SINO-EUROPEAN PARTNERSHIP
ON LOW CARBON AND SUSTAINABLE
URBAN DEVELOPMENT
中欧低碳与可持续城市发展伙伴关系

低碳城市发展
—中国民间组织案例集

ADDRESSING LOW CARBON URBAN DEVELOPMENT
- NGO CASE STUDIES FROM CHINA

低碳城市发展

—中国民间组织案例集

Addressing Low Carbon Urban Development - NGO Case Studies from China

本报告是“中欧低碳与可持续城市发展——伙伴关系”项目的一部分。项目由两家非政府组织——德国观察与 E3G 共同发起执行的，旨在促进中国，德国和欧盟之间在气候变化和低碳城市发展等领域的合作。

编辑：张楚（德国观察 /E3G），任慧（中国民促会），Dirk Rommeney（德国观察），黄心薇（E3G）
设计：朱雨生（北京奇胜智合文化发展有限公司 ）
资助：墨卡托基金会
出版：北京，2014 年

电邮： info@low-carbon-partnerships.org
网站： www.low-carbon-partnerships.org

This publication is part of the project "Sino-European Partnership on Low Carbon and Sustainable Urban Development” launched by the non-governmental organisations, Germanwatch and E3G (Third Generation Environmentalism). The project aims at fostering the cooperation in the field of climate change and low carbon urban developmentbetween China, Germany, and the EU.

Editing: Zhang Chu (Germanwatch/E3G), Ren Hui (CANGO),
Dirk Rommeney (Germanwatch), Dr. ShinWei Ng (E3G)
Design: Zhu Yusheng (Beijing QiSheng ZhiHe Cultural Development Co., Ltd.)
Published: 2014, Beijing

Contact: info@low-carbon-partnerships.org
Website: www.low-carbon-partnerships.org

项目资助 /Funded by

前 言

改革开放以来，中国民间组织的发展经历了一个从无到有、曲折发展、成长壮大的历史过程。截至 2013 年 6 月底，全国依法登记的社会组织有 50.67 万个，其中社会团体 27.3 万个，民办非企业单位 23 万个，基金会 3713 个，从业人员超过 1200 万人。社会组织的整体实力不断提升，已成为政府职能转移的主要承接者、社会政策的重要执行者和社会服务的重要提供者，成为我国社会主义现代化建设不可或缺的重要力量。

近几年，由于环境恶化的加剧、政府解决环境问题的不足及国际环保民间组织的示范效应，使得越来越多的团体、个人以不同的方式加入到环境保护的行列中来，涌现了大批关注环境层面的环保民间组织，为社会的发展注入了新的活力。从 2008 年北京举办“绿色奥运”到 2010 年上海举办“绿色世博”的迫切需要，在中国形成了一股环境保护的浪潮。从关注生物多样性、气候变化、水质污染、垃圾减量、城市空气污染等，全国环保民间组织关注的领域越来越多，也越来越以联合携手的形式推动中国环保领域的发展。

目前国内已有 100 多个城市在打造不同层面的绿色、生态或低碳城市（城区），如中国和新加坡合作的天津中新生态城，曹妃甸国际生态城，深圳光明新城，长沙大河西，德州、保定、淮南等地也都在进行示范，此方面议题也渐渐成为环保民间组织努力的方向。

中国国际民间组织合作促进会（以下简称民促会）作为一家致力于环境保护的平台性机构，在气候变化、绿色出行、低碳城市等方面一直与国内、国际民间组织开展常态的合作，并一直在绿色环保领域践行着自己的行动。

为了更全面、深入地参与到城市可持续发展中来，2014 年在德国观察（Germanwatch）和第三代环保主义（E3G）的支持下，民促会开展了一系列“中欧低碳与可持续发展伙伴关系”主题活动，并邀请国内各环保民间组织共同编写了低碳城市案例手册。

参与编写的机构涉及世界自然基金会、中华环保联合会、绿色和平、全球环境研究所、北京环友科学技术研究中心、创绿中心、绿色浙江、爱有戏社区文化发展中心、成都根与芽、磐石环境与能源研究所及成都城市河流研究会等 11 家机构，通过共同分享在低碳和城市可持续发展中的案例，希望为其他致力于关注低碳城市的民间组织分享经验并总结教训，也希望通过自身的微薄力量影响更多的公众参与到低碳城市发展的行列中来，让包括政府、企业、媒体等各类人士看到民间组织在城市可持续发展中的积极性，同时加强各环保民间组织在此领域的对话与交流。

中国国际民间组织合作促进会

Foreword CANGO

Since reform and opening up, China's non-governmental organizations (NGOs) has experienced a history of tortuous development and growing process. By the end of June 2013, official statistics show a total of 506,700 registered social organizations, including also 230,000 private non-enterprise entities and 3,713 foundations, employing more than 12 million people. The overall impact of social organizations is on the rise and they are now an indispensable force in building China's socialist modernization, through taking over more public functions, implementing social policy and providing social services.

In recent years, increasing environmental degradation, inadequacy of government's actions and leading examples set by international environmental NGOs make more and more organizations and individuals joined the environmental crusade in China, creating a large number of domestic environmental NGOs and injecting new vitality into social development. A new wave of environmental protection in China was formed when Beijing hosted the "Green Olympics" in 2008 and Shanghai hosted the "Green Expo" in 2010. The focus areas of environmental NGOs have been multiplied and diversified, from biodiversity and climate change to water pollution, waste reduction as well as urban air pollution; NGOs have also increasingly worked together to promote environmental protection.

Currently there are more than 100 so-called green, ecological or low carbon cities on different levels in China – China-Singapore Tianjian Eco-City, Caofeidian International Eco-City, Shenzhen Guangming New Town and Changsha Dahexi. The cities of Dezhou, Baoding, Huainan, and more are also pilot cities of different initiatives and demonstrating its efforts. Environmental NGOs are actively involved in promoting the movement.

China Association for NGO Cooperation (CANGO), which acts as a platform for NGOs committed to environmental protection, has been cooperating with domestic and international NGOs in the fields of climate change, green commute, low-carbon city and etc, and has also undertaken many initiatives on environmental protection on its own.

In order to further advance sustainable urban development in China, with support from Germnanwatch and E3G, CANGO carried out a series of activities under the project of "China-EU Low Carbon and Sustainable Development Partnership" in 2014, including inviting various environmental NGOs to contribute to a compilation of China's low carbon city case studies.

A total of 11 NGOs contributed to the manual, namely World Wide Fund For Nature (WWF), All-China Environment Federation, Greenpeace, Global Environmental Institute (GEI), Envirofriends, G-Hub, Green Zhejiang, Ai Youxi Community Culture Development Center, Chengdu Roots and Shoots, Rock Environment and Energy Institute, and Chengdu Urban Rivers Association. Through sharing case studies on low carbon and sustainable urban development, it is hoped that the study can share experiences and lessons with other organizations, and attract interest to support low carbon urban development, including the government, businesses and the media. It can also strengthen the dialogues and exchanges between environmental NGOs.

China Association for NGO Cooperation

前 言 二

城市化进程在中国领导层新的改革议程中扮演着战略性的作用。2014 年 3 月，中央政府发布了《国家新型城镇化规划 (2014 － 2020 年)》。该计划指出，到 2020 年，中国城市总人口的比例将达到 60%，而这意味着城市人口每年增加 1500 万。这样的城市化速度和的规模即使在中国也是前所未有的，会带来多方面的压力。

中国将如何应对这个进程？如何面对现有的机遇和挑战？如何对不断增长的资源、能源、交通、社会和其他公共服务等需求进行管理？怎样引入并动员政府，企业和公众针对低碳问题采取行动?

2013 年 12 月，在北京召开的一次圆桌会议就以上这些问题进行了讨论。会议由中国民间组织合作促进会（以下简称中国民促会），德国观察（Germanwatch）和 E3G 共同发起，议题为“加强非政府组织在中国城市可持续发展中的作用”。会议汇集了来自 20 家民间机构的 26 名来宾，初步展现了一幅令人鼓舞的低碳城市化图景。我们非常高兴地看到国内外不同的非政府组织，都对促进应对气候变化展现了热情，做出了承诺。尽管还有很多的监管上或政策上的障碍，知名国际组织、国内非政府组织、地方基层组织、新的独立智库，以及“政府资助的非政府机构”正在从不同层次，采用不同的方式，做出相关努力。他们的工作，从提高当地社区认识、解决农村面源污染、城市农庄、企业供应链环境监控、政策倡导、到为政府机构提供技术支持，不一而足。

以上会议也是“中欧低碳和可持续城市发展伙伴关系”项目的一部分，项目由德国观察、E3G 和合作伙伴执行，旨在促进中国、德国和欧盟之间在气候变化和低碳城市发展等领域的合作。

我们知道，最近几年，有许多报告洞察了民间社会和非政府组织在中国气候和环境问题方面的工作。我们的这本报告或案例集不是复制之前成果，也没有试图对中国非政府组织的活动进行全面的评估，而是要展现一些不同城市的低碳与可持续城市相关项目和案例。

重要的是，我们分享教训经验，增进相互了解。通过寻求国际经验与本地工作的结合点，同时在国内外平台上分享地方经验，能够帮助我们做出正确的决定，向一个气候友好的城市发展迈进。

所以，通过这份报告，我们希望贡献于这个还在进行中的讨论，加强中欧双方民间社会有关低碳和可持续发展的对话。

德国观察 / E3G

Foreword Germanwatch / E3G

Urbanisation plays a key strategic role in the new reform agenda of the Chinese leadership. This March the central government released the "National New-type Urbanisation Plan" for the 2014-2020 period. This Plan states that by 2020, sixty percent of China's total population will live in urban areas, and this population will increase by approximately 15 million people every year. The speed and scale of urbanisation in China is unprecedented and will increase pressures on multiple fronts.

But how is China managing this process? How will both challenges and opportunities be addressed? How is the rising demand of natural and energy resources, transportation, access to social and other public services being managed? How should government, businesses and the public be drawn in and mobilised into taking action on low-carbon agenda issues?

These questions were discussed at a round table titled "Strengthening the role of NGOs in China's sustainable urban development" in December 2013 in Beijing, organised by China Association for NGO Cooperation (CANGO), Germanwatch and E3G. This round table was part of the project "Sino-European Partnerships on Low Carbon And Sustainable Urban Development" jointly implemented by Germanwatch, E3G and partners, which aims to foster cooperation in the field of climate change and low-carbon urban development between China, Germany, and the EU.

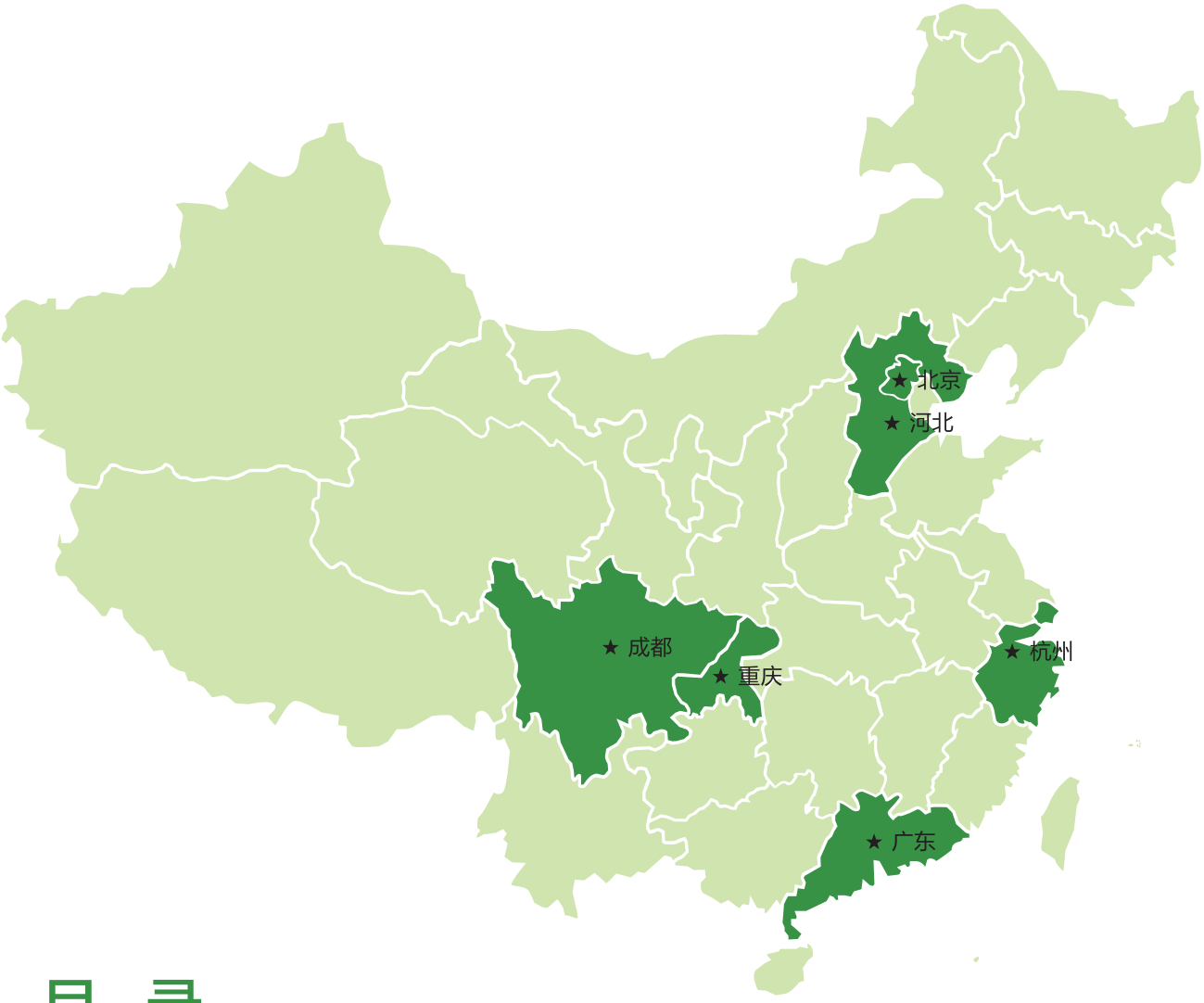
This event brought together 26 participants from 20 national and international organisations, acting as the starting point for this fascinating and encouraging snapshot of civil society activities related to China's low-carbon urbanisation. It was great to see such a wide range of local and international NGOs, all committed and enthusiastic players in promoting action on climate change. Despite numerous regulatory and political hurdles, high profile international NGOs, domestic NGOs, local grassroots organisations, new independent think-tanks, as well as government-funded NGOs (so-called GONGOs) are working on different levels and using different approaches to promote action on climate change. Their activities vary from raising awareness within local communities to policy advocacy and providing technical assistance to government agencies.

We are aware that in recent years there have been many insightful publications on civil society and NGO activities on climate and environmental issues in China. This publication is not attempting to replicate these, nor trying to give a full assessment of Chinese NGO activities, but instead to highlight the role of a few interesting cases related to low emissions and sustainable development projects in cities and urban areas.

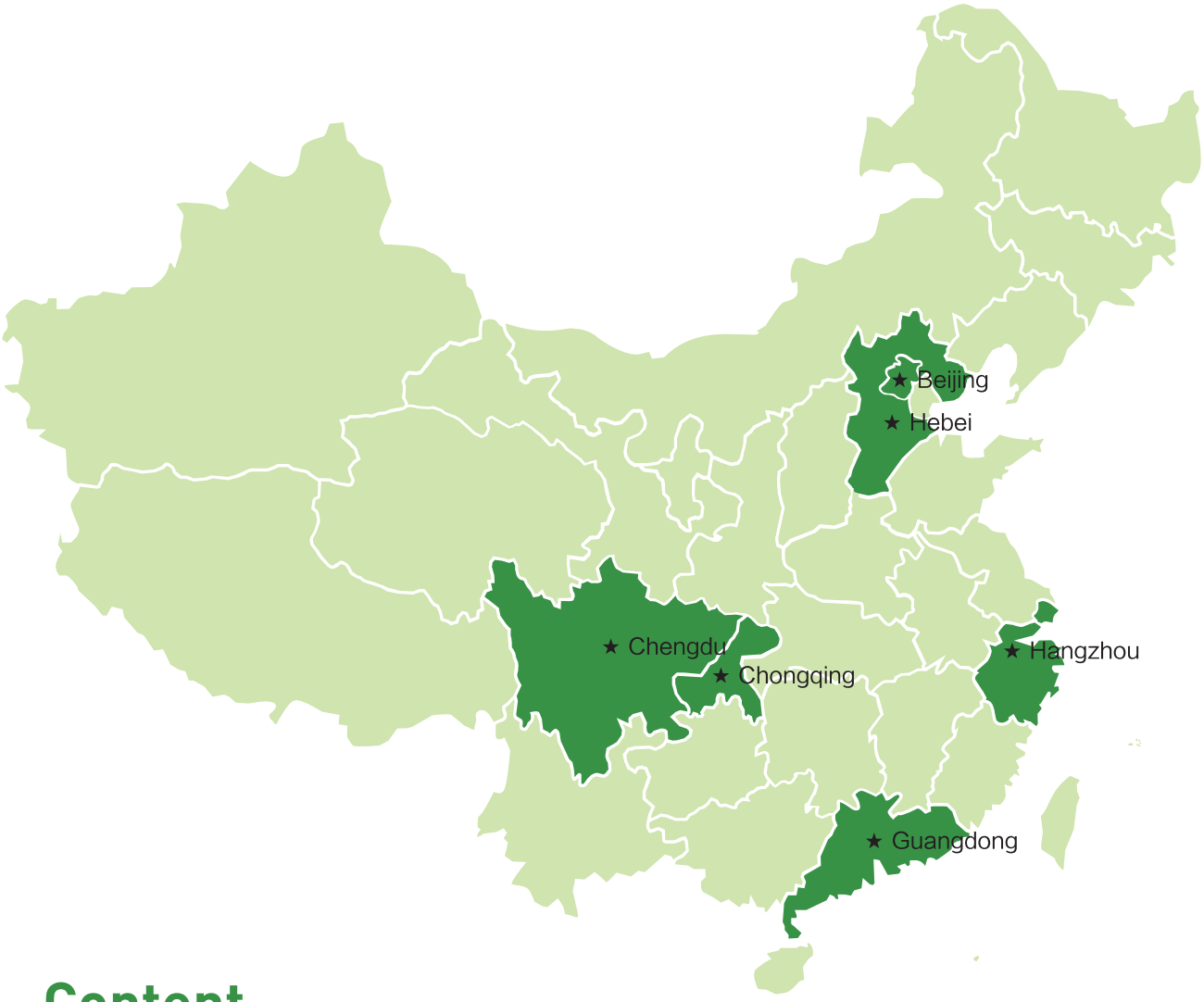
It is imperative that we share lessons and experiences and increase mutual understanding. Allowing interaction that seeks to incorporate international practice into local activities and share local cases in the national and international arena can help us to make the right decisions today and move towards a climate-compatible urban development worldwide.

With this publication we hope to contribute to this debate and strengthen the EU-China civil society dialogue on issues related to sustainable development and low carbon development.

Germanwatch / E3G



目　录



Content

中华环保联合会
—北京市社区家庭节电节能促减排示范

一、机构简介

中华环保联合会（ACEF）是于 2005 年 4 月 22 日经中华人民共和国国务院批准、民政部注册，中华人民共和国环境保护部主管，由热心环保事业的人士、企业、事业单位自愿结成的、非营利性的、全国性的社团组织。中华环保联合会作为政府和民间的桥梁，致力于实施可持续发展战略，围绕实现国家环境与发展的目标，围绕维护公众和社会环境权益，充分发挥自身组织优势，推动中国的环境保护和可持续发展。工作领域包括：

◎ 为政府提供环境决策建议。每年开展环境监督，为政府重大环境方针政策的制定进行前期调研、论证、咨询。

◎ 为社会提供公共环境信息和环境宣传教育活动。

◎ 为公众和社会提供环境法律权益的维护。每年开展环境权益维护工作，对环境权益受到侵害的公民、法人，尤其是弱势群体进行法律援助。

◎ 促进中国环保民间组织健康发展并确立其应有的国际地位。

◎ 国际交流与合作。

二、北京市社区家庭节电节能促减排示范项目

（一）项目背景

中国政府已经采取了一系列政策措施积极推进节能及应对气候变化，《节能法》和《循环经济促进法》于 2007 年和 2008 年相继出台。2007 年 9 月，科技部发布的《全民节能减排手册—36 项日常生活行为节能减排潜力量化指标》（简称《全民节能手册》）和“全民节能减排计算器”（简称“计算器”），其中主要致力于在不降低公民现有生活水平的前提下，挖掘他们日常生活细节中的节能减排潜力。2008 年 1 月，完成“全民节能减排计算器”软件的研究及试运行，并发布在主要网站上供公众使用。公众可以在衣、食、住、行及日常必需品使用等 6 大主要方面计算出节能及减排量。

通过在社区对相关主要人员的初步调查和采访，ACEF 发现社区居委会有很大的节能减排潜力，在家庭社区的推广和应用在推动公民参与节能减排方面起了一定作用。但在此过程中存在若干问题：（1）家庭低碳生活和消费模式（日常节能减排模式）还没有在我国社区家庭中形成；（2）我国《节能法》及相关政策的具体落实措施有待于完善；（3）我国社区家庭参与节能减排的积极性不高。

因此，ACEF 在全球环境基金小额赠款计划、联合国开发计划署的支持下，开展“北京市社区家庭节电节能促减排示范项目”。

（二）项目实施

通过专家学者的智力支持在示范区与管理单位建立沟通协调机制，ACEF 在北京市望京社区选择 1 万户家庭（约 3 万人），深入社区开展系列家庭节电宣传和调研实践。项目选取了 5 个街道办事处，招募了 5 名社区协调员和 15 名志愿者，负责到社区具体开展节电调查和辅导工作。项目实施过程中，将社区协调员和志愿者分为 5 组展开竞争，有效激励了项目进展。有效提高了社区公众对节约用电、减少二氧化碳应对全球气候变化的意识，自觉在日常生活中采用节电行为，尽量选购家庭节电产品。

另外，ACEF 出版的“应对气候变化公众节电手册”，列举了 11 中简便的家庭节电方式，为实现环境友好型生

活方式做出贡献。

项目通过收集第一手家庭用电数据，比较国内外家庭耗能节能情况，立足于北京市的生活用电现状，完成《关于北京市社区家庭节电促减排激励机制的研究》，针对政府部门、企业、学术机构、民间组织及公众，提出相应意见和建议，形成从各自角度形成节电的激励机制及方式，调动各方力量参与到社区节电工作之中，并将报告递交给相关政府部门。

望京社区家庭节电项目启动会

望京社区低碳行动志愿者培训

（三）项目的成功和亮点

项目活动有效提高了望京 3 万余公众对节约用电、减少二氧化碳应对全球气候变化的意识，在项目执行期间的夏季（2010 年 5 月 -9 月），望京社区 1 万户家庭用电量平均每月下降了 1 度以上，减少了约 50 吨的二氧化碳减排量。

（四）参与和沟通

在项目实施前期，ACEF 观察到公众对家庭节能节电方式的接纳热情程度不高，与主要媒体密切合作，ACEF 向公众普及相关家庭节能节电知识和信息，鼓励更多居民参与到此项目中来。为了让公众了解更多的信息，ACEF 在示范区建立了管理办公室。

为了让更多的公众了解项目成果，ACEF 计划推进、宣传项目成果，组织新闻发布会，在官方网站上定期更新项目进展信息。

（五）主要经验教训

为了解决配套资金缺乏的问题，ACEF 与清华大学建筑节能研究中心和北京市朝阳区望京街道办事处合作，由三者提供无形资金，包括免费提供调查仪器、提供活动场地、投入劳动力等。

（六）可持续性和未来计划

通过示范区域的低碳文明成果和家庭节能政策，项目可以将其经验推广到其他 7 个大城区和 9 个区县之内，辐射北京城乡的大多数居民（约 1633 万人），进而辐射我国其他大中型城市，提高更多城市社区的节能节电实践。同时，ACEF 期望与跨界城市分享他们的项目经验，最终为建设可持续发展的社会做出贡献。

另外，ACEF 与其他民间组织一起，组织创建“中国可持续发展环保类民间组织年会”平台，向全国 400 多家环保类民间组织介绍此项目。邀请多家利益相关方参与和支持，如媒体、社区和物业管理公司、环保民间组织和公众等，最终推进项目的进展。

联系方式

中华环保联合会

办公地址：中国北京市朝阳区和平里青年沟东路
华表大厦 6 层

联系人：李蕾

联系电话：86-10-51230007

电子邮件：redlilei@126.com

网站：www.acef.com.cn

ACEF-Demonstration Project to Reduce Household Power Consumption in Beijing

1. About ACEF

The All-China Environment Federation (ACEF) is a nationwide, not-for-profit civil society organisation (CSO) working in the field of the environment, and supported by the government. It is composed of CSOs and individuals who are driven towards environmental protection and are willing to take action for it. ACEF's objective is to serve as a bridge between the government and the public in implementing sustainable development strategies, achieving national objectives relating to the environment and development, and protecting the environmental rights of the public. By fully utilising its organisational advantage, ACEF aims to promote environmental protection and sustainable development in China and the world at large. The organisation aims to unite the people of China to protect the environment. ACEF works to:

(1) Provide the government with recommendations on environmental decision-making.

(2) Protect the environmental rights of the public.

(3) Disseminate environmental information to the public and carry out environmental education.

(4) Promote the healthy development of China's environmental CSOs, and help them establish their due status in the international community.

(5) Carry out international communication and cooperation.

2. The Demonstration Project in Beijing

2.1 Background

China is a fast growing developing country with a massive population and relatively inadequate resources. Its rapid economic development, industrialisation, and urbanisation mean it is facing increasing energy consumption and increasing carbon dioxide emissions.

The Chinese government has responded actively to this by adopted a series of policies and actions to promote energy saving and slow down climate change. TheEnergy Conservation Law and the Circular Economy Promotion Law were promulgated in 2007 and 2008 respectively. These laws make resource conservation basic national policy and give top priority to energy conservation in China's energy development strategy.

ACEF saw the important part households could play in reducing the country's energy consumption. It saw that families were the cells and communities the grassroots organisations of a society, and that both were important forces for promoting energy saving and emission reduction. By conducting community surveys and interviewing relevant Ministry of Science and Technology (MOST) personnel, ACEF found that there was enormous potential for neighbourhood communities to bring about energy saving and emission reduction.

Using data published by MOST, detailing potential

reduction in energy consumption by making different lifestyles changes, ACEF estimated the type of reduction in energy consumption a household might be able to achieve. It found that if a family of three, with a housing area of 50 to 79 square meters, made nine lifestyles changes, they would save the equivalent of 82 kilograms of coal per year, which would give a total carbon dioxide emission reduction of 2,006 kilograms of carbon dioxide per year. Some attempts has already been made to promote energy saving to households. In September 2007, MOST issued a National Energy Saving Manual. This document provides figures as to how much energy a person might save by making 36 different lifestyle changes. MOST reported that if everybody actively participated in this scheme and made these 36 changes, the energy saved would equal about 70 million tonnes of standard coal, corresponding to a reduction of approximately 180 million tonnes of carbon dioxide.

In January 2008 MOST launched a National Energy-saving and Emission Reduction Calculator on its website. This software allowed people to calculate the potential energy they could save and the reduction in emissions they could bring about by making different changes to their lives. The calculator showed, for example, that if a family of three used cloth bags instead of plastic ones, took public transport, turned down their air conditioner slightly, and used passive solar energy for heating, their emissions would be reduced by around 894 kilograms of carbon dioxide per year.

The government's new laws, together with the launch of the National Energy Saving Manual and the National Energy-Saving and Emission Reduction Calculator have helped to encourage public participation in national energy saving and emission reduction. However, ACEF saw that there were still a number of hurdles to getting the wider public involved in energy saving:

(1) An effective mode of low-carbon living and consumption for families had not yet been established (there was no mode of routine living that involved significant energy saving and emission reduction).

(2) The measures for the detailed implementation of the Energy Conservation Law and relevant policies of China needed improving.

(3) Communities and families in China lacked enthusiasm for participating in energy saving and emission reduction activities.

ACEF therefore decided to carry out the Demonstration Project on Reducing Household Power Consumption and Energy Saving to Lower Carbon Emission in Beijing in order to promote energy saving in households.

2.2 Project execution

ACEF's demonstration project targeted 10,000 households in Beijing (around 30,000 people) and conducted activities to promote the adoption of energy saving practices. The project also carried out research and collected first-hand data on household power consumption in order to offer evaluations and recommendations to the government, businesses, academic institutions, and non-government organisations.

The project aimed to increase Beijing residents' awareness about household power conservation and potential responses to climate change while minimising power consumption within Beijing households. It sought to create power-efficient lifestyles and consumer behaviours. It also aimed to study the incentives behind public civic energy conservation and carbon reduction in Beijing.

Through the practical implementation of energy saving

and emission reduction measures to 10,000 families (with an average three people per family) in the Beijing demonstration community, the project aimed to make Beijing residents more conscious of household energy saving and emission reduction and explore the mode of domestic consumption for family energy saving and emission reduction in big and medium sized urban communities in China.

Under the project, different activities were carried out at the community and family levels to promote and put into effect measures for energy saving and emission reduction.

The project aimed to achieve the following three objectives:

(1) To reduce the amount of household electricity use of about 30,000 people within the Beijing demonstration area. During the implementation period (May to September), it aimed for the average household to reduce their electricity usage by 1Kw per month.

(2) To raise Beijing residents' awareness about reducing household power consumption and energy saving to lower carbon emissions, while encouraging them to adopt electricity saving modes of living and consumption.

(3) To explore new modes of living and consumption for energy and electricity saving for Beijing communities. It aimed to study the incentive mechanisms used to encourage family energy saving and emission reduction and through this to provide theoretical and practical guidance on how to bring about effective community and family energy saving and emission reduction in big and medium Chinese cities.

2.3 Project successes and highlights

The project had a number of successes. It effectively

The kick-off meeting for household power consumption in Wangjing community

Low carbon action volunteer training in Wangjing community

improved the awareness of 30,000 people in the Wangjing district of Beijing about power conservation, carbon reduction and potential responses to global climate change. During the implementation period from May to September 2010, the average power consumption among 10,000 houses in Wangjing dropped by 1 kWh or more, which meant a reduction in emissions of about 45 tonnes of carbon dioxide.

The project also succeeded in increasing many Beijing household's awareness of power conservation and carbon reduction. Some of these households now make automatic energy-saving actions in their daily lives and choose to purchase energy-efficient home appliances. The project helped to drive changes in consumer

behaviour and create more environmentally-friendly lifestyles.

2.4 Participation and Communication

The Wangjing Community Office played an important role in implementing the project. Through the office five community coordinators were recruited from five residential community offices alongside 15 volunteers. These coordinators and volunteers carried out an investigation on energy saving and provided public guidance. The team produced a handbook called Energy Saving Measures to Counter Climate Change which prioritised 11 convenient methods of reducing electricity consumption in the home.

2.5 Lessons Learned

ACEF found that many residents were unwilling to participate in the project. It also found that the public lacked enthusiasm about employing methods to save electricity and energy. ACEF is making use of its close media connections to provide the public with more information about electricity and energy reductions in the home. ACEF is also making use of its advantages in leading other organisations to guide public participation in household electricity and energy saving.

2.6 Outlook

ACEF hopes to continue promoting household saving. It will seek to share the information it has collected about energy usage by households in Beijing, which can be seen as representative of big and medium Chinese cities. This can be used to guide the promotion of energy saving in other parts of the country.

Contact

All-China Environment Federation (ACEF)

Add: 6th Floor, Huabiao Building, Qingniangou East Road, Chaoyang District, Beijing, China

Tel: 86-10-51266665-221

Contact: Li Lei

E-Mail: acefcn@hotmail.com

Website:www.acef.com.cn

爱有戏—成都可持续生态社区构建

一、机构简介

爱有戏成立于 2009 年，是在民政注册的 5A 级社会组织，以协力构建更具幸福感的社区为使命，立足社区，通过培育社区社会资本推动社区发展。

爱有戏立足社区，用参与式的工作方法，通过搭建社区参与式互助、院落自治组织能力建设、参与式文化艺术、社区志愿服务及社区公共服务等平台，促进和协助居民实现自我服务、管理、教育和监督，提升社区居民的幸福指数。机构长期扎根于社区，以人为本，主要从事社区发展、互助、生计、文化艺术等工作，服务对象涉及儿童、青少年、老人、妇女、残疾人、社区矫正人员、社区社会组织等群体。

爱有戏采用跨专业团队合作的模式，其成员来自社会学、人类学、公共管理、社会工作、心理学、影视戏剧等专业，并聘有一批专家督导和顾问团队，有规范的组织架构与财务管理制度。自 2009 年成立以来，爱有戏一直致力于社区社会组织的培育与发展工作，经过四年多的专业发展与经验累积，通过不断的对社区社会资本进行探索与总结，已在促进社区多元治理、社区参与式互助、社区青少年服务与社区养老服务等领域拥有丰富的工作经验，且有较强的组织管理和资源整合能力。

爱有戏社区文化发展中心长期规范化、专业化的社会工作得到社会和政府部门的认可。2011 年荣获联想公益创投公益行动奖；2012 年荣获民政部全国首届优秀专业社会工作服务项目二等奖；“社区参与式互助项目体系”荣获中央财政支持社会组织示范项目；2012 年获联想“责任中国—公益盛典”入围奖； 2012 年 12 月获共青团四川省委、四川青年志愿者协会授予的“四川省优秀志愿服务集体”荣誉称号。中央电视台、人民日报、中国青年报、中国社工杂志、凤凰卫视、四川电视台、四川日报、成都电视台、成都日报、VISTA 看天下等媒体多次报道了爱有戏事迹及开展的社会工作情况。

爱有戏深信每一个社区都是独一无二的，没有一种模式是万能的，唯有在充分了解社区需求的基础上，研发和设计的项目才是最适合的项目，爱有戏通过培育社区互助、促进社区文化、协力居民自治组织的发展，构建具有共同价值观、相互信任、守望相助、环境优美、安全稳定的社区。

二、 成都可持续生态社区构建项目

（一）项目背景

爱有戏水井坊街道辖区青龙正街 102 号院、东风路 23 号院及点将台横街 55 号院内开展参与式环境治理项目。这 3 个院落都是建于 80 年代中后期的多层楼房，共有住户 500 户，居住人口 1325 人，院落基础设施陈旧老化，公共场地少，环境绿化较差，绝大多数居民对改善居住环境的愿望迫切。在政府与全社会大力建设生态文明的大背景下，街道社区也急需社会组织来参与生态院落的打造，并给予充分的肯定和大力支持。爱有戏社区文化发展中心成立 3 年来，一直在水井坊街道各院落开展参与式互助项目，如“义仓”、“义集”等，与街道、社区、院落居民长期保持良好的互动关系，所以爱有戏认为在这 3 个院落开展参与式环境治理项目的客观条件和社区可行性都比较成熟。

为了构建可持续与更具幸福感的社区，提升居民的生活质量与生活满意度，爱有戏社区文化发展中心通过整合资源、搭建社区居民参与环境治理平台，探索有特色的社区环境生态化治理模式。将可持续发展的内涵贯穿于社区

居民的公共生活与家庭生活中，实现人与自然、城市与生态环境的和谐共生。

（二）项目实施

爱有戏社区文化发展中心为水井坊生态社区的建设订立了 4 个分目标及相应的实施途径：

（1）通过参与式环境治理，培育和发展环境治理社会组织。途径：采取小额资金支持小项目的形式培育社会组织。

（2）通过资源的分配利用与优化技术的引入，促进社区生态环境的改善。途径：采取培训及引入资源资金的形式开展。

（3）通过引导社区居民实施互助行动，促进社区居民绿色环保互助体系建立。途径：采取引导及倡导形式实施。

（4）推广治理经验。途径：采取倡导 / 评比 / 参访 / 培训等形式推广。

爱有戏前期经过与 PCD（香港社区伙伴）的合作，初步打开了城市社区生态建设的思路，在整个水井坊辖区推广城市农耕文化倡导项目，申请了约 6.7 万元项目款。

爱有戏现在与北京万通基金会合作，在水井坊街道的 3 个院落里重点推广社区生态技术理念，从水资源的优化利用、绿化种植、垃圾综合管理、节能与能源有效利用的推广等方面推广环保理念，申请了 15 万元项目款。

成都水井坊社区绿化种植

城市农耕项目于 2012 年 7 月在点将台横街 55 号院启动，随着项目的深入开展和不断宣传推广，先后在均隆街 13 号、东风路 23 号、青龙正街 102 号院开展城市农耕项目。为节约成本，将有限资源发挥其最大作用，爱有戏联合社区共同出资为较场坝 67 号院落建造菜地，节省了绿化建设资金。

在社区推广垃圾分类回收时，爱有戏联合绿色地球组织为 13 号和 23 号院安装了垃圾分类回收箱，节省了购买垃圾分类回收箱的资金。为推广节能灯时，爱有戏联系了节能灯厂商，赞助节能灯推广活动，为 213 户家庭发放了免费节能灯。

到 2014 年 2 月止，水井坊街道辖区内，参与城市农耕蔬菜种植的居民有 190 多户，种植面积达 435 平方米，制作雨水收集系统 5 个，堆肥系统 4 个。

爱有戏在水井坊街道中的 4 个院落开展了绿色读书会、农耕技术的交流培训、有机农耕讲座、小农场评比、农耕成果品尝会等活动 12 次。在提高居民种植技能的同时，通过各类专家讲座、召开参与式规划讨论会和外出参访共 14 次，环保小剧团演出活动、节能灯推广宣传活动和生态环保宣传活动共 14 次，努力培养和树立他们的节能环保意识。

（三）项目的成功和亮点

城市农耕项目开展一年来，由最初的小规模、小范围、形式单一、单户盆栽逐步走向了规模化、组织化、集体化的轨迹，给院落面貌带来了新的变化，生活和居住环境得到了明显改善。东风路 23 号院，公共场地狭小，除了门口的几棵杂树外，院内除了光秃秃的水泥地、堡坎和裸露在外生锈的自来水管，没有任何绿色植物。现在新修建的小菜园，犹如两条绿色的彩带，形成了一条绿色走廊。通过开展交流培训、读书等活动，居民的种植技能不断得到提升。从育苗、种植、浇水、施肥到厨余堆肥等技术，大多数农耕爱好者都已基本掌握。农耕活动不但改变了院落的面貌，更重要是人的精神面貌的改变。邻里关系更加融洽和谐，农耕活动的开展，改变了参与者的生活习惯。

通过组织农耕爱好者外出参观、读书活动、厨余堆肥、雨水收集、环保小剧团节能灯宣传等活动，院落居民的环

保意识增强，减少了自来水的使用，达到循环利用水资源的目的。除此之外，农耕小组成员们基本上有有机肥料代替了化肥为弄作为施肥。

（四）参与和沟通

项目实施过程中，与项目资方沟通方面，爱有戏由项目负责人定期将每一季度的项目进展报告、项目明细表、项目成果量化统计表和项目影音资料提交给项目资方审查。

在社区工作中，与政府加强沟通，得到他们的认同和支持是十分重要的一环。爱有戏首先邀请社区和街道工作人员共同参与项目活动，由此能够更直观的感受到爱有戏要传递的生态理念和做实事的工作态度。在项目活动结束后，将活动相关报道和影音资料提交给社区和街道存档，并听取他们提出的相关意见和建议。

生态社区构建项目中，项目工作人员还会外出参加生态社区建设的培训和参访活动，学习其他社会组织和机构的优势和方法，寻找一些项目中能够合作的地方，将有限的资源整合在一起，最大发挥这些资源的能量。

爱有戏通过社区参与式讨论会让居民们通过面对面的交谈和沟通分享项目成果和成功经验，再通过社区院落宣传和海报张贴的方式，扩大居民的受众范围，吸引更多的居民参与到生态社区的建设活动中。机构还结合新闻及网络媒体，如微博和博客向广大受众传递生态社区建设的项目成果和成功经验及生态理念。

（五）主要经验教训

爱有戏在生态社区建设项目中，坚持以居民为本，找准居民们的需求后调动居民的积极性，鼓励居民参与活动策划、增强他们在活动中的能动性。当居民们之间的纽带加强以后，爱有戏从旁协助，发掘社区领袖，促使社区组织的成立。社区组织成立以后，爱有戏对社区领袖进行培训，提高社区领袖的执行力、创新力和领导力。让在优秀社区领袖领导下的社区组织能更好的为社区服务，建设更好的生态社区。

在项目实施过程中，也遇到了不少问题及不足之处。例如社区广大居民过度依赖社会组织，缺乏自主参、决策的能动性，因此爱有戏以社区院落的环境建设、改造为议题，引导和培育居民的自主参与，根据居民的需求进行适当的调整与完善。

另外，社区居民对一些需要花费较多精力的活动还不太认同，参与度不够高，例如厨余堆肥。爱有戏请专业老师为社区居民们进行培训，深入讲解活动的意义，同时请专家提供最为简便的活动方法，由社区领袖进行活动试点，消除居民们的顾虑，提高他们的参与度。

此外，爱有戏在社区生态建设技术方面的能力比较欠缺，推广方法或许会有偏差，由此利用现有的资源及其它资源组建专家团队来应对项目中涉及的技术问题。

（六）可持续性和未来计划

生态社区建设项目最初只是在水井坊街道中的两个院落中进行试点，生态项目是现在居民们很关注也很感兴趣的一个方向。爱有戏发现，与居民日常生活息息相关的生态项目，能很大程度上调动居民们参与的积极性，也培育出了许多社区组织。所以将生态社区建设项目复制到了水井坊街道更多的院落中，同时还从最初的城市农耕，将项目扩大发展到雨水收集、厨余堆肥、垃圾分类和节能灯推广四大类，让生态社区建设项目更加完善和深入。生态社区建设项目在居民中的影响力很大，使生态环保小组培育成为居民自治中不可或缺的一环。

为了能在水井坊街道扩大生态社区的受益院落并深入研究生态社区建设，爱有戏在 2014 年将与 PCD（香港社区伙伴）合作，申请了约 23 万元项目款。

联系方式

爱有戏

办公地址：四川成都天仙桥北路 10 号锦江区市民中心 2-5

联系人：周军川

联系电话：86-28-86958150

电子邮件：1715594406@qq.com

网站：www.cdayx.com

Ai'youxi - Sustainable Ecological Urban Community-Building in Chengdu

1. About Ai'youxi

Ai'youxi was founded in 2009. Ai'youxi's mission is to promote community development and build a greater sense of well-being within different communities. It seeks to assist community members to participate more within their communities. Ai'youxi helps community residents to manage and monitor their own communities, and provides them with services and education. It creates platforms through which people can participate in different aspects of their community. These might be platforms that allow residents to organise their own building work, get involved in arts and culture, or set up their own public services. Ai'youxi has developed deep roots within the communities with which it works and is a people-oriented organisation. Its main focus is fostering community development, providing community support, assisting community livelihood, and facilitating community arts and culture. Its target group includes children, adolescents, the elderly, women, the disabled, as well as community-based corrections officers and social organisations. Ai'youxi strongly believes that every community is unique and there is no universally applicable model. It seeks a full understanding of the needs of each separate community and will tailor suitable projects to meet these needs. Ai'youxi has received a number for accolades: it was chosen as a finalist for Lenovo's Responsible China Charity Gala and was awarded the title of Chengdu Pioneer for Advanced and Excellent Grassroots Party Organisation. It has been recognised for its work by Chinese and worldwide media.

2. The urban community project in Chengdu

2.1 Background

Ai'youxi set up a participatory environmental management project in Chengdu's Shuijingfang Street District. The project sought to give members of this community greater participation in the management and development of the environment in which they live. The project involved three locations within the district: compounds in Qinglong Street, Dongfeng Road and Dianjiangtai Street. These three compounds contain a total of 500 households, approximately 1,325 people, in multi-storied buildings built in the late 1980s. These compounds are structurally outdated and dilapidated, with limited public space and a lack of greenery. Having carried out a number of previous participatory projects in the Shuijingfang area, Ai'youxi had good relations with the community. The vast majority of residents had a strong desire to improve their living environment and get involved with green growing. Ai'youxi recognises the growing demand to develop environmentally friendly, sustainable living environments. The Chinese government views the construction of ecological civilisation as a priority and many of the country's municipal governments issue administrative guidance strongly supporting the

building of ecological communities.

Ai'youxi recognized that the residents were lacking a platform through which they could participate in the management of their own living environment, which was currently managed on a top-down basis. Their lack of participation meant that the residents had little environmental awareness. This top-down community management also meant that decisions were not targeted to their specific needs. The residents of different communities had different demands for the environment in their compounds, but the existing mode of environmental management did not make decisions which took into account these individual demands. This caused a growing number of residents to feel dissatisfied about their environment. A gap was identified between the lives and needs of the community residents and the way their living environment was being managed. The method of environmental management did not allow for the participation of residents, who in turn did not regard environmental management as being relevant to their own lives. The organisation observed that this top-down model was not sustainable. Ai'youxi saw that environmental management of the community was not being taken seriously neither by the government nor the residents. As a result community residents continued acting in ways which were harmful rather than beneficial to the environmental.

2.2 Project Execution

The long-term goal of Ai'youxi's project in the Shuijingfang Street area was to construct a platform through which community residents could participate in environmental management. It sought to implement a method of environment management method which would be tailored to the communities in the area and help them to manage their own sustainable development.

Under this goal, the project had four sub-objectives:

(1) To foster environmental management of social organisations within the district.
(2) To introduce resources and technology which would help improve the community's environment.
(3) To promote the building of a green community with members working together to protect the environment.
(4) To share experiences of environmental management with community residents.

Through cooperation with Partnership for Community Development (PCD), a Hong Kong-based NGO, Ai'youxi started preliminary thinking about building an urban ecological community. It applied for funding of 67,000 RMB for a cultural advocacy project in the Shuijingfang Street District, promoting urban vegetable growing.

Ai'youxi is currently working with Vantone Foundation Beijing, and has applied for funding of 150,000 RMB to carry out a project focused on promoting the concept of ecological technology within the three target Shuijingfang Street compounds. Compound residents will be encouraged to adopt environmental measures including optimised water utilisation, green growing, waste management, energy saving and energy efficiency.

Green growing in Chengdu's Shuijingfang community

2.3 Project successes and highlights

The project has had a number of successes. It enabled the establishment of several urban community growing schemes. It facilitated the setting up of 435 square meters planting areas, five rainwater collection systems, and four composting systems. By February 2014 there were 190 households in the Shuijingfang Street District growing their own vegetables.

In July 2012, an urban growing project was started at the Dianjiangtai Street school, which has expanded over time. Similar urban growing schemes have subsequently been set up at the two other compounds. Another urban farming scheme was set up in Dongfeng Road. This compound lacked public space. Apart from the trees at the entrance, there was no greenery, just the bare concrete yard and its rusty water pipes. Ai'youxi gave them guidance in setting up a new vegetable garden, two green belts were created along the compound, forming a green corridor through it. Local climate meant that vegetables here got less sunshine and growth was initially slow and disappointing. The residents experimented with growing different varieties of vegetables before discovering those suitable for their compounds.

Now more people are adept at growing vegetables in these communities and some are even fostering their own resident agricultural experts. Lin Huiyun, a teacher from one community, was recently invited to appear on Chengdu TV and use his expertise to give a lecture on vegetable growing.

Residents of Dongfeng Road, inspired by examples from other compounds, have formed their own growing group. Through information exchange and training sessions, and reading books, these residents have learned how to plant and grow vegetables. Most now have a basic grasp of growing seedlings in the nursery, planting, watering, fertilizing and composting. These agricultural activities have not only changed the way the compounds look, they have also helped to change people's mindset.

Urban growing has stimulated communication and collaboration between community members. Growing vegetables had added a new fun and fulfilling element to their lives.

As part of the project, Ai'youxi hosted 12 different activities within Shuijingfang Street compounds. These activities included a green book club, meetings in which growing techniques were taught and shared, organic agriculture seminars, growing competitions and tasting sessions. These activities helped foster a large number of gardening enthusiasts and residents who now have planting skills and knowledge about growing vegetables. The communication and exchange between residents is increasing all the time. Ai'youxi has also organised a series of lectures given by various experts, as well as more hands-on workshops. It has set up small theatre performances about environmental protection. It has hosted promotional activities to inform residents about the different eco-friendly efforts they might make, such as switching to energy-efficient light bulbs.

During the project Ai'youxi carried out a number of cost-saving measures to ensure that their resources would go as far as possible. It ran a joint project to build one large shared community allotment, instead of separate planting areas in 67 compounds. When encouraging participants to separate their waste, it collaborated with another organisation to install special waste receptacles. When promoting energy-saving lamps to the communities, it contacted the light bulb manufacturers who agreed to sponsor a promotional activity and distribute free energy-efficient light bulbs to 213 families.

2.4 Participation and Communication

During this project, Ai'youxi sought to strengthen communication with local government and gain its approval and support. It did this by inviting local community members and Street Office employees to take part in project activities, giving them a closer understanding of what was being carried out. When the project activities came to a close, Ai'youxi gave written reports and audio-visual records to the community and street archive and listened to the opinions and suggestions made. When the communities embarked on their own ecological community-building projects, Ai'youxi project staff were invited to attend.

Ai'youxi held workshops to discuss project results and share successful experiences. It put up posters in compounds to reach out to residents and attract more participants to these community-building activities. Ai'youxi made use of its media connections to convey its message about its ecological projects and concepts.

2.5 Lessons learned

Ai'youxi encountered a couple of main problems with the implementation of its project. Most residents were over-reliant on community social organisation and there was not as many participants as it had hoped for certain activities, such as food waste composting.

2.6 Outlook

In the future Ai'youxi plans to replicate its ecological community-building project in further Shuijingfang compounds. It also hopes to expand the scope of the project to include rainwater harvesting, composting kitchen waste, waste classification and promotion of energy-efficient light bulbs, as well as broader community-building activities.

Contact

Ai'youxi

Address: 2-5 Jinjiang District Centre, 10 Tianxianqiao North Road 10, Chengdu, Sichuan

Tel: 86-28-86958150

Contact: Zhou Junchuan

Email: 1715594406@qq.com

Website: www.cdayx.com

成都城市河流研究会
—成都市安龙可持续示范村

一、机构简介

成都城市河流研究会（河研会）成立于 2003 年 6 月 5 日，是一个以“保护河流、保护环境、促进城乡可持续发展”为使命的民间环保公益组织。机构成立的初衷是为了回应城市水环境重大污染源—上游农村面源污染，愿景则是在上游水源地推动流域社区的生活生产方式转型，创建河流两岸的“河流保护带”。河研会以“府南河综合整治工程”专家组为基础，建立了一个稳定的专家团队，并自 2005 年起在成都市上游水源地郫县安龙村开展 “可持续发展示范村项目”，坚持至今已步入第九个年头。

除了在安龙村的长期实践，河研会积极参与多项政府公共事务决策。2006 年，就都江堰管理局要对柏条河进行 15 级梯级电站综合开发项目一事，河研会发起了长达两年的“保护成都饮用水源地‘柏条河’行动”；2006—2011 年，河研会拟在成都市古城西郊河上建“停车场”，在河道上修“立交桥”把河道变车道之举多次提出异议，经过 16 个多月的开工停工、建桥还是建高架桥的大讨论后，政府最终同意放弃修桥主张，恢复西郊河原有风貌。

如今，成都城市河流研究会已发展成为一个拥有专、兼职工作人员 13 人的专业环保组织，也建立了来自国际、国内和本土约 200 人的志愿者团队。工作领域包括：水环境课题研究；为政府提供环境政策建议、为公众提供公共环境信息；水污染防治、社区环境教育与交流等。

二、成都市安龙“可持续示范村项目”

（一）项目背景

成都历来就因河流而闻名，上世纪 50 年代成都还有着 19 条主要河道，总长约 1000 公里。目前，城市水系主要为：府河，从西北郊区至南部的双流县；南河，从西到东，全长 5.63 千米。上述两条河流基本构成了围绕老城区的护城河。虽然这样一个发达的城市水系在历史上发挥过诸多作用，近年来它却成为城市面临的一大环境压力来源。城市水系随着人口增长和经济发展而萎缩，基本上就只是承载污染物的臭水沟。

1993 年 1 月，成都市政府发起了“府南河综合整治工程”，其中涉及六大领域：防洪、治污、安居、交通、绿化、文化工程。工程第一阶段运行至 1997 年 12 月，取得相当成果。1998 年至 2002 年，府南河工程启动了二期向上向下延伸整治工程，向上重在治污向下重在行洪，加强府河沿岸尤其是下游河流汇合处的防洪能力。两期工程耗时十年，共计花费人民币 33 亿元人民币（约合美元 4.5 亿元）。

然而，尽管府南河整治历时长、涉及面广、动迁量大（仅拆迁人数便高达 10 万人），动用的资金在当时也算巨资，但并没能改善城市河流水质，更不用说实现“水清目标”。专家们开始质疑一个不研究河流上下游之间关系，不研究城乡整体发展，只注重城市中心的项目对城市可持续发展究竟有多大贡献？毕竟，河流不是孤立的水体，而是流动的水系。创办一家独立研究型机构并聚焦农村生计的念头也由此诞生。

（二）项目实施

河研会的安龙“可持续示范村项目”某种程度上是府南河工程的延续，有着相同的大目标：改善成都河流的环境质量。但是，因为认识到上游农村生计在城市水污染问题方面扮演着举足轻重的角色，示范村项目致力于通过农村可持续发展来实现“绿色与低碳城市化”的目的。

当然，上游的污染物不止是如氮、磷等高浓度农业化学污染物。一项完整的河流保护计划必须应对其它的污染源。2003 年 9 月 −11 月，府河和南河上游的水污染情况调查发现人类废弃物、牲畜粪便、居家废水的排放加剧了农业化学品带来的面源污染问题。总的来说，这些面源污染源构成了府河和南河地表水污染的 60%。要解决这 60% 的重大污染问题，不仅需要改变上游的农业生产方式，即农业化学品的使用，也需要改变同样能造成污染的上游农村生活方式。

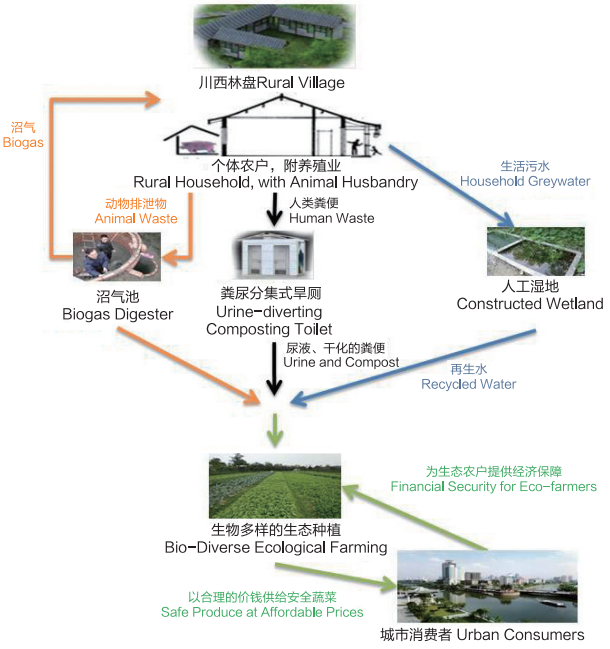
“可持续示范村项目”的核心理念是：将包括沼气厕所湿地在内的生态家园设施与生态农业相结合，将种养殖业生产过程和村民生活过程产生的废弃物放进这个闭合循环系统里分解并消化，实现零污染零排放的同时为乡村提供生生不息的可再生能源。我们将其称之为乡村生态家园闭合循环系统，截止 2012 年，河研会已与当地家庭一同建设了以下生态家园设施：

◎ 55 个厌氧沼气池。在解决农村能源不足、改善农村环境的同时也为农作物提供了清洁高效的有机肥料；在杀虫灭菌同时培肥了地力，改善了土壤结构。简单来说一个 8 立方米的沼气池每年产出的沼气能为一个家庭节约薪柴 1204 公斤，相当于保护了 3.3 亩林地。

◎ 160 个粪尿分集式卫生旱厕。通过粪尿分开收集，节水、减排，实现粪便无害化处理后回田，贡献农业的同时，无需区域性管网铺设和后期处理投入。这项从瑞典引进的概念和技术，使安龙村全年节约清水五千多吨。

◎ 160 个家庭式人工湿地灰水处理系统。污水人工湿地处理系统，结合川西生态庭院建设，采用当地土壤、沙石和植物等原料，按一定级配，经过物理、生化过程，就地净化灰水后应用于农田灌溉或回灌地下水，改善了历来农村生活用水自然排放给健康、环境和饮用水安全带来的危害，每年阻止 10512 吨灰水进入河流小溪。

除此之外，项目还开展了生态农业与乡村环境教育等工作。用生态家园设施支持生态农业发展，用生态农业撬动社区支持农业 (CSA)，用社区支持农业实现生态乡村建设，用生态乡村支持河流保护，最终实现城乡可持续发展目标。在 2012 年，安龙村有 14 户村民在以生态方式进行种植，种植面积达 62 亩。根据 2012 年由美国国家地理空气与水保护基金支持的安龙村数据采集项目提供的调查结果，在安龙村实践的生态农业每年每亩能取得化肥减量 162.50 公斤以及农药减量 176.67 克。项目从环境教育入手来提升村民们自然环境知识和保护意识，倡导村民对可持续发展生产生活的思考和行动，培养和激发乡村的内动力，这是项目可持续发展的关键。



安龙村项目框架

水环境教育中心

市民走近乡村河流

村民参与

（三）项目的成功和亮点

通过建立循环式家庭生活生产模式，“可持续示范村项目”在农村家庭的内部将废物减量化、资源化，这也间接地支持低碳城市化，为大环境做出贡献。河研会曾尝试研究生态农业的碳足迹，虽然并未取得有结论性的量化结果，但在分析专家们的意见之后，还是可以得出生态农业能为低碳发展做出贡献的定性总结。

从以上列举的项目中不难看出河研会在示范村的工作已取得多方面的成效。同时，项目实施方法也是最节约成本的。在建设生态设施时，项目采取了村民承担一部分、项目补贴一部分的形式，除了增加村民们的拥有感、加大项目的可持续性，也减轻了项目经费压力。推广生态农业方面，河研会开展了针对小农户的能力提升培训，而不是自己建立、管理一个高投入的生态农场典范。

安龙“可持续示范村”项目的受益方包括当地村民，他们在厨房使用沼气烧水做饭，也享受到卫生旱厕和人工湿地带来更为优越的卫生环境条件。生态农户通过此项目增加了收入，也可以在本村良性发展自己的事业，不需外出务工。当然，城市居民也得到了来自安龙村的无公害蔬菜，也有着这样一个临近的环境科普教育基地供家庭、学校、社团开展环境、自然教育。可以说此项目带来了社会资源的重新整合。

（四）参与和沟通

实施团队内部的沟通在项目实地进行。在项目起始阶段，河研会的工作人员长期驻扎安龙村，分成了生态农业、农户能力建设、生态卫生等团队（第四个社区互助农业团队是之后成立的，负责协调有机农产品的销售）。工作、生活在一起的实施团队能及时讨论工作进展，应对项目前期挑战。

项目相关方之间的对话也设在安龙村，具体地点为当地几户较大人家的院坝聚落。这样的安排为村民接受能力提升培训和参与生态农业工作坊提供了熟悉的环境，同时也创建了安全的空间让当地人重拾传统生态农业种植知识，并与其他利益相关方共创本地生态农业实施计划。

项目还组织了多场生产者－消费者对话活动，让村民与城市消费者和关心环境保护、食品安全的大众进行直接交流。项目也同时组织定期的乡村参访活动，如在相应的节气有开锄节等、在每年的元旦会组织联欢会和游园会、消费者答谢活动等形式的工作。

政府部门在项目中主要扮演了支持者、出资方的角色。河研会采取了配合政府新农村建设的策略，如项目中涉及的改水改厕过程就申请了当地政府的卫生项目补贴，同时沼气的项目也向当地政府申请了补贴款。

项目的后期传播利用了安龙村作为一个系统性实体项目的优势，既可以开展针对广大公众的环境教育，也吸引媒体前来报道。电视台、纪录片摄制组、纸媒记者都报道过安龙村“可持续示范村项目”，并将项目成果传递给更多人。

（五）主要经验教训

在不使用农业化学品的生态农业方面，项目表面看似取得了较小的成效，村子并没成为统一的生态种植基地。但是，从另外一角度思考，这也恰恰印证了生态转型所需的深层次行为转变，可在 14 户生态农友身上看到项目成果。

在技术层面，河研会认识到项目的设计一定要与村民的实际生活情况相联系：在理论上行得通的未必能提供最佳的用户体验。在河研会 2012 年进行的项目回访中，村民提出了针对生态设施的反馈意见，包括生态旱厕设计是否符合老人儿童的需要、家庭草木灰量的减少对旱厕带来的影响等等。这些都是需要跟进和改善的经验，用户的第一手反馈信息是项目系统完善的依据。

另一方面，项目的时间周期较长，也没有完整的项目经验记录体系，影响了项目评估过程。在过去的 9 年里，多位工作人员、志愿者参与了安龙村项目，但并没有形成良好的学习经验传承。此外，项目也没有完整地保留统一的报告记录等，拖延了整理项目经验的工作。日后再启动推动农村可持续发展的项目之前，有必要设计一套完整的记录系统，即使项目运行时间较长也不会受到影响。

（六）可持续性和未来计划

安龙村项目的很多实践也在很多地方得到推广和应用，比如在郫县园田村，河研会在世界自然基金会委托下建设一个集中式人工湿地污水处理系统，服务当地 40 户家庭（约 200 人）。此外，还有如重庆、贵州、云南等地。

更重要的是，作为一个可复制的策略，河研会正在将安龙村发展成为一个供环境教育和项目推广的基地。真正的教育不是单单增强大家对问题的认知，而是也能确保社区参与保卫生态村庄的永久性。2011 年，河研会和世界自然基金会合作，在全家河坝的中心位置修建了环境教育中心（环教中心）。河研会把环教中心设计为社区中心和教育中心，供来访者认识生态家园模式，以便参观者理解如何根据个人的需要和要求来复制生态家园模式。环教中心也是实实在在的交流场所，可以用作安龙村村民和其外来参观者能力培训，为非政府组织、研究机构、专家和政府部门提供讨论和信息共享的平台。

联系方式

成都城市河流研究会

办公地址：成都市金家坝街 7 号文联大厦 303 室

联系人：李明玖

联系电话：86-28-86263969

电子邮件：limingjiulijiu@gmail.com

网址：www.rivers.org.cn

CURA - Anlong Sustainable Village Pilot in Chengdu

1. About CURA

Chengdu Urban Rivers Association (CURA) is a non-governmental, not-for-profit environmental organisation. Its mission is to protect rivers and the environment and promote sustainable rural and urban development. It was founded on 5 June 2003 in response to what it identified as a major source of pollution to urban waters: upstream non-point-source rural pollution. Since then the vision for the organisation has been to facilitate the creation of river protective beltways, in which communities living on land beside rivers adopt green and low-carbon production methods and lifestyle habits.

CURA currently has 13 full-time and part-time staff and over 200 volunteers from China and abroad. Its work includes research on water environments, policy advocacy and public information provision, and actions for water pollution treatment and community environmental education. Besides its on-going project in Anlong Village, CURA has carried out successful advocacy efforts in areas of governmental decision-making. Between 2006 and 2008, it organised a campaign to halt the development of hydropower dams along the Baitiao River, a source of drinking water for the city of Chengdu. Between 2009 and 2011, it was instrumental in preventing the construction of a road over the Xijiao River in Chengdu, thereby preserving one of the city's old rivers.

2. The sustainable village pilot project in Chengdu

2.1 Background

In 2005, CURA started its "Anlong Sustainable Village Pilot Project", with a core advisory team of experts from the government's "Funan River Comprehensive Treatment Project". Anlong Village, in Pi County, Sichuan, is a water source area upstream of Chengdu.

For Chengdu, an attempt to achieve "Green and Low Carbon Urbanisation" will necessarily involve water, since Chengdu is very much defined by its rivers. In the early 1950s, there remained 19 waterways in the Chengdu area, covering approximately 1000 kilometres. At present, the urban river system is dominated by the Fu and Nan Rivers which essentially form a moat around the old city.

This well-developed river system served many purposes historically, but has recently become a means by which environmental pressure is placed on the city. As a result of population expansion and economic development, the river network in Chengdu has shrunk and rivers have essentially become gutters keeping water pollution inside the city.

The Chengdu Municipal Government has attempted to tackle this issue. In early 1993 it launched the "Funan River Comprehensive Treatment Project". This project,

which cost over 3.3 billion RMB (around US$450 million), focused on flood control, wastewater treatment, road construction, greening, resettlement and the implementation of cultural projects. Under the first phase, which ran until December 1997, 1,006 polluting factories located near to rivers were closed down, upgraded, or moved away, 26 kilometres of pipes were laid to centralise wastewater collection and treatment, and 100,000 families were moved from riverside slums. In the second phase, 1998 to 2002, the project focused on strengthening flood control along the Fu River.

However, the Funan River Project did not significantly improve the water quality of Chengdu's rivers. Water sampled from the rivers in 2001 was of Type V (five on a six level water quality scale) and during the dry season the rivers gave off pungent odours. Doubts were cast upon the effectiveness of a project that worked only within the city's limits and did not address upstream developments.

2.2 Project execution

As a result, CURA decided to implement its "Anlong Sustainable Village Pilot Project". This project continued to pursue the same key objective as the Funan River Project: to improve the environmental quality of Chengdu's rivers. Through its project CURA became aware that rural subsistence often played a major part in the problem of urban water pollution. The project focused on rural agriculture, rather than rural industries, as agriculture was identified as a more significant cause of water pollution. Experts working on the Funan River Project found high incidences of organic pollutants such as nitrogen and phosphorous in water they tested, which they believed to be the accumulative result of upstream agricultural pollution, due to the use and over-use of agro-chemicals. It was therefore necessary for CURA's promotion of sustainable rural development to include the elimination of agro-chemicals from farmers' fields.

Agro-chemicals are not the only upstream water contaminants; river protection can only be achieved when these are addressed together with other pollutants. As well as agriculture, CURA identified households as another significant cause of water pollution in the area. Water pollution surveys upstream of the Fu and Nan rivers discovered that the discharge and run-off of human waste, husbandry emissions, and household wastewater compounded the contamination caused by agro-chemicals.

Taken together, these non-point source pollutants account for 60 percent of surface water pollution in the Fu and Nan rivers. In order to address these two major sources of surface water pollution – agriculture and households – CURA saw that changes needed to be made not only to upstream agricultural production methods, specifically the use of agro-chemicals, but also to upstream rural lifestyles.

Its key strategy for this was to promote the adoption of an eco-household model to people living and farming close to the rivers. This eco-household model was an appropriate one for the area because of its closed-loop, cyclic, systematic nature.

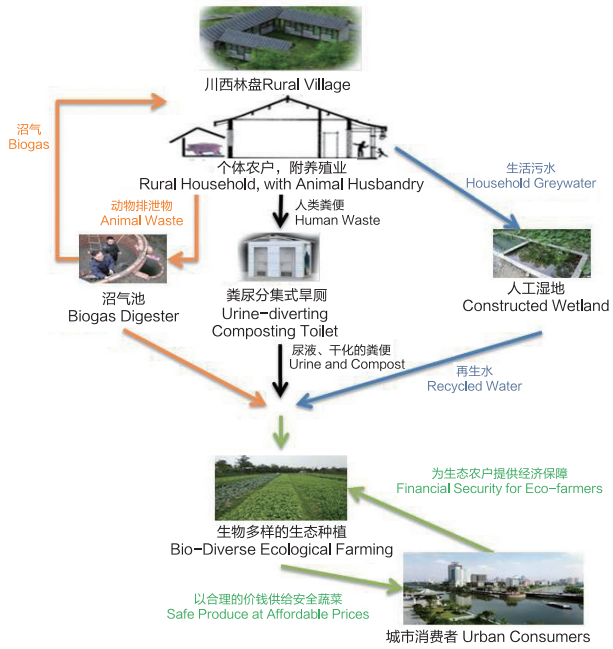
The eco-household model involves three main components:

◎ The use of eco-infrastructure in people's homes. This infrastructure consists of biogas digesters, urine-diverting and composting toilets, and constructed wetland where the household can discard its waste water.

◎ Farmers practising bio-diverse, ecological farming without the use of chemical additives. This ecological farming is supported by the eco-infrastructure in local

households, which can provide efficient organic fertilizers and recycled water.

◎ It sees farmers carry out Community-Supported Agriculture (CSA). This is a scheme where rural ecological farmers make weekly deliveries directly to urban consumers.



Project framework of Anlong Village

The water environmental education center in Anlong community

The villagers are participating in the capacity building workshop

The residents are visiting the rural river

2.3 Project Successes and highlights

CURA's Sustainable Village Pilot Project has established a household-based cyclic production and lifestyle model in the target areaacilitating waste reduction and resource recovery..

Under the project, CURA worked with locals in Anlong Village to construct a range of eco-infrastructure. As of 2012, it had successfully set up:

◎ 55 anaerobic biogas digesters. An eight cubic-metre digester produces enough biogas to save a family 1,204 kilograms of firewood per year– the equivalent of protecting a forested area of 3.3 mu (around 2,200 square

metres).

◎ 160 urine-diverting composting toilets. Installing these toilets in the village will conserve a total of 4,768 tonnes of water every year.

◎ 160 household-based constructed wetlands, which on an annual basis prevent 9,536 tonnes of household grey water (water from kitchens, showers, washing machines etc.) from entering rivers and streams.

2.4 Participation and Communication

As part of the project, CURA sought to increase communication about sustainable living and agriculture, as well as water pollution. At the start of the project, the CURA implementation team was based in the village; by working and living together with the villagers, the team was able to hold timely discussions and address early project challenges. CURA also held dialogues between stakeholders in Anlong Village. This arrangement provided familiar settings for villagers to receive capacity-building training and participate in ecological farming workshops, and a safe space for locals to rediscover traditional agrarian knowledge and forge plans to implement local ecological farming in collaboration with other stakeholders.CURA facilitated dialogue between growers and consumers so that villagers could interact directly with urban consumers and general public concerned about environmental degradation and food safety. Regular visits to Anlong Village were arranged, including experiential farming sessions and visits on important dates in the agrarian calendar.

2.5 Lessons learned

The project appears, on some levels, to have been less successful in encouraging farming without the use of agro-chemicals. In 2012, there were only 14 households in Anlong Village who were still practising ecological farming. However, the fact that this many farmers have made deep-rooted behavioural changes could be seen as a success in itself. These 14 households have a total growing area of 62 mu (41 square kilometres). Based on a 2012 survey supported by the National Geographic Air and Water Conservation Fund, the adoption of ecological farming by these households in Anlong has reduced the use of chemical fertilizers by 162.50 median kilograms per mu of ecological farmland and the use of pesticides by 176.67 median grams per mu.

The same survey was used to calculate what effect this ecological farming might have had on the households' carbon footprints. While there were no conclusive quantitative results, expert opinions suggest that ecological farming of this nature would certainly contribute to a reduction in carbon emissions. Because organic fertilizers are generated on the farms themselves, petroleum and other carbon-emitting fuels are not required for their production. Organic fertilizers are plant-based, and become carbon-neutral in a relatively short period of time, capturing and releasing the equal amounts of carbon. Soil being ecologically rather than chemically treated for farming is naturally fertile and can act as a carbon sequester.

As well as a reduction in water pollution, the project has also brought benefit to citizens living and farming in the area. Local villagers can use biogas in their kitchens, and enjoy improved local sanitary and environmental conditions brought about by the composting toilets and wetlands. Farmers who adopted ecological farming methods receive increased income through the CSA programme and have been able to live sustainably, rather than migrating to urban areas to find work. Urban

residents have also benefited, as they can now consume safe produce from Anlong and have the village as a nearby site for environmental and nature education.

CURA identified a number of issues while carrying out this project. It found that the design of the existing eco-household infrastructure needed some improvements. One example the villagers reported was that the composting toilet was not designed with the elderly in mind. Also, now that families are cooking less with firewood, there is a lack of ash which is required for the desiccation process of composting.

2.6 Outlook

CURA and other organisations have already replicated parts of this project in other locations. In Yuantian Village, Pi County, for example, CURA has constructed a centralised wastewater treatment system for 40 households (200 people). While it would be possible to select other sites and carry out subsequent new projects, CURA feels this is a slow process that can be easily hampered by the current landscape of fast urbanisation and contradicting government policy. Instead, it is now aiming to focus on educating people and changing mindsets.

In 2011, CURA took a physical step towards this second option, by building an environmental centre (with funds from the World Wildlife Fund for Nature) which is located at the heart of its project area. CURA envisages as a community and education centre, providing visitors with an insight into the eco-household model which they can learn to adapt to fit their individual needs.

Contact

Chengdu Urban Rivers Association (CURA)
Address: 7 Jinjiaba Street, #304, Chengdu, Sichuan, China
Tel: 86-28-86263969
Contact: Li Mingjiu
Email: cura2005@126.com
Website:www.rivers.org.cn

绿色选择联盟—品牌供应链污染管控

环友科技

一、机构简介

北京市朝阳区环友科学技术研究中心（简称环友科技）于 2005 年成立。机构长期设立《一线 NGO 之家》，特别是对外地新建 NGO、边远地区、贫困地区的 NGO 提供食宿、信息、实习、心里咨询、培训等，被二十几家环保 NGO 聘为顾问。此外，环友科技还担任东亚环境信息共享网络中方负责人，为中日韩环境信息、NGO、企业、政府、专家学者等交流搭建平台，提供技术和信息咨询。

环友科技在中国的三十多个省、市、地区进行环境科普教育培训约千场。组织国际、国内环保会议、论坛约百场，组织大中小学生调查环境问题组织或参与全国其他环保 NGO 的调研近百次，对大树进城、莲花模式、生态立县、气候变化对生态的影响、重金属污染水源地、养殖业与河流、农药对湿地的影响、限塑令、过度包装、地沟油的污染等都掌握了一手的资料。环友科技还兼任中国环保 NGO 绿色选择联盟核心领导小组成员、中国民间组织气候变化行动网络理事、中国环境倡导行动网络指导委员会委员、中国江河行动观察网络理事。

二、品牌供应链污染管控项目

（一）项目背景

全球化有力地推动了包括中国在内的发展中国家的经济发展，全球物流、低成本生产和强劲消费需求使得出口加工业在中国取得了长足进步。进入 21 世纪，中国制造的一系列产品在世界市场占有重要份额，使得中国成为名副其实的世界工厂。

然而，作为世界加工业的中心，中国的环境也承受了巨大压力。近年来中国 60% 的监测河段受到污染，一半以上重要城市的大气质量达不到法定的环境标准。目前中国的污染问题面临着地方保护主义的强大阻力，薄弱的民间力量经常力有不逮。污染受害者自主维权受到短视地方政府的阻挠，其本身能力不高，维权手段单一；环保组织势单力薄，声音不被采纳，污染调查受到粗暴干涉；媒体力量也经常无法发挥作用。

应全社会日益增长的环境保护要求，一些大型企业已经开始将一定的环境标准引入到他们的采购行为中。但在发展中国家，由于环境监管偏弱，加之供应商数量庞大，提升供应链环境表现十分艰难，甚至做到稳定的达标排放也依然是一个挑战。

使用违反中国环境法规的供货商将损害中国环境，将给客户企业带来品牌风险。随着中国政府加强环境监管，环境违规企业可能被限产甚至停产整治，使用这样的供货商将可能带来运营风险。由于存在着巨大的障碍和现实的风险，需要通过新的方式对供应链进行有效的环境管理。

（二）项目实施

2007 年由 IPE 发起，北京环友科技等四家核心机构、21 家环保 NGO 参加、53 家环保 NGO 响应的绿色选择联盟向全国广大消费者发出绿色选择倡议，希望大家在消费过程中考虑企业的环境表现，在污染企业证明已经改正之前谨慎选择其产品，用自己的购买权力促使企业改进其环境行为。

绿色选择联盟以动态更新的 IPE 数据库为基础，制作中国污染地图，发布污染信息 14 万条，使得企业、公民可以更加有效地发现环境违规的供应商。并通过透明、参

正己烷事件

与式的方式对其进行审核，促使污染问题得到解决；使得企业明确承诺不使用污染企业作为供应商，为企业环境守法提供新的动力，同时呼吁品牌企业对其供应链也采取绿色选择方式。通过推动品牌供应链管控，有效地推动了大量污染企业自主进行治理。

无助的原住民

2010年，绿色选择联盟首次尝试并推动 IT 行业苹果、微软、松下等 33 个品牌的互动，先后发布 7 期 IT 产业污染调查报告。推动了以苹果等为代表的品牌公司公布供应商名单、对有严重污染记录的供应商采取停订单、限期整改、第三方审核等措施。

2012 年进入纺织业，与雅戈尔、李宁、耐克等 48 个品牌的互动，先后发布 3 期纺织行业污染调查报告。

“牛奶河”

2013 年发布蓝天路线图 2 期，披露 100 余座城市空气质量及重控有害气体排放信息，推动上百座城市开始了 PM2.5 等污染物监测信息的实时发布。

（三）项目的成功和亮点

绿色选择联盟利用信息公开的手段，推动品牌自身社会责任建设中的供应链管控，找到了一条行之有效的推动污染企业整改的途径并取得了巨大成功。迄今为止，绿色选择联盟共发布 140,000 条企业环境监管记录，推动 1100 余家企业与 NGO 取得沟通，完成 170 余次第三方审核，合格验收污染企业整改。

（四）参与和沟通

在项目实施过程中，绿色选择联盟发现，与品牌沟通需要长期的耐心。给企业发质询信到收到回复，往往需要 2 周到 3 个月的时间。从建立沟通到达成协议，经常需要 2 年或者更长时间。期间因为很多企业仍旧用传统的眼光看待大陆民间环保组织，其态度经常要经历从“漠视 – 怀疑 – 推诿 – 对抗 – 对话 – 合作”这样一个过程。因此，在逐步施加压力的同时要给企业应对时间。

国际品牌的企业对待其本国与大陆民间组织对其企业社会责任问题质询的态度往往存在巨大差异，它们经常无视大陆 NGO 发出的质询，但十分重视其本国 NGO 发出的质询。因此，在工作中有时需要与国际 NGO 进行协作。

纺织行业品牌回复情况表（部分）

排名	客户企业名称	回复收到与否	了解背景情况	跟进供货商超标记录		探讨利用公开信息加强供应链管理		推动供应商作出整改并公示环境信息		推动环境管理向供应链深处延伸	
				初步检查	深入调查	考虑建立检索机制	决定建立检索机制	作出整改并公开说明	定期公布排放数据	直接延伸到主要材料供应商	推动一级供应商检索二级供货商环境表现
1	H&M	√	√	√	√	√	√	√	√	√	×
2	耐克	√	√	√	√	√	√	√	×	√	√
3	溢达	√	√	√	√	√	√	√	×	√	×
4	李维期	√	√	√	√	√	√	√	×	√	×
5	阿迪达斯	√	√	√	√	√	√	√	×	√	×

绿色选择联盟两次组织全国成员进行培训、协调工作。经纺织行业协会组织，与污染企业、媒体、其他 NGO 成员召开圆桌会议，形成良好的对话开端。

（五）主要经验教训

绿色选择联盟依靠大品牌的供应链管控，目前已经逐步形成并扩大影响力，可以有效推动行业内大量污染企业整改。项目注重公开信息的准确性与权威性，采用了环保部、厅公布的污染信息，污染企业难以提出质疑与攻击。另外，除了供应链管控，还应该做好消费者倡导工作，这是配合信息公开的核心力量。

（六）可持续性和未来

作为中国大陆首个信息最全面的污染地图，在信息公开快速发展的大环境下，污染信息公开量将继续高速增长。近期，针对目前严重的雾霾灾害，绿色选择联盟制作了大气污染源实时公开 APP 客户端，公众可以更方便的查看身边的重控污染源，以达到更好的监督作用。

绿色选择联盟将继续深化培训，联合全国各地联盟成员的协作能力共同推动。同时与行业协会合作，建立更加有效地与企业沟通的渠道。

联系方式：

环友科学技术研究中心

办公地址：北京市昌平区回龙观龙华园 32 号楼 4 单元 102 室

联系人：张頔

联系电话：86-15611323558

电子邮件：so64358364@hotmail.com

网站：www.ipe.org.cn

Green Choice Alliance - Encouraging companies to take social responsibility by monitoring their supply chain

1. About Envirofriends

Beijing Envirofriends was established in 2005 as the "first home" to newly formed NGOs. It provides accommodation, information, internships, counselling, and training to employees in newly-established NGOs, and those in remote or poor regions. It has acted as a consultant for more than twenty environmental NGOs. It is the party responsible for the Chinese side of the East Asian Environmental Information Sharing Network, providing a platform for communication between NGOs, enterprises, governments, experts and scholars from China, Japan and South Korea, while also serving as an information and technology consultant.

Beijing Envirofriends has implemented a large number of environment education and trainings sessions in more than 30 Chinese provinces, cities and regions. It has organised many international, and domestic environmental protection conferences and forums, as well as mobilising primary, middle school and university students to investigate environment problems. Beijing Envirofriends has been directly involved in projects which target the ecological impacts of climate change, heavy metals in water, aquaculture and river pollution, the impacts of pesticide on wetlands, reduction of plastic and packaging, and oil pollution among others.

Envirofriends is one of the core members of the leading group of China's environmental NGOs: Green Choice Alliance; a member of the Chinese NGO Climate Action Network; a steering committee member of China's Environmental Advocacy Action Network; and director of the China River Watch Alliance.

2. Brand supply chain and pollution control and monitor project

2.1 Background

Globalisation has provided a huge push towards the economic development of developing countries, China included. The global logistics structure, low cost of production and strong consumer demand has led to the rapid growth of China's export industry. This century has seen China play an important role in the world market, turning China into the world's factory.

Being at the epicentre of the world's processing industry puts great pressure on China's environment. In recent years 60 percent of the rivers monitored have been found to be polluted and the air quality in over half the major cities fails to meet the statutory environmental standards. Society as a whole needs to increase its environmental protection demands. A few large enterprises are introducing environmental standards into their procurement behaviour. However, due to weak environmental regulations in developing countries, together with the large number of suppliers, it is very

difficult to improve the environmental performance of the supply chain and meeting the pollution discharge limit poses a challenge.

2.2 Project execution

The project was launched in 2007 by the Institute of Public and Environmental Affairs (IPE), and participated by Envirofriends and four other core institutes in the Green Choice Alliance, as well as 21 environmental NGOs. A further 53 environmental NGOs responded to the call to promote green choices to consumers throughout China. The hope is that these consumers will start to consider the environmental performance of a company before buying its products. If customers stop buying items from companies with bad pollution records, it could well lead to a positive change in the environmental behaviour of these companies.

Discussing N-hexane poisoning and pollution

The Green Choice Alliance has created a pollution map of China using dynamically updated information from IPE's database. It has published over 140,000 pollution-related messages, letting companies and citizens know

A polluted river known as a "milk river"

Local resident, a victim of local pollution

who is responsible for violating the environment and promoting transparency. The public can update and review this information, although a commitment has been made not to let polluting companies have any input. This has provided a new form of power for companies who adhere to environmental law. It also calls for brands to monitor the effects their supply chain has on the environment, promoting a system of effective self-governance to many polluting companies.

2.3. Project successes and highlights

Local protectionism means that there is currently a strong resistance to resolving China's pollution problem. Civil society and environmental groups are too weak and their voices too quiet to overcome this; pollution

The reply table of textile industry brand (part)

Rank	The name of customer company	Reply received or not	Survey the background	Follow up exceeding bid record of suppliers		Discuss using public available information to strengthen supply chain management		Promote suppliers to make rectification and to public environmental information		Promote environmental management to extend to supply chain	
				Preliminary investigation	Thorough investigation	Consider to establish retrieval mechanism	Decide to establish retrieval mechanism	Make rectification and explain openly	Release emission data regularly	Extend to the main material suppliers directly	Promote Level 1 suppliers to retrieve environmental performance of Level 2 suppliers
1	H&M	√	√	√	√	√	√	√	√	√	×
2	Nike	√	√	√	√	√	√	√	×	√	√
3	Esquel	√	√	√	√	√	√	√	×	√	×
4	Levi’s	√	√	√	√	√	√	√	×	√	×
5	Adidas	√	√	√	√	√	√	√	×	√	×

investigations are often met with strong interference.

Pollution victims are powerless and their cases often undermined by short-sighted local governments. Media often fails to carry out its proper function, which means that polluting companies are getting away with their reckless actions.

Through the dissemination of information and publicising the fact that brands have a social responsibility to establish and manage their own supply chains, Green Choice Alliance has found an effective way to get polluting companies to rectify their bad habits, which has proved to be a great success. It has published 140, 000 corporate environmental monitoring records to date, encouraged more than 1,100 companies to communicate with NGOs, carried out more than 170 third party audits, and reviewed how polluting companies are improving.

2.4. Participation and communication

In 2010, the organisation entered into discussions with 33 IT industry brands, among them Apple, Microsoft and Panasonic. It has published seven IT industrial pollution survey reports. It has called for leading brands like Apple to publish a list of their suppliers, taking action like stopping orders, demanding improvements within a certain time-frame, and carrying out third party audits on suppliers with bad pollution records.

In 2012, Green Choice Alliance started working within the textile industry too, entering into discussion with more than 48 brands including the Youngor Group, Li-Ning and Nike, and publishing three textile industry pollution investigation reports.

In 2013 the Blue Sky Road Map: Atmospheric Pollution Investigation Phase II Report was released. This disclosed

information on air quality and harmful gas emissions for more than a hundred cities and promoted the publishing of real-time pollution monitoring data from hundreds of cities. This urged central and local governments to bring about large-scale emission reductions.

Green Choice Alliance organised the training and coordination for its members throughout China. The China Cotton Textile Association organised a round table meeting with polluting companies, the media, and members of other NGOs, providing a space for discussions to begin.

2.5 Lessons learned

(1) Communicating with brand companies requires a lot of time and patience. Sending a letters to the company and receiving a reply usually takes anything between two weeks and three months. It often takes two years or more from the time communication is established to where an agreement is made. Many companies have a conservative view of Chinese environmental NGOs, and their attitudes usually have to through the stages of disregard, doubt, excuse, resistance, dialogue before finally cooperation. By applying gradual pressure, companies are given time to respond and change their attitude.

(2) International brands often respond with a very different attitude when questioned about corporate social responsibility by Chinese NGOs, tending to ignore them, while paying far more attention to the NGOs from the brand's own country. There is therefore sometimes the need for Chinese NGOs to cooperate with international NGOs to get things done.

(3) As well as supply chain management, consumer advocacy work is needs, with a focus on supplying accurate and authoritative information to the public.

2.6 Sustainability and the future

(1) In view of the current severity of the smog, Green Choice Alliance has created an air pollution phone app. This will allow the public a clearer picture of heavy pollution sources surrounding them, making supervision easier.

(2) The organisation will continue to improve its training, and expand the cooperation ability of its country-wide members to push companies into improving their environmental conduct.

(3) It is difficult to challenge polluting companies using pollution information released by the Ministry of Environmental Protection, but by focusing on the supply chain management of big brands, the organisation has gradually expanded its sphere of influence and created an effective system to encourage polluting companies to improve themselves.

(4) By cooperating with industry associations, it has established a more effective channel to communicate with the enterprises.

(5) The pollution map it created , the first of its kind in China, provides the most comprehensive and up-to-date information on China's pollution which can be disseminated extremely quickly.

Contact

Envirofriends

Address: Room102, Unit 4,32th Building, Longhuayuan Community, Changping District, Beijing

Tel: 86-15611323558

Contact: Zhang Di

E-mail: so64358364@163.com

Website:www.ipe.org.cn

全球环境研究所
—低碳规划编制工具开发与示范

一、机构简介

全球环境研究所（Global Environmental Institute，简称 GEI）是一家中国本土的非政府、非营利性组织，于 2004 年 3 月在北京注册成立，2013 年被评为“4A 级社会组织”。GEI 的宗旨是利用市场机制和政策建议解决环境问题，力求社会、环境和经济效益多赢。GEI 总部在北京，项目点分布于中国广东、四川、云南以及老挝、缅甸等地区。项目集中在能源与气候变化、生物多样性保护、投资、贸易与环境以及能力建设四个领域。

GEI 的特点在于将环境保护、生计改善、资源节约等与创新的商业模式或者合理的政策建议相结合，使项目成果延续到项目期之外。GEI 也注重推动环境、能源等议题的国际合作，因此成为第一家在海外成功实施项目的中国本土民间组织。

二、低碳规划编制工具开发与示范项目

（一）项目背景

自 2008 年，中国面临的经济发展和温室气体减排的双重压力越来越大。GEI 认为，要加强政策制定的科学性和一致性，量化政策的减排成本和评估政策的经济影响非常必要。通过举办模型研讨会、专家访谈等形式的调查研究，GEI 发现中国缺乏一套有效的“自上而下”与“自下而上”相结合的政策模型分析工具。

为此，GEI 在美国布莱蒙基金会、美国洛克菲勒兄弟基金会、橡树基金会和英国战略繁荣基金（SPF）等支持下，于 2010 年与中科院科技政策与管理科学研究所（简称“中科院政策所”）、美国气候战略中心（简称“CCS”）、美国区域经济模型公司（简称“REMI 公司”）等多家机构合作开展了“中国省市级低碳规划编制工具开发与示范”项目。该项目以重庆为试点，参照美国州层面制定气候政策的方法、流程和模型工具，开发了一套适合中国的“低碳政策量化工具”，旨在协助地方政府制定可量化、可实施的政策，更好的实现碳强度目标。

（二）项目实施

2011 年，GEI、中科院政策所和 CCS 联合签署了《关于中美低碳规划编制方法研发与示范的合作备忘录》，标志着“中国省市级低碳规划编制工具开发与示范”项目进入了实质性的开展阶段，将根据中国的实际情况开发一套辅助低碳发展决策的工具。在整个项目进程中，合作协议中的共识与内容对于实现项目目标与成果起到了重要的保障作用。

GEI 与 CCS 签署《关于中美低碳规划编制方法研发与示范的合作备忘录》

在初始阶段，项目研究团队（GEI 和中科院政策，同项目组）首先对《美国州气候行动方案》的编制方法学进行了深入学习和研讨，总结出了两点重要的借鉴价值：

◎ 利益相关方，包括政府部门、企业代表、公众代表等，参与气候行动方案制定的全过程保证了规划制定的科学性和可操作性。

◎ 注重政策的定量化分析。一套规范的低碳规划编制流程和有效的模型分析工具对于技术专家提供政策建议极为重要。

基于上述研究，项目组于 2011 年分别举办了“区域低碳规划辅助工具推介研讨会”，提出了中国版“低碳政策量化工具”的研究思路，及“美国 REMI 模型应用与本土化研讨会”，讨论构建中国版的宏观经济评估模型（PIC 模型）、如何在地方试点中应用等问题。

区域低碳规划辅助工具推介研讨会

项目获得国家发改委及相关研究机构的支持和建议后，中方专家选择了重庆市作为首个试点，与重庆市社科院签订了合作协议。2012 底，经重庆发改委的协调，项目研究团队前往重庆进行了为期一周的调研工作，先后走访了重庆市环保局、重庆市电力公司、统计局、发改委、林业局、城乡建设委和交通委员会等部门，了解各职能部门对于促进低碳发展的政策考虑，并收集了大量模型工具研发中所需要的数据和政策信息。

中美专家经过近两年的努力，开发完成了适用于中国

GEI 与重庆发改委领导会议

的“低碳政策量化工具”，包含“政策统筹分析系统工具”和“政策评估模型（PIC 模型）”两部分，可以核算某一区域的温室气体排放现状和未来的基准排放量、分析减排政策的经济成本、评估减排政策对该区域的经济增长、就业等影响。项目组还提出了低碳规划编制的流程：

（1）编制温室气体排放清单（测定基准线）和预测排放趋势；

（2）识别现有的温室气体减排政策、建立政策库；

（3）筛选优先分析政策（分析实现碳强度目标的贡献率）；

（4）描述优先分析政策（目标、时间、实施机制等）；

（5）对各优先政策进行成本 / 收益的经济分析；

（6）评估低碳政策对地区宏观经济发展的影响；

（7）征询利益相关方的建议，形成技术分析报告；

（8）与政府职能部门交流，提交政策建议，并协助制定实施机制。

2013 年，项目组开发了“基于行业的区域温室气体排放清单编制方法”，运用该套工具分析了重庆市“十二五”规划中 30 多项政策的温室气体减排量和相应的经济成本，包括发展可再生能源发电、推广新能源汽车、提高车辆的燃油经济性、淘汰高耗能行业落后生产工艺等；涵盖了能源、工业、交通和土地利用、建筑、农林业和废弃物处理六大部门、100 多类的温室气体排放源。获得了相关机构的认可和高度评价。

2014 年 3 月，GEI 和中科院专家先后向国家发改委气候司、重庆市发改委主管气候工作的领导汇报了《重庆“十二五”规划中低碳政策的评估报告及政策建议》，其创新性和决策支持作用均获得了充分肯定。

在项目设计和实施阶段，GEI 始终关注国家和试点地区政府部门的支持，定期汇报项目进展；同时关注各利益相关方对项目提出的改进建议，将其纳入到各种技术研讨中，这对于项目的成功至关重要。

（三）项目的成功和亮点

该项目通过整合政府部门、科研机构和非政府组织等多方资源，完成了“低碳政策量化工具”的研发，增强了中方专家运用技术工具进行政策分析的能力。项目成果《重庆“十二五”规划中低碳政策的评估报告及政策建议》得到了政府决策者的重视和认可，中国地方官员依据科学量化分析进行科学决策的意识和能力得到了提升。

在该项目中，GEI 与中国体制内研究机构、国际 NGO 组织的合作经验为中国 NGO 组织参与政府决策、提供政策建议探索了一条有效途径。

该项目作为中美省州合作项目，得到了中国国家发改委与美国国务院主管气候变化部门的高度认可。2011 年 5 月，GEI 与该项目的美国合作方——CCS，凭借该项目成功加入了《中美能源和环境十年合作框架》下的“中美绿色合作伙伴计划”，成为当年 6 对“合作伙伴”中唯一的 NGO 组织。2013 年 7 月，GEI 和 CCS 应邀参加了第五轮中美经济战略对话（S&ED）期间举办的“第一届中美绿色合作伙伴计划研讨会”。

（四）参与和沟通

在过去几年的中，GEI 与各方始终保持着良好、顺畅的沟通，尤其是与美方机构进行了有效的交流。虽然中美两国政治体制、决策过程的差异为该合作项目带来了挑战，但 GEI 始终坚持在差异中求共赢，寻求合作点、促成各方的合作共识。

对外宣传上，GEI 自 2010 年起一直与 CCS 联合举办 UNFCCC 缔约方大会期间的边会，向来自各国的政府、学术机构、企业和 NGO 代表介绍该中美合作项目。2012 年和 2013 年，GEI 和 CCS 先后在卡塔尔多哈和波兰华沙联合召开了主题为“差异中求共赢——中美气候政策交流与技术合作”和“自下而上推动中美低碳发展合作”的边会。会上详细介绍了“低碳政策量化工具”研发和示范的合作方法、成果和应对挑战的经验，旨在为全球应对气候变化合作提供有价值的参考。

（五）主要经验教训

“低碳规划编制工具开发与示范”项目得到了国家发改委气候司的大力支持，并且凭借“GEI-CCS 绿色合作伙伴”得到了美国国务院的肯定。中美政府部门的支持在很大程度上促进了项目的推进与成功。但是，试点地区的发改委、经信局等部门对于气候变化与低碳领域的国际合作项目非常谨慎，有时需要国家发改委出力协调。在中国开展气候变化领域的项目，与各利益相关方，尤其是政府职能部门的沟通与协商非常重要，由此获得的支持能极大的促进项目开展。

技术研发方面，中方专家始终坚持分析工具的开发必须基于中国的数据统计体系和政策特点；同时借鉴美国经验以弥补数据缺失、政策分析方法不当等问题。该项目的成功得益于中美合作，而实施国际合作项目既要立足于本土，又要兼顾创新性和开拓性，敢于打破固有的思维方式，探索和尝试先进的理念与方法。

（六）可持续性和未来规划

GEI 将该合作项目介绍给了诸多的中美省州政府机构，为中美省州政府间的交流搭建起了非官方的渠道和平台，有效地促进了省州政府间在清洁能源发展领域开展更广泛的交流与实质性的合作。基于重庆试点，GEI 和中科院政策所已开发完成了“低碳政策量化工具（1.0 版本）”，即将把该套工具推广到其它省市，以辅助地方的低碳发展决策，并对工具本身做进一步的完善。

2013 年 4 月，中国广东省与美国加州签署了《广东省政府与加州政府关于低碳发展合作谅解备忘录》。目前，GEI、中科院政策所、暨南大学低碳与可持续发展研究院已达成合作意向，三方将开展“广东省低碳发展规划辅助分析研究”课题。鉴于广东省与重庆市低碳发展路径的差

别，对广东省低碳政策的分析将会拓展“低碳政策量化工具”的功能，极大地增强工具的普适性，使其能够在更广泛的地区得以应用。

此外，GEI 将开展关于“低碳政策量化工具”的培训。2014 年初，GEI 与天津行政学院签订了《关于低碳政策量化工具培训与推广的合作协议》，双方将联合开发与“低碳政策量化工具”相关的互动式教学培训课程，在公务员系统开展政策模拟式培训，以促进地方政府官员制定更为科学、有效的低碳发展政策。

联系方式

全球环境研究所

办公地址：北京东城区新世界家园 5 号楼 1 单元 401 室

联系人：于卿婵

联系电话：86-10-67083192 转 225

电子邮件：qcyu@geichina.org

网站：www.geichina.org

GEI - Low Carbon Planning Methodology and Tools

1. About Global Environmental Institute (GEI)

Established in Beijing, China in March 2004, the Global Environmental Institute (GEI) is a Chinese non-governmental and non-profit organisation. It aims to employ market-based models and make policy suggestions to solve environmental problems in order to help achieve development that is economically, ecologically and socially sustainable. Head-quartered in Beijing, GEI has implemented projects in Guangdong, Sichuan, Yunnan and Qinghai, as well as neighbouring countries like Laos and Myanmar. These projects focus on four key areas: energy and climate change; biodiversity conservation; investment, trade and the environment; and capacity building.

GEI excels in combining creative business models and sound policy suggestions to implement projects tackling environmental protection, livelihood improvement and resource conservation. Thanks to its efforts and emphasis placed upon international collaboration with regard to environmental and energy issues, GEI has become the first Chinese NGO to have successfully implemented projects abroad.

2. Low carbon planning methodology and tools development and demonstration project

2.1 Background

Since 2008, China has been facing the huge double burden of managing both economic development and greenhouse gas (GHG) emission reduction.

GEI believed that the quantification of GHG emission reduction, policy cost-effectiveness analysis and economic impact assessment were crucial for making and implementing scientific low-carbon policies. Through hosting a series of climate model workshops and technical discussions, GEI found that China lacked the tool kit to combine "bottom-up microeconomic analysis" with "top-down macroeconomic impact evaluation" thus effectively making climate and low-carbon policies.

To this end GEI, with support from the Blue Moon Fund, the Rockefeller Brothers' Fund, the Oak Foundation, and the Strategic Programme Fund (SPF) UK, cooperated in 2010 with the Beijing-based Institute of Policy and Management of the Chinese Academy of Sciences (IPM CAS), the US Centre for Climate Strategies (CCS) and the US economic model company Regional Economic Models, Inc. (REMI) in developing and demonstrating province and city level low-carbon planning methodology and tools. Chongqing was chosen as the pilot location for this project, and the methodology, models and tools used for US state-level climate action planning were adapted for China's local context. The Chinese template of low-carbon development methodology and tools are expected to assist local governments with their efforts to make quantifiable and implementable climate policies to meet their carbon intensity-reducing goals.

2.2 Project execution

In 2011, GEI, IPM CAS and CCS jointly signed a memorandum on China-US Low-Carbon Planning Methodology and Tools Development and Demonstration, which has ensured the smooth progress of the project and the delivery of its outcome.

GEI and CCS signing the Memorandum on China-US Low-Carbon Planning Methodology and Tools Development and Demonstration

In its initial phase, GEI and IPM CAS experts made a thorough study of the US state-level climate action planning methodology and summarised two valuable aspects. The first important aspect concerns the engagement of stakeholders, including governmental agencies and representatives from companies and the general public. Only with their participation in the whole planning process can the climate action plan be guaranteed to be designed in a scientific and implementable manner. The second aspect focuses on the importance of a standard framework of a low-carbon planning procedure and effective analytical models. Technicians will follow this framework and apply these tools to produce workable measures and put forward suggestions to policy makers. It is a key and indispensable step to analyse individual policies and identify their cost effectiveness in mitigating greenhouse gases.

Based on this research, GEI and IPM CAS jointly held a seminar in July 2011 which focused on low-carbon planning methodology and tools. During workshops, Chinese experts presented an outline of the road map to develop a Chinese low-carbon planning methodology template. Not long after the project team held another seminar on the application and localisation of the US REMI models, during which Chinese and US experts probed deeply into the development and employment of the PIC model in China's pilot areas.

Seminar on low-carbon planning methodology and tools

Having obtained NDRC support for the project, Chinese experts chose Chongqing as the location for their pilot project and partnered with the Chongqing Academy of Social Sciences for its implementation.

Meeting with the Chongqing DRC

During field research trips in Chongqing the project team collected a large amount of data and policy research, as required for the development of these models and tools.

After two years of effort by Chinese and US experts, a Chinese template for low-carbon development planning has been created, including two key elements: systematic tools for overall policy analysis and the PIC model. These tools will be used for calculating GHG inventories and forecasts, analysing the economic cost of emissions-reducing policies, and assessing the impacts of these policies upon GDP growth and employment in specific places or regions. The project team has also designed a step-by-step procedure for low-carbon development planning:

1. Create an emissions inventory for baseline calculations and forecast emissions tendency.

2. Identify existing emissions-cutting policies and establish a policy portfolio.

3. Select priority policies for analysis by their potential contribution to reducing carbon intensity.

4. Describe priority policies' deliverables, time scales and factors concerning implementation mechanisms.

5. Conduct cost-effectiveness analysis of each priority policy.

6. Assess low-carbon policies' impact upon local macro-economy.

7. Consult local stakeholders for suggestions and complete technical analysis reports.

8. Discuss with government agencies and offer policy suggestions; assist with creating policy concerning implementation mechanisms.

These tools have been used to calculate emissions reductions and costs of more than 30 policies listed in Chongqing's 12th Five-Year Plan, including projects ranging from renewable energy, new energy vehicles, fuel efficiency to phasing-out of outdated high-energy-consuming facilities. These policies covering more than 100 emissions sources and involve six key sectors: energy; industry; transportation and land use; construction; agriculture and forestry; and waste treatment.

In March 2014 GEI and IPM CAS presented NDRC and Chongqing DRC with an assessment report on low-carbon policies listed in Chongqing's 12th Five-Year Plan and offered policy suggestions which were acknowledged and accepted.

From the design to the implementation of the project, GEI has been working hard to gain support from central and local governments with timely and routine project progress reports. It also attaches great importance to the input of stakeholders and involves them in the technical discussions and improvement, which has helped ensure the programme's success.

2.3 Project successes and highlights

Collaborating with government agencies, research institutes and NGOs, has allowed the project to complete the research and development of a set of tools used for quantitatively analysing low-carbon policies. The project has also helped Chinese teams improve their analytical skills through the use of these tools and models. The outcomes of the project, namely the assessment report on low-carbon policies listed in Chongqing's 12th Five-Year Plan and related policy suggestions, have been recognised and accepted by local decision makers. Local officials and technicians have also benefitted from this project, which has helped improve their awareness and capacity in applying scientific tools and analysing measures to make appropriate applicable policies.

Through this project, GEI has demonstrated valuable expertise in collaborating with state-run research institutes and international NGOs. The projectshows how to offer policy suggestions and effectively engage in the government's policy-making process.

GEI has introduced the project to several government agencies within the two countries, building up an unofficial channel and platform for China-US provincial-state exchange, and pushing forward the two countries' concrete collaboration on clean energy and other areas. In April 2013, Guangdong Province and the State of California signed a memorandum on low-carbon collaboration.

2.4 Participation and Communication

GEI has maintained good and smooth communication with all partners over the past few years and has had effective and efficient exchange with US collaborators. Though the differences between the two countries' political systems and decision-making processes have posed challenges to the project, GEI has worked to identify the common interests and has sought collaborating opportunities through agreements from all partners.

To promote the project internationally, GEI has been working with CCS since 2010 to introduce the China-US partnership during their joint parallel events hosted during the UNFCCC climate change conferences. The 2012 parallel event in Qatar featured seeking mutual benefits from differences in climate policy exchange and technical collaboration, while the 2013 parallel event in Poland focused on the bottom-up approach to the China-US low-carbon cooperation. These two recent parallel events involved a detailed introduction to the project, its outcomes and its challenges, and offered valuable reference points for other similar global climate partnership initiatives.

2.5 Lessons learned

The project has earned great support from the NDRC Climate Change Department and been recognised by the US State Department as an Eco-Partnership programme. Support by the governments of these two countries has greatly helped drive the project and ensure its deliverables. However, it is usually the case that local government agencies in pilot areas, such as DRCs and economy and information technology bureaus, are cautious about collaborating in international climate change and low-carbon projects. NDRC's mediation brought about an effective solution. GEI's experience has highlighted the importance of engaging and conferring with stakeholders, especially with the government departments in charge, for the implementation of climate change programmes. Their support helps the programmes to go forward as scheduled.

Chinese technicians used to insist that analytical tools should be developed using Chinese data and policies, and the US perspectives and experience should only be drawn on and used as reference to solve issues when Chinese data is not available and policies not properly analysed. This project's has helped to break this traditional thinking, explore advanced concepts and methods, as well as develop creativity and innovation.

2.6 Outlook

Through its pilot work in Chongqing, GEI and IMP CAS have fully developed a set of tools to use for quantitatively analysing cost-effectiveness of low-carbon policies. The Version 1.0 set of tools will be promoted for use in other Chinese provinces and cities, to assist

with local low-carbon development planning. These tools will be further improved and upgraded through their application across the country. So far GEI, IPM CAS and Jinan University, have all reached an agreement of intent to take on research concerning Guangdong's low-carbon development planning. Considering the difference in low-carbon approaches and paths adopted in Guangdong Province and Chongqing Municipality, the analysis of Guangdong's low-carbon measures and policies will add more functional features to this set of tools, further increasing their compatibility and applicability to pave way to its extensive deployment for wider regions.

GEI will soon launch training sessions on using the tools for quantitative analysis of low-carbon policies. In early 2014, GEI signed an agreement with the Tianjin Administrative Institute, to cooperate in providing interactive, and policy-simulation training for civil servants who study at the institute on the quantitative analytical tools of low-carbon policies. This new partnership will help increase the capacity of local officials in effectively planning local low-carbon development.

Contact

Global Environmental Institute (GEI)

Address: Room 401, Unit1, Building No.5,Xinshijie Jiayuan, Dongcheng District, Beijing

Tel: 86-10-67083192 (ext 225)

Contact:Yu Qingchan

Email: qcyu@geichina.org

Website:www.geichina.org

创绿中心—广东省生态宜居指数排名

一、机构简介

创绿中心成立于 2012 年，旨在提供创新的工具和渠道，促进公众参与环境保护并融合社会、企业和政府的力量，共同推动中国的绿色转型。机构重点关注中国水问题的解决方案、政策推动（宜居城市、气候及可持续金融）等问题。

创绿北京办公室专注于气候变化和可持续金融等政策领域工作，以创新的工作手法推动政策的积极转变。2013 年，围绕气候公正、能源转型等议题开展专业研究，举办了中国水源－能源圆桌论坛、绿色金融圆桌会议推动多方对话，牵头组建中国气候政策小组（CPG），跟进全球气候谈判，并针对欧盟对中国的光伏反倾销以及《IPCC 第五次评估报告》发布等时事热点，发表回应和政策分析文章，取得良好的媒体互动和传播效果。

广州办公室则扎根于推动环保实际行动的工作，重塑环保 NGO 新鲜生动的形象。“一杯干净水”小组继续在全国范围内走访了 50 个村庄和学校，为中国农村居民寻找一杯干净水。4.20 雅安地震，团队启动应急响应，奔赴灾区并加入“中国水安全计划”，将项目合作和模式的经验推广，切实解决灾后饮水问题，覆盖灾区安置人口的 10%。“我测我水”项目，致力于提供工具支持环保 NGO 和公众参与到水环境的保护中来。2013 年年底，与阿里巴巴集团成为战略合作伙伴，其将为 2014 年水组以及机构的工作提供更大的平台和机会。

二、广东省生态宜居指数排名项目

（一）项目背景

中国目前有超过一半人口居住在城市，城镇化将是未来 20 年中国发展的重点，也被认为是人类历史上最大的一次社会运动。城市的质量、形态和发展前景，直接关系到社会的可持续发展。2005 年，在国务院批复的《北京城市总体规划》中，首次出现“宜居城市”的概念。宜居城市是指经济、社会、文化、环境协调发展、人居环境良好，能够满足居民物质和精神生活需求，适宜人类工作、生活和居住的城市，主要有社会文明度、经济富裕度、环境优美度、资源承载度、生活便宜度、公共安全度等几大指标。从环境的角度来评判城市是否宜居，是其他评判标准的基础。

2013 年初，国家发改委和环保部对全国十余省区就“加强生态文明建设”这一课题做了专题调研。广东省环保厅从广东省的实际出发，坚持生态文明建设，坚定不移的走绿色经济建设道路。可见，从中央到地方各级政府都开始重新思考定位环境与发展的关系。

环境质量指数和排名可以在环境数据基础上，综合、分析和对比，从而看出不同区域环境表现的优劣，并以此为基础推广表现优异的经验，形成良性竞争，促进各项指标的改善，从而提升各区域的环境质量。政府部门和研究机构也以不同的形式、标准评选出一系列国内宜居城市，希望借助标准和典范的示范性作用带动城市居住环境质量改善。但是，以往的排名内容过于简单，还没有结合从以上多角度来做分析对比，互相之间经验难以效仿，对决策者、相关管理部门的作用有限，公众也缺乏对相关信息的了解。

（二）项目实施

在以上背景下，创绿中心开发出《广东省城市生态宜居指数》，以广东省城市为对象，以民间角色参与到“生态文明建设”的大队伍中，从而推进城市宜居和可持续发

展。该项目以通过收集、整理和评估官方监测数据、法律法规、研究成果，站在民间角度发布城市生态宜居指数排名，建立公众和决策者之间的对话桥梁，一方面让公众了解决策者所做出的努力，在可能的情况下甚至可以参与到决策的制定和执行中；另一方面在此过程中直接向决策者反应公众最迫切的需求，从而让两者成功“对话”。

最重要的是，通过对各个地级市环境质量、民意的研究，得出排名的同时，在广东省这个范围内推行最佳实践分享，深度剖析最佳实践之经验，建立各地级市相互学习、交流的平台。使得排名在相互比较之余，还可以相互学习，抓住“绝对不垫底”的心理，使差的变优，优的更优。

项目研讨会

新闻发布会

项目通过相关利益方分析，运用来自官方发布的数据进行研究避免了各方对数据真实性和科学性产生质疑。同时配合对城市居民的民意调查，弥补了官方数据存在的部分缺陷。通过发送意见征询函到各地级市相关部门以及召开新闻发布会发布研究成果，抓住竞争存在的胜负欲以及排名落后带来的舆论压力，促使各地级市相关部门用实际行动来改进现有的城市环境。

《广东省城市生态宜居指数》报告

（三）项目的成功和亮点

在 2013 年项目研究第一轮数据意见征询函反馈期间，揭阳市环保局、茂名市环保局陆续发来意见反馈函，主动提出更新和补充相关数据，且使得该市排名提升。新闻发布会后，清远市媒体对项目进行了深度咨询，清远市环保局也做出了正式回应，并且表示坚决对生态宜居排名垫底说“不”。中山市在整体生态宜居排名中较为靠前，但也在新闻发布会后期对项目做出了回应，表示要求更正部分较老的数据，以提升其排名。以上反馈很好的反映了该项目进行初期取得了有利于项目发展的成果。

项目实施过程中，创绿中心也讨论并创新出自己的一套有效执行方式，也是项目中可以借鉴的亮点。例如：

◎ 报告的研究数据 80% 以上来自电子版统计年鉴，和网站发布的电子报告。利用高校图书馆或与高校数据平台合作等方式进行查询和下载。减少了纸张资料的购买和使用（一本年鉴对于项目的贡献只有一次）。

◎ 项目成立为数 20 人左右的专家咨询团队，分别涉及城市环境建设的各个方面。项目评价框架建立期间以及数据分析期间，项目采用了分别咨询专家顾问的方式，有效的利用了外部资源来完善和

保障评估体系的严谨和科学性。

◎ 在本项目执行过程中，创绿中心则选择跟青城环境文化发展中心合作展开调查。青城环境文化发展中心目前与广东省 96 家大学生环境组织有良好的互动关系，并为 2000 余名青年提供环保公益服务，建有《广东省绿色青年人才数据库》。

◎ 报告中提出目前官方部门使用的城市噪声监测方法未能全面的反映城市噪声污染状况，广州市社情民意调查中心发布的《广州市噪音污染公众评价民调报告》中的数据证实了这一观点。

（四）参与和沟通

项目中，实施团队以及合作方沟通良好。各地级市政府部门是该项目促成变化的目标群体，项目初期与各地级市政府部门建立了单项信息传递的沟通方式（邮寄排名、电话咨询并录音），后期通过报道前期的沟通结果以及媒体对项目的报道，与部分城市环保部门建立了双向沟通的良好关系。

项目让城市居民在参与项目的同时对项目进行初步了解。此外，项目邀请相关领域专家、政府职能部门、NGO 以及市民举行五场专题研讨会，提供了多合作和参与的平台，其成果也贡献于分析报告。2013 年 9 月 11 日，创绿举行了报告新闻发布会，正式发布研究报告。

项目还充分利用媒体和网络，通过与南方都市报的合作，扩大影响力。通过网络“征集宜居城市照片”活动、微博“随手拍不宜居现象”，网络票选“你心目中的宜居城市”让公众参与到项目中。建立项目网页，内嵌公众参与讨论板块，公众可以在此自由讨论，并与项目组互动。

（五）主要经验教训

排名带来的压力是促成改变的主要动力，同时对官方数据的利用又强调了项目的立场并非是与政府部门或者决策者对立，而是立足民间机构，搭建多方参与的平台。这样的逻辑策略保障了非政府组织项目的“友好性”，甚至提高了民间组织与政府部门协同合作的可能性。但在项目执行中，也遇到了一些挑战，例如部分数据的获得性和滞后性。该项目以数据研究为基础，但由于研究数据由官方公布，因此很多数据存在约一年的滞后性，甚至很多指标由于缺少基础数据。该项指标的基础数据涉及 21 个城市中每个城市至少两个行政部门（发改局、统计局）。

为此，创绿中心总结了项目进程中制约进度的因素：数据公开的不统一性使得要客观反映城市环境质量延后，需 21 个城市在同一水平上公开相关数据之后才能全面进行比较，形成良性竞争；政府部门处理民间意见的行政流程较繁琐，使得项目进度必须配合其行政流程。此外，项目传播计划在项目实施初期没有形成，以至于项目在整体传播中有种被拖着走的趋势。

（六）可持续性和未来计划

项目的研究数据来自官方，是对外公开的，任何城市都可以运用城市生态宜居指数评估体系的框架套用到自己的研究对象上进行研究。2014 年 1 月，南方都市报运用广东省城市生态宜居指数的评估方式和逻辑体系，以广州市各区为研究对象进行了研究，并以创绿中心为联合发布方进行媒体发布，扩大了项目研究方法的运用范围，并提出建立长期合作关系的意愿。

项目结束后统计到的媒体报道共计 69 篇。通过微博关键字搜索靠前，可见在项目发布之后形成了较好的公众舆论氛围，唤醒了更多的人对城市环境质量的关注，相关部门也在期间对外发布了自己的立场，公开做出改变的承诺。

项目成功发布后广州市环境保护科学研究院提出对项目有进一步合作的意向。2014 年项目计划在完善评估体系的基础上将展开个别指标的深度探索，并结合代表城市做个案研究和分析，并尝试发展全国代表城市的评估体系。项目也得到省级相关部门的支持，有利于其长期的平稳发展。

联系方式

创绿中心

办公地址：广州市海珠区广州大道南 880 号
和平商务中心北塔 1101 室

联系人：邓婷

联系电话：86-20-87676161

电子邮件：veronica@ghub.org

网站：www.ghub.org

G-Hub —Eco-livable City Index Ranking in Guangdong province

1. About Greenovation Hub (G-Hub)

G-Hub wishes to bring about a greener future, where everyone has access to clean water, fresh air and safe food. It aims to do this by providing innovative tools to enable wider public participation in environmental protection, and fostering the joint powers of civil society, business and government to accelerate China's green transition.

G-Hub opened its Beijing office in May 2012 and its Guangzhou office followed in July. The organisation's Beijing office, the Beijing Policy Research Centre (BPRC), focuses on climate change and sustainable financial policies, and aims to promote policy change with positive and innovative work practices; while the Guangzhou office aims to promote environmental action and to reinvigorate the image of environmental NGOs in southern China. From 2012 to 2013, G-Hub was involved in actively exploring pilot projects and carrying out preparatory work, while slowly establishing its brand.

In 2013, the BPRC carried out professional research on climate justice, energy transformation and organised round table discussions about energy and green finance. . The BPRC led the formation of the China Climate Policy Group (CPG), following up on global climate negotiations as well as the European Union's anti-dumping measures against China's photovoltaic cells and panels, and the release of the Intergovernmental Panel on Climate Change (IPCC)'s Fifth Assessment Report, by publishing policy analysis and opinion pieces, attracting media attention.

The organisation furthermore focuses on exploring solutions for China's water issue and promoting environmental policy (related to eco-cities, climate change, and sustainable finance).

2. The Eco-livable City Index Ranking

2.1 Background

China has moved away from a mainly agricultural country. Currently more than half of the population lives in cities. Urbanisation will be a priority of China's development over the next 20 years, and China's urban migration is considered to be the largest social movement in the history of mankind. In 2005, the State Council approved the Beijing City Master Plan. This was the first time the concept of a Livable-city was heard. Six indices were adopted as the evaluation criteria: civic civilisation, economic wealth, environmental well-being, resources, living cost and public safety, among which environmental well-being has commonly been regarded as the most critical. Government departments and research institutions have made appraisals of a series of livable cities using different criteria and standards, all hoping to find a exemplary standard and model to help drive improvement to the environmental quality of cities throughout China.

However to apprise whether a city is "livable" from an environmental perspective, different evaluation criteria is needed.

In early 2013, the National Development and Reform Commission and the Ministry of Environmental Protection conducted research and carried out an investigation into the construction of an ecological civilisation in more than ten Chinese provinces. Public awareness and understanding of environmental quality and the demands of improving environmental quality are increasing in cities too, as well as a public understanding of the factors by which a city is judged as "livable". Not one of the current Chinese cities designated as "livable" has been termed so based on combined analysis and comparison from objective data and the subjective feelings of its residents. Only with these two perspectives can a city's comprehensive environmental performance be understood, and a contribution made to improving the quality of its urban environment.

2.2 Project execution

This project's objective is to drive cities with similar characteristics to compete and learn from each other, to popularise and develop the concept of "eco-livable" cities, and to establish dialogue and cooperation between the public and decision-makers. This will be achieved through developing and honing a publically-recognised Eco-livable City Index Ranking. This project has the potential to bring about an improvement in the environmental quality of these cities and the performance of their local governments, as well as encouraging residents to become more aware of urban environment issues and participate in environmental protection.

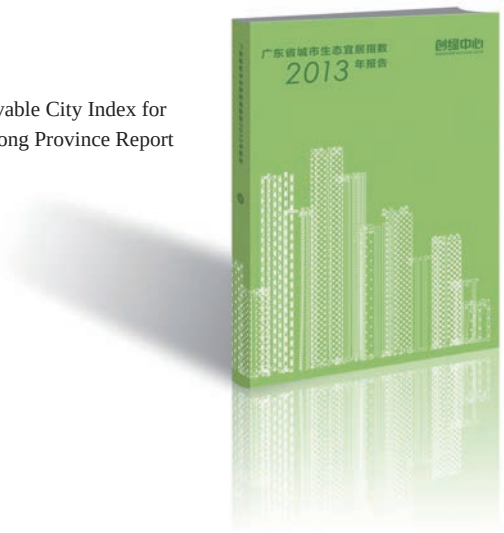
21 cities in the province were picked to participate in the programme. The construction of an ecological civilisation aims to promote improvements to urban environmental quality, thereby improving a city's living conditions and allowing it to realise sustainable development. The programme involved collecting and assessing data from official monitoring, analysing laws and regulations, and carrying out research. An Eco-livable Cities Ranking List will be published once a year, to establish a dialogue between the public and decision-makers. This project will make the public aware of policy-makers' decisions, and in some cases the public might even participate in the formulation and implementation of these decisions. During this dialogue process, the public can make their most pressing demands directly to decision-makers. Through the study of each city's environmental quality and public opinion, this project will analyse and share the best practices from the highest ranking cities, and establish a platform for cities to learn from each other and exchange experiences. By setting up friendly competition between cities, who all wish to avoid appearing at the bottom of the list, and providing information which enables comparisons, will lead to the worse becoming good and the good becoming better.

Project workshop

This approach was based on stakeholder analysis about how the political system might be utilised. By using official data in its research, G-Hub saw it could avoid doubts and questions from local government over the

quality and the scientific nature of the data. Meanwhile, a public satisfaction survey gave its research some qualitative and subjective data. The local Environmental Protection Bureau (EPB) and the National Development and Reform Commission were informed of the results in a letter, and this information was presented in a press conference too, and local government could not deny the importance of what had this research had uncovered. By encouraging friendly competition between cities and the public pressure put upon them to improve their ranking, local governments were forced to take action to improve their city's environment. Despite this, there is currently little support from provincial departments for the development of this project.

G-Hub press conference



Eco-livable City Index for Guangdong Province Report

2.3 Project successes and highlights

Some behavioural changes were observed during the first round of consultation with local departments: the EPBs of Jieyang and Maoming sent official feedback to update and supplement their data in an attempt to improve their rankings. After the press conference, the media in Qingyuan city carried out an in-depth consultation of these research, while their EPB made an official response, claiming that their ranking would never drop. Zhongshang received a relatively high ranking, but after the press conference, the city's EPB asked if they could update their data to try and improve their ranking further. These responses show that cities were taking notice of their ranking and making positive steps to improve them.

Around 80 percent of G-Hub's research data comes from the electronic edition of the Statistical Year Book and City Environment Quality Reports, available online. Data was downloaded from digital libraries and borrowed from universities, reducing paper costs and waste.

There are about 20 members in the project consultant group, which includes professionals and experts from each sector of urban construction. While establishing an evaluation system for the project and exploring how data of a city's environmental quality might be analysed, the research team consulted these experts. T

Engaging an marketing enterprise to carry out its surveys was a costly part of the project. The research team chose to work with the Centre for Green City Environmental Development (Green City) to produce an eco-city public satisfaction survey for Guangdong province. Green City is a NGO which has a good relationship with about 90 university environmental groups, and provides environmental public service for more than 2000 young people.

The research team found that official noise monitoring methods did not reflect the actual noise pollution people experienced. A report entitled Public Opinion Survey Report on the Evaluation of Noise Pollution in Guangzhou was produced, showing these results, which was published by the Guangdong Public Opinion Research Centre.

The Eco-livable City Public Satisfaction Survey was handed out in 21 Guangdong cites by a team of volunteers from university environmental groups during their summer break. This survey investigation took two weeks. Working with volunteers reduced survey costs, while giving young people a practical way to get involved.

2.4 Participation and communication

The research team has communicated well with its partners throughout the project. Local government, the target group for this project, were contacted during the early phase of the project (the research team delivered their rankings, which they followed up with a recorded telephone consultation). During later phases, the research team made use of media reports and public pressure to established a two-way dialogue with local governments.

G-Hub gave also the public a chance to participate in community activities, which also helped give them an understanding of this project.

A series of five seminars were organised with experts, local departments, NGOs and citizens speaking on relevant topics. These seminars provided a multi-participatory platform, where project results and report contributions could be announced.

A project press conference was held in September 2013, at which the research report was officially released. Cooperation with Southern Metropolis Daily helped to expand the project's influence.

By organising online activities such as an Eco-livable City photo contest, inviting netizens to post photos they have taken showing undesirable living conditions on the Chinese social media site Weibo, and conducting an online survey My Imaginary Livable City, members of the public were drawn into the project. During a later phase, the project built its own website, which included a public forum where people could speak their minds and discuss topics with the research team.

2.5 Lessons learned

The pressure of ranking was the main driving force for change. Using official data emphasised that the project was not working against the government or decision-makers, but providing a multi-participatory platform of cooperation with the government to promote progress and popularise the concept of livable cities. The assurance that this was a "friendly" project increased local governments' willingness to collaborate.

The project also faced challenges. Some data was incomplete or out of date. A lack of basic data made it increasingly difficult to know the indices necessary for making calculations, for a city's carbon footprint for example.

After the project's first year, the research team has received positive feedback from five relevant local departments and was mentioned favourably in 69 media reports.

In order to give citizens a chance to participate in the project, there have been some changes in the way the public satisfaction survey is being conducted. G-Hub found that face-to-face interviews worked better than telephone interviews.

Disagreements regarding the disclosure of data caused delay in the objective evaluation of the city's environment performance. There is an official administrative procedure when working with public opinion. This red tape requires the project to be carried out with patience and in line with the official administrative procedures.

2.6 Outlook

All research was based on official figures and made available to the public. Any city can use the eco-livable city evaluation standards to replicate the project. In January 2014 Southern Metropolis Daily used G-Hub's methodology to research all the districts within Guangzhou and produced the results in collaboration with G-Hub, expanding the scope of the project.

After the project ended, its results were picked up by many media reports and were showing up in keyword searches on Weibo too. Many relevant city departments promised to make changes. The project plans to improve its evaluation system by carrying out in-depth research on single indices during 2014, while carrying out case study research and analysis on behalf of each city.

Contact

G-Hub

Address: Room 1101, Peace Business Centre, No. 880 Guangzhou South Street, Haizhu District, Guangzhou

Contact: Veronica

Phone: 86-20-8767 6161

Email: veronica@ghub.org

Website: www.ghub.org

绿色浙江
—“衣物重生”：杭州衣物回收

一、机构简介

绿色浙江是专业从事环境服务的公益性、集团化的社会组织，由“地球奖”获得者、浙江大学教师阮俊华及其学生中国青年志愿服务金奖获得者忻皓于 2000 年 6 月创建，主要致力于公众环境监督、生态社区建设、环境教育传播三大领域，是浙江省最早建立、规模最大，也是在中国首家获得社会组织评估 5A 级，目前在中国较具影响力、党团工会建制较完整、专职人员和参与国际事务较多的环保社团之一。绿色浙江旗下拥有浙江省绿色科技文化促进会、杭州市生态文化协会两家社会团体，以及杭州市下城区春晖慈善商店一家民办非企业单位。

二、“衣物重生”：杭州衣物回收项目

（一）项目背景

虽然目前政府在大力倡导垃圾分类，但其实真正做到的并不多，大多数人还是将旧衣服和其他垃圾扔在一起，最终被焚烧和填埋，将旧衣纳入规范的回收地需要引导。而虽然目前有不少慈善机构接受社会的旧衣捐赠，但大多要求捐赠的衣物要达到八成新，这也为旧衣回收设置了不低的门槛。

住在杭州下沙的陈小姐每到换季整理家中衣物时，总有些犯难。“家里的衣物都成堆了，大部分是八九成新的衣服，穿嘛不想穿了，扔掉又挺可惜的。”陈小姐说，她所住的单元楼与社区服务中心隔了几条街，即使有捐赠活动，她也不能及时知道。她也曾想过把衣服捐给一些公益组织，但是网上信息杂乱，她担心对方将回收旧衣卖掉，而不是送到有需要的人手里。

不少市民表示，之前拿着不少旧衣到社区想捐赠，却被拒绝了。虽然杭州也有不少社区设立了旧衣捐赠点，但目前接受捐赠的衣服为八成新以上的干净秋冬旧衣裤。“那些不是很新的怎么办？”张阿姨说，“一般如果环卫工人不嫌弃，就会送给他们，另外大多都扔掉了。” 杭州申奇废品回收连锁有限公司副总经理李震认为，杭州每年产生这么多旧衣服，如果能回收利用得当，既节约又环保，还可以减少城市垃圾。

据不完全统计，杭州市每年产生 10 万吨废旧衣物，大部分进入了垃圾填埋场。这些随意丢弃的衣服，市民觉得可惜，同时也会对环境造成污染。现在的衣服大多是化纤、涤纶、晴纶、棉麻等成分，这些原料很难降解。除了棉麻衣物在自然环境下能够降解吸收之外，化纤等成分在自然状态下都不易降解，留在地表上可达数千年之久，对环境危害很大。

（二）项目实施

“衣物重生”废旧再利用项目由浙江省最大的环保组织“绿色浙江”旗下专业从事生态社区建设的 5A 级社会团体—杭州市生态文化协会发起倡导，旨在利用科技寻求垃圾减量、回收和再利用。

“衣物重生”项目初期只对废旧衣物进行回收，其作为协会另一项主推的、曾获全国公益慈善项目大赛金奖的城市社区垃圾综合性回收处理项目“智慧绿房”的初期基础和推广项目。衣物重生项目由杭州市生态文化协会牵头，相关政府、企业与其它社会组织共同推动，减少社区生活垃圾产生量和因填埋产生的对环境的影响，实现废旧衣物捐赠或再生，把手套、围巾、地毯、拖把等捐赠给有需要的群体。杭州市生态文化协会将该项目英文名称定为

“ReClothe”，此名称同时作为这些产品的品牌标志。

“衣物重生”选择废旧衣服先行的主要原因是当前在浙江尚没有专业从事回收、再生废旧衣服的回收人员，不对现有利益群体产生影响，从而减少新项目扩展和实施的阻力，因其主要针对于衣物回收。

项目还与浙江之声、杭州申奇废品回收连锁有限公司共同合作，杭州市生态文化协会负责项目策划、推广与社区居民教育，杭州申奇废品回收连锁有限公司负责废旧衣物的回收、再生，浙江之声负责项目宣传。

“垃圾回收”宣传

2014 年 4 月 8 日，杭州第一只大熊猫废旧衣物回收箱体，入住中国杭州低碳科技馆。4 月 9 日下午，下城区文晖街道的流水东苑社区、流水西苑社区、打铁关社区、现代城社区等 8 个社区各自接收了他们的第一个“大熊猫”。市民可以将旧衣服放到一个写着“废旧衣物回收专用”的大熊猫箱里，经过专人分类挑选，进入工厂二次处理后再利用。今年年底前，杭州各个小区设置的大熊猫旧衣回收箱将达到 2000-3000 个。

4 月 15 日，杭州市社区废旧衣物循环再生项目的首站在文晖街道和平广场启动。截止 4 月 18 日，已经有 16 个社区有了大熊猫，此外还有来自学校、机关、企业的申请。

目前，除了文晖街道的 8 个社区和杭州低碳科技馆，现代实验小学、世纪联华和平广场店也各自放置了一个‘大熊猫’。”绿色浙江副秘书长李薇说。现在，已经有越来越多的社区、学校向我们拿申请表，让回收旧衣服的熊猫“住”到他们社区。他们计划在 2014 年年底前，在杭州

市民将废旧衣物投放进大熊猫箱体

各个小区设置大熊猫旧衣回收箱 2000-3000 个。今后，市民可以把家中的废旧衣物扔进大熊猫箱体，八成新以上的旧衣可作慈善捐赠。八成新以下的衣物回收来的旧衣先进行人工拆解，并按照衣服的原料种类进行分类，分成化纤、涤纶、棉纶等。然后转入专业工厂进行资源回收和再利用处理，变成手套、地毯等新产品。经过再加工生产的产品将返回到社区，由社区进行支配。

（三）项目的成功和亮点

和以往要前往特定机构，或是不定期开展捐赠活动不同，“大熊猫”让社区居民可以随时随地捐赠废旧衣物。每个社区都有一名环保使者来看管“大熊猫”，一旦箱体装满旧衣，环保使者会打电话给浙江申奇废品回收连锁有限公司相关工作人员，他们会上门来收取旧衣。市民将不需要的废旧衣物放进社区的大熊猫废旧衣物回收箱，接由专人进行挑选分类，将八成新以上的衣物将梳理出来，用于民政公益捐赠，资助边远、困难地区的居民。

被丢弃的纺织品和衣物中，可以重新利用的比例高达 95%。每吨旧衣服回收利用后，可生产 0.99 吨无纺布或 0.99 吨分色棉纱，等于节约 1.1 吨纺织原料或 0.8 吨棉花，同时还省下了 35% 生产同等无纺布的能源，以及节约了 20% 生产同等棉纱的能源。杭州每年有大概 10 万吨的废旧衣物产生，10 万废旧衣物相当于 5 亿条棉服，50 亿条内裤，更准确的说，相当于 2000 吨二氧化碳排放量。

（四）可持续性和未来

项目下所收集来的废旧衣物除了八成新以下的通过企业分拣、消毒等程序送到下游处理厂家进行处理再生外，八成新以上的废旧衣物将送往贫困地区。

贫困地区的孩子可以通过这些废旧衣物制作一些布偶或者其他的工艺品，然后通过慈善商店进行出售，获得的资金再反馈给这些孩子，让孩子们培养出任何事情都需要通过自己的努力获得的概念。

另一方面，以杭州市作为试点的“衣物重生”项目在良性循环发展的基础上，将在相邻市县进行推广，当地机构将以合作的方式与申奇回收公司建立新的衣物重生项目。

联系方式

绿色浙江

办公地址：杭州市下城区绍兴路 337 号
野风现代之星大厦 2204 室

联系人：李薇

联系电话：86-18157136608

电子邮件：chuxuminx@gmail.com

网站：weibo.com/345900500

绿色浙江

Green Zhejiang - ReClothe: Clothes Recycling in Hangzhou

1. About Green Zhejiang

Green Zhejiang is a collectivised social organisation specialised in providing environmental services. It focuses on public environmental monitoring, ecological community building and environmental education. It was established in June 2000 by Ruan Junhua, a teacher at Zhejiang University and winner of the 7th National Earth Award (2003), together with his student Xin Hao, winner of a China Youth Volunteer Service Award.

Green Zhejiang was the first environmental group to be established in Zhejiang, a province on China's east coast, just below Shanghai, and it is Zhejiang's largest environmental group. It was also the first environmental group in the province to receive a 5A classification within China's social organisation evaluation system. In 2010 the group registered a branch called the Hangzhou Eco-Culture Association (HZECA).

2. The Clothes Recycling Project

2.1 Background

Although the government promotes the sorting of waste, it does not achieve as much as it would like in this regard. Most people still mix old clothes with their other waste, which ends in the clothing being incinerated and put into landfill. Channels and regulations need to be established to facilitate the recycling of old clothes. Although there are many charitable organisations that accept old clothes donations, most of them request that this clothing be in new or nearly-new conditions, which causes a hurdle for the recycling of old clothes.

Each year around 90,000 tonnes of old clothing is discarded in Hangzhou. Most of these clothes end up in landfill, where they can cause damage to the environment. The raw materials in this clothing, mostly synthetic fibre, polyester, acrylic and cotton, does not readily decompose. This material remains in the ground for thousands of years, harming the natural environment. "It is harmful to just throw [old clothes] away," explains Li Zhen, vice president of Hangzhou's Shen Qi Recycling. "By properly handling them we can reduce city waste."

2.2 Project execution

HZECA, a branch of Green Zhejiang, has set up a project called ReClothe which aims to reduce the amount of waste generated in community life and the environmental impact of landfill. It seeks to do this by providing a channel by which members of the community can donate used or unwanted items of clothing which can then be recycled.

The group decided to focus on clothing because it saw that there was currently no organisation in Zhejiang

specialising in the recycling and re-use of old clothing. It also identified that this project would not conflict with the activities of any existing interest groups.

To carry out its ReClothe project, HZECA has collaborated with related government bodies, enterprises and other social organisations. It works closely with The Sound of Zhejiang and Hangzhou Shen Qi Recycling, each taking on different duties. HZECA is responsible for planning the project, promotion, and providing community education, Hangzhou Shen Qi Recycling handles the recycling and regeneration of used clothing, while the Sound of Zhejiang takes care of the project's advertising.

Waste recycling promotional activity

By the end of 2014,ReClothe hopes to achieve the following five objectives:

1. To set up 600 used clothing collection points in Hangzhou

2. To hold 100 activities to promote the recycling of used clothing

3. To provide recycling for clothing that is worn or damaged

4. To donate a portion of regenerated supplies from the clothing in new or nearly-new conditions

5. To train at least 200 community members in environmental protection

Many charities and organisations in Hangzhou have set up clothes donation points, but these only take clothes that are clean and in new or nearly-new conditions. This means that there is a large supply of unwanted old clothes that will not be taken. Many people have tried to donate their unwanted clothes, but have had them refused. People conclude that the only way to get rid of these worn and old clothes is to throw them away.

Now these old clothes have another place to go, thanks to Green Zhejiang's ReClothe project and the introduction of its community recycling boxes. Members of the public can put their unwanted clothes in these boxes, which will be later be sorted through, some of them sent off to charities while others are regenerated into items such as cushions.

The first recycling box made its way to Hangzhou's Low Carbon Science and Technology Museum on 8th April this year and subsequent boxes were introduced into eight other Hangzhou neighbourhoods. By the end of April, 16 recycling boxes had been successfully established, with schools, government institutions and enterprises applying for more. Green Zhejiang plans to set up between two and three thousand boxes by the end of the year.

A citizen puts his old clothes into the "Panda" recycling box

The organisation hopes that with the provision of these boxes, people will think to recycle their unwanted clothes rather than just throwing them away.

2.3 Project successes and highlights

These recycling boxes allow residents to donate their unwanted clothes at any time. Someone is allocated from each neighbourhood to inform Hangzhou Shen Qi Recycling when their box is full. The company will come over the following day to pick up the clothes.

Some of the newer clothes are distributed to charities which are in desperate need of them. The older and more worn clothes are unstitched and sorted by material. They are recycled and re-processed in factories and turned into gloves and blankets. These products can be returned to those same neighbourhoods with a "ReClothe" label.

Up to 95% of the material in these clothes can be recycled. One tonne of recycled clothing produces 0.99 tonnes of cotton or 0.99 tonnes of yarn, which is the equivalent of saving 1.1 tonnes of raw materials or 0.8 tonnes of cotton. Recycling old clothing uses 35 percent less energy than the production of cloth, and 20 percent less energy than the production of yarn. The 90,000 tons of old clothing discarded in Hangzhou each year can be recycled into around 450 million items of cotton clothing or 4.5 billion pairs of pants.

2.4 Outlook

The clothing collected which is dirty, worn or old is sorted, disinfected and sent to downstream processing factories for treatment and regeneration, while the clothing in new or nearly-new conditions is sent to impoverished areas.

Children in these areas can use this clothing for arts and crafts, and make puppets for example, which are sold by charity shops and the money made given back to the children. This allows the children to develop a sense of self-reliance and empowerment.

Having proved beneficial Hangzhou's pilot "ReClothe" project will be promoted in neighbouring cities and counties where local organisations can collaborate with Shen Qi Recycling to establish new clothes recycling projects.

Contact

Green Zhejiang

Address: Room 2204, Yefeng Xiandai Zhixing Building,
337 Shaoxing Rd, Hangzhou, Zhejiang Province, PRC

Tel: 86-571-87755205

Contact: Li Wei

Email: liwei0520@gmail.com

Website: weibo.com/345900500

绿色和平
—北京分布式光伏并网

一、机构简介

绿色和平成立于 1971 年，目前在世界 40 多个国家和地区设有分部，拥有超过 300 万名支持者。为了保持公正性和独立性，绿色和平不接受任何政府、企业或政治团体的资助，只接受市民和独立基金的直接捐款。绿色和平致力于以实际行动推动积极改变，保护地球环境与世界和平。绿色和平涉及的领域和项目包括：

◎ 对抗气候变化 – 开始能源革命

气候变化是全人类共同面对的一项重大挑战。气候变化为人类及整个生态系统带来种种灾难：冰川融化、极端天气、粮食减产、海平面上升、物种灭绝、空气污染等等。绿色和平在气候变化与能源方面的工作主要集中在：推动中国摆脱煤炭依赖、亲身见证气候变化影响、倡导可再生能源革命和追踪国际气候谈判几个方面。

◎ 污染防治

有毒有害物质存在于水体中、电子垃圾中，存在于我们生活中的很多方面。绿色和平的污染防治项目从推动“清洁生产”、“公众知情权”及“企业信息公开”等方面入手，汇集政府、公众、企业、专家和关心中国污染问题的公众的力量，以见证、取样、调查等多样的途径工作，努力促成积极的改变。

◎ 保护森林

绿色和平一直努力保护地球上仅存的原始森林和栖息在其中的人和生物。我们与政府、企业和消费者各方面共同行动，多年来不仅保护了全球原始森林和可持续发展，也通过公众教育提高对森林有利的消费意识。

◎ 食品与农业

面对今日迫在眉睫的农业与食品危机，绿色和平致力于扭转农业工业化的不合理生产模式，与世界各地的政府、农业企业、农民和公众共同合作，促进农业可持续发展。在食品安全方面，绿色和平提倡保护消费者知情权，不定期进行食品农药残留、转基因成分检测，将检测结果通过消费者购买指南或直接发布等方式告知大众。

◎ 保护海洋

海洋是地球上 80% 生物的家园，人类猎杀鲸类、过度捕捞，正在直接威胁着看似永不枯竭实则濒临崩溃的海洋生态。要保护海洋，最快捷的方法是设立海洋保护区。目前全球只有不到 1% 的海洋受到保护，渔船可以在海洋上恣意航行。因此我们需要设立如同在陆地一样的国家公园，防止过度开采渔业资源。

二、分布式光伏并网项目

（一）项目背景

近年来，分布式光伏发电发展迅速，已成为不少发达国家极力推动的重要发电技术，主要用于工业园、公共设施、商业设施和住宅建筑等领域。截至 2010 年底，全世界累计光伏装机量 39.5GW，这其中分布式光伏发电又是光伏应用的主流。至 2010 年底，分布式系统的累计装机量约有 23.4GW，占光伏累计装机量的 66.8%。其中德国 14.5GW、日本 3.5GW、美国 1.7GW，而中国的分布式光伏系统累计装进仅有 0.25GW。

光伏发电是指利用太阳能光伏电池把太阳辐射直接转变成电能的发电方式。分布式光伏发电是指在用户所在场地附近建设，运行方式以用户侧自发自用为主、多余电量上网，且在配电系统平衡调节为特征的光伏发电设施。这种发电形式可以充分利用太阳能资源，替代和减少化石能源消费。

2012 年起，绿色和平便有了初步构想，认为个人分布式光伏将成为可行的能源替代方案。但在中国，分布式光伏的大力发展必须先克服“并网”这一难题。当时中国尚未建立起适应分布式发电发展的价格政策和电网运行机制，特别在电网介入和并网管理上，仍沿用传统发电厂运行管理模式，无法发挥分布式光伏发电规模小、效率高的优势，形成了电网“卡脖子”的现象，制约了分布式光伏发电的规模化发展。

绿色和平认为要推动中国分散式光伏发电的发展，必须首先攻克并网难关。因此绿色和平花费了数个月的时间，尝试在着探索出一条在当今相关法规尚未健全的条件下的户用建筑光伏并网之路。绿色和平希望此次项目经验可以帮助到众多未并网的建筑光伏系统用户，使他们成功并网，从而进一步推动中国分布式建筑光伏产业的前进及相关并网法律法规的早日出台。

（二）项目实施

基于上述的调研和分析，绿色和平在 2012 年 5 月就有了建设自己的电站、使用清洁电力的想法：

◎ 2012 年 10 月 26 日，国家电网发布《关于做好分布式光伏发电并网服务工作的意见》，鼓励分布式光伏项目并网。

◎ 11 月 1 日，绿色和平在《意见》生效当天就递交了并网申请，并在一个月内得到电网并网书面许可。

◎ 2013 年 4 月 15 日，绿色和平与国家电网正式签订《分布式光伏发电项目低压发用电合同》。

◎ 4 月 17 日，国电北京顺义分公司的工作人员上门为绿色和平的分布式光伏项目更换电表，并进行并网调试。普通电表更换为两个多功能智能电表，一块计量客户用电情况，另一块计算客户发电回传电网的电量。4 月 16 日首次并网发电，

◎ 截止 12 月 26 日，“余电上网”部分共发电 2633 度，获得收入 1043 元。度电补贴部分，国家电网将另行给付。如按每度电可产生 310 克煤耗计算，2013 年“会发电的屋顶”减少了近 900 公斤煤耗。

目前在国家电网并网发电的项目，余电上网电量按照所在地的脱硫电价进行收购（根据不同地区额度有所不同，北京为 0.4 元 /kWh），另外全部所发电量按照 0.42 元 /kWh 的价格进行补贴。据国家电网工作人员介绍，截至 4 月初全国已受理报装分布式光伏 352 起，成功并网 43 起，绿色和平还为此专门制作了并网申请指南。

绿色和平太阳能项目


项目人员与工程师讨论

（三）项目的成功和亮点

对于分布式光伏用户来讲，如果想并网发电，必须先通过国家电网的并网申请流程，然后再实施系统安装和调

试，最终与国家电网签订售电合同，方可卖电并获得国家补贴。绿色和平分布式光伏项目是首个机构身份成功申请并网发电的，申请流程用了 1 个多月的时间，施工安装大约用了一周。提交并网申请与国家电网的审核并不需要支付任何费用，包括更换电表和电网改造的成本都由国家电网承担，用户仅需负责光伏系统的购买和安装。

绿色和平的分布式光伏成功并网，对于释放中国屋顶光伏潜力是有里程碑意义的。国家电网对于接受分布式光伏并网态度的 180° 大转弯，可以说是加速中国能源结构转型的重要事件。这对于消化光伏过剩产能，保住光伏制造业的就业机会无疑是大有裨益的。在接下来的几年中，国家能源局设定光伏装机 35GW 的目标，2014 年新增装机 12GW，其中分布式光伏占 8GW。

绿色和平的太阳能系统除了可以发电之外，还可以自动记录每日的发电量，这就为太阳能发电的数据研究建立了基础。无论是从并网补贴与个人电站的投资回报和融资模式的精确计算方面，还是从能源结构调整的政策建议方面，甚至包括把这些数据与雾霾数据相匹配进行深入研究方面，都有最直接的益处。

另外，国家电网首次放开分布式光伏并网申请，无论从并网技术、并网政策执行细则、甚至系统设备的审核上，经验都相对不足。尤其是对于基层的电网工作人员来说，一切都是“摸着石头过河”，而绿色和平和光伏项目工程师一起，提交的并网系统设计方案、设备选择清单等，都为电网制定更加合理的并网审核标准提供了有效参考。

（四）项目参与和沟通

在绿色和平光伏项目团队内，分为了两个小组，分别负责电网安装和申请等事务；另一部分负责与媒体和外界沟通。两个小组建立了在线协作档案，分别记录、更新各自进展，这样可以保证信息的实时更新。

与此同时，在并网过程中的阶段性成果，例如项目方案提交、通过国家电网验收、电费补贴申请成功等，都在微博上以图文形式进行分享，帮助外界及时了解项目进展；之后针对每一个主题，也会有更加详细的博客来进行更深一步的知识和经验讲解；最后，绿色和平还在并网发电之后，特别制作了并网安装手册，帮助大众了解到分布式光伏申请需要什么样的流程。

另外，光伏系统成功并网后，绿色和平还联合自然之友的低碳家庭项目会员，实地开展了光伏并网的工作坊，很多对光伏感兴趣的家庭通过实地参观、听取讲解，解决了对光伏系统的疑问，甚至有不少家庭当即表示希望安装自己的系统。

（五）主要经验教训

在并网申请的过程中，由于没有针对个人或企业用户申请并网的先例和支持政策，因此并网申请过程并不顺利。但在 2012 年 10 月 26 日，国家电网发布《关于做好分布式光伏发电并网服务工作的意见》之后，光伏政策自上而下的变化使并网申请流程变得比较顺利。当然，政策的顺利并不代表项目能够顺利推进，因为地方电网单位也是初次接触分布式光伏并网，在系统设计方案上以及并网施工检查上，甚至并网后对电能质量进行定期检测方面，都需要投入专人进行跟踪，一定程度上延缓了项目进度。

目前，分布式光伏还处于摸索和理顺商业机制的阶段，因此仅有补贴政策，也不会有广大的市场用户实际开始安装。另外，光伏发电本来就不是一个部门可解决的事情，发改委的装机目标需要财政部、国家电网、国土资源部等部门的密切配合，甚至税务部门等单位也要加入协调。没有统一的规划部署，企业很难从中获利，也就难以打开市场。

在对外沟通时，所有人都很容易把雾霾和新能源联系起来，这也是下一步对外进行有效传播的重点。

（六）可持续性和未来计划

本项目已经并网发电，并且在持续记录发电数据。目前绿色和平正在着手制作指导手册，帮助公众了解分布式光伏并网。并且还将定期更新并网发电的情况，并找到适合的时间点做相关评论和深度博客。

目前，由于北京屡遭雾霾侵袭，光伏发电系统的发电量也受到了一定程度影响，绿色和平正在搜集数据，做光伏与发电量之间相互影响的调研，以帮助政府和个人更精确地了解光伏发电量和投资回报周期的准确信息。

绿色和平分布式光伏项目安装并网已经完成，但整体

项目并没有结束，这只是一个开始。因为有了这套系统，可以更好的对发电量、收益、维护、电网沟通等进行长期检测，并反馈信息，对政策提出建议。当前，光伏并网政策已经有了明显进步，整个光伏行业都非常兴奋。但是，政策的相关实施细则还有待完善，绿色和平将继续以实际用户的身份进行调查研究，并提出合理建议。除此之外，基于光伏的微电网和融资政策等相关信息的调研，也是下一步机构着重推进的重点。

联系方式

绿色和平

办公地址：北京东城区新中街 68 号聚龙花园 7 号楼聚龙商务楼 3 层

联系人：蔡元卿

联系电话：86-10-65546931

电子邮件：cai.yuanqing@greenpeace.org

网站：www.greenpeace.org

Greenpeace-Distributed Photovoltaic Grid in Beijing

1. About Greenpeace

Greenpeace is present in 40 countries across Europe, the Americas, Asia, Africa and the Pacific. Greenpeace East Asia opened its Hong Kong office in 1997, Beijing in 2002, Taipei in 2010, and Seoul in 2011. Greenpeace is in East Asia to fight climate change, stop toxic pollution, ensure food security, end illegal deforestation, and defend the oceans.

2. The Distributed Photovoltaic Grid Project

2.1 Background

The use of solar energy has been growing rapidly in recent years. It is already becoming an important power supply system in many countries, used primarily in industrial parks, infrastructure, business facilities and public housing.

At the end of 2010, the total amount of power generated globally by solar installations reached 39.5 GW. Of this, 23.4GW (66.8%) was produced by distributed solar generation systems (power generated by smaller distributed solar units, rather than one large centralised plant). The amount of power generated by solar power systems is 14.5 GW in Germany, 3.5 GW in Japan, and 1.7 GW in the US; China, in contrast, only generates 0.25 GW through solar power.

Distributed solar energy is generated either via rooftops or ground-mounted installations which feed into a local grid. There are many advantages to the adoption of distributed solar energy generation as the main means of future energy production and Greenpeace has been considering building its own solar energy system in Beijing since 2012, offering an alternative to the current means of generating energy. The main difficulty of setting up a distributed solar energy generation system in China, however, has been the issue of connecting to the state grid. This problem is becoming a bottleneck impeding China's solar marketization.

2.2 Project execution

Greenpeace believed that the first step in dealing with this bottleneck was to overcome the grid connection issue. Greenpeace's renewable energy team carried out months of research to try and overcome this problem, thus providing the public with an understanding of the grid connection application procedure. Greenpeace hopes that this will stimulate the solar market and lead to more supportive policy.

In October 2012 the State Grid Corporation of China (SGCC) announced a new act, encouraging solar grid connection for individual households. Greenpeace East Asia decided to take advantage of this act and have solar panels installed on its new warehouse in Shunyi, on the outskirts of Beijing. In so doing, the organisation hoped

Greenpeace's solar installation

Project staff talking with an engineer

to test the ease with which Chinese individuals and business owners might also switch to solar.

Five months later, having completed the application process, Greenpeace was approved by the SGCC and 65 square meters of solar panelling was successfully installed. When operating at full capacity, these generate around 5 kWh of electricity per hour. Solar panel owners are given the option of feeding the energy their panels generate back into the grid or using it on site. Greenpeace opted to consume the electricity generated on site with surplus fed back to the grid; the most typical model. By December 2013, the organisation had fed back 2,633 kWh, earning 1,043 RMB, and was given subsidies too. Greenpeace used its experience to create a Grid Connection User Guide which it has made available online.

The project's objectives were:

1. To test the feasibility of renewable energy in China by going through the whole process of applying for grid connection and installing the system, thereby establishing an actual case study.

2. To continue collecting and analysing first-hand data once the project was completed.

3. To conduct media promotion activities (a series of reports and micro-blog stories) in order to highlight the grid connection issue and make a positive case for public usage of renewable energy.

4. To identify policy loopholes regarding the grid connection problem and provide suitable recommendations.

5. To understand and analyse the stakeholders in the grid connection process to facilitate future projects.

2.3 Project successes and highlights

Greenpeace was one of the first institutions to make a successful application to the SGCC's distributed photovoltaic project and be connected to China's state grid. All distributed solar energy users in China must go through the SGCC application and system installation procedure before connecting to the grid. A contract is then signed with the SGCC and subsidies can be received. Greenpeace's application process took more than a month and installation about a week. When submitting an application to the SGCC, the organisation was not required to pay a fee. SGCC covers the expense of the replacing meters and upgrading grids; all the user is responsible for is the purchase and installation of the photovoltaic system.

Greenpeace's installation of a distributed solar panel system in its Beijing warehouse and connection to the grid is a huge landmark in the campaign to exploit the potential for rooftop solar panels in China. The SGCC has had a complete turnaround in its attitude towards distributed solar energy systems too. Greenpeace's successful installation of the system has played an important role in accelerating the transformation of China's energy structure. The completion of this project will show how other institutions might begin to make use of solar power generation too. Within the next few years, China's National Energy Commission plans to set a target of 35 GW of power to be generated by solar panels.

Greenpeace's solar panel system was first connected on 16 April 2013 and between then and 26 December 2013, it has fed back 2,633 kWh of electricity to the grid. Calculated on the basis of 310 grams of coal required to produce one kWh of electricity, the system has reduced coal consumption by around 900 kilograms. By feeding some of this energy back to the grid, it has produced an income of 1,043 RMB. The organisation will also receive subsidies for its use of solar energy.

Greenpeace's solar panel system automatically records the amount of power generated daily. This provides useful data about power generation which the organisation can use to make policy recommendations and exact figures about return on investment which can be passed on to other organisations. This was the first time the SGCC opened up applications to its distributed photovoltaic grid. In so doing it revealed its lack of experience in terms of grid technology, details of policy implementation and examining system equipment. Greenpeace was able to provide the SGCC with a detailed system design plan and equipment list; a valuable source of information. Greenpeace's solutions to grid issues are likely to be included in the SGCC internal instruction manual.

2.4 Participation and communication

Greenpeace carried out extensive media communication and public engagement efforts throughout the duration of the project. It published all its milestones while applying for grid connection on the Chinese social media site Weibo: submitting its system design plan, being verified and accepted by the SGCC, receiving subsidies. This gave the general public a thorough understanding of the organisation's progress. When issues of particular public interest arose, the organisation published follow-up blogs expanding on the details. After Greenpeace successfully installed its system, it published an online User's Guide to help interested parties implement their own projects.

Greenpeace organised a workshop alongside Friends of Nature, inviting members to visit the project location. These members were given an introduction to the project and solar energy situation in China, after which some expressed a strong interest in installing their own solar energy systems. Greenpeace shared practical information and contacts, with the hope that more people will start to adopt clean energy generation.

2.5 Lessons learned

When the organisation first applied to connect to the state grid, there were no previous case studies or policies to reference, which lead to initial hitches during the application process. There was a major turnaround in October 2012 when the SGCC issued an act encouraging distributed solar grid connection. This led to top-down policy changes, streamlining the application procedure.

This policy change did not remove all the hurdles,

however. Greenpeace found that local grid officers did not have experience in solar energy generation and additional time was needed for step-by-step communication and a trial-and-error approach to the application procedure.

When communicating with the general public on this issue, Greenpeace discovered that many people associated renewable energy with atmospheric haze. During the next stage of the project this will be a key matter to be addressed.

2.6 Outlook

Having set up the solar panels at their warehouse and connected to the grid, Greenpeace plans to continue recording its solar power generation data and regularly updating its blog and Weibo account to provide on-going information about the project.

Beijing's current smog affects the output of photovoltaic power. Greenpeace is collecting data and carrying out research on the relationship between photovoltaics and power generation in the region, to allow the government and individuals to build up a clearer picture about photovoltaic power generation and the investment return cycle.

Contact

Greenpeace

Address: 3/F, Julong Office Building, Block 7, Julong Gardens,68 Xinzhong Street,Dongcheng District, Beijing, China

Tel: 86-10-6554 6931

Contact: Cai Yuanqing

Email: cai.yuanqing@greenpeace.org

Website:veronica@ghub.org

REEI
Independence and Justice for Sustainability!

磐石能源与环境研究所—成都洛带垃圾焚烧案例

一、机构简介

磐石环境与能源研究所（REEI）2012 年 7 月创建于北京顺义，旨在通过探讨、分析和提供促进可持续发展、符合社会正义的政策方案，成为一个独立的民间政策研究智库。磐石希望通过社会和科学分析为民间组织或企业提供实际的政策解决方案，机构主要关注气候变化、能源系统转型、空气污染、碳市场和城市固体垃圾管理等议题。

截止目前已经完成的项目包括：

◎ 生活垃圾焚烧发电厂的环境、健康与环境影响研究；

◎ 反思中国垃圾发电的可再生能源补贴的合理性；

◎ 可再生能源和能效对煤电和水电为主之能源结构的意义；

◎ 中国西北五省区 2011–2020 年煤炭工业碳排放情景分析等。

二、成都洛带垃圾焚烧案例研究

（一）项目背景

随着中国城市化、工业化的加快，过去几十年产生城市固体垃圾的数量也在不断增长。目前 80%–90% 的固体垃圾被填埋，10%–18% 被焚烧，剩下都被倾泻或用来堆肥。世界银行预测，到 2030 年中国将产生两倍于美国的城市固体垃圾。垃圾焚烧正逐渐成为中国未来垃圾处理的重要方向。但是实际上，国内“现代化”垃圾焚烧厂的运行管理却并未像政府部门和开发商所说的那样美好，其投资决策过程、公众参与、能源消耗、工况控制、烟气净化、灰渣处理都存在着严重的问题。而对于这些问题，政府和开发商采取了漠视、回避，甚至是粉饰的态度，这显然对于环境安全和公众健康是十分危险的。即使这样，焚烧厂还享受中央政府的财政补贴（“由废变宝”项目），部分厂家还通过联合国清洁发展机制（CDM）获取了碳减排收益。

（二）项目实施

以成都洛带生活垃圾焚烧发电厂作为案例，REEI 通过田野调查的形式对焚烧发电厂当地环境及公众健康的现有及潜在的影响进行了研究。根据附近居民切身感受到的环境和健康的影响，本研究经由对周边居民的访谈，为附近居民们提供了对焚烧厂的基本了解和风险认知，做出适当的防护措施并要求对焚烧厂进行更严格的污染物排放监管；对于环境部门采取忽视的态度，REEI 联合公共利益团体与政府部门以及厂方进行沟通，也依法申请了环境信息公开；机构还联系学术科研机构中国农业大学对自然环境影响如当地大气污染物进行了季节性的动态监测和分析。

成都洛带垃圾焚烧厂


对焚烧厂附近社区居民关于垃圾焚烧对周边环境影响的调查

随后，项目延展到讨论焚烧厂仍获得可再生电力补贴和碳减排收益的合理性。联合国清洁发展机制（CDM）以及中国温室气体自愿减排（CCER）体系都将垃圾焚烧项目作为可接受的一个减排类型，REEI 建议应该更谨慎地对待并严格限制此类项目获取碳减排收益以及任何形式的补贴，除非垃圾焚烧项目解决其产生的潜在的可持续发展方面的问题。针对垃圾发电的可再生能源补贴合理性分析结果表明，这种补贴政策在环境可持续方面是不合理的，也阻碍了以前端减量、垃圾分类和回收再利用的垃圾层级管理体系的实行。碳减排的收益以及垃圾焚烧发电补贴变相地鼓励了垃圾焚烧厂的建设，带来不可忽视的环境和社会影响，很有可能在推动一种不可持续的垃圾管理模式。

本研究中焚烧厂的主要利益相关方为管理垃圾的政府部门、环境监管部门、焚烧厂的管理和技术人员、受影响地区的公众，研究者在研究过程中和他们中的大部分建立了联系。REEI 主要负责项目的协调以及研究框架的整合，具体涉及研究脉络的梳理、工作时间表的制定与执行、预算的控制以及实地参与到每次调查和访谈中。外部合作者自然大学有着丰富的社会调查和干预垃圾焚烧厂污染的实战经验，擅长利益相关方的心理以及申请信息公开方面的工作，可确保高效地获得有效答案。

对这些利益相关方的访谈结果表明：围绕垃圾焚烧厂的运行以及产生的环境问题给出的解释不同，主要表现在环保部门和焚烧厂互相推脱焚烧厂信息公开数据的责任；对村民切身感受到的环境和健康影响，环保部门采取忽视的态度，焚烧厂则推脱责任。在申请环境信息公开的过程中，省级市级环保部门也试图拒绝公开信息内容。在采访其他利益相关方时项目执行方力争互相配合，用被采访者可接受的语言获得更多地信息。

（三）项目的成功和亮点

根据分析，REEI 认为成都洛带垃圾焚烧发电项目获得 CDM 碳减排收益存在极大争议。REEI 最终在 2013 年底的气候变化大会边会的案例集中展示了案例分析结果。在此基础上，REEI 又独立地分析了针对垃圾焚烧发电给予可再生电力补贴的不合理性。REEI 的案例分析没有带来直接的政策转变，但是促进了中国垃圾焚烧项目负面环境和社会影响的社会讨论。

在整个项目设计过程中，REEI 听取各利益相关方的意见，与学术机构和公共利益团体合作，用严肃的态度寻找分析焚烧厂在现实中对社会和环境产生的影响，对现实中最终有利于废弃物综合管理体系的完善和垃圾处理技术的合理发展起到积极的作用，对人们认识垃圾焚烧处理行业的现状和未来发展趋势有着较强的参考意义。

（四）参与和沟通

项目中，本机构与学术机构和公共利益团队的合作是必不可少的。因为垃圾焚烧项目具有环境和社会外部性，只有环境学科和人文社会学科的研究者共同合作，才能获得全面的认识。在实施过程中，与周边居民的交流，与利益相关者的交流，以及申请信息公开过程中与法律相关人士和媒体的交流都是实现这项研究的关键。

在地的环保机构对本项目工作的支持也使项目得以顺利进行，他们了解风土民情，认同项目所研究的问题，并且能在项目研究者们不在的时候对实地检测样品收集提供协助。反过来，对项目的参与也让本地 NGO 在研究方法方面获得经验，可以应用在未来自身机构的不同项目中。

项目中涉及到环境、健康、政策制定等是非常值得关注的议题，加上学术机构和公共利益团体也积极参与公共活动、研讨会，使不同网络媒体做出了相关报道。

（五）主要经验教训

在项目实施过程中，为了了解周边居民真实的生产和生活状况，研究人员居住在周边居民家中，对环境进行检查，就周边农作物生长受影响程度和居民进行访谈。

由于污染物检测需要中国农业大学的研究人员配合，就如何在有限的经费、资源以及时间的情况下，科学地反映存在的问题，农业大学研究组在与磐石环境与能源研究所项目组商讨后觉得只进行特定污染物的测量，所以决定集中资源把主要问题搞清楚，避免出现什么都想做，却又什么都不精的尴尬状况。

同时，研究过程中的及时调整也是必要的。由于健康问题的研究比较敏感，在调查中也发现村民的态度要么是担忧、要么是过分夸大健康问题与焚烧厂的关联，而且社区诊所也对此事有所顾忌，并不愿意多评论。有鉴于此，RREI 及时调整方案，并没有把健康问题的流行病学调查作为这次研究的重点，而是更关注对焚烧厂环境的改变进行观测，根据结果以及现有科学和医学证据来推测可能潜在的健康风险。

项目希望结合能源政策的合理性分析，并提出对垃圾焚烧项目成功申请 CDM 项目的质疑，这需要不同学科领域和背景机构的人员，但由于目标明确且协调得力，项目最后取得的结果是让人鼓舞的，并使下一步的行动及研究更加脉络清晰。

项目在申请环境信息公开遇到了困难。当要求环保相关部门提供垃圾焚烧发电厂环评报告全本，垃圾焚烧发电厂气体排放检测报告和产生的飞灰和炉渣处理报告时，结果都是拒绝公开完整而透明的信息。

（六）可持续性和未来计划

项目的研究结论取得了一定的社会影响。本项目研究团队把研究机构、民间环保组织或社会行动者的工作结合起来，并利用申请信息公开和国际气候变化会议来拓展所传达信息的影响范围。

这种针对一个垃圾焚烧案例进行社会调查和环境监测，并利用申请信息公开促动政策干预的模式，可以在很大程度上被复制。可能比较大的困难是环境监测环节常常会有较昂贵的投入，这对 NGO 是一个显著挑战。

联系方式

磐石环境与能源研究所（REEI）

办公地址：北京市顺义区后沙峪中景江山赋 1 号楼 524-2 室

联系人：林佳乔

联系电话：86-10-61438032

电子邮件：linjiaqiao@reei.org.cn

网站： www.reei.org.cn

REEI - The Luodai Municipal Solid Waste Incineration Case in Chengdu

1. About Rock Environmental & Energy Institute (REEI)

Rock Environmental & Energy Institute (REEI) aims to provide research support to NGOs and corporations. It focuses on such environmental and energy issues as climate change, energy transformation, air pollution, the carbon market, and municipal solid waste (MSW) management. Its mission is to be an independent think-tank in pursuit of justice and sustainability. REEI was established in July 2012. Up to now it has completed the following projects: The Environmental, Health and Social Impact of MSW Incineration Plants; Reflecting on the Justification of Feed-in-tariff Renewable Power Policy for Waste-to-energy Incinerators; The Role of Renewable Energy and Energy Efficiency in Reducing the Dominance of Coal Power and Hydropower in the Energy Mix: the Case of China South Grid Power; and Scenario Analysis of Carbon Emissions from the Coal Industry in Five Chinese Northwest Provinces between 2011 – 2020, among others.

REEI is located at Shunyi, Beijing and consists of three full-time researchers, one part-time researcher and one intern.

2. The Luodai Municipal Solid Waste Incineration Case in Chengdu

2.1 Background

China's accelerated urbanisation and industrialisation has brought about an enormous growth in the amount of MSW produced in the past few decades. Currently 80 to 90 percent of solid waste goes to landfill, 10 to 18 percent is incinerated, and the remainder is dumped or used for composting. The World Bank predicts that by 2030, China will produce more than twice the amount of MSW than the United States. Waste incineration is becoming the major future direction for China's garbage disposal.

The operation and management of "modern" Chinese incinerators are not as good as government departments and developers describe. These incinerators' energy consumption, operating conditions, flue gas purification and ash treatment and the lack of public participation are serious causes for concern. Government and manufacturers have chosen to ignore or gloss over the obvious danger to environment safety and public health. In addition, incineration plants receive central government subsidies under the Waste to Treasure project and some receive carbon reduction benefits under the UN Clean Development Mechanism (CDM).

2.2 Project execution

This project has taken the Luodai MSW incineration plant in Chengdu as its case study. Using both field research

and desktop study, REEI investigates existing and potential impacts on the local environment and public health. This project was carried out by way of interviews with local residents living close to the incinerator; conducting scientific tests on levels of ambient pollutants; and applying for formal environmental data and information from the Environmental Protection Bureau. As a result, it was discovered that the incineration plant posed considerable risk to the environment of the neighbouring communities, as well as to the health of the general population. Incinerator workers and people living nearby were at particularly high risk of exposure to pollutants.

Chengdu Luodai MSW incineration

REEI's research suggests that the CDM and the Chinese Certified Emission Reduction (CCER) should cancel its provision of carbon benefits to this project category and ban waste-to-energy incineration projects, such as the Chengdu Luodai Incinerator, from benefitting from carbon offsets. This subsidy has skewed the waste management system, deterring waste reduction, waste separation and recycling; while actually encouraging the expansion of incinerators all over China in the pursuit of this unsustainable waste management model.

Surveying people living in communities near the incinerators about the impact of waste incineration on the surrounding environment

In newer incinerators, air pollution control devices such as air filters capture and concentrate some of the pollutants, but they do not eliminate them. The captured pollutants are turned into by-products, such as fly ash, slag, and waste water treatment sludge which are then released into the environment. However, even modern pollution control devices are unable to prevent the escape of many hazardous emissions. Due to the low energy of waste, incinerators are only able to create small amounts of energy while destroying large amounts of reusable materials, while also posing a serious threat to the environment and public health.

The major stakeholders in REEI's research were the government's waste management and environmental monitoring departments, incinerator managers, incinerator workers, and local people. Governments agencies and incinerator managers were generally unwilling to communicate with REEI, which made it impossible to have full access to environmental data regarding the incinerator. The organisation was therefore reliant on people who lived in communities near the incinerator to talk about their experiences of living nearby.

REEI cooperated with research institutes, NGOs, and local environmental groups throughout the duration of this project. They provided scientific data about local ambient pollutants, the legal procedure to apply for complete data, and the impact on the local environment. Building a cooperative network was the key to gaining support from different parties and expanding its influence.

2.3 Project successes and highlights

During its research, REEI's goal was to present a picture of the situation from different perspectives. Basic knowledge of incinerators and risk management was provided from the residents living near the incinerator; NGOs and local environmental groups were contacted for information about incinerators operating with disregard for environmental procedure and how to make a legal application for information transparency; and with the help of research institutes and universities, a seasonal analysis of pollutants was conducted and their impact on public health studied. REEI submitted its case to an NGO publication during the 2013 COP19 climate change conference.

REEI made the argument that providing renewable electricity subsidies to waste-to-energy incinerators was not a rational policy option. Although the argument has not resulted in any policy changes, the organisation's findings will be revealed during a series of workshops.

One of the organisation's approaches was to understand the local situation, and live alongside local residents for a time while carrying out pollutant testing experiments in the neighborhood. With a limited budget and resources for these experiments, the organisation focused on the most important factors affecting the environment and public health, and carried out their experiments accordingly.

Making a causal connection between environmental pollutants produced by the incinerator and problems with people's health was complicated, so REEI decided to focus its energy on monitoring the local environment, rather than the public health aspect.

2.4 Participation and communication

Building partnerships and carrying out frequent communication with stakeholders was essential to REEI's research. The organisation worked well with the collaborating research institutes, NGOs and local environmental groups. The project aimed to analyse both environmental and social aspects of the incinerator, which meant that it was important to incorporate environmental science and social science aspects to the research, to allow a balanced overview of the incineration plant.

This project combines issues including the environment, public health and policy-making. This made it relevant to the public, whose engagement was sought by way of different channels including conferences, workshops, and media coverage.

2.5 Lessons learned

By combining the different research projects: Environmental, Health and Social Impacts of MSW Incineration Plants and Reflecting on the Justification of Feed-in-tariff Renewable Power Policy for Waste-to-energy Incinerators, REEI's project provides insight into renewable energy policy-making and the irrational application of CDM projects regarding incineration.

REEI worked alongside local NGOs who are familiar with local people and culture, and assisted in acquiring

information and conducting surveys on its behalf. In return, they benefitted through learning researching approaches and gaining hands-on experience of working on a complex real-life case study.

So far, it has been difficult to engage with government officials and incinerator managers on this topic. Environmental NGOs and government often see eye to eye regarding environmental issues; the current challenge is that both central and local government is far from transparent with its information.

2.6 Outlook

There have been individual cases of good cooperation between environmental NGOs and the government, but these cases have not become normal practice. It is therefore necessary to develop these cases into normal established practice.

To this end, environmental NGOs, the public, research institutes and the government must work together. Environmental NGOs and the public should provide academics with successful case studies, which they can study and analyse, before proposing new policies to make this good practice customary. Finally, the government needs to adopt and implement these recommended policies.

Contact

Rock Environmental & Energy Institute (REEI)

Address: Rm 524-2, No.1 Zhongjing Jiangshanfu, Houshayu, Shunyi district, Beijing

Tel: 86-10-61438032

Contact: Lin Jiaqiao

Email: linjiaqiao@reei.org.cn

Website:www.reei.org.cn

成都根与芽—低碳可持续社区建设案例

一、机构简介

成都根与芽环境文化交流中心于 2008 年 4 月正式在成都市民政局注册，其前身为 2003 年北京根与芽在成都设立的西南地区办公室。曾经在彭州市龙门山开展自然保护区周边居民“自豪”环境教育项目，512 地震灾后重建“新家园”计划。2011 年机构根据自身发展，结合实际制定出新的发展规划，并将工作范围聚焦到环境教育，生态可持续社区发展建设，建设四川地区草根环保组织支持网络这三方面，旨在通过开展环境教育和各种环境保护项目，促进公众关注并参与生态环境保护，推动社会可持续发展。

成都根与芽环境文化交流中心的愿景是期望通过环境行动教育，引导公众关心、参与社区环境公共事务，共建共享资源安全和环境健康的生态文明社会。

二、低碳可持续社区建设案例

（一）项目背景

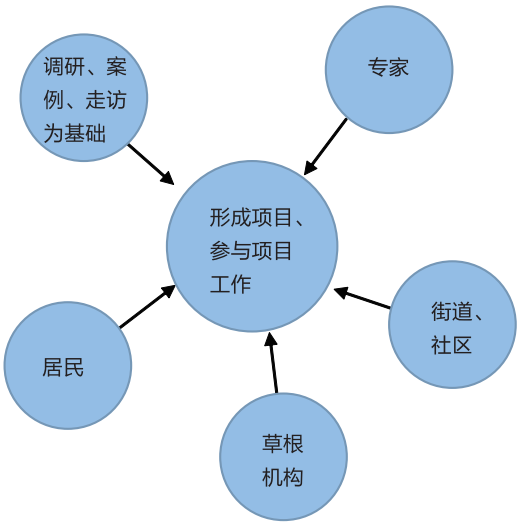
成都市政府于 2009 年提出“世界现代田园城市”的发展目标。“十二五”规划中，成都市政府将生态建设和环境保护列入五年目标。但同时，2010 年初成都垃圾二期填埋场告急，每天超过 5000 吨城市生活垃圾被运出城市，美丽的天府之国有被垃圾围城的危害；为维护人工景观效果，城市小区高耗能现象和过度使用农药现象严重；城市人越来越远离真正的自然生态环境，导致和自然的情感联系越来越淡漠。

成都根与芽认为，没有公众的共同参与是无法根本解决环境问题的。而现状却是部分公众意识到了环境问题带来的影响，然而忙于生活，或者苦于没有参与途径；还有相当一部分居民没有意识到或者忽略了自己的日常生活对环境造成的伤害，也没有意识到自己的行为可以改善环境问题。

（二）项目实施

成都根与芽计划推动公众参与环境运动和生态社区建设，选择了位于成都市锦江区河滨社区的望江嘉苑小区开展生态社区建设项目。该小区是城市较典型的物业管理小区，楼盘较新（2001 年建成），总户数为 999 户，常住人口大约为 3000 人左右。居民多为中青年社会中坚力量，主要职业为高校教师、政府公务部门工作人员等，经济收入和受教育程度相对较高，也是资源和物品主要消费群体。

经过对小区的走访和调查发现小区物业管理公司和业主委员会关系和谐，对生态小区建设有很高的兴趣，部分业主带着孩子曾经参与过根与芽办公室的环境教育活动，因此根与芽在此开展工作具备较好的群众基础。小区物业管理公司和业主委员会一致同意在小区内实施此项目，经过讨论将项目命名为“嘉好田园——望江嘉苑生态社区建设行动”。



通过本项目：

◎ 小区开辟公共农圃 60 平方米，家庭种植超过 110 户；修建成都第一个小区雨水收集灌溉装置，浇灌小区公共农圃。

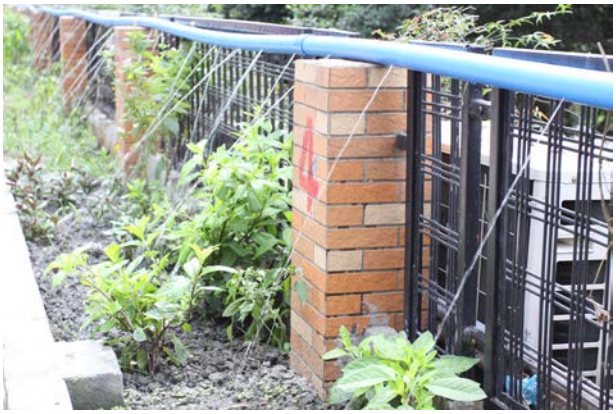
◎ 推动居民进行节水活动，在半年中节水达 3200 吨。

◎ 开设小区“肥料工厂”（厨余堆肥）一个，引导居民将厨余垃圾制作成肥料。

◎ 增设小区厨余垃圾专用桶，推动 600 多户居民参与垃圾减量及分类实践，回收软饮料包装盒 10000 个、废旧电池 1000 个，小区垃圾平均每月减量 1.5 吨，干垃圾回收量达到 10000KG（2012 年 8 月到 2013 年 4 月）并实现资源循环利用。

◎ 进行环保手工、环保观影、小区认知等环保活动，带动小区青少年及其家庭参加。

◎ 组织居民参加跨社区的交流活动 5 次，提高了小区居民的环保意识和行动力。



小区灌溉装置

小区种植户余伯伯自己种的冬瓜

小区雨水收集装置

（三）项目的成功及亮点

整个项目以基于社区需求和特点的环保行动为出发点，用数据案例做支撑，协调社会资源及项目参与方共同策划设计而成；充分考虑社区条件，将有关低碳可持续社区建设的理念和工作内容拆分，结合居民的生活习惯和社区背景、条件，用受益方易于接受和参与的方式由难到易构建开展社区建设工作的框架及实施计划；项目设计过程中，将如何培养社区积极分子成为项目可持续运作的主要力量作为项目核心目标之一，项目工作都尽量会回归到社区自身，让“人”的成长伴随低碳可持续社区建设过程。

项目影响该小区住户达 60% 以上。望江嘉苑先后 5 次接受到来自社区、街道、区、市级、省级领导的视察，得到各方的肯定，使该小区成都市人居活动生态小区、龙舟路生态社区教育示范基地，协助社区参与省级生态小区的评选，协助小区获得“成都市五星级住宅小区”的称号。

（四）参与和沟通

街道办及社区层面组建多方参与的项目工作组及常态沟通机制，保证项目顺利进行。

（五）主要经验教训

在此之前，四川没有一个可供学习借鉴的城市低碳可持续社区的成功案例，只能由机构不断的在实践试错的过程中获取经验教训，慢慢总结出一套在城市社区开展低碳可持续社区的思路和方法。

项目组建由街道、居委会、社区积极分子及机构形成的工作小组，形成项目统筹协调平台；发展有居民参与的项目小组，具体开展各个小区的活动。在项目操作层面，所有工作基于社区需求、条件、特点和居民习惯、喜好进行，用社区自身力量开展工作。

但同时，社区培育需花费大量时间和精力达成一致的意见并落实行动、养成习惯，可能会影响项目进度。

（六）可持续性和未来

2013 年，第一期项目结束后总结项目的成功和失败经验，提取后续可有效操作的内容和工作方法；并且在项目过程中，主动邀请并接待来自其它社区、地区、行业、媒体及政府层面的参访交流活动，加强项目的宣传力度。成都根与芽将继续撬动社会资源，启动第二期工作，目前已得到来自区环保局部分资金的支持。

联系方式

成都根与芽环境文化交流中心

办公地址：成都市武侯区科华北路 151 号
棕南苑 A6B1

联系人：魏蔚

联系电话：86-28-85136383

电子邮件：weiwei@cdgyy.org

网站： www.cdgyy.org

Roots & Shoots Chengdu - Building a Low-Carbon & Sustainable Community

1. Introduction of Roots and Shoots (R&S) Chengdu

Through environmental education, R&S hopes to encourage an increasing number of community residents to be concerned and get involved in environment matters. The organisation's goal is to establish and share an ecological civilised society with resource security and a healthy environment, and to encourage and facilitate communities to have an active role in bringing this about. In 2003 R&S set up a project called Pride Campaign which started in Longmenshan, Pengzhou and later in Chengdu, where it set up an office. In 2008 the R&S Chengdu office registered with the Chengdu Bureau of Civil Affairs and the New Family project was launched following the Sichuan earthquake that May. Since 2011 the organisation's development and other external conditions have allowed R&S Chengdu to follow a new path, focusing on three main areas: environmental education for young people, ecologically sustainable community-building, and providing a support network for grassroots groups.

In 2011 R&S Chengdu launched Celebration of the Countryside, a pilot scheme to establish an eco-community at Hebin, Jinjiang district. This pilot lasted for a year and a half and included environmental education for young people and lectures on environmental protection for older residents, the establishment of a public allotment, and information for residents on how to sort their rubbish into dry and wet waste. During the project period, the residents of Wangjia Jiayuan community were offered various schemes to help them to establish an eco-community. 80 percent of the 999 community households participated. In October 2012 the community was designated a Residential Eco-community by the Chengdu's Environment Protection Bureau.

This pilot project was completed in April 2013 and a scaled-up second project was approved by the sponsor, Vantone Foundation, with support from the Jinjiang District Environmental Protection Bureau. This second project has been expanded to include five communities and further communities have since asked to join the scheme.

2. Low-carbon sustainable community project

2.1 Background

In 2009 Chengdu city government put forward the development goal of creating a "modern garden city of the world". Among the goals listed for its 12th five-year plan, Chengdu city government included ecological construction and environmental protection. However in early 2010, Chengdu was experiencing a landfill crisis; more than 4,500 tonnes of household rubbish being removed from the city each day. To maintain this artificial "garden city" landscape involved energy-intensive

practices and the excessive use of pesticides within these city communities. City dwellers were becoming more removed from the natural world and experiencing further emotional disconnect with nature.

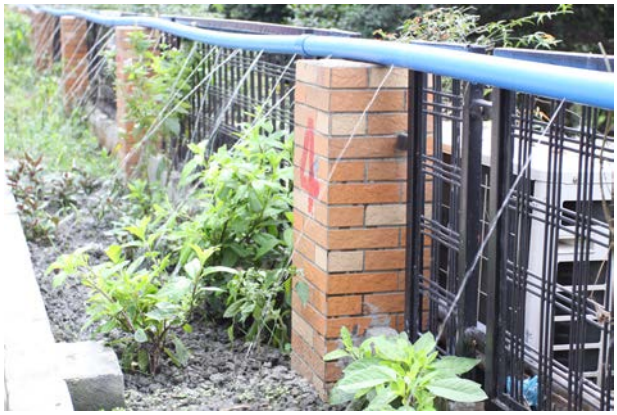
2.2 Project execution

The aim of the project was to promote low-carbon sustainable community-building through community-based education about environmental-friendly practice, while encouraging the public to get involved in exploring and promoting the low-carbon sustainable community concept. This project involved working closely with the Chengdu Environmental Protection Bureau, the Urban Management Bureau, the Jinjiang District Government, the House-owners' Committee, property management companies, experts, volunteers and community-based NGOs. Through this collaboration, R&S Chengdu was able to encourage community members to take part in the design, management and supervision of an eco-community, helping to develop environment-friendly habits in the daily lives of its residents. The project, which started with organic growing, consisted of various engaging environment protection activities and techniques which have taught an increasing number of people to work together to keep their community ecologically healthy and beautiful.

Social groups and project participants worked together to design this project. The environmental protection activities were tailored to community requirements, and based on data collected for the area. R&S took the situation of the community into account. To make target audience more willing to accept and take part in the project, its broke down the project ideas, and implemented the plan in stages. One of the main aims of the project was to foster community members who would take on active roles in the project and to be the main force of developing a sustainable operation. To this end, R&S put this project in the hands of the community. By

Eco-community rainwater collection device

A wax gourd grown by Mr Yu from the eco-community



Eco-community irrigation device

managing the project themselves, these people became increasingly familiar with the concept of a low-carbon sustainable community and theirs was developing.

2.3 Project successes and highlights

60 percent of the community households have been influenced by the first phase of this project. A 60 square meter public allotment was created, and more than 110 households have taken part in growing vegetables for household use. Chengdu's first community rainwater collecting and irrigation device was set up to irrigate this public allotment, saving around 3,000 tonnes of water in just six months. A fertilizer works (kitchen waste composting) was set up and a kitchen waste receptacle stationed in the neighbourhood to encourage residents to compost their waste and reduce landfill by sorting waste. By doing this 10,000 soft drink packs and 1,000 used batteries have been collected, reducing waste to landfill by up to 1.36 tonnes per month. Between August 2012 and April 2013, 10,000 kilograms of dry waste was collected. R&S organised green handiworks activities, showed environmental films, and hosted community awareness-raising and community exchange activities. All these activities helped improve the residents' awareness and provided them with practical skills to protect their environment. Wangjian Jiayuan eco-community has been visited by a number of community, sub-district, district, city and provincial leaders, who have designated it a Chengdu Residential Eco-community and Longzhou Road as an Eco-community Education and Demonstration Base. It was selected as a Provincial-level Residential Eco-community and rated as one of Chengdu's five-star residential compounds.

To meet the needs of the community, R&S has worked mainly with residents from the community itself, who have volunteered their services, saving the organisation labour costs. Further money was saved by using waste material to build and improve community facilities.

R&S assisted the community by providing it with outside resources, enriching the community management's ideas about ecological living and low-carbon sustainable development. It brought about a change in their mindsets and the way they work. It also assisted by providing the community residents with environmental education. R&S have been collecting data and carrying out case studies analysis, which has been used to compile a project manual to help communities with their low-carbon efforts. Community members who were interested in taking a more active role in the project were trained, and an autonomous group have been established to continue developing the project.

2.4 Participation and communication

An effective communication system was established which ensured the smooth implementation of the project. There was excellent communication between members of the project team as well as with all related parties. The organisation made use of traditional information channels, like community bulletin boards, posters, stand-up banners and community newspapers; as well as new media channels, such as the social media platforms Weibo and Wechat. There were activities such as community lessons and sharing salons, open to the public and media.

2.5 Lessons learned

Task groups were formed from active members of the communities and sub-districts and a platform created from which the project could be coordinated. Residents were encouraged to participate in the task groups and get involved in community activities. All project work was

tailored to the basic requirements of the communities, and the situations and habits of the residents taken into account. The work itself was carried out by the community as a whole. This has been the first low-carbon sustainable community to be established in Sichuan. The project has gained experience from its trial-and-error approach and has produced a summary of the methods and principles used to establish such a community. Cultivating the eco-community was time consuming; it took a long time before an agreement was reached and actions implemented, and more time and effort for the residents' lifestyle changes to become habitual.

2.6 Outlook

After analysing what had been effective during this first project, the R&S project group has produced a summary of the lessons learned, which it has used to develop effective working methods. R&S invited residents from other regions and communities, the media, and government officers to visit the project, interact with the residents and project workers and expand the project's popularity. Due to all the positive feedback from the first phase of the project, the Street Office has given funding so that the second phase can go ahead.

Contact

Roots & Shoots Chengdu

Address: A-6-B1, No. 151 Kehua North Road,
Wuhou Distrct, Chengdu, China

Tel: 86-28-85136383

Contact: Wei Wei

Email: weiwei@cdgyy.org

Website: www.cdgyy.org

世界自然基金会—低碳城市发展

一、机构简介

世界自然基金会（WWF）是在全球享有盛誉的独立性非政府环境保护组织之一。WWF 于 1961 年成立，总部位于瑞士格朗，在全世界超过 80 国家有办公室、拥有 2500 名全职员工，并有超过 500 万名志愿者。

WWF 在中国的工作始于 1980 年的大熊猫及其栖息地的保护，是第一个受中国政府邀请来华开展保护工作的国际非政府组织。1996 年，WWF 正式成立北京办事处，此后陆续在全国九个城市建立了办公室。至今，WWF 在中国共资助开展了 100 多个重大项目，投入总额超过 3 亿元人民币。

WWF 致力于保护世界生物多样性及生物的生存环境，所有的努力都是在减少人类对这些生物及其生存环境的影响。WWF 的使命是遏止地球自然环境的恶化，创造人类与自然和谐相处的美好未来。WWF 致力于：

◎ 保护世界生物多样性

◎ 确保可再生自然资源的可持续利用

◎ 推动降低污染和减少浪费性消费的行动

二、低碳城市发展项目

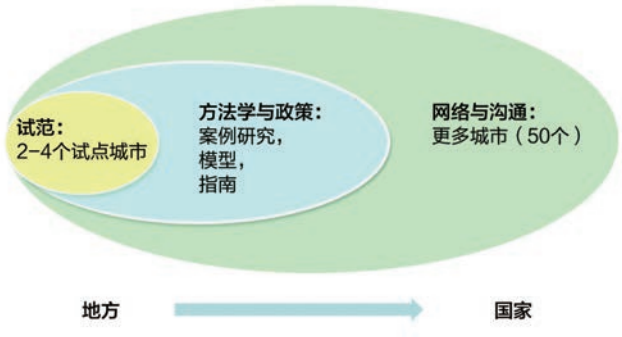
（一）项目背景

当今世界仍然延续着工业革命以来的城市化进程，城市人口越来越多、规模越来越大，必然导致能源消耗迅猛增长，温室气体排放急剧上升。当前，城市消耗着世界 60% ~ 80% 的能源和排放大致相应比例的 CO2。此种现状也决定了城市在应对气候变化中需承担的巨大责任，决定了要取得了令人满意的进展就必须把城市有效整合进来，让应对气候变化相关资金、技术、政策以及社会意识等在城市层面上得到全面有效的应用。

在中国城市的排放里，工业排放往往占据了最大一块，建筑和交通虽然总比例不是很高，但增长迅猛。因此，在中国城市的低碳努力中工业领域的贡献要比发达国家城市重要的多。建筑和交通领域的目标则是低碳基础设施，以及倡导低碳的生活方式，避免走向高碳和在不远的将来用更高的成本去降低碳排放。

（二）项目实施

自 2007 年开始，WWF 气候与能源项目在中国开始了低碳城市发展的探索，并于 2008 年初正式宣布了将保定市和上海市作为低碳城市发展项目的试点城市。在当前中国城市化发展不断加速和能源消耗快速增加的背景下，WWF 低碳城市项目致力于探索在保持经济发展的同时，摸索不同发展阶段的城市如何有效实现低碳转型。在城市化进程中减少碳排放的同时，过程中所带来的“碳锁定”效应。



低碳城市项目 5 年战略规划（2011 - 2015）

借鉴国内外对低碳城市发展的研究和实践，尤其是结合中国城市发展的特点，WWF 提出了低碳城市“六步走”的路径：

（1）编制温室气体排放清单，了解清楚城市目前的碳排放状况。了解当前碳排放量、主要排放源和减排潜力对指导低碳规划和行动至关重要。如果能够了解清楚城市过去若干年的碳排放状况，则可更清晰地分析出城市碳排放与社会经济发展之间的关系及发展趋势。

（2）研究城市未来中长期的碳排放情景。在掌握城市的碳排放状况后，基于城市未来的经济社会发展趋势和目标，对未来中长期的碳排放情景进行分析是设定减碳目标、编制低碳发展规划的基础。

（3）设定量化的减碳目标。设定减碳目标一方面要量力而行，充分考虑城市的发展阶段、资源禀赋、排放构成、发展定位等，以及为了展示城市形象的领先性。

（4）编制城市的低碳发展规划。规划应该包括建筑、交通、产业、能源等主要领域，以及政府引导、金融政策、公众企业等相关方参与。编制城市低碳发展规划应考虑与城市现行经济社会发展规划及各专项规划之间的协调，并通过合理途径确保核心目标、措施的法律地位与可操作性。

（5）实施低碳发展规划。实施应由城市宏观经济管理部门牵头，协调各专业管理部门，充分调动企业及公众的积极性，通过制度建设、资金支持、科技支撑、舆论倡导全面加以推进。

（6）监测和评估减碳效果。有利于及时修订和完善低碳发展规划，确保目标的实现。

在过去六年多的时间里，WWF 和合作伙伴一起，在低碳城市发展相关的政策研究、试点示范、能力建设、宣传倡导和国际经验交流等方面开展了多项工作。

在 WWF 网络的支持下，低碳城市发展项目与国家发改委能源研究所、住房与城乡建设部科技发展促进中心、中国社会科学院城市发展与环境研究所、中国建筑科学研究院、中国可再生能源协会、同济大学、复旦大学和中国浦东干部学院等研究机构共同开展了相关研究。

在保定，WWF 从供应侧着手，着眼于可再生能源产业发展契机，和城市一同致力于探索以提供低碳解决方案为特点的低碳发展模式。在上海，WWF 从需求侧入手，聚焦于交通和建筑部门的节能和能效提升，致力于探索通过减少能源消耗来降低城市碳排放的模式。同时在试点城市开展了诸多公众参与和能力建设活动。

中航惠腾风电设备

太阳能光伏道路在保定被广泛应用

2010 年保定低碳示范社区 - 新世纪花园

WWF 也在推动国内外城市之间的低碳发展实践经验和解决方案方面开展了持续的努力。在 WWF 的组织下，保定市政府，湖南省发改委等合作伙伴先后于 2009 年和 2013 年前往瑞典、法国、荷兰等国家开展了低碳城市交流，城市之间通过交流逐步开展了相关低碳技术和项目合作。在 WWF 的推动下，保定市于 2012 年 4 月与丹麦森讷堡市缔结为友好城市。2013 年 11 月，WWF 与国家发改委气候司战略处，世界资源研究所和万科共同合作，在联合国气候变化华沙会议（COP19）成功举行了“低碳城市发展 . 低碳生活”边会，获得了与会代表的肯定。

（三）项目的成功及亮点

WWF 先后完成和发布了低碳城市发展策略与方法，低碳建筑和社区导则，低碳交通导则，城市废弃物低碳管理导则等相关研究成果。同时，开发了适用于中国城市的温室气体核算工具和城市低碳发展评价体系。以上低碳城市政策和导则相关研究成果已经在多个城市开展了应用。

WWF 和试点城市合作伙伴协同合作，在探索城市低碳发展解决方案方面开展了持续的实践探索。自 2007 年到 2010 年期间，保定市的太阳能光伏产业每年都以 70% 的速度增长，成为国际可再生能源产业重要的产品生产基地。位于保定的英利太阳能也在 2013 年 1 月成为 WWF 在中国的首家碳减排先锋。

在 WWF 的支持下，保定市政府制定了保定市低碳发展规划，保定市低碳社区和建筑行业减排规划，保定市五年温室气体排放清单，并建立了碳排放管理和监测体系等。在此期间，保定市 2010 年成为第一个公布其 2020 减排目标的城市，也于 2010 年和 2011 年先后被国家发改委和交通部门别纳入国家低碳省区和低碳交通首批试点城市。

WWF 与合作伙伴一起，发布了上海市低碳发展路线图，参与了上海公共建筑能效监测体系和上海科学节能展示馆的相关建设。2010 年世博会期间，WWF 也一同参与了低碳世博的宣传活动。作为推动城市建设和节能减排的重要机制，WWF 也在上海市开展了低碳金融相关机制的研究与合作。2013 年 3 月，在上海市政府的支持下，WWF 地球一小时“绿 V 客”活动获得广泛支持。

（四）参与和沟通

WWF 的低碳城市发展项目注重与合作伙伴在理念上保持一致，共同参与和推动。尤其是在试点城市低碳发展推动中，WWF 与地方政府主管部门，专家团队和本地项目执行机构保持定期和充分的沟通，在沟通中识别，界定和实现切实可行的城市低碳发展目标。WWF 与合作伙伴定期举办面向政府相关部门和企业管理者的能力建设培训，促进利益相关方的意识和能力提升，并以低碳社区，低碳沙龙等社区参与活动和“地球一小时”公众宣传活动推动公众的参与。

（五）主要经验教训

在推动城市低碳发展的合作中，一个切实可行的低碳目标是指导城市低碳发展的关键因素。而合理和进取的减碳目标约束下的城市低碳发展将具有更好的经济性和可推广性。

（六）可持续性和未来

经过六年多的探索，自 2013 年开始 WWF 低碳城市发展项目开始由模式探索的阶段转变为推动减排实践阶段。下一阶段，WWF 将与城市一起，共同探索如何引入适用的工具和方法，帮助城市了解自身的碳排放状况，找出城市节能减排的潜力和关键节点；并借鉴国内外成熟的技术，机制和综合解决方案，帮助城市有效实现低碳经济的转型。

联系方式

世界自然基金会（WWF）

办公地址：北京市东城区劳动人民文化宫东门内
文华宫 1609 室

联系人 : 冯金磊

联系电话：86-10-65116240

电子邮件：jlfeng@wwfchina.org

网站： www.wwfchina.org

WWF - Low Carbon City Initiative

1. About WWF

WWF (World Wide Fund for Nature) is one of the world's largest independent organisations dedicated to the conservation of nature. Since the first office was founded in Switzerland in 1961, WWF has grown into a global network active in more than 100 countries with almost five million supporters.

WWF has been active in China since 1980, when it was invited by the Chinese government as the first international NGO to work on nature conservation. The Beijing office opened in 1996, and there are now nine additional field programme offices spread across China.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

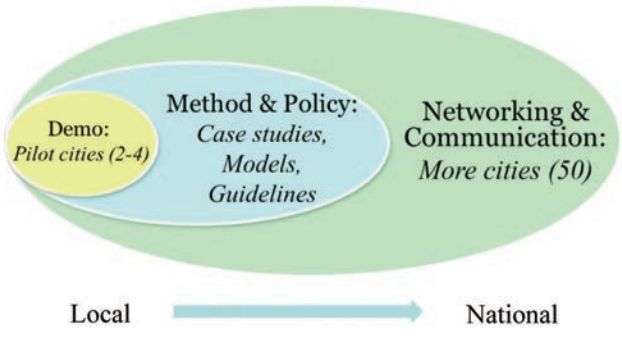
- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption.

2. Low Carbon City Initiative project

2.1 Background

Since the industrial revolution, the world has been in a state of accelerated urbanisation, characterised by increasingly large urban populations and expanding cities. This has led to increased energy consumption and greenhouse gas emissions. Nowadays more than half the world's population live in urban areas and this is only increasing. Urban dwellers account for 60 to 80 percent of the worlds' energy consumption and carbon dioxide emissions. Cities play the significant role in greenhouse gas emissions which means that they need to shoulder most of the responsibility in dealing with climate change. In order to achieve a noticeable impact, cities need to be brought together effectively to allow the effective and comprehensive application of climate-change related finance, technology, policy and public awareness.

In Chinese cities, the industrial sector is responsible for the vast majority of emissions, which means that



5-Year Strategic Plan for LCCI

industrialising cities need more to be addressed more urgently than developed cities. The construction and transportation sectors need to establish the infrastructure for these cities to meet with the rapid rate of urbanisation. At the same time, a low-carbon lifestyle needs to be promoted, to avoid the huge costs of being locked into a high carbon development path.

2.2 Project execution

Since 2007, as part of Climate and Energy Programme, WWF China has undertaken a Low Carbon City Initiative (LCCI) and announced Baoding (Hebei Province) and Shanghai as its pilot cities. With China's rapid urbanisation and energy consumption, LCCI is working to explore effective low-carbon development models for different types of city, while allowing the economy to develop. This work aims to reduce carbon emission and prevent carbon lock-in.

WWF believes that the development of low-carbon cities should enable fast economic development alongside low-level energy consumption and carbon dioxide emissions. Drawing on experience from both domestic and foreign studies and development practices on low carbon cities, and taking into special consideration the characteristics of urban development in China, WWF have proposed the following steps when building low carbon cities:

(1) Establishing a greenhouse gas inventory and analysing the current situation of urban carbon emission. Understanding current carbon emissions, main emission sources and emission abatement potential is important for creating a low-carbon plan and taking action. The relationship and development trends of a city's carbon emissions and social economic development can only be determined if its carbon emissions over the past years are published and understood.

(2) Predicting middle and long term future carbon emissions scenarios. After understanding the current urban carbon emissions situation, middle and long term future carbon emissions scenarios need to be predicted and analysed. These are based on economic and social development trends and objectives, and provide the basis for setting up carbon emission abatement goals and low-carbon development planning.

(3) Setting a quantitative target on carbon reduction. The carbon abatement goal should be realistic and obtainable, and full consideration should be given to the stage of development the city in question has reached, as well as its resources endowments, emission composition, developmental orientation, and the general national goal. This goal should also give the city a sense of leadership and an opportunity to display its strengths.

(4) Establishing a low-carbon development plan. This should include major fields such as: construction, transportation, industry and energy, as well as governmental initiatives, financial policies, and public and corporate participation. The low-carbon development plan should be in line with current economic and social plans for development, as well as sub-plans, to ensure that the core objectives can be realised in a legitimate and feasible way.

(5) Implementing the low carbon development plan. This should be organised by local departments responsible for macroeconomic management, who coordinate agencies, and are able to mobilise both enterprise and general public. The plan should be carried out in a comprehensive way by establishing a system which provides financial and technological support and molds public opinion.

(6) Evaluating and monitoring results. The level of carbon abatement a city has achieved will provide guidance to how the low-carbon development plan should be revised

and improved to ensure the city reaches its goal.

With support from the WWF network, LCCI has partnered with the National Development and Reform Commission (NDRC)'s Energy Research Institute; the Ministry of Housing and Urban-Rural Development Science and Technology Development Centre; Chinese Academy of Social Sciences' Institute of Urban Development and Environment; the Chinese Academy of Building Research; the China Renewable Energy Association; Tongji University; Fudan University; and Pudong's China Executive Leadership Academy among other research institutions, in order to carry out related research. Implementing the pilot projects involved the municipal departments of Shanghai and Baoding who could make specific suggestions for the formulation of low-carbon policy and development models. Public engagement and capacity-building activities were also held in pilot cities.

The windpower equipment of Avic Huiteng

Solar photovoltaic roads are widely used in Baoding

Baoding low carbon demonstration community in 2010-The new century garden

2.3 Project successes and hightlights

Over the past six years, WWF has implemented several projects alongside its partners related to policy research, pilot plans, capacity building, public engagement and the exchange of international knowledge. To assist those involved in policy-making and guideline research, WWF has published reports on Low Carbon Cities: Why and How, Guidelines for Low Carbon Community-building, Guidelines for Low Carbon Transport and Guidelines for Urban Waste Management and Low-Carbon Development. WWF has developed a greenhouse gas accounting tool for Chinese cities and low-carbon city index guidelines, which have been adopted in several cities.

WWF is working with city-level management to explore low-carbon development solutions. In Baoding the organisation started from supply, focusing on the renewable energy industry to work out a low-carbon development model to provide low-carbon solutions. Between 2007 and 2010, Baoding's low-

carbon industry grew by over 40 percent annually, and has become a provider of global climate solutions. Yingli Solar, a Baoding-based company, has become WWF's China's first "Climate Saver". With the support of WWF, Baoding Municipal Government developed its own low-carbon development plan, low carbon community and construction industry plan, established a 2005 greenhouse gas inventory, and put in place a management and monitoring system for emission reduction. In 2010 Baoding was the first city in China to announce its 2020 carbon intensity reduction target. Between 2010 and 2011, Baoding was selected as a National Low Carbon Pilot City by NDRC and a National Low Carbon Transport Pilot City by the Ministry Of Transport.

WWF started from the demand side in Shanghai, focusing on improving the energy efficiency of large commercial buildings by establishing an energy auditing system and developing energy efficient building policies. Partnering with local government and institutes, WWF announced its Shanghai Low-Carbon Development Road Map 2050 and carried out preparatory work for an energy efficiency monitoring system and the Shanghai Energy Conservation Exhibition Hall. WWF organised a public campaign at the 2010 Shanghai Expo, entitled Low Carbon Expo. As an important mechanism to promote emission reduction in urban construction, it also implemented green finance projects in Shanghai. In March 2013, Shanghai Municipal Government supported WWF in implementing Earth Hour 2013: Green Week, which was met with wide participation.

WWF continues to promote the exchange of knowledge between Chinese and international cities relating to low-carbon practice, experience and solutions. In 2009 and 2013 WWF organised low-carbon exchange trips and brought partners from Baoding and Hunan to Sweden, France, Netherlands and other European destinations. The low-carbon technological cooperation between these cities was thanks to these initial trips. With WWF's help, Baoding and Sonderborg, Denmark announced their "Twin City" relationship. In November 2013, the parallel event Low-Carbon Cities Driving New Urban Living, co-sponsored by WWF, NDRC, World Resources Institute and Vanke China received high praised at the COP19 climate change conference in Warsaw.

2.4 Participation and Communication

WWF's LCCI emphasises shared understanding and joint promotion. When promoting pilot projects in cities, WWF ensures regular and effective communication with local government, experts and other local implementing partners, so as to identify, define and reach a city's realistic low-carbon development target. Government managers and company leaders are invited regularly for capacity-building sessions to promote awareness. Public campaigns such as low-carbon community activities, low carbon salons and Earth Hour are organised to promote public engagement.

2.5 Lessons Learned

A feasible carbon reduction target is the key factor in guiding the low-carbon development framework of a city, as well as cooperation between cities and NGOs. Reasonable but ambitious carbon reduction target lead to increased economic efficiency and a replicable model.

2.6 Outlook

From 2013, WWF's LCCI evolved from its pilot exploratory stage into its scaled-up project phase. The next step will see WWF working together with more cities,

exploring feasible tools and methodologies, help cities to understand their emission situations, and highlighting the key sectors to target for greenhouse gas emission reduction. Both national and international technologies, mechanisms, and integrated solutions will be used to bridge cities and allow the successful transition to a low-carbon economy.

Contact

WWF (World Wide Fund for Nature)

Address: Room 1609, Wenhua Gong, Beijing Working People's Culture Palace, Beijing

Telephone: 86-10-6511 6240

Contact: Feng Jinlei

Email: jlfeng@wwfchina.org

Website:www.wwfchina.org

SINO-EUROPEAN PARTNERSHIP
ON LOW CARBON AND SUSTAINABLE
URBAN DEVELOPMENT
中欧低碳与可持续城市发展伙伴关系

中华环保联合会
爱有戏
CURA 成都城市河流研究会
环友科技
Global Environmental Institute
创绿中心 GREENOVATION:HUB
绿色浙江
GREENPEACE 绿色和平
REEI Independence and Justice for Sustainability!
CAN SHU ROOTS & SHOOTS
WWF

电子版下载地址 / This report can be downloaded from:

www.low-carbon-partnerships.org

www.cango.org

本手册采用环保纸印制
This publication is printed on environmentally friendly paper.