial Animals in Qinghai Province” in 2011, it has been extremely difficult to implement. On one hand, the compensation procedure is tedious, time-consuming, and overly complicated. The qualification review process requires the case to be reported in a “timely manner” within the prescribed time with the premise of joint approval by the responsible departments at the county and township-levels as well as the villagers. On the other hand, there is no universally effective estimation of the required compensatory costs. Each year, there is a governmental budget deficit for the compensation of incidents caused by wild animals.

The most important compensation standard was, “If predation of cattle by wild animals is found to be due to poor management by the household, it will not receive compensation”. This standard actually implies that incidents caused by wild animals are the shared responsibility of local people and wild animals.

This concept is consistent with local Tibetan culture - humans and wild animals are equal. In Tibetan traditional culture, people are not the owners of the land, because the land belongs to the mountain and water gods. Therefore, when each household moves to a new place to erect their tent, they need to pay sacrifice to the mountain god and water god, so they may borrow the land from them for a while. In this sense, humans and wild animals are equal as they are both “guests” on the land.

The community monitoring and interaction model we piloted in Yunta Village has been replicated in five communities along the Tongtian River and headwaters of the Lancang River. Through several years of community monitoring, data has showed that the number of snow leopards in the monitoring area has increased significantly, and the protection consciousness of snow leopards by local farmers and herdsman has also improved. In addition, we have teamed up with the IBE to carry out a rapid biodiversity survey in the Sanjiangyuan area to provide detailed imagery records of the local flora and fauna. The “Snow Leopard Research and Monitoring Technical Manual” released by us has also been used by organizations in other snow leopard habitats outside Sanjiangyuan.

In March, 2016, Angsai officially became part of the Sanjiangyuan National Park. The Qinghai Sanjiangyuan National Park System Pilot Program placed Angsai as one of the 13 townships in this program.

Ecosystem restoration is undoubtedly the most important function of the Sanjiangyuan National Park. However, the primary problem to be solved in ecosystem restoration is to reduce the losses to local inhabitants caused by ecological conservation activities and ensure that local herders are left with sustainable participation in conservation efforts while we remain conscience of traditional culture.

The SEE has provided support for establishing a protection model with farmers and herdsmen being the main players. It has introduced these social forces in an orderly manner to protect the Sanjiangyuan area. The first protection activity implemented that involved herdsmen were “community monitoring.” Community monitoring is defined as a scientific monitoring activity with communities as the major participants. At present, the most important monitoring method employed in the Sanjiangyuan area utilizes infrared cameras. Through automatic capturing, infrared cameras can spot many animals that are not easy to see under typical conditions. Infrared cameras can greatly increase our knowledge of an area.

In Angsai, such practices began in 2015. Within a range of 400 square kilometers, 16 trained herders have been managing their own infrared cameras. Camera maintenance carried out by the herders includes maintaining camera batteries, memory cards, and camera positions on a regular basis.

In 2017, based on the initial data, community monitoring was officially incorporated into the responsibilities of the national park public welfare managers for Lancang River District. These efforts would soon enrich the local database significantly. In addition, a predation compensation mechanism was officially included in the pilot program of the Sanjiangyuan National Park. A 300,000 RMB National Park pilot fund was also allocated to Angsai.

It has been found that herders are both good at and are enjoying this job. Living in close proximity to wildlife for generations, herders know the habits, activities, and range of wild animals, and this has allowed them to position the camera with great

effect. In addition, installing the infrared cameras in their own pastures makes camera a part of their daily routine. This saves valuable time for the herders and eliminates the boring, arduous climbing over the mountains by outsiders. Finally, traditional culture dictates that herders often equate a link between possessing wild animals and pride. They would say, “Look, this is the snow leopard from my house!” Everyone would proudly share pictures of animal carcasses on their phones.

With the herders help, we filled in the gaps of the Sanjiangyuan leopard imagery records. We proved to the world that there is an area in Sanjiangyuan where snow leopards and leopards share a habitat. Inspired by this discovery, the Sanjiangyuan National Park fully recognized the herders for performing this primary role in wildlife conservation. Beginning in 2015, each of the park’s 16,421 herder households was designated as a conservation station. Each household was assigned an ecological welfare manager and received 1,800 RMB per month.

For the first time in Sanjiangyuan, the concept of ecological conservation had been broadly accepted, and the herdsmen had become the primary players of ecosystem protection.

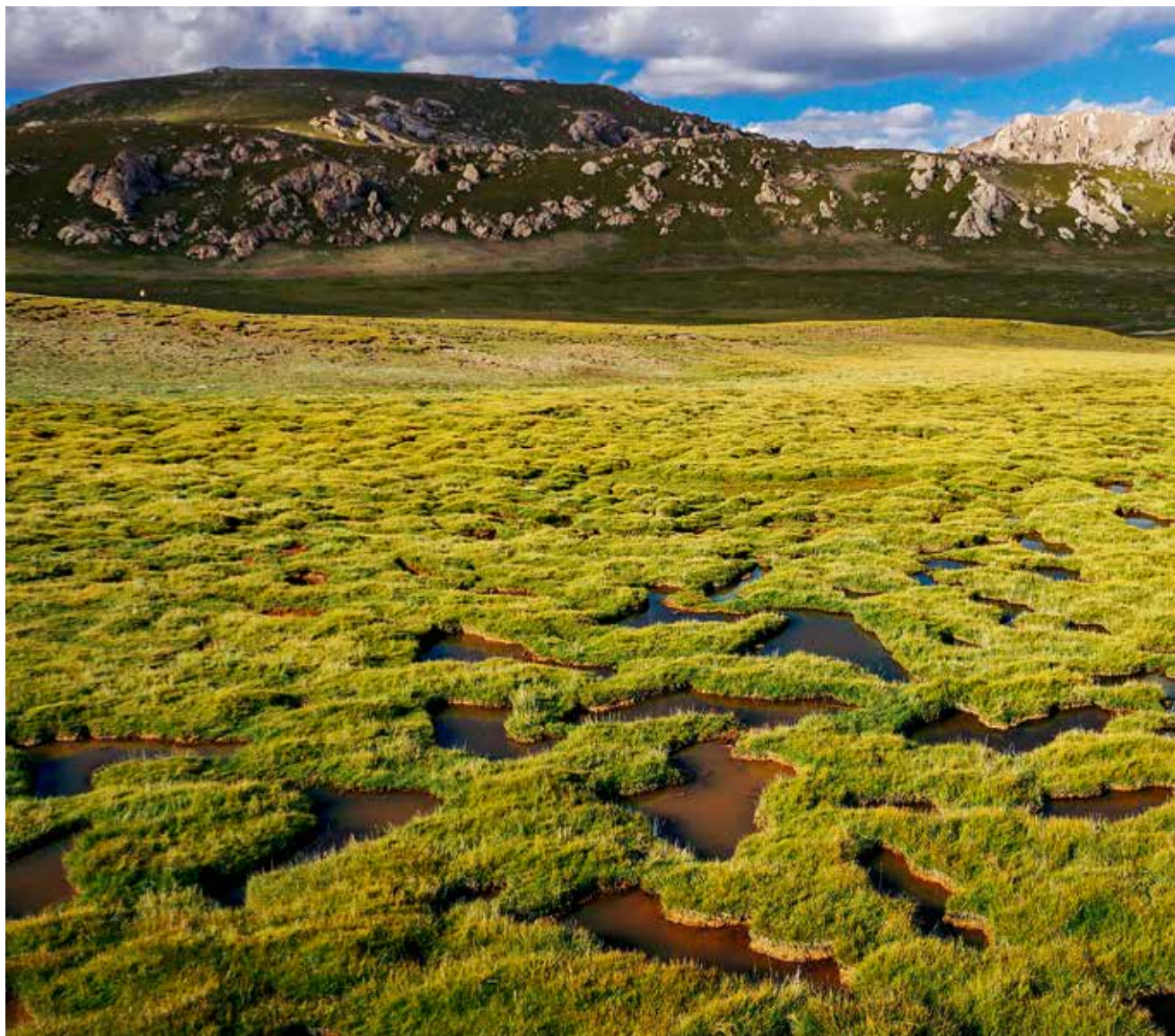
The Sanjiangyuan National Park Institutional Reform Plan first proposed the key principle of a systematic increase in the participation of social forces. As an important window for institutional reform, the activities in the Sanjiangyuan National Park were the first attempt of their kind in any of the country’s national

parks.

Accordingly, Sanjiangyuan National Park has hosted three nature observation festivals held in collaboration with non-governmental organizations. With an effective model to experience nature from the perspective of biodiversity cognition and appreciation, the local community was the most involved in these activities and gained benefits.

It should be noted that this is very different from traditional tourism. In the fragile and unique ecosystem of Sanjiangyuan, such events allow each participant to gain knowledge from nature and the local community while closely experiencing the wonder of the landscape. These events also allow participants to give back to nature and the local community in various ways. These may include better skills, investments, and even feelings. These synergistic efforts all combine to form a positive feedback cycle. In the past, herders bred cattle and sheep on the pastures of this natural system, and they converted the purely natural resources into livestock that provided them with energy, protein, clothing, and even daily utensils. This is the wisdom and experience of the Tibetan people who have been prospering on the Tibetan Plateau for thousands of years. But today, we may be able to convert the natural landscape and biodiversity directly into energy and clothing without the middle link of livestock.

I think the so-called broad engagement of social forces requires that each of us provide what we can to help build the right nature experience and development model here.



Yaqu Wetland. Photography: Jian XU

With the support of the SEE, we have made great progress in governmental procurement and policy incentives. The model of community monitoring and the villager resource center has been adopted by the Lancang River District.

Driven by the establishment of the Sanjiangyuan National Park, the SEE, Shanshui, Peking University, and Zadoi county government jointly set up the “SEE Shanshui Natural Homeland Guardian Action Angsai



Workstation” in the village of Angsai. This particular national park pilot is set to greatly surpass all of the previous protection outcomes of the past. The Sanjiangyuan National Park’s first

research and protection base will undertake scientific research and manage volunteer services in the national park area.

Water Source Protection

Arouse Local Farmers and Herdsmen's Awe Towards Water Sources; Cut off Solid Waste Pollution

The Sanjiangyuan region is the water source for 700 million people. As such, it is of the utmost importance that a conservation priority effort be placed on protecting this vital water source. One of the major threats to this water source is solid waste pollution.

To this end, local environmental organizations, farmers and herdsmen have been practicing two aspects of water source protection. The first aspect is should involve cleanup and the management of solid waste. Local environmental organizations should organize farmers, herdsmen and volunteers to collect trash from the waters. We, together with the Sanjiangyuan Association have also funded some grassroots environmental organizations to support their independent environmental protection activities. Furthermore, we have organized educational events each year for training the grassroots environmental organizations to promote environmental protection. These events will enable everyone to become more effective and efficient in environmental activities. The second aspect deals with reshaping the local water source culture through environmental information and education. A good example of this can be found in the Sanjiangyuan Association launch of the “Asian Water Source” Project. This project collects water samples and records water source statistics. The water source is further protected by revoking the traditional culture of water source worshiping, and evoking the local



Fig.1

•Figure 1: Environmentalists and monks discuss conservation work. Photo courtesy: the SEE Foudation



Fig.2



Fig.3

•Figure 2: Infrared cameras placed on a path where snow leopards roam. Since snow leopards live at high altitude areas where has no trees, infrared cameras can only be mounted on rocks. Photo courtesy: the SEE Foundation

•Figure 3: A snow leopard's image captured by an infrared camera. Photo courtesy: Shanshui Nature Conservation Center

farmers and herdsmen' respect for water sources. Fortunately, the management method of garbage classification and disposal has been in proved for the entire Zadoi County.

In fact, the SEE has been funding local environmental groups, farmers, and herdsmen in the Sanjiangyuan region to carry out water source protection activities all along. Through several years of work, more than 100 grassroots environmental organizations, farmers and

herdsmen have joined the Sanjiangyuan environmental protection network in these efforts. Solid water pollution has decreased significantly. Taking the Lancang River as an example, solids in the source water have decreased by 80%. In 2016, the garbage cleanup action covered six regions in the Sanjiangyuan area, including Yushu, Guoluo, Hainan, Haibei, Huangnan, and Haixi. A total of 5 square kilometers of this water source area was purified and protected.



The Tibetan fox has a big square face. The cute look makes them appear to have human qualities and features. This Tibetan fox has shed its thick winter coat, so its face doesn't look as square. Photography: Liang GUO

Expert Comments

Zhi LV

Professor, Peking University

Sanjiangyuan has been known as the “Water Tower of China.” It is the source of the Yangtze River, Yellow River, and the Lancang River. It has ensured ensures the water security of hundreds of millions of people in China and surrounding areas in Asia. The region where Sanjiangyuan is located also provides a series of ecosystem services such as climate regulation, water resource conservation, and soil and water conservation, all of which benefit downstream areas. The combination of the natural and cultural landscapes in Sanjiangyuan has retained a special type of ecological culture for this era. It is this ecological culture which meets people’s spiritual needs at a higher level.

With the increased impact of climate change and negative human activities, if related problems such as glacier retreat and grassland degradation accelerate in Sanjiangyuan, they will inevitably affect downstream water source security. If other problems such as desertification are triggered, it may bring new challenges to the western region of China. The deterioration of the ecological environment will first cause losses to local farmers and herdsmen, greatly affecting their daily production and lifestyle.

According to the latest research, in contrast to our normal expectation of the cold climate and low productivity in Sanjiangyuan, it is currently the region with the most abundant large carnivores in China. There are at least six

kinds of carnivorous animal species, including the snow leopard, leopard, brown bear, wolf, dhole and lynx. Small and medium-sized carnivorous animals, herbivores, and birds are also in rich numbers. What is particularly valuable is that some of them are endemic to China and have extremely important biological uniqueness and biodiversity values. The connection of Sanjiangyuan to southeastern Tibet may be the greatest hope for the recovery of large carnivorous animal populations in western China.

At the core of Sanjiangyuan’s ecological conservation is how to handle the relationships between humans and nature. However, the development and changes happening in the Sanjiangyuan region, market economy, and political factors are all affecting the traditional culture and social structure here. These factors in turn affect human-nature relationships, and they affect the ways and attitudes of people’s use of natural resources.

Faced with such changes, if we are not able to manage it properly, we may break the human-nature-culture balance that has originally existed here. Once the balance is broken, its overall ecological health will be extremely difficult to recover, no matter how hard we try.

Sanjiangyuan still needs more research and attention. It is only possible to find a suitable solution through the accumulation of more data and observations in this rapidly changing era.



The Sanjiangyuan region is located at a high altitude. Various plant species utilize the short summer for blooming; they make a beautiful showing in this season.
Photography: Bo LEI



Free Flying Wings: Letting Birds Share the Nature with Human

by Chennan LIU

Director of Operations, Guangxi Biodiversity Research and Conservation Association

There are more than 1,400 avian species in China, and waterfowl account for about 20% of the total number. Waterfowl often spend a great amount of time on wetlands and tidal flats, thus considered as indicator species of a healthy wetland. Wetlands are Earth's kidneys, as they powerfully modulate its ecosystems.

In order to protect China's endangered waterfowl and their habitats, the SEE Foundation officially started the "Free Flying Wings Project" in 2016, with the aim of creating a non-governmental conservation network complementary to the governmental conservation system and establishing a conservation demonstration base to protect, between 2016 and 2026, more than 100 urgently threatened wetlands involving 24 rare and endangered waterfowl as priority species. This project carries out wetland conservation activities through a "social participation" model. It has been initiated by non-governmental organizations, invested in by enterprises, and participated in by the general public.

Funded by the Beijing Qiaonv Charitable Foundation, the SEE Foundation will jointly develop the "Free Flying Wings

Project" along with the Mangrove Foundation. At the same time, the project has received additional support from the SEE's North China Project Center, East China Project Center, Shenzhen-Hong Kong Project Center, the Tencent Charitable Foundation, and other socially responsible enterprises and individuals.

As of the end of 2018, the 41 partner agencies of the "Free Flying Wings Program" have conducted wetland patrols and bird surveys nearly 1,800 times, inspecting and protecting about 1,900 square kilometers of wetlands. Nearly 40,000 bird survey records have been submitted, documenting a total of 514 bird species. Nearly 700 threat records such as poaching, pollution, and unlawful activities were also registered. Two hundred forty-nine nature education events were held, covering a total of 70,000 person-time hours.

The data shows that this "social participation" aspect has made notable achievements. It has spurred both governmental and private forces to protect wetland ecosystems systematically, allowing birds to fly freely in the blue sky and perch near the clear water.



The coastal area along eastern China is part of the famous East Asian-Australian Flyway. Every spring and autumn, tens of thousands of waterfowl including plovers and sandpipers stop here for replenishment, making it an important habitat on this busy migratory route. Photo courtesy: the SEE Foundation

In 2018, the Shanxin Sand Island of Fangchenggang city, Guangxi Province was added to the “List of Priority Wetlands in 2018” published by the SEE’s “Free Flying Wings Project” Shanxin Sand Island placed number 90th on the list. This list is an important component of the “Free Flying Wings Project” to designate the priority wetlands and protect the critical habitats of migratory birds. The list of priority wetlands is selected and set by this project team together with scientific research institutions. It forms collaborations for governmental investment and covers areas that require private resources and forces, so that protection and investments are more effective. In addition, local

organizations receive funding to conduct wetland patrols on the wetlands that fall outside the program. Behind this newly added priority wetland lies a typical example of cooperation between the government, private environmental organizations, and scientific experts all focused on protecting China’s most endangered waterfowl and their habitats.

Shanxin Sand Island, a Story-filled Island with the Birth of the 90th Priority Wetland

In the southeastern waters of Qisha Town, Fangchenggang City, there is a small island about 300 meters long, 140 meters wide, with an area of about 41 thousand



Fig.1



Fig.2



Fig.3

- Figure 1: Wastewater, gas, and excess heat emitted from factories built around wetlands can all contaminate the local environment and adversely affect the survival of waterfowl and other vital organisms. Photo courtesy: the SEE Foundation
- Figure 2: Some people have illegally deployed bird nets around active avian areas. Once birds are trapped by a net, it is difficult for them to break free. They can eventually become injured or even die. Photo courtesy: the SEE Foundation
- Figure 3: Environmental volunteers and members of the Guangxi Biodiversity Research and Conservation Association conducting an investigation of Shanxin Sand Island. Photo courtesy: the Guangxi Biodiversity Research and Conservation Association

square meters. Its name is Shanxin Sand Island. Such a small island touched the hearts of bird lovers and naturists from all over the country during Spring Festival.

It all started from a document entitled “The First Public Notice of the Environmental Impact Assessment of the Shanxin Sand Island Ecological Island Reef Project in Fangchenggang City” (hereinafter referred to as the public notice). According to the “public notice,” the project plan in Fangchenggang City included construction of an east-west revetment, a new roundabout road, main road, a walking path, a landscaped green area, a bridge, a leisure plaza, a sight-seeing pavilion, ecologically-friendly toilets, bird watching stations, a tourist service center, a marine education center, rest benches, running water, and electrical facilities, etc. Backfilling of the islands and recovering sandy beaches around the island was also proposed.

On February 12, 2018, on the 27th of the twelfth lunar month, this document was circulated and finally read by bird-watching enthusiasts from the Guangxi Bird Watching Society. They could no longer

sit idly by.

Shanxin Sand Island is one of the few wintering grounds of China’s spoon-billed sandpipers. This makes the island a critical habitat for many wintering waterfowl like the spoon-billed sandpiper. Birdwatchers have observed them on Shanxin Sand Island for three consecutive years. The spoon-billed sandpipers are sparsely distributed, with only about 600 individuals left in the world. The IUCN Red List labels the bird’s status of protection as “extremely endangered.” The spoon-billed sandpiper is mainly a passing migratory bird in China, and some are winter migratory birds. They migrate through China from April to May and again from September to October.

According to observations and surveys by the Guangxi Biodiversity Research and Conservation Association, Guangxi Forestry Institute, Guangxi Bird Watching Society, and bird volunteers from Fangchenggang, 36 species of waterfowl, including the spoon-billed sandpiper, were spotted on Shanxin Sand Island in 2016-2017. The species spotted in relatively large numbers were

the Kentish plover, three-toed sandpiper, black-bellied plover, Eurasian curlew, red-billed gull, and Heuglin's gull. Of the 36 species of waterfowl, 28 are winter migratory birds who spend their winters here. In addition to the world's "most endangered" spoon-billed sandpiper, there are also the "endangered" Great Knot, the "vulnerable" black-billed gull, and the "nearly endangered" black-tailed godwit. The total number of avian creatures has reached into the tens of thousands.

All the waterfowl species living on Shanxin Sand Island belong to the national "three-valued" protected birds. This status means that they are either beneficial, or have important economic or scientific value. There was a very important waterfowl habitat in Guangxi during the high tide period. Now, after years of



The picture shows Cross Section B - on the southeast side of Shanxin Sand Island. It shows the environment on the island, which consists of sandy beaches, mangroves, and rocky beaches. Photo courtesy: Guangxi Biodiversity Research and Conservation Association

Release of the "Green Book on China's Coastal Wetland Conservation"

The "Green Book on China's Coastal Wetland Conservation" is a biennial report assessing the progress of coastal wetland conservation, gaps in protection efforts, and wetland health. Through the preparation and publication of the "Green Book on China Coastal Wetland Conservation," we have been able to share our experiences and practices of wetland conservation. We engage in these activities to improve public awareness and cognitive levels of conservation, provide decision support for state and local governments, and continue our efforts to promote the conservation of coastal wetlands in China.

In December 2016, the SEE

Foundation signed a funding contract for the "Green Book on China's Coastal Wetland Conservation (2017)" (hereinafter referred to as the "green book").

This project was jointly funded by the SEE Foundation, SEE East China Project Center, SEE North China Project Center, and Shenzhen Mangrove Wetlands Conservation Foundation (MCF). It was implemented by the Institute of Geographical Sciences and Natural Resources Research of the Chinese Academy of Sciences. The project was active in 14 provinces, autonomous regions, directly-administered municipalities, and special administrative regions of China, including

Liaoning, Hebei, Tianjin, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong, Guangxi, Hainan, Taiwan, Hong Kong, and Macao.

The "green book" was completed in 2017. It was officially released on September 26 at the annual meeting of the Chinese Coastal Wetland Conservation Network held in Panjin, Liaoning. In October, the SEE and the Geographical Institute of the Chinese Academy of Sciences held a seminar in Shanghai to introduce the contents of the book and gather suggestions from participating experts to prepare for the compilation of the next issue. In 2018, the "Green Book" was officially published.



Plovers and Sandpipers on Shanxin Sand
Island. Photography: Ruge

construction and development, Guangxi has very few places left that can provide waterfowl with a foothold during high tides along its more than 1,600 kilometers of coastline. Shanxin Sand Island is one of the few very precious remaining habitats. It is one of the 13 critical habitats for migrating waterfowl found in the north bay region by the Guangxi Biodiversity Research and Conservation Association. However, from the content of the “public notice,” the construction of roads and leisure tourism around the island, as well as the future tourists, will pose serious threats to wintering waterfowl.

A Heart-wrenching Spring Festival Holiday for Naturists

Faced with this situation, the SEE Foundation, a number of ornithologists, ecological conservation scholars, the Guangxi Bird Watching Association, the Guangxi Biodiversity Research and Conservation Association, and other organizations started got into action. They expressed deep concerns about the Shanxin Sand Island Ecological Restoration Project and formed a WeChat group to rapidly share the progress of projects and propose appropriate conservation suggestions. Among them, Chun Qin, a bird protector, not only vocally appealed to protect Shanxin Sand Island, but he also contacted other experts for suggestions. He then sent the compilation of suggestions to the Marine Bureau of the Port District at Fangchenggang.

Throughout the Spring Festival of 2018, conservationists couldn't set their minds at ease. They were constantly concerned about the progress on Shanxin Sand

Island. The worry centered around the possible response from the Marine Bureau of the Port District at Fangchenggang.

Good news finally came. The reply from the Marine Bureau was very positive. The bureau communicated with conservationists in a timely and friendly manner, and it issued formal responses via Weibo and WeChat. In the reply, the bureau's reasons for the launching of the ecological rehabilitation project on Shanxin Sand Island were explained in detail. The bureau also expressed its gratitude to the various departments that provided valuable input. Lastly, they proposed to focus on further improvement of the project design after the holiday to make it more suitable for wintering waterfowl to perch while better protecting the entire marine ecosystem.

After receiving the Marine Bureau's positive response, conservationists were able to briefly rest their minds. The prevailing feeling was that there's still hope for the conservation of Shanxin Sand Island.

Soon, public's voice began to be heard. This was the voice calling for protection of China's most endangered waterfowl and their habitats, and the voice became louder as it was echoed by various influential parties. The situation seemed to progress day by day and week by week. Two very prominent newspapers in the Guangxi region, the “South China Morning Post” and “China Ocean News” both published special reports on this matter and explicitly mentioned that the Marine Bureau of the Port District at Fangchenggang had indicated its intention to comply. These papers also reported on suggestions from all social

sectors to further improve the project design in order to improve the protection of the island itself as well as assure that the habitat is kept suitable for wintering waterfowl.

The Guangxi Branch of the Xinhua News Agency also proposed feasible and scientific suggestions for the restoration of the ecological island reefs of Shanxin Sand Island and the protection of migratory birds. The procuratorate of Fangchenggang City also paid close attention to the concerns of all social sectors about Shanxin Sand Island and promptly held a meeting with the Marine Bureau of the Port District at Fangchenggang to learn about the necessity and feasibility of the rehabilitation project. He then recommended that the new project plan be based on validation from experts in all related fields. By promoting the restoration of Shanxin Sand Island, they also suggested that the goal was to make it a successful case for the protection and restoration of ecological islands reefs. Their goal was to make the island one of the best habitat islands for migratory birds.

Revising the Project Plan, “Making Way” for Waterfowl

On March 24, 2018, the Shanxin Sand Island Project Symposium was officially held with twenty-one expert participants from fields such as marine science, water conservancy, ornithology, and environmental volunteers. Also present were the Guangxi Marine Fisheries Department, the Port District Government, Marine, Forestry, and Environmental Bureaus of both Fangchenggang City and the Port

District. Representatives from the Marine, Forestry, Environmental Protection Departments, and representatives from Shanxin Village were also in attendance. The Guangxi TV station made full coverage of the symposium.

At the symposium, the original project plan was revised so that the construction of certain facilities, such as the plaza, new roads, public toilets, and education center, etc. were taken out. Other suggestions were put forward by various participants, including revetment work based on the seawater erosion level and a graded revetment to preserve the natural shoreline. The nature conservation groups would provide assistance by providing information about bird activities on Shanxin Sand Island to the project executors. These executors would then invite the birdwatchers and experts from nature conservation groups for on-site monitoring during the construction period.

On March 31, the Guangxi Biodiversity Research and Conservation Association assembled an 18-people team to go to Shanxin Sand Island for a waterfowl survey with support from the SEE’s “Free Flying Wings” project. The investigation found 22 species of birds such as the *Tringa Guttifer*, the great knot, three-toed sandpiper, *Tringa Nebularia*, Kentish plover, *Charadrius leschenaultii*, *Charadrius mongolus*, *Pluvialis Squatarola*, Caspian tern, red-billed gull, gull-billed tern, and white tern. Among which, the most abundant were found to be the 1,060 Kentish plovers, 276 great knots, 270 red knots, 168 red-billed gulls and 150 three-toed sandpipers.

Such a large number of waterfowl implies sufficient food supplies. A benthic organism survey conducted at the same time showed that overall environmental disturbance on the island was slight. The lack of major disturbances led to the presence of rich and diverse benthic organisms suitable for waterfowl to feed on. A large enough food source to support dozens of species and tens of thousands of migratory waterfowl was present. They could regain their strength, supplement their nutrition, and stock up for the continuation of their long-distance flight. In the wetlands of eastern China and along the southeast coast, food shortages have often occurred due to pollution, urban development, and other adverse reasons. As the last “gas station” before the long-distance flight of the waterfowl, Shanxin Sand Island’s position has always been particularly important.

The Guangxi Biodiversity Research and Conservation Association looks forward to collaborating with various nature conservation agencies and individuals. The association will continue this important work on biodiversity conservation. We must protect every single coastal wetland, because each one of them is unique and indispensable.

Construction of the First Folk Conservation Networks with the “Free Flying Wings Project”

One of the strategies of the “Free Flying Wings Project” is to build a grassroots conservation network that complements the government’s own conservation system. This strategy allows the conservation gaps that haven’t been actively

protected to be quickly covered so that they gain a great chance to subsist. A civil conservation network is a network alliance composed of institutions and individuals who carry out conservation work within a project area. As a network sponsor, the SEE recruits network members through joint bidding, review, and funding every year. The foundation conducts joint wetland patrols, bird surveys, and public advocacy activities to enhance the protection of endangered waterfowl and their habitats.

In 2016, after the “Free Flying Wings Project” was officially launched, the project team began to select pilot conservation sites. After comprehensively considering the conditions of local public welfare organizations, importance of the land to be conserved, and source of funds, the team invited experts, environmental partners, and other potential partners to conduct on-the-spot investigations. In 2016, the “Free Flying Wings Project” team visited the habitats of *Larus relictus*, *Eurynorhynchus pygmeus*, and other rare species in Tianjin, Beijing, Luannan Hebei, Rudong Jiangsu and other places. This allowed them to create adequate preparations for the “Free Flying Wings Pilot Project” and establishment of nature reserves.

In March 2017, more than a hundred grassroots conservation institutes applied for the “Free Flying Wings Folk Conservation Network Project.” After a round of qualification review and a round of expert evaluation, the 2017 funded project list of the “Free Flying Wings Folk Conservation Network” was officially released in April. Thirty-two wetland conservation projects from 28 institutions



Spoon-billed sandpipers. Photography: Lin CHEN

were selected, and nine of them targeted internationally important wetlands. The SEE provided funding in amounts between 50,000 to 150,000 RMB for each project. The total funding amount offered by the foundation was 3,000,700 RMB. Projects which received funding included wetland baseline information collection, parcel threat monitoring, bird survey and monitoring, nature education, anti-poaching, and bird rescue, and more.

In June 2017, nearly 50 project representatives participated in the 2017 “Free Flying Wings Folk Conservation Network Training Workshop” held by the SEE Foundation in Beijing. For the workshop, the project team developed a “Workbook for SEE ‘Free Flying Wings’ Folk Conservation Network” and a “Free Flying Wings” data reporting system. Workshop activities included training and outdoor hands-on courses covering various topics such as nature education, project brand management, communication standards, methods to improve project transparency and public participation, threat monitoring with the data reporting system, use of maps and other survey tools, and bird survey and

monitoring.

Among the course material, the “Free Flying Wings” data reporting system allows executing institutions to upload and look up parcel data, patrol data, nature education data, bird survey data, etc. The system not only facilitates front-line staff with recording the damages done to wetlands caused by invasive species, poaching incidents, and pollution sources in a convenient format, but also allows for fast collection of bird survey data. Standardized data reporting and year-round data accumulation will gradually create a mosaic of the most realistic “image” of China’s coastal wetland conservation. Through analysis of the data, the key issues and current status of China’s coastal wetland conservation can be more accurately and comprehensively examined.

By the end of 2018, the funded 41 institutions have carried out training activities, bird surveys, patrols, and other project activities. They are actively engaged in the protection of not yet protected “gap lands” in wetland conservation.

On June 14, 2018, the SEE’s “Free

Flying Wings Project” released the 2018 List of Wetlands for Priority Conservation. There are 13 of these locations in Guangxi province, 11 of which are coastal wetlands, with Shanxin Sand Island being one of them, numbered the 90th. The restoration of these 11 coastal wetlands also largely owes to the biodiversity monitoring work performed by a number of grassroots conservation groups such as the Guangxi Biodiversity Research and Conservation Association.

Completion of the Largest Scale Simultaneous Survey of the Wintering Scaly-Sided Mergansers in China

Since 2014, the SEE Foundation had funded for three consecutive years the Rosefinch Club. Together with other bird watching organizations across the country they have conducted a simultaneous survey of wintering scaly-sided mergansers. This is the nation's largest wintering survey of a specific species in the Anseriformes, which has collected valuable data and information of an extremely important scientific value. This has also been a valuable exploration by the SEE into citizen science.

The survey project was jointly carried out by a total of 70 birdwatching organizations and related institutions across the country. Through the three-year wintering survey of this Chinese first-class protected species (also included in the IUCN “endangered” species category), it aimed to establish a special database so that useful information on this flagship species can be used to monitor the environmental quality of the related rivers and reservoirs, while facilitating the corresponding conservation work.

Expert Comments

Zhengwang ZHANG

Professor, Beijing Normal University

China is rich in biodiversity, with many species of birds. Avian species exceed 1,400 species in China. Among these birds, there is a special class of birds living in the wetlands known as waterfowl. They are the “Elves of the Wetlands.” Wetlands are also known as the “Earth’s kidneys,” and they play an important role in conserving water sources. The coastal wetlands are especially rich in biodiversity. For birds, the east coast of China is a significant component of the world’s eight major migration routes. We call this route the East Asian-Australian Flyway. It starts in Australia and New Zealand and it passes through Southeast Asia and then on into East Asia. Eventually the flyway extends to Siberia in Russia and Alaska in the United States. It passes through 22 countries and regions and involves more than 500 bird species. The number of migratory birds is in the hundreds of millions. Taking the number of waterfowl alone, on this migration route each year, the most conservative estimation is 50 million.

China’s entire east coast is situated on this route, and thus its protection has a great impact on migratory birds throughout East Asia and Australia. At the same time, China’s east coast has the fastest developing economy in the country featuring a very dense population. About two-thirds of China’s population is distributed in the eastern coastal zone and 70% of China’s GDP is produced in this region. China’s three major economic belts, the Pearl River Delta, the Yangtze River Delta, and the Bohai Bay Economic Zone surrounding Beijing and Tianjin, are all located in this region. The methods utilized to protect the birds in this region are thus crucial. Birds are an important component of the ecological environment, whose loss will bring serious detrimental impacts to the environment and the economy.

The SEE Foundation launched the “Free Flying Wings Project” to connect researchers with environmental professionals. Through the participation of scientists and through the facilitation by non-governmental groups and social forces, the ecological environment of coastal areas in China and migratory birds can be protected. We will not only allow migratory birds to fly, but also, we will ensure the protection of suitable habitats to keep the avian populations stable. These efforts will allow some of the suffering species to gradually recover. This has been the original intention and our common goal of the “Free Flying Wings Project.”

Save the Smile of the Yangtze River: Birth of the Finless Porpoise Stewards and Their Actions

by Zhengyi QIAN CCF Finless Porpoise project manager

*The Yangtze Finless Porpoise, or finless porpoise, is the flagship species of the Yangtze River ecosystem and is also endemic to China. People love their cute looks and acts. The finless porpoise and white dolphin (*Lipotes vexillifer*) had been the only two aquatic mammals in the Yangtze River. White dolphins have become functionally extinct. The number of finless porpoises has also dropped significantly, threatened by hunger and habitat loss. There is not much time left for them. In order to protect this lovely animal, the SEE Foundation has set up conservation projects in Hubei, Hunan, Anhui, and Jiangsu provinces since 2016. The aim has been to save them as much as possible so that they can continue to inhabit the Yangtze River. Their survival correlates with the health of the entire Yangtze River ecosystem. This article introduces the work done by the Hubei Project Center and reflects on the efforts made by the SEE Foundation in protecting the finless porpoise.*

Urgent Demand for Rangers to Protect the Finless Porpoise

On July 30, 2018, China's aquatic animal assistant rangers gathered at the SEE-CCF Nature Education Base in Moshan Lotus Garden at East Lake, Wuhan, Hubei Province. They solemnly vowed

to pledge their commitment to Yangtze River ecological conservation. They are the only professional aquatic animal assistant rangers in China, and they are the only ones who fulfill the role of ecological conservationism.

If we return to Tencent's 99 Giving



A Finless Porpoise photographed in the Museum of White Dolphins. Photography: Ju TAO

Day in 2016, we see that entrepreneurs from the SEE's Hubei, Hunan, Anhui, and East China project centers jointly raised 3.05 million RMB in funds for the protection of the finless porpoise. At the same time, in order to better respond to the call of Chairman Xi on the "Great Yangtze River Protection," the "Hubei Province Entrepreneur Environmental Foundation" was established by the Hubei Center. It was then renamed as the "Changjiang Conservation Foundation (abbreviated as CCF)" to make its theme more distinctive.

Also, in 2016, the Hubei Project Center identified the finless porpoise project as its strategic core project. It was established as a brand project by the SEE

Foundation in January, 2017. There's has been much work to do to protect the finless porpoises. The question arose as to which aspects of the core problem should the CCF start to tackle first?

Pondering on this question in the second half of 2016, members of the Hubei Project Center, Yu Feng and Dalin Wang, visited NGO partners related to the protection of finless porpoise along the lower reaches of the Yangtze River. In the first quarter of 2017, led by director Luming AI and vice director Gan TAN, the CCF project executive team visited the Yangtze River office of the Minister of Agriculture and Fishery Departments of several provinces. The goal was to explore ideas, collect appeals, and design

a better project, whose guiding principle was determined to be social participation in the rescue of the Yangtze Finless Porpoise. It was felt that protection of the Yangtze Finless Porpoise and the rest of the Yangtze River ecosystem could only be achieved if the government, research institutions, NGOs, and caring businesses join forces. Each one needed to find a niche and play their vital roles in a shared course of action.

The Yangtze Finless Porpoise is the only remaining aquatic mammal in the Yangtze River ecosystem. It is its flagship species and a true indicator of the ecosystem's health. It sits atop the Yangtze River ecosystem food chain, and in theory, it does so with no natural predators. An investigation conducted in 2017 showed that there were only 1,012 Yangtze Finless Porpoise remaining, distributed along the mainstream of the Yangtze River, Poyang Lake, and Dongting Lake. The study found that illegal fishing was the most direct influential cause of the sharp decline in their numbers up to that point. All fish species in the river were caught, no matter their size, by any fishing methods necessary. These methods included electric fishing, traps,

and large, commercial-scale bottom nets. The consequences of this resulted in a serious deficiency of small fish (below 20 cm), which was the main food source for Finless Porpoise. This caused starvation and the loss of large numbers of Finless Porpoise in 2012. In addition, such illegal fishing activities directly caused the death of some Finless Porpoise.

The Fishery Administration Department, the agency in charge of fishery resource conservation and finless porpoise protection in China, is currently the weakest link among managing departments. This was first reflected in the department's shortage of manpower. For example, the Fishery Administration Department of East Dongting Lake at Yueyang has had the strongest enforcement power in the fishery sector among departments in the finless porpoise distribution areas. At the time it had a total staff of about 60 people. However, there were more than 9,000 fishermen to regulate in the East Dongting Lake region. The largest fishery county around Poyang Lake was Poyang County, which was embodied by more than 3,000 fishing boats and a fishing-related population of 7,000 to 8,000. Conversely, there were a mere 22

Beyond the Finless Porpoise Program

The "Beyond the Finless Porpoise Program" was designed to support more scientific researchers (especially young scholars) to participate in research on Yangtze Finless Porpoise protection. Its aims have been to solve more of the scientific problems in the field. Young scholars often face challenges in securing grants for their research projects due

to a lack of research experience. The purpose of the "Beyond the Finless Porpoise Program" has been to provide research seed funding for scientists who are interested in Finless Porpoise protection, for them to accumulate research experience, to facilitate further funding, and contribute to the protection of the Yangtze River Finless Porpoise.



●Figure 1: Xiangming PENG, director of the Yueyang Fishery Administration, is leading the aquatic animal assistant rangers in taking their oath of duty. Photography: Xiaojun MIN ●Figure 2: China's aquatic assistant rangers and grassroots fishery administration staff gather together on World Ranger Day. Photography: Xiaojun MIN ●Figure 3: At the Poyang Lake Assisted Patrol Demonstration Site, Director Junqi ZHOU watches the familiar finless porpoise. Photography: Huazhu DU ●Figure 4: Lao-HU (Shibin HU) and the rangers at the Anqing Assisted Patrol Demonstration Site. Photography: Huazhu DU ●Figure 5: Lao-HU (Shibin HU) shows the uniforms of the assistant rangers. Photography: Huazhu DU ●Figure 6: A ranger shows the "Finless Porpoise Steward App." Photography: Huazhu DU

staff in this area's fishery administration. The shortage of fishery officials had become a weak point for the protection of the Yangtze Finless Porpoise.

The Finless Porpoise needed to be protected. Fishermen had to change their lines of production. And the fishery administration was seriously short staffed. We came up with the idea of an auxiliary enforcement system. By converting some of the more seasoned fishermen, who possessed new ideas and wills to engage in environmental protection, we would be able to utilize these fishermen to supplement the fishery administration in enhancing the conservation of aquatic resources. This plan provided new jobs in conservation for these fishermen and the shortage in fishery department personnel was augmented. The once endangered Finless Porpoise would now be protected. We accomplished three goals in one

effective action. This needs to be the style of approach in the future.

Launch of the Dongting Lake Patrol Demonstration Site

On April 25, 2017, under the facilitation by the CCF and the SEE Foundation, a seminar on the assisted patrols of Finless Porpoise was held at the office of the Yangtze River Fishery Supervision and Management of the Shanghai Department of Agriculture; the highest level administrative department for fishery law enforcement in the Yangtze River Basin. The purpose of the seminar was to encourage qualified grassroots fishery administration departments to take the lead in trying out the assisted patrol system, explore new ways for fishermen's production conversion, and assist in the protection of important aquatic organisms



The picture shows Yangtze finless porpoises living in the Institute of Aquatic Sciences of the Chinese Academy of Sciences. Scientific research on their behavior has made a great contribution to the protection of the species in the wild. Photography: Yuan BIAN

such as the Finless Porpoise. This is an innovative and feasible way for development in the new era. Since then, the story of the transformation of fishermen into “Finless Porpoise stewards” had officially started.

The seminar was very successful. The participating grassroots fishery administrations gave compliments to this beneficial policy, and they also put forward their own suggestions to help improve the project design. However, new questions arose after the meeting when the CCF executive team approached the grassroots fishery departments to talk about specific implementation. Who would be responsible in the case of acci-

dents? Would this project last long term? There were also fishermen who thought that 3,000 RMB a month was too low of a salary. We hadn’t originally discussed or even thought about these issues. It seems that few people dare to be pioneers.

To solve these problems, we needed to first find a leader who would be both responsible and willing to lead the effort. Xiangming Peng, an old friend and the director of the Yueyang Fishery came to my mind. I’ve known Director Peng for a long time. He is capable and discreet; he is persistent with those things he strongly believes in. I gave him a call and described the Assisted Patrol Project, including the challenges it had faced. He

listened carefully, and said a few firm words, “This is a good thing. Let’s do it!” The process afterwards had some twists, too, but director Peng was able to persuade the deputy chief of the Yueyang Fishery Administration department on the merits of the project. The deputy chief then in turn persuaded the department chief. On June 21, 2017, the launching ceremony of the Dongting Lake-Yueyang Assisted Patrol Demonstration Site was held on Baling Square adjoining beautiful Dongting Lake. Since then, the assisted patrol program at Dongting Lake has been growing stronger and more effective every day.

Launch of the Poyang Lake-Hukou Patrol Demonstration Site

Dongting Lake is the second largest freshwater lake in China, and it accounts for half of the total population of Finless Porpoise. We have solved the problems of assisted patrols at Dongting Lake. What

should we do with Poyang Lake? After visiting several counties with large numbers of fishermen and being rejected by all of them, our partners felt a bit discouraged on the train ride back. They doubted that a patrol demonstration site could be established at Poyang Lake. But deep in our hearts we were thinking; Poyang Lake is such an important place. We must do everything possible to establish a site here.

There are three municipalities around Poyang Lake, and they involve more than a dozen grassroots fishery administration bureaus. There is an old Chinese saying; “If the east side is dark, you may find light on the west side.” We then thought, “Why don’t we try Hukou County?” Although Hukou County has a smaller number of fishermen, the area has a good distribution of Finless Porpoise. The Bali River section used to be the best waters to find white dolphins. It is also the only channel connecting Poyang Lake to the Yangtze river. Its geographical location is very important.

Little Finless Porpoise, Big Love

The SEE’s “Save the Smile of the Yangtze River: Save the Finless Porpoise” themed project aims to increase the participation and effectiveness of actions by social organizations with respect to the rescue of Finless Porpoise. Another goal of the project is to form a joint action force made up of government agencies, universities, research institutions, enterprises, NGOs, the public, and others. With effective participation in the rescue actions taken by multiple parties, the ultimate goal is to realize the beauti-

ful vision of the recovery of the Yangtze Finless Porpoise population and to achieve stable and healthy development of the Yangtze River ecosystem..

“Little Finless Porpoise, Big Love” is a small fund program under this themed project. In addition to obtaining funds through the project, NGOs will receive training by the CCF to better organize activities and improve forces of action during the project application and implementation processes. In 2018, twelve NGOs were funded by the “Little Finless Porpoise,

Big Love Program.” They will establish 8 “Finless Porpoise Nature Schools” in the Yangtze River Finless Porpoise Protected Area and around other important habitats. The NGOs will film 4 documentaries of the Yangtze Finless Porpoise protection, compose and perform a Finless Porpoise shadow play, design and create various Finless Porpoise clay and fabric crafts, collect a number of intangible cultural heritage products, and hold annual Finless Porpoise-themed summer camps for college students.



The Yangtze Finless Porpoise is one of the two aquatic mammals living in the Yangtze River watershed. It is the top species in the Yangtze River ecosystem and is also endemic to China. These Finless Porpoise were photographed inside the Museum of White Dolphins. Photography: Tao JU

When I was discussing this with Dr. Limin WANG, the vice chair of the CCF, someone else came to our minds. It was Mr. Junqi ZHOU, the previous director of the Hukou County Fishery Administration Bureau. At that time, he had been retired for more than two years, and his daughter had invited him to Beijing to stay at her home. Dr. Limin

WANG tried to call his old number and it went through. Director Zhou was very happy to hear from his old friend and delighted to learn about the Assisted Patrol Program. He said that it would have been so nice if they had this program two years ago before he retired. When asked if he would be willing to come back to Hukou from Beijing to recruit fishermen



for this program, he said just one word, “deal!” More surprisingly, he drove back from Beijing the next day, leaving behind the calligraphy class that he had just paid 10,000 RMB for. Since then, work at the assisted patrol demonstration site at Hukou has been carried out with outstanding results. The site was officially established on June 15th, 2017, a few days

Expert Comments

Ding WANG, Research Fellow

Director of the Academic Degree Committee of the Institute of Hydrobiology, Chinese Academy of Sciences

Secretary General of the Chinese “Man and the Biosphere” National Committee

The Yangtze River had given birth to two freshwater aquatic mammals - the white dolphin and the Yangtze Finless Porpoise (finless porpoise). Due to increased human activities in the Yangtze River ecosystem, the number of white dolphins has rapidly declined, and the species was declared functionally extinct in 2017. Concerned by the lessons learned from the white dolphin, the protection of the Yangtze Finless Porpoise has received great attention.

The Yangtze Finless Porpoise is a top-class creature living on the top of the food chain, and it is an indicator species for the entire Yangtze River ecosystem. The health of the Finless Porpoise actually parallels the health of the Yangtze River ecosystem. Therefore, its protection is not only the protection of one single species, but also the conservation of the entire Yangtze River ecosystem.

In 2014, the Yangtze Finless Porpoise was included on the National First-class Protected Animal List for the most stringent protection by the Ministry of Agriculture. In 2017, the Ministry of Agriculture entrusted the Institute of Aquatic Sciences of the Chinese Academy of Sciences to organize another nationwide scientific investigation. The results were relatively good, with 1,012 Finless Porpoise observed. The overall number did not change much compared to the numbers seen in 2012, and they remain basically stable. In some places, such as Dongting Lake, there were even some increases. In general, the past trend of rapid decline has been effectively curbed. However, the situation is not yet entirely optimistic, as the species is still at a “very endangered” level.

The Assisted Patrol Project is a fisherman’s conversion project that has been initiated and sponsored by the SEE and CCF under the leadership of the Yangtze River Office of the Ministry of Agriculture and the Yangtze River Branch of the National Aquatic Wildlife Conservation. With this project, some fishermen were converted into assistant rangers. They patrol the waters inhabited by Finless Porpoise, assist the fishery administration in combating illegal fishing, and make up for the shortage of official fishery administration personnel. This practice has proven this project to be successful source of research and innovation, which has driven social forces to work together to save the Yangtze Finless Porpoise and contribute to the Great Yangtze River Protection.

before the Dongting Lake site, and so it had become China's first assisted patrol demonstration site.

Launching of the Anqing Patrol Demonstration Site

The assisted patrol demonstration sites for the two lakes leading to the Yangtze River had both taken shape and were now in operation. However, conservation of the mainstream of the Yangtze River had not yet been addressed. Dr. Limin WANG asked me which part of the Yangtze River had the densest Finless Porpoise's population. Without any hesitation, I said, "Anqing." Anqing is a prefecture-level municipality in Anhui Province. Its Finless Porpoise's population accounts for half of the total number of Finless Porpoise in the Yangtze River during peak periods (this excludes Poyang Lake and Dongting Lake).

Unexpectedly smooth progress was witnessed at the Anqing Demonstration Site. The director of the Anqing Fishery Administration Department, Zeqiu JIANG, gave his strong support for the site and designated Deputy Director Lushan Song to lead the effort in person. At the same time, innovation was introduced. The department cooperated with a local environmental NGO, the Anhui Yangtze River Protection Association, which took responsibility for performing specific tasks to implement the program. The Fishery Administration Department provided strong support and quickly took action. They used a crane to transport a medium-sized speedboat from the inner lake; the boat was to be designated for use on assisted patrols. The Anqing Assisted

Patrol Demonstration Site was officially established on June 29, 2017.

During an assisted patrol, Shibin HU (Lao-HU) from Anhui Yangtze River Protection Association was featured by local TV for his justness and fairness. Lao-HU has always had his own honorable principles. Whenever cases of illegal fishing, illegal sewage disposal, or illegal sand dredging were observed during his patrols, he would immediately report the activities to the fishery administration department and water police. This occurred regardless of who was involved or what kind of background they had. He would not make any exceptions, no matter who came to intercede.

We Are All "Finless Porpoise Stewards"

On June 13, 2017, the Yangtze Finless Porpoise Rescue Alliance was established in Wuhan, which was facilitated by institutions such as the CCF. At the inaugural meeting, the Ministry of Agriculture awarded the title of First Demonstration Sites of Finless Porpoise Reserve to the four assisted patrol sites: Hukou, Yueyang, Anqing, and Hewangmiao/Jicheng.

In order to strengthen the digital management of assisted patrols, a team led by Zongren WANG, member of the SEE's Hubei Project Center, together with the CCF, developed a professional patrol APP called the "Finless Porpoise Steward." This app assists the patrolman in recording data, communications, and contacts between the rangers and fishery officers.

The Finless Porpoise Steward APP name is a name that the assistant rangers

affectionately relate to. As of 2017, a total of 40 former fishermen had been converted into Finless Porpoise stewards with the title “Assistant Rangers.” They drive their boats under the heat and sun, in wind and rain, where they patrol Finless Porpoise habitats to monitor their activities. They report to the fishery administration about any cases of illegal fishing, illegal dredging, and other issues detrimental to the survival of the Finless Porpoise. From July to December 2017, 40 assistant rangers accumulated an effective patrol distance of 14,000 kilometers, captured and demolished more than 200 illegal fishing vessels and gear, and were featured 86 times on mainstream media. They have effectively protected the Finless Porpoise and fishery resources, formed an effective deterrent to illegal fishing, spread positive energy out to the public, and established a positive image of ecological conservation.

In addition, illegal fishing gear, such as traps around important Finless Porpoise habitats have been mostly cleared. Dongting Lake and other places have seen a complete cessation of sand mining. Illegal fishing gangs, such as those engaged in electric fishing have become fearful of the patrol team. The news of these assistant ranger’s deeds, helping to combat illegal fishing and protecting the finless porpoise, has been widely spread among the residents around the patrol sites and on to the rest of the nation through media reports. This has boosted the public’s confidence and determination to save the Finless Porpoise and further protect the ecosystem of the Yangtze River.

The impact and effectiveness of the 2017

patrol demonstration work was very significant. This was first reflected within the fishery administration itself. In 2018, when the program called for additional demonstration sites, it received active applications from fishery departments at different levels. One hundred and six outstanding assistant rangers from 11 Yangtze River Finless Porpoise assisted patrol demonstration sites were selected through an expert review process and were subsequently recognized. The selection was done under the leadership of the Yangtze Watershed Fishery Supervision, Administration Office of the Ministry of Agriculture and Rural Affairs, and the National Aquatic Wildlife Conservation Association. It was led by the chair of the Second Working Committee of Hubei Center, Mr. Zhi YAN. The 106 selected rangers are from Yangzhou, Anqing, Yichang, and Yibin, and these areas represent the Yangtze mainstream region. Yueyang represents the Dongting Lake region. Jiujiang, Hukou County, Poyang County, the Swan Island protected area, the Hewangmiao/Ji Cheng protected area, and Xinluo protected area represent the Poyang Lake region. This selection and recognition not only involved the protection of the Finless Porpoise, but also included the Chinese sturgeon and the Yangtze River sturgeon as key protection targets. For example, the establishment of the Chinese Sturgeon Protected Area in Yichang, Hubei and the Yangtze River Sturgeon Protected Area in Yibin, Sichuan were new breakthroughs.

Although some progress has been made with respect to the protection of Finless Porpoise, there is still a long way to go. Our new goal is to increase the number of Finless Porpoise to 2,000.

“Noah’s Ark” Carrying Nature and Life

by Mo QI

Noah’s Ark is the ark described in the Bible that protected all life during the Great Flood. Although the story in Genesis seems to be in the distant past, it is an ideal that we must strive for; and ideal that is within reach. There is a group of people who regard this planet as a single, life-bearing Noah’s Ark. They are using science to improve the living ecology of rare species, such as the Yunnan golden monkey, the Himalayan bee, the green peacock and the Asian elephant to construct a beautiful home where birds in the sky, beasts in the forest, fish in the water, and humans in nature will thrive. This group is the SEE Foundation, and this project is called “Noah’s Ark.”

Walking up to the Yunnan Golden Monkey

In July 2018, intermittent showers made the thick forest more verdant. Inhabitants of Xianggujing, a small mountain village in the Weixi-Lisu Autonomous County of Diqing Tibetan Autonomous Prefecture in Yunnan, welcomed another group of

visitors. Their purpose was to visit the hard-to-see Yunnan golden monkeys. This group was made up of middle school students from Southeast Asian countries. Guided by the local villagers, they listened each of the guides’ introductions regarding the Yunnan golden monkey. Soon, they came upon the mesmerizing view of the monkeys hav-



The SEE's Noah's Ark Project is dedicated to the protection of the primeval forest and biodiversity in the southwestern mountains of China. The project strives to explore and promote a friendly and interdependent relationship between society and natural ecosystems. Photo courtesy: Visual China Group

ing their breakfast, which the absolutely appreciated. “Wow!” They couldn’t help exclaiming as the monkeys made swift movements or cute expressions.

Lao-YU, Jianhua YU, was far away squatting in front of the temporary shelter. He was calling out to other rangers from time to time, while keeping an eye on the movements of the monkeys and the children’s whereabouts. He made sure to keep the monkeys from shaking the branches to hurt the children, and at the same time, he prevented the children from crossing the patrol line and getting too close to the monkeys. The rainy day

brought extra trouble for Jianhua YU and his Yunnan golden monkey ranger team; they all got wet, and extra caution was needed, because the road was slippery.

The children were absorbed in watching the monkeys and did not notice the old man behind them. They did not know that he was one of the heroes who made it possible for them to be able to appreciate the view of monkeys up close. Jianhua YU and other rangers guard and track the movements of monkeys in the mountains all day long. They get up before dawn every day to determine the location of the monkeys and ensure that the visitors can



Yunnan golden monkeys are typically distributed along a narrow strip of the Yunling Mountains between the Jinsha and the Lancang River. Photo courtesy: Baima Snow Mountain National Nature Reserve



Fig.1



Fig.2

- Figure 1: Middle school students from Southeast Asia looking for traces of Yunnan golden monkeys. Photography: Xuewen WU
- Figure 2: Yunnan golden monkey ranger Jianhua Yu and his co-worker. Photography: Xuewen WU

see them.

What the visitors don't know is that Lao-YU used to be an experienced hunter, and the Yunnan golden monkeys that are now awing children used to be among his hunted. "We did not know that monkeys were a protected species in the past," said Lao-YU. The Lisu and Yi ethnic groups are mountainous aboriginals, and hunting has been their tradition since ancient times. For much of that time, the Yunnan golden monkeys lived in these mountain forests with the aboriginals, and were one of their main sources of game. "The monkey hunt was a big deal in the village. The villagers would gather together to celebrate and then share the meal," he admitted. Thus it was no exaggeration to describe the mind-set of the villagers towards the Yunnan golden monkeys in Weixi at the end of the 19th century as "We could not see monkeys, we could only see hides."

The Yunnan golden monkeys are typically distributed along a narrow strip of the Yunling Mountains between the Jinsha River and the Lancang River. The area is approximately 20,000 square meters. They usually live among fir forests, spruce forests, eucalyptus trees,

The "Noah's Ark" Project

The SEE's "Noah's Ark" project is dedicated to the protection of primeval forests and biodiversity in China's southwestern mountains. It strives to explore and advance the friendly and interdependent relationship between human society and ecosystems. The "Noah's Ark" project currently includes several sub-projects, such as protection of the Yunnan golden monkey, breeding and protection of the Himalayan bee, protection of the green peacock, protection of the Asian elephant, protection of endangered plants and endangered medicinal plant resources, protection of indigenous fish in the plateau river, village and stream garbage disposal, mountain village ecological bathrooms, and the Hengduan Mountain Xinzhu Botanical Garden.

and alpine rhododendron shrublands at an altitude between 3,000 and 4,700 meters. Their habitats are the highest in altitude among primates, with the exception of humans. However, the golden monkeys disappeared in the 70 years after they were named, and there were no public reports on their sightings. People once thought that the Yunnan golden monkey had gone extinct. It was not until the early 1960s that Mr. Hongshou Peng, a zoologist from the Kunming Institute of Zoology, Chinese Academy of Sciences, discovered their trace once again and confirmed their existence.

The survival of the Yunnan golden monkeys is highly dependent on the primeval forests. Each of them needs more than 100 square kilometers of primeval forest to survive. Their home range is one of

the largest among primates in China and also around the world. Therefore it is an important indicator species of the forest ecosystem. Places with permanent monkey habitation indicate that there are large, supportive areas of primeval forests. Protecting a forest's flagship species, such as the Yunnan golden monkey, makes it possible to indirectly protect these large areas of primeval forests and other wildlife that shares the forest resources with the monkeys.

In 1983, China's highest-altitude and largest-scale national nature reserve, Baima Snow Mountain National Nature Reserve, was established to protect the Yunnan golden monkey and its habitat. After 35 years of management and protection, there are now 8 populations with approximately 1,500 Yunnan golden monkey individuals living in this reserve. They account for 70% of the Yunnan golden monkey total population in China. However, we can not be absolutely optimistic just yet, even if the living conditions for the monkeys have improved.

Yongcheng Long, who has been devoted to the protection of the Yunnan golden monkey for almost half of his life, said, "After decades of protection, the number of Yunnan golden monkeys has increased, but so far, the total number worldwide is still less than 3,000." Yongcheng Long is the current chief scientist of the SEE's Southwest Project Center and the honorary chairman of the Chinese Primate Society. In the past, he served as the Chinese Liaison to the Primate Specialist Group of the IUCN Species Survival Committee (SSC) and Senior Consultant of the Primate Specialist Group of the Chinese Zoological Society.

Funding for a Nation-wide Survey of the Yunnan Golden Monkey Population

The dynamic monitoring program for Yunnan golden monkeys was created by the Forestry Department of Yunnan Province and funded by the SEE Foundation's "Noah's Ark Project." It was the attempt of a new model for the conservation of Yunnan's wildlife and forest ecosystem. The project has been jointly carried out by multiple protected areas, scientific research institutions, and non-governmental organizations.

A new round of monitoring will enable further understanding of the population and dynamic changes of the Yunnan golden monkey population. For the first time, the genetic relationship among monkey groups and their genetic diversity will be determined using DNA analysis. This will provide a scientific basis for the development of protective measures to increase the population of the Yunnan golden monkey. It is also a test of the quality of the ecosystem conservation activities performed within the Yunnan golden monkey distribution area.



Yunnan golden monkey. Photo courtesy:
Baima Snow Mountain National Nature
Reserve



Asian Elephants. Asian elephants are the largest land animals in Asia. They are distributed in Southeast Asia, South Asia and southern Yunnan, China, with a population of only 40,000. Usually male Asian elephants have long incisors (commonly known as ivory), while female incisors are underdeveloped, or very short and not be exposed. Photo courtesy: Dazhi Gallery

“When the SEE Foundation proposed the concept of ‘Noah’s Ark’ and initiated the project for conservation of the Yunnan golden monkey, I strongly agreed with the idea. Because important animals like the Yunnan golden monkey do need the protection of an ark, and the Baima Snow Mountain is a giant ark.” However, in order to protect a species and a primeval forest, it is not enough to have just one person or one institution on board. It is necessary to mobilize the power of our entire society. In this way, we may achieve twice the results with half the effort.

In 2016, the “SEE, Noah’s Ark – Biodiversity Conservation in China’s Southwestern Mountains” theme proposed by the Southwest Project Center passed review and began fundraising out of the SEE Foundation. The Noah’s Ark Project is a regional project of the SEE Foundation. It aims to promote multi-faceted social participation, improve resource integration for conservation activities, and cooperate with governments, experts, other protection agencies, communities, and local residents to explore a comprehensive mechanism for the conservation of the primeval forests of China’s southwestern moun-



Fig.1



Fig.2



Fig.3



Fig.4



Fig.5



Fig.6

● Figure 1: Broadcast equipment used to inform village residents of the presence of Asian elephants. Photography: Xuewen WU ● Figure 2: Staff responsible for the day-to-day operation of the broadcast equipment. Photography: Xuewen WU ● Figure 3: Cameras used for monitoring Asian elephants with infrared sensor triggers. Photography: Xuewen WU ● Figure 4: Trekking through the tropical rainforest in Xishuangbanna. Photography: Xuewen WU ● Figure 5: Yun DENG assembles an alarm system to prevent Asian elephant from attacking people. Photo courtesy: Yun DENG ● Figure 6: Screenshot of a photo captured by an infrared camera that monitors Asian elephants. Photo courtesy: Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences

tains. It seeks to establish a “human society-ecosystem” relationship that is friendly and interdependent, so that our imperiled ecosystem conditions will improve.

The Yunnan golden monkey Conservation Program launched in 2016 is a key conservation sub-project within the Noah’s Ark project, and its activities are carried out by the SEE’s Southwest Project Center. This center is the foundation’s latest effort to protect flagship species. The program includes two components; nature conservation and nature education of Yunnan golden monkey habitats. The foundation is also committed to protecting Yunnan golden monkeys and their habitats in northwestern Yunnan province by establishing and consolidating a community patrol and monitoring system, promoting

community subsistence alternatives, and providing nature education for the public. According to the foundation, an important strategy for biodiversity conservation and ecosystem protection in northwestern Yunnan is through the joint forces of scientists, entrepreneurs, local governments, communities, and local environmental organizations. These activities are designed to protect the monkeys and use the monkey as a flagship species to drive the conservation of primeval forest ecosystems in northwestern Yunnan.

The Protection of Asian Elephants in Xishuangbanna

If the protection of the Yunnan golden monkey, the “elves of the snowy mountains” in Yunnan’s northwest, can be attributed to their “glamorous beauty,”

then more people may wish to learn more about these beautiful animals and how to save them. The Asian Elephant Protection Project in Xishuangbanna carried out by the SEE Foundation has similar goals and was designed to solve the tricky problems of how to have Asian elephants live in peace with humans.

Asian elephants are the largest terrestrial creatures in Asia. The activities of Asian elephants have a great impact on the renewal of plant species and the coexistence of animal species in local forests and nearby areas, and so their existence has become an important cultural symbol for local ethnic groups. Therefore, the Asian elephant is considered to be a key species in the conservation of regional biodiversity. Asian elephants generally do not actively attack humans, since the forest can provide sufficient essential habitat elements such as food and open space. However, in recent years, with the expansion of agricultural farming, the habitat of Asian elephants has been rapidly diminished. Road construction has also blocked their normal migration routes. These have led to a deadlocked rivalry between elephants and humans. The spatial range of conflicts is still expanding and the intensity is increasing..

From 1991 to 2014, the direct economic loss caused by Asian elephants in Xishuangbanna's Dai Autonomous Prefecture was recorded as high as 200 million RMB. As of December 2014, more than 210 people had been attacked by Asian elephants in Xishuangbanna, and more than 50 of them died from severe injuries. The intensification of conflicts between humans and elephants had had a serious impact on local people's living conditions

and productivity. At present, the nature reserve compensates for the economic losses caused by Asian elephants by purchasing wild animal accident insurance. However, the safety risks to local people's daily lives and productivity have not been properly resolved.

Yun DENG is the developer of a mobile sound and light alarm system to prevent attacks and injuries caused by Asian elephants. He is also in charge of the promotion of this project (hereinafter referred to as the Asian Elephant Early Warning Project). When we met the young man at the Xishuangbanna Tropical Botanical Garden of the Chinese Academy of Sciences, he showed a sense of humor rarely found in academicians. He showed us photos on his phone. "I received an early warning that you were coming. When I got the message, I was glad to not be an elephant. However, one of my friends here is obvious quite experienced. The camera did not even capture him." It turned out that when we visited the infrared camera site installed by the Asian Elephant Early Warning Project, we were photographed by the camera and were transmitted to Yun's cellphone. Yun has been placed in charge of monitoring and identification of the elephants as well.

Yun DENG said, "Human-elephant conflicts in Xishuangbanna have been a long-standing problem. Many institutions and organizations, including the administration of the nature reserve, have tried various solutions, such as isolation barriers, anti-elephant trenches, and walls to solve the problem. However, since most of the previous solutions relied on the passive prevention of elephant

aggression, and did not actively attempt to change elephant behavior, the effect has not been satisfactory. Our project involves a simple change of thinking. Since wild elephants cannot understand our language and cannot be directly controlled, an effective solution involves changing the thoughts and actions of people. When elephants have been detected approaching the periphery of villages, an early warning is issued to local residents so that they can yield to the oncoming pachyderms. This method is much easier than trying to control the elephants.”

The primary technology utilized for the Asian Elephant Early Warning Project employs infrared sensors that trigger camera shutters. Once such cameras are installed at pre-selected locations, they are kept on 24 hours a day. When a photo is taken, it is immediately transmitted to a designated mailbox. An administrator checks the received photos and sends the surrounding village residents an alarm if the detected activity is indeed caused by an elephant. The alarms are controlled by cell phones and are sent in the form of a flashing light and voice broadcasts. This system provides uninterrupted warning for areas with Asian elephant activities around villages, providing sufficient response time for better safety and productivity of the community residents.

Yun went on to say, “Presently, rubber collection is one of the primary means of subsistence for local villagers. Cutting rubber needs to be done at night, and that is when elephants are the most active. Therefore, it is very important for people’s occupational safety to be able to receive timely alerts of elephant group activities at night.” According

to YUN DENG, in the 884 days from May 19th, 2015 to October 19th, 2017, the project team recorded 181 Asian elephant activities and issued alerts for 157 of them. A total of 213 alert messages were broadcast, among which 173 were released within 20 minutes of elephant activity detection. The effectiveness of the entire early warning system reached 72.49%, evaluated using two combined indicators. One indicator is the normal function rate of the hardware equipment and the other is the on-duty rate of personnel. Of course, this is all due to the fact that the early warning technology, the wireless infrared cameras, and sound and light alarm system, have achieved my original expectations. Through the careful monitoring of important intersections where wild elephants usually pass, injuries caused by wild elephant attacks have been reduced.”

However, the current system still has a big drawback “it needs backstage supervision 24 hours per day” by an associate to identify and judge whether or not the trigger has indeed been caused by an elephant. That is what Yun DENG was referring to as “24 hours on call”. “The elephants are often active at night. It is understandable if the trigger is set by actual elephant movements. The problem is that infrared camera alarms sometimes can be triggered by other animals or even human movements. I’m not able to sleep if such false alarms happen a lot,” Yun said with a wry smile. He would be anxious if he missed an important night time alarm, because he was unable to wake up.

To this end, the SEE Foundation is also commissioning relevant research

institutions to develop an intelligent recognition system specifically for detecting Asian elephants. Obviously, we can clearly see that the aim is to operate an automated alarm system. If the development goes well, the system will not have to depend on the 24-hour manual, on-call service and can be offered in more areas.

Speaking of the origin of the relationship between the Asian elephant early warning project and the SEE Foundation, Yun DENG said with humor, “In fact, it felt like I was accidentally picked up by the Foundation while I was begging on the street.” The story was, in order to alleviate the increasingly intense human-elephant conflicts in the area, Yun DENG’s team had run a pilot version of an Asian elephant early warning and monitoring site in Konggeliudui of Guanping village, Mengyang Town, Jinghong City. Asian elephant activities have been frequently observed here. The pilot study had been funded by the Beijing Shanshui Conservation Center’s Lancang River Conservation Project from June 2015 to 2017, and had established a preliminary Asian Elephant early warning system which utilized manpower. However, as the Lancang River Protection Project was completed in 2017, and funding was no longer available for the key equipment that was required, such as sound and light alarms. The project was at a standstill.

When Yun DENG and his team were worrying about how to continue the improvement of the warning system, they were contacted by the SEE Foundation, introduced to it by the Shanshui Conservation Center. In 2018, the project was officially funded by the Southwest

Project Center for continuation. Currently the Asian Elephant Early Warning Project has completed the development and installation of the sound and light alarm broadcast prototype and another prototype based on subtitles. Subsequent technical improvements are being steadily carried forward.

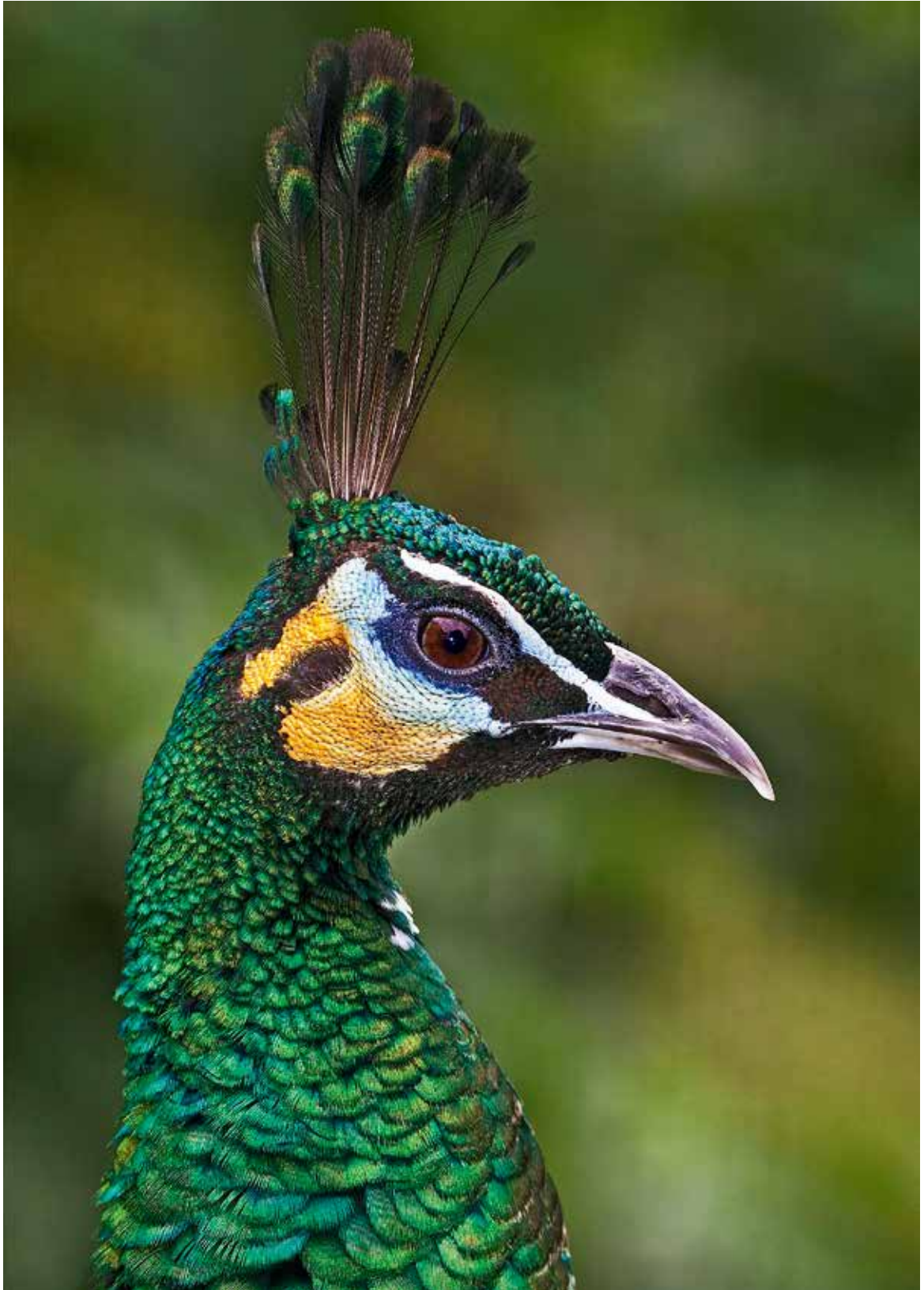
Let the Green Peacocks “Bloom”

On the evening of November 18, 2017, a concert, dedicated to green peacock protection, was held at the Kunming Theater. This concert was jointly sponsored by the Yunnan Natural and Cultural Heritage Protection and Promotion Association, the SEE Foundation, and Noah Holdings Ltd. The concert gave the public an awareness of the protection efforts for the endangered green peacock in the form of art. The popularity of this art form encouraged more people to learn about the animal’s “endangered” status. At the same time, protective actions for the green peacock have been actively progressing.

The green peacock is a star species in the southwestern mountainous region, especially in Yunnan province. When the fate of this beautiful bird was seriously threatened, it was included on the protection list of the “Noah’s Ark” project. The green peacock inhabits tropical and subtropical evergreen broadleaf forests and mixed forests below altitudes of 2,000 meters. It especially favors open grasslands, river banks, farm sides, and forest clearings. Green peacocks used to be widely distributed in large areas of southern China. However, with the fast development of China’s economy



Green peacocks can only be found in China and Southeast Asia. However, due to human activities, their habitat has gradually retreated and is now only present in parts of Yunnan Province with less than 500 peacocks remaining. Photo courtesy: the SEE Foundation



The most obvious difference between the green peacock and blue peacock is the crown feathers. The blue peacock's crown feathers are fan-shaped, while the green peacock's form a cluster. Photo courtesy: Dazhi Galler

over the past 40 years, the distribution area of green peacocks has been rapidly shrinking with an “encirclement and suppression” effect caused by many factors.

Xiaojun YANG, professor from the Kunming Institute of Zoology, Chinese Academy of Sciences, and Lianxian HAN, professor from the Southwest Forestry University along with their colleagues have been unceasingly monitoring the habitat changes of the green peacock. They made an optimistic estimate based on years of tracking and concluded that there are currently less than 500 green peacocks in China. How can we provide a relatively safe living environment for wild green peacocks who have a very low reproductive capacity? In order to solve this problem, the SEE’s “Noah’s Ark”

Co-managed Green Peacock Habitat Protection Zone

In June 2017, the project application of a Co-managed Green Peacock Habitat Protection Zone was approved by the Yunnan Provincial Forestry Department. After its review by a team made up of experts, governmental department heads, and project sponsors assembled by the “Noah’s Ark” project team, a special committee for green peacock protection was established.

The project enables non-governmental public welfare organizations to work together with government agencies, experts, and local villagers on the evaluation and management of public welfare projects to form an effective public management model.

funded the Green Peacock Protection Project. Through the integration of resources from various parties, the project facilitates responsible government agencies, scientific research institutions, public welfare organizations, corporate public welfare funds, local institutions and many enthusiastic individuals who are concerned about the status of green peacocks to work together and build a well-managed green peacock protection zone. It aims to protect and improve the habitat conditions of the green peacocks and restore the stability and vitality of the wild green peacock population in the protection zone within 5 years.

Protection of Endangered Plant Species and Endangered Medicinal Plant Species

Thirty million years ago, the Himalayan Movement created the most majestic mountain range in the world. The Hengduan Mountains formed along its southeastern edge, which is part of both the Pacific and Indian Water Systems. Yunnan’s northwest, where three major rivers run parallel, lies in the heart of the Hengduan Mountains. In the short distance of merely 10 kilometers between the mountain ridge and the valley bottom lie five distinct climate zones. They are the subtropical, arid valley, warm temperate, temperate, and cold temperate climate zones. The vegetation exhibits a stereoscopic vertical distribution, transitioning from evergreen broadleaf forest to needleleaf and broadleaf mixed forest, needleleaf forest, alpine shrubland, alpine steppe, flowing rocks, and permanent snow peaks. Kun XU, head of the Lijiang Al-



Buddleja alternifolia, known as alternate-leaved butterfly-bush, is endemic to China and is distributed in the provinces along the Yangtze River. Photo courtesy: Dazhi Gallery



Rhizoma Polyphylla is the dry rhizome of the liliaceous plant *Paris polyphylla*. As a Chinese herbal medicine, it tastes bitter, has a slightly cold nature, and is mildly toxic. Photo courtesy: Visual China Group

pine Botanical Garden of the Kunming Institute of Botany, Chinese Academy of Sciences, told us stories from ancient times to the present. In ancient times, lichens and moss gradually evolved on the uplifted rocky hills. Under their protection, herbaceous vegetation developed, and then shrubs grew in the thick grass. These forms of vegetation provided fertile ground for tall trees. “In the natural world, plants sitting on the bottom of the food chain and provide homes for all animals. Vegetation is the ‘foundation project’ of biodiversity,” Kun XU said.

There are about 350,000 species of higher plants in the world, 35,784 of which are in China and 19,333 in Yunnan alone. There are 10,198 species of higher plants in northwestern Yunnan according to record. More than 500 different kinds of medicinal plants were compiled in the book “Chinese Herbal Medicine” and 321 of which can be found in Lijiang.

The Lijiang Alpine Botanical Garden of the Chinese Academy of Sciences lies 3,300 to 4,000 meters above sea level making it the highest botanical garden in the world. It is responsible for the protection of biodiversity in the Hengduan Mountains and the Alpine Mountains, as well as for the cultivation of endangered and rare species. Kun XU’s team is known as the “Plant Hunter.” They monitor and collect plant seeds in the alpine primeval forests. In the spring, they collect plant specimens and bioactive material for analysis. In the fall, they harvest mature seeds, part of which are used for experiments and the rest are sent over to China’s Southwestern Wild Species Germplasm Bank for cryopreservation.

New seeds of existing species in the germplasm bank should be added at a certain number of years’ intervals to ensure that seeds in the germplasm pool can germinate within 100 years.

Scientists have developed this system to prevent the destruction of some species on the planet in case of major disasters.

In 2014, the SEE's Southwest Project Center started collaborating with the Lijiang Alpine Botanical Garden. The executive team had the privilege of visiting the forests with director Kun XU, where they got to experience the life of a "plant hunter". Walking in the steep mountains, Kun XU said sentimentally, "Noah's Ark is a legend, but northwestern Yunnan is a real living Noah's Ark. We protect the endangered plants to prevent them from going extinct. We are protecting the home of all animals and plants."

Due to the country's economic development and to meet the living needs of local people, deforestation and exhaustive harvesting as well as acquisition of Chinese medicinal plants have caused a sharp decline in biodiversity. Many wild plant resources have been exhausted and become endangered species. The alpine plant species growing in a special environment particularly face serious cultivation and development crises due to their low reproductive rate and slow growth rate. Through its cooperation with the Lijiang Alpine Botanical Garden, the "Noah's Ark" project has selected in its first round of plant cultivation and protection efforts several endangered medicinal plants with high economic values, including *Rhizoma Polyphylla*, *Rhizoma Panacis Majoris*, *Psammosilene tunicoides*, and *Ocimum basilicum*.

Tetracentron is a national second-class protected plant. It has been germinating

and flowering on Baima Snow Mountain for many years, but no saplings have been found. Broadleaf trees such as *Tetracentron*, *Cyclobalanopsis*, and *Poplars* provide more diverse food for the Yunnan golden monkeys. Due to the double impact of both anthropogenic and natural causes, the area of broadleaf forests in places where Yunnan golden monkey live has severely contracted. Tai ZHONG, Director of the Weixi Management Branch of Baima Snow Mountain National Nature Reserve was worried that older trees had been perishing without replacement by new saplings and that this issue would have irreparable consequences. The protection of broadleaf forests had become more urgent than ever. In the fall of 2016, the Noah's Ark executive team collected *Tetracentron* seeds in Xiangguging. Kun XU, with his team, began to germinate them in the "Noah's Ark" resource nursery. The seeds sprouted in the summer of 2017, and were already one foot tall by the summer of 2018. They will be transplanted back onto Baima Snow Mountain once they grow tall enough to resist temperatures below zero.

Those at the SEE hope that the Noah's Ark Project will unite as many forces as possible. This will allow more people to join together in protecting the primeval forests and water sources. This will enable the forests in southwestern China to sustain various wild and rare plants. Wild animals such as the Yunnan golden monkey, Asian elephant, and green peacock can still live in a safe and intact habitat.



Tetracentron is a national second-class protected plant. This picture shows the leaves of a tetracentron wet from the morning dew.
Photo courtesy: Visual China Group.

Other Projects Carried Out by “Noah’s Ark”

Restoration and Protection of Indigenous Fish in the Jinsha River

In 2017, the “Noah’s Ark” project, together with environmentalists and the public, held a fish release campaign to release and proliferate 30,000 fish specimens indigenous to the Jinsha River during the closed fishing season.

Under the guidance of Dianjiang River fish expert Deqing Tan, the project discovered six Triplophysa in Jianhu Wetland, which was suspected to have gone extinct. The fish were sent to the Shigu Dianjiang River fish breeding base for breeding experiments.

Ecological Bathroom Demonstration and Promotion

Since its implementation in 2015, the project has distributed ecological sanitary equipment to key areas of biodiversity in China’s Three Parallel Rivers of Yunnan Protected Areas. This project has helped villagers build open-air toilets or dry toilets, thereby controlling disease transmission, reducing nonpoint source pollution around villages, and protecting the cleaning ability and conservation capacity of the Jinsha River’s primary tributary.

On November 23rd 2017, twenty-one sets of detachable household sanitary equipment were transported to the homes of farmers chosen as demonstration sites. Lijiang and Weixi Counties were chosen for construction and installation.

Dai Medicinal Plant Germplasm Resource Conservation in Tropical Rainforests

Through extensive collection of wild Dai medicinal plants, the project has established a nursery for both germplasm resource conservation and science education to promote the sustainable development of the Dai herbal medicine pharmaceutical industry and the protection of tropical rainforest biodiversity.

In 2017, with donations from 66 SEE “Noah’s Ark” sponsors, the project established the 20 acre SEE “Noah’s Ark” Grassroots Medicinal Plant Germplasm Resource Nursery in the Naban River Basin Nature Reserve. It has introduced Dai medicinal plants from local pharmacological research institutes and hospitals, and has promoted understory planting to villagers in protected areas. The grassroots medicinal plant germplasm resource nursery has completed the cataloging and archival of 190 recently introduced medicinal plants.

Protection of Endangered Plant Species and Medicinal Plants Used in Chinese Herbal Medicine

In order to protect the ecological barrier for biodiversity in the Three Parallel Rivers region of northwestern Yunnan, this project established an endangered medicinal plant resource nursery through collaboration with the Lijiang Alpine Botanical Garden of the Kunming Institute of Botany, Chinese Academy of Sciences.

In 2016, 1,500 square meters of nursery for endangered medicinal plant resources have been completed, effectively cultivating 10 medicinal plant species. A technical manual for daily cultivation and management of medicinal plants was also edited for training and teaching purposes. In 2017, the SEE’s Southwest Project Center distributed 36,000 endangered medicinal plants to the rangers in the nature reserve to increase local residents’ sources of subsistence. The “Noah’s Ark Project” also collaborated with Kun XU to conduct local species surveys and species cultivation at the Xinzhu Botanical Garden of Hengduan Mountain, provide seedlings for vegetation restoration, and rehabilitate endangered and rare plant species such as *Tetracentron* and *Euonymus*. Ultimately, 270 species of endangered female plants will be introduced.

Himalayan Bee Project

By protecting the Chinese Himalayan bee species, this project makes use of its ability to maintain the forest ecosystem's health and at the same time creates an ecological and stable source of income for local villagers.

In 2017, Yulong County government invested 900,000 RMB to purchase Himalayan bee cultivation and training services for low-income villagers in 5 townships. During the process, the Southwest Project Center provided four training sessions or about 100 villagers in each township and conducted four-season beekeeping related technical training for a total of 200 person-time hours in other towns in northwestern Yunnan. A total of 2,402 beehives were distributed. At present, there are three to four core technical areas and key demonstration households among the bee farmers. Bee farmers have also mastered their basic beekeeping techniques around the various townships in northwestern Yunnan. The Southwest Project Center also edited and distributed Chinese Beekeeping Technical Manuals.

Conservation and Vegetation Restoration in the Xinzhu Botanical Garden of Hengduan Mountain

The SEE's Southwest Project Center established a Northwestern Yunnan Biodiversity Conservation Zone in the Laojun Mountain section of the Hengduan Mountains in the Three Parallel Rivers region. It aims to establish a rescue and cultivation base for endangered and rare plant species. With financial support, the project center guides local people to participate in its conservation activities. In collaboration with the Lijiang Alpine Botanical Garden of Kunming Institute of Botany, at the Chinese Academy of Sciences, it plans to protect and restore the vegetation in the botanical garden. The goal is to curb the destruction of vegetation within the botanical garden and gradually restore the species within 5 years.

Currently a new SEE "Noah's Ark" project, the Xinzhu Botanical Garden of Hengduan Mountain, has raised funds with help from Lei Liu to officially commence its activities. Lei is the third chair of the working committee of the SEE's East China Project Center. Lei participated in the opening ceremony with more than a dozen other East China Center members. Supported by the "Noah's Ark Project" team, the villagers of Xinzhu Village spontaneously set up a forest conservation team composed of 74 members. They formulated the township conservation protocols and took turns patrolling the mountains every day. In the summer of 2018, 2,000 *Acer yangbiense*, a species with a very small population, were planted in the garden to help restore the forest.

Blue Defenders:

Weaving a Blue Safety Net

by Shuren DING

While industrial development drives China's booming economy, it has brought with it various pollution problems, which makes up the country's major environmental concerns. The "Great Smog of London," "Los Angeles Photochemical Smog," and the "Minamata Disease" in Japan were all serious disasters caused by industrial pollution. Alerted to the severity of industrial pollution by these events, the world started to take corresponding measures. China's 2018 Government Work Report proposed to, "Drop the emission of sulfur dioxide and nitrogen oxides by 3% this year, and continue the decline of particulate matter (ppm2.5) in key areas. Industries such as the steel industry

will be pushed to transform to these new ultra-low emission standards. Pollutant discharge standards will be improved and deadlines enforced for meeting the standards. Special control programs will be carried out to deal with excess emissions by diesel trucks. It is understood that the 2018 Standing Committee of the National People's Congress will continue to provide solid legal assurance for pollution prevention and control.

But protecting the environment should not be just a governmental responsibility. It requires the synergistic concerns, participation, and efforts of everyone to successfully reduce the damaging effects of pollution.



While industrial development has driven China's booming economy, it has brought with it various pollution problems, which makes up the country's major environmental concerns. The world has realized the seriousness of industrial pollution and has started to take corresponding measures. Photography: Wandao

Great Warriors Serve the State and the People.

Among the 10 branded projects that the SEE Foundation has established under the “One Cornerstone, Three Major Issues” framework, only the pollution prevention project contains the word “warrior” in its name. “Blue Defenders” refer to those who defend the clear water and blue sky. Any non-governmental forces who make efforts to control and reduce pollution can become a “Blue Defender” with the SEE Foundation. The “Warriors” help the government and the general public solves environmental

problems such as water, air and soil pollution through a variety of mechanisms on a professional platform.

In short, the “Blue Defenders Project” aims to boost the effects of pollution prevention and control through the use of non-governmental forces. The original intention of the project was to increase the scale and professional capabilities of local public welfare organizations for pollution control, integrate operational network resources, support local grassroots organizations based in various places to push for information disclosure, supervise corporate pollution reduction,

and facilitate governmental agencies' law enforcement.

The "Blue Defenders" still has a long way to go.

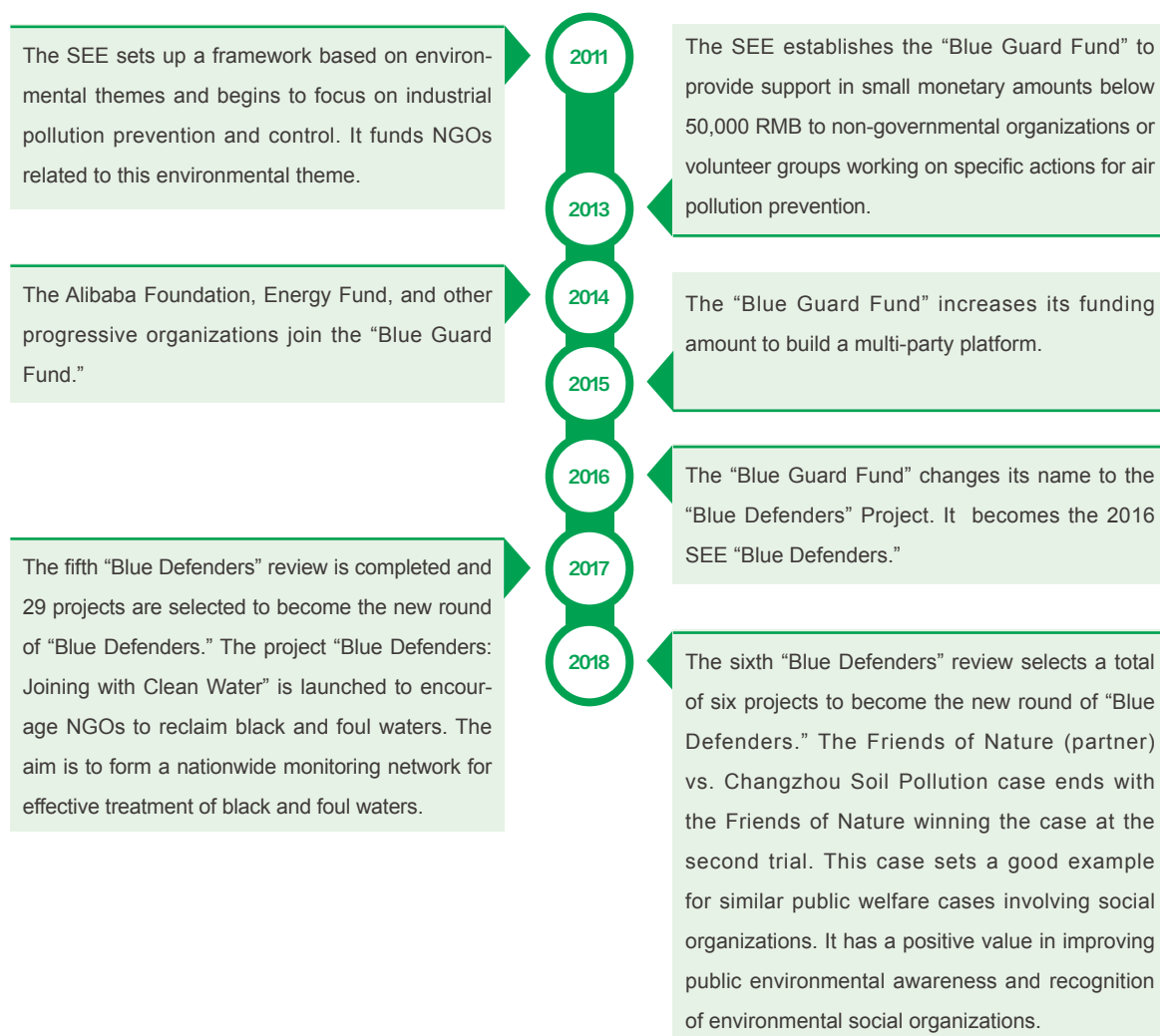
The Origin of the "Blue Defenders"

While industrial development drives a rapidly growing economy, the pressure of pollution control brought by the extensive development of some industries has been

increasing. Also, on the rise have been the costs for pollution management. In order to win the battle against pollution, China's current ecological environmental protection has entered the "key period, critical period, and window period. Achieving a win-win situation with both economic development and environmental protection has become one of the key tasks of environmental NGOs.

In 2011, the SEE Foundation carried

The Blue Defenders Project Timeline



out a strategic plan hoping to promote the formation of a healthy and diverse environmental public welfare industry ecosystem that is compatible with China's economic development. Under this strategy, its goal is to stop environmental degradation through intervening in specific and urgent environmental issues and collaborating with mature domestic and foreign partners with effective methods. At the same time, it expects to improve the quality of local environmental organizations. To this end, the SEE has established various environmental theme groups. Each theme group provides organized assistance to the environmental NGOs in that particular field. Among them, the "industrial pollution prevention and control" theme started to follow with a close interest on environmental actions related to water pollution.

In 2012, the SEE made strategic adjustments to focus on industrial pollution prevention and supported the formation of a "Green Choice Alliance." This alliance is composed of 42 environmental organizations such as the IPE. Through the alliance, it has promoted collaborative actions in industrial pollution reduction by industries and regions. At the same time, it increased the funding amount for relevant NGOs. In that year, the SEE Foundation invested 2.12 million RMB to monitor 50,000 factories engaged in illegal pollution activities nationwide. It monitored 10,000 major pollution sources and their pollutant emissions, facilitated 40 enterprises in the upgrade of their supply chain management, helped 200 polluting enterprises to meet emission standards, and established a website for the disclosure and inquiry of

the environmental performances of listed companies.

In 2013, serious air pollution problems stirred strong social controversy in China. On January 28, the Central Meteorological Observatory of China issued its first air quality "blue warning." The prevention and control of air pollution could tolerate no further delay. The Ministry of Environmental Protection issued the 2013 Report on the State of the Environment in China and monitored 74 cities based on new standards in regions including the Beijing-Tianjin-Hebei region, Yangtze River Delta, and the Pearl River Delta. The report even covered municipalities directly under the central government, provincial capitals, and cities with separate planning. The results showed that only three cities, Haikou, Zhoushan, and Lhasa, met the standard.

Under such a severe air pollution situation, the SEE Foundation launched the "Blue Guard Fund" in the same year. Use of this fund began with a focus on air pollution problems. It cooperated with partners such as IPE and Chongqing Two Rivers to further promote data warehousing and data mining in industrial pollution prevention and control. It attempted to utilize the platform effect of the internet to monitor local pollution indicators by taking advantage of Big Data. With the data search and trace-back functions of the "Pollution Map" and its related database, effective and standardized management of enterprise supply chains and management of investment responsibilities of listed companies were achieved. These special situations eventually facilitated the pollution reduction of enterprises. Also starting 2013, the



Environmental volunteers from Shuguang Environmental Protection Charity Center investigating water pollution caused by Realgar Mine in Shimen, Hunan Province in May, 2014. Photography: Donghai PAN

SEE began to support the Chongqing Two Rivers to build a public participation network for environmental assessment designed to promote the standardization of the environmental assessment industry through data integration and public supervision of violations in environmental assessment practices.

Also, in the same year, the SEE foundation, together with the Alibaba Foundation and the Energy Fund, upgraded the “Blue Guard Fund” to the “Blue Defenders.” The Blue Defenders advocate to push for the disclosure of pollution information, encourage public supervision of pollution sources, and facilitate corporate pollution reduction and sustainable development. It started to recruit partners publicly. So far, a three-dimensional pollution prevention environmental project involving water, air, and soil were officially weaved into shape. Xiaohua QIAN, then chairman of the SEE said, “In the area of pollution prevention and control, Hunan has

the ‘Green Xiaoxiang’, Fujian has the ‘Green Home’, Jiangsu has the ‘Green Jiangnan’ and Chongqing has the ‘Two Rivers’. All of these organizations have been performing well. We call our project the ‘Blue Defenders’ - the warriors who defend the blue sky and clear water. Everyone is welcome to apply, and we will use this (brand) to raise funds.”

Four-way Pollution Prevention and Control

Environmental problems are essentially social problems and are often intricate and complicated. Environmental organizations need to find the primary link in the chain and the first piece in a chain of dominos. Locating the critical “sore point” with scientific methods will make the problem-solving more effective. In the prevention and control of industrial pollution, there is often more than one “sore point.” The head of SEE’s pollution prevention and control theme group said: “There are multiple ways to solve the pollution problem, which requires the government, the legal system, society, and the market to each play their own role and complement each other.”

As the prevention and control of industrial pollution progresses, the most needed force is professional expertise, which sets up a platform for communication among the government, enterprises, and the general public. The “Blue Defenders Project” has set up such a platform for the involved parties and established a communication mechanism to assist in problem solving. There have been quite a few successful cases.

Chang'an Village is located in Tingjiang Town, Fuzhou province. Over the years, the villagers had suffered from a fetor, which they suspected to be coming from the nearby Gushan biodiesel plant. However, whenever the villagers report to the local government and the environmental protection department came for inspection, the odor would disappear. As soon as the inspectors left, it came back. This situation repeated several times without a solution. The intervention by the Fujian environmental organization "Green Home" changed the situation. Green Home helped to set up an environmental volunteer group, and build a roaming monitoring team which represented the factory, environmental protection departments, village officers, and villagers. The team recorded actual air conditions throughout the day. Whenever the odor appeared, representatives of all four parties would record it together with their signatures. At the same time, Fujian Green Home brought in environmental experts to give training sessions to local villagers to increase their environmental awareness and provide them with reasonable and legal means to react.

Eventually, the polluting factory moved out of Chang'an Village. But the work of Green Home was not done. They continued to work with the village to help its industrial park find its niche and formulate reasonable development plans. Today, whenever the government takes action to attract investment, the villagers will be invited to participate in public hearings. Whenever a new business comes to Chang'an Village, the villagers always actively participate in a

forum regarding the issues. These often involve issues such as whether there is an environmental assessment and whether all environmental procedures have been completed.

Chang'an Village is seeing gradual and steady growth of businesses in line with its development plan.

In 2015, Green Home also created an environmental organization that specifically promotes green finance, named the "Green Walker." They approached the Industrial Bank, the first Chinese bank to join the "Equator Principles," to assist companies in finding help for green development. After conducting investigations, the Green Walker would inform the Industrial Bank of the company's risks and put financial pressure on the company through the bank, thus curbing potential pollution problems.

Environmental NGOs' participations in the prevention and control of air pollution in the heavily polluted "2+26" cities enabled the problem to be solved in a fundamental way rather than simply shutting down factories. For example, the Foxconn Foundry is the largest industrial organization in Taiyuan, Shanxi Province. With the help of IPE, it was able to reach an all-win solution for its environmental problems that did no harm to its corporate development, local economic development, and social stability.

In 2013, IPE received a report from locals saying that exhaust emissions from the Foxconn Foundry in Taiyuan seriously affected the daily lives of local residents. Before the report, local people

had already repeatedly clashed with the factory due to pollution problems. After receiving feedback from multiple parties, IPE decided to follow up on this incident. On one hand, the public wished to obtain the truth about the pollution. On the other hand, Foxconn's customer, Apple Inc., also wanted to know and investigate the pollution source through IPE's information disclosure platform. Meanwhile, the local government also hoped to find the source of the problem so that it could be solved through control instead of shutdown of the factory, thus avoiding potential social problems caused by the layoff of workers.

Upon IPE's intervention, it used its professional advantages to conduct a large-scale investigation of the factory. Finally, the pollution source of both sewage and waste gases were identified to be present at one of the plants. Under the supervision of the local government, the Foxconn Foundry remediated the pollution source, and the pollution problem haunting local residents for years was finally resolved. Workers did not need to be made jobless, therefore preventing a series of social problems.

In this case, as an organization independent of the government, enterprises and the public, NGO played a role more than that of a messenger between the involved parties. It gave full action to its subjective initiative in urging the involved parties for continuous adjustments and communications where it finally achieved a win-win situation. Jun MA commented, "Both the public and the government would trust a third party more than others, as it has no stake in the outcome."

Gathering the Power of Environmental NGOs with the "Blue Defenders"

In the past decade, the SEE Foundation has provided multi-faceted support to environmental organizations throughout the country, paving the road for pollution prevention and control. The SEE's blueprint brings environmental NGOs together through the "Blue Defenders" program.

An environmental NGO needs to pass strict tests to become a "Blue Defender." The application must both be aligned with the overall strategy for pollution prevention and control theme, and it must pass an expert review. The head of the SEE's pollution prevention and control theme group said, "The project to be funded must fall in the industrial pollution category. The SEE will then invite experts on water, soil, and waste gas to evaluate the relevant issues involved in the scientific merit of the project. In addition, the SEE will look at the effectiveness, innovation, and reproducibility aspects of the application."

Through the end of 2018, the SEE Foundation has directly funded 53 organizations in 21 provinces and municipalities across the country to become the "Blue Defenders." It has updated the pollution source database in a timely manner. This exhaustive data platform covers a total of 3 million enterprises in 364 cities. During this time, a total of 5,883 enterprises have been prompted to rectify pollution problems at the sources.

The emergence of the "Blue Defenders" has enhanced the professionalism of local environmental NGOs. The mechanism

for mutual cooperation has also strengthened the relationship between partners. With help from the “Blue Defenders” program, some local organizations have started cooperating with platform-based and data-based organizations such as the IPE, Green Network, and Shanghai Qingyue. The Legal Aid Center for Environmental Victims at the China University of Political Science and Law, funded by the SEE Foundation, has been providing legal training to other environmental organizations.

The SEE has constantly been paying at-

tention to the scope of the “Blue Defender” partners. It has set up various forms of communication platforms such as training salons, workshops, round tables, etc. in an effort to improve grassroots environmental organizations’ theoretical and practical capabilities in atmospheric management through experience sharing and think tanks.

Convergence and cultivation are becoming the mission of the “Blue Defenders.” We believe that in the future, there will be more professional environmental NGOs to help us create a better environment.

Policy Promotion; Proposals Submitted to NPC and CPPCC Meetings Push for Reforms in Environmental Policy

Illegal emissions are the primary source of industrial pollution. Disclosure of information plays a positive role in pushing for pollution reduction from key pollution sources. Only when monitoring data of key pollution sources is disclosed to the public in a timely manner, can we effectively break through the obstacles of environmental law enforcement while at the same time satisfying the public’s right to know. Once the records of excessive pollution get quickly publicized, the polluting enterprises are placed under powerful social scrutiny. This helps to overcome the recurring murrain of weak law enforcement.

Currently, there are more than 3,000 key state-monitored waste gas sources in China. A large number of waste gas emitting enterprises are also present in

various provinces and prefecture-level cities. These include many with large amounts of emissions and inattentive management. In addition, there are waste incineration plants receiving wide public concerns. Their emission data has not yet been disclosed to the public. Once all of these publicly concerned and visible chimneys are equipped with online monitoring devices and the monitoring data is disclosed to the public, broad social supervision and participation will be achieved to promote effective pollution reduction.

Before 2013, there was no perfect mechanism in China for information disclosure of major pollution sources and no effective channel existed for the public to know about the pollution source information. Within the past six years, the “Blue Defenders Project” has

focused on pushing for the information disclosure of major pollution sources. The project has seen this grow from nothing to an effective watchdog.

Horizontally, it has grown from publicizing online monitoring data on only key pollution sources, to using “pollution maps” to comprehensively report the emission status of all surrounding pollution sources, and finally to full information disclosure on atmosphere, water, and solid waste pollution. Vertically, it has extended from national to local levels. Built upon the practice of state-monitored key pollution source control, it recommended that all provinces and regions further improve their self-monitoring information disclosure platforms to disclose online monitoring data in a more comprehensive, timely, and friendly manner.

Proposal time

Proposal content

Government feedback

2013

In March, 2013, Jie WAN, SEE member and member of the National Committee of the CPPCC, submitted a proposal on "Making full disclosure of information about key pollution sources as soon as possible" to the CPPCC meeting. At the same time, Dongsheng LI, SEE member and NPC deputy submitted the same motion to the NPC meeting.

Government feedback: On July 31st, 2013, the Ministry of Environmental Protection issued the "On the Issuance of 'Measures for Self-monitoring and Information Disclosure of Key State-Monitored Enterprises (Trial),'". This measure called for online monitoring data of state-monitored key pollution sources to be disclosed in a timely manner.

2014

In March, 2014, Jie WAN, SEE member and member of the National Committee of the CPPCC, submitted a proposal on "Implementing Real-time Information Disclosure of Key Pollution Sources As Soon As Possible" to the CPPCC and NPC meetings. It recommended that local environmental protection authorities should implement the full disclosure of major pollution sources as soon as possible in accordance with relevant laws, regulations, and policies, strengthen environmental supervision and social supervision of key enterprises, and promote pollution reduction and industrial restructuring.

2015

In March, 2015, Jie WAN, SEE member and member of the National Committee of the CPPCC, submitted a proposal on "Optimizing the Real-time Disclosure of Key Pollution Sources" to the CPPCC and NPC meetings. It recommended that Guangdong, Shanxi, Qinghai and other areas that have not yet implemented real-time online information disclosure of major pollution source monitoring data should set up the platform as soon as possible, and achieve real-time online disclosure of monitoring data. In May, Wuhu Ecological Center and Friends of Nature release the "Report on Pollution Information Disclosure of 160 Operating Domestic Waste Incineration Plants". It recommended that governmental agencies include 100% of the nation's waste incineration plants as key monitoring enterprises, forcing the publication of their monitoring data online, and strengthening the self-disclosure of information on active pollutants such as dioxins and fly ash.

Proposal time

Proposal content

Government feedback

2016

In February, 2016, Jie WAN, SEE member and member of the National Committee of the CPPCC, submitted a proposal on “Implementing the Air Law Regulations and Pushing for Information Disclosure by Key Polluting Units” to the CPPCC and NPC meetings. It recommended that all localities implement the Environmental Protection Law and the Air Law and requests the compilation and publication of a list of key polluting units and the disclosure of environmental information.

Government feedback: In 2016, a total of 213 cities above the prefecture level compile and publish a list of key polluting units in accordance with the requirements of the Environmental Protection Law, which shows an increase by 67 cities compared to 2015.

2017

Jie WAN, SEE member and member of the National Committee of the CPPCC, submitted multiple proposals to the CPPCC and NPC meetings, including the “Proposal on Pushing for the Implementation of Enterprise Environmental Credit Evaluation”, the “Proposal on Rescue Protection of 11 Important Coastal Wetlands” and the “Proposal on Strengthening the Information Disclosure of Surface Water Quality Monitoring Data”. The proposals recommended for the establishment of an enterprise environmental credit evaluation system, the establishment of 8 new nature reserves in Tianjin, Hebei, Jiangsu, Shanghai, Zhejiang and other places, as well as the information disclosure of surface water quality monitoring data.

2018

Jie WAN, SEE member and member of the National Committee of the CPPCC, submitted multiple proposals in the field of pollution prevention and ecological conservation to the CPPCC and NPC meetings, including the “Proposal on Further Implementing the Environmental Protection Law, the Air Law, and the Water Law to Push for the Disclosure of Environmental Information of Key Polluting Units” and the “Proposal for the National Oceanic Administration to Strengthen Mangrove Protection.”

Under the continuous promotion by the SEE and through many years’ worth of efforts, most provincial environmental authorities have completed and put into operation information disclosure platforms for publishing self-monitoring data by key monitored enterprises. Shandong, Zhejiang, and other provinces actively responded to the public supervision made possible by such platforms and urged more than 500 enterprises to give public explanations on their data showing excessive pollution.

With full disclosure of environmental information, multiple sectors of society fully participated in joint efforts to monitor pollution and push for pollution reduction. We have to say that this is the most gratifying achievement that the “Blue Defenders Program” has made in pollution prevention and control.

Green Supply Chain Initiative:

SEE's Initiative to Green Enterprises

by Shuren DING

The current environmental situation in China is grim, and problems, such as smog, water pollution, soil pollution, carbon emissions, and high energy consumption are prominent. In response, the Chinese government has successively issued a series of environmental laws and regulations, which have achieved remarkable results. However, compared with strict administrative measures, voluntary emission reduction actions based on market means are still relatively scarce in China. This is especially the case with highly-polluting industrial emissions, which has been relying on government's administrative means for control for many years. Market-based or voluntary emission reduction schemes such as emissions trading have not yet been fully developed.

On June 5, 2016, the SEE, together with Zhongcheng Alliance, China Real Estate Chamber of Commerce (CRCC), Landsea

Green Group, and China Vanke, launched the "Green Supply Chain Initiative in China's Real Estate Industry." It is committed to improving the environmental performance of suppliers of steel, cement, a-alloy, lumber, stone, paint, and insulating material industries through green procurement to promote sustainable development.

This was the first joint action on Green Supply Chain initiated by the Chinese real estate industry. It was also the first industry-based emission reduction exploration in the world that is based on market mechanisms. It was a solid step taken by Chinese enterprises to actively respond to the government's implementation of the "Paris Agreement" and to facilitate global emission reductions. It is expected that by 2025, an annual reduction of 890 million tons of carbon dioxide can be achieved; this is equivalent to twice the total carbon dioxide emissions in the UK in 2015.

The “Green Supply Chain Initiative in China’s Real Estate Industry” is committed to promoting the involvement of supplier industries of steel, cement, aluminum, wood, stone, coatings, and insulation materials in actions for improving the environment through green procurement. Photo courtesy: Visual China Group



Driving a Green Transformation with Business Wisdom

Many SEE members come from real estate companies. Its influence is thus particularly significant in the real estate industry. As early as 2006, the SEE has held the “Environmental Responsibility of Chinese Real Estate Enterprises” Forum to advocate for energy conservation and emission reduction in the real estate industry, promoting, and guiding environmental acts within the industry. The organization’s work plan in the same year also proposed to promote environmental protection work in real estate enterprises.

At the end of 2015, Xiaohua QIAN, the then newly elected SEE president, visited the IPE (Institute of Public and Environmental Affairs) for the pollution prevention and control theme, and started to develop an idea to collaborate with IPE on a green supply chain initiative in the real estate industry. Within the following six months, and facilitated by former Chairman Zhiqiang REN, two real estate industry organizations, the Zhongcheng Alliance and CRCC, joined in on the

idea. This was followed by the Vanke Group and Landsea Green Group. This further drove the pace of the green supply chain project’s development.

The Landsea Green Group is a real estate company that has been implementing a green differentiation strategy since 2004. At the time, Landsea, which had begun to gain scale, got a project in Nanjing. The progress of this project would directly affect the company’s survival. Landsea looked around at its competitors. Local real estate companies had an advantage in the low cost for land acquisition, and the brand, management, and team advantages of the industry giants were obvious. Therefore, they decided to play the best card they had; of differentiation with green technology transformation.

For Ming TIAN, Chairman of the board at Landsea, green technology strategy also fits well with his personal values. When Ming TIAN joined the preparatory work of the “Green Supply Chain Initiative in the Real Estate Industry,” he was the vice chairman of the All-Union Real Estate Chamber of Commerce, and would soon

become the next rotating Chairman of the Zhongcheng Alliance. At that time, he was in charge of the procurement work for the Zhongcheng Alliance, and he presided over the launch of the largest-scale joint procurement in the real estate industry. This launch had the participation of dozens of real estate enterprises and lasted for 8 consecutive years. It had been proven that promoting green procurement was the primary way for the Green Supply Chain to be effective. As such, in a preparatory meeting, Ming TIAN was elected as the chair of the steering committee for the Green Supply Chain Initiative.

Different from the previous stand-alone models, the creators of this initiative relied on the huge real estate enterprise network formed and for the first time fully implemented the Green Supply Chain initiative in the Real Estate industry in the form of an industry union. After two years of development, the number of member enterprises of the Green Supply Chain Initiative committee increased from 5 to 9 during its launch on June 5, 2016, with the addition of the IPE, China-ASEAN Environmental Cooperation Center, Beixin Building Materials (Group) Co., Ltd, and the China Building Energy Conservation Association. After the expansion, each of the nine units sent 1-2 representatives to form a work group to be responsible for the implementation of specific tasks. Since 2018, the Green Supply Chain Initiative in the Real Estate Industry work group has set up a secretariat in the SEE. The secretary is responsible for coordinating and communicating various activities of the Green Supply Chain Initiative.

The Power of “Pulling a Hair to Move the Whole Body”

“My own factory is emitting smoke and wastewater. By joining the SEE now, making donations and engaging in its activities can only be regarded as buying indulgent vouchers,” Ming TIAN said of the value of the Real Estate Green Supply Chain.

Indeed, the very goal of the SEE when it launched the Green Supply Chain Initiative in the real estate industry was to get real estate entrepreneurs who would be personally involved in environmental practices and function as leaders and guides. Once this step is realized, real estate enterprises will trigger a great chain effect through the supply chain.

The “Green Chain Initiative” encourages participating real estate companies to submit lists of their suppliers to receive environmental assessments by designated third parties. If the assessment result is not satisfactory, the supplier will be required to make rectifications within a set time limit, and the real estate enterprise will decide whether to continue to purchase from the supplier based on the result of the rectifications. Similarly, new suppliers who want to enter into contracts with these real estate enterprises must also be assessed first. Based on the assessment results of the supplier chains, the real estate “Green Chain Initiative” has formulated various environmental “white lists” (recommended procurement lists), including the “White List of Environmental Compliance by Supply Chain Enterprises,” the “White List of Chromium-free Passivation for Aluminum Alloy,” the “White List of

Legal Wood Sources,” the “White List of Formaldehyde Control for Synthetic Board for Interior Decoration and Related Products” and so on. Next, “green lists” (recommended priority procurement list) and “blacklists” (rejected procurement list) will also be created. When the real estate enterprises put pressure on their suppliers and the suppliers continue to put pressure on their upstream suppliers, the “greenization” of the real estate supply chain will be realized.

BASF is one of the main suppliers of Landsea. As early as November, 2015, BASF had completed its upgrade of flame retardants used in the production of polystyrene products worldwide. The traditional flame retardant HBCD is a persistent organic pollutant, being volatile and highly toxic. BASF uses polymer flame retardants as alternatives for HBCD. In 2016, at the invitation of the Landsea Green Group, BASF participated in the formulation of the action plan on “Hazard Control of HBCD Flame Retardant for Polystyrene Insulation Materials and Their Products” from the perspective of market and technical indicators and initiated discussions on the implementation process with Landsea.

Daqing Zheng, senior vice chairman of BASF’s greater China business and market development, believes that the traditional extensive production methods do not meet the requirements of sustainable development anymore. Greening the entire real estate supply chain, on the other hand, can improve environmental efficiency and resource utilization efficiency.

China’s real estate industry is an

important battlefield for global energy conservation, emission reduction, and pollution control. Studies show that China currently accounts for about 20 percent of global carbon emissions, and nearly 40 percent of those emissions are generated by the real estate and construction industries. That is to say, China’s real estate and construction industries account for about 8 percent of global carbon emissions. This shows that China’s real estate industry involves an enormous volume of the economy, and its supply chain covers a wide range of industries, with complicated interests both inside and outside the industry. It is extremely difficult to promote environmental protection work in this field. As Daqing Zheng said, “The implementation of the Green Supply Chain Project depends on more than all the upstream supplies of the real estate industry. What is more critical is how the Green Supply Chain Alliance members balance between public interests and commercial interests.”

“Without impetus from the SEE, the Green Supply Chain Movement in the real estate industry would have been very gloomy,” said Jun MA, director of the IPE.

The IPE is not only a funding partner of the “Blue Defenders Project”, but also the technical support and assessment institution for the Green Supply Chain Initiative. It is the pioneer of Green Supply Chain work among domestic environmental organizations. In 2009, the IPE extended the Green Supply Chain Initiative to the IT industry, and three years later to the textile industry. These industries share a common characteristic; that is, they are both extremely sensitive

to public opinion and consumer evaluations in the market. This is also the key to the IPE's success. The real estate industry clearly does not fall into this category. However, once the green chain action is launched, the real estate industry also has obvious advantages.

"Real estate is a resource consolidating industry," Ming TIAN said, "Much of the supplies it consolidates are oversupplied or abundantly supplied. It has the right to speak to suppliers and manage the supply chain upward and require the supplier to be green. In, and of itself, this does not increase costs."

In the procurement process, the real estate industry is facing a favorable buyer's market. There are a few large-scale and influential leading enterprises in the industry. Combined with the SEE's impetus, this makes it possible, "to pull a hair to move the whole body".

By December 2018, the number of enterprises participating in the Green Supply Chain Initiative had increased from the original 48 to 98. These enterprises hold influence over more than 2,000 suppliers in the industrial chain, which can be used to fulfill the commitment of "no green, no purchase". Meanwhile, the project has issued green procurement plans for seven categories of products. The "white list" has made public announcements on 575 enterprises and has been updating the information on their official websites and official Weibo sites in real time.

In the future, the Green Supply Chain Initiative will not be limited to the real estate industry. It expects to expand to other industries, such as the daily chemicals industry, the IT industry, electric vehicles

industry, home furnishings, and many others. Therefore, the initiative will be used to promote relevant policy making with practical industrial experience.

Opening Up a New Perspective for Global Response to Climate Change

The Green Supply Chain Initiative in China's real estate industry, which uses business wisdom to constantly drive the green transformation of China's economy, is also gaining global attention.

In November, 2016, a side forum was held at the United Nations Climate Change Conference (COP22). It published the "White Paper on Green Supply Chain Procurement Standards for China's Real Estate Industry" and the environmental benefit assessment results of the "Green Supply Chain initiative." The deputy secretary-general of the United Nations and UNEP executive director Erik Solheim made a special trip to attend the meeting and highly praised the efforts and contributions made by this initiative in response to global climate change. He acknowledged that China's Green Supply Chain Initiative by the real estate industry had opened up a new perspective for the global response to climate change. Jian LIU, chief scientist of the UNEP, said of the SEE's Green Supply Chain Project, "The SEE once mentioned that public welfare was not just about meeting standards, but about getting ahead of the curve. A good example is the Green Supply Chain; it's a worldwide concept that is ahead of its time. The UNEP is willing to provide any assistance needed." He believes that the SEE's entrepreneurs have shown great creativity and leadership in environmental public welfare, which are



Launch ceremony of the “Green Supply Chain Initiative in China’s Real Estate Industry. Photo courtesy: the SEE Foundation

now at the forefront of the international arena.

In fact, the Green Supply Chain Initiative has never quieted its voice on the international stage.

In July, 2017, the SEE participated in the G20 Foundation Alliance Conference (F20) held in Hamburg, Germany. As the only foundation in China to become a founding member of the F20, the SEE engaged in discussions with other members on F20’s roles and potential impacts of the implementation of two important institutions: “The 2030 Agenda for Sustainable Development” and the “Paris Agreement”. In November, 2017, during the 23rd United Nations Conference on Climate Change (COP23), it hosted a side meeting themed “The Green Supply Chain Initiation - China Enterprise’s Contribution on Carbon Emission Reduction”. Here, its representatives were able share the foundation’s experiences with the world. Important topics included the SEE’s successful contributions, experience, and

achievements of Chinese enterprises in promoting carbon emission reduction through the Real Estate Green Supply Chain Initiative.

Jian LIU hopes that, “...The SEE can rely on existing advantages to further exert its strength and expand its influence. This will lead to leaders and enterprise CEOs around the world to gain practical knowledge and attract their active participation. Furthermore, it should establish standards for more programs like the Green Supply Chain, while verifying their feasibility. This way, more countries and enterprises in the world will be able to follow their productive.”

In the future, UNEP will cooperate with the SEE in a more diversified way. “UNEP is willing to introduce mature practices and experience to places outside of China. This is especially true for developing countries. In this way, they may be able to utilize these advanced methods and avoid following the old path,” stated Jian LIU, showing how he is full of expectations.

Green Supply Chain Timeline

The Green Supply Chain Initiative in the Real Estate Industry was officially launched. A working group was set up for green procurement of raw materials and a series of research activities were carried out.

June 5, 2016

A side forum was held at the United Nations Climate Change Conference (COP22), publishing the “White Paper on Green Supply Chain Procurement Standards for China’s Real Estate Industry” and the environmental benefit assessment results of the “Green Supply Chain Initiative”. The deputy secretary-general of the United Nations and UNEP executive director Erik Solheim attended the meeting and highly praised the efforts and contributions made by this initiative in response to global climate change. He believed that China’s Green Supply Chain Initiative by the real estate industry has opened up a new perspective on the global response to climate change.

November, 2016

September, 2016

Erik Solheim, deputy secretary-general of the United Nations and UNEP executive director, visited China and meets with representatives of the Green Supply Chain Committee, where he gave them high praise for the initiative’s work.

The review rules for the “Green Supply Chain White List on Chromium-free Passivation for Aluminum Alloy and Formaldehyde Control for Wood Products” were announced. An action plan for the risk control of HBCD flame retardant, a polystyrene insulation material, was added. Thirty-two outstanding participating companies are recognized.

June 5, 2017

January 7, 2017

The first edition of the “White List by the Green Supply Chain Initiative in China’s Real Estate Industry (draft for comments)” was released. The official website for the Green Supply Chain in the real estate industry (www.cura.cn) was officially launched, where it quickly promotes an open and transparent mechanism for Green Supply Chain in the real estate industry and implements public supervision of the white list.

July, 2017

The then chairman of the SEE, Xiaohua QIAN and vice chairman Shumeng Tong led SEE delegation of 18 people to the F20 meeting. Representative from the SEE, a member of the Executive Committee, discussed with representatives of other F20 members the role and potential impact of F20’s implementation of the “2030 Agenda for Sustainable Development” and the “Paris Agreement”.

During the 23rd UN Climate Change Conference (COP23), the SEE held a side meeting themed “The Green Supply Chain Initiation - China Enterprise’s Contribution on Carbon Emission Reduction.” SEE’s representative shared the experiences and achievements of Chinese enterprises in promoting carbon emission reduction through the real estate Green Supply Chain Initiative. The then-vice president, Luming AI introduced the actions of the SEE in which the foundation promotes carbon emission reduction through commercial means and continuously promotes the Green Supply Chain Initiative in various industries.

November, 2017

September, 2017

The Green Supply Chain Working Group convened industry experts and companies to discuss green procurement standards and solutions for coating materials. They also advocated for the inclusion of coating materials into the Green Supply Chain’s Initiative’s Green Procurement List.

June 5, 2018

The Green Supply Chain expanded its committee and formulated a new organizational structure and working group. The Green Procurement Plan for two new categories of materials, stone and coatings was added. “Environmental Compliance by the Supplier” was listed as the basic requirement for inclusion on the White List. Five hundred and seventy-five companies in four categories were added to the updated White List.

The SEE delegation went to California to participate in the Global Climate Action Summit and jointly launched the “China Business Climate Action” with the Vanke Foundation and the C Team (Dadao Promotion Center for Responding to Climate Change). It called on industry associations, chambers of commerce, and alliances to lead and drive carbon emission reduction, green transformation, green innovation throughout the industry chain, and form industrial clusters.

September, 2018

December, 2018

The SEE delegation went to Katowice, Poland to participate in the 24th UN Climate Change Conference. The SEE co-hosted the “Co-Building an Enterprise Climate Action Platform” side event with the Vanke Foundation and the C Team. Guests invited to the event include Mr. Gore, the founder and chairman of the Climate Reality Project, and Zhenhua XIE, special representative of China Climate Change Affairs. The Green Supply Chain in China’s Real Estate Industry project reported its work outcomes and prospects, and receives compliments from people of all walks of life around the world.

Vitality in the Desert

by Yin SU and Ping HE

When one enters the Alxa area, the first impression is its desolation. However, there is hidden vitality here. In 2009, the SEE made the first documentary film that fully revealed the biodiversity in Alxa and its important ecological status. The film used Alxa's three ecological barriers as its main story lines. These barriers were the primeval secondary forest at Helan Mountain, the Suosuo zone, and the populus euphratica forest in Ejin Banner. The rich, diverse species in Alxa League's flora and fauna were well documented, and these areas reflected their biodiversity and ecological importance. However, Alxa is facing risks of desertification. To this end, the SEE has carried out projects such as the "100 Million Suosuo" and Groundwater Conservation to conserve the biodiversity of Alxa. The program continues to help farmers and herdsmen develop new ways of subsistence while revitalizing the desert.

According to the national survey of deserts, Gobi and desertified lands, as of 2015, China's total desertified land area was 2.622 million square kilometers, accounting for 27.4% of the country's land

area. A population of nearly 400 million has been affected by desertification. Due to its arid climate and sparse vegetation, soil in the Alxa region of Inner Mongolia has experienced serious wind erosion.



Suosuo growing in the desert. Suosuo is a small tree distributed in Inner Mongolia, Gansu, and Xinjiang. Because of its strong drought tolerance, it is often used for wind proofing and sand fixation. Photo courtesy: the SEE Foundation

The ecological environment here is quite fragile; it is the main source of sand and dust in China.^[1]

In Alxa, 78 square meters of land is desertified every second. However, an adult Suosuo can consolidate 10 square meters of land, and planting one costs only 10 RMB. In 2014, the SEE officially launched the “100 Million Suosuo Project” in Alxa League. It cooperated with the forestry department, local farmers, herdsman, and community cooperatives, and made plans to plant 100 million psammophytes, represented by the Suosuo, in the key ecological zone of Alxa within a decade to recover 2 million

acres of desert vegetation.

How Come the Sand?

According to the 2002 satellite remote sensing data from the Alxa League Environmental Protection Agency, the Alxa region covers a total area of about 270,000 square kilometers, of which the desertified area (including desert, Gobi and land with Suosuo remnants) is as much as 223,800 square kilometers. This accounts for 93.15% of the Alxa League’s total area. Furthermore, the Alxa desert extends another 20 meters from west to east each year, with an

[1] Data Source: the Ministry of Land and Resources of China.



Suosuo is a drought-resistant, cold-tolerant, heat-resistant, and salt-tolerant plant. It has strong adaptability and rapid growth rate with dense branches and developed root systems that give them strong wind proofing and sand fixing abilities. It is therefore an excellent tree species for sand fixation. Photo courtesy: the SEE Foundation

increase of about 1000 square kilometers area per year. This fast speed of desertification must not be ignored. The causes of the deterioration of the ecological environment in Alxa were analyzed to include two main factors; natural and anthropogenic.

In the large area of desert and Gobi, the land surface is barren with dust. Desertified land in the Alxa League takes up 223,800 square kilometers and accounts for 93.15% of the total area. The climate is arid with little rain. The day/night temperature difference is huge. A high evaporation rate causes these arid conditions and exposes dust. Precipitation drops from 208.1 mm measured on the southeast to 32.7 mm in the west, while evaporation increases from 2323 mm to 4217 mm along the same transect. At the same time, the area suffers from frequent windy conditions with an average wind speed of 2.8-4.7 m/s, which lift up large amounts of sand and dust. Under the combined effect of all these natural factors, desert, gobi, and dusty weather have become an important part of Alxa's natural ecology. Moreover, the dust storm climate caused by these natural factors is difficult to control with human efforts^[1].

In recent decades, the influence of human disturbance factors has become more and more prominent where they have been added to natural factors. At the end of 2008, the population of the Alxa League was 225,500^[2], which increased to 248,000^[3] by the end of 2017. With the increase of population, the demand for food, livestock, fuelwood, and water resources has increased dramatically. These demands on resources have finally caused huge impacts on the ecosystem. The main

manifestations include; overgrazing leading to grassland degradation, excessive logging of firewood resulting in a sharp decline in the area's shrublands, and over-reclamation causing groundwater depletion.

In summary, the anthropogenic causes of Alxa's ecological deterioration can be attributed to three excesses; overgrazing, over-logging, and over-watering of farmlands. Therefore, the solution to these three problems is to reverse the direction of our actions. That is, to achieve three "reductions" in a sustainable manner; to reduce the number of livestock on grasslands, reduce the logging of bush fuelwood, and reduce land reclamation and irrigation. Working toward these three "reduction" goals, the SEE has implemented more than 240 projects in the Alxa region through decade-long practices, where it has achieved significant outcomes. The "100 Million Suosuo" project is one typical example.

Vitality brought by Suosuo

Generally, an average of 50 pits of Suosuo can be planted on every acre of land. The survival rate of the Suosuo is 70%. After one year, Cistanche can be grafted onto the Suosuo. Cistanche has very high medicinal value. Yunba Yar, director of the Forestry and Sand Control Research Institute of the Alxa League, said, "Due to the ecological status of desertification, the pastoral area is in full grazing prohibition. The Alxa region has gradually developed into a production structure with plantations including the Suosuo plus Cistanche, Nitraria plus Cynomorium, and Goji berries. Among

[1] Data source: Meteorological Bureau of Alxa League.

[2] Data source: 2008 "Alxa League Statistical Bulletin on Economic and Social Development" by the Alxa League Census Bureau

[3] Data source: 2017 "Alxa League Statistical Bulletin on Economic and Social Development" by the Alxa League Census Bureau



Due to reasons such as overgrazing, the previous grassland environment has been seriously damaged. Now all that's left in sight is desert, and the desertification situation is critical. It not only affects the local environment, but highly impacts surrounding areas. Photo courtesy: Visual China Group

these plants, the Suosuo has a particularly important position since adult Suosuo can be used to graft Cistanche. This is in addition to its drought-resistance, sand-fixing features, and high survival rate in deserts. Cistanche is called “Desert ginseng,” which can be processed into different health supplements to bring high returns for local herders. One kilogram of fresh Cistanche can be sold for thirty or forty RMB.”

A septuagenarian, Jinshu Guo, received the 2016 Excellent Participation Award by the “100 Million Suosuo Project.” He is in his 70s and still keeps on planting Suosuo. His children all live in the Alxa

Left Banner, and he lives alone on the grassland. This is where he grows 5,000 acres of Suosuo and 1,500 acres of Cistanche. “Planting Suosuo and Cistanche can help control desertification, and I can make a good income by selling Cistanche,” The old man said with pride, “I bought a house in the city, and I’m living a good life.”

Zhiqiang REN, the fifth chairman of the SEE, said during the spring planting event named “Set off to the next Million Desert,” “We should not only ask local herders to participate in sand control to protect the environment, but also bring them economic value.”

Guibing YANG, a 56-year-old herder, began to plant Suosuo in 2010. He started cooperating with the SEE in 2014. He said that the changes in his life during these years has indeed been due to the cultivation of Suosuo. “Our income has increased; our current annual income can reach 200,000 RMB. In the past, we could barely fill our stomachs with grazing,” he recalled. Unlike many herders who return to town in the winter, he and his wife live on the desertified grassland all year long. He has been planting 4,000 acres of Suosuo and 2,000 acres of Cistanche this year. In the past few years, his family has worked with the SEE and the total planted areas with Suosuo add up to a total of 14,000 acres. He acknowledges that the “100 Million Suosuo” is a great project. “We participate in their new projects every year. The organization has also provided us with a lot of help. I wanted to keep going for another ten years, but my grassland is limited and there’s no more space to plant more.”

It is not an Easy Job.

Haoyang MA was born after the 1990s. He is a staff member of the “100 Million Suosuo” project. When he graduated from college in 2014, he acquired an internship with the SEE and has been working with the SEE ever since then. He mentioned that a total of 108 herder households participate in the project in the Suhaitu administrative village. About 40 households participate each year. His job is to go to the countryside to mobilize the herders, provide technical guidance and support, and inspect their cultivations. Their work rhythm follows the seasons. February is for preparations. They go to the countryside

to communicate with the herders, and inspect the land to be planted. In March and April, they review applications from the herders, supervise them, and supervise their planting to ensure it meets the project requirements. May and June is for inspection. This is the time for them to make sure that at least 44 pits are planted on each acre of land. The survival rate inspections are performed August to September, and they are the most tedious as they need to take hikes to count the Suosuo row by row. He said that the longest walk he did was through a field with nine kilometers of Suosuo. The task took him about three hours to complete.

By the end of 2018, vegetation restoration had been completed on 19.17 million acres of land. Although the “100 Million Suosuo” project had reached its halfway point, the then project director Zongping Pang brought up another situation, “The 100 Million Suosuo project was initialized to prevent the convergence of the three major deserts, the Badanjilin, Tengri, and Ulan Buh. Although we have already achieved the goal of planting one million acres of land, the three deserts have already shown signs of accretion in quite a few places. Desertification control has a long way to go.” Carrying out the actual work in the local area was also not as simple as imagined. “According to state policy, the survival rate of Suosuo should reach 70%, and there must be 44 pits per acre. Our staff had to inspect the fields one by one. Some herders were unable to meet the standard. We had to work with them one at a time. We also organized various trainings to help them improve their skills. In the past few years, the herders have witnessed the economic



Fig.1



Fig.2

● Figure 1: Cistanche. It grows parasitically on the roots of Suosuo. It is a valuable Chinese Herbal Medicine, which can be used for kidney and liver health, as a laxative, as an alternative cancer therapy, and is radiation-resistant. It is called the “desert ginseng.” Photography: Xuewen WU ● Figure 2: On April 28, 2018, the “Set off to the Next Million Desert” and the 2018 SEE “100 Million Suosuo” spring planting event were simultaneously held. Through the spring planting events, the concept of environmental protection was spread to all areas of society and on to the next generation. Photography: Xuewen WU

benefits and gradually gained more of an appreciation of Suosuo planting and ecological conservation. Therefore, ecological conservation is a step-by-step process to fit in with the local ecology and not a one-time deal.”

Since May 1st, 2015, the SEE has organized a “100 Million Suosuo” spring planting event every year. Representatives from the government, sponsors, the media, and the public from all over the country have participated. At the same time, behind the “100 Million Suosuo Project” was support from the Internet and public welfare forces.

Internet + Public Welfare

What is “Internet + Public Welfare”? The SEE has attracted public attention and support from hundreds of millions of people through a series of public participation platforms such as Tencent’s “99 Giving Day,” Alibaba’s Taobao Charity Baobei, and Ant Financial’s “Ant Forest,” through which the foundation has transformed into a public fundraising foundation with more public participation. The SEE has participated in Tencent’s “99 Giving Day” for three consecutive years. In 2017, it also participated in the “95

Public Welfare Week” by Alibaba for the first time. Through bringing together and mobilizing entrepreneurs, celebrities, and NGO partners to promote public participation in environmental public welfare undertakings, it has actively explored innovative ways to use the “Internet + Public Welfare” mechanism.

In August, 2016, the SEE’s “100 Million Suosuo Project” cooperated with Ant Financial on “Ant Forest.” The carbon emissions saved by users through subway travel, online payment of water and electricity bills, and online ticket purchasing are counted as virtual “energy.” Virtual energy can be used to grow virtual trees on their mobile phones. As of May 2018, there were more than 350 million Ant Forest users. Since cooperating with the “100 Million Suosuo Project,” the Ant Forest has donated 112 plots for the project to plant on.

Since 2016, the SEE’s “100 Million Suosuo Project” has been doing fundraising through Taobao’s Charity Baobei platform. A total of 248,000 merchants donated more than 5.3 million RMB through 145 million transactions in the platform’s first phase. From April to December, 2017, the second phase of the SEE’s “100 Million Suosuo Project” performed fundraising activities through Taobao’s Charity Baobei platform. As of the end of the project on October 30, 2018, it had received 553,200 caring, internet-merchants’ donations through more than 139 million transactions, and raised more than 10 million RMB.

Behind the Internet + Public Welfare Operation stand countless people. What particularly touched Xiaohua QIAN, the

sixth chairman of the SEE, was that many internet users who supported the “100 Million Suosuo Project” are actually young people living on low incomes. Some work as waiters or waitresses in restaurants. For example, when we were dining in restaurants and waiters saw the bag we were carrying had “SEE” printed on it, they would come up and say, “I am planting trees for you.”

In addition, the SEE has also developed other forms of public participation such as the donation of “exercise/workout steps.” With the Internet, public welfare, and exercise combined together, company employees and internet users have been mobilized to participate through the “online donation of steps.” The internet connects enterprises with environmental public welfare and people’s healthy lifestyle, where they can leverage public participation and corporate exposure. It is a great mechanism to promote the participation in public welfare by enterprises, the general public, and company employees. In 2017, twenty-three enterprises from the SEE participated in Tencent Gongyi’s “Corporate Customized Step Donation” campaign. So far more than 1.34 million people have donated to environmental projects for a total of 17.1 billion steps. There are also many urban white-collar workers who have raised funds for Alxa’s “100 Million Suosuo” project through walking, taking public transportation, and through “green” travel.

In fact, the SEE had performed numerous projects before the “100 Million Suosuo Project” took shape. From 2004 to 2008, twenty-four projects were carried out, with the goal of accumulating the

experiences of desertification control from different aspects, establishing better interactions with local herders, and exploring the directions of ecological conservation. That was the early, experimental period. From 2009 to 2013, the sites for sand control were determined, community cooperation was carried out, and the SEE started cooperation with the EU to edit books and film documentaries on Alxa's biodiversity. More scientific methods were also used to analyze the causes of desertification and the number of projects gradually increased to more than 240. From 2014 until now, the main focus has been placed on the two brand projects: "100 Million Suosuo" and "Groundwater Conservation." The goal is to explore new practical approaches to the prevention and control of desertification with a win-win strategy that benefits both the ecosystem and development through the combination of scale and demonstration.

Little Millets Taking on Heavy Responsibility

Groundwater conservation is at the core of improving the ecological environment and achieving regional sustainable development. The SEE's "Groundwater Conservation" brand project was based on the protection of one of the ten most representative desert oases in the Alxa region. It started with water-saving alternative crops to explore a comprehensive management model for water-saving agriculture integrating crops, technology, and agronomy. It took advantage of the SEE member entrepreneurs' superior resources to establish a social enterprise. The core businesses of the social enter-

prise are selling oasis-friendly agricultural products, broadening commercial channels, and leveraging scaled planting of oasis-friendly agricultural products at Yaoba. In this way, the social enterprise forms a production and sales system for those products and promotes the sustainable development of agriculture on desert oases.

Alxa is an arid desert with an extreme water shortage. Groundwater conservation lies at the core to improve the ecological environment and achieve sustainable development in the region. In 2009, Shi WANG, the second chairman of the SEE, introduced desert millet to Alxa. The seed is a water-saving grain cultivated by Zhihai ZHAO, the father of hybrid millets. Compared to conventional millet species, its yield increases by one-third per acre. Assisted with water-saving irrigation technology, every kilogram of desert millet can save two tons of oasis groundwater compared to the traditional corn crop.

Before Shi WANG's resignation, the SEE's scientific experiment on cultivating millet in the desert had been initially completed. In 2010, jointly promoted by the government of Alxa Left Banner and the SEE, desert millet remained popular in the region, with a total planting area once exceeding 3,000 acres at its peak. The millet yield reached over one million kilograms, far exceeding the internal sales capacity of SEE member companies. How to sell the millet and let the farmers make a profit became a problem that the then chairman Jiahuan HAN needed to solve.

Jiahuan thought of setting up a social



Staff of the groundwater conservation project inspecting the water-saving millets. Photo courtesy: the SEE Foundation

enterprise as a bridge connecting desert millet and the market. While the SEE supports the planting and promotion of desert millet on the front line, the social enterprise is responsible for customizing the product standard, acquiring millet from farmers, and selling it to food companies. With the brand benefit from food companies, desert millet can be more easily and widely accepted by the market.

In May, 2014, after five years of exploration, innovation, accumulation of cultivation experiences, opening market channels, and establishing product brands, Alxa Desert Water-saving Millet was officially launched. It was a brand

jointly created by China's first group of environmental entrepreneurs and social enterprises. The then chairman of the SEE, Zhiqiang REN, announced his endorsement. Alxa Water-saving Millet was officially named as "Ren Millet." In January 2015, "Ren Millet" was finally released to the public.

The water-saving millet cultivation project launched by the SEE in the Yaoba oasis set local farmers as the main players. Production and management processes were standardized. It relied on the social enterprise initiated by the SEE, Beijing Weixi Agricultural Development Co., Ltd., for market development. This formed a three-way cooperation



Ren Millet granules of the millet cultivated in the desert are fuller with a rich aroma and perfect stickiness. Photo courtesy: the SEE Foundation

model composed of the SEE, Weixi, and farmers. By the end of 2018, the SEE has facilitated the cultivation of 20,000 acres of water-saving millet in the desert. This project involves 464 households. The total amount of water saved has exceeded 10 million cubic meters. The local farmers in Yaoba used to rely on a traditional flood irrigation method. In order to guide the farmers to scientific and efficient irrigation practices, the SEE cooperated with the local government to promote the use of drip irrigation water-saving facilities through policy, advocacy, and training. By 2018, drip irrigation has been used on a total of 20,000 acres of traditional croplands.

Millet Product Optimization

At a lunch break during the “100 Million Suosuo” spring planting event in 2018, 67-year-old Zhiqiang REN saw the children who were participating, and he offered them chips made with water-saving “Ren Millet.” He told them, “This is made from Ren Millet. It is delicious!”

In 2016, “Ren Millet” innovatively launched new products and services such as landlord certificates, food stamps, home delivery packages, New Year’s gift boxes, and corporate customized sets, which not only promoted the brand but also boosted sales. At the same time, it strengthened research and development,

continued product optimization, and developed derivative products on the basis of primary agricultural products. These derivative products also used the water-saving millet as raw material, and the principle that no preservatives, flavors, and taste-enhancing substances should be added was held onto. Even the auxiliary materials used in the processing procedures are quality ingredients whose sources are traceable. Currently, millet sticks, millet chips, and 6-degree millet vinegar are available on the market. Market response has strong with high acceptance and favorable comments by consumers. More products will be released in the near future. These products are sure to include millet craft beer, instant millet porridge, and high-fiber millet. A number of new derivative products such as millet GIN wine and hard liquor are also in the process of research and development, and may enter the market in the near future.

Presently, a comprehensive sales channel has been opened up for desert water-saving millet that combines online sales with retail stores and supermarkets. It is being sold on popular e-commerce platforms including Tmall, Taobao, Juhuasuan, Qiang (Taobao), Loulan Meview, Dmall, Youzan, JD.COM, Dangdang, and E-farm Spring. More than 200,000 consumers have bought and supported these desert water-saving millet products. Offline sales in retail stores and supermarkets have also shown an advantage. This advantage can be seen in the direct access to distributors, which has seen the large-scale retailing of water-saving millet and its appearance on ordinary people's dinner tables. In 2016, the sales of desert water-saving millet products exceeded 600 tons.

At the same time as the promotion of the desert water-saving millet, the project conducted experiments with rotating crops to solve a singular problem faced by water-saving crops. In 2017, the SEE and Beijing Weixi Agricultural Development Co., Ltd. carried out multi-species crop planting experiments to search for other crop varieties that would more water-saving, of better quality, higher yield, and more suitable for growth in the Alxa region. Sixty-eight acres of land was used to plant a variety of trial crops, including peanuts, soybeans, oats, sunflowers, and quinoa.

Expert Comments

Jianjun QU

Director, Dunhuang Gobi Desert Ecological and Environmental Research Station, Cold & Arid Regions Environmental & Engineering Research Institute, Chinese Academy of Sciences
Director, Sandstorm Disaster Prevention Engineering Center of Gansu Province

The "100 Million Suosuo Project" has been carried out around the restoration of desert ecosystems and afforestation of the three major deserts in Alxa. It has been utilizing local psammophytes represented by Suosuo as the main building block and has made positive effects on the restoration of the local desert ecosystem. The 2018 recommendation is for more scientists to be involved with the aim of further strengthening the scientific research and sustainability of the project.

Cui'e HU

Deputy Director, Agriculture and Animal Husbandry Department of Alxa Left Banner

Since the SEE's establishment, it has been committed to the grassland restoration and ecological conservation of Alxa Left Banner and explored a new ecological management model in the form of "public welfare organization + government + enterprises + farmers and herdsmen." In particular, the millet cultivation project implemented in the Yaoba area, where groundwater is severely depleted, has found an effective way to solve the contradiction between water saving and income increase for local people. It has provided a new model that can be borrowed, replicated, and promoted for the sustainable development of local agriculture and animal husbandry.



Aerial photo of a Suosuo forest. Presently, many places in Alxa are covered by Suosuo. When Suosuo mature, they can help prevent further intensification of desertification and restore the local ecological environment. Photo courtesy: the SEE Foundation



HOLDING THE GROUND OF PROTECTION



SEE Environmental Programs across the Country

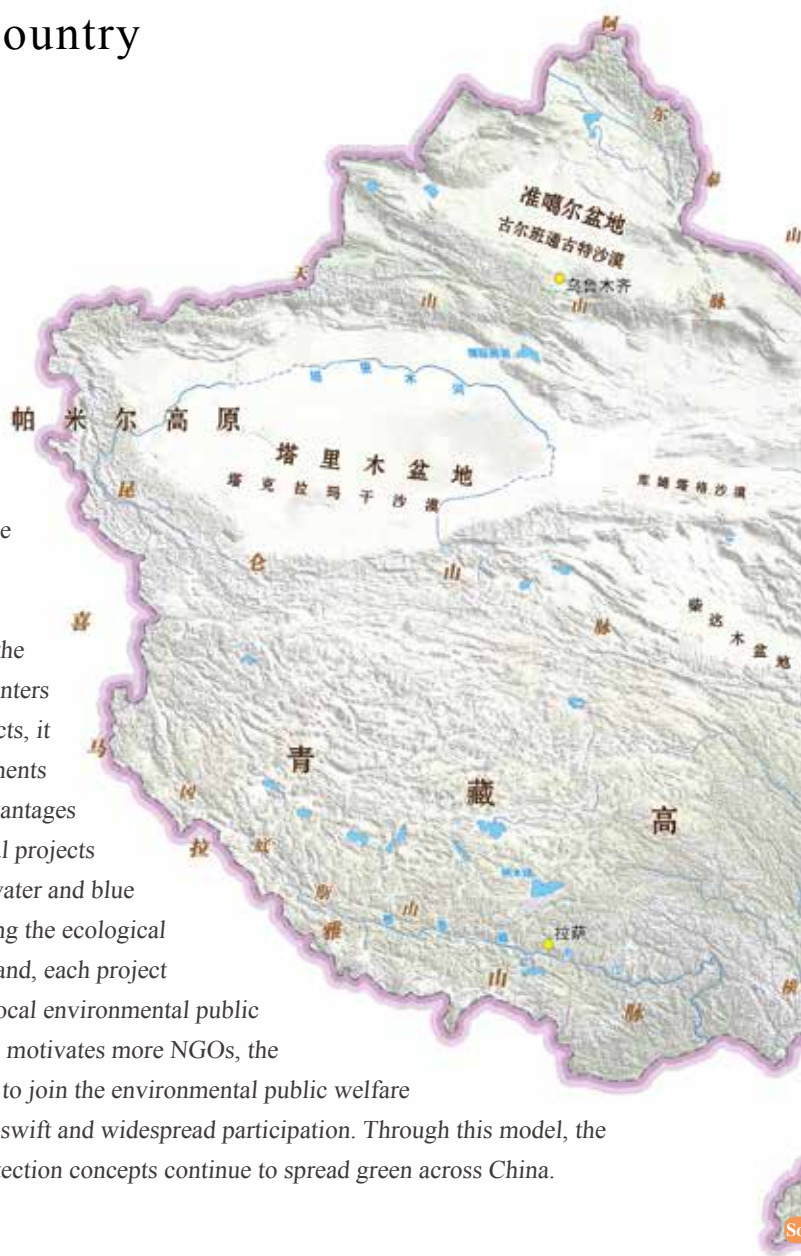
by Changhuan HE

As of December, 2018, the SEE has established a total of 23 environmental project centers. Through the coordination of project centers with environmental projects, it focuses on local environments and takes use of local advantages to carry out environmental projects for conserving the clear water and blue sky. In addition to guarding the ecological environment of its homeland, each project center collaborates with local environmental public welfare organizations and motivates more NGOs, the public, and entrepreneurs to join the environmental public welfare force. These efforts drive swift and widespread participation. Through this model, the SEE's environmental protection concepts continue to spread green across China.

If we consider the Earth to be a vast ecological system, we can say that the SEE projects have touched on every major component in this system.

Ecosystems are often divided into two major categories, natural ecosystems and artificial ecosystems. Natural ecosystems can be subdivided into terrestrial and aquatic systems. These include forests,

grasslands, wetlands, deserts, and marine ecosystems. Artificial ecosystems can be divided into urban and farmland ecosystems. The ultimate goal of environmental protection is to maintain the integrity of the overall ecosystem and protect the integrity and health of each individual ecosystem. This is a top priority for environmental protection.





The chirping of cicadas, the twitter of birds, the growling of wild animals, and the rich shades of green are all beautiful scenes that forests bring us. But in recent years forests have become more and more silent; vegetation has been declining and birds and animals have been moving away and even dying out. The traditional way for Chinese people to escape from the mundane world was to “return to the mountain forests.” Now that the forests have receded, where can we go? Major environmental organizations around the world have made forest conservation their top priority and so has the SEE. It has been making effective efforts to save forests, protect animals and guard habitats.

The tiger is almost extinct in most parts of China, and the leopard is now the “king” of the forest. With their presence, herbivores will not overpopulate and we can see the healthy growth of forest vegetation. The North China leopard, a leopard subspecies endemic to China, lives in the Taihang Mountains. Today, these native “big cats” are both powerful and graceful. Unfortunately, they are also very rare and “critically endangered.” In recent years, the Chinese Felid Conservation Alliance (CFCA), a continuously funded partner by the North China Project Center and the Shanxi Project Center, has been closely monitoring and protecting them and has made some progress.

Around the snow-capped mountains of the Sanjiangyuan River Basin are the habitats of snow leopards. They are the highest-altitude carnivores; they are covered in a gray coat with black markings that make them look particularly intelligent and spiritual. Tibetans regard snow leopards as their patron saints,



North China leopard. The Taihang Mountain region is the only habitat of the North China leopard. Photo courtesy: Dazhi Gallery



White-headed langurs. The white-headed langur lives near the Jiuchong Mountain in China's Guangxi province. Their remaining numbers are even less than that of the giant panda. Photo courtesy: Dazhi Gallery

and they are key species of the local ecosystem. With pollution, deterioration of the environment, and a constantly shrinking snow leopard habitat, conflicts between humans and animals have increased. The SEE Sanjiangyuan Project Center is carrying out conservation activities in the region, not only in awe of gods, but also in awe of nature and life.

The crested ibis, giant panda, golden monkey, and takin, four rare animals living in the Qinling Mountains, are called the “Four Treasures of Qinling.” This is due to the fact that the habitats are seriously damaged and their individual numbers in the wild are now very small. The crested ibis and giant panda have also appeared on the protection map of the SEE Northwest Project Center.

The dense forests of the south are home to a variety of animals. The Asian elephant symbolizes tropical charm. The green peacock with its emerald tail symbolizes grace and beauty. Both are now rare animals found in the southern forests. The Asian elephant is the largest land animal in Asia. Now, it mainly lives in Yunnan and the tropical regions of Southeast Asia and South Asia. It spreads seeds for plants and helps maintain the ecological balance of the forest. Even in ancient times, the word “elephant” could be found on Chinese oracle bone inscriptions. It was also said in the “Book of Songs” that “the singer of the Huaiyi came to offer his treasures that are big turtles and ivory;” this shows that they used to live far to the north. But these days, elephants have retreated to areas bordering Yunnan, Myanmar, and Laos, where they face the risk of complete habitat loss. In order to

resolve the conflicts between man and nature, the SEE Southwest Project Center has carried out related projects to allow Asian elephants to better proliferate in the forest and keep this nationally protected animal alive in China.

The green peacock covered in its glamorous, green plumage is another rare species in Yunnan. Unlike the blue peacocks commonly seen in zoos, the green peacocks are sparsely distributed in a few restricted areas of Yunnan. In the mountains of Yunnan live the Yunnan golden monkeys. Their habitat is at the highest altitudes among non-human primates. It is also one of the few unique endemic primates in China. Due to the scarcity of their number and the very harsh living environment, their population recovery is very slow. The SEE Southwest Project Center is making every effort to increase the number of green peacocks and golden monkeys.

In Guangxi, a neighboring province of Yunnan, environmental organizations have been paying close attention to white-headed langurs. The white-headed langurs live near Jiuchong Mountain in Guangxi. The current number of langurs is even less than that of the giant pandas. In 2002, they were listed as a national, first-class protected animal. In 2005, the local government established the Guangxi Chongzuo White-headed Langurs Nature Reserve at the Autonomous Region Level to protect this species and their remaining living space. In recent years, the SEE Guangxi Project Center has contributed to the protection of white-headed langurs.



Crested ibises. Current, the remaining crested ibises are mostly distributed in Yang County in China's Shaanxi province. They are often spotted feeding in the rice fields in Yang County. Photo courtesy: Visual China Group





Yunnan golden monkeys. The Yunnan golden monkeys' habitat is at the highest altitudes among non-human primates. It is also one of the few, uniquely endemic primates in China. Photo courtesy: Baima Snow Mountain Nature Reserve.





Asian elephants. The Asian elephant mainly lives in China's Yunnan province and the tropical regions of Southeast Asia and South Asia. Photography: Liu LIN





Green peacock. The green peacock is mainly distributed in a few small areas in China's Yunnan province and is very rare.
Photo courtesy: Dazhi Gallery





In the second season of its flagship show, the “Blue Planet,” the British Broadcasting Corporation (BBC) documented the strange viviparous reproductive method of mangroves; the seeds of mangroves fall off the tree and remain vertical till they plunge into the mud. Waterfowl active on the wetlands feed, perch, and breed here. Fiddler crabs swing their front claws to excavate the sand skillfully. The burrows they make help improve the permeability of the tidal flats and the waterflow microenvironment. This allows mangrove roots to flourish. Waterfowl, fiddler crabs, and the viviparous mangroves synergistically thrive in the mangrove wetlands.

The wetlands are located in the transitional zone between terrestrial and aquatic ecosystems. They are widely distributed all over the world. Containing many wildlife resources, wetlands are an important ecosystem and are called, “the Earth’s kidneys,” by some. The mangrove forests in the southeastern coastal areas

make up one of China’s most important wetlands. Its health has a major impact on the local and Asian ecological environments. The SEE has carried out mangrove conservation in various areas along the coast by replanting native mangroves and restoring the wetland ecosystem. These efforts have started to show positive effects in the Futian Mangrove Ecological Park held in trust by the Shenzhen Mangrove Wetlands Conservation Foundation. The SEE has also carried out a variety of bird conservation activities in a number of wetlands across the country with its “Free Flying Wings Project,” making rare and endangered waterfowl its priority in avian conservation. In Shanghai, the SEE, together with the Shanghai Chongming Dongtan National Bird Reserve, established the SEE Chongming Nature Education Base to build a communication platform for public awareness of nature, wetland conservation, and natural education. The North China Project Center



has implemented the “Restoration of Key Habitats for Migratory Birds in Bohai Bay” project, targeting Tianjin Beida Port Wetland, Tianjin Coastal Wetland, and Hebei Luannan Wetland as the key protection areas. The Hubei Project Center has launched a blue-head duck conservation project in the Fuhe Wetland, Wuhan. The Fujian Project Center unites multiple forces to help protect the Chinese crested terns. The Chongqing, Henan, and Saishang Jiangnan Project Centers have also actively joined in on bird conservation activities.

The broad definition of wetlands also includes rivers. The finless porpoises and white dolphins in the Yangtze River watershed are mammals living in rivers. They play a key role in maintaining the ecological health of the river. However, due to the increasingly severe pollution of the Yangtze River, the white dolphin has suffered from functional extinction. Only a few finless porpoises can still be found.

The extinction of the white dolphin was due to the lack of environmental awareness. If the finless porpoise were to go extinct, it should be attributed to our lack of responsibility and action. The SEE is actively carrying out activities to conserve the finless porpoise, the Chinese sturgeon, and the Yangtze River sturgeon with its Hubei, Hunan, Anhui, Poyang Lake, Chongqing Project Centers. These centers are all located within the Yangtze River watershed. The parties involved have been actively conducting ex-situ conservation, preventing illegal vessels from entering the finless porpoise habitat for fishing, and motivating fishermen to change their means of living. The Pearl River Project Center and the Heilongjiang Project Center have maintained environmental protection efforts by launching a series of environmental projects to promote the conservation and improvement of the ecological environment within their control.





Black-faced spoonbill. The black-faced spoonbills in this picture were photographed in the No. 4 fish pond in the Shenzhen Futian Mangrove Nature Reserve. Photography: Gongmi



Fiddler crab. The two unevenly sized claws are symbolic of fiddler crabs. The way they swing their claws makes it look like they are waving at the tides. They feed on bacteria in the mud and leave behind clean mud balls. They will also carry the mud back into their caves for later consumption. The fiddler crabs' eating habits allow for the release of beneficial materials that provide healthy nutrients for mangrove trees. Without fiddler crabs, the soil would be filled with poisonous, sulfur bacteria.



Shown in this picture are the buttress roots of a mangrove tree in the Shenzhen Futian Mangrove Ecological Park. The park is located in Futian district. Standing on top of the highrise buildings in Futian's CBD, one has an overview of the beautiful panorama with the green mangrove trees winding along the blue coastline. Photo courtesy: Mangrove Conservation Foundation (MCF)

The Grassland

Grassland ecosystems play an important role in wind and sand fixation. North China was ravaged by sandstorms in past springs. The key of sand control lies in the grasslands. The SEE has been calling on people to plant psammophytes, represented by Suosuo, in the degraded grassland-desert areas. As a result, these places have regained their vitality, while sand and dust storms have been repressed. The SEE Inner Mongolia Project Center has its obvious regional characteristics. It continues to pay close attention to the prevention and control of desertification in Inner Mongolia.



Due to arid climate and sparse vegetation, soil in the Alxa region in Inner Mongolia experiences serious wind erosion. This ecological environment is quite fragile. It is the main source of sand and dust in China. Photo courtesy: Visual China Group



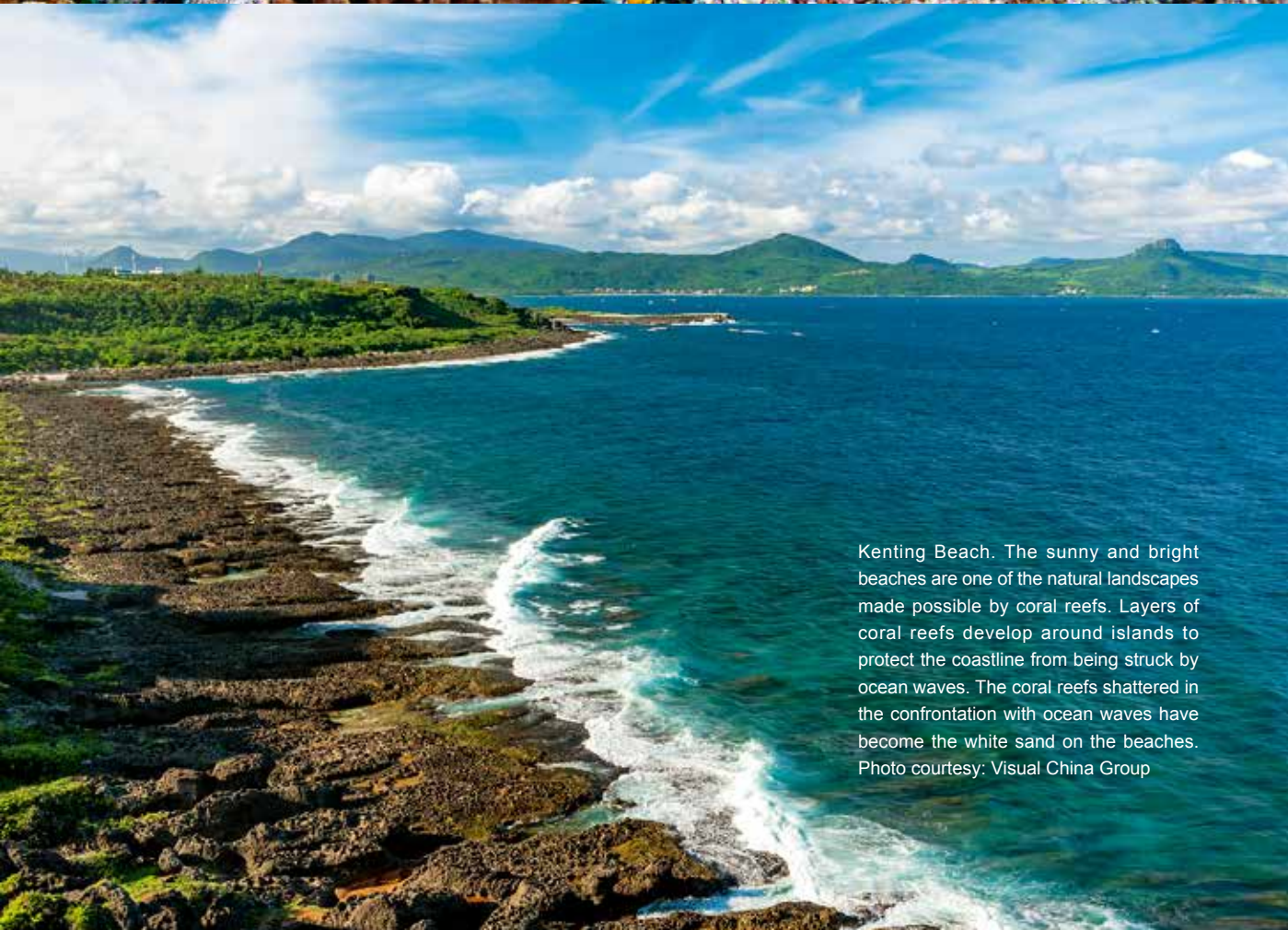
The Suosuos are called the "Patron Saints of the Desert Ecosystem." They are extremely tough and can sprout within 2-3 hours after planting with a small amount of water. Shown in this picture are the Suosuo forests that were planted through SEE's "100 Million Suosuo" project. Photo courtesy: the SEE Foundation

The development and survivability of mankind and civilizations cannot do without the oceans. The earth's blue color also comes from the ocean. The deep blue contains secrets of the birth of all living things on earth. But in recent years, things like oil spills, algae pollution, marine debris, and overfishing are clouding the planet's blue color. Our marine ecosystems are being threatened. The SEE Taiwan Project Center and the Shenzhen-Hong Kong Project Center have been concerned about the conservation of marine ecosystems.

Taiwan Island is surrounded by ocean water and has abundant marine resources and landscapes. Ocean waves are both gentle and destructive, with the most destructive being the tsunami. From the various tsunami disasters in human history, we can see the cruelty hidden in the waves. Therefore, islands are usually surrounded by layers of coral reefs to protect the coastline from tidal impact. The shattered coral has become the white sand on beaches. These coral reefs have also been the habitat for many marine lives. However, in recent years, things like global warming, marine pollution, and overfishing have caused a large number of corals to die, and the quantity of coral reefs has dropped drastically. The SEE Taiwan Project Center has successively carried out programs such as squid breeding, beach cleaning, coastal monitoring, and the bioremediation of contaminated soils. The Shenzhen-Hong Kong Project Center has been funding local partners to carry out projects such as restoration of coral reefs and establishing education systems to improve public awareness of marine conservation, motivating cross-border participation by the public, enterprises, governments, and various social organizations to jointly promote the construction of a coral conservation mechanism. Currently, coral reef conservation is one of the highlights of the SEE's Marine Conservation Project.



Coral Reefs. The Coral Reefs living around coastlines not only provide habitats for a variety of marine lives, but they also protect the coastline from being lost to ocean water. Photo courtesy: Visual China Group



Kenting Beach. The sunny and bright beaches are one of the natural landscapes made possible by coral reefs. Layers of coral reefs develop around islands to protect the coastline from being struck by ocean waves. The coral reefs shattered in the confrontation with ocean waves have become the white sand on the beaches. Photo courtesy: Visual China Group

Urban ecosystems seem to be more closely related to people than natural ecosystems. People living in cities may not witness the tragedy of species extinction, but the ubiquitous domestic garbage constantly reminds people of the existence of environmental pollution. In areas with concentrated urban communities, such as Shanghai and Hangzhou, local governments and NGOs have launched a number of green campaigns. These campaigns have called on people to classify waste in their daily lives, both to improve waste recycling and reduce carbon emissions. The SEE Zhejiang Project Center started with a number of pilot communities in Hangzhou to establish demonstration sites for property waste classification and explore replicable and sustainable community waste management models. The East China Project Center summarized the experience and released a Community Waste Classification Plan. It also set up a precise clothing donation platform. With various efforts, Shanghai has also managed to implement a preliminary waste management system from garbage disposal by front-end residents, to its collection and transportation by middle agencies, and eventually garbage classification at the end of the garbage collection chain. A clean city allows residents to feel more internal connections with their communities and truly find a sense of home in the city.



In our country, most cities' garbage disposal system just started operating. Sanitary landfill is the disposal method for domestic waste used by most cities. Photo courtesy: Visual China Group

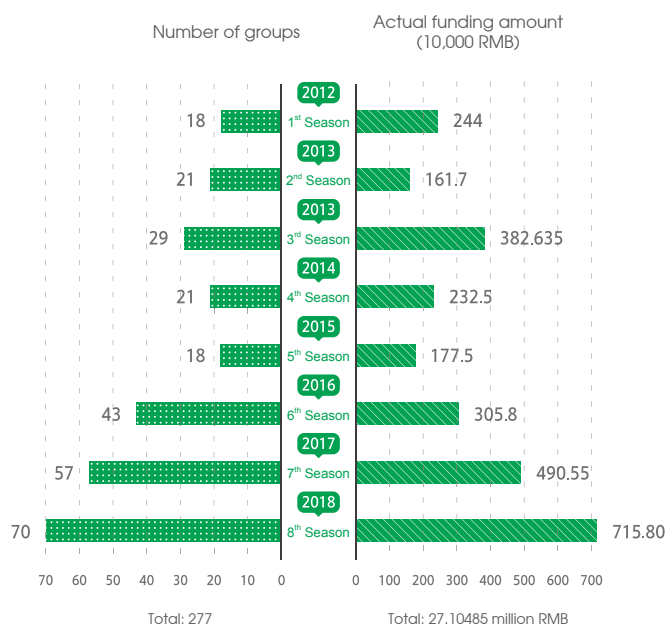


With the rapid development of the economy, environmental pollution has become a prominent problem faced by human kind. The main environmental problem in urban areas is solid waste pollution. Photo courtesy: Dazhi Gallery

AWAKENING AND FOSTERING



The SEE's Practice in Driving the Development of Environmental Professions



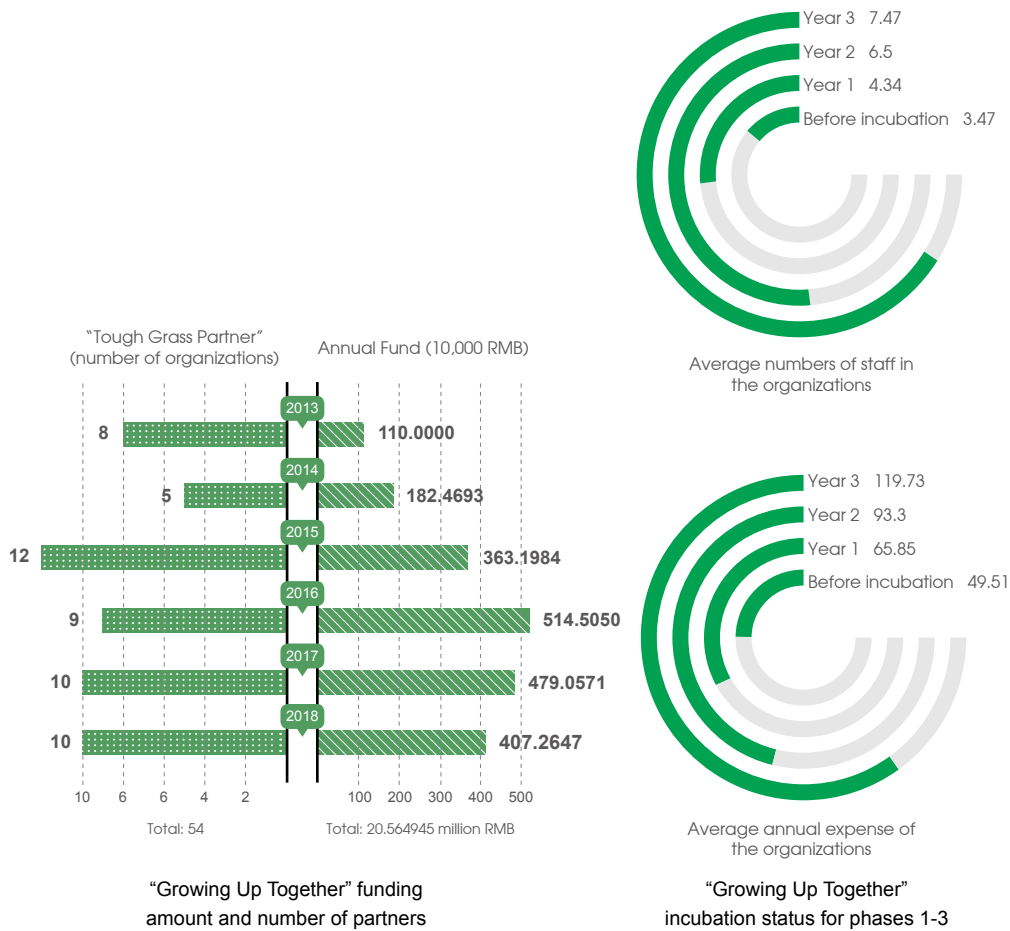
Funding amounts and numbers of funded groups by the "Green Starters" project in the past eight seasons.

In 2008, a word popped up on Chinese people's radar screen; public welfare. This year, public welfare organizations driven by various forces provided the timeliest assistance in Wenchuan earthquake relief. Their efforts were featured by media, recognized by society, and motivated more people to participate in public welfare undertakings. China's environmental public welfare force has grown stronger in this tide. However, when we consider the severe environmental problems it is facing, this new force is far from robust.

China's environmental forces appear even weaker when compared to others on

a global scale. In 2008, there were only 508 non-governmental environmental organizations in China, while the number of US environmental organizations exceeded 20,000 with a total investment in environmental protection reaching 6.46 billion US dollars. The lack of funds for environmental protection, the small number of environmental organizations, and the lack of their diversity are all important factors that have constrained China's environmental public welfare development.

Confronting the problems faced by China's environmental industry, the SEE Foundation set up two non-targeted



funding projects in 2012 to support the development of the environmental public welfare industry nationwide. They are the "Green Starters- Environmental Public Welfare Startup Funding Program" and the "Growing Up Together" program. The goal was to promote China's environmental public welfare development organizations in terms of both quantity and quality, while providing the nutrients for environmental protection forces to grow.

The "Green Starters- Environmental Public Welfare Startup Funding Program" can be abbreviated as the "Green Starters" program. This program

aims to promote the development of the environmental industry through increasing the number of environmental organizations. With this program, the SEE Foundation innovatively introduced the Angel Investment Model into the field of environmental protection and established an angel fund to specifically fund startup environmental public welfare teams. The hope is that it will see more outstanding environmental public welfare organizations emerge in China. The "Green Starters Program" values the growth potential of a team. In addition to receiving 10,000 to 200,000 RMB of unrestricted venture capital support,

selected teams will also receive multi-faceted support including information publicizing, resource connection, dissemination and fundraising, and exchange of professional experiences. From September 2012 to 2018, the “Green Starters Program” had successfully completed the screening and selection for 8 seasons. Funded startup teams come from 31 provinces, autonomous regions, and municipalities directly under the central government, with a total of 277 environmental public welfare teams. Funding exceeded 27 million RMB, which will be used to cover environmental issues such as pollution prevention and control, species conservation, environmental education, and waste classification.

The “Growing Up Together Program” aims to help young environmental public welfare teams to navigate bottleneck periods and respond more effectively to environmental problems. Through this it hopes to improve the quality of China’s environmental public welfare organizations. The project focuses on key talent within a team and selects individuals to become “Growing Up Together”. The Foundation provides partners and their teams with three years of unrestricted funding in the amount of 300,000 RMB as well as Tough Grass mentors to accompany them through the challenges they face during periods of slow growth. The goal is to push them to make breakthroughs in areas such as core business consolidation, team professionalism. Furthermore, the goal facilitates resource diversification and expansion to assist them in becoming regional or theme leaders. From 2013 to 2018, the “Growing Up Together Program” invested more than 20 million RMB to fund 54 organizations. More than 121 mentors invested nearly 10,000 hours to truly support each individual and team engaged in environmental protection.

A Cornerstone: the Environmental Conservation Forces Breaking out of the Ground

by Shuang SUN and Yifan ZHANG

The “Green Starters Project” aims to discover and nurture new forces in China’s environmental public welfare field and provide assistance to startup teams that care about the environment and our homeland. The methods used foster the spirit of entrepreneurship in practicing environmental protection concepts, thus awakening local environmental protection forces in China. In the six years since the launch of “Green Starters”, the project has been carried out in 8 phases and supported 277 start-up environmental organizations with funding amount exceeding 27 million RMB. The teams funded are from 31 provinces and regions across the country, and they cover areas and environmental themes such as biodiversity conservation, garbage classification, pollution prevention and control, organic agriculture, and nature education. A phased assessment and survey conducted in 2015 showed that the “Green Starters” funded teams had a 3-year survival rate of about 80% and their funding increased to three times that of three years ago.



Pictured here is the final selection meeting of the sixth phase of the “Green Starters Program,” held in Wuhan in 2016. A total of 165 environmental public welfare teams applied and were evaluated in multiple rounds by 63 member entrepreneurs and field experts. Eventually 43 teams stood out and were selected for the award. Photo courtesy: the SEE Foundation

In the 1960s, American biologist Rachel Carson published “Silent Spring.” In this book, Rachel described a town that looked prosperous. There were neat houses, acres of orchards, and deer making their way through the morning mist. All was quiet and sweet. But behind this serenity, there was a subtle, hidden strangeness. There were no bees around any of the flowers. There were no fish in the creek, and birds were dying in the orchards. She quoted John Keats’s verse to describe the scene, “the sedge is withered from the lake, and no birds sing.”

Through the description in the book, people realized in shock that the environment had changed, and mankind was facing a serious situation with multiple problems; food security problems, resource problems, and environmental pollution problems.

This book, which is still shocking to read today, let humanity hear the word “environmental protection” for the first time. It was the first cry in the wilderness. Under the call of this cry, more and more people devoted themselves to environmental protection

and became practitioners and advocates. This was an awakening process and awakening is an eternal theme in environmental activities. Environmental problems originated from the imbalanced relationship between human and nature. To repair the relationship, humans must take an active role. Therefore, only those who are aware of the necessity of environmental protection can really push the cause forward. This process of making people aware is called awakening, and it is accomplished through people getting along with each other and people getting in touch with nature. We interviewed six environmentalists who received support from the SEE Foundation during their teams' start-up period.

They are Bin LV, founder of "Eyes of

the Countryside" located in Yunnan; Awang, founder of "Prairie Grass Nature Conservation Center" located in Qinghai; Jiaxiang XIA, director of "Dive for Love" based in Shenzhen; Jing YANG, founder of "Pure Public Welfare" in Beijing; Tianle CHANG, director of "Beijing Organic Farmers Market Community Store" located in Beijing; and Xiaobo WANG, founder of "Hyper Box" based in Beijing.

Bringing their own environmental experiences, these six environmentalists, representing six organizations, talked about how to get along with people in environmental practice, how to rebuild the relationship between man and nature, and how to rediscover our place in a world full of other lives.

Six Environmentalists



Bin LV

Founder of “Eyes of the Countryside”

Photography: Xuewen WU

Images and videos are tools for enlightenment. Through videography, people can dig through the surface of things and uncover something deeper.



Awang

Founder of “Prairie Grass Nature Conservation Center,”

Photo courtesy: Prairie Grass Nature Conservation Center

We use the traditional worship ceremony to the God of Lu (the God of Water) in local culture to awaken people’s awe of the sacred mountain and reflect on their own behavior.



Jiaxiang XIA

Director of “Dive for Love”

Photography: Xianzhong GUO

We hope that this traditional knowledge can be passed on to the people whose lives are closely related to the ocean; the dream is to plant a seed of correct ocean awareness in their minds, so that they may know how to get along with the ocean.



Jing YANG

Founder of “Pure Public Welfare”

Photography: Xuwen WU

Everyone has their own original intention to take up environmental protection. You cannot force others to follow your idea. So, I think education is the best approach.



Tianle CHANG

Director of “Beijing Organic Farmers Market Community Store,”

Photography: Xuewen WU

We hope that farmers can take this place as a communication platform and pass their values to consumers through sharing sessions and the products of their labor.



Xiaobo WANG

Founder of “Hyper Box”

Photography: Xuewen WU

There is no contradiction between business and public welfare. Many excellent public welfare projects are supported by scientific business logic.



Students in the “Eyes of the Countryside Program” shooting on the grassland. Photo courtesy: Eyes of the Countryside

When we interviewed Bin LV, he was busy preparing for the “Future of the Mountains Film Festival” and communicating with the participating film directors before the exhibition. We arrived at the agreed place only to see a group of Tibetan herdsmen in an engaging conversation. Seeing our confusion, one of the herdsmen suddenly stood up and waved to us, “Hello, I am Bin. These are our film directors; country filmmakers from our “Eyes of the Countryside” and “Eyes of Everything” programs.”

Bin LV, a documentary filmmaker, has been paying attention to the natural and cultural changes in western communities. Soaked in the sun on the fields all year round, he has a dark skin and a bright smile. “I am as dark as the students,” he quipped.

“Eyes of the Countryside” is a rural public welfare videography program based in the west. It was initiated in 2007 by the organization he was affiliated with at that time, the Shanshui

Eyes of the Countryside Environmental Awareness: Awakening Through Reflection



Fig.1



Fig.2

●Photo 1: Bin LV teaching students about film editing skills on the grassland with some students taking swift notes on the side. Photo courtesy: Eyes of the Countryside.

●Photo 2: Weihong LI, a student from a village at the foot of Kawagarbo Mountain in Yunnan province, made a documentary about her experiment in growing ecological grapes. Her hope is to provide guidance to other farmers for doing the same. Photo courtesy: Eyes of the Countryside

Nature Conservation Center. In 2015, it was registered as an independent public welfare organization in Kunming, Yunnan province, and was supported by the SEE's "Green Starters Project." Since its establishment, "Eyes of the Countryside" has guided and trained hundreds of students from the rural areas in Yunnan, Sichuan, Qinghai, Guangxi, and many other places. It has called on the local people to record their own culture and changes of society.

The "Future of the Mountains Film Festival" was planned by Bin LV. All festival films focus on the plateau's unique natural environment and discuss the relationships between humans and nature. They are divided into three units, namely "Ecological Rhythm", "Land System" and "Sustainable Livelihood"; all emphasizing sustainability. After years of observation and communications with people in the field, Bin LV believes that environmental protection, like cultural

conservation, is a process from the inside out. External intervention itself cannot achieve the best protection, and people inside the culture need to have a sense of self-consciousness. Therefore, he and the "Eyes of the Countryside" team have been working to hand over the cameras to the locals in these rural communities. The idea is to allow people to rediscover their own culture and environment through the camera lens, to generate awareness and actions, step by step, and to repair the relationship between people and the environment from the roots of culture.

The "self-consciousness" mentioned by Bin LV comes from the "cultural self-consciousness" concept proposed by Mr. Xiaotong Fei, a Chinese sociologist and anthropologist. It means that people in a certain culture becomes aware of their own culture first, and then conduct cultural reflections and then actively learn new culture. Bin LV believes that this kind of reflective cognition is

also applicable to the environment, and human beings should have a kind of “environmental consciousness” with respect to the environment. They should develop awareness and reflections about the environment. When local people whose hands that were used to herding, milking, and boiling sesame oil tea picked up the camera and started to observe their own life, something unexpected happened. Self-education and transformation happened. “So did environmental awareness. People with environmental awareness become more determined. For example, activities such as urban environmental monitoring actually involve some risks. If one doesn’t have a sense of why he/she is doing it, then he/she won’t be able to keep an interest or remain engaged for long,” said Bin LV. He went on to say one of the students, Weihong LI, was brought into the environmental cause through documentary films.

Weihong LI, a grape-grower from Gushui village in Diqing Tibetan autonomous prefecture, picked up the use of pesticides and fertilizers along with the promotion of high efficiency planting methods by a local wine company, but she never thought about the consequences. By watching documentary films, she gained a lot of new knowledge, including the impacts of pesticides and fertilizers on the land and insects. Knowing the consequences, Weihong started to experiment with growing organic grapes.

She recorded the entire experiment procedure with a video camera, and chose her family’s daily work as the filming scenes. She filmed her family doing farm work, teasing with friends and relatives, and villagers joking with her,

“our reporter grandma is shooting again,” They’d say, “It’s like a village ‘reality show.’ She filmed for a whole year, and the final result was a great success. Her organic planting has also borne fruit, but the grapes are a little small. They don’t sell well on the vast market. Her efforts seem to be just a drop in the bucket, but it is a very meaningful attempt to environmental protection.

Bin LV calls her a Samaritan. He said, “In 2013, I recommended that she participate in the Eco-Prize Competition hosted by the SEE, and she won the grand prize that year! The biggest significance of the prize was to give her an authoritative recognition, which greatly increased her prestige among the villagers. Before, people laughed at her for not minding her own business, but no one said that again after she won the prize.”

This also showed the local government the potential of an alternative development model. Some wine companies came to order grapes following her fame, and Weihong became even more determined to growing organic grapes. “She has been delivering speeches, training all over the place, and has been very busy,” Bin LV said with a smile.

Unlike Ms. LI, most of the students started out just for fun. They picked up the camera to film their families, cattle and sheep, and the garbage on the grassland. They then gradually realized that what they saw through the lens was not that simple. Why is there so much more variety of garbage than before? Where does it come from? What’s the impact on the environment? As the shooting unfolded and deepened, the photographer’s

concern for the environment gradually is moved from a level of interest to a level of consciousness.

There was a film called “Pika” at the film festival. Pika is a small animal living on the grasslands and feeding on grass roots. It lives in the short grasses that facilitate its observation of predators. Thus, they are not present in places with lush vegetation, but they are mostly found on degraded grasslands where they are more likely to breed. This led to the misunderstanding by many people that they were the ones to blame for grassland desertification. The filmmaker Lanze wanted to show with his film that pikas were not the ultimate cause of desertification. Their increased numbers were only the consequence of desertification. The control of desertification needed to find another direction.

Lanze invited environmentalists, monks, and experts from Nianbaoyuze to talk about how they dealt with pikas and how the local culture regarded pikas. A lot of interview footage in the film made many listeners restless. I whispered to Bin next to me, “Why does this film use so many interview scenes?” Tibetans usually use long talks to explain things or carry out daily conversations, so that they can express themselves completely. Thus, film editing should not break up the rhythm or their expressions,” Bin said. It

is also clear from this film that Lanze has become very conscious as a filmmaker. He has expressed the local people’s views on environmental protection. This expression is the basis of communication.

There was a conversation session after the screening. Someone in the audience asked the question, “Was it directed by environmental organizations? Is that why the deer and people sat quietly on the hillside without disturbing each other? Is that why the Tibetans selflessly saved the crane in the film?” The filmmaker answered, “These were real scenes. Influenced by Tibetan Buddhism, Tibetans believe that all living things are equal. There is no difference between human beings and animals.” The film conveyed the cultural perspectives of the locals. And the audience’s question represented another perspective. The relationship between humanity and the environment in different cultures was recognized during the conversation. The audience, filmmakers, and film editors engaged in reflections during the event. Just as the English description of the “Eyes of the Countryside” implied by the words “from our eyes”. Through communication we reflected on our position in the world by looking at the world from others’ perspective. We then began to think about how to deal with our new view of the environment.



Awang, Founder of "Prairie Grass Nature Conservation Center," conducting a survey
Photo courtesy: Prairie Grass Nature Conservation Center



This photo depicts bar-headed geese in Sanjiangyuan. As an endemic species in Asia, bar-headed geese lay eggs, hatch, and breed on the Tibetan Plateau. In the fall, they fly thousands of miles south of the Himalayas to spend the winter. Bande Lake, located at the source of the Yangtze River by Ulan Moron, is one of the main breeding sites of bar-headed geese. Photography: Awang

Prairie Grass Nature Conservation Center
 Going Back to Culture to Retrieve
 the Genes for Environmental
 Protection

“The value of the ‘Eyes of the Countryside Program’ lies showing us the views of mainstream experts and scholars are not the only voice on environmental protection. Local people can come up with solutions in line with their own culture to enrich the diversity of environmental protection concepts and methods,” commented Yiqing WANG, senior project manager of environmental welfare industrial development in the SEE Foundation.

Giving voice to cultural subjects is not only the protection of cultural diversity, but also the assurance of the conservation of environmental diversity. Culture and environment are inseparable. The persistence of a culture and its current existence, suggests that it has a set of internal mechanisms for how its people co-exist with the environment. If human development overdraws from the natural environment, the corresponding culture is bound to discontinue. Some ancient civilizations have slowly disappeared due to this imbalanced relationship.

Looking back at traditional cultures, people can often find answers to some environmental problems. The Animaqing Mountain area of Qinghai province, 2,000 kilometers away from where the “Eyes of the Countryside” is based in Yunnan, is where the Prairie Grass Nature Conservation Center is located. Center staff is working on protecting snow leopards. The “Prairie Grass Project” is committed to preserving the uniqueness, diversity, and integrity of the Sanjiangyuan ecosystem. “To achieve this goal, the protection of snow leopards is an important part,” said Awang, the project director, “The key to protecting the snow leopard is not only to save them from extinction, but more importantly to protect the alpine ecosystem and the water sources that over a billion people depend on.”

Due to the impact of global warming and increasingly intensive human activities in recent years, the ecological status of Animaqing has become increasingly grim. The habitat of snow leopards is being constantly reduced. In the winter, due to cold and lack of food, snow leopards must leave the mountain frequently to replenish their energy by hunting herders’ livestock. Human-animal conflicts are very common here.

Awang is a local Tibetan. He once studied abroad in the UK, and he majored in biodiversity conservation. After returning home, he launched the “Prairie Grass Project” with several fellow villagers who have similar academic backgrounds. He told us about the plight of Animaqing, which

is revered as a “sacred mountain”. “Nowadays, a herder’s lifestyle is more and more like that of an urban lifestyle in that a lot of household waste is produced. Combined with garbage carelessly discarded by a large number of tourists, it has polluted the grassland, wetlands, and damaged the ecosystem. The many rivers with headwaters in the Animaqing Snow Mountain are being polluted”.

Awang believes that there has always been a sense of protection for sacred mountains and snow leopards in the local culture. Local Tibetans regards the snow leopard as an important patron saint. Its presence is also a symbol of the prosperity of their grasslands and favorable weather for good harvests. The mountain is also a god, a kind of unity of “heaven and man.” Each sacred mountain has its own anthropomorphic prototype, and the mountains are related to each other. For example, one mountain might be the wife of the mountain god, and another mountain might be his brother. Injuring or hunting the animals in the mountains will be punished by the mountain gods.

He said this is a typical type of “Sacred Natural Sites”. “The so-called ‘Sacred Natural Sites’ refer to some aboriginal settlements in the world, where people regard some mountains, forests, rivers, and lakes as sacred and extraordinary. The sites are carefully protected and the creatures inside are well taken care of. They are the oldest type of nature reserves. Such indigenous culture greatly contributes to the improvement of biodiversity.”



A snow leopard. Photo courtesy: Visual China Group.

However, under the impact of a modern lifestyle, more and more people are parting from their traditional cultures, and they have become lost in modern life. Awang believes that reintroducing people to their cultures is the best approach to conservation. The “Prairie Grass” project advocates for environmental protection with the help of local cultural forces. “We invite lamas and monks from the monastery to preside over the traditional worship ceremony of the local god Lu (the god in charge of water). It is a ceremony that can best raise the awareness among local herdsman of our water environment, through which we hope to awaken people’s awe of the sacred mountain and reflections on their own behavior.”

The stories about the water god were told in many ancient Tibetan books, asking people to respect him and protect the water source. It shows that the experience of getting along with the environment has been deeply rooted in the culture. When people are faced with environmental changes and have

doubts on how to adapt to the changes, traditional culture can answer a lot of questions. Thus, it is an effective approach to environmental protection for people to understand their own culture, arouse their deep-rooted sense of belonging to their cultural heritage, understand how their ancestors had gotten along with nature, and think about how to deal with modernization using the same model. Awang said, “We named the project to mobilize and educate people to clean up garbage at the water-source as ‘Guarding the sacred mountain for King Gesar.’ The project is still under way, but it has already made an impact.”

Although “Environmental Protection” is a word that emerged in the era of industrial society, many traditional cultures had formed their own environmental protection culture during their long course of development. Going back to traditional culture to find the way to get along with the environment may help us find a better way of survival than slogans and concepts.



A volunteer from “Dive for Love” collecting coral debris in the ocean. Photography: Chao CHEN

The past four decades of rapid development have also witnessed the fastest deterioration of our marine ecosystem. Excessive and destructive fishing has severely damaged the marine ecosystem, and this is visible in all coastal areas within human reach. Jiaxiang XIA, director of the “Dive for Love” organization in Shenzhen said, “Human activities at sea have led to the destruction of coral reef ecosystems on the bottom of near-shore waters. Diving in some ocean waters is like going into a desert. You can’t see anything but a dead silence, let alone other marine landscapes.”

“Dive for Love” is an environmental public welfare organization based in the Dapeng new district of Shenzhen. It was initiated by a group of diving enthusiasts who gathered at “Dive for Love” with the intention of doing something to protect the coral reefs around the Dapeng peninsula of Shenzhen. In addition, they wanted to contribute their efforts to protect the marine environment. Jiaxiang XIA was the first

Dive for Love

Change Starts from the “Heart,”

Achieve Win-win Results of Both

Environmental Protection and

Livelihood

full-time employee who was also in charge of the organization.

“‘Dive for Love’ was jointly established by ‘Mofang’ (doyouhike.net), the online platform for outdoor enthusiasts and Dapeng new district. The diving section of Mofang is the entry point for many diving enthusiasts. At that time, Dapeng new district had just been established and the government wanted to develop it into a place for residents to get close to nature. They approached Mofang and invited them to make some relevant efforts, what they came up with was the ‘Dive for Love’ program.” Jiaxiang XIA became associated with “Dive for Love” activities in 2012. At that time, Mofang gathered many divers together to recover the coral reefs in Dapeng district. He said, “There were a total of four types of corals in the Tai O Bay Waters where we were working. They were the leaf coral, acropora coral, brain coral, and stony coral. Our work included counting the number of existing coral reefs, as well as rescuing the residual branches of these native corals.”

In one of the pieces of footage he showed volunteers rescuing the galaxea coral, clusters of glowing umbrella-shaped tentacles flapping with the water, opening and closing. “They are the tendrils of the tower barnacles, which are buried in coral rocks, and are used for them to gather food,” said Jiaxiang XIA, “We temporarily take care of these coral branches broken by fishing nets and anchors in a nursery to give them a chance to recover. This is how we do coral conservation”. This

is also the core activity of “Dive for Love.”

After registering as a formal organization in 2014, “Dive for Love” set up a project for this work and called it “Dive for Coral Reefs.”

The project has two tasks. The first is to continue the conservation of coral reefs, and the other is to work with marine scientists to edit a textbook for divers’ underwater operations. The textbook discusses the conservation of coral reefs from a professional perspective to provide a guide for divers to perform the task. As the project proceeded, Jiaxiang XIA and his partners found out that coral breeding was not a fundamental solution to the problem of nearshore ecosystem deterioration, as it was still constantly happening. “Human, offshore work is the most direct cause. Nowadays some unlawful fishermen even use explosives to blow up fish in areas with coral reefs, which can be devastating to the coral reefs,” said Jiaxiang XIA. In order to reduce these damages, the first step should be to get fishermen to change their current means of subsistence. There needs to be a balance between environmental protection and people’s livelihood. It is going to be a long process.

What came earlier than the solution was clashes with the fishermen when conservationists tried to protect coral reefs. When the government approved for “Dive for Love” to build a coral reef conservation station on the beach in Dapeng district, the local fisherman mistook this as someone trying to encroach on their land. Meanwhile,



Coral reefs and their associated ecosystems are valuable treasures of humanity. They make up the most diverse marine communities and beautiful ocean landscapes on Earth. Photo courtesy: Visual China Group



There are two main projects within “Dive for Love;” “Dive for Coral Reefs” and “Dive to Learn.” Photo courtesy: Visual China Group

the coral reef conservation work by “Dive for Love” also interfered with their daily fishing. They couldn’t understand what “Dive for Love” was doing. Jiaxiang XIA had to frequently negotiate with the local fishermen.

During the many conversations, he found that these fishermen had a wealth of marine knowledge. “Once we were negotiating with their village head and he asked us what to do if cut by coral reefs while working under the sea. We stood in silence. Seeing that we did not know, he didn’t want to embarrass us and told us the answer. Sea cucumbers in the water have an emergency re-

sponse organ called Cuvierian tubules. When stimulated, it releases a kind of antiseptic mucus, which can be directly applied to the wound. Generations of fishermen have used this substance for underwater first aid”, Jiaxiang XIA recalled. In the face of this knowledge, Jiaxiang XIA and his partners could only be open-minded and happy to learn. He then said, “These are the experiences accumulated by generations of fishermen, and are not available elsewhere.” This has led to the birth of another important project of “Dive for Love,” that is “Dive to Learn.”

Jiaxiang XIA collaborated with marine

scientists again by collecting knowledge about the ocean from fishermen and he wrote a book. This book was used as a teaching sourcebook in “Dive to Learn” classes. The knowledge of fishermen had been passed down from generation to generation, but this was the first time it had been passed down to non-fishers before. In the “Dive to Learn” classes, the underwater experience accumulated by generations is now passed on to a new generation of islanders.

The “Dive to Learn” classes are currently open to students under fifth grade. No matter what their future careers are, a correct view of the ocean will guide them to build a new relationship with it. Jiaxiang XIA has said, “We hope that traditional knowledge can be passed on to people whose lives are closely related to the ocean, so as to plant the seeds early on in their minds allowing them to form a more practical understanding of the ocean. In this way will they be better able to know how to get along with it.”

In 2016, “Dive for Love” was supported by the SEE’s “Green Starters Program.” According to Jiaxiang XIA, “Dive for Love” will take more lasting efforts to protect the environment, such as trying to help local fishermen to change their means of subsistence. The plan is to first invite some fishermen to protect coral reefs with them and then consider how they might transform from the traditional fishing industry to tourism. He said, “Making a living comes first. We can only change the way we live, instead of giving up our living.”

The various attempts by “Dive for Love” are not meant to be an overnight change. One can only start from the “heart.” It starts with helping people understand the ocean in a way that works best. The slogan of “Dive for Love” says, “Nurturing corals by nurturing people’s hearts.” Only by planting the seeds for proper understanding into people’s hearts, we can guide them to think about ways to achieve win-win results in both environmental protection and their livelihoods.



Pictured is the living room of Jing YANG's home. Jing YANG often holds discussions with her "Pure Public Welfare" colleagues and plans activities here. Photography: Xuewen WU

Jing YANG is the founder of "Pure Public Welfare." The base of their team activities is in Xinzhuang village of Xingshou town, Changping district, Beijing. Her home is a small villa of the type commonly seen in Xinzhuang village. It has a spacious living room. A few clay pots are neatly placed by the side of a south-facing French window. They are filled with enzymes. The pots are labeled with black writings on red paper; backyard persimmon, Xinjiang black honey, Turkish yellow honey, enzyme primer, and enzyme water.

"Xinzhuang village is different from other villages," said Jing YANG. The village is located in the suburbs of Beijing, where strawberry cultivation was the main subsistence of the local people. A few years ago, an international school was opened next to the village. Many parents moved to Xinzhuang for the convenience of their children's education. The Xinzhuang Art Gallery and the tranquility of the village also attracted many artists to settle here. Within a few years,

Pure Public Welfare Turning Advocacy into Spontaneity Through Education

more than half of Xinzhuang's population had become immigrants. Most of the locals were elderly people who had rented out their homes to tenants and moved to the outskirts near the fields. Gradually, the village changed. Two more supermarkets and a few restaurants were opened. Trash cans were always overfull instead of being mostly empty as they had been before. The few garbage dumps were always stinky during the summer, and garbage was littered all over the ground.

"At that time, I and another 6 moms, wanted to do something to help the village and to have a clean environment for our children to live in," she recalled. So they set up a "Xinzhuang Environmental Protection Group," and she received support from the village committee to conduct a series of training for villagers as well as sanitation workers about garbage classification. Each family was given three types of trash cans; recyclable, non-recyclable, and kitchen waste. Materials in recyclable waste can be reused. Kitchen waste can be fermented into enzymes. After three months of fermentation, it will turn into fertilizer, which can be diluted or mixed with soil to create compost for use in local the strawberry plantations.

Due to the characteristics of Chinese people's dietary structure, wet waste accounts for about 65% of urban and rural area household waste. Once kitchen waste is treated through fermentation and composting, a separation of dry and wet waste is performed next. The remaining dry waste is drier and cleaner, and it results

in much higher recycling rates of recyclables. Through these measures, the current amount of non-recyclable waste produced in Xinzhuang is less than one-fifth of the original amount. This greatly reduces the amount going into landfills.

During the many activities held by the "Xinzhuang Environmental Protection Group," all seven moms developed their own understandings of environmental protection. Based on their understandings, some of them also set up their own environmental organizations, where they carried out other environmental activities in Xinzhuang. Jing YANG, for example, launched the "Pure Public Welfare" organization in 2017. With the goal of creating a village with zero pollution, it focused on activities to eliminate plastic waste. In the same year, the "Pure Public Welfare" organization was funded by the SEE's "Green Starters Project."

"Pure Public Welfare" started with a monthly environmental farmers market, where organic vegetables, second-hand goods, handmade crafts, and food could be bought and exchanged. It also set up bulletin boards to pass on environmental information. "The participants are mostly villagers and farmers from nearby, as well as some environmental partners and farmers who'd come all the way from Hebei. We may have a college student training program in the future. All environmental programs are moving forward incrementally," said Jing YANG reassuringly. The day before our interview, it just so happened to be an environmental farmers market



Picture are the jars used for fermentation in Jing YANG's home. Photography: Xuewen WU



Pictured are garbage classification bins in a small room inside the Xinzhuang garbage disposal center. These buckets are mainly used for garbage classification education at the environmental farmer's market held by "Pure Public Welfare," Photography: Xuewen WU

day in Xinzhuang. On the big long table in Jing YANG's house were piles of handmade food made by her team. The healthy items included dried sweet potatoes and dried apple slices, etc.

"After being engaging in environmental protection for a while, I feel that environmental protection is still a matter of people's mindsets. Just like when we were trying to persuade the village committee to support us for garbage classification, the village head could not understand it until I showed him a nearby village." It was in April, 2016, Jing YANG was talking to the village head about garbage classification for the second time. She first

took him to a nearby village known for eco-tourism. She then explained to him what a clean and beautiful village would look like, and then led him to the landfill pit by Xinzhuang. This was the final destination for all of Xinzhuang village's garbage; a huge 4-acre pit, which would soon be completely filled up. "The village head was quite surprised. There were flies all over the pit. He probably didn't expect the garbage volume to have grown so fast. After that, he began to support us on garbage classification in the village." The change of the village head's mind came from his change of mindset. Effective environmental protection

needs a change of mindset to transform a bystander into a participant, and then on to an initiator.

“That’s the hardest part, but it’s also the most important part. From classification to the final disposal of waste, environmental groups cannot do everything in place of the residents or the staff at the dump. Only by mobilizing everyone to do it, can we really get the campaign going.” Jing YANG said, “This is the way to make our lives better, and it is also our original intention.”

Jing YANG’s team organizes weekly lectures on green living. Topics include organic farming, environmental classifications, and a zero-pollution lifestyle. “I first came up with the idea because my sheep died from accidentally eating a plastic bag. It died right in my backyard. Its death greatly touched me. A plastic bag caused the ending of a life. It made me think about the environment.” Jing YANG said, “But everyone has their own reason to pick up environmental protection. You can’t force others to follow your lead. So I think education is the best approach.”

“Pure Public Welfare” is also helping out environmental groups in other

regions. “Xinzhuang’s method can be applied to many more villages. We went to villages in places like Shandong and Henan to help local environmental groups in technical and team building aspects. On the basis of a common foundation, each village may develop its own set of methods, which we can then learn from and take advantage of.” Jing YANG thinks of this interaction and exchange like “going out” and “coming in.” “We are doing this job. It’s hard to say what the results will be yet. But at least we can spread our hopes for a better life.”

“Pure Public Welfare” has a slogan saying “Pure Earth, Pure Heart,” which is meant to convey hope. The hope is that people will protect the environment coming from a place in their hearts. There is also hope that through ongoing lectures and communications, farmers will recognize the importance of the sustainable development of the land. There is hope that parents will realize the necessity of having a clean environment for their children. Only when every villager understands the value of eliminating plastic waste, environmental protection can change from an advocated activity to a spontaneous action.



Pictured is a staff member of the Beijing Farmers Market using a compost bin for composting at the entrance of the Sanyuanqiao market. Photography: Xuewen WU.

Let the Idea of Environmental Protection be Rooted in People's Mind through Community Forces

Environmental advocacy is a method used by many environmental organizations, and its effectiveness depends on whether one can be convinced to take action. “Currently, the most difficult part about environmental protection is that it’s hard for the urban public to find ways to take part in environmental activities. Even though they are concerned about environmental issues, there are few tangible actions,” Tianle CHANG told us. She is the director of the “Beijing Organic Farmers Market” and wants to use food to promote public awareness and action on environmental issues.

The Beijing Organic Farmers Market is a platform built for organic farmers and urban consumers. It was born out of its organizers’ concern of the abuse of pesticides in agricultural products and the difficulty organic farmers have in surviving the market mechanism. The platform calls farmers and consumers “Farmer Pals” and “Market Pals,” respectively. “Farmer Pals” are the small-scale farmers or new farmers engaged in organic farming. They can promote themselves through the market and establish a direct connection and trust with consumers. “Market Pals” are those urban consumers who crave healthy living. They need a place to help them screen organic produce. The “Farmers Market” has become a platform they can trust. It has reduced both the physical and psychological distance between farmers and consumers.

Since 2010, more than 600 farmers markets have been held in dozens of different venues from the Second Ring Road to the Sixth Ring Road in Beijing. These locations have included some fixed locations in Sanyuanqiao, Sanlitun, and Shangdi, etc. In addition to markets, there is also a community center called the “Market Room” in Sanyuanqiao. That’s where we met with Tianle CHANG. Located on a commercial street between the Sanyuanqiao Community and the mall, it is easy to find because there is a small vegetable garden at the entrance that grows tomatoes, cabbage, and various wild vegetables. At a glance, one might mistake it as just a decorative garden. Behind the vegetables, there is a large compost bin. Inside the room is an organic food store where people can buy the various produce supplied by the Farmer Pals and other small-scale organic farmers from outside the Beijing area. Some non-disposable daily necessities such as handkerchiefs and bamboo toothbrushes are also sold here. Further down are the office and kitchen. Tianle said



Only organic vegetables and fruits supplied by Farmer Pals are sold at the Beijing Organic Farmers Market. Photography: Xuewen WU

that during the day this is the market staff's workplace, but its easily turned into a public space at night to host a variety of activities. The kitchen is not be idle either. The staff members take turns cooking with the store's produce. It's not only healthy, but it also cuts the loss and expenditure of a typical store.

Tianle CHANG started volunteering at the Beijing Organic Farmers Market in 2010 and gradually became its director. "We had been running the market for three years and had never had an office during that time. But we didn't want to work in an office building. Why not put the office in the vegetable store? This way we can see our Farmer Pals and Market Pals often and better organize events in it. This makes it a real public space," expressed Tianle, who thought

this idea coincided with the purpose of "Green Starters" perfectly. So, she applied for support from the SEE. In 2013, the Beijing Organic Farmers Market Community Store became the second program funded project.

"The Market Room is an extension of the market. It's an open and sustainable community center," Tianle CHANG said, "Everyone's knowledge and experience is part of our culture. How does an organic farmer grow vegetables? There's a lot of knowledge in it." The Market Room provides a meeting place for Farmer Pals and Market Pals, who can share their experiences here. Consumers can learn from the farmers' knowledge. Tianle thinks that the way to get along with nature is integral to the farmers' knowledge. She said, "After I got in contact with the farmers, I learned about biodiversity and soil diversity. It was knowledge gained from real farmers. Small-scale farming is a production model that reflects the value of best practices. It will always exist. It unites economic justice, environmental sustainability, and social justice as one. We hope that farmers can take this place as a communication platform and pass their values on to consumers through the sharing sessions and their products."

Not only Farmer Pals, volunteers, and Market Pals, but NGO associates can also share their ideas in the Market Room. "This is a true community, and in my opinion, a true community is a society of acquaintances. This is the opposite from the modern communities made up of strangers. Thus, we are a more open community. Here, if some-

one wants to sign up as a volunteer, then he or she may join right away. We put our trust in them. This is not common in the city,” Tianle CHANG said. In such a trusting environment, the idea of environmental protection and a sustainable lifestyle is shared and heard. Some moms even formed organic food purchasing groups after meeting in the Market Room. Tianle CHANG went onto say, “That is what’s interesting about this community. People can connect here, but then they may do totally different things. We only provide the platform, service, and technical support.” This community provides a fertile ground for many environmental activities. Some environmental NGOs who are acquainted with the farmers market even conduct work and team-building here. Over the past five years, the Market Room has held more than 150 sharing sessions. Those who shared include farmers, university professors, and experts from the United Nations. They spoke Chinese, English, Japanese, German,

and Italian. Each speaker talked about the same basic topic; how to make our food system sustainable.

In the evening, Tianle and her team members cooked dinner for us with vegetables picked from the garden in front of the Market Room. Everyone had a share of the work and they collaborated smoothly. She said with a smile, “I hope our market can continue its operations in the same small-scale and beautiful way. Although the market has had its doubters as not everyone understands this lifestyle, my job is only to patiently explain it again and again. There are many people in the world who share their understanding of the environment with others by writing books and giving lectures. In this way people may slowly understand. That’s what an environmentalist needs to do, too.”

This community provided the best soil for their ideas to take root and germinate, from which a sustainable way of life grows.



Pictured is Xiaobo WANG displaying a Hyper Box product in his office. Xiaobo WANG started his experiments for environmental protection with courier boxes when he was a college junior, and he applied for a grant through the “Green Starters” program during his junior year. Photography: Xuewen WU

Hyper Box Courier Boxes Conveying Environmental Distress with a Solid Medium

City dwellers seem to have broken off their relationships with nature. “Endless buying” and “endless discarding” has become part and parcel of assembly lines of production and consumption. On one side is the excessive consumption of natural resources, and the other is the creation of large amounts of waste. People seem to be blind to the green mountains and the garbage piled up over the land. It seems that environmental problems and concerns are far away from them. But the separation of humanity from nature is only an illusion. The exhaust from factories will eventually turn into smog covering their cities. And the garbage thrown into the sea will eventually be swept back to their shores.

Xiaobo WANG was born in the 1990s, and he grew up in the city. In the era of China’s rapid development, he realized that modern people’s lifestyles determine their dependence on consumption, and environmental protection needs to be combined with business to make the greatest impact.

Xiaobo WANG put his focus for the environment on reusable courier boxes. During his junior year in college, he was touched by a particular scene. He said, "I would pass by a parcel distribution station every day on my way to class, and I often saw piles of discarded courier boxes. At that time, online shopping was not as developed as it is today, but there was already a lot of waste generated. At that moment, I really wanted to do something," he said. He was in a campus club called The Enactus. He went on to say, "They encourage students to use business thinking to solve environmental and social problems. So, I started to target the problem of courier boxes and attempted to make some changes in a commercial way."

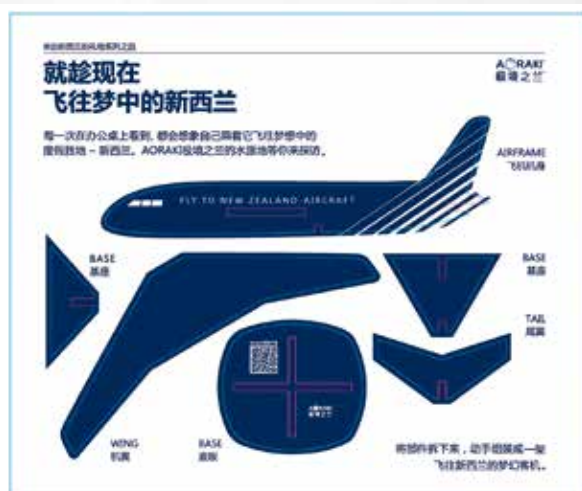
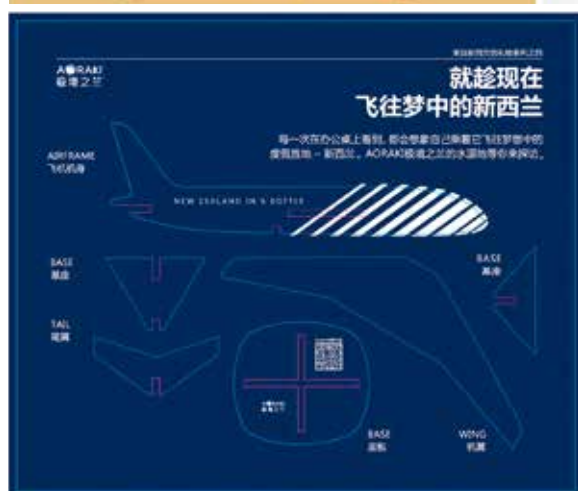
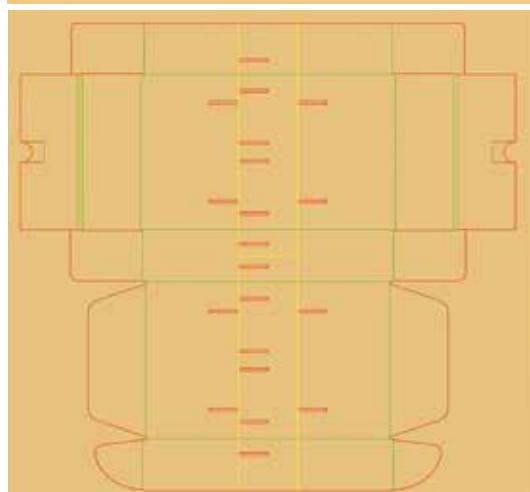
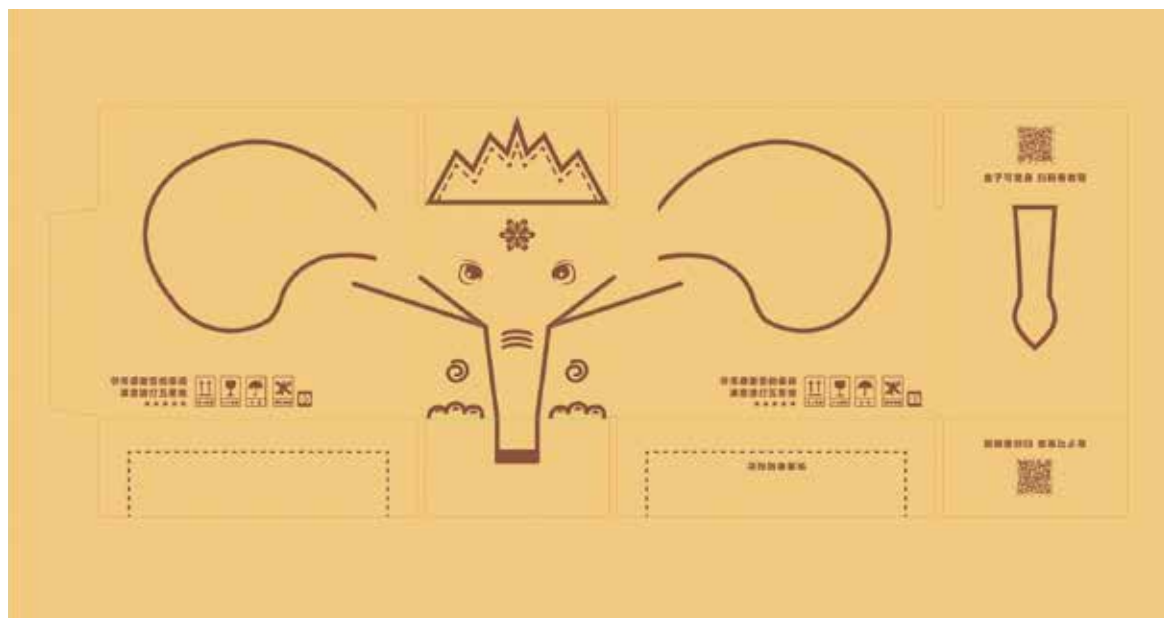
After some thorough deliberation, he came up with an idea; only through improving the utilization rate of consumer goods can the generation of waste be effectively reduced. Consumers can also be guided to take positive actions through consumer goods. He said, "Many people think that waste is inevitable, and it's a natural part of life. But waste is actually the result of poor design, and design can be improved. We can give the box special characteristics before its production so that it can transform into something useful after more than its first use. A design instruction can be put inside the box so that it can be converted. This way we can reduce a lot of waste."

With this idea, Xiaobo and his classmates designed several kinds of convertible courier boxes, and then drew

the instructions for transformation on the interior of the boxes. Customers could follow the instructions to convert the courier boxes to multi-functional storage boxes, calendars and even iPad holders. This interesting box project was thus hatched at Enactus.

In 2013, Xiaobo WANG took the project to the College Student Environmental Innovation Competition, and he won the highest funding provided by the "Green Starters Program." After more than a year's trials, Xiaobo realized that in order to drive consumers' environmental actions through courier boxes, commercial maturity and success would have to be the prerequisite. In 2015, his Hyper Box Company was founded.

Xiaobo later said, "I take merchants' demands seriously. There is no contradiction between business and public welfare. Many excellent public welfare projects are supported by scientific business logic. Public welfare projects without commercial support are not sustainable and will eventually fail." During the production of his boxes, Xiaobo WANG asked designers to add a QR code to each box. Consumers can scan the code to find the box transformation tutorial. It is also an online promotion for the merchant's business. While the scanning rate of ordinary courier boxes is only about 3%, the highest scanning rate of Hyper Box reached over 17%. This gave Hyper Box a commercial advantage. Since then, there has been a great increase in Hyper Box orders. A number of large brands have also shown interest.



Shown are some of Hyper Box's creative designs for courier boxes and some product packaging boxes. China consumes nearly 20 million courier boxes every day. If the life cycle of these boxes could change from one week to one month, we could save about 2 million tons of water and wood resources. Photo courtesy: Beijing Hyper Box Co., Ltd.

“Many people make purchases because of our sustainable designs. There are a growing number of environmentally conscious businesses and consumers. And you can clearly tell that the young consumers born after 1990 and 1995 have their own ideas when choosing products. They try to choose a lifestyle that is good for themselves and for nature through consumption,” Xiaobo expressed.

Xiaobo WANG believes that the market feedback received by Hyper Box is positive and that people have not lost their concern and passion for the environment. He said, “What Hyper Box is doing right now is a drop in the bucket, but it doesn’t mean that the future is not bright.” At present, a packaging company shareholder is providing strong support to Hyper Box. According to the plan, 50% of the company’s packaging will switch to reusable green packaging by 2020.

In cities far away from mountains and rivers, the concept of sustainable development is attached to the “heart” of courier boxes, and it speaks to the people controlled by consumerism about the environmental distress of

the desertified grasslands thousands of miles away.

Bin LV uses images to help local people develop environmental awareness. Awang takes people back to their traditional culture to learn how to live with nature. Jiaxiang XIA leads people to explore the new relationship between man and nature. Jing YANG inspires the villagers’ environmental consciousness with the power of education. Tianle CHANG takes the community as her base to let environmental ideas take root. And Xiaobo WANG uses the courier box as a medium to convey the concept of sustainability. In their interactions with people, environmentalists are inspiring others to develop environmental consciousness. It is just like what SEE is accomplishing with its “Green Starters Program;” arousing more environmental forces all over the country. There is a line in the “Silent Spring” that says, “Those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts.” These reserves of strength will eventually spread the “beauty of the earth” deeply into people’s hearts and much broader spaces.

Teams Funded by “Green Starters” Nationwide Distribution Map



From 2012 to 2018, the “Green Starters Program” had successfully completed eight seasons of screening and selecting. Funded startup teams have been distributed in 31 provinces, autonomous regions, and municipalities directly under the central government, with 277 environmental public welfare startup teams supported. A total funding amount of more than 27 million RMB has been allocated, covering environmental issues such as pollution prevention and control, species conservation, environmental education and waste classification, etc.

“Growing Up Together” Nationwide Distribution Map



Distribution of the number of “Growing Up Together” from 2013 to December, 2018

- | | | | | |
|---|--|--|--|--|
| 1. Green Longjiang (Harbin) | 16. Shanghai Aifen (Shanghai) | 25. Fujian Green Home (Fuzhou) | and Conservation | Chengdu (Chengdu) |
| 2. West Ujimqin Banner pastoral area information service center (Xilingol League) | 17. Spoon-billed Sandpiper in China (Shanghai) | 26. Fujian Birdwatching Society (Fuzhou) | Association (Nanning) | 45. One Year-Four Seasons (Chengdu) |
| 3. For Good Fields (Alxa Left Banner) | 18. Shanghai Qingyue (Shanghai) | 27. China Mangrove Conservation Network (Xiamen) | 37. Firefly Conservation Research Center (Wuhan) | 46. Chongqing Nature Bridge (Chongqing) |
| 4. CYCAN (Beijing) | 19. Shanghai Rendu Ocean (Shanghai) | 28. Bike Guangzhou (Guangzhou) | 38. Che Chu-line (Wuhan) | 47. Guizhou Qianren (Guiyang) |
| 5. Rock Environment and Energy Institute (Beijing) | 20. Bluesky4Children (Shanghai) | 29. Eco Canton (Guangzhou) | 39. Hubei Daoda (Wuhan) | 48. Hope for Children (Kunming) |
| 6. Chinese Felid Conservation Alliance (Beijing) | 21. SWNE (Shanghai) | 30. Hi Nature (Guangzhou) | 40. Green Hunan (Changsha) | 49. Rosefinch Club (Kunming) |
| 7. Imaging Biodiversity Expedition (IBE) (Beijing) | 22. Forest City Studio (Shanghai) | 31. Rice Harmony (Guangzhou) | 41. Shu Guang Huan Bao (Changsha) | 50. Cloud Mountain Conservation (Dali Bai Autonomous Prefecture) |
| 8. Beijing Fuqun (Beijing) | 23. Shaoxing Zhaolu (Shaoxing) | 32. Laukai Ecology Center (Guangzhou) | 42. Hunan Yiyou (Changsha) | 51. Gansu Green Hada (Gannan Zhou) |
| 9. Green Taihang (Shijiazhuang) | 24. Wonderland Keeper (Hangzhou) | 33. Shenzhen Spring (Shenzhen) | 43. Chengdu Kang-hua (Chengdu) | 52. Prairie Grass (Xining) |
| 10. Green Qilu (Jinan) | | 34. Dive for Love (Shenzhen) | 44. Roots & Shoots | 53. Wildness Xinjiang (Urumqi) |
| 11. Green Central Plains (Zhengzhou) | | 35. China Blue Sustainability Institute (Haikou) | | 54. The Pendeba Society (Lhasa) |
| 12. Wuhu Ecology Center (Wuhu) | | 36. Guangxi Biodiversity Research | | |
| 13. Green Jiangnan (Suzhou) | | | | |
| 14. Nanjing Green Stone (Nanjing) | | | | |
| 15. Shanghai Daorong (Shanghai) | | | | |

From 2013 to 2018, the “Growing Up Together Program” invested more than 20 million RMB to support 54 institutions. More than 121 mentors invested nearly 10,000 hours.

Seedling of the Giant Wood: the Germination of the Backbone Force

The development of environmental public welfare organizations in China since the establishment of Friends of Nature in 1994 has lasted for more than two decades. The current number of environmental organizations is not small. But compared with the rapid growth of China's economy and the fast emergence of environmental problems, it is still lagging behind. Environmental public welfare organizations that can serve as the core for a region or a theme is particularly rare. Studies have shown that many public welfare organizations encounter a "glass ceiling" after six years of establishment, making it difficult to grow upwards. It results in low effect of public welfare investment and many delays in solving environmental problems.

In response to the three core bottlenecks faced by environmental public welfare organizations during their growth period, core business, core team, and core resource, the SEE Foundation and the Global Green-grants Fund (GGF) started the design of the "Growing Up Together Program" in 2012 based on much consultation and research. It was launched in April, 2013 and recruited the first batch

of Growing Up Together.

The "Growing Up Together" program provides non-restrictive funding to young environmental organizations for a total of 300,000 RMB for three consecutive years. It also provides them with entrepreneurial mentors and public welfare mentors to help the "tough grass" partners cope with their development bottleneck, facilitate them to make breakthroughs in core business consolidation and team professionalization to gain a powerful "hematopoietic" function, so that they can adapt to rapid changes in the external environment for sustainable development.

"Hold a scoop of water and pour it on the root." According to mentor Ying WANG, the "Growing Up Together Project" should end up to be the first funding program in China's public welfare field to specifically solve the bottleneck problem of young organizations to help their development.

Six years have passed since its launching. With the three years of funding to twenty-two partners, their average number of staff members has increased from 3.47 to 7.47. And the average annual operating



Photo courtesy: the SEE foundation

capital has increased from 495,100 RMB to 1,197,300 RMB.

In addition to providing financial support and mentors, the “Growing Up Together” program continues to explore and build platforms to help young environmental organizations by holding various sharing sessions for experience exchange and resource sharing. These sessions are conducted in the form of case sharing and case reviews, during which Tough Grass mentors, partners, and foundation peers interpret and share their experiences as well as their confusion regarding organizational strategic positioning, business model design, and resource allocation. In this

way, they may search for experience to break through growth bottlenecks.

Where there's action, there's support. A large number of environmental public welfare organizations, such as the Chinese Felid Conservation Alliance, Aifen Environmental Protection, and Fujian Green Home, have fully energized themselves from funding program capital and have been growing strong. Entering a new phase, they are using mature models to effectively solve regional or theme-based environmental problems, more effectively responding to environmental issues, and gradually growing from tough grasses into giant trees leading the advance of the environmental industry.

Chinese Felid Conservation Alliance

Walking Down the Path to

Conserving the Big Cats

by Dazhao SONG

Director of the Chinese Felid Conservation Alliance

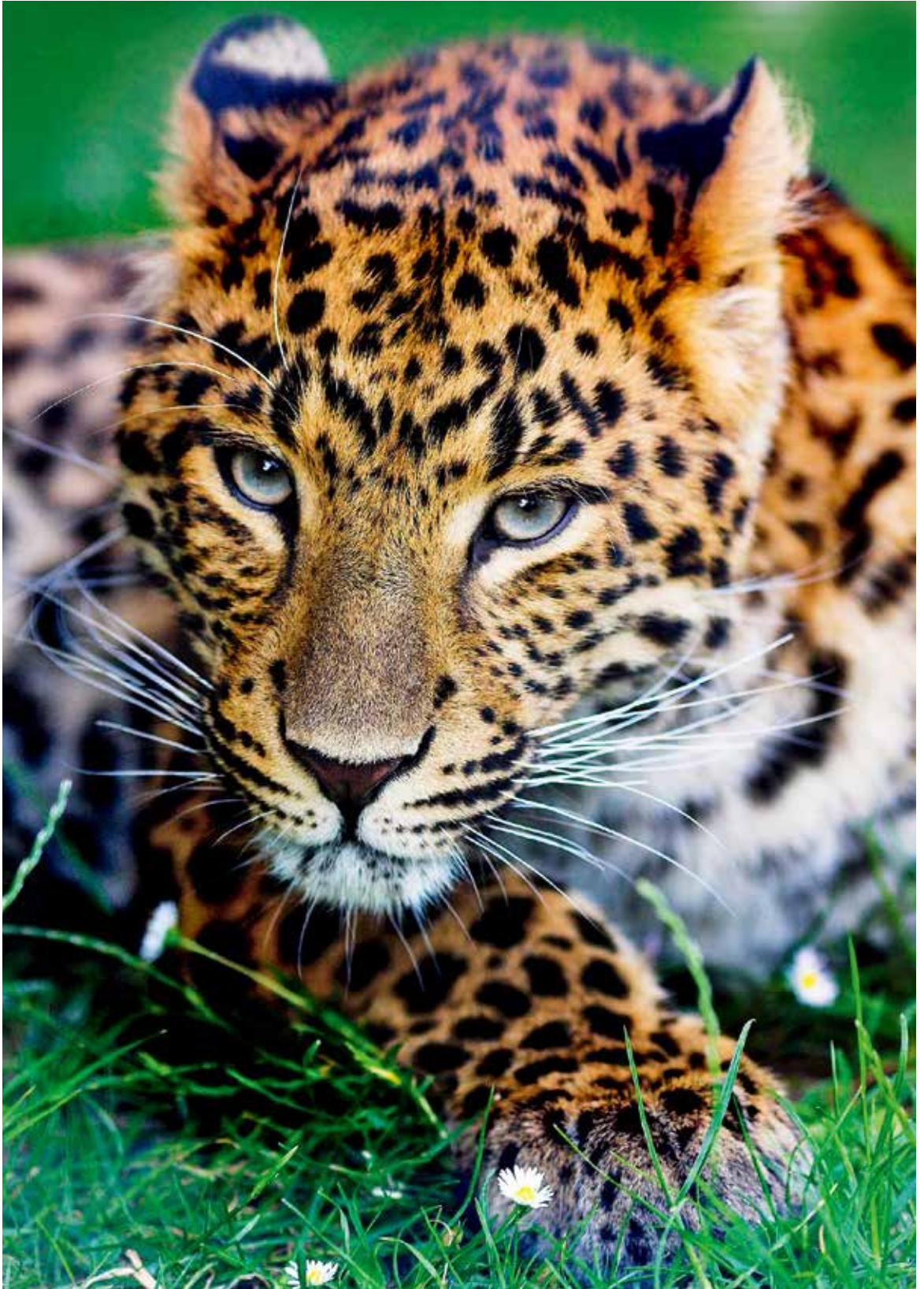
The Chinese Felid Conservation Alliance has focused on one specific endangered species, the North China leopard. The Chinese Felid Conservation Alliance (Felid Alliance for short) has gradually developed into a leading domestic wildlife conservation organization through its own efforts and with help from the SEE's "Green Starters" and "Growing Up Together" programs. The author, Dazhao SONG, is from the Chinese Felid Conservation Alliance. He grew up as a veteran environmentalist during his ten years walking in the Taihang mountains of Shanxi Province. This is where the North China leopard lives. He is currently in charge of the leopard program at the Felid Alliance.

The Felid Alliance was established in 2012. Hoping to lead the conservation of the North China leopard, our group of leopard guardians was upgraded from volunteers to professional staff, which was a new start in our conservation career.

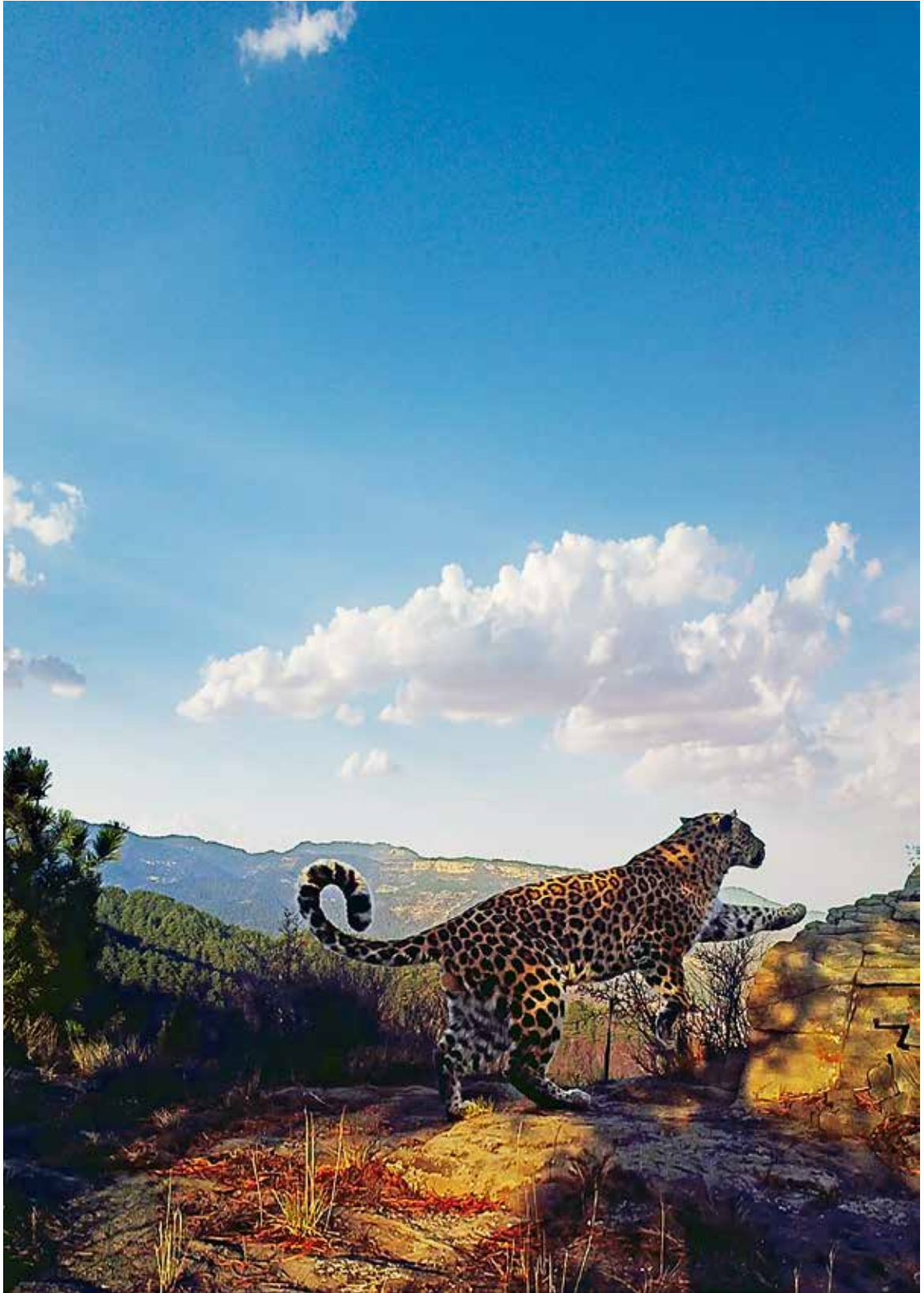
A Conservation Career Re-started From the Startup Period

Running an organization not only requires expertise in protecting leopards, but it also requires the skills to solve a lot of unknown problems. The first problem came to surface right after we finished formulating our first conservation plan; where do the funds to run these activities

come from? In the past, we paid for the logistics and equipment to go to the Taihang mountains out of our own pockets. But as an institution looking to develop in the long run, we can't do that anymore. So, we started several attempts to solve this problem. First, we raised some funds through a few commercial investigation projects and filming projects, which we were able to provide the basic support for our conservation activities. In addition to the commercial projects, we also asked around for other approaches and soon made new progress in funding. I don't remember who recommended the SEE's "Green Starters Program" to me, but after learning about the program details, I knew



The North China leopard is a subspecies of leopards' endemic to China. It is considered to be the top carnivore in its distribution area. It plays an important role in regulating the herbivores population and maintaining the healthy growth of forests. Photo courtesy: Dazhi Gallery



The North China leopard is very territorial, as it patrols its territory every day. This North China leopard is looking into the distance on the Rongyao Rock, keeping an eye on the land. Photo courtesy: Felid Alliance



Fig.1



Fig.2



Fig.3

- Figure 1: One can determine the gender, age, and other information of a North China leopard through the shape of its footprints. Shown here is the footprint of a North China leopard as big as the size of an adult's fist. Photo courtesy: Felid Alliance
- Figure 2: Many animals in the forest can be observed with infrared cameras mounted on trees. Photo courtesy: Felid Alliance
- Figure 3: A member of the Felid Alliance is conducting a feline survey in Ganzi prefecture, Sichuan province. This kind of survey activity is the daily routine of Felid Alliance's members. Through such intensive survey work, data obtained by the Felid Alliance is more accurate and scientific. Photo courtesy: Felid Alliance

clearly that “Green Starters” could help us address our most urgent needs. So, I filled out the application carefully, but was unsure about our chances. Fortunately, the application didn’t have to go through many hurdles. We received full funding as a 2013 “Green Starters” team.

The injection of funds helped us take the difficult first step, but other problems soon followed. For example, a commercial project that was supposed to be a continuous source of funding suddenly turned into a main expense. Professional investigations in the field and photography work require a great amount of human and material resources. The profit from a single project was very small, but our lack of personnel also made it impossible for us to go with “small profits but quick turnover.”

After a couple of years, the profit generated by our commercial project was a drop in the ocean, regardless of the inventory cost. How we could balance the distribution of our personnel’s time and energy in commercial projects and public welfare projects was also a problem. So, we began to think seriously about how to operate and

manage an animal welfare organization like ours. It was the end of 2014 that an official of the SEE’s “Green Starters Program” suggested to me, “Try to apply for the ‘Growing Up Together Program.’”

Tough Grass Mentor and Organizational Evolution

The “Growing Up Together” is a program that provides non-profit organizations with three consecutive years of non-restricted funding. Three years just so happens to be the necessary time to solve the problems of organization development during the growth stage.

The program not only provides funding, but also people and resources. “People” refers to the Tough Grass mentors. After becoming a Tough Grass partner, what arrives earlier than the funding is the Tough Grass mentor group. The Tough Grass mentors are composed of entrepreneurs and senior public welfare professionals. They help the partner team sort out strategies, connect to resources, improve the effectiveness of the team’s resource



Shown in the picture is a group photo of members from the SEE Shanxi Project Center and senior rangers from Heshun North China Leopard Protected Area. Staff from the project center discussed with rangers the problems met during conservation and their solutions. Photo Courtesy: Felid Alliance

allocation, and improve the internal management system. Felid Alliance's mentors were Zhizhong CHEN, Weishan Liang, Fei Hao, and Yuan Zhang.

At the beginning, I was not quite sure how to communicate with my mentors or even how to ask for help. Seeing this, Zhizhong CHEN took the initiative with his business instincts and enthusiasm, which is what entrepreneurs are good at. He gave us a suggestion, "Don't think too much just yet. Establish your brand first in 2016, and at the same time start public fundraising."

But how? We know how to look for leopards, but we are not very good at public fundraising.

The answer to break the game came from

mentor Yuan Zhang, the director of the cooperative development center of the SEE Foundation at that time. In March, 2016, when "Zootopia" made a big hit in theatres, animals became the focus of public attention for the first time. Yuan suggested, "Why don't you swim in this tide and try crowdfunding? You are not qualified for crowdfunding but the SEE is. We can be the foundation that claims your project."

On the second day of the launch of the crowdfunding project, three of us set out for the mountain. On our way, a colleague who did not have much expectation on crowdfunding refreshed the website over and over again. Looking at the soaring numbers, his eyes lit up, and he spoke emotionally, "So, the public is willing to

pay for conservation work!” During the fundraising, we suddenly realized one thing; fundraising is not begging for alms, but effective public communication. It can break through scientific barriers by means of interpersonal communication and can also make a path for generating fuels for this cause. And the public’s enthusiasm and participation in conservation efforts, and this has far exceeded our expectations. Eventually, with the encouragement of the SEE, we raised 340,000 RMB for our leopard conservation projects at two project sites within 79 days.

This fundraising actually helped the Felid Alliance to identify a strategy for its development, which is to follow the path of public fundraising through self-media-based communications. In the Internet era, efforts can be made by relying on the power of the Internet. We decided to recruit the volunteer who had done well in the fundraising activities, Qiaoqiao, into our organization as an official fundraising communications officer. The following year, we took the opportunity to recruit another excellent communications officer.

In fact, how to make your project one that others are willing to pay for is the key to public welfare projects. If what you’re doing is something that benefits the society, then it should not be for just the minority or for self-entertainment. It took the Felid Alliance a few years to realize and be able to do this. It wasn’t until then that I realized the most important resource provided by “Growing Up Together” wasn’t money. It provided each Tough Grass partner with two other important resources. One is the entrepre-

neur partners who bring their own social resources and business experience. The other is other Tough Grass peers. The significance of the former is self-evident. A few years later, when I spoke about the entrepreneur members of the SEE to another peer, he agreed with my opinion. These entrepreneurs chose to do public welfare for nothing in return. They were doing it not for fame and fortune; they were doing it from the purest hearts. This is one of their biggest strengths as mentors to startup environmental organizations; they sincerely hope for their mentees to develop well. Admittedly, I know that not every partner feels the same amount of gain, but this program itself is good. Its mechanism and some basic elements are true.

Through years of observation, I feel that the major problems facing public welfare organizations are not in their professional fields, but in the understanding of the public welfare industry and the institutional management capabilities. Although public welfare organizations are small in size, it is not any easier to manage than a company, because the personnel characteristics, business purpose, ways of doing things, and supporting resources are all not comparable to those in a mature business environment. How to run a public welfare organization is indeed a big challenge for novices. The “Growing Up Together Program” is one that focuses on solving the management and development problems of public welfare organizations.

With increased recognition and understanding of the Felid Alliance by our entrepreneur mentors, the “North China Leopard Conservation” project also re-

ceived support from the SEE North China Project Center, recommended by our mentor Zhizhong CHEN. In September, 2017, the SEE Shanxi Project Center was established. Weishan Liang, an entrepreneur mentor from Taiyuan, also strongly recommended the protection of North China leopards in Heshun, Shanxi to be one of the center's key projects.

Today, we are able to spend most of the

year at the North China Leopard Reserve in Shanxi Province, working on conservation-related tasks in our own base station. A dozen North China leopards live around our base station, allowing us to concentrate on conservation. Although the pressures of survival are still there, they are not as pervasive as they used to be, and we don't worry about whether our careers will last anymore.

Expert Interview

Dazhao SONG

Director of the leopard project at the Chinese Felid Conservation Alliance

The leopard is a widely distributed feline species. As a big cat, the leopard, like the tiger, has become the top species in the forest. Their prey is typically roe deer and other herbivorous ungulates. They may also dine on wild boar and other omnivores as well. If there are no top carnivores in the forest, the number of herbivores will multiply. This most often results in the decline of forest plants and threatens the forest's ecological health. Therefore, these top predators play a crucial role in the health of a forest ecosystem. Unfortunately, tigers are almost extinct in China. Thus, the burden of protecting the forest's health has fallen on a slightly larger number of leopards. However, the "slightly larger" number is only in comparison with the tiger. In fact, Chinese leopards are also at high risk.

Chinese leopards used to be found all over the country, but now their population has declined significantly. Especially the subspecies endemic to China, the North China leopard is already in an endangered

status. Threats faced by North China leopards are mainly from the following aspects. The first is a scarcity of food sources. In North China's forests, the number of ungulates has decreased sharply due to human hunting and other reasons. For the leopards that feed on them, the shortage in food has had a serious impact on its population growth. Secondly, many local farmers in North China tend to herd their cattle and sheep into the forests. Due to the lack of wild ungulates, North China leopards sometimes would attack these animals in order to survive. This further aggravated the conflicts between farmers and North China leopards. Some farmers even poison the leopards for revenge. Lastly there is the loss and fragmentation of their habitats. Due to human population growth, North China leopard's habitats are gradually encroached upon. The leopards are often trapped in many isolated small wood patches, which poses a great threat to their survival.

Compared to the two star species,

the snow leopard and tiger, the North China leopard receives very little attention from the public. In order to solve these contradictions, many wildlife conservation agencies are making better efforts. For example, our Felid Alliance has been working to protect the North China leopard for the past few years. Our first effort was to use infrared cameras to survey local species in unknown areas and we have successfully found traces of North China leopards in many of them. As for the conflicts between villagers and leopards, we worked with the local governments to participate in ecological compensation for the losses caused by North China leopards. In addition, we have also been actively conducting investigations and research, trying to connect their fragmented habitats. All these efforts are aimed at increasing the number of North China leopards. We hope that one day North China leopards can be distributed in all the places where they used to live and once again live on happily with nature.

Aifen Environmental Protection is an organization dedicated to municipal solid waste classification. Their original approach to waste classification has covered more than 200 residential communities in Shanghai and a total of more than 300,000 residents. As they grew from a small team to a mature organization, the SEE Foundation provided timely support at various stages. Looking back on these changes, we find that the help provided to public welfare organizations by the foundation is insufficient in terms of resources and technology. Likewise, it is also this way in the form of long-term companionship and mutual growth.

At 7 o'clock in the morning, we arrived at the garbage sorting department of the Shanghai Baoping community. The environmental volunteers of the community had already started their work, assisting the community residents in garbage sorting. We stood by the garbage compartment for a while to notice someone carrying a bag coming our way. It was an old lady who greeted the volunteers as an acquaintance, "So glad to see you today. What kind of grocery shopping are you going to do later?" As she said this, she picked out something from her bag and placed it

into a bucket, then threw the bag into another bucket. She then washed her hands with the faucet next to the room. The whole process was completed skillfully.

"The main job of volunteers now is to just motivate and supervise," said Hui SONG who looked fresh and focused wearing short hair and a shirt with an Aifen logo. He is the founder of Aifen Environmental Protection, a company dedicated to municipal waste classifications.

Aifen Environmental Protection is



With the development of China's economy, its solid waste problem has become increasingly prominent. The seemingly clean city corners are often filled with garbage. The outskirts of cities even became hidden garbage dumps. Photo courtesy: Visual China Group

based in Shanghai. In addition to the efforts of environmental organizations, the Shanghai government has also introduced many policies to encourage waste classification, and has built a back-end disposal site very early on. Starting from the waste classification pilot site at Shanghai Yangbo Tower in 2011, Aifen Environmental Protection has covered more than 200 residential communities and a total of more than 300,000 residents in Shanghai. During our conversation with Hui, we could feel the extensive efforts he and his team have put in. He could tell us how

many households there are in a certain communities and other specific details. He has even secretly followed recycling trucks to monitor the effectiveness of classified recycling.

You, Me, the Environment is Related to Everyone

Why waste classification? Whenever Hui SONG was asked this question, it took him back to Shengqiao town in Shanghai's Baoshan district in the 1990s. It is Shanghai's inland port far from downtown, and Hui's home. He remem-

bers hearing the deep long whistles from the cargo ships every morning.

At that time, Hui SONG was still in elementary school, and his home was surrounded by farmland. Streams flowed around the fields, and Hui and his friends used to use earthworms on an iron string to fish for lobsters by the river. They could quickly catch quite a few. Many people would swim in the river.

That all changed within a few years as some downstream factories of Baoshan Iron and Steel Co., Ltd. were opened nearby to perform the secondary processing of steel scrap and other materials. Due to its poor measures of environmental protection, it often discharged wastewater directly into these pristine waters. At first no one realized what changes the factories would bring to the environment. Hui said, "That's because the environment was contaminated slowly." By then he was in middle school, and the waters eventually turned black like ink and no one would come near them.

Before Hui SONG took up environmental protection, he worked in the Shanghai office of an American company. Chinese suppliers made recycled paper for use in hotels and restaurants in North America for this company. At work, Hui learned that although the color of recycled paper looked a little dark and not so attractive, it was more environmentally friendly. At that time Song felt that he was indirectly making contributions to the society, and it was a good thing.

In his third year, Hui SONG began to inspect his company's suppliers whose factories were mainly located in

Shandong, Zhejiang, Guangdong, and Guangxi. The bosses of the local factories would treat him to dinner during his business trips. During their conversations at the dinner table and after a few drinks, many would share how they secretly discharged wastewater. Most of their factories were built near water sources. If they dug a tunnel from the factory to the middle of the river, it would be difficult to tell they were discharging wastewater. The factories are required by the government to be equipped with water treatment facilities. However, in order to save costs and maintain attractive prices, the equipment was basically just decoration. Secret wastewater discharge had even become common topics for the bosses to chat about.

This gave Hui SONG a big shock. He had thought his work was beneficial to human beings, but he became an accomplice in polluting the environment. He pondered many things; the pollution of rivers he witnessed as a child, the chronic diseases that his elders suffered from, and the vast forests in Switzerland. One thought became clearer, "Did the environment affect me and my family? If so, then how?"

Eventually, Hui SONG quit his job at this American company.

Garbage Siege

After Hui SONG quit his job, he stayed at home for a while. "I just noticed that there were so many medicines in our house. My parents had been taking medicines for their chronic illnesses for a long time, and they put them right there on the coffee



Shown in the picture is Hui SONG demonstrating a poster of tips for garbage classification. Publicizing and training are important links in the promotion of garbage classification.

table. My mother had chronic pharyngitis, and I had it myself. I could always feel the phlegm, but I couldn't cough it up. Later, my mother was diagnosed with thyroid cancer. I started thinking about what I could do."

He also noticed smoke coming from a nearby factory. "The smell was especially strong in the afternoon," he said, "I never knew about it before when I was at my job. The surrounding residents were definitely affected, but few people might have reported it." He began calling the 12369 Environmental Reporting Hotline to complain. The response he got was that it would be recorded and sent through the public complaint procedure. But the situ-

ation was not completely resolved. After having reported, on multiple occasions, the factory smoke issue, which resulted in no corrective action, Hui SONG decided to move. It didn't take long for him to realize that moving could not solve all the problems. Smog had become more and more serious. The severe environmental and health issues around him prompted Hui to start seeking for more solutions.

It wasn't until 2008 that Hui SONG came in touch with public welfare organizations. That year, because of the Wenchuan earthquake, public welfare organizations popped up on the public's radar screen. Hui also took the initiative by taking part in environmental activities, such as tree

planting and wildlife conservations. Two years later, he learned about the Shanghai Loving-Our-Homeland Volunteers Association while surfing the internet. One of the projects dealt with garbage sorting. Hui was glad, “I felt that this project was closely related to my life; I could do it often and even every day.”

This organization was founded in 2000, and it mostly provided legal assistance to ordinary community residents, especially vulnerable groups. It was also doing community environmental education, including the dissemination of garbage classification and related this knowledge to residents. After participating in some activities, Hui applied for a job as an environmental project manager. He officially entered the profession of public welfare organizations.

During his work and training, Hui SONG kept learning about the urban environmental crisis caused by solid waste. The largest landfill in Asia is located in Shanghai. It is the Old Port Solid Waste Base, and it is an eye-watering 30 square kilometers in size. Hui SONG often described the landfill to residents by saying, “The landfill is about the size of Zhabei district. Trash goes 45 meters deep, which is equivalent to a 15-story building. And, this is not the only landfill in Shanghai. We have more in Songjiang and Pudong.”

In addition to landfills, large amounts of garbage are also disposed through incineration. The Jiangqiao Garbage Incineration facility is located in between Shanghai’s middle ring and outer ring. It sits at the border between Jiading district and Putuo district. It can process 1,200

tons of garbage per day. Incineration always leaves behind garbage residue, which still needs to be sent to landfills. Incineration also generates Dioxin, which is harmful to human health. It is a persistent organic pollutant with strong toxicity that will accumulate in the bodies of organisms.

“Even if every existing incineration plant meets the emission standard, new incineration plants are being built in many places. There are already quite a few within a limited range. This can be likened to burning an incense stick at home; it doesn’t matter. But, if you burn ten or twenty incense sticks, you won’t be able to stand it. Some non-governmental records have shown that dioxin is found in the breast milk of residents living around the incineration plant,” said Hui about the harm done by the garbage incineration plants.

Although waste is constantly being produced, it is difficult to solve the problem from the root. However, waste classification can control the disposal efficiency to a certain extent. Hui SONG said, “I am not strongly against incineration, but I am against the incineration of mixed waste. For example, glass won’t even melt at 800 °C. When you burn metal, it comes out of the process as metal. And, if you throw kitchen waste into a fire, you need to add combustion aids due to its high content of moisture, which is a waste of energy.”

After joining “Loving-Our-Homeland,” Hui SONG and his partners started to set up a garbage sorting pilot site at Shanghai Yangbo Tower in September, 2011. At first, many people thought that

the program would fail, but after three months, positive effects started to show. This became the starting point of Aifen Environmental Protection.

Let Waste Classification Grow in Shanghai

When Hui SONG and his team started to set up a classification pilot site, they first approached the Baoshan subdistrict office in the hopes that they could help mobilize its communities and see which one was willing to give it a try first. In the beginning, no one was on board. After repeated communications, Yangbo Tower's Owner's Association agreed to try it out.

There are two buildings in Yangbo Tower and 169 households. Hui SONG first changed the garbage dump in the community to an open type. The residents were indifferent at the beginning; their thinking was that it was one of those temporary acts by the community office. The Shanghai municipal government used to encourage communities to conduct waste classification quite a few times in the past, but it never lasted long. So, they assumed that this was also a "face activity." Unexpectedly, the volunteers were very conscientious. In the beginning, they would come on duty every morning, stand by the garbage cans, and tell residents how to sort their garbage.

The government used to distribute, to every household, a trash bin just for wet waste. Now, there were specially appointed personnel coming to the community and giving garbage classification

lectures. Understanding the benefits of classification, the community residents gradually got involved. Hui SONG and his team also bought a compost bucket to make compost out of kitchen waste. They first used it to demonstrate how to compost, and they then applied the compost onto the loquat trees in the community. The trees really grew a lot of fruits that year. The residents witnessed the entire process and were amazed. Hui and other volunteers made a bag full of thank-you notes and loquat fruits, which they presented to every household in the buildings.

"Many people said that that was the first time they got to eat loquat fruits grown in the community. They felt a deeper connection with the community and were willing to do garbage classification together," Hui SONG mentioned. While progress was made in Yangbo community, Hui SONG was also worried about the back-end disposal of the garbage. He and his volunteers even followed garbage trucks to monitor back-end work. After the garbage truck left from Yangbo Tower, it had to go to other communities. There were more than one gate in each community. The truck might have gone in through the front gate but out through another one. After losing it a few times, they finally arrived at the pre-treatment plant. Hui SONG walked around and saw, with his own eyes, workers sorting out plastic waste. He and the other volunteers finally left with peace of mind. He said, "If it were just a garbage plant that disposes mixed waste in landfills, it did not have to go through this step."

Soon, Yangbo Tower attracted the atten-



Illustration of the garbage classification methods by Aifen Environmental Protection. Photo Courtesy: Aifen Environmental Protection

tion of the media and the government. Their garbage sorting model was named the “Yangbo Model.” There were always journalists and members of other communities coming to visit. This made the residents very proud, and they paid even more attention to garbage classification. They also noticed that the garbage compartment did not smell like it used to since they began the sorting of waste. Their environment became cleaner. More communities approached Hui SONG to pilot garbage classification.

In August, 2012, Shanghai Aifen Environmental Protection Science & Technology Consulting Service Center was officially established. In the same year, Aifen Environmental Protection also added two new pilot communities with Guangsheng Apartments being one of them. It was also the first replica of the “Yangbo Model.”

Aifen Environmental Protection used three months to do the preparatory work.

They first conducted a community survey and a questionnaire survey. They asked residents whether they would like to become volunteers and agree to do garbage classification in the community. In the survey, most residents answered “agree to support garbage classification.” Next, they rebuilt the garbage compartment and set up a work team to guide garbage classification and a community volunteer team. After garbage classification was fully carried out in the community, a research team on human sustainable behaviors from Fudan University came to conduct an investigation. After three days of observation, they found that 87% of the waste was classified into wet and dry waste without the supervision of volunteers.

To achieve this, volunteers needed to put in a lot of meticulous effort. Hui SONG said, “In early July, I visited a community that was doing garbage classification that Aifen Environmental



Fig.1



Fig.2

● Figure 1: A resident from Shanghai Baoping Community is doing garbage classification, while the volunteer next to her is helping her record on the "green account." After the early-stage promotion and training provided by Aifen Environmental Protection, most residents in the community accepted garbage classification. Photography: Shu ● Figure 2: Garbage classification bins in an Aifen pilot community. Currently, there are such garbage classification bins in more than 200 communities in Shanghai. Every morning, there are volunteers from within the community on duty next to the bins to assist residents in classifying waste. Photography: Shu

Protection was responsible for. Two volunteers were standing outside the community garbage compartment at 7am in the morning. They were in their fifties and were on duty at least once a week. Soon, the first resident showed up to discard garbage. The volunteers told me that as soon as you see someone carrying garbage in the distance, your eyes should follow him/her.

When residents came to dispose of their garbage, volunteers would use their mobile phones to score points on the residents' green accounts. Many households in Shanghai now have green accounts for garbage sorting. It has been part of the city government's incentives for residents to participate in environmental protection since 2013. Within an hour, most of the residents in the community would fulfill their credits. Residents can participate in regular offline point exchange activities. They can also exchange points for gifts online through the official green account

website.

"The garbage compartment is also constantly improving." Hui SONG said that the community set up a fan next to the room to cool it down. When the garbage compartment was remodeled, a faucet was connected to it so that people could wash their hands after disposing of wet waste.

From just the new changes to the garbage compartment, we can see how urban waste classification is done through the interactions of residents, communities, non-profit organizations, enterprises, and even local governments. Through its long-term practice, Aifen Environmental Protection has also summarized a set of working methods. They are called the three-phase, ten-step method. Three phases refer to the introduction phase, implementation phase, and maintenance phase. It includes the preparatory community survey, setting up of work group, and the final assessment summary and

system building.

As the number of communities in the city keeps increasing, garbage classification will encounter various new difficulties, especially in new communities. Most old-fashioned residential areas in Shanghai are equipped with one or two garbage compartments. But newly-built, high-rise style residential quarters often have trash cans installed downstairs in each building unit. They may even have them on every floor just for the convenience of the residents. Residents often do not know each other and cannot form an environment of mutual supervision. This adds a lot to the workload. Furthermore, most people involved in garbage classification are elderly people. Hui SONG said, “Although young people are very environmentally conscious, they are too busy and stressed to practice garbage sorting on a regular basis. Many people return from work to the community at night without knowing about this practice. Some young people move frequently and it’s hard for them to have a sense of belonging to the community.”

Hui SONG told me, “There are also some people who don’t want to classify their garbage. They would throw garbage into the public trash can outside of the community. Luckily, they are in the minority. In more than 200 communities, more than half of the residents are doing garbage classification. The majority will gradually influence the minority.”

Seeking for Nurturing Soil

At the beginning of the establishment of Aifen Environmental Protection, most of the funds spent in the pilot community

were paid out of pocket. The subdistrict office would only reimburse for some materials. The participants were all volunteers. To enter more communities, Aifen needed to recruit full-time employees. At this time, funding became very important for the formation of this start-up team.

In 2012, Hui SONG applied for the SEE’s “Green Starters Program,” in the hopes of receiving support. Unfortunately, his application did not pass the first round of selection. He said, “At that time, the team was not mature yet. Six of us went together, but our goals and values did not coincide, and our mode of operation was not clear.” Hui SONG analyzed the reasons.

In the second year, after Aifen Environmental Protection passed the first round of selection, he went to the next round with just one other partner. At that time, Aifen’s activities had included Guangsheng Apartments in addition to Yangbo Tower. He used the research data by Fudan University to perform demonstrations. “With data support, this model was shown to be replicable, and it obtained a certain level of validity verification.”

They finally passed the “Green Starters” evaluations and received a non-restricted fund of 150,000 RMB in 2013. “This fund was very important. We could pay our rent. We could pay wages, we could finally recruit employees,” Hui said delightfully. In the same year, their work was affirmed by the government. In the form of purchasing our services, a total of 24 assisted community pilots were added, and we were paid several hundred

thousand RMB for our assistance services. “The money was mainly used for the promotion, management, and education of community waste sorting,” he said. Hui SONG also said that as the number of communities assisted by Aifen increased, the figure was getting close to 2 million RMB this year.

Aifen Environmental Protection’s full-time employees had gradually reached more than a dozen. Hui SONG faced issues such as the management of more personnel and setting a strategic vision of the organization’s future. In 2015, Aifen Environmental Protection was selected for the SEE “Growing Up Together Program.” For him, the biggest difference between “Tough Grass Partners” and “Green Starters” was in companionship. “The support for environmental organizations is longer. “Green Starters” is only for one year while the non-restricted funding from “Growing Up Together” lasts for three years. More importantly, there is a talent development plan. This is very useful for growing public welfare organizations.”

The SEE assigned entrepreneur mentors and public welfare mentors for its “Tough Grass” partners. Hui SONG’s three main mentors were; entrepreneur mentor Yuhong YE, public welfare mentor Yingying Lu, and ternary strategy mentor Ying WANG. Hui SONG met with his mentors frequently, sometimes in Aifen’s office, and sometimes in the mentor’s home. He believes that the most important role played by the mentors is to give the public welfare organization different perspectives and ideas. He said; “The mentors can help me turn my experience into a methodology. For example, mentor

Ying used her Ternary Theory to re-examine my previous work experience. The mentor taught me the theoretical method and I determined the logical relationships. In this way I adjusted the order and made more subdivisions for our previous three-phase ten-step method.”

Hui SONG used the Ternary Theory to analyze the main interests and related needs of urban waste classification and more clearly understood his roles in it. He is a designer, instructor, and promoter. Hui said, “Aifen can unite stakeholders together to promote waste sorting. For the residents, Aifen can provide a whole set of procedures and methods for grassroots community leaders in terms of consulting and implementation of city greening. It is both the designer of the community’s internal system and the promoter of the entire waste processing chain.”

Yuhong YE also noticed the changes happened to Hui SONG over the past few years. She said, “At first he was very confused about how to manage a team. He used to work at the front line and treat himself as a substitute, but that was distracting. Now, he has considered how to make better use of human resources, assessment, and strategies. He’s better at managing the team. In addition to his passion, I have also seen the improvement of Hui SONG [‘s leadership].”

In addition to their skillful help, the mentors also bring resources. With the help of Ying WANG and Yuhong YE, Aifen Environmental Protection received 400,000 RMB from the SEE East China Project Center. The fund was used to create visualizations of its six-year’s garbage classification experience. It

resulted in two manuals; the “Community Waste Classification Operation Guide” and the “Aifen Model for Community Waste Classification,” as well as 20 videos about their working methods. Such work makes more people clearly understand the knowledge and experience in waste classification accumulated by Aifen.

From serving one community to four subdistricts in Shanghai, and finally spreading their experience and methods to more people, Aifen Environmental Protection has experienced a great transformation. During this transformation, the help provided by the SEE created a growing environment for its development. More importantly, it has allowed the experience and enthusiasm of Hui SONG and his teammates to be better expressed and spread. When coping with environmental problems, Hui SONG always maintains a rational, optimistic, and pragmatic attitude, which has allowed him to lead Aifen further.

Diagnostic Consultation Based on Ternary Strategic Management

Based on her own experience in the corporate and public welfare fields, mentor Ying WANG developed the Ternary Management tool specifically for the strategic management of growing environmental organizations. It provides effective tool support for more public welfare organizations during the processes of strategic design, strategic selection, strategic decision-making, strategy implementation, strategy review, and strategic revisions.

Expert Interpretation

Ying WANG

Senior mentor of “Growing Up Together”

In the past few years, I have traveled to more than half of China; I’ve gone on site to help nearly 40 non-profit organizations with diagnoses, strategic analysis, and consulting. The efforts we are making are to water the roots of environmental protection. What is the root? If we think of public welfare projects as the fruits and flowers on the tree of public welfare, the large number of non-profit organizations are the trunks; the growth of the non-profit organizations themselves is the tree root. Only when the roots go deep, the leaves and flowers can flourish and produce rich fruit. What “Growing Up Together” does is to make the roots grow stronger and better absorb nutrition from their own environment. What mentors should do is to “cultivate our spirits” together with the various NGOs and obtain “usual minds.” The “usual mind” is not just manner or skill, but also a pure heart for public welfare.

Take Aifen Environmental Protection as an example, I feel that their work is very solid and have addressed the upstream and downstream issues in urban waste classification very early. On the basis of the strategic visions and challenges described by Hui SONG, we used the Ternary semantic system for dialogues, communications, and discussions. After analyzing the main interests and related needs, we were able to clearly identify the roles Aifen Environmental Protection plays in urban waste classification. In this process, the role of we mentors was to provide the NGO with a new perspective and ways to think about problems.

by Jingyi ZHAO

Fujian Green Home

Focus and Transformation of an Environmental Team

The Tough Grass partner at Fujian Green Home is Mengxuan DENG. She is also the director of the Green Home. She and her team have completed its transformation. In addition to its previous focus on public welfare litigation services, it is also trying to build an environmental risk early warning system.

On the day we met Mengxuan DENG, she wasn't feeling well. At the beginning of 2018, she was diagnosed with lumbar disc herniation and chose conservative treatment. But when she went to Inner Mongolia for a business trip, not long ago, the bumpy journey and two plane transfers caused a relapse. She could only walk slowly, step by step, with a facial expression showing the pain. As soon as we started to talk about environmental protection, her look changed. She gestured from time to time, almost forgetting the pain in her body for the moment.

Mengxuan DENG and the public welfare organization, Fujian Green

Home, give many people the impression of a warrior. They go all the way to the front line to investigate key polluted areas and initiate public interest litigations. Their efforts have pushed some large factories to stop polluting and carry out environmental rectifications. After joining the SEE's "Growing Up Together Program, they set about setting up an environmental risk early warning system with the help of their mentor, Zhizhong CHEN. The system implements an environmental credit evaluation system targeting enterprise's environmental risks. Its service customers include industrial investors, financial institutions, and



Founded in 1998, Green Home was formerly known as the "Green Home" Environmental Science and Education Program broadcasted by Fujian TV Station. Its founder was Ying LIN, the producer of the TV program. In 2006, Green Home was registered as the first environmental public welfare organization in Fujian. Photography: Yaqi WU

insurance companies. This is also an attempt for a market-oriented product by Green Home.

“We are only one of those who are facilitating environmental protection. We try to help enterprises, residents, and local governments to formulate communications to achieve final solutions to environmental problems,” summarized.

From Journalism to NGO

Before entering the NGO profession, Mengxuan DENG worked at Fujian TV. The job often required her to go to towns and villages to report news related to people’s livelihood issues, such as land disputes, farmers’ cattle being stolen, and water pollution. In the process, villagers often reported pollution incidents.

She once went to Longhai, Zhangzhou for an interview. A local came over to the camera with his cow and complained in a dialect about a serious pollution problem. He said that wastewater was discharged into the sea and had killed everything they planted. Mengxuan DENG was standing on the shore and noticed the filthy and smelly river flowing into the sea.

She and the cameraman went up the river and found the sewage outlet. It was a yellow-colored wasteland with bubbling foam and not a single blade of grass. They suspected that it was the waste water and waste residue discharged by a large pharmaceutical factory. After about half an hour of walking through these vapors, their

eyes were irritated to tears.

But the film did not appear on TV in the end. This made Mengxuan DENG think, “The local people could only complain about the stink and had no further action. They did not even know who discharged the wastewater.” After that, Mengxuan encountered similar situations a few more times. She was confused; Why wasn’t the problem being solved? Why wasn’t there any concern?

This had troubled Mengxuan DENG until she met Ying LIN at an interview. Ying is the founder of Fujian Green Home, which was established in 1998, formerly known as the Green Home Science and Education TV Program. It has been dedicated to protecting the environment in people’s hometowns, motivating more people to become environmental guardians, and reducing the harm of pollution to the environment and people. Mengxuan DENG told Ying LIN about the issues that had perplexed her while participating in the environmental investigations in the countryside. This experience pointed to a direction where she might be able to find answers. In her spare time, Mengxuan DENG also went to Green Home often to offer her help. In 2006, she officially joined Green Home after leaving her job at the TV station.

Mengxuan DENG feels that her previous media working experience will be able to be utilized for charity activities. She explained, “I am good at resource integration and allocation during the beginning stage. Once we have pilots and have a good solution



Pictured are the samples brought back to the office by Green Home's staff from their water ecological investigation around Fujian.
Photography: Yaqi WU

to the problem, we can replicate it. The Green Village Green Countryside Model Base that we set up in Chang'an Village has this value.”

The Experience with Chang'an Village; Let Locals Become Action Takers

In June, 2008, Green Home received a call from someone in Chang'an village, Mawei District, Fuzhou City, asking for help to solve their pollution problem. The village is located on the north bank of the Minjiang River estuary. It has a permanent population of about 1,000 people, mostly being elderly. The pollution problem had

existed for more than two years, and it has appeared in newspapers and on television. Unfortunately, it is still not resolved.

Three years ago, the Gushan Biodiesel Plant was built near Chang'an Village. In addition to the irritating and unpleasant odors emitted by the factory, the wastewater discharged also gradually wiped vitality off the wetlands and shoreline. The villagers took a lot of photos of the pollution, and they even got into conflicts with the company. After reading the materials submitted by the villagers in Chang'an village, Green Home led environmental experts to the scene. They stayed for two days,

visited villagers and the company, and investigated on the impact of the factory on the surrounding ecosystem. According to the villagers' complaints, there were nine months out of a year that they were unable to open their windows. Even if the volunteers stayed for just a short while in the village, they felt irritation in their respiratory systems.

After many round-table communications with the villagers and on-site investigations, Green Home built a team of "environmental guardians" made up of locals. "Most of the villagers did not realize that in addition to the large-scale discharge of pollutants by the factory, littering and wasting of resources by the public also accounted for the environmental degradation. In order to solve the environmental pollution problem here in an essential way, it should start from changing the environmental awareness of the villagers," said director Ying LIN. Most of the participants of the "environmental guardians" were elderly people in their 60s. The youngest were in their 40s. The professors in Green Home's experts team taught the villagers about environmental protection. The elderly and village officers all came to class. The first step was to understand environmental impact assessment.

After Green Home conducted environmental education in Chang'an Village for more than three months, the volunteer team in the village gradually grew. People from surrounding villages also joined in. Green Home turned Chang'an Village into

a "Green Countryside Model Base." They invited experts and scholars to give environmental lectures and held weekly activities. These initiatives attracted a lot of media coverage, and the villagers gradually gained a sense of collective environmental awareness. It also attracted many visitors from outside the province.

"This was the media strategy we used in addressing environmental problems, because there were many important figures from outside the province to come for visits. Important leaders in Fujian often came to participate in activities and made environmental protection the symbol of Chang'an village. There was no way for the factory to continue its production," said Mengxuan DENG. They hoped to put pressure on the factory through public attention, and at the same time, they started to prepare for a lawsuit against the diesel plant. When examining its record, they found out that the factory was involved in a lot of illegal operations. For example, the initial land acquisition was unlawful. Fraud was suspected when documents showed the collection of villagers' signatures.

The legal department of Green Home began collecting material and compiling documents, for which they obtained signatures from the villagers. Multiple individual and class action lawsuits were filed simultaneously. These lawsuits were directed at different violations by the same company. However, the lawsuits filed in district, city, and provincial courts were ultimately not put on record. Mengxuan



Fig.1



Fig.2

● Figure 1: Mengxuan DENG's office in the Environment Friendly Center of Fujian Green Home. The Green Home office is located in Fuzhou, Fujian, but their volunteer team has carried out environmental investigations and environmental assistances in 12 districts, 23 watershed sections, and more than 800 villages and towns in Fujian. Three rural environmental education bases (Green Countryside Program) have been established, which has trained 883 villagers to become environmental guardians in their hometowns. Photography: Yaqi WU

● Figure 2: A wastewater discharge problem discovered by the Green Home team during its investigation in Shaowu, Nanping, Fujian Province. The source of the pollution is still under investigation. Photography: Zhengyu CHEN

DENG said; “The purpose of litigation was not to win, but mainly to let more people know about it, so that it acts as a deterrent to the company.”

The continuous litigation of hundreds of villagers caught the attention of the relevant departments. Whenever the villagers called the reporting hotline, the environmental protection department would come on site and ask the factory to rectify the issues. The villagers also established a non-governmental monitoring station, which was staffed 24 hours a day with participations of village officials and personnel from within the factory. They would record the time when odors were detected. When negotiating with the factory, the villagers showed records from more than two years. Mengxuan DENG recalled, “If you say that there was no smell, then who is lying here?”

With the supervision and continuous appeal by the villagers, the biodiesel plant started a half-year rectification in March, 2009. However, a crude oil spill occurred in August of the same year. It resulted in oil stains all over the Chang'an section of the Minjiang River. The foul smell extended three kilometers away. The diesel plant eventually stopped production completely. The accident also gave confidence and methods for the people in Chang'an Village to guard their living environment. In addition to the diesel plant, they also prevented a Promethium Nonferrous Metal Plant and the Davis Chemical Plant from being built here.

Nowadays, many people come to Chang'an Village to learn about their experience in environmental protection. Green Home believes that Chang'an Village has entered a new

life cycle. Whenever there are companies who want to build plants here, the villagers took the initiative and asked if they have compliance documents and what the environmental impacts would be. Mengxuan DENG summarized this experience and said, “A sustainable solution to environmental problems begins with environmental education. Having a team composed of local people to supervise enterprises’ environmental management will gradually form a positive interaction among the people, the government, and the enterprise.”

New Changes Starting with “Growing Up Together”

Mengxuan DENG frankly admitted that the lack of funds was her original intention to join the “Growing Up Together Program” of the SEE Foundation. However, during her three years with the program, she received unexpected rewards. She said that she still remembers the series of questions asked by her mentor, Zhizhong CHEN, during his visit to the office; “What is the mission of Green Home? What is its goal? What are the objectives in five years?”

Although Green Home had been established for a long time, it did not have a clear strategic goal. Mengxuan DENG said about her reflections, “We did a lot of things, such as environmental education, garbage classification, and even water sources. We were like an organization that wanted to participate in everything.” After understanding the

situation, Zhizhong CHEN suggested that Green Home borrow the commercial mode of thinking, bring in more resources, and create greater value.

In the beginning, this caused some disputes within Green Home. Some older experts could not understand why they needed to use a business vision to do charity. They wanted the organization to do things with a pure spirit of altruism. However, the traditional form of public welfare implied low salaries and fast turnover. Ying LIN, the founder, also said after thinking it through, “If we don’t keep up with the times, we won’t make progress. Only by attracting more talent, we can do more environmental work.”

After several meetings with “Growing Up Together,” Green Home slowly sorted out its organizational goal. It is to help local people solve environmental problems and become environmental guardians.

Following the suggestion of mentor Zhizhong CHEN, Green Home began to try a market-oriented product; an environmental risk early warning system. It implements an environmental credit evaluation system targeting the environmental risks of enterprises. Based on the local environmental performance of an enterprise, it analyzes the public data of all its environmental assessment records and establishes a corporate environmental file. This information is provided free of charge to banks and investors to help them assess the environmental risks that may exist in a business.



Shown in this picture are members of Green Home evaluating the pollutant discharge situation at a factory; checking the lye spray tower. The lye spray tower is an indispensable piece of equipment for treating acid waste gases generated in the processing of hydrochloric acid, sulfuric acid, and nitric acid, etc. Photography: Zhengyu CHEN

At first, Mengxuan DENG felt that it was sufficient to just provide data. Zhizhong CHEN told her that she needed to think about developing products. In recent years, many companies' production projects face increased risk of being suspended for reasons related to environmental protection. Banks pay more attention to the environmental risks related to corporate loans. Taking note of this background in conjunction with the mentor's suggestion, Green Home will now provide an assessment report on the environmental risks of a company in addition to just environmental assessment data to help financial

institutions understand the potential impacts of the environmental risks.

Mengxuan DENG believes that those at Green Home have learned a lot from this phase of the "Growing Up Together Program." The mentor system can help some local public welfare organizations find their own shortcomings and develop their potential. She said, "Sometimes, because you have been in it for too long, it is not easy to think out of the box. With a different perspective, you can focus on your core mission as well as see future directions."





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