



CHINA ISSUE GUIDE



ENVIRONMENTAL PHILANTHROPY



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The Centre for Asian Philanthropy and Society (CAPS) is a uniquely Asian, independent, action-oriented research and advisory organization committed to maximizing private resources for doing good. We do this by generating evidence-based insights into how individuals, companies, and governments can best address social challenges.

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Executive Summary

This report is the second in our four-part series examining “philanthropy with Chinese characteristics.” Here we look at individual and corporate giving to environmental issues through the lenses of themes and approaches. The former focuses on areas as diverse as biodiversity, energy, climate change and sustainable livelihoods, while the latter encompasses strategies such as conservation, educational campaigns, environmental impact disclosures and the rehabilitation of polluted areas.

While China has achieved huge success in expanding its economy and generating wealth for its citizens, this achievement has come with an environmental cost. A deteriorating environment threatens not only citizens’ health and livelihoods but also the country’s future economic growth and global efforts to combat climate change. In China, air pollution is a leading cause of premature death and disability, and water and land contamination pose serious health risks to local communities. The cost is not just social: the bill for environmental damage has soared into the hundreds of billions of dollars.

In the last ten years, China has made great strides in addressing environmental degradation and climate change, but there is still work to do. Recent actions by the government include new policies designed to protect and rehabilitate nature, the introduction of restrictions on polluting activities, and a public call for corporations and communities to embrace a sustainable future. Having successfully mobilized private sector support to alleviate poverty, the government is likely considering similar tactics to address urgent environmental needs.

At the same time, the mandate to undergo a green transformation and low carbon development gives rise to business and philanthropic investment opportunities. Green finance is a significant growth area with China overtaking the United States in 2021 as the largest issuer of green bonds. President Xi Jinping has also stressed that environmental considerations must be part of China’s economic plan: financial gains can no longer be

separated from the environmental impact on our planet.

There are now more than 3,000 environmental nongovernmental organizations across China, working in areas such as education, research, and project design and management. As the sector continues to grow, these organizations are building out their capacity and forming meaningful bonds with government and corporations to maximize positive impact.

Chapter 1 looks at individual, corporate and government-affiliated philanthropy in China. It provides an overview of the different types of foundations that exist within the Chinese philanthropic ecosystem and how their number has increased rapidly in recent years.

Chapter 2, written by Ma Jun (马军), Director of the Institute of Public and Environmental Affairs, examines the current state of the environment in China, including key issues, policy responses and overlooked areas of need. It includes an overview of the serious environmental challenges, categorized into environmental pollution, climate change and ecological degradation, each exacting a heavy social and financial toll. The chapter also outlines the strategies being mobilized by public and private stakeholders to deal with these challenges.

Chapter 3 highlights case studies that show the successful implementation of an environmental philanthropy strategy in China. It also looks at the issues being addressed, by whom, and through what kinds of projects. While the environment currently receives relatively little attention and funding compared to education and health philanthropy, the success of existing projects—combined with the government’s signalling to the private sector that the issue needs greater attention—suggests we are likely to see the rapid scaling up of environmental philanthropy in China.

The **Conclusion** underscores the core tenets of “philanthropy with Chinese characteristics”: strong alignment with government priorities, leveraging of business skills, piloted innovations that grow into public sector adoption, and a pragmatic, traditional

connection to one's hometown. While there are relatively few Chinese funders working under the banner of environmental philanthropy, a wide range of foundations are working on long-term viable solutions for a more sustainable future.

Finally, we have outlined **Next Steps** for thinking about environmental philanthropy in China. This resource has been designed for both those already working in this space as well as those considering entry. We suggest key questions that funders need to ask themselves to help them find their niche and craft their strategy for creating a positive impact.

Introduction

China is rapidly growing and evolving, not least through a dramatic rise in wealth. As the country becomes richer, its philanthropy also grows in depth and scope. In 2018, philanthropic donations of ¥1 million (approximately US\$154,560) or more rose to ¥27.63 billion (approximately US\$4.27 billion) in total—surging 50% in a year and almost fourfold over a decade.^{1,2,i}

But inequity persists, and while the government has the predominant role in addressing societal needs, philanthropy also plays an important part. In China, as in any nation, the haves can do much by reaching out to help the have-nots. Philanthropy also offers a way for citizens to engage, for those who care about their community to assist others. No matter how much China continues to progress, everyone can benefit from shared efforts to find and deploy solutions to local needs. China's government has emphasized this concept. In recent speeches, President Xi has repeatedly referred to “common prosperity” (“共同富裕”), a goal which embraces the role that private social investment can and should play in moving the country forward in ways that benefit all citizens. In fact, during the Fourth Plenary Session of the 19th CPC Central Committee meeting, philanthropy was adopted as a mechanism to help achieve common prosperity.³

This report is part of a four-part series on the role of individual and corporate philanthropy in addressing health, the environment, education and poverty alleviation in China. As China continues to prosper, needs in these four crucial areas will change. But, given China's size and complexity, needs will persist. We hope that these studies will help readers understand how Chinese philanthropy tends to be deployed, and where it has been and has the potential to be most effective. We also hope to help readers be more strategic in their giving going forward. Finally, we hope to better inform this most precious human tendency of helping others so that it can be as impactful as possible.

This report, the second in our China Issue Guide series, focuses on environmental philanthropy. There have been several landscape studies on Chinese philanthropy in the last few years, but this report endeavors to go beyond a broad overview.^{4,5,6} It looks at local and specific efforts to see how Chinese individual and corporate philanthropy address environmental and climate change challenges in communities throughout the nation. Our studies answer these questions about the nature of philanthropy in China and how it is being deployed:

1. What does “philanthropy with Chinese characteristics” generally look like? China's philanthropy is unique: while the core motivation is universal—helping one's fellow man—the strategies and means for doing so are rooted in China's political and cultural composition. A holistic understanding of Chinese philanthropy underpins the deeper dive into environmental philanthropy.
2. What is the state of the environment in China, and what are the key environmental priorities of the Chinese government?
3. What types of environmental projects are being funded and where? What trends can be seen from this overview?
4. How aligned is environmental philanthropy with government objectives? Are there gaps that can be filled through philanthropic and social investment initiatives?
5. Given this analysis, what are the key recommendations for environmental philanthropy going forward?

Our insights are based on extensive quantitative and qualitative data. We mined data from national and provincial-level information disclosure platforms and triangulated it against third-party data banks and Chinese media reports. We also interviewed dozens of leaders from businesses, foundations and social organizations.

ⁱ The exchange rate used in this report is ¥6.47 = US\$1.

The report is divided into three chapters and a final section on next steps. The first chapter is an overview of Chinese philanthropy (individual, corporate and government-affiliated) and its evolution in recent years. While some of the nomenclatures of philanthropy are the same in China as in other countries, Chinese giving can be described as “philanthropy with Chinese characteristics.” In the first chapter, we explore what this means.

The second chapter, by Ma Jun (马军), Director of the Institute of Public and Environmental Affairs, provides an overview of the current state of China’s environment, including environmental pollution and challenges related to climate change and ecological degradation. It also looks at current government policies and areas that need additional funding and attention.

The third chapter focuses on where funding is going under the environmental umbrella and why. It also spotlights examples of philanthropic projects in underserved areas to illustrate the role philanthropy can play.

Finally, we conclude with thoughts on the next steps in environmental philanthropy: a how-to guide for those already in or wanting to explore this space. Rooted in our observations of the current status and potential of philanthropy, the steps we discuss may serve as an aid to those who want to help the environment and the people affected by environmental challenges.

Chapter 1

China's Philanthropy Landscape

One of the most important distinctions to note between philanthropy in China and elsewhere is that certain terms take on meanings distinct from the West.

Foundations are especially important in China as they are integral vehicles for social investment. Encouraged by new regulations and the availability of charitable funds, Chinese philanthropists have embraced the creation of foundations for the delivery of social investment. By the end of 2019, the number of foundations in China more than doubled, from around 3,000 in 2012 to almost 8,000.⁷

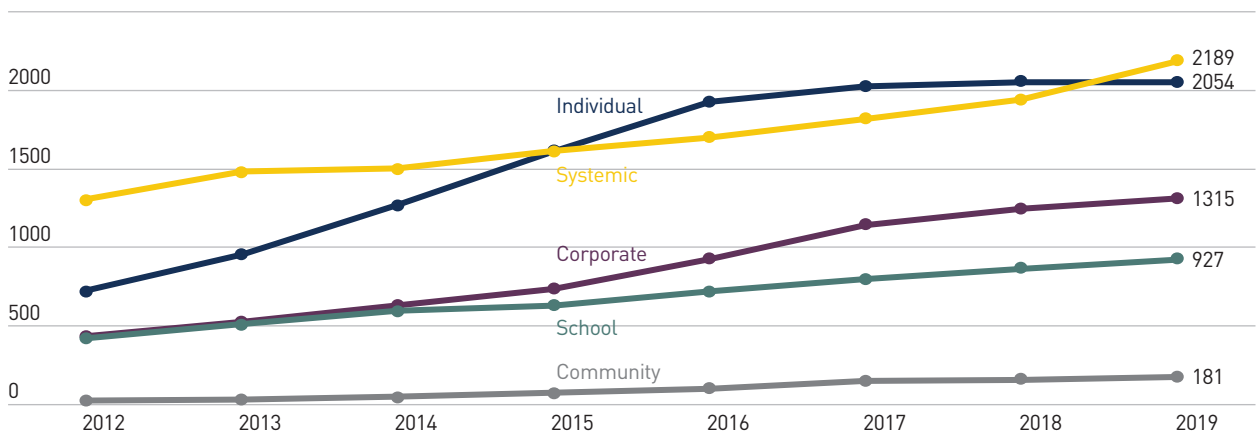
In China, the term “foundation” (基金会) applies to several types of organizations and, unlike in the United States, not all of them are grantmaking institutions. Different types of foundations and the ways they operate are key features of “philanthropy with Chinese characteristics.”

Figure 1 shows the growth of different types of foundations. “Individual” foundations (个人基金会) are those associated with an individual of wealth and are typically grantmaking. Members of the board of directors are usually handpicked by the founder and are often respected public figures involved in the governance of the

foundation.⁸ This type of foundation showed the greatest growth between 2012 and 2019 and reflects the rise of big businesses and their owners’ wealth during this period. In most cases, individual foundations are just as the name implies—foundations founded by a principal to carry out their personal philanthropy. Foundations such as the Jack Ma Foundation (马云公益基金会) and the Heren Charitable Foundation (河仁慈善基金会), the personal foundation of Cao Dewang (曹德旺) of the Fuyao Group, are examples of these. Descriptions of other types of foundations can be found later in this chapter.

In environmental philanthropy, foundations organized by a group of individuals have been particularly influential. Examples include the SEE (Society of Entrepreneurs and Ecology) Foundation (北京市企业家环保基金会), established by Liu Xiaoguang (刘晓光) and others to support and nurture Chinese entrepreneurs engaging in environmental protection and sustainable development, and the Paradise International Foundation (桃花源生态保护基金会), also established by a group of well-known individuals including Jack Ma (马云), Pony Ma (马化腾) and Shen Guojun (沈国军). When asked why group foundations dominate environmental philanthropy,

Figure 1: Growth of foundations by type, 2012-19



Source: Blue Book of Philanthropy (2019), p. 115, 119, 126 and Blue Book of Philanthropy (2020), p. 107

the consistent response from those we interviewed was that since there are so few environmental philanthropists, it is important to pool resources to make any type of meaningful change.

From our interviews, we also learned that some individual foundations go beyond traditional grantmaking to take the lead in piloting social innovations. For example, the Shenzhen Mangrove Wetlands Conservation Foundation (MCF, 红树林基金会) is the first nongovernmental organization (NGO) to operate a government-mandated ecological park in China.⁹ Under a model of “government + social organization + expert management committee,” the Futian District government and the management committee are responsible for supervising and monitoring the work of the MCF, inspecting evaluation results and paying entrusted management funds. The MCF, meanwhile, uses its own funds for the daily management of Futian Mangrove Ecological Park (福田红树林生态公园) and related ecological protection and public education activities. “The goal for government procurement to ‘only fund the service, but not the people’ was achieved, and the expertise of social organizations in environmental conservation science has also been fully utilized,” said a Futian District government official.¹⁰

CHARITABLE GIVING IN CHINA

The growth of all types of foundations in China mirrors the rise in philanthropy in recent years. China’s philanthropy in 2021 was 35 times that in 2004.¹¹ During this time, China’s gross domestic product (GDP) per capita grew almost sevenfold, from ¥10,666 (US\$1,649) to ¥72,000 (US\$11,128). With higher disposable income, people have been deploying their discretionary funds more to charity.

In China, as in the rest of Asia, generosity also goes hand in hand with pragmatism. Much of Chinese philanthropy is grounded in helping people directly or bolstering existing (primarily government) social service programs. To understand Chinese philanthropy, it is important to look into how, where, and with whom philanthropy and corporate social responsibility are carried out.

First, the greater context. Philanthropy and charity have a storied history in China. The concepts of community care, taking care of the elderly and educational assistance are rooted in Confucianism.¹²

Since the Qin Dynasty (221–206 B.C.), clan-based organizations have provided assistance to others when needed. In modern times, philanthropy has been growing and evolving rapidly, albeit in ways idiosyncratic to China. The degree to which it is being embraced can be attributed both to the country’s meteoric economic growth and the government’s efforts to promote philanthropy.

The massive Wenchuan earthquake of 2008 marked an important pivotal point in the development of Chinese philanthropy. There was an outpouring of public support, and individuals and charitable organizations flocked to Sichuan province to assist. The earthquake helped the government to understand the importance of maximizing philanthropic contributions. This recognition, along with some scandals related to the social sector in the early years of the following decade, accelerated the development of new charity legislation.

Introduced in 2016, the Charity Law is the official set of regulations for the charitable sector. It has sought to encourage individual and corporate contributions by introducing tax incentives and clearer regulations and helping to build accountability and transparency.

Legislation for overseas NGOs was introduced at the same time as the domestic-facing charity law. The Overseas NGO Law focuses on funding and projects that come from outside mainland China. Its goal is roughly the same: to increase accountability and transparency by creating clear rules as well as reporting and oversight requirements. For some organizations, the increased regulatory hurdles have had a dampening effect. According to the *Doing Good Index*TM, the percentage of social welfare organizations receiving foreign funding decreased from 39% to 16% between 2018 and 2020.¹³ Foreign funding into Asia has been diminishing as the region becomes more prosperous, and China is one of many countries grappling to find ways to increase domestic contributions.

To truly understand Chinese philanthropy, it is essential to identify the Chinese characteristics of philanthropy, four in particular. First and foremost, Chinese philanthropy often supports government initiatives by supplementing existing programs and filling gaps in unmet needs. That is not to say philanthropy flows only to areas prioritized by the government, but philanthropists do pay heed to government signals for support. Second, individuals and companies tend to

leverage their business skills and experience to set up effective, efficient and sustainable philanthropic programs. In China, finding a win-win solution is a pragmatic way to meet both business and community imperatives.

Utilizing business acumen with fresh perspectives leads to the third characteristic of Chinese philanthropy: the piloting of an innovative solution with the goal for the government to adopt and scale it across a much wider area. The last defining characteristic is the connection to one's ancestral home: there is a high degree of hometown loyalty among Chinese philanthropists.¹⁴

We illustrate each of these characteristics of Chinese philanthropy with environment-related examples at the end of this report. For now, let's dive into what the data is telling us about the current philanthropy landscape.

FOLLOW THE MONEY

Let's start with the "where." Figure 2 shows the location of China's foundations. The great majority are found along the coast and around the Tier-1 cities of Beijing, Shanghai and Guangzhou. This is as expected; there are

more companies and thus more wealthy individuals in these areas. According to Wealth-X's *Billionaire Census 2020*, three of the most economically advanced cities—Beijing, Shenzhen and Hangzhou—are also the ones with the most billionaires.¹⁵ The positive correlation between foundation location and economic development is also evidenced in the *Blue Book of Philanthropy*, an annual report and analysis of the development of Chinese philanthropy.¹⁶

But as a testament to Chinese people's penchant to provide for the needy, Figure 3 shows how donations are spent far away from the location of the foundation. They flow to areas where needs are far greater. Around 70% of the projects funded by foundations in Guangdong, Beijing and Shanghai were executed outside of these cities.

The tendency for donations to be sent to the most underserved areas was amplified in 2015-20 when the government's poverty alleviation campaign was in full swing. The government identified 832 of the poorest counties in China and encouraged philanthropic organizations to engage in them. This drive to alleviate poverty galvanized China's philanthropic spending—in line

Figure 2:
Location of China's foundations

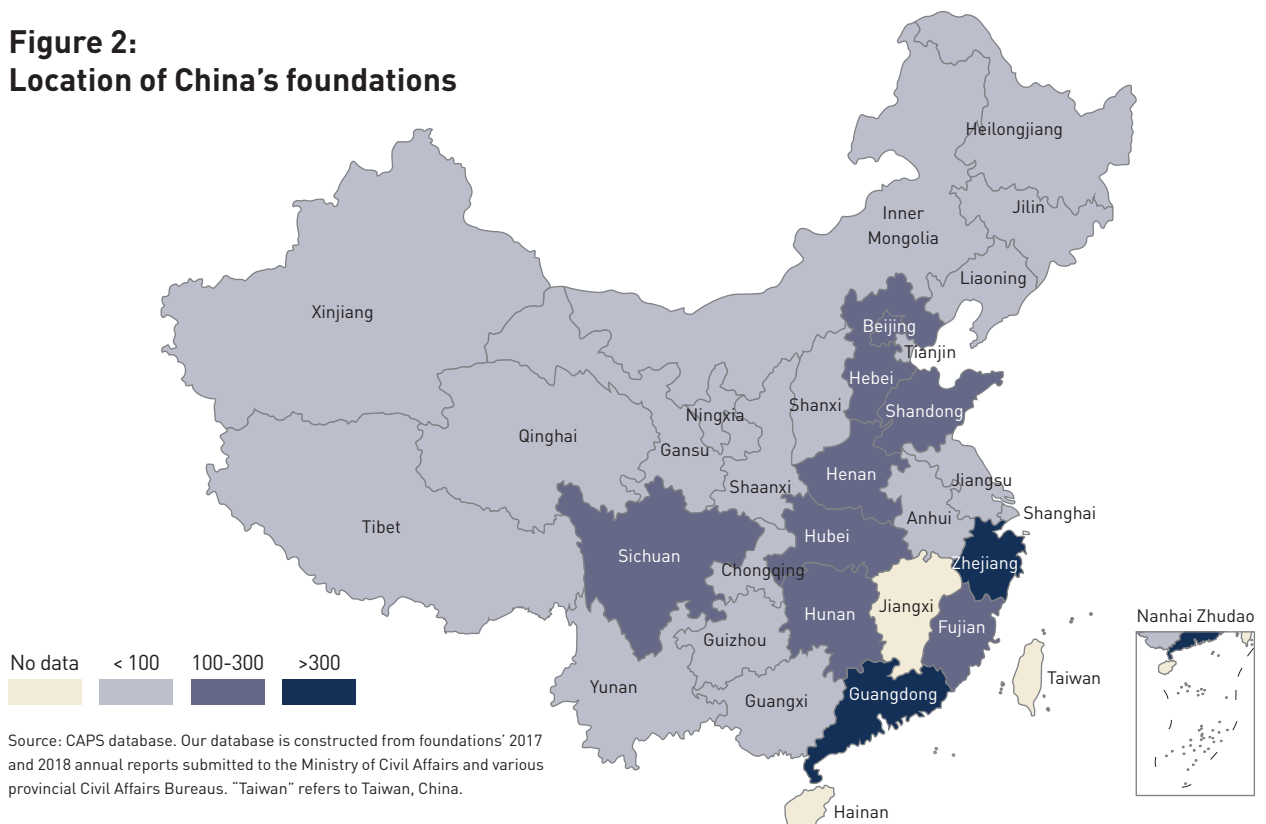
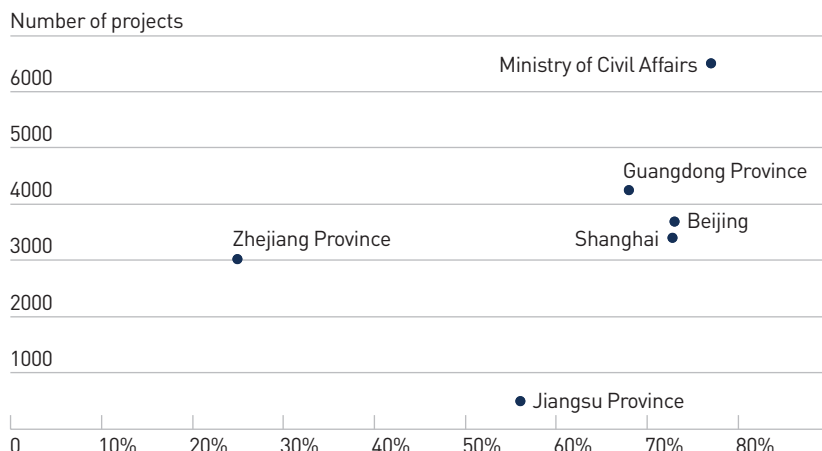


Figure 3: Foundation projects and percentage executed outside of registration province, 2018



Source: Blue Book of Philanthropy (2020), p.127

with government goals. It also helped set the stage for increased government-driven philanthropy going forward.

NOT ALL FOUNDATIONS ARE THE SAME

In addition to organizations founded by individuals and groups of individuals, foundations in China can be distinguished by their structures and missions.

“Corporate” foundations (企业基金会) are initiated by an enterprise, with funding coming mainly from the company, which can be a private, state-owned or foreign enterprise. While a corporate foundation is legally separated from the company and cannot engage in any for-profit activities, it can—and often does—act in concert with the company to carry out other activities. An example of a corporate foundation is the Tencent Charity Foundation. As of 2019, the internet and technology company has donated ¥4.3 billion (approximately US\$660 million) to its philanthropic organization to support charities.¹⁷

“Community” foundations (社区基金会) refer to foundations that take solving community or local problems as their primary and often only focus. Close to 80% of their income comes from donations, predominately from corporates while the remainder comes from government subsidies.¹⁸ Community foundations operate in a way most similar to nonprofit organizations: they receive funds and implement projects. While they have also grown in number, especially in recent years, their overall count remains small compared to other types of foundations.

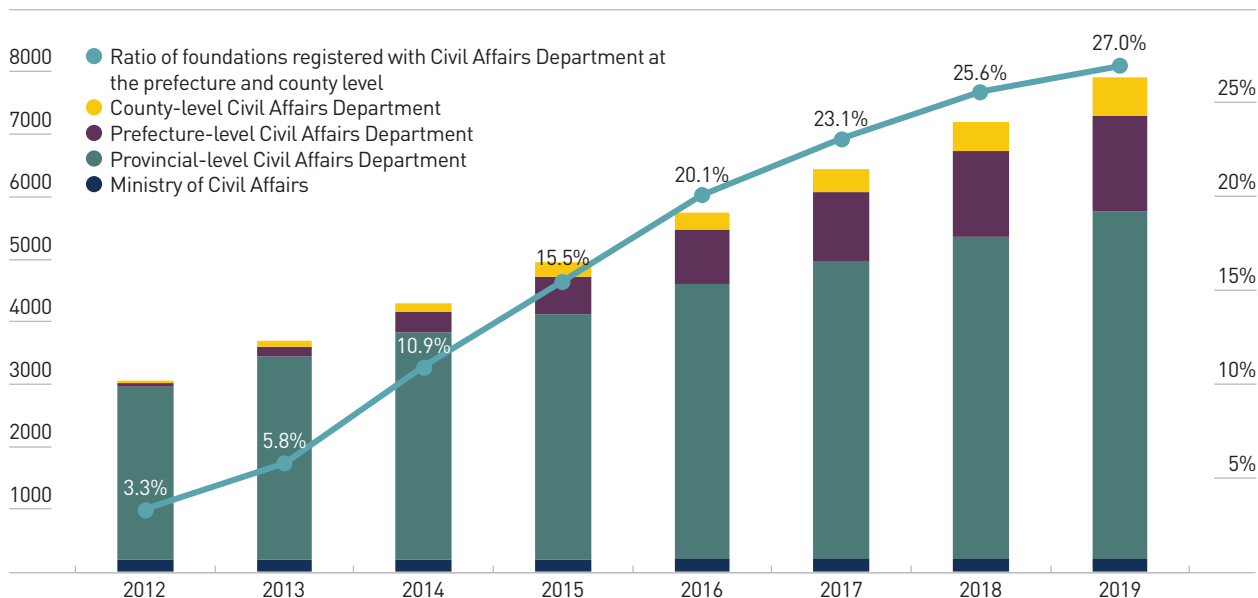
“Systemic” foundations (系统基金会) are often referred to colloquially as GONGOs (government-operated nongovernmental organizations). These foundations are operating organizations affiliated with the state. They proliferate at local, provincial and national levels and have doubled in number in recent years (see Figure 1). While there are GONGOs such as the China Environmental Protection Foundation, our data shows the environmental sector is mainly dominated by nongovernmental foundations, unlike the health sector which has a prevalence of GONGOs.

According to Deng Guosheng (邓国胜) and Zhao Xiaoping (赵小平), “GONGOs may be defined as nonprofit organizations initiated by or funded by the government, but GONGOs are not government departments...GONGOs also benefit from special regulations that allow them more room to maneuver with regard to financing and administration. GONGO foundations (sic) are able to conduct public fundraising, collect tax-exempt donations and mobilize resources through domestic media.”¹⁹

“Educational” foundations (教育基金会) are initiated by a university, middle or elementary school or vocational training institute to facilitate fundraising from alumni, companies and other interested donors.²⁰ Tsinghua University Educational Foundation is one such example. The number of educational foundations has almost doubled in recent years.

It is clear that all types of foundations are growing. But there’s another trend captured by Figure 4: foundations are mushrooming at multiple tiers. Once dominated by provincial and state-level foundations, we now see the rise of “regional” foundations (地方基金会). The graph charts the proliferation of these prefecture and county-level foundations. This trend took off in the wake of the central government’s relaxation of charity registration laws and delegation of administrative authority to local governments. By 2020, regional foundations accounted for more than 27% of all foundations—a ninefold increase from a mere 3.3% in 2013.

Regional foundations focus on the particular

Figure 4: Foundations registered at each administrative level, 2012-19

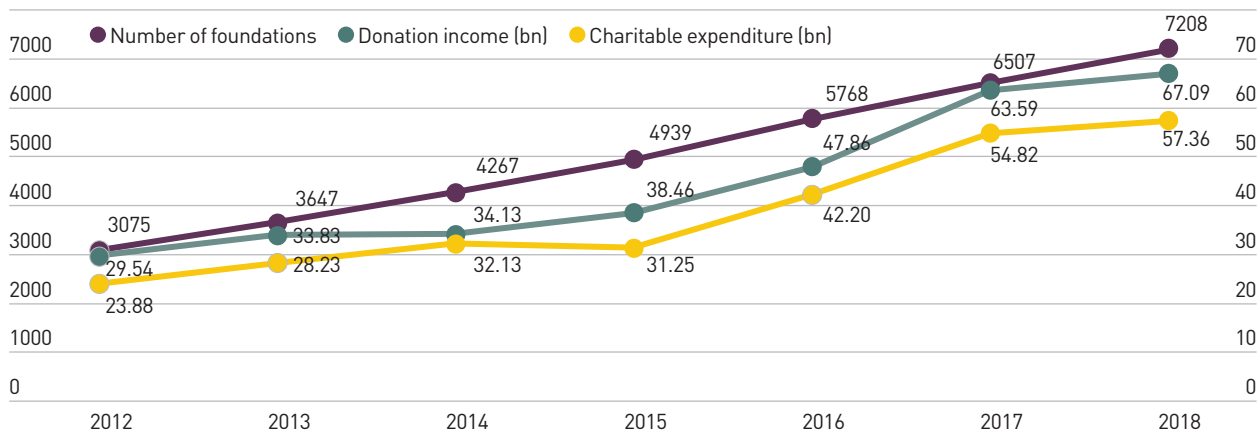
Source: Blue Book of Philanthropy (2020), p. 105

issues of their locality such as providing a subsidy for the construction of a rural primary school canteen, rather than multilocal interventions such as the introduction of a mental health curriculum in secondary schools across a province.²¹ The rise of regional and national systemic foundations (GONGOs) in particular makes sense as they are an efficient mechanism to

steer private resources toward helping the government address local issues.ⁱⁱ

PROFESSIONALIZATION

Figure 5 shows that it is not only the number of foundations that is growing: so are the donations. And with this increased philanthropy has also arisen the need

Figure 5: Donation income and charitable expenditure, 2012-18

Source: Blue Book of Philanthropy (2020), pp. 104, 112

ⁱⁱ There is yet another way to categorize foundations in China: “public” (公募) or “private” (非公募). This differentiation refers not to ownership but fundraising. Public foundations have government approval to fundraise from the public, whereas private foundations do not. Most of the reporting regulations contained within the 2016 Charity Law apply only to public foundations.

for more professionals to manage assets and projects.

While the number of trained philanthropic professionals is growing, the sector still needs another 9-13.75 million people to fill the positions created by the increase in foundations and social organizations.²² Fortunately, China is rapidly expanding the ranks of experienced philanthropy and social sector professionals who understand the role of private social investment and how best to deploy it. Additional professional talent in the social sector will undoubtedly serve China well by allowing projects and programs to be more sophisticated and impactful.

Encouragingly, our research also shows that philanthropists are increasingly supporting capacity building. This is a positive and somewhat surprising finding. According to the *Doing Good Index*TM, it is difficult for many social welfare organizations to obtain funding for capacity building.²³ On average, only 17% of organizations receive such support consistently across Asia. But in China, 24% of those surveyed were able to raise funds for training and capacity building. This is a welcome observation as many in the social sector lack the skills necessary to do their jobs well, regardless of the commitment they may have to greater impact. Building up the skills of staff in local social organizations and government units can help them to be more effective. This is especially true when confronting environmental challenges as subject-specific knowledge and skills are necessary for effective interventions.

PARTNERING WITH GOVERNMENT

The growth of China's foundations also shows the rise of "philanthropy with Chinese characteristics." While individual and corporate foundations in China seem similar to their Western counterparts, a closer look shows how they choose to work differently. The key difference is the first characteristic mentioned: the tendency to work closely with government. This fundamental difference between philanthropy in China and the West is vital for understanding the context.

Asian institutions tend to work in tandem with government but even more so in China.²⁴ Both through our interviews and project-level data analysis, we found that individual and corporate foundations work aligned with the government (at minimum) and are often in a formal partnership. The rise of GONGOs also shows the heavy influence of and reliance on government apparatus

to target and oversee charitable work.

The end result of these strategies is that in China philanthropy is often a means to supplement and, in many cases, buttress government initiatives. For example, in health philanthropy, almost 43% of contributions are cash donations to poor areas to help pay for health care costs.²⁵ This largesse is directly linked to President Xi's poverty alleviation campaign.

But philanthropists' linkage and identification with the government go beyond supporting a particular campaign. In the words of Ai Luming (艾路明), Founder and Chairman of the Dangdai Group and former Chairman of SEE, "[Entrepreneurs] should play a guiding role and keep aligning our work with the government's to get things done together. This is where entrepreneurs' sensitivity to market and ability to innovate can add value."²⁶

Or in the words of notable philanthropist Cao Dewang (曹德旺), "If the Reform and Opening Up policy was not there, I would have neither the development platform of Fuyao nor my achievement today. I share my wealth with society out of my gratitude for the Chinese government. This is the first point. Second, in Chinese culture, we are imbued with the reciprocity mindset. You have to bear social responsibility while you make money. When the gap between the rich and the poor further widens in our nation, we as entrepreneurs should stand up and take this responsibility. We also should not be greedy. If you are so insatiable, if the society is not harmonious, business will become difficult. This is the real reason why I donate."²⁷

The next chapter focuses on the landscape of environmental protection, progress and challenges in China and sets the stage for the subsequent chapter on environmental philanthropy.

Chapter 2

An Overview of Ecological and Environmental Protection

Ma Jun, Director of the Institute of Public and Environmental Affairs

History has shown that industrialization and urbanization can have negative environmental impacts, and often reach a point where governments are moved to act. To combat the high levels of respiratory and cardiovascular diseases, the United States passed the first federal law to control air pollution at a national level in 1963. Between 1970 and 1990, the US Clean Air Act led to about US\$0.5 trillion (1990 dollars) in direct compliance expenditure and brought an estimated US\$22.2 trillion in cumulative human health and reduced mortality benefits.²⁸ Further amendments were passed in 1990 to improve air quality, and since 2000, average US ambient concentrations of fine particulate matter (PM2.5) have declined by approximately 42%.²⁹

Likewise, the United Kingdom and Japan also serve as useful references. A recent study showed that UK mortality rates attributed to PM2.5 and nitrogen dioxide declined by 56% and 44%, respectively, over 40 years (1970-2010) as a result of national and European legislation addressing emissions of a variety of air pollutants.³⁰ Japan also overcame severe environmental pollution problems through efforts made by the national and local governments, the private sector and its citizens: in the 1970s, it enjoyed a dramatic improvement in water quality by setting and achieving standards for lead, cyanogen, cadmium, arsenic and mercury.³¹

China's economic development has been accompanied by a long history of environmental problems. Decades of limited attention and insufficient accountability mechanisms from both the government and business sectors have resulted in the destruction and degradation of the ecological environment. Since opening up in 1978, China gradually became the leading global manufacturer of chemicals, and by 2018, it had a share of more than 40% of the global chemicals market, more than that of North America, Europe, the Middle East and Africa combined.³² It also became the leading

global manufacturer of over 220 industrial products, including steel, cement, automobiles, air conditioners, personal computers, cell phones and ships.³³ This growth came with an enormous increase in solid, liquid and gaseous waste. Weak environmental regulations and pollution targets, inadequate monitoring infrastructure and poor local enforcement of the standards that did exist exacerbated negative environmental impacts. As China's energy consumption requirements grew as well to become the highest in the world, it had to turn to coal power generation—its only relatively plentiful fossil fuel resource—to secure its energy and power supply.³⁴

The environmental pollution from this extensive growth has led to the prevalence of diseases in some areas of China.³⁵ According to Chen Zhu, President of the Chinese Medical Association and Chinese Academy of Sciences, and Wang Jinnan, former Vice President and Chief Engineer of the Chinese Academy for Environmental Planning, China is proactively tackling air pollution as premature deaths caused by outdoor air pollution in China is estimated to be between 350,000 and 500,000 per year.³⁶ A study by the Institute of Health Metrics and Evaluation concludes that air pollution was the third-leading cause of premature death and disability in China in 2009 and the fourth in 2019.³⁷

The effects of water pollution on health are more concentrated in rural areas. Over a period of time, reports of "cancer villages" ("癌症村") have gained traction in the media. Most of these villages are situated near polluted waterways and contaminated soil and experience a high incidence of birth defects, premature deaths and illnesses. Following nearly five years of surveillance along the Huaihe River basin, official research by the Chinese Center for Disease Control and Prevention (CDC) in 2010 "basically confirmed the correlation between pollution and tumors."³⁸ The research stated that the occurrence of tumors among

people living near the shoreline is not caused by a single factor, and it is not only industrial pollution but also agricultural and indoor pollution that affects their health.³⁹

According to the Chinese Academy of Environmental Planning, following Integrated Environmental and Economic Accounting System guidelines issued by the United Nations Statistics Division, the cost of environmental degradation in China, of air and water and from solid waste, increased from ¥511 billion (approximately US\$79 billion) in 2004 to ¥1,892 billion (approximately US\$292 billion) in 2017, which is an average annual growth rate of 10.6%.ⁱⁱⁱ The environmental degradation index, which is the ratio of environmental degradation cost to GDP, however, decreased from 3.05% to 2.23%, reflecting that China's economic development has become greener, especially in the most recent five years (see Figure 6).⁴⁰

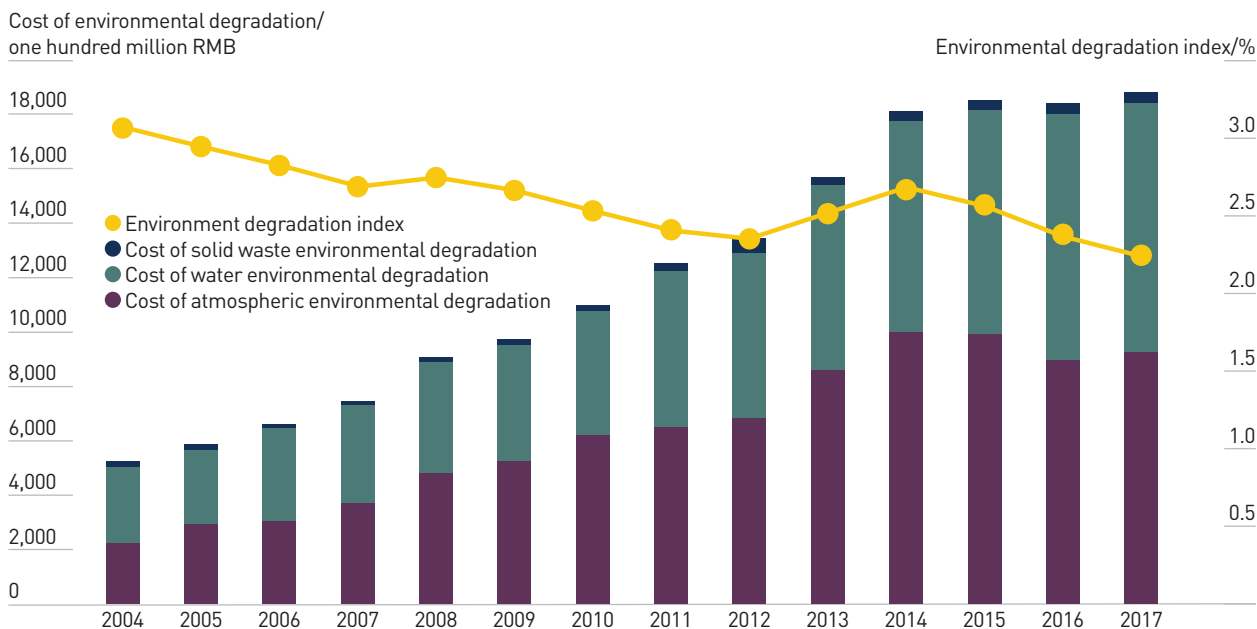
Over the past decade, China has begun to face the stark reality and make meaningful changes. Guided by the concept of ecological civilization (生态文明), China

has comprehensively upgraded its legislation and policy formulation and launched large-scale pollution control and environmental protection measures. It has made major achievements in air pollution control and significantly reduced the level of surface water pollution. Currently, China is aiming for a fundamental improvement of environmental quality and plans to achieve peak carbon emissions by 2030 and carbon neutrality by 2060 (the “30-60” goal), with visions of a “Healthy China” (“健康中国”) by 2030 and a “Beautiful China” (“美丽中国”) by 2035.

ENVIRONMENTAL CHALLENGES IN CHINA

China's serious environmental challenges can largely be categorized as environmental pollution, climate change and ecological degradation. These three categories share causes and are closely interrelated. Environmental pollution has received the most attention to date, but there is accelerating concern for climate change, especially with China's commitment to its 30-60 goal. Since the 14th Five-Year Plan (2021-25), China has

Figure 6: Environment degradation costs, 2004-17⁴¹



ⁱⁱⁱ “The environmental degradation cost mainly includes the costs caused by air pollution, water pollution, and land occupation of solid waste. Air pollution costs include four components: damage to human health, loss of crop production, corrosion loss of building materials exposed to the outdoor environment, and increased cost of cleaning. Water pollution costs include human health loss, agricultural loss caused by sewage irrigation, additional treatment cost of industrial polluted water, economic loss of urban residents, and water shortage due to water pollution.” Source: The Valuation of China's Environmental Degradation From 2004 to 2017 by G. Ma et al. See endnote 40.

Table 1: Comparison of China's air and water pollution in 2017 and 2019

Metric	2017	2019
Air pollution		
Cities meeting national air quality standard	29%	46.6%
Average percentage of days of cities meeting air quality standard	78%	82%
Water pollution		
Surface water suitable for drinking and fishing	68%	75%
Surface water unsuitable for industrial or agricultural use	8%	3.4%

Source: 2017 and 2019 Reports on the State of the Ecology and Environment in China

entered a new era where the main focus is on carbon reduction (and the synergy between pollution and carbon reduction), while awareness and actions related to ecological protection have also increased significantly.

Environmental Pollution Control

While China has made some dramatic progress in environmental pollution control, many areas remain lacking. Air quality and surface water saw significant improvement, especially when metrics were set in place and incorporated into the evaluations of government officials. According to the *2019 Report on the State of the Ecology and Environment in China*, of the 337 cities or regions at or above prefecture level, only 46.6%, or 157 cities met national air quality standards (see Table 1).⁴² Also, in the same report, of the 1,931 surface water sections under a national monitoring program, only 75% of the sites met Grade I-III water quality standards, which means suitable for drinking and fishing, and 3.4% failed to reach Grade V, meaning water quality so poor that it cannot be used for industry or agriculture, or even landscaping.

Hidden pollution has yet to be fully regulated. China has prioritized regulation of substances that present clear risks because they are explosive, flammable, or highly toxic, but control and regulation of invisible toxic and hazardous substances have not been implemented. This should be a matter of urgency, especially given China's role as the world's factory and the prevalence of high-polluting and energy-intensive industries like smelting, chemical and electroplating. In 2011, China produced more than 90% of all personal computers and over 70% of all mobile phones worldwide.⁴³ The heavy

metals, halogenated compounds and harsh chemicals used to create these products pose serious harm to human health and the environment if effluents are discharged without proper treatment.⁴⁴

The quality of underground water receives less attention than surface water, even though they are connected and are part of the same system. This is especially problematic when up to 70% of China's population taps their drinking water from underground, and only 14.4% of groundwater met Grade I-III quality standards in 2019.^{45,46} The quality of groundwater is still deteriorating, which makes pollution prevention and control crucial. In 2019, of the 10,168 groundwater monitoring sites across China, 66.9% were under Grade IV, which means water fit only for industrial purposes without human contact.⁴⁷ Of the 2,830 shallow groundwater wells monitored nationwide, 23.7% met Grade I-III water quality standards, 30.0% Grade IV and 46.2% Grade V.⁴⁸ Levels of manganese, total hardness, iodide, total dissolved solids, iron, fluoride, ammonia nitrogen, sodium, sulfate and chloride exceeded standards.⁴⁹

Less well known to the public is the problem of soil degradation and pollution, which continues to worsen with China's industrialization and urbanization. Compared to air and water pollution, soil contaminants may take much longer to surface, so it is more difficult to identify the polluters. Furthermore, the contaminants may stay in the soil for a long time.⁵⁰ According to the National Soil Pollution survey carried out in 2014, over 16% of China's total soil is contaminated, including almost a fifth of its arable land.⁵¹ Some regions are more affected than others. Contamination due to heavy

metals such as cadmium, lead and arsenic poses threat to human health in some of China's industrial and agricultural regions.⁵² Soil quality directly impacts food safety. In the 2013 Hunan rice scandal, the Food and Drug Administration of Guangzhou revealed that rice samples from canteens and restaurants were tainted with cadmium, sparking public concern.⁵³ New policies, regulations and measures were subsequently put in place, including the Action Plan on the Prevention and Control of Soil Pollution (2016).⁵⁴ Nevertheless, the cost and complexity of remediation work will be enormous due to the scale of the problem. Since 2016, the central government has already allocated ¥30 billion (US\$4.6 billion) for soil pollution prevention and remediation, mainly in urban areas. The cost to clean up contaminated soils in urban and rural areas is estimated at ¥9 trillion (US\$1.4 trillion).⁵⁵

Underlying pollution control challenges is the state of China's waste management. China's waste is mainly incinerated or sent to landfills. The amount of garbage disposed of in China is estimated to have increased from 67 million tons in 1990 to 242 million tons in 2019.⁵⁶ Of the 225 million tons of waste handled in China in 2018, 52% went to landfills, 45% was incinerated and 3% was handled in other ways.⁵⁷ According to the *2019 Report on the State of the Ecology and Environment*, 24,000 informal and unauthorized solid waste dumping sites were identified nationwide.⁵⁸ The recycling percentage is low. For most cities, including Beijing, preventing waste pollution, not to mention recycling and reusing to reduce waste, remains a serious problem.

Addressing Climate Change

Climate change is another important environmental concern for China. Since 2006, it surpassed the US to become the largest carbon emitter in the world, although the US remains the largest historical emitter.⁵⁹ China's carbon dioxide (CO₂) emissions currently account for around 28% of the global total, more than the US and European Union combined. There are different estimates on carbon emission volume, with some claiming that CO₂ emission from fossil fuel and industrial purposes in China exceeded 10 billion metric tons in 2019.⁶⁰

China uses half of the coal consumed worldwide. Most of the roughly 3.9 billion tons of coal China consumed in 2018 was burned for power or heat. Coal is also used as a feedstock in several industries, including chemical,

iron and steel.⁶¹ In 2018, coal accounted for 59% of primary energy consumption nationwide.⁶² China is also the world's leading producer of coal, accounting for just under half of global production. In 2018, Chinese coal production reached 3.68 billion tons.⁶³

With climate change, the rise of sea levels is impacting China's coastal areas. The average coastal sea level is at the highest level in four decades, rising 3.4 milometers/year in the period 1980-2019.⁶⁴ In 2019, the country's sea level reached the third-highest level since 1980 at 72 milometers higher than the historical average.⁶⁵

Due to the complexity and magnitude, tackling climate change goes beyond pollution prevention and control. Dealing with issues including the country's energy mix, industrial structure, public transportation systems and people's lifestyles must be part of the formula. Achieving carbon neutrality will require no less than a transformation of China's economic development model. Following its 30-60 decarbonization commitment in 2020 and as per guidance issued jointly by the Central Committee and State Council in March 2021, China has already planned reforms across multiple areas including government supervision, corporate responsibility, and public participation, with implementation to follow.

Alleviating Ecological Degradation

Ecological degradation interventions have often been promoted as nature-based solutions related to environmental pollution and climate change, however, biodiversity is another area of critical consideration and ecological protection deserving of its own category.

China is a crucial player in protecting global ecosystems, which are important for helping humans adapt to climate change, supporting food security, providing resources for medicine and ensuring sustainable productivity. Encompassing a wide range of terrains, it is one of 17 "mega-biodiverse" countries in the world and home to almost 10% of all plant species and 14% of all animals on Earth.⁶⁶ However, due to development over the last century, more than 10% of China's mudflats and wetlands have been destroyed and more than 100,000 square kilometers of grasslands degraded.⁶⁷ Updated in 2021 for the first time in 32 years, the National Catalog of Wildlife under Key State Protection shows that 980 species and eight categories of wild animals are threatened or endangered.⁶⁸ In addition

to land habitats, freshwater biodiversity and nearshore habitats have also become threatened. Though some species like the giant panda and Tibetan antelope have stabilized and even increased their population numbers, many fish, amphibians and other animals remain endangered and receive limited attention.

Important steps have been taken to stop the long-term trends of deforestation and desertification, and ever since the 1998 logging ban, preventing hillside farming, there has been substantial progress. Between 2010 and 2020, China increased its forest coverage rate from 20% to 23%, planting millions of hectares of forest each year.⁶⁹ Between 2000 and 2017, China was the world's largest contributor of forest area, accounting for around 25% of global gains.⁷⁰ The forestation of China's Maowusu Desert is one positive example that has received global attention. However, it should only be taken as a start and not the end of efforts in this area.

According to the 2019 national *Ecological Index*, 32.6% of China's total geographic area is of poor or relatively poor eco-environmental quality.⁷¹ The poorer eco-environmental counties are mainly distributed in western Inner Mongolia, central and western Gansu, western Tibet and most of Xinjiang.⁷² Of the 817 counties with key ecological functions, 12.5% showed improvement in its eco-environmental quality compared with 2017, while 78% remained stable and 9.5% showed levels of deterioration.⁷³

GOVERNMENT POLICIES AND RECENT PROGRESS

Due to its rapid industrialization, by 2011, China was burning as much coal as the rest of the world combined and some studies predict that under a business-as-usual scenario, China's coal consumption would double before it would peak.⁷⁴ Many Chinese cities are engulfed with haze, exposing hundreds of millions of people to health hazards. The choking reality of this environmental challenge raised public awareness and led policymakers to recognize that traditional development models were unsustainable. To pursue the goal of ecological civilization (生态文明), China has to adopt new development concepts and take large-scale action.

The years 2011-13 can be seen as a watershed in the history of China's environmental protection. Throughout 2011, social media debated whether PM2.5 levels should be monitored and the data released. The

central government eventually decided to release PM2.5 information to the public starting from 2013. The National Clean Air Action Plan was released in September 2013, and in 2014, at the annual session of the National People's Congress, China declared a "war on pollution" and vowed a stricter approach to environmental protection.

In 2011, China also began its Ecological Conservation Red Line initiative to demarcate and protect areas with unique ecological functions. More than a quarter of China's mainland—over 2.4 million square kilometers—has been included with areas chosen for attributes including ecological fragility, biodiversity and natural landscape.⁷⁵ After seeing the data and analysis showing ecosystem deterioration from overgrazing, deforestation, grassland degradation and exacerbated flooding due to lost wetlands, the government resolved to pilot and adopt new and effective strategies.

Approach to Environmental Governance

China's approach to environmental governance has diverged from its traditional approach to governance. Experimentation with "public participation" and "multistakeholder governance" has resulted in stable and coordinated development, with a significant trend of fewer mass incidents arising from environmental issues. Information disclosure about the environment catalyzed positive social change and built trust and confidence: the public and government were able to form a positive interaction, aligning to work together to advocate for and supervise environmental regulation.⁷⁶ As a result, two key policies paved the way for greater information transparency and public participation regarding environmental protection. In July 2013, the Ministry of Environmental Protection issued the Measures for the Self-Monitoring and Information Disclosure by Enterprises (国家重点监控企业自行监测信息公开管理办法) to launch the world's first system for enterprises to monitor their pollution discharges in real time and share the data publicly online. Then in 2015, the Environmental Protection Law was overhauled to include a full section, Article 5, to strengthen and institutionalize public participation and information disclosure. In 2020, the State Office of the Central Government officially released its Guidance on Building a Modern Environmental Governance System (关于构建现代环境治理体系的指导意见), which further clarifies and highlights

the responsibility and role of public participation in environmental protection.⁷⁷

In the years following, a slew of legislation was passed at the national level, including an Environmental Protection Tax Law (2018) to change how pollution is taxed, as well as amendments to laws relating to marine environment pollution (2017), water pollution (2017), atmospheric pollution (2018), environmental noise pollution (2018), environmental impact assessment (2018), soil pollution (2019) and solid waste pollution (2020).

Restructuring of Government Ministries

In 2018, a government restructuring created the Ministry of Ecology and Environment, integrating responsibilities for environmental protection and restoration, and the Ministry of Natural Resources to replace the Ministry of Land and Resources. Previously, while there was a Ministry of Environment Protection (established in 2008) at a full ministry-level, many relevant functions were decentralized to other agencies such as the Ministry of Water Resources, the Ministry of Land and Resource and the Ministry of Health for water quality monitoring; the National Development and Reform Commission for addressing greenhouse gases and climate change; and the State Oceanic Administration for marine pollution. Government officials and scholars used the idiom “nine dragons rule the waters” (九龙治水) to describe the previous bureaucratic arrangement for water regulation. The restructuring shows a commitment to greater coordination and regulatory effectiveness.⁷⁸

Top-level objectives and strategies for China’s environment protection were outlined in the 13th Five-Year Plan (2016-20) as well as multiple government guidelines including the Environmental Protection Law, Law on Environmental Impact Assessment and the Administrative Measures for Pollutant Emission Permitting. The broad objective was to achieve an overall improvement in the quality of the environment and ecosystems, with an emphasis on pollution prevention and control. Furthermore, to combat pollution, one important approach was the reform of fundamental environmental governance systems, ensuring local governments are fulfilling their environmental responsibilities, making inspection visits and eventually establishing a responsibility system and performance

assessment mechanisms for meeting environmental protection targets.

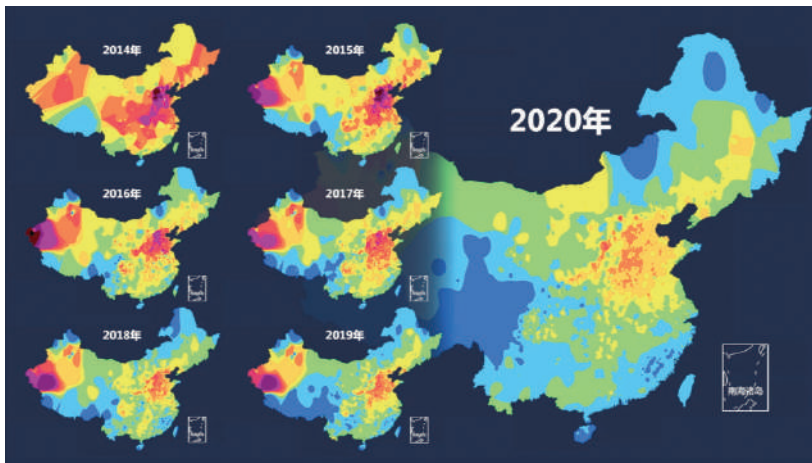
Key Progress and Results

In 2019 and 2020, China allocated ¥390.6 billion (US\$60.4 billion) and ¥407.3 billion (US\$63.0 billion), respectively, to ecological and environmental protection. Of the 2020 amount, 41% was allocated to air pollution prevention and control, 52% to water and 7% to soil protection.⁷⁹

Key progress and results to date are available in the Ministry of Ecology and Environment’s *2020 Annual Report on the State of the Ecology and Environment in China*. In the last seven years, improvement in air quality is the most evident, with Beijing’s concentration of PM2.5 dropping from 89.5 micrograms per cubic meter in 2013 to 38 micrograms per cubic meter in 2020.⁸⁰ Surface water quality also showed significant improvement in 2020. The percentage of Grade I-III quality surface water in China increased by 8.5% compared to 2019, to 83.4%. The percentage of Grade V and inferior water quality, which stood at 28% in 2006, fell to 0.6%, down 2.8% from 2019.⁸¹ Of course, the Covid-19 pandemic contributes extraordinary factors (with levels of pollutants dropping during lockdowns), but the numbers do show significant positive change.

Waste pollution, unfortunately, seems to be getting worse. China produces and consumes the largest quantity of plastic waste in the world. In 2019, it manufactured over 80 million tons of plastic products. Plastics account for over 80% of all ocean waste in China’s waters. The fast development of China’s courier and parcel sector, further accelerated in 2020 by the pandemic, exacerbates the challenge.⁸²

Regarding climate change, China remains the world’s largest contributor to greenhouse gas emissions. In terms of CO₂ emission per capita, it is lower than the US, but slightly above the European Union average. It shares the global focus on renewable energy and electrification, green transportation, green consumption and green finance, and is developing technologies and initiatives in these areas. China is also a leading installer of renewable energy. The percentage of clean energy consumption in China has increased, from 19.1% in 2016 to 24.3% in 2020.⁸³ With the restarting of energy-intensive industries, there will be a rebound in the related carbon emissions. Meanwhile, drought conditions in the first half of 2021 lowered energy outputs from hydroelectricity, driving up

Figure 7: Average PM2.5 levels in China from 2014 to 2020^{iv}

Source: Blue Map

the need for coal as a baseload electricity provider, which inevitably bumped up CO₂ emissions levels.^{84,85} It seems China's 30-60 carbon peak and neutrality pledge has come at a critical moment.

From Theory to Practice

China is at a transition point where official high-level aspirational theory regarding the environment—concepts like “Beautiful China” (“美丽中国”) and “ecological civilization” (“生态文明”) and phrases such as “Clear waters and green mountains are as valuable as mountains of gold and silver” (“绿水青山就是金山银山”)—can now be understood in terms of a scientifically developed incentive structure for all levels of government administration. The participation of the Institute of Public and Environmental Affairs (IPE) in projects to define ecological and environmental performance evaluation metrics for officials provides optimism that systemic change and implementation is underway.

How to set specific and actionable performance metrics is the challenge: there are many different environmental contexts across China and they are multidimensional, highly complex and interrelated with other development targets and also cross jurisdictions. Also, in ecological deterioration, there is often a lag before accumulated devastation becomes apparent. Therefore, it is especially important to strive for greater transparency of environmental protection work.

In the face of global environmental challenges and the complex, ever-changing international situation, China's top leadership has proposed the idea of building a “community with a shared future for mankind” (“人类命运共同体”) in the hope of transcending industrial civilization and opening up a new path of ecological and environmental governance led by the concept of “ecological civilization” (“生态文明”). In December 2020, President Xi remarked, “Earth is our only and shared home.”⁸⁶ He also stressed that “the ecological environment itself is the economy.

Protecting the environment is developing productivity.”⁸⁷ And, “Recognizing that ‘our solutions are in nature,’ we could strive to find development opportunities while preserving nature and achieving a win-win in both ecological conservation and high-quality development.”⁸⁸

THE ROLES OF PHILANTHROPY AND THE PRIVATE SECTOR

NGOs have played an important role in the development of China's environmental sector. They raise awareness of environmental issues, educate and mobilize society, strengthen incentives for private sector decision-making and support government policymaking. According to the He Yi Institute, which has maintained an online database of China's environmental NGOs (ENGOS) since 2014, there are now over 3,000 ENGOS across China.⁸⁹ Their major areas of impact are education, environmental performance monitoring and enhancement, research and policy advocacy, and project design and management of environmental protection projects.

With China's economic take-off, along with inappropriate development practices, environmental degradation such as pollution, climate change, and the destruction of ecosystems including freshwater and agricultural land, has continued to worsen. Many people are not aware of the extent and ramifications of such damage until these problems directly affect their lives, and often advocate the need for development before

^{iv} The color code on the map refers to the Air Quality Index (AQI) of a specific region, with a range from “Excellent” (green) to “Off-the-charts” (dark purple).

environmental governance. Environmental education can serve a pivotal role in maintaining the balance between economic growth and environmental sustainability and is one of the most common missions of ENGOs. Their role, however, is evolving. Green Jiangnan Public Environment Protection Center (绿色江南) is an example of an ENGO that shifted from raising awareness of environmental problems to also finding solutions.⁹⁰ Green Jiangnan not only facilitates local residents and enterprises to engage in dialogue to increase understanding of environmental concerns but also implements public transparency and participation mechanisms to address them.

Some ENGOs achieve impact by creating and improving monitoring systems to enhance environmental measurements of pollutants across China. IPE, for instance, has long been committed to promoting environmental information disclosure in China. IPE also assists informed public participation; strengthens environmental regulation; introduces public supervision; mobilizes market forces; makes production, procurement, investment, financing and helps enterprises undergo a green transformation and achieve low-carbon development. Aiming to be a catalyst in greening China's manufacturing facilities, IPE also works with the government and corporates to improve information access and data transparency on environmental performance.

Research and policy advocacy is the third major area of impact of ENGOs. Friends of Nature (自然之友), founded in 1993 as one of the earliest environmental nonprofits in China, is a good example. The organization advocates for legal and policy changes and participates in major environmental events. In recent years, it has also engaged in public interest litigation, including the first preventive litigation for the protection of endangered wildlife in China.⁹¹ Similarly, the

Shan Shui Conservation Center (山水自然保护中心) has also contributed to policymaking processes through its extensive research on biodiversity.⁹²

Lastly, ENGOs can use their skills and resources to contribute to the project design and management of environmental protection projects, which often require technical or subject area knowledge.

As different aspects of ecological and environmental protection become mainstream, corporates are well positioned to work with the government and NGOs to shape policy and offer efficient solutions. For example, dozens of major global brands, including financial institutions such as China Postal Savings Bank, have conducted environmental due diligence on suppliers or lending companies through IPE's Blue Map platform, thereby driving improvements and disclosure for over 1.6 million companies in China.⁹³

Figure 8: Chinese and foreign enterprises using Blue Map data and processes in their procurement criteria



Source: IPE website

In addition to greening their own production, procurement and investment processes, companies can also contribute to policymaking and environmental solutions by providing resources and capabilities. For example, in May 2020, IPE and Vanke Group's corporate foundation jointly developed the Solid Waste Pollution Map (垃圾地图) app. Under the guidance of the China Association of Environmental Journalists, coupled with assistance from the Green Jiangnan, Alibaba and Alipay's CSR department and other NGO partners, as well as the utilization of the Blue Map database, IPE conducted an investigation into garbage sorting in 25,000 neighborhoods in over 300 cities across China. Based on the collected data, IPE published a proposal for a common model of community garbage sorting (*Proposal for Regulations on the Management of Domestic Waste*) and set up the Garbage Sorting Index for the quantitative evaluation of the status of garbage sorting in key cities. The SEE (Society of Entrepreneurs and Ecology) Foundation, meanwhile, has mobilized hundreds of Chinese entrepreneurs to participate in ecological environmental protection, raising their awareness and capacity through learning, in addition to funding and implementing a large number of environmental projects.

As regulators, investors and the public become more discerning regarding domestic and global environmental impact, new opportunities for business and philanthropy are emerging, encouraged by powerful market incentives. There are new carrots and sticks.

KEY OPPORTUNITIES

Following its carbon peak and neutrality commitment announced in 2020, China has made a 40-year comprehensive plan for its green transition to reduce its current carbon emissions by approximately 10 billion tons to net zero. This tremendous undertaking requires a trillion-dollar investment and presents many business and social investment opportunities for companies and philanthropists. For example, a large number of green and low-carbon technologies await further development and innovative applications in the areas of new energy; hydrogen energy; energy storage, transmission and distribution; industrial energy efficiency and low-carbon production; carbon capture, utilization and storage; nature-based solutions; low-carbon transportation; zero-carbon buildings; and more energy-efficient consumer products. Minimizing the environmental footprint of

production, sourcing and investment also requires education and expertise applied across various industries and ecosystems.

Capacity building, for NGOs to increase their technical expertise and enable stronger partnerships domestically and internationally, is also a critical need facing China's environmental sector. This is especially true in the complex fields of climate change, energy conservation and low-carbon technologies and transitions. Many ENGOs already have valuable staff and knowledge related to their specific work areas, but as they shift to cocreating solutions with the government and corporates, their scale and effectiveness will be limited by their human resources and expertise in areas such as marketing communications, technology and product development, operations, finance and business development.

Waste management has started to gain focus. It has been elevated from tackling the garbage siege and waste pollution to promoting greener lifestyles, which calls for domestic waste reduction, and recycling and reusing resources. In June 2019, President Xi gave important instruction on how the implementation of garbage classification is an important reflection of the level of social civilization.⁹⁴ Mandatory garbage classification is now on the national agenda. The classification of garbage allows for the subsequent recycling of plastics, paper, metal and fabric. Enterprises should actively participate in building a closed-loop system for the recycling of plastics and other waste.

Green lifestyle is another area of opportunity. As Chinese consumers grow more aware of environmental considerations, there are incentives for companies to develop green lifestyle products and services. From 2015 to 2017, consumer awareness of green labels increased from 78% to 89% and of green products from 58% to 83%.⁹⁵ Overall sales of green products on the JD online shopping platform increased 18% from 2018 to 2019, led by the millennial generation (aged 26-35).⁹⁶ According to the *2019 China Sustainable Consumption Research Report*, 80% of consumers were willing to pay 5-10% more for eco-friendly products.⁹⁷ However, there is currently a lack of such products in China, including limited availability of organic food.⁹⁸ Meanwhile, the certification of green low-carbon products also needs to enhance its credibility.

Green finance is also a growing area in China. According to the People's Bank of China and the Ministry

of Finance, green finance refers to the “economic activities that support environmental improvement, climate change and the economical and efficient use of resources,” including financial services related to projects in the fields of environmental protection, clean energy and green buildings.⁹⁹ As of the end of 2020, China had issued ¥12.5 trillion (approximately US\$1.9 trillion) in green loans, the highest in the world, and as of the first quarter of 2021, China overtook the US to become the largest green bonds issuer with US\$15.7 billion sold.¹⁰⁰ According to Chen Yulu, Deputy Governor of the People’s Bank of China, China will build a unified green finance standard system as part of the 14th Five Year Plan.¹⁰¹

Finally, as mentioned, there are specific areas of environmental concern that are significantly under-resourced: groundwater and offshore seawater quality; lake, river and ocean habitats and biodiversity; and soil remediation. Though they may not receive the same visibility and praise as other environmental projects, philanthropic contributions toward these areas would make an important impact.

TOWARD A GREEN TRANSFORMATION

China faces diverse serious environmental challenges, which can largely be categorized as environmental pollution, climate change and ecological degradation. The government has already embarked on a new governance model for environmental and ecological protection, incorporating engagement from the public and business sectors as well as various administrative levels of government.

Philanthropists and NGOs play important roles to raise awareness around specific environmental issues, educate and mobilize society, support government policymaking; strengthen incentives for private sector decision-making; and create accountability through information disclosure and public supervision. Through digital technology and other means, they have also assisted in mobilizing market forces toward green production, procurement and investment financing.

Since 2013, significant progress has been made, especially regarding air and surface water pollution and policy development. The government has also accelerated its ecological and environmental protection process. Along with the rapid development of environmental governance, there has been a shift of focus toward energy saving and carbon reduction. For

their part, NGOs meanwhile need to adapt to changes and improve their capacity in areas from human resources to technical capabilities to domestic and international partnerships. Looking ahead, with further expansion of environmental information disclosure mechanisms, corporations, financial institutions, investors and consumers will all have the opportunity to be engaged more deeply in an accountability system that will incentivize pollution and carbon emissions reductions on a larger scale. Only through the joint effort of the government, enterprises, NGOs and the public will there be an overall green transformation of China’s economy and society.

Chapter 3

Environmental and Climate Change Philanthropy in China

Despite widespread agreement that climate change is an existential threat and a developmental hindrance, funding for environmental projects has ranked low compared to education and health. In their annual reports submitted to the government, Chinese foundations must label each of their projects as addressing one issue, however, this can lead to an undercount of projects that address multiple challenges. Figure 9 shows how foundations self-identified their projects.

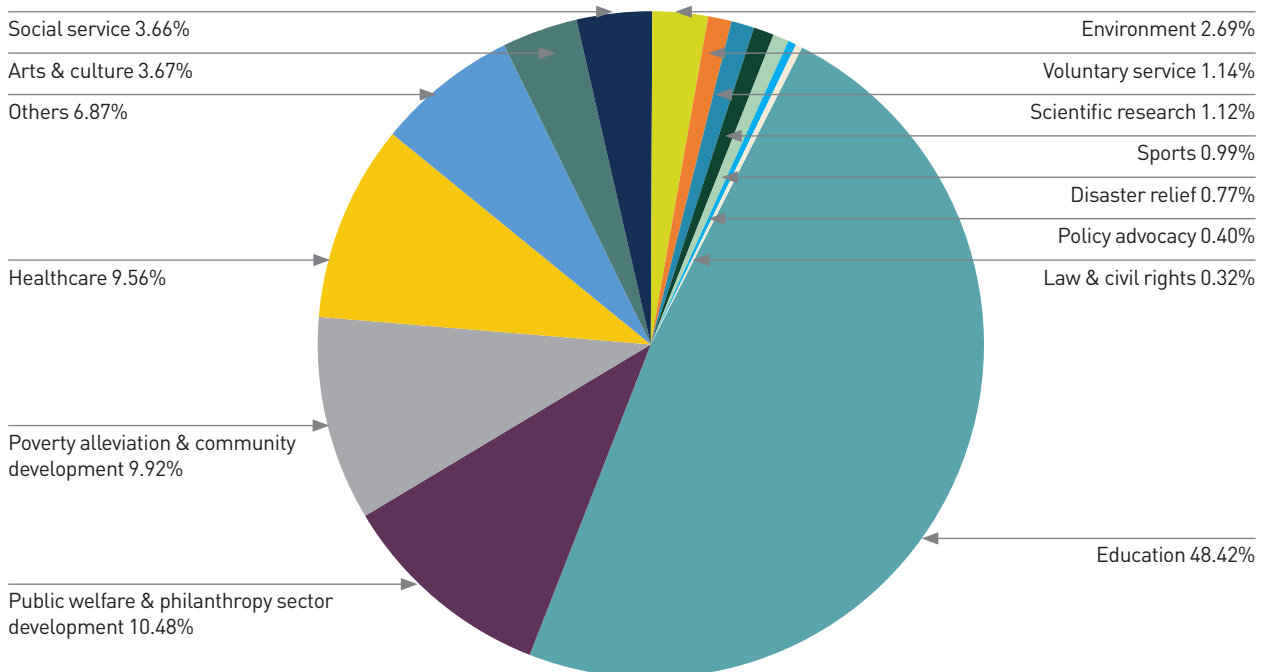
In terms of resources allocated, projects aimed at health and poverty alleviation receive more funding on average than those in other areas, while environmental projects have, to date, received less. Of the four areas CAPS studied in the China Issue Guide series, the

environment ranks lowest in terms of the number of projects funded, total project expenditure and average funds devoted to each effort (see Table 2).

Using these figures, we can produce a chart of total project expenditure in the four focus areas. Now we see that just over 1% of total foundation expenditure is devoted to protecting the environment and addressing climate change (Figure 10).

Using environmental keywords such as “conservation,” “wildlife” and “tree planting,” we found that tagged environmental projects accounted for a larger number than projects self-identified as “environment.”^v Among all the environmental projects we identified, 21.4% were tagged as focused on “education,” 11.7% as

Figure 9: Focus areas of foundation projects—self-identified*



*Source: CAPS database. Our database is constructed from foundations' 2017 and 2018 annual reports submitted to the Ministry of Civil Affairs and various provincial Civil Affairs Bureaus. In these reports, foundations group their projects into categories such as health, education, etc. This is what we refer to as “self-identified” project focus areas.

^v A total of 115 environmental terms were used in this analysis.

“public welfare & philanthropy sector development,” which includes such actions as tree planting and public awareness raising, and 8.4% as “poverty alleviation & community development,” focusing on sustainable livelihood initiatives. Given the limitation of allowing only one tag per project in annual reports, environmental projects may be reported at a much lower rate than is really the case.

However, China can now expect an increase in

environmental projects thanks to official attention at the highest level. Achieving ecological civilization (生态文明) has become an integral aspect of President Xi’s vision of China’s continued development. Over the past year, the president has stressed the importance of the coexistence of man and nature and called for environmental considerations to be part of China’s economic plans as well as a mainstay of common prosperity.

In October 2021, President Xi opened the United

Table 2: Project expenditure for health, education, poverty alleviation and environmental projects (in ¥)

	Education	Health	Poverty Alleviation	Environment
25th percentile	24,000	51,000	40,000	45,000
50th percentile	100,000	309,000	199,000	202,000
75th percentile	416,000	1.24 million	815,000	784,000
Average	1.66 million	7.16 million	4.62 million	1.15 million
Total project expenditure	31,850.76 million	27,039.00 million	18,129.00 million	1,218.66 million
Total number of projects	19,191	3,788	3,931	1,066

Figure 10: Focus areas of foundation projects by expenditure

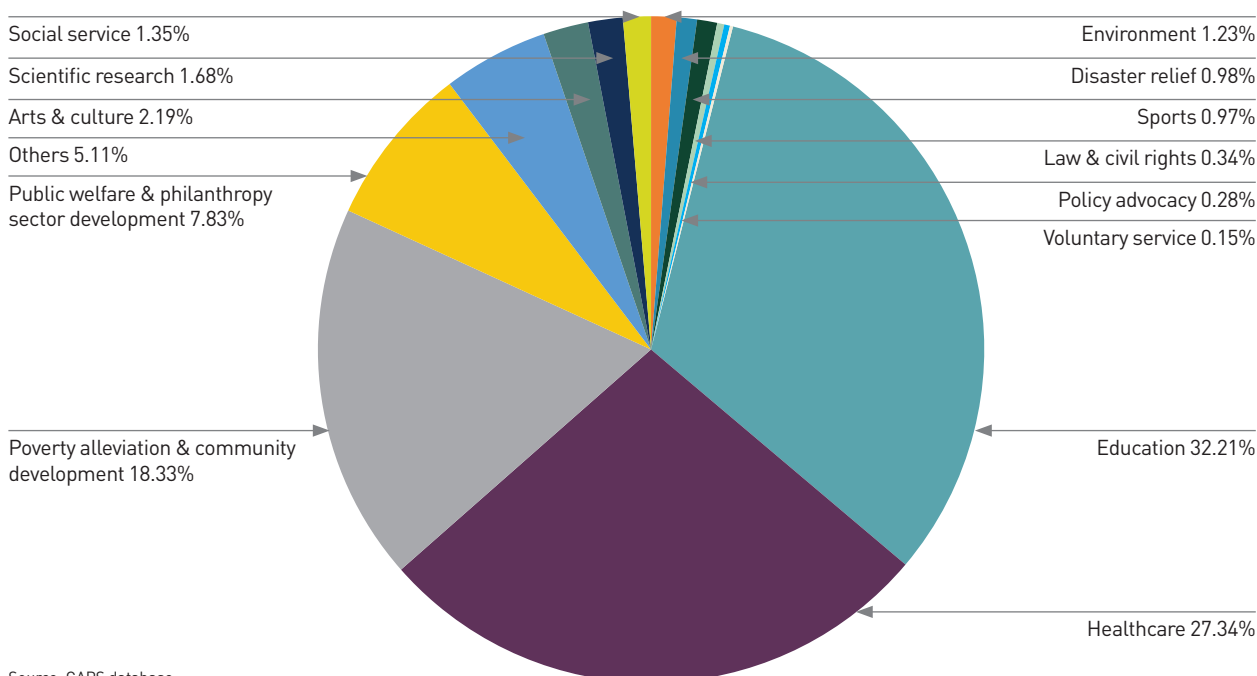
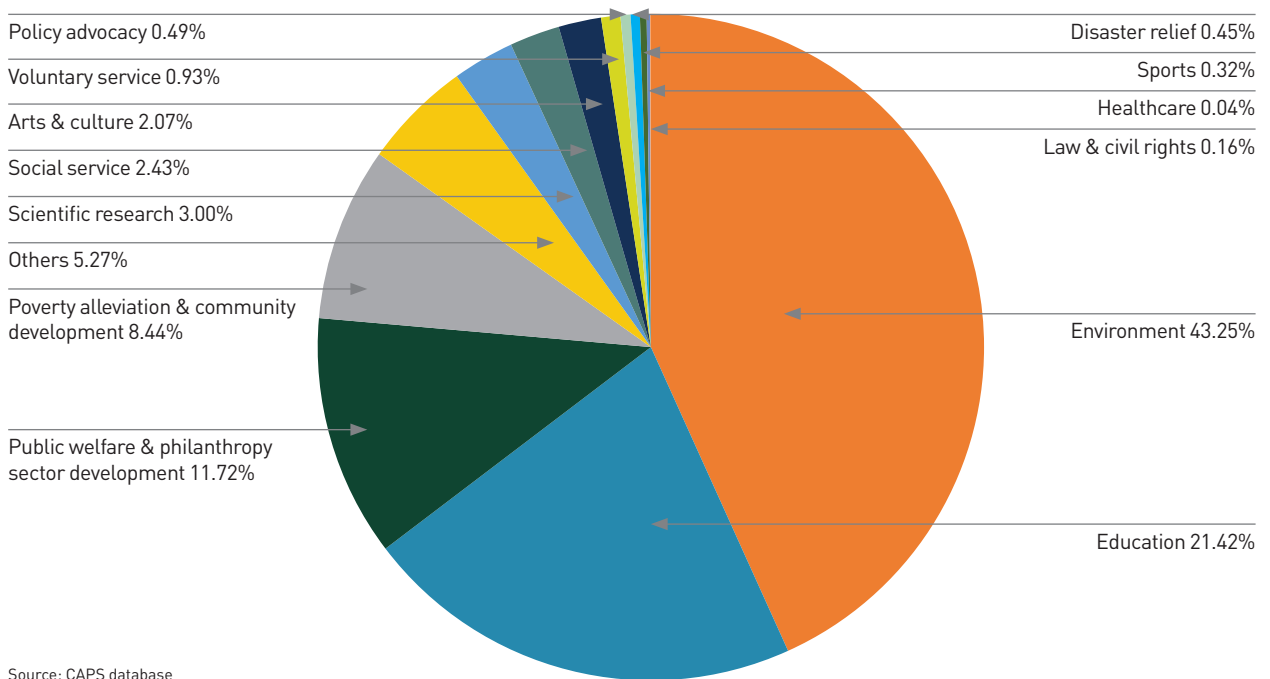


Figure 11: Environmental projects by CAPS keyword analysis

Nations Biodiversity Conference (COP15) in Kunming with a pronouncement that may influence environmental philanthropy in the years to come. The announcement heralded the creation of the first batch of national parks, comprising a total land area of 230,000 square kilometers, home to more than 30% of China's key terrestrial wildlife species.¹⁰² Although protected areas have been around since the Dinghu Mountain National Nature Reserve was set up in 1956 to protect forests in Guangdong province, the establishment of five new national parks is a significant initiative.^{103,104} The president also announced the creation of the Kunming Biodiversity Fund, to which China is pledging ¥1.5 billion (US\$231.8 million), to support biodiversity efforts in developing countries.¹⁰⁵ Even though the amount is a fraction of the US\$598-824 billion biodiversity funding gap per year, this announcement will undoubtedly be considered a turning point in the Chinese government's involvement in environmental programs.¹⁰⁶ While the government has, over the years, put in place several policies meant to address environmental pollution, climate change and ecological degradation, this was the first active encouragement of private resources going toward addressing these challenges. It seems

the government has seen the success of mobilizing support towards alleviating absolute poverty and is now employing a similar strategy to help protect the environment.¹⁰⁷

Interestingly, the government is even allowing litigation to be carried out in line with environmental objectives, which, at times, can conflict with local economic development goals.

Thematic Challenges and Approaches

Before going into specific projects and strategies, some definitions are needed. Ma Jun, Director of the Institute of Public and Environmental Affairs (IPE), explained the differences between environmental pollution, climate change and ecological degradation in Chapter 2. Within each of these large categories, there are further classifications. We developed themes and definitions based on Ministry of Ecology and Environment's classification systems when discussing environmental needs and actions. CAPS has also included "sustainable livelihoods" based on project descriptions in our database (see Table 3).

Given these categories, how are foundations in China addressing environmental challenges? Figure 12 show the thematic breakdown of projects self-tagged as

ENVIRONMENTAL PUBLIC INTEREST LITIGATION IN CHINA

While China's economic development has generated incredible wealth for its citizens, the public health and environmental consequences have also created a plethora of challenges. The government is well aware of these challenges and is utilizing a number of policy and regulatory tools to manage them. Among the more innovative tactics is to allow and even encourage judicial redress through public interest environmental litigation.

The government has allowed two means by which public interest litigation to address public harm due to environmental and resource damages can be pursued.¹⁰⁸ Either ENGOs or the people's procuratorates (similar to state prosecutors) can "institute a civil action against conducts that result in environmental pollution, infringes consumer rights, or otherwise harm the interest of the public," even though as litigant they may not have suffered direct harm.¹⁰⁹ In 2020, courts across China concluded 103 environmental public interest lawsuits initiated by social organizations, up 77.6% year-on-year, and 3,454 brought by prosecutors, up 82.3%.¹¹⁰ In the past year, the Shenzhen government has also put in place legislation allowing philanthropy to support this type of litigation.

1. Social organizations as litigants

ENGOs that can show that they have been working on environmental protection public interest activities for at least five consecutive years can file litigation against activities that cause environmental pollution and ecological damage. In 2016, it was estimated that around 700 organizations were eligible to bring environmental public interest lawsuits.¹¹¹ But eligibility and having the financial and human resource wherewithal to carry out such legislation are not yet in sync for many organizations. For example, ENGO litigants can struggle to pay for expensive damage assessment fees.¹¹² In these cases, philanthropic support can help. Friends of Nature, with the support of Jack Ma's Alibaba Foundation, has set up China's first fund dedicated

to providing financial support for ENGOs working on environmental litigation.¹¹³ The Shenzhen government has also created a novel way to raise funds for environmental litigation. Passed in August 2020, the Regulations on Ecological and Environmental Public Interest Litigation in the Shenzhen Special Economic Zone¹¹⁴ established an environmental public interest fund, which is to be managed as a charitable trust. It will be used for expenses related to the litigation. In addition to philanthropic support, the fund receives money from penalties paid for ecological and environmental damage.

2. Procuratorates as litigants

Procuratorates can sue government regulators or departments carrying out official duties, which are cases that citizen groups cannot bring.^{vi} While the 2020 figure above seems to indicate prosecuting authorities' leading role in initiating environmental public interest lawsuits, this has to be taken with a pinch of salt. According to University of Hong Kong Law School Professor Xia Ying, "Procuratorates are driven by political pressure to meet the evaluation targets. So they are most interested in growing the number of cases they brought. Therefore the defendants they have chosen are often small potatoes or lower hanging fruit."¹¹⁵

ENGOs and government-affiliated procuratorates are increasing their use of the court to address environmental harm. The space to carry out environmental public litigation exemplifies how unique environment governance is in China. Encouraging "public participation" and "multistakeholder governance" is part of China's latest approach toward environmental governance.¹¹⁶ Apart from the right to seek legal redress, measures providing for citizens' right to be informed (which helped give rise to IPE's Blue Map initiative, see p.30) and the right to participate in environmental governance through litigation are indicative of the collaborative and constructive relationship struck up by the government, corporates and the public in this area.¹¹⁷

^{vi} Citizen groups can, however, instigate "administrative litigation" against government malfeasance, which is permissible under China's Administrative Litigation Law. Source: Han, S. L. (2017). *Background Memorandum: Public Interest Litigation in China*. See endnote 108.

Table 3: Environmental challenges by theme and definition

Themes	Definition
Atmospheric Environment	Air quality; air pollution
Biodiversity and Habitats	Ecological environment quality; biodiversity; endangered species; animal and species protection; invasive alien species; nature protected areas; forest; grassland
Climate Change	Climate-related air temperature, precipitation, sea level, carbon intensity, greenhouse gases
Freshwater Environment	Surface water; rivers; lakes; water bodies of key water conservancy projects; groundwater; inland fishery waters; water supply and safety
Infrastructure and Energy	Industrial waste gas, wastewater, sewage, solid waste; clean energy; energy consumption (incl. electricity, natural gas, and coal consumption)
Land Environment	Soil environmental quality; quality of arable land; water loss and soil erosion; desertification and sandification
Marine Environment	Nearshore sea areas (i.e., coastal provinces, major gulfs, sea-going rivers, water pollution sources directly discharged into the sea); marine fishery waters
Sustainable Livelihoods	Poverty alleviation through the development of green and sustainable industries (based on local natural advantages and characteristics)

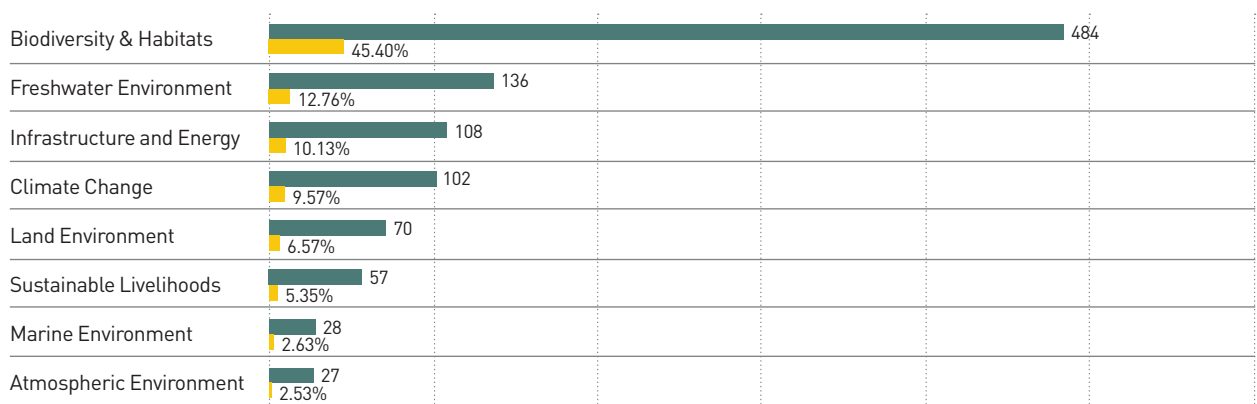
Source: The Ministry of Ecology and Environment, CAPS database

environmental. Even before President Xi's announcement, almost half of all projects were addressing biodiversity and conservation issues, accounting for the most funds deployed. We can expect to see this number rise over the next few years, although noting that many of these categories are interrelated and some projects address multiple thematic challenges concurrently.

Within each of these areas, there are different approaches. Ma Jun noted that the most common

intervention strategies are related to environmental education, increased transparency and awareness, and research. Our research confirms this as well. These types of activities are still needed and are often part of a multifaceted approach to addressing environmental issues.

In China, seven out of the top 10 foundations focusing on environmental issues are private foundations and three are GONGOs. The top private funders in

Figure 12: Thematic focus of self-tagged environmental projects

Source: CAPS database

● number of projects ● share of environmental projects



All photographs in this report are stock photos (unless otherwise indicated).

environmental philanthropy are the SEE Foundation, Alibaba Foundation and Vanke Foundation. Two of the top 10 foundations, the SEE Foundation and Paradise International Foundation, were created by a group of business leaders who saw the benefit of working together and pooling their resources. Environmental foundations have pioneered this concept in China.

The central government has also created environmental GONGOs to fulfill specific goals.¹¹⁸ For example, the China Oceanic Development Foundation (中国海洋发展基金会) funds marine projects through a collaboration of a national agency alongside six state-owned enterprises.¹¹⁹ The China Yellow River Foundation (中国保护黄河基金会) coordinates water-quality support from all levels of government and enterprises within the Yellow River basin.¹²⁰ And the China Biodiversity Conservation and Green Development Foundation (中国生物多样性保护与绿色发展基金会) is a nationwide public foundation focused on the environment and approved by the State Council. It was founded as the China Deer Foundation in 1985 with the initial purpose of

reintroducing the endangered Père David’s deer back to China, then renamed in 2009 to reflect the rising value placed on green development and biodiversity.^{121,122}

TOP ENVIRONMENTAL ISSUES ADDRESSED IN CHINA

Environmental concerns overlap; improved water quality can be achieved by protecting alluvial habitats and

Table 4: Top 10 environmental foundations by expenditure (from 2017 and 2018 annual reports)

	Name of Foundation	Total Expenditure (2017-18)
1	SEE Foundation	¥204,386,502.27
2	China Green Foundation*	¥173,297,105.34
3	China Environmental Protection Foundation*	¥141,221,615.70
4	China Green Carbon Foundation*	¥82,089,036.63
5	Alibaba Foundation	¥58,547,257.52
6	Paradise International Foundation	¥45,475,055.70
7	Vanke Foundation	¥33,932,453.64
8	Tencent Foundation	¥33,862,033.00
9	Guangdong Qiaoxin Public Welfare Foundation	¥29,032,617.88
10	Elion Foundation	¥25,051,308.28

*These are GONGOs. The other seven are private foundations.
Source: CAPS database.

expanding green energy production. But since foundations often have specific missions and skillsets, it can be helpful to categorize their work into particular areas. Ma Jun and the CAPS team have identified several of particular importance. We summarize their challenges and opportunities and provide examples of innovative programs by foundations, addressing the needs in each area.

Biodiversity and Habitats

China is a massive country with varying topography that spans several climate zones, endowing it with rich biodiversity. Yet its flora and fauna are also among the more endangered globally. For example, 43% of amphibians in China face extinction, significantly more than the global average of 30%.¹²³ Habitat loss and its impacts on biodiversity present a challenge in the face of China's rapid economic development. As President Xi's declaration at the COP15 in Kunming attests, China is cognizant of the risks and is highly committed to environmental conservation. China was among the first to sign the Convention on Biological Diversity in 1992, and since the 18th National Congress of the Communist Party of China in 2012, it has prioritized ecology and pursued green development in accordance with President Xi's thoughts on ecological civilization.^{124,125} But China still faces challenges that include inadequate basic research, lack of reliable data and talent, regional inequality and imbalances in biodiversity development and conservation.¹²⁶

Philanthropists recognizing the importance of biodiversity and habitats have focused attention on this issue. In our data, biodiversity and habitats rank first in terms of both the number of projects and money spent. Around 45.4% or 484 environmental projects are tagged as addressing "biodiversity and habitats" with total spending of ¥774.4 million (approximately US\$119.7 million), or 63.6% of all funding.^{vii} Project spending in this area is 40% higher than the average environmental project, most likely because of the significant costs entailed in purchasing land. Within this category, the top approaches are conservation, education, and ecological restoration and compensation.

The SEE Foundation and Shenzhen Mangrove Wetlands Conservation Foundation promote conservation through its Free Flying Wings outreach program, which began in 2016. This comprehensive program aims to safeguard

endangered waterbirds and their habitats by working with local governments and communities to protect 24 endangered waterbirds and more than 100 wetland sites. The program has three implementing strategies. First, it identifies suitable wetland sites to serve as "ecological conservation demonstration bases," replicating best practices in conservation work. Second, it provides financial support to build and strengthen local organizations and citizen networks dedicated to wetland and bird conservation. The local NGOs and community organizations carry out monitoring, patrolling, early warning, data collection, documentation and public education activities. And third, the project invests in scientific research and policy advocacy, so the best practices can be better understood, sustained and replicated.¹²⁷

Free Flying Wings typifies effective approaches to conservation. CAPS' data shows that community outreach and mobilization is a frequent strategy employed by philanthropists and ENGOs in mitigating environmental degradation. By June 2021, Free Flying Wings has supported a total of 90 wetland conservation projects initiated by 65 organizations over its five-year span.¹²⁸ Together, these organizations conducted 6,500 wetland patrols and bird surveys, protected 4,000 square kilometers of bird habitat, submitted reports of more than 2,200 threats of poaching, pollution and construction and organized 1,100 educational campaigns with a total of 750,000 people engaged.¹²⁹

Similar steps protect habitats for other species. The Shan Shui Conservation Center focuses on locally endangered species like the snow leopard, giant panda and snub-nosed monkey. Its partnerships with nearby communities also provide monitoring, public education activities and policy suggestions on conservation project management overseen by local governments. The center's initiatives for the giant panda have already protected more than 150 square kilometers of panda habitat.¹³⁰

Freshwater

China's water resources per capita are only a quarter of the global average. With 80% of China's water supply in the south, the northern provinces struggle with water accessibility while supporting 41% of the nation's population, 38% of its agriculture, 46% of its industry and 50% of its power generation.¹³¹ Of the water China does

^{vii} This figure is an aggregated amount of multiple tags on projects, which means that these funding amounts may be counted in other thematic areas as well.

have, rapid industrialization has caused pollution in many of the country's waterways making the water unpotable in places and threatening numerous aquatic species.¹³²

Recognizing the problem posed by polluted waterways, the River Chief Mechanism (河长制) was introduced as a pilot project in Wuxi in 2007, then expanded nationwide in 2017.¹³³ The mechanism assigns government officials with a section of river or lake: the more important the water body, the higher the seniority of the official assigned. The system aligns incentives of government officials with water needs and explains why freshwater projects account for the second most-funded type of projects. Philanthropists in China are attuned to the needs of their communities and in regular touch with government officials, especially in their hometowns or areas in which they have business operations, and thus are likely to donate to these types of projects.

Given the ubiquity of the issue, clean water is the second most popular project area both by number of projects and money spent in environment. Around ¥180.6 million (approximately US\$27.9 million), or 15% of all environmental philanthropy, is devoted to 136 clean water projects with almost half focused on pollution prevention and control. One third of the projects also provide environmental education and community engagement. Other key mitigation strategies include information capture and disclosure of environment data, making it easier for government, ENGOs and community groups to understand and track environmental metrics.

Citizen engagement is crucial to addressing the challenge, as recognized by the Riverwatcher Foundation (北京守望者环保基金会). In partnership with the SEE Foundation, IPE and Friends of Nature, it launched the Clear Water as Neighbor civil network project in August 2017, mobilizing local NGOs and volunteers across China in the control of water pollution. Volunteers make daily patrols of black and odorous water bodies, and through a multiparty dialogue involving the public, enterprises and the government, the project tracks the effectiveness of water treatment efforts.

Those efforts build on a 2016 initiative by the Ministry of Housing and Construction and the Ministry of Environmental Protection (now the Ministry of Ecology and Environment). Together with ENGOs, the ministries jointly launched a WeChat reporting platform to encourage the public to report polluted water bodies. The platform was soon connected to the Blue Map

app developed by IPE, enabling netizens to submit tips about polluted water and receive replies from relevant departments directly. While feedback through the platform and app continues, the ministries have also raised the need for in-depth participation in observation and evaluation with philanthropic organizations.

In 2017, the Clear Water as Neighbor project supported 25 environmental organizations and volunteering teams nationwide, mobilizing more than 3,000 people to participate in water body research, with regular observation operations covering 125 rivers in 23 cities nationwide. In 2018, from a total of 8,212 reports on black stinky waters, the project's volunteers uploaded 2,141 river patrol data, accounting for 26% of reports nationwide and demonstrating the important role of the project's public power in identifying polluted water bodies and supporting long-term maintenance after treatment.^{134,135}

Other foundations apply similar tools to specific geographic areas. Pearl River Watchers tackles environmental issues in the Pearl River basin, where 23% of water bodies fell below the Grade IV standard (which means water suitable only for industrial use and recreation without direct contact with the human body) in 2019.¹³⁶ Around 56% of the wastewater in the basin came from industry, with heavy polluting industries spread along the coast, making the area the third-largest source of plastic pollution in the world.¹³⁷

To address these challenges, Pearl River Watchers recruits social organizations in six provinces and 48 municipalities in the region.¹³⁸ With the Harmony Community Foundation providing support to local ENGOs, river watcher teams are everywhere the Pearl River flows. They monitor water quality and encourage local residents to pay attention to the governance of their shared freshwater environment.¹³⁹

Infrastructure and Energy

With 108 projects, philanthropy seeking to support the theme of infrastructure and energy ranked third in terms of the number of projects and sixth on money spent at a cost of ¥89.8 million (approximately US\$13.9 million), or 7.4% of environmental philanthropy. It will, however, likely grow in importance as the government has made carbon neutrality a key goal over the coming years. In 2021, China introduced an emissions-trading system so participants can offset a portion of their emissions through investments in renewable energy and cleaner power production. With

new thinking about sustainability taking hold around the world, some leading environmental philanthropists such as Wang Shi (王石), Founder and Chairman of Vanke Group, are advocating green and circular development with a bottom-up approach. We expect more individuals and companies to follow suit in the coming years. In our data set, almost half of all infrastructure and energy projects use clean energy infrastructure installation and utilization as a pollution prevention and control approach. Some 20% of all projects under this theme—as with the Baofeng case below—are also part of livelihood schemes to address and alleviate poverty through new revenue streams or job opportunities generated by renewable energy projects. Separately, awareness building through education on topics such as energy conservation and household waste management are key strategies used within this theme. Research on renewable energy, waste management and recycling accounts for one-fifth of infrastructure and energy projects.

Power supplier CLP Holdings sets an example

for balancing corporate interest with environmental sustainability. The company built the very first agriculture and solar-integrated integrated power station in Yunnan in 2015. Located in Xicun, an area with rich solar resources near the city of Dali, the solar power station was able to generate 41,300 megawatt hours of electricity in its first five months of operation. But CLP also figured out how to create a win-win-win strategy: the station also serves as the farmland for a total of 540,000 honeysuckle plants, which grow well in the increased humidity under the solar panels. Honeysuckle, commonly used in traditional Chinese medicine, is a prized crop and brings sustainable livelihood options for the local community.¹⁴⁰ “It’s not easy to look after this crop because I didn’t know about it before but I’m making much more money now,” says Ms. Yang, whose earnings have trebled to ¥3,000 (US\$464) per month since she started working for the honeysuckle contractor brought in by CLP.¹⁴¹ By integrating agriculture with solar generation, this project creates job opportunities for local farmers and generates





clean energy while maximizing land use. Richard Lancaster, Chief Executive Officer of CLP Holdings, described it as a good example of “a practical and innovative approach to this undertaking [of sustainable development].”¹⁴²

Baofeng Energy Group does something similar in Ningxia province. Baofeng aimed to provide agricultural benefits along with its clean power generation, but Ningxia’s high altitude and consistent sunlight meant high moisture evaporation, unfavorable to many crops. So, in partnership with Huawei, Baofeng planted goji berry shrubs under its solar panels, which helped to reduce land moisture vaporization by 40%.¹⁴³ The combination of all these efforts increased the vegetation coverage of the area by 85% while notably improving local climate conditions and biodiversity.¹⁴⁴ Because of the labor-intensive nature of operating a goji berry farm, and the need to maintain the solar panels, Baofeng employs about 80,000 people in the area each year, providing a stable job and a steady income for many in the impoverished region.¹⁴⁵ The income for each farming family increased to over ¥40,000 (approximately US\$6,182) per annum.¹⁴⁶

Both the CLP and the Baofeng project showcase

how a successful shared value project can be beneficial on several fronts. It was a win for the local area due to desertification mitigation of the land, a win for the local community with the creation of job opportunities, a win for the power companies in creating renewable energy, and a win for the environment with the reduction of pollutant and greenhouse gas emissions otherwise emitted by coal-fired electricity generation. The environmental impact of the Baofeng project is particularly significant: once fully built, the solar plant is expected to save 557,600 tons of coal as well as substantially lower emissions of pollutants and greenhouse gases.¹⁴⁷

To address the problem of waste, the Vanke Foundation partnered with IPE and the China Environmental Journalists Association (中国环境记协) in 2018 to launch a campaign called Environmental Protection at Your Fingertips, which created a website that allowed members of the public to submit photos on waste management conditions. By June 2020, the campaign has received submissions from over 1,400 communities in 157 cities with support from local grassroots organizations, volunteers and the general public.¹⁴⁸ The submissions revealed a wide variation in

waste management performance across communities, exacerbated by the reliance on secondary sorting systems for domestic waste. But the evidence submitted through the Fingertips website showed that most of the 46 key cities was making progress in improving their food waste systems and management.

Vanke then took data from both its waste map platform and the Fingertips website to analyze trends and make policy recommendations. Based on the photos, field research and extensive case studies, the foundation recommended regular supervision of waste disposal, removal of extra bins and waste stations, and increased public education. Later, it released a proposal for a common model of community waste management and a report (*Recommendations for Regulations on the Management of Domestic Waste*) with proven solutions for local governments to tackle problem areas.

Climate Change

Climate change presents a double-edged sword for philanthropists, particularly those in China. On the one hand, the issue is prominent and receives government attention at the highest level. President Xi pledged targets for China's CO₂ emissions in 2020, national plans followed, and in 2021, the Ministry of Ecology and Environment produced guidelines to synergize pollution reduction and carbon emissions in 2021.^{149,150}

But on the other hand, it can be difficult for philanthropists to see how they can contribute in a meaningful way. In our data, climate change ranked fourth among areas of environmental focus and third in environmental funding, with 102 projects and total funding of ¥137.5 million (approximately US\$21.3 million). Around ten percent of all environmental projects and 11% of environmental funding were tagged as addressing climate change.

Tree planting as a carbon sequestration strategy is the most popular activity, accounting for 40% of climate change projects, although it can complement efforts in other environmental areas. The Lao Niu Winter Olympics Carbon Sequestration Forest program uses tree planting as part of a comprehensive, nature-based solution for Hebei province. Developed by the Lao Niu Foundation in collaboration with the State Forestry Administration, China Green Carbon Foundation, Hebei Province Forestry Department and Zhangjiakou Forestry Bureau, the program has planted 30,000 mu (20 square kilometers)

of forest in Hebei, close to the site of the 2022 Winter Olympics. It should capture 380,000 tons of carbon dioxide in 30 years.¹⁵¹

And the forest provides further benefits. Yang Jianzhong (杨建中), Afforestation Station Chief of Forestry and Grassland Bureau of the Chongli District, said of the project, "The planting of camphor pine and oil pine not only promotes the recovery of the local vegetation landscape and absorb carbon dioxide from the atmosphere, but it can also play a role in reducing soil erosion, curbing land degradation and protecting important water sources in the Beijing-Tianjin-Hebei region."¹⁵²

On the carbon emissions front, the SEE Foundation has utilized its strong business network to encourage entrepreneurs to be conscious of their business' environmental footprint. Using its influence, the foundation helped launch the Green Supply Chain Action in Real Estate Industry (绿链行动) initiative in 2016. This effort, supported by 100 real estate companies (representing 20% of total sales revenue of China's property market), works to increase green procurement opportunities for the US\$1.54 billion spent by the industry as a whole in 2020. This has generated a significant market force on suppliers to improve their environmental performance and reduce carbon emissions in the manufacture of materials like steel and cement as more developers adopt green procurement practices and favor procurement of building materials only from certified green building materials suppliers.^{153,154} The procurement choice of these real estate and construction enterprises could prove to be significant in meeting China's carbon reduction targets, given that the sector's CO₂ footprint accounts for around one tenth of the global total.¹⁵⁵ CAPS' research shows that many business and philanthropy leaders throughout Asia see addressing environment and climate change through their companies as the most realistic option they have to make an impact.

Land Environment

In 2016, the Chinese government released the Soil Pollution Prevention and Control Action Plan, also known as the "Soil Ten" (土十条), to establish a soil pollution prevention and control scheme nationwide.¹⁵⁶ Following this, the pace of national and local policies accelerated and polluting industries were put under the spotlight.

However, the problem remains deeply rooted. According to a survey conducted by the Ministry of

Agriculture and Rural Affairs, the quality of China's arable land has decreased by at least 10% over the past 30 years. Soil degradation is concentrated in three areas, namely, the acidification of arable land in the south, the salinization of arable land in the north and the degradation of black land in the northeast, which is a total area of more than 660 million mu (440,000 square kilometers).¹⁵⁷

Land environment ranked fifth in terms of the number of projects and fourth on money spent in our study. 70 projects, representing around 7% of all environmental projects and ¥130.4 million (approximately US\$20.2 million) in funding, were tagged as addressing this issue. In our data, land conservation projects are 63% more costly than average environmental projects as the remedies are more expensive. An official from the Environmental Protection Bureau of Nandan County, one of China's key prevention and control areas for heavy metal pollution said, "Funding and technology are the biggest obstacles to soil pollution remediation."¹⁵⁸ The top approaches employed by projects are conservation, ecological restoration and compensation, research and education.

The SEE Foundation and the government-led China Environmental Protection Foundation demonstrate what philanthropy could do for land conservation.

The 100 Million Suosuo project, initiated by the SEE Foundation in 2013, illustrates what philanthropy can do for land conservation. The project in Alxa, a prefecture of Inner Mongolia, established a platform bringing together officials, local herders and cooperatives, civil environmental organizations and entrepreneurs and the general public. The aim was to create synergy for the restoration of 133,333 hectares of desert vegetation through the planting of 100 million psammophytes (plants that thrive in sandy soil, including the suosuo) in critical ecoregions of Alxa over the decade from 2014 to 2023. This should hold back desertification in Inner Mongolia while improving the living standards of local herders. Not only will herders benefit from the increased vegetation for their livestock, but they can also profit from the harvesting of a parasitic plant that lives in the roots of the suosuo plant and is believed to have medicinal properties. By 2020, the project planted a total of 65,588,500 suosuo shrubs and other psammophytes, covering 1,377,500 mu (918.3 square kilometers) of Alxa's key ecological areas.¹⁵⁹

Another planting project combines education with its efforts to assist local herders. China Environmental Protection Foundation (CEPF) and Natural Hall (a Garan Group beauty brand) co-founded the Natural Hall Himalayan Charity Fund to plant resilient grasses throughout the Himalayan region. As well as teaching farmers and herders scientific concepts and methods of grassland management, the program also increases food supply and security for their cattle and sheep.¹⁶⁰

"In these grass-growing public welfare programs, the government provides land, public welfare organizations and enterprises invest money, scientific research departments supply technology and local villagers provide labor," said Fang Zhi, Deputy Secretary-General of CEPF, in an interview with the *China Philanthropy Times*. "Grassland revenues are returned to the villagers. This forms a complete service or 'public welfare chain' to support people's livelihoods, welfare and rural revitalization...Local shepherds now earn over ¥13,000 (approximately US\$2,009) per capita annually."¹⁶¹

Sustainable Livelihoods

One of President Xi's policy centerpieces is sustainable livelihoods for China's citizens. After declaring victory in eradicating extreme poverty in February 2021, efforts to build on this success continue afoot. While China transitions from poverty alleviation (扶贫攻坚) to pursue common prosperity (共同富裕), the goal remains the same: to attain a "moderately prosperous society" through agricultural and rural modernization.¹⁶²

Poverty alleviation in China is carried out in a highly coordinated manner with the central government matching state organs and units to specific counties.¹⁶³ Rallying calls for businesses, such as the "10,000 enterprises helping 10,000 villages" campaign, has directed the resources of more than 12,700 enterprises toward China's most deeply impoverished regions.^{164,165} Around 8,000 top companies across various industries responded to the call and established agriculture and processing bases in China's poorer regions in 2020.^{166,167}

In our data, sustainable livelihoods ranked sixth in terms of the number of projects and fifth on the money spent. Fifty-seven projects, or 5% of all environmental projects, are tagged as addressing sustainable livelihoods with total spending of ¥113.1 million (approximately US\$17.5 million), amount of which accounted for 9.3% of all environmental projects. As these projects address

environmental degradation and climate change as well as provide sustainable livelihoods for the local community, it is not surprising that the actual funds deployed are 70% higher than other environmental projects.

Projects in this area include providing jobs in the production of environment-friendly crops and maintenance of green energy infrastructure, as in CLP's and Baofeng's solar projects outlined earlier. Another example is the Jiemuxi Township ecological farm in Hunan province, which is supported by a donation of ¥2.6 million (approximately US\$401,900) by the COSCO Shipping Charity Foundation. In addition to producing food, the farm includes parks and attractions which have made it an ecological tourist destination. Local citizens benefit by working directly for the farm and tourist sites, or the supporting businesses.

Marine Environment

Marine ecosystems, like grasslands, lakes or forests, also need protection.¹⁶⁸ To this end, China released a plan in 2020 to conserve and restore major national ecosystems, aiming to protect more than 35% of the nation's

coastline.¹⁶⁹ While it is a step forward, there are gaps to close. Marine-protected areas comprise only 4.1% of China's marine jurisdiction, and law enforcement and management of these protected areas are sporadic.^{170,171} Climate change amplifies degradation of the marine ecosystem. Many aquatic species face extinction. Coral reefs are in peril and fish stock has plummeted because of overexploitation. "Dead zones" as big as the United Kingdom are created as fertilizers enter through China's coastal ecosystem.¹⁷²

In our data, philanthropy seeking to support the theme of marine environment ranked seventh in terms of the number of projects and money spent. Twenty-eight projects comprise 3% of all environmental projects and, at ¥29.5 million (approximately US\$4.6 million), less than 2.5% of all environmental funding. More than 70% of experts polled by Duke Kunshan University responded that in China, funding dedicated for marine ecosystem protection is severely insufficient.¹⁷³

Of philanthropic projects focused on the marine environment, about half involve education and the rest focus on pollution prevention and control, and marine





research. In 2017, Shen Guojun (沈国军) of the Yintai Group and the Paradise International Foundation jointly launched the Blue Pioneers Program committed to cultivating and empowering young talents in the frontline of China's marine protection. The program has successfully trained 80 students in cooperation with Guanghua College of Peking University and Duke Kunshan University. The 2022 cohort will soon be enrolled.

Spreading marine knowledge within popular science is another focus of the Paradise International Foundation. Through a partnership between Shen Guojun and OceanX, an ocean exploration project founded by Ray Dalio, the foundation created an online classroom in 2020 to increase teenagers' ocean literacy. A wealth of deep-sea scientific expedition content is made available on Chinese social media platforms, allowing young people to learn about the ocean during the pandemic.

At the front of policy advocacy, Shen Guojun also submitted a policy proposal at the Two Sessions in 2021,

advocating for greater integration between blue carbon, marine conservation and China's carbon neutralization strategy.^{viii} In an interview for this study, Shen Guojun said, "Private charitable foundations like the Paradise International Foundation will continue to play to its strengths, and work with all sectors of society to better promote marine conservation work."¹⁷⁴

Education also forms the backbone of the demonstration project at Meilian Village (梅联村) in western Sanya. This bottom-up approach rallies the local community in protecting the environment, which is under increasing threat due to Sanya's booming tourism. Sun Dong (孙冬), a local businessman, felt the need to act to protect the few remaining healthy coral reefs, clear garbage from beaches and combat the reckless discharge of waste-water directly into the sea.¹⁷⁵ With a group of peers, he established the Blue Ribbon Ocean Conservation Association in 2007, providing innovative environmental initiatives ever since.

^{viii} Submitted at the annual plenary sessions of the National People's Congress and the National Committee of the Chinese People's Political Consultative Conference, the full title of the policy proposal is "A Proposal on Raising the Status of Blue Carbon in the Nation's Carbon Neutralization Strategy."

In addition to public education and beach clean-ups, Blue Ribbon's Meilian Village project balances the local need for sustainable livelihoods with conservation of the marine environment. Meilian Village is surrounded by abundant marine resources, which have traditionally provided the community with their livelihoods. Unfortunately, many of these fisherfolk employed destructive fishing methods such as drift nets and bottom trawling, both causing serious damage to the offshore marine biodiversity. Blue Ribbon's demonstration project provided the local community with alternative models of sustainable fishing.

The project team also introduced ecological tourism initiatives, resulting in the reduction of more than 30 fishing boats as people began to make their living from tourism. As a result, the average annual income per person in Meilian Village increased from ¥4,000 to ¥7,200 (approximately US\$618 to US\$1,112) by the end of 2018.¹⁷⁶

Atmospheric Environment

In 2013, Beijing introduced regulations and measures to tackle air pollution. Great progress has been made, but unceasing industrialization and urbanization continue to release pollutants into the air. Increased energy use exacerbates problems in key regions like Beijing-Tianjin-

Heibei (Jing-Jin-Ji), especially during the winter months.

Despite the severity of the problem, the atmospheric environment ranked eighth in terms of the number of projects and money spent. Twenty-seven projects, or 2.5% of all environmental projects, spent ¥11 million (approximately US\$1.7 million) on atmospheric issues, less than 1% of all environmental funding.

Given its low profile, helping stakeholders to "see" the problem is essential and education efforts often accompany projects aimed at pollution prevention and control. One of the most significant contributors in this area is IPE, the ENGO founded by Ma Jun. IPE developed a pollution map database called the Blue Map in 2006. Over 10 years, it collected data from more than 300,000 inputs in 31 states and 338 cities and counties across China.¹⁷⁷ In 2014, the launch of the Blue Map mobile app enabled the public to access and upload information about air quality, water quality and pollutant emissions, making them participants in collecting this vital information. "When there are a lot of smoggy days, before people would get angry, but now they can use their energy for something else: find out who is polluting and tweet it," said Ma Jun. "And once the public began tagging government agencies in those 'tweets' on Weibo, officials could no longer ignore the problem without appearing to neglect their duty."¹⁷⁸



Conclusion

Our work identifies the tenets of “philanthropy with Chinese characteristics.” First and foremost is that Chinese philanthropy supports government programs and initiatives. While it has only been recently that the Chinese government has called directly on philanthropists, philanthropic goals have long matched government objectives in dealing with environmental degradation and climate change. All the environmental projects we saw throughout our study worked toward treating issues identified by the government as needing much assistance.

The second characteristic of philanthropy with Chinese characteristics is the tendency to apply business skills toward viable solutions. In Vanke Foundation’s community waste management and Solid Waste Pollution Map projects, company expertise of Vanke coupled with that of the Institute of Public and Environmental Affairs was used to illuminate urban living patterns harmful to the environment when people disposed of their garbage and waste. Vanke’s knowledge of the urban landscape and cities’ key officials was essential in implementing the project. The data-driven analysis enabled the project team to craft policy solutions that the local government could employ.

Chinese philanthropy can also move government policy as much as vice versa. Foundations often pilot a solution with the hope that the government can either put in place new policies based on this intervention or scale it up with financial and administrative support. In fact, in a new report by the China Environmental Grantmakers Association, calls for promoting national strategies for environmental adaptation is a key recommendation.¹⁷⁹ Zhang Boju (张伯驹), Director of Friends of Nature, one of the earliest environmental protection organizations in China, said: “There are two criteria for the success of an environmental project: the first is that it effectively influences government policies, the second is that it effectively changes the habits or consumption choices of the general population.”¹⁸⁰ Livelihood projects, including CLP’s and Baofeng’s agribusiness solar programs and Blue Ribbon’s Meilien project are good examples of

demonstration or pilot initiatives.

When a company applies its business acumen and skills, the projects can also contribute to the company’s financial sustainability. This shared value strategy is a norm among Chinese corporate social responsibility (CSR) programs. JD Logistics, for example, merged its research and development with CSR efforts to develop a green supply chain system that will also improve and restructure its business model. In 2021, it announced its intention to spend ¥1 billion (US\$155 million) to increase its carbon efficiency by 35% within five years.¹⁸¹ A key part of this effort combines green logistics and delivery in remote areas to promote rural revitalization efforts.

Another key characteristic of Chinese philanthropy is to give back to one’s hometown. Our research shows there are two reasons for this: tradition and pragmatism. Traditionally, giving back to one’s hometown honors one’s ancestors and is a concrete way of demonstrating filial piety. Being connected to a place and concentrating on its needs is also pragmatic, particularly in environmental philanthropy. Even if a place is not historically connected to one’s family, building deeper relationships is perceived to be a beneficial use of time and resources. Ma Jian (马剑), Vice President of the Paradise International Foundation, was asked how board members chose which locality in which to work, given China’s size and environmental needs. He responded that, in addition to assessing the biodiversity status of these localities, they look for “mutual understanding between the local government and the community whose ideas of development must be sustainable and anchored by a mindset for solid dialogue.”¹⁸² He explained, “If you want to protect the environment, you need to consider not only the environment but also the people [interacting with it].”

Local support can also influence the choice of where to pursue relationships. Wang Shi (王石), Founder and Chairman of Vanke Group, said, “The good thing is that now there is competition between cities, and after assessing their different levels of support, I would choose accordingly to land my [environmental] projects.”¹⁸³

Competition for foundation projects can even lead to more favorable negotiations and guarantee better outcomes.

Our study also shows that environmental projects differ from those in other sectors in several ways. First, environmental philanthropy is dominated by private and individual foundations, or those set up by a group of individuals. As we saw in Chapter 3, seven of the top 10 environmental foundations are of this type, and only three are GONGOs. In health philanthropy, the opposite holds with seven of its top 10 foundations being GONGOs.

Ai Luming (艾路明), Founder and Chairman of Dangdai Group and former Chairman of the SEE Foundation, said, “One of the biggest achievements for SEE is figuring out a way to make environmental protection appropriate for the private sector in China. The ‘how’ to achieve it requires the participation and experimentation from the entrepreneurs; we cannot just see it as a law or regulation of the state. We need to explore *how* to involve more private and corporate forces in this process and how to reach this goal.”¹⁸⁴

Another distinct characteristic is that the majority of environmental programs are multifaceted, rather than serving one independent task such as providing funding for a local hospital or school. Foundations involved in environment philanthropy recognize that surgical interventions aimed at solving one problem are not viable for their missions. For clean water, there need to be efforts to stop effluents, educate people living along the shore and remove contamination. No single activity can solve the issue.

The need for a comprehensive approach may enhance the reliance on ENGOs as partners. This is the case for two reasons. First, for an environmental project often there is not an easily discernible “recipient” for a donation. Unlike giving philanthropic support to a hospital or school, a multifaceted solution may require working with a variety of local partners. The second reason is that many environmental projects require technical and science-based solutions for which specific expertise is a prerequisite. The *2021 China Environmental Grantmakers Alliance* (CEGA) report also emphasizes the need for environmental projects to better integrate a sound understanding of climate change into their design.¹⁸⁵ Expert input is essential for carrying out this important objective.

Another characteristic of environmental philanthropy is the prevalence of collaborative funding groups or platforms. SEE and the Paradise International Foundation, two of China’s largest environmental foundations, pool

resources so that they can have more impact, while the CEGA was established to allow several foundations to work together. “The environmental sector has a much smaller source of funding [than other focus areas], and as it’s smaller, it pushes everyone to form a coalition to create a larger effect,” said Yang Biao (杨彪), Vice Secretary-General of SEE. “Secondly, air, soil and water are intertwined—there is no way to separate them. ENGOs are doing the same thing in the same way, so they are bound to collaborate.”¹⁸⁶

As companies respond to increased calls to marry profit with purpose, and with new environmental, social and governance regulations, there will undoubtedly be more CSR activity addressing environmental concerns. Public-private partnerships for social good—in which companies and government agencies work together to address a particular social challenge—will increase, according to 88% of top business leaders in Asia, in a CAPS survey.¹⁸⁷ In the Lao Niu Winter Olympics Carbon Sequestration Project, for instance, the Lao Niu Foundation works closely with the local government to improve carbon capture in specially managed forests. In China as a whole, where it is the norm to work with the government, there will be fertile ground for developing more public-private partnerships to deal with environmental degradation and climate change.

We will also continue to see a great deal of activity and experimentation with green financing, both for environmental projects and for standard business operations. Between 2016 and 2019, China issued 184 green bonds totaling ¥479.91 billion (approximately US\$74.17 billion), or about 27% of green bonds globally.¹⁸⁸ Private companies are also issuing “green panda bonds” which are renminbi-denominated financing instruments adhering to stricter environmental standards. In many instances, this type of “blended finance” includes philanthropic and impact investing capital.

With the government’s commitment to a zero-carbon future, along with initiatives supporting biodiversity and sustainability in rural revitalization, we expect increased activity by China’s foundations in tackling critical environmental challenges. The government’s support for a carbon market in China will play an important role in encouraging green developments and solutions. And philanthropic projects will both follow and influence government policy as foundations work with officials to meet China’s growing environmental needs.

Next Steps

Throughout this study, we have emphasized the extent to which private and corporate philanthropy and corporate social responsibility (CSR) in China are aligned with government priorities. Philanthropists in China want to help the government progress the agenda of providing health care, good education and job opportunities and protecting the environment. And they often work in partnership with official agencies.

Having said that, there are choices to be made about missions and methods. As one philanthropist mentioned in an interview, it is important to find the “kongjian” (空间) or space in which one wants to operate and influence. Whether acting alone or with a private or corporate foundation, it is vital to think through which issues matter and what resources can be brought to address them. Pertinent questions include “What problems warrant increased attention?” and “Which tools can best be deployed toward solutions?” Strategic philanthropy entails more than writing a check: it requires thinking through how best to apply funding and other resources toward durable solutions.

INDIVIDUAL AND FAMILY PHILANTHROPY

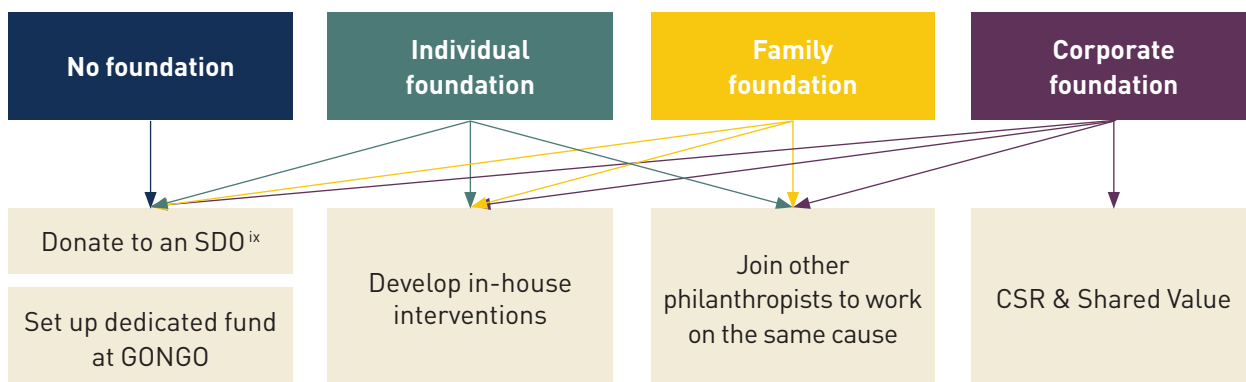
Many philanthropists choose to support specific projects because they have a personal connection to an issue. For

Vanke Group’s Founder, Wang Shi (王石), an avowed hiker and outdoorsman, supporting environmental interventions was a natural choice. One head of a prominent ENGO mentioned that when both his parents were diagnosed with cancer, he realized that pollution was causing irreparable harm and had to be addressed. He switched his career to focus on the environment.

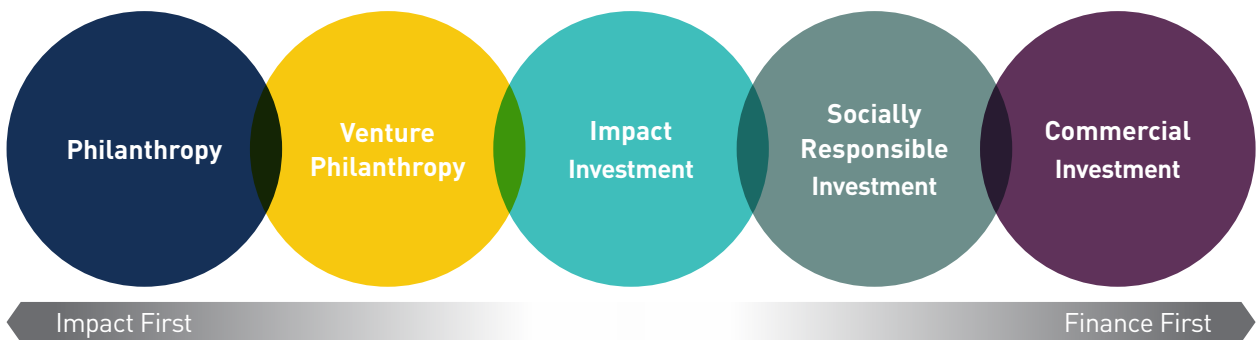
An individual philanthropist, without dedicated staff or auxiliary resources, must make early decisions about their mission and resources. Within the environmental arena, many areas need help, from conservation and biodiversity to climate change and pollution control. A philanthropist may then decide whether to work through an independent or a government-affiliated organization. This may depend on the issue addressed and the strategy the organization is employing. In environmental philanthropy, as we have shown, working with experts is a requirement. Environmental solutions require holistic approaches based on scientific and community knowledge and many philanthropists will find themselves collaborating with an environmental nongovernmental organization.

When working with an organization, how to interact is also a decision an individual philanthropist must make.

Figure 13: Pathways for philanthropy and CSR



^{ix} In our studies, we use “social delivery organization” (SDO) to refer to organizations that are engaged in delivering a product or service that addresses a societal need.

Figure 14: Financing spectrum

Source: Business for Good: Maximizing the Value of Social Enterprises in Asia [2019], p. 16

In years past, many philanthropists would simply write a check to a group of organizations. More recently, the notion of venture philanthropy—which requires higher engagement and a longer-term approach—has taken hold. A venture philanthropist, employing tactics similar to those of a venture capitalist, is committed to the continuing sustainability of the organization supported and to its portfolio of projects. A venture philanthropist funds over years and funds in larger amounts.¹⁸⁹ He or she also takes a more strategic and involved role, providing management and strategic coaching. Many times, the philanthropist does so through a formal advisory or board role.

A philanthropist can also set up a family foundation, as is common in China. These include local and regional foundations focusing on specific geographic concerns as well as foundations set up to signal the intent of using wealth for societal good. Such foundations have two especially important resources: local knowledge and understanding and/or business acumen and skills. Together, these resources can help a philanthropist design innovative and impactful solutions. Bringing business tools into the mix is important and too often overlooked in the business of doing good. Yet understanding the costs and benefits of a strategy is critical to its sustainability and success over time. In our study, we could see how business- and issue-specific knowledge helped specialized environmental foundations such as SEE and Paradise International develop solutions that are more sustainable and yield higher impact.

But philanthropy should not be approached solely as a business venture. A personal connection to an issue can increase the passion and dedication to

find solutions. Philanthropy should be strategic, but it must also be from the heart. Working to address environmental degradation and climate change must be a central focus as the world becomes more and more aware of the implications of not acting.

CORPORATE PHILANTHROPY

Corporate foundations have the greatest resources to develop and implement solutions. As we saw with Vanke, CLP and Baofeng, solutions employing business strategies and know-how have improved impact and success. Corporate foundations can also be aided by employee volunteer programs and business development efforts and through research and development. JD Logistics, for instance, successfully combined knowledge from its commercial ventures and its CSR projects to improve logistical operations while supporting rural revitalization.

In China, these types of win-win or shared value strategies are an oft-used model within Chinese philanthropy and deployed in many projects nationwide, helping in many areas. By aligning goals and finding synergies, there need not be an exit strategy or cause for “donor fatigue.” It is in the long-term interest of Vanke, CLP and Baofeng to help bring about clean and healthy cities and create more sources of renewable energy.

A FURTHER “WIN-WIN”

Of the many reasons that Chinese philanthropy tends to partner with the government, one of the most important has to do with scale. When the government is at the table from the beginning, effective solutions piloted by

philanthropy can find their way into policies. Since the government provides most social services, helping it to do its job as effectively as possible is a fundamental benefit of philanthropy.

Lastly, a word on the need and importance of trusted advisers. As mentioned, the number of trained philanthropy professionals is rising in China, but philanthropy and CSR are still nascent fields and China is a very big country. When starting out on a philanthropic journey, or even for those more seasoned, finding a trusted adviser to help guide the way is a smart idea.

As part of CAPS' advisory work, we recommend thinking about social investment in terms of a portfolio of investments as the financing spectrum (Figure 14) shows. Some of the investments bring about monetary returns, some less so and some not at all. Taken together, they provide a variety of resources to address complex situations that often require more than one project or initiative to solve.

This report outlines how environmental philanthropy in China is addressing critical issues in new and interesting ways. But this is only the beginning. As China's economy continues to grow, more wealth will be created and philanthropy will continue to flourish. We look forward to this journey of doing good together.

Appendix 1

Methodology & Data Sources

With the China Issue Guide series, we set out to understand the current trends and practices as well as motivations for philanthropic giving in mainland China.^x To do so, we collected quantitative and qualitative data from three main sources:

- Publicly available government databases
- Interview of 40 principals, management of foundations, representatives of social service organizations, and scholars
- Media resources, including *China Philanthropy Times* (公益时报)

Data integrity

Our main quantitative database was constructed from data derived from annual reports of foundations for 2017 and 2018. We scraped annual reports from national-level information disclosure platforms administered by the Ministry of Civil Affairs, including the China Nonprofit Organization Public Service Platform (中国社会组织公共服务平台) and Charity in China (慈善中国). We also included data from provincial-level information disclosure platforms, such as the Guangdong Social Organizations Network (广东社会组织网) to complete our data set.

The robustness of the CAPS data set was ensured through triangulation with trusted data sources, including the *Blue Book of Philanthropy: Annual Report on China's Philanthropy Development* (中国慈善发展报告) from multiple years, Family Philanthropy Data Center (家族公益慈善数据中心) and a CAPS-commissioned data set prepared by the China Foundation Center (基金会中心网).

Data scraping and analysis

The numerical and textual data scraped from annual reports was structured into a consistent format and aggregated into a single data set holding 42,070 entries of projects carried out or funded by foundations.

To analyze these projects in greater depth, we studied keyword frequency and co-occurrence in each of four focus areas (education, environment, health and poverty alleviation). This analysis gave us a closer view of specific activities or resources mobilized in each of these areas. We used basic natural language processing (NLP) tools, segmentation and part-of-speech (POS) tagging on project titles and descriptions. Segmentation separated Chinese text to make counting each word possible, and POS tagging classified each word by identifying its part of speech. We took out words with meaningless POS tags (conjunctions, etc.) and only looked at the ranking of the meaningful words (proper nouns, verbs, etc.).

With reference to the NLP results, our sector experts helped cross-check keywords for each issue area, giving us greater confidence in its validity.

^x To give a more accurate picture of philanthropic trends and practices in mainland China, philanthropic activities from the Hong Kong and Macau Special Administrative Zones, Taiwan, China, and overseas to mainland China were excluded from this study.

Appendix 2

List Of Interviewees

Principals

AI Luming	Founder and Chairman, Dangdai Group
CAO Dewang	Chairman, Fuyao Group
CHENG Heiming	Founder and Chairman, KaiLong Group
FANG Fenglei	Chairman, Hopu Investment
Nellie FONG	Founder, Lifeline Express
GUO Meiling	Chairman, Century Galaxy Technology Group
Fred HU	Founder and Chairman, Primavera Capital Group
Victor KOO	Founder, Tianren Culture
LI Kemei	Vice Chairman, Beijing Deqing Foundation
LIU Daoming	Chairman, Myhome Foundation
NIU Ben	Founder, Laoni Brother & Sister Foundation
PAN Shiyi	Chairman, SOHO China / SOHO China Foundation
SHEN Guojun	Founder and President, Yintai Group and Founder and Honorary President, Yintai Foundation
WANG Shi	Founder, Vanke Group and President, Vanke Foundation
XIA Hua	Chairperson, Eve Group
ZHANG Yaqin	Dean, Institute for AI Industry Research, Tsinghua University
Susan ZHU	Chairman and CEO, Shanghai Treasure Carbon Co., Ltd
ZHUANG Zhi	Founder, LoveZone Charity Foundation
---	Anonymous Donor 1

Management of foundations and scholars

CHEN Yimei	Secretary-General, Vanke Foundation
GU Lan	Director, China Youth Development Foundation
GUO Su	Executive Secretary-General, Ningxia Yanbao Charity Foundation
LI Danning	Secretary-General, K2 Foundation
Rocky LIU	Secretary-General, Shenzhen TCL Charity Foundation
Luke LIU	Senior Project Officer, Sany Foundation
MA Jian	Vice President, Paradise International Foundation
Mandy TAO	Program Director, Laoni Brother & Sister Foundation
XIA Ying	Dr.; Assistant Professor, HKU
YAN Baohua	Secretary-General, Shenzhen Mangrove Wetlands Conservation Foundation
YANG Biao	Secretary-General, SEE Foundation
ZHANG Boju	Director, Friends of Nature
ZHANG Ruiying	Executive Director, China Environmental Grantmakers Alliance
ZHANG Zhen	Secretary-General, Rici Foundation
ZHAO Liwen	Secretary-General, Beijing Taikang Yicai Foundation
ZHAO Min	Director of Operations, Hubei Myhome Philanthropy Research Institute
ZHUANG Wei	Secretary-General, Beijing Cihong Charity Foundation
ZHU Lihua	Co-Founder, He Yi Institute
---	Anonymous Foundation 1
---	Anonymous Foundation 2
---	Anonymous Foundation 3

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