



中外对话
chinadialogue

促进中国可持续产业的发展

Advancing sustainable business in China



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“中外对话”是一个独立的非营利性组织，以伦敦、北京、德里为中心开展工作。

“中外对话”的主要业务是其独特的完全双语网站，它通过发表精辟、原创的中外文章、评论和分析，促进世界理解中国崛起带来的全球性生态环境影响，进而共同寻求公平可行的全球环境问题解决之道。

“中外对话”“最佳环境报道奖”，与英国卫报共同发起，每年一届，旨在鼓励在环境领域做出杰出报道的中国环境记者。2014年“最佳环境报道奖”，与网易新媒体中心、人民大学环境学院、人民大学新闻学院合作筹办。

About chinadialogue

chinadialogue is an independent, not-for-profit organisation based in London, Beijing and Delhi.

Alongside a bi-monthly journal, *chinadialogue*'s primary vehicle is our website (www.chinadialogue.net), a unique bilingual platform which promotes a global understanding of the environmental impact of China's rise by publishing informed articles, commentaries and analysis by writers from inside and outside of China. We aim to inform, educate, and contribute to building a global consensus on fair and workable solutions.

chinadialogue also organises annual press awards in conjunction with the Guardian, Netease New Media Center and Renmin University's School of Environment and Natural Resources and School of Journalism and Communication..

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伊莎贝尔·希尔顿
中外对话总编辑

简介

气候变化和环境压力给商业带来的威胁日益明显。比如过去两年中，投资者、非政府组织、银行和智库就曾就化石燃料储备作为世界各大石油公司帐面资产的价值，展开了一场激烈争论。

正如国际能源机构指出的，如果世界各国领导人认真对待他们做出的将全球平均气温上升控制在2摄氏度的承诺的话，“到2050年所消耗的化石燃料绝不能超过现有储量的三分之一……除非碳捕捉与封存（CCS）技术得到广泛应用”。用“碳跟踪计划”的话来说，这些石油储量是“不能燃烧的”碳；同时随着按比例缩减煤炭使用量压力的增大，煤炭储量也将处于类似的监督之下，以控制其对空气质量的影响以及减少碳排放。

这些对市场和投资者来说都是至关重要的风险。另外一些压力以各种方式体现出来：资源竞争和资源管理的改善需求；同时给能源和经营带来风险的水短缺；随着各国政府以新规则应对新的限制而带来的未来管理中的偶发事件。配额的可利用性和条件也受到气候风险的制约。


事实表明，产业界迄今还未对气候变化做出应有的反应。最近，致力于产业可持续性的非营利组织CERES就美国产业界发布的一份报告指出，600多家美国主要上市公司（占美国股票市场总市值的四分之三）中，没有几家在气候变化问题上有足够的进展，或者给予这些风险足够重视。

很多层面的商界领袖都明白，投资者、管理者、商业伙伴和客户将会越来越多地从环境角度来评判企业的业绩，这意味着负面影响将处于劣势，而对环境可持续性的积极贡献则会受到鼓励。全球会计巨头毕马威已经算出，2008年由全世界3000家最大的上市公司造成的环境破坏达到惊人的2.15万亿美元。尽管许多美国企业都报告说它们都将进行某种形式的气候管控，并表示它们已经开始将气候变化列入其财务规划，但到目前为止，并没有几家大企业仿效联合利华的做法，后者公开承诺在2010年到2020年之间，实现销售额翻番的同时将气候足迹减半。

中国是世界第二大经济体，也是世界碳排放总量最大的国家，而且还是世界主要的制造业中心，同时还面临着长期存在的环境危机。因此，无论对于避免灾难性气候变化的全球行动，还是对于中国建成习近平主席所说的“生态文明”的自身努力，中国产业界应对可持续性挑战的能力都将具有决定性意义。

中国对于环境危机给未来经济繁荣和人民健康福祉带来的威胁越来越关注，这在中国政府对于环境失责企业的坚决治理中得到了体现。如在冯安琪2013年的报道中，北京市政府关停了200家两高（高污染、高耗能）企业，投资方遭受了严重损失。即使负责任的企业也并非全无风险：比如清洁可靠的供水是企业的基本需求，但中国许多地方已经遭遇了极度的缺水问题；还有一些项目在规划的后期被迫中止，原因是遭到不信任感强烈并且日益活跃的中国公众的反对。在海外同样如此：比如在秘鲁和缅甸，由于对当地公众意见的误判或者没有达到当地环境标准，中国企业严重受挫。

为了在未来能够成功地经营，无论在国外的中国企业还是在中国的外国企业，都必须展示出它们在资源限制内经营的能力，以减少其造成的环境损害，并对此负责。环境治理和负责任的环境行为常常被视为产业的负担，但那些最富创造性和长远眼光的企业的实践证明，限制也可以成为刺激创新的动力，负责任的企业将得到眼光越来越敏锐的客户的青睐和回报。

自从2006年创办以来，中外对话记录了中国环境危机的方方面面，发表了中国国内外分析家、决策者和民间团体的各种真知灼见，以促进知识分享和合作。过去一年中，我们的注意力越来越多地集中在中外产业界在各个层面的行为和影响上，既揭露污染者，也宣传弘扬那些能够带来积极的未来希望的创新模式和最佳实践典范。中国是快速前行的未来实验室，中国和中国产业界的决定将影响我们所有人。在中外对话本期双月杂志特刊上，我们很高兴与您分享一些最新成果，我们将继续对这个至关重要的领域进行报道和分析。 



Isabel Hilton
Editor, chinadialogue

Introduction

The risks that climate change and environmental stresses pose to business are increasingly clear. In the last two years, for instance, an urgent debate has begun among investors, NGOs, banks and think tanks over the value of the fossil fuel reserves that are entered as assets on the books of the world's largest oil firms.

As the International Energy Agency (IEA) has pointed out, if the world's leaders are serious about their commitment to limit the global average temperature rise to two degrees centigrade, "no more than one-third of proven reserves of fossil fuels can be consumed prior to 2050...unless carbon capture and storage (CCS) technology is widely deployed". Those oil reserves become, in the words of the Carbon Tracker Initiative (a non-profit organisation working to align capital markets with climate policy), unburnable carbon; coal reserves are coming under similar scrutiny as pressure grows to scale back coal use, to limit the impact on air quality and, of course, to mitigate carbon emissions.

These are critical risks for the market and for investors. Other pressures come in different forms: resource competition and the need for better resource stewardship; water scarcity that poses a risk both to energy and to business operations, and the contingency of future regulation as governments respond to new constraints with new rules. The availability and the conditions of credit are also being conditioned by climate risks.


So far, the evidence suggests that business is not responding as well as it needs to. A recent report on US business by the not-for-profit organisation CERES, which tracks business sustainability, revealed that of more than 600 major publicly listed US companies – representing three-quarters of the country's total stock market capitalisation – few had made sufficient progress or given the risks sufficient attention.

Business leaders at many levels have understood that investors, regulators, partners and customers will increasingly judge performance in environmental terms – penalising negative impacts and rewarding positive contributions to environmental sustainability. The global accountancy firm KPMG has calculated that the environmental degradation caused by the world's 3,000 largest public companies came to a staggering US\$2.15 trillion in 2008. To date, relatively few major companies have followed the example of Unilever, which publicly committed to double its sales and halve its footprint between 2010 and 2020, though many US companies report that they expect some form of climate regulation to come and they have begun to factor climate change into their financial planning.

Since China is the world's second largest economy, the world's biggest carbon emitter by volume, and the world's principal manufacturing centre, and since China also faces a sustained environmental crisis, the capacity of China's businesses to rise to the challenge of sustainability will be decisive for global efforts to avoid dangerous climate change, and for China's own efforts to become, in the words of President Xi Jinping, an "ecological civilisation".

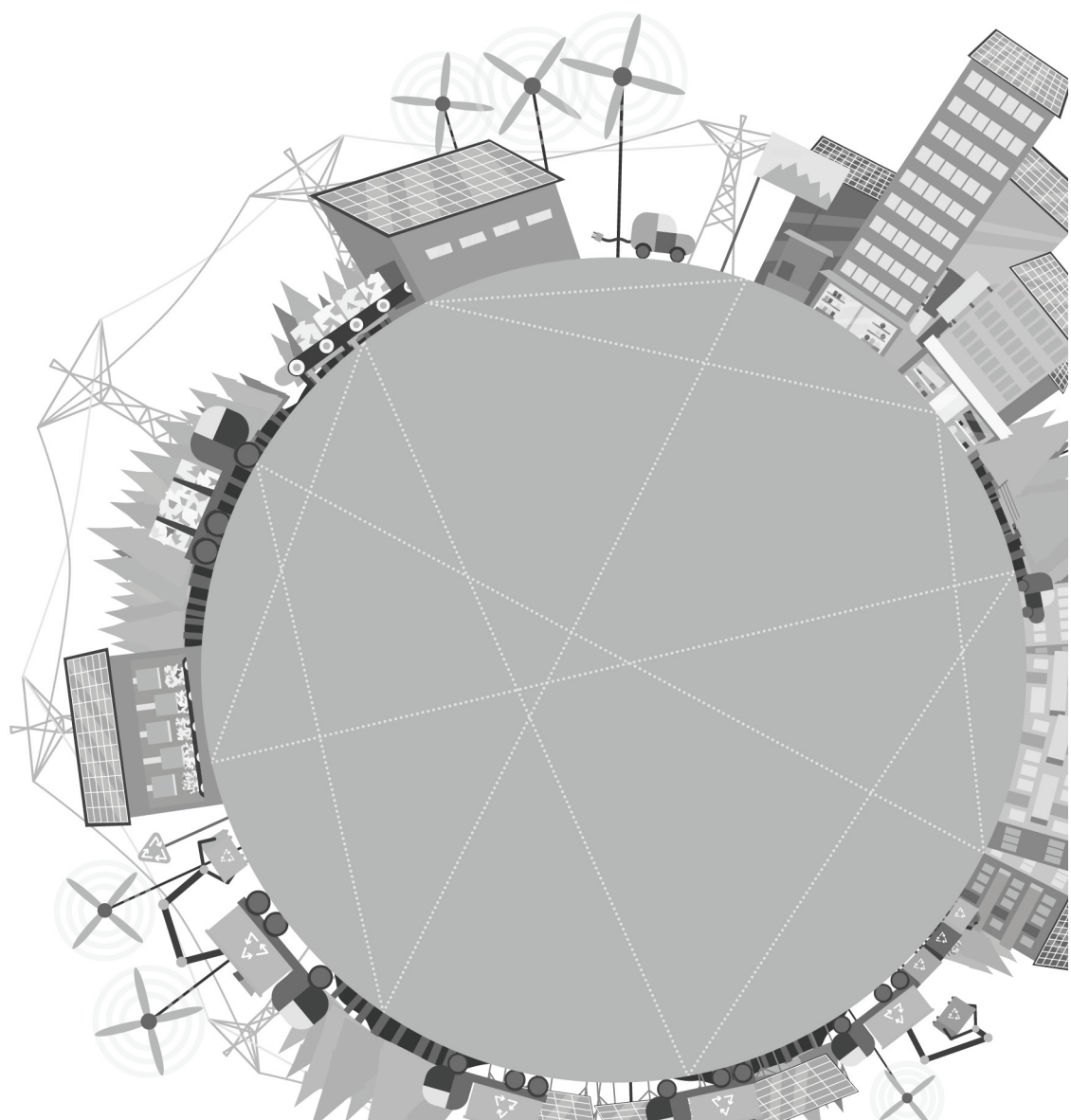
Mounting concern in China over the risks that the environmental crisis poses to future prosperity and the health and wellbeing of its citizens is already visible in the robust action that government is taking against environmentally irresponsible companies: as Fong On Kei reports in this issue, in 2012 the city government of Beijing closed down 200 companies that it judged energy inefficient or excessively polluting, with heavy losses for investors. Even responsible companies do not avoid all risk – a clean and reliable water supply is fundamental, and many locations in China already suffer extreme water stress, for example. Other projects have been forced to halt at a late planning stage because of opposition from a mistrustful and increasingly active public in China, and in overseas operations – in Peru and Myanmar for example – Chinese companies have suffered severe setbacks because they have either misjudged local public opinion or have failed to meet local environmental standards.

To operate successfully in the future, both Chinese companies operating abroad and international companies operating in China will need to demonstrate their capacity to operate within resource constraints, to limit and to take responsibility for the environmental harm they do. Environmental regulation and responsible environmental behaviour are often understood as a burden for business, but as the example of the most innovative and far-sighted companies shows, constraints can also act as a spur to innovation and responsible companies are rewarded by increasingly discerning customers.

Since its launch in 2006, *chinadialogue* has documented many aspects of China's environmental crisis and has published the views and insights of Chinese analysts, policy makers and civil society, along with their international counterparts to promote knowledge sharing and collaboration. In the past year, we have focused increasingly on the conduct and impact of businesses at all levels, in China and overseas, both exposing polluters and highlighting innovative models and examples of best practice that point to exciting future possibilities. China is a fast moving laboratory of the future; the decisions that are made in China – and by China's business, affect us all. In this special issue of *chinadialogue's* bi-monthly journal, we are pleased to highlight some of our recent coverage; we shall continue to report on and analyse this vital sector. 

促进中国可持续产业的发展

Advancing sustainable business in China



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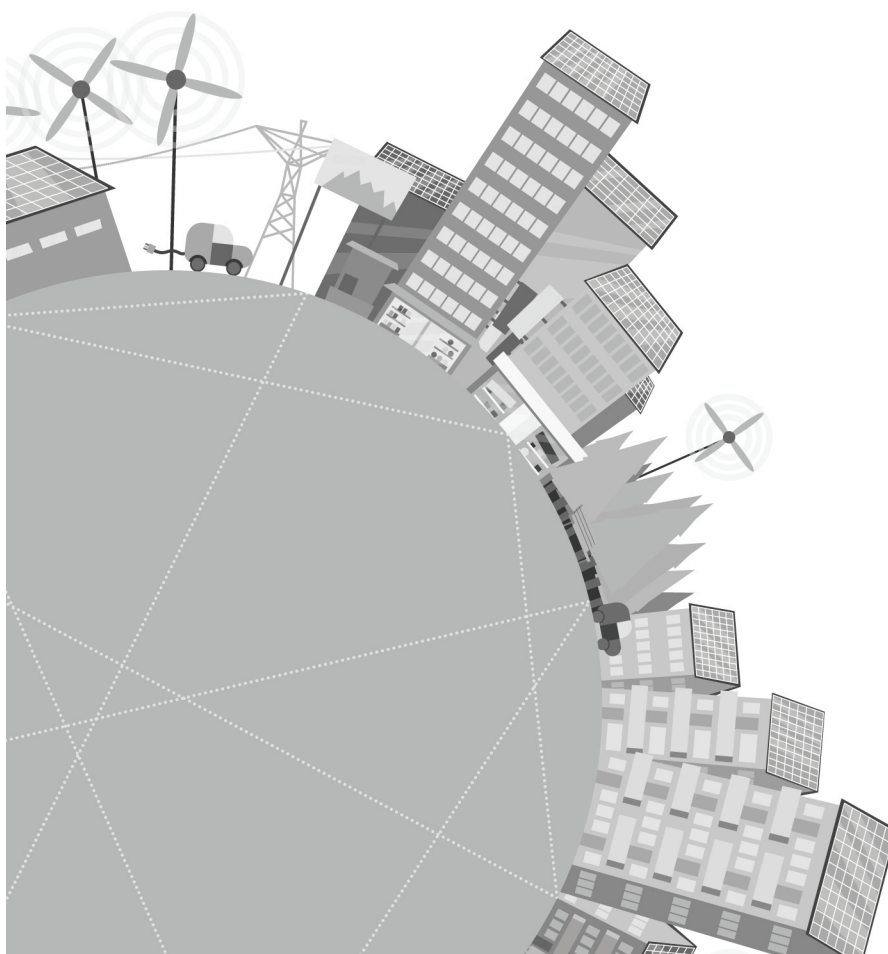
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国内进程

-CHINA AT HOME-



为反PX运动正名

唐昊认为，对以反PX项目为代表的邻避运动，质疑声越来越大，被指“无必要”、“自私”、“受人利用”。他认为需要对邻避运动正名。实际上邻避运动频发，是企业、政府与民众之间互不信任的结果。

唐昊

2014年3月下旬，在广东石化工业重地茂名市，部分公众因反对PX项目落户茂名而上街聚集，并发生街头冲突。3月31日晚，茂名市政府新闻发言人通报称，如绝大多数群众反对，市政府不会违背民意进行决策，事实上将PX项目就此搁置下来了。

为邻避运动正名

从2007年的厦门到2014年的茂名，在过去7年间，不断有城市居民用街头抗议的方式，将当地政府费尽心力引进的PX项目驱逐出门。当地居民几乎一边倒地反对PX项目的同时，另一种声音在逐渐扩大，即认为民众的行为值得商榷。目前对邻避运动的争议主要在三方面：一是认为PX项目是低毒项目，没有那么大的风险，民众的抗议并无必要；二是认为邻避体现了自私的民意表达，只顾小集体，不顾大利益，并且有将污染转移到其他城市的“以邻为壑”的后果；三是通过

背景资料分析，认为邻避运动并非完全自发，实际上是受到利益集团挑唆，民众是被利用的工具。由于上述声音在茂名事件后一度成为网络上的重要意见流，并且影响到民众和政府对于邻避运动的判断，因此有必要对这些声音进行一定程度的廓清。

在PX项目抗议过程中，公众确实可能误解PX项目，认为其高毒、致癌、危险性高。但即使这类问题存在，也并非公众的原因。公众没有义务去了解一些强加于其上的工业项目，反而是政府和企业有义务向民众解释清楚。在科普不足，项目立项、环评、建设等信息不公开的情况下，公众对项目污染后果的怀疑是合情合理的。此外，公众是依赖以往的经验常识进行判断的——即使PX项目在国外未造成太多污染，但在中国的管理水平下，难保不出问题。在公众拒绝PX项目的背后，是对政府和企业能力的的不信任。

另有声音说邻避运动体现的是

自私的民意表达，这也是事实，但公共利益正是在一个个自私的小利益中产生的。取消了具体的、自私的利益，也就根本没什么公共利益可言。同理，保护了每一个具体的地区或个人利益，就是在保护整个公共利益。

至于说邻避运动是受到利益集团挑唆、民众是被利用的工具等说法，含有太多阴谋论的想象。这种说法贬低民众的智商、从而贬低民众的自主行为，本身或者含有恶意、误解。对民众的无端怀疑和不信任，正是一种专制时代的遗存。连人们维护自身利益都不承认和许可，何谈公共利益？

同时，就公共利益与地区利益的比较来看，PX项目所代表的“公共利益”确实可疑。人民日报《PX焦虑》一文总结PX项目屡遭抵制的原因中就包括：民众认为在PX项目中无法获得实质性收益、利益反哺不够。此前有数据表明，茂名石化2013年缴纳税金241.42亿元，其中对茂名财政奉献仅15亿。而项目

可能造成环境污染、生活品质下降和相关环节风险，这些都要居民承担。由此，民众基于利益受损判断上的抗议又有什么问题呢？

政府、企业与民众互不信任

由以上描述可知，邻避运动的真实原因并非公众素质，而是企业、政府与民众之间互不信任。

从民众的角度来看，这种不信任并非仅仅在PX信息披露的层面，而是对整个系统的不信任：担心企业生产不规范、不安全；不信任政府能够严格监管、执法到位。公众对政府和企业的已经不信任已经达到了这样的地步——即使这个项目放在世界上其他任何一个国家都不会出问题，但放在中国就一定出问题。而从以往政府行为和企业行为来看，对其“有罪推定”并非完全不靠谱。

来自民众的不信任，主要表现是猜测、谣言和抗议行动。社交媒体作为群体性事件传播的主舆论场，放大了这种不信任。在事件爆发后，微博、论坛与博客的帖子即刻呈暴涨趋势，甚至有民众走上街头抗议。

而政府对民众不信任主要表现在，为抑制相关舆情扩散，政务微博集体失声，大量有关抗议活动的社交媒体帖子遭到删除和屏蔽。在封网、删帖之外，甚至有报道显示有些部门强迫石化员工、公务员和

师生签订承诺书，不得参与游行。茂名事件后直到写作当日，我在互联网上查询关于茂名事件的有关材料，无论是细节披露还是网友评论，都被大量删帖，根本找不到多少有价值的信息。

但问题在于，没有必要的信息，哪来的信任依据？网络封闭与街头运动是有相关性的。对信息的封闭，无助于事情的解决，反而使政府与民众对立起来。网络讨论难以满足的诉求，必然会在街头运动中以另一种方式提出。网络信息的封锁，反而助长了街头激进势力。

为维护某个工业项目而采用政治手段，并非完全因为政府观念问题，更多的是畸形的政绩评价体系所致。在自上而下的选拔体制下，政绩成为地方官员升迁的最重要砝码。随着中国经济增长速度放缓，地方政府的经济压力再次凸显。因此，拿大项目、提振本地经济就成为地方政府的重要选择。在这里，凡是阻碍本地经济成长的力量都被视为对地方政府的反对。


如何重建良性互动机制

在信任缺失的情况下，官、民、企业之间的恶性互动不可避免。如何重建公众、企业和政府间的良性互动？短期信任的建立是由企业和政府作为强势一方的公正性和信守承诺等行为带来的，而长期信任的建立必须依靠制度，尤其是如下制度：

严格执行企业项目的环境评价制度。邻避现象的出现与政府活动尤其是公共政策密切相关。在公共政策制定和执行上的公共性必须得到保障。对PX项目的立项、环评、建设过程必须公开透明，严格依法依规依程序。防止政策制定主体受到利益集团的干扰，偏离政策的公共性。

建立有效的公众参与制度。加强官民沟通，倾听民意，保障居民知情权与参与权，使其合法权益得到保障，形成规范的公众参与。这是防止无序参与和街头政治失控的替代性方法。

建立多方沟通机制。对公众的质询，政府应建立规范的回应制度，切勿通过删帖遮掩真相。在类似项目中应注重加强科普宣传，让民众理性认识PX，并提供参与渠道及尊重第三方专家意见。在必要时还需对居民提供公共生态补偿，在有效的沟通机制中平衡各方利益。

良性互动的社会机制必须建立在相互信任的基础之上。在台湾地区，以街头运动为主要形式的“邻避运动”活跃了30多年，如今却不多见，就是因为公众的持续压力下，民众与政府、企业的良性常规互动机制的建立，以及相关的项目推广、监督机制的完善。需要从台湾的经历中吸取经验的不仅仅是政府，还有公众和企业。 

唐昊，华南师范大学教授

Public mistrust on PX justified by corporate secrecy

China's PX protestors are accused of overreacting, but their anger is based on a long string of pollution cover-ups

Tang Hao

In late March 2014, street clashes hit the southern Chinese city of Maoming during public protests against a new paraxylene (PX) factory. By the end of the month, the city government announced it would respect the wishes of the majority. The PX project was shelved.

Seven years have passed since the first PX protests in the port city of Xiamen in 2007, along with a succession of similar cases. The pattern is familiar: local governments work to attract PX projects, residents protest and force a halt to the schemes. But this time there has also been a number of criticisms of the public opposition to these plants. The criticism has been along three lines: first, that the protests are unnecessary, because PX projects are neither very toxic nor dangerous. Second, that the objections are selfish and only reflect the interests of a minority, and will simply shift pollution to another city. And third, that these protests are not as spontaneous as they appear – vested interests are using the public as a tool.

Such views became common online after the Maoming protests and have influenced both public and government views of the protestors. There is therefore a need for clarification.

The public may be wrong to view PX projects as toxic,

“Without trust, the three players – government, business and the public – inevitably fall into negative patterns of interaction.”

carcinogenic and dangerous. But is that really their fault? It is not the responsibility of citizens to research chemical plants being forced upon them – it is the government's job to explain. When secrecy surrounds a project's inception, environmental impact assessment and construction, it is entirely legitimate for the public to worry.

Moreover, these judgements are based on past experience: overseas PX plants might not cause pollution, but it is hard to be so confident about a Chinese-managed plant. The opposition to PX arises from public mistrust of both government and business.

As for whether the nimby movement is selfish, it's arguable that the wider public interest is made up of many smaller interests. If we take away specific selfish concerns, we have no public interest left. Similarly, by protecting local and individual interests, we protect the greater public good.

To argue that vested interests are manipulating the public into protesting is too much of a conspiracy theory. It belittles the public intelligence, and by extension, citizens' actions. It shows misunderstanding or malice, an unwarranted questioning and mistrust of the public, which harks back to authoritarian times. If we don't recognise the people's right to protect their own interests, what public interest is there to speak of?

An article in the People's Daily, titled "PX Concerns", said that one cause of opposition is that that members of the public do not realise how they themselves benefit from PX factories. But statistics show that, of 24 billion yuan in taxes paid by Maoming's petrochemical sector in 2013, only 1.5

billion went to Maoming itself. Yet local residents take on the pollution, the diminished quality of life and the potential dangers. Why shouldn't they protest?

Mistrust of the system

Nimby protests arise not from public failings, but from public mistrust of government and businesses.

Citizens don't just worry that they aren't getting the full story about PX plants – they mistrust the entire system. They do not think the company will run the plant safely, and they do not trust the government to exercise strong oversight and uphold the law. The mistrust is so strong that a project which would be accepted anywhere else in the world cannot be built in China. Government and business actions in the past show such presumed guilt is not wholly unreasonable.

The people's mistrust is expressed as supposition, rumour and protest. Social media provide a venue for protest to spread, amplifying that mistrust. As events accelerate posts on microblogs, forums and blogs increase exponentially, and in extreme cases the people take to the streets.

The government's mistrust of the people is evident from the way microblogs fall silent and social media posts are deleted, all to prevent the spread of opposition. There are even reports of authorities forcing petrochemical workers, civil servants, students and teachers to sign no-protest commitments. From the start of the Maoming protests to the time of writing, I have seen huge quantities of online material deleted – both specific details of the opposition, and online comment. It is next to impossible to find any valuable information.

And without the necessary information, what reason is there for trust? There is a link between internet censorship and the street protests. Cracking down on information exacerbates the situation by placing the government and the people on opposite sides, making radical action more likely.

Political support for an industrial project comes as much from the perverse incentives created by the assessment system for officials as the views of local government. Attracting major projects and boosting the local economy is an important way for officials to demonstrate competence and earn promotions. But this means any movement reducing economic growth is treated as opposition to the local government.

Transparency needed

Without trust, the three players – government, business and the public – inevitably fall into negative patterns of interaction. To change this, the stronger parties – government and businesses – must work in the short term to create trust by committing to be fair and uphold their promises. In the long term, we need new systems.

Firstly, strict implementation of environmental impact assessments is essential. Nimby protests are closely linked with government behaviour, particularly public policy decisions. The fairness of policy making and implementation must be ensured. We need transparency when decisions are being made, when environmental impact assessments are being carried out and when construction is under way. All legal procedures must be followed closely, and vested interests not be allowed to interfere in policy decisions.

Secondly, we need an effective method of public participation. We must strengthen communication between government and the people, solicit public views, protect residents' right to know and participate and create norms for public participation. This will prevent disorderly behaviour and loss of political control.

Finally, we need to establish multilateral mechanisms for communication. The government should have a procedure for responding to questions from the public, without censoring the truth. Public education work should be emphasised in similar cases, so the public can understand what a PX project involves. Routes for the public to participate should be provided, and the opinion of third party experts given weight. When necessary, environmental compensation should be paid to residents, after effective, open discussion.

Such positive social mechanisms need to be built on a foundation of trust. In Taiwan, the nimby movement has been active for over 30 years, but today it rarely takes to the streets. Sustained public pressure has forced the establishment of positive tools for communication between the people, government and business, better publicity about projects and improved oversight. It is not just the government that must learn from Taiwan – so too should the public and business.. 

Tang Hao is a professor at South China Normal University

众筹：中国NGO绿色项目融资新方式

新筹款方式广泛助力中国环境可持续项目。

尼科拉·戴维森

2013年4月20日，四川雅安发生7.0级地震，宝兴县是受灾最重的地区之一，数十名村民死亡，严重的破坏也使幸存者生计困难。

面对如此令人沮丧的情况，作为宝兴县蜂桶寨蜂蜜合作社的支持者，全球环境研究所（GEI）转而求助于一种创新的筹资方式。5月份，GEI在各众筹（crowdfunding）网站上发起了一项活动，用招标方式筹集所需的8500英镑（8.1万元人民币）资金，用于购买新蜂箱和帮助蜂桶寨乡150家养蜂户重建生活。

过去短短几年中，众筹在欧洲和北美迅速兴起。据Massolution的统计，众筹方式在2012年共集资约18亿英镑（180亿元），比2011年的总额几乎翻了一番。

所谓众筹就是用个人共同集资的方式，通过Indiegogo和Kickstarter等网络平台为各种行动提供资金支持。有时，出资者们会获得一些小小的非货币性回报，比如一件T恤衫或者把他们的名字放在电影摄制名单里。这是一个方兴未艾的产业，一些人预测说待其成熟

后，可能会有3200亿英镑（3万亿元）的产值。

事实证明，众筹方式尤其适合绿色行动。清洁能源和可持续发展项目已经通过这种方式在世界范围内筹资超过3.2亿英镑（30亿元）。有一些众筹平台是完全致力于绿色事业的，比如Kiva和GlobalGiving，它们同时采取多种投资模式，包括资金换商品或股份。

然而在中国，众筹产业的规模还很小。迄今在两个最大的众筹平台——点名时间和追梦网上筹集的资金还不到600万元。

对GEI来说，蜂桶寨的蜜蜂众筹是冒着风险的。GEI招聘的亨利·卢斯项目学者艾米·贝利说：“我们不确定这件事会不会彻底失败，但这个项目今年是没有资金的，因此如果我们找不到钱的话，就不会有新的蜂箱。”

蜂桶寨国家自然保护区就位于宝兴县境内，这里的生物多样性之丰富可谓全球瞩目，同时也是包括金丝猴和大熊猫在内的多种濒危物种的自然栖息地。养蜂为这里的居

民提供了一个利润丰厚的非劳动密集型谋生手段。

艾米·贝利说：“我们一直推动这里的养蜂业发展，就是为了帮人们转换谋生方式。这个地区的挣钱机会并不多，所以很多人只能靠非法采伐来维持生计。”

GEI在Indiegogo和点名时间上同时发起了两个众筹活动，筹资目标分别是1万美元（6400英镑）和2万人民币（2100英镑）。它们承诺向参与者提供回报，比如发布受益人及他们蜜蜂的照片，并且定期更新。正是这种亲身的投入感激励着人们积极参与。到两个活动结束后，GEI通过点名时间筹资2.7万元，超额35%；通过Indiegogo筹资10350美元，超额4%。

中国的慈善和公益

在中国，众筹的成功并不是总有保障的。点名时间的创立者张佑说：“开始建立点名时间的时候，我们觉得十分焦虑。因为我们大多数的咨询对象都告诫说中国社会和

美国并不一样。尽管在我们创立这个网站前几个月中国就已经成了世界第二大经济体，但捐赠的概念并不流行。”

如今，中国的慈善事业正在快速发展。许多人把2008年汶川地震视为中国慈善事业发展的分水岭。政府对慈善事业发挥了更加积极的支持作用，新浪微博等微博平台也提高了公众对社会和环境问题的意识。根据政府统计，中国的公众捐赠总额从2007年的32亿元（3.3亿英镑）猛增到2011年的250亿元（26亿英镑）。自从点名时间2011年4月成立以来，该公司迄今已经受到了7千份申请。张佑说：“回顾起来，我意识到当时的担心是不必要的。”

中国的企业也开始探索用众筹方式来帮助履行企业责任。去年9月，互联网巨头腾讯公司发起了“We Love”计划，迄今该公司已经帮助114家社会企业和NGO筹款470万元（50万英镑）。提议都被放到社交网络上，只要达到最低数量门槛，每转发或分享一次，受益人就能从腾讯的公益慈善基金中获得0.06英镑的捐助。

尽管并没有严格遵循既有的众筹规则，比如捐助者的直接参与最小化以及不索取免费T恤衫，腾讯的计划仍然秉承了类似的思想。“我实在想不出还有哪个市场能够让你引入一个腾讯这样的众筹平

台，并且如此迅速地得到大规模回应。”英国文化协会中国区社会项目总监马湄丽如是说。

然而，众筹在中国也并非万事如意，尤其是中国还缺乏合法的慈善事业。马湄丽说：“在中国，是否能够用某种方式同时将慈善目的和商业模式结合起来，仍然处于探讨阶段。”（点名时间宣布放弃收取10%的日常维持经费，但大多数众筹平台都要收管理费的。）她还说：“这对法律框架的制定来说是有意义的，因为在立法前，人们必须在基础定义上作出决定。”

筹资对于中国的NGO和可持续企业来说已经成了个难题，比如他们无法向公众请求捐赠。不过已经有人呼吁政府更新立法，比如GEI正在起草的一份白皮书里有一条政策建议就是政府应该明确将众筹合法化。

公众的信任是另一个难题。由于所捐款项用途的透明度和问责性的缺失，致使慈善事业信用不佳，最近中国红十字会的一系列丑闻让情况雪上加霜。

为此，点名时间采取了“三步走”的方式来减轻参与者的忧虑。第一步是针对申请者的身份认证手续。接下来的第二步是一个“热身步骤”，即在正式启动前，由网友对项目投票表示其支持或反对。第三步，如果持续项目的申请是由个

人或非正式团体提出的，则其必须与一个既有机构合作提交，以保证其可靠性。

可持续项目在众筹平台上还有更大的发展空间。张佑说目前点名时间的绿色项目只占10%，但它们常常能取得成功。“在这个个性化媒体的时代，传播的分散化是革命性的事物。社交媒体在中国的繁荣当然有很大帮助，因为‘众筹’需要的就是‘众’。”

北京师范大学学生陈彤彤选择用众筹的方式来帮助赣南贫困油茶农建立手工香皂合作社。由于年轻一代纷纷到城市打工，这里的茶树油产业步履维艰。陈彤彤在点名时间上为期一个月的筹资活动获得了99位支持者1.1万元（1200英镑）的捐助，使她得以向当地油茶农传授茶树油香皂生产、法定权利、可持续性的知识。

陈彤彤和她的团队目前正在对另外六个计划运用众筹的项目进行研究。她说：“众筹方式对于我们这样的草根组织来说‘平易近人’，我们的目标也不会定得太大。我们真正需要的是一个能够开始的起点。”

夏可宇（音）对本文亦有贡献

尼科拉·戴维森，自由撰稿人，现居住在上海

NGOs crowdfunding for green initiatives in China

New methods of fundraising are helping to support a range of environmentally sustainable enterprises in China

Nicola Davison

When an earthquake hit rural Sichuan on April 20 2013, the community of Baoxing County was one of the worst affected. Dozens of villagers died and the destruction threatened the livelihoods of the survivors.

These desperate circumstances led the Global Environmental Institute (GEI), a supporter of Baoxing's Fengtongzhai Honey Cooperative, to turn to an innovative fundraising solution. In May, the non-profit launched a campaign on crowdfunding websites in a bid to raise the £8,500 (81,000 yuan) needed to buy new hives and help the 150 beekeeping households rebuild their lives.

In the last few years, crowdfunding has rapidly gained traction in Europe and North America. In 2012, around £1.8 billion (18 billion yuan) was raised, almost doubling 2011's total, according to research firm Massolution.

Crowdfunding describes the collective effort of individuals to financially support initiatives through online platforms such as Indiegogo and Kickstarter, sometimes with a small non-monetary return on their investment, such as a t-shirt or their name in film credits. It is a sector expected to mushroom: some predict it will be worth £320 billion (30 billion yuan) when mature.

Crowdfunding is proving particularly suitable for green initiatives. Clean energy and sustainable development projects have raised more than £320 million (3 billion yuan) worldwide. There are entire platforms dedicated to green causes, such as Kiva and GlobalGiving, which use an array of funding models including money-for-goods or equity.

Yet in China, the industry is still small. Less than six million yuan has been crowdfunded to date on the two largest platforms, Demo Hour and Dreamore.

For GEI, the bee campaign ran risks. "We weren't sure whether or not it would flop", says Aimee Bailey, a Henry Luce scholar hosted by GEI. "But it was a project that didn't have funding this year, so if we didn't look for the money there would be no bee hives."

Bordering Baoxing is the Fentongzhai National Nature Reserve, a place of global ecological significance in terms of biodiversity, and the natural habitat for endangered species including the snub-nosed golden monkey and giant panda. Beekeeping offers a profitable livelihood that isn't labour intensive.

"We've been building the beekeeping industry to try to provide an alternate livelihood", Bailey says. "There aren't many opportunities to earn money in this region, so many people have to resort to illegal forestry in order to make a life for themselves."

GEI launched two concurrent campaigns on Indiegogo and Demo Hour aiming to raise \$10,000 (£6,400) and 20,000 yuan (£2,100) respectively. They offered participants rewards, such as a photo of the beneficiaries with their bees, and updated them regularly. It is this personal engagement that encourages people to get involved. By the end of the campaigns, GEI had raised 27,000 yuan or 135% of their target on Demo Hour, and US\$10,350 or 104% of their goal on Indiegogo.

Charity and good causes in China

The success of crowdfunding in China was not always guaranteed. “We felt anxious when we started building Demo Hour, as most of the people we consulted told us that Chinese society is not the same as the US”, says Peter Chang, a founder of Demo Hour. “Although China became the world’s second largest economy just a few months before we opened the website, the concept of donation was not popular.”

Philanthropy is a burgeoning movement in China. Many credit the Sichuan earthquake of 2008 as the sector’s watershed moment. Just as the government has taken a more active role in its charity support, microblog platforms such as Sina Weibo have heightened awareness of social and environmental issues. Public donations rose from 3.2 billion yuan (£330 million) in 2007 to 25 billion yuan (£2.6 billion) in 2011, according to government statistics. Since Demo Hour launched in April 2011 the company has received 7,000 applications. “In retrospect, I realise the worries were unnecessary,” Chang says.

Companies, too, are beginning to explore crowdfunding to facilitate corporate responsibility. Last September Tencent, the internet giant, launched its We Love scheme. So far the company has helped raise 4.7 million yuan (£500,000) for 114 social enterprises and NGOs. Proposals are uploaded onto social networks and with every retweet or share the beneficiary is credited £0.06 from Tencent’s charity foundation, once a minimum number is reached.

Though not strictly adhering to established crowdfunding principles – the donors have minimum involvement and don’t get a free t-shirt – Tencent’s scheme shares a similar ethos. “I can’t think of another market where you can introduce a crowdfunding platform like Tencent and get such a scale of response so quickly”, says Mairi Mackay, director of society at the British Council in Beijing.

Yet crowdfunding in China isn’t all rosy. In particular there is a lack of legal clarity. “In China there’s still a discussion ... about whether it’s possible to have something that is a charitable cause and a commercial model at the same time,” says Mackay. (Most crowdfunding platforms charge for hosting, though Demo Hour waives its usual 10% fee for sustainable projects.) “It has implications in the way the legal framework is developed because people

need to make decisions about basic definitions before they legislate,” adds Mackay.


Fundraising is already difficult for NGOs and sustainable enterprises in China – they can’t solicit donations from the public, for instance. There are calls for the government to update legislation: in a white paper GEI is drafting, one of the policy suggestions is that the government should explicitly legalise crowdfunding.

Public trust is another barrier. A lack of transparency and accountability about how donated funds are used has done little to credit the charity sector, with recent scandals at the Red Cross Society of China making the problem worse.

Demo Hour has taken steps to assuage participants’ fears. There is an initial identity verification process for applicants, followed by a “warm-up step” in which website users vote for or against a project before official launch. Thirdly, sustainable project applications, if created by individuals or unofficial groups, must partner with an established institution to ensure credibility.

There is room on crowdfunding platforms for more sustainable projects. Chang says that green initiatives account for just 10% of applications to Demo Hour at present. Yet they are often successful. “In this era of personalised media, the de-centralisation of communication is revolutionising things,” says Chang. “The proliferation of social media [in China] certainly helps greatly. What crowdfunding needs is the ‘crowd’.”

Chen Tongtong, a student at Beijing Normal University, chose to crowdfund to help establish a handmade soap cooperative in rural Jiangxi. The area’s tea tree oil industry was struggling as younger generations moved to cities for work. Chen’s month-long Demo Hour campaign raised nearly 11,000 yuan (£1,200) from 99 supporters, and has allowed her to educate locals about tea tree soap production, legal rites and sustainability.

Chen and her team are currently researching six other projects that they plan to crowd fund. “It’s accessible to grassroots organisations like ours. Our goals are not too big. What we really need is a starting point to kick them off.” 

Additional reporting by Xia Keyu

Nicola Davison is a freelance journalist based in Shanghai

煤企神华向NGO让步始末

绿色和平持之以恒地调查和公开发布，迫使在内蒙古草原违法排污的巨型央企终于让步。

冯 洁

2014年4月，在揭示央企神华在内蒙古超采地下水和违法排污的调查报告发布8个多月后，绿色和平被告知，这一煤制油项目将逐步停止抽取草原地下水。

消息甫一公布，民间组织纷纷给神华点赞，也将此次行动视作民间力量推动环保的范例。而不少同类企业却担忧神华“开了一个坏头”，在面对社会监督时，多了一个不必要的选项。甚至在神华集团内部，迄今意见也不统一。

在此之前，既没有一家大型国企，把不是主管部门、执法机构、新闻媒体的社会组织，作为“汇报工作”的对象并“履约”；也没有一家NGO，能推动中国最大的煤炭企业、世界唯一的煤直接液化项目作出改变承诺。

2014年4月28日，中国神华煤制油化工有限公司（以下简称神华煤制油）总裁张继明接受了记者的独家采访，他认为这种“NGO胜利、央企低头”的简单逻辑伤害了来之不易的改变，也低估了双方都曾经经历的挣扎和艰辛。

民间力量的合纵连横

故事始于2002年神华项目上马。

对于煤制油项目所在地的牧民来说，这确实像是一场“战争”。项目伊始，“战争”便已展开，这里既有搬迁补偿的纠纷，也有牧民对地下水的忧虑。

“取地下水从2005年开始，那时起当地农牧民就一直反对。”2014年4月29日，牧民道尔吉告诉南方周末记者。

民间力量盯上神华的煤制油项目，是在2012年或更早。当年绿和发布了第一份以“噬水之煤”为名的报告，揭露西部煤化工扩张与民争水、与生态争水的严酷事实。

此后，绿和把矛头对准了神华在鄂尔多斯的煤制油项目。这家在国外以环保行为艺术著称的NGO，这

次擎起的是实地调查的武器。2013年上半年，绿和11次前往鄂尔多斯调查。

而本土老牌NGO自然之友，从2003年起就一直在内蒙古帮助当地牧民进行环境维权，后来它也成为主要的公益诉讼力量。

在数月的调查时间里，律师成为第二支响应的民间力量。在一次环境会议上，中国政法大学污染受害者法律援助中心主任王灿发听闻此事，决定用诉讼来维护当地牧民的利益。

“从法律上，我不是很乐观。”王灿发团队律师胡少波说，当时刚刚修改的民事诉讼法第五十五条，给环境公益诉讼的主体资格开了口子，但没有详细规定。他想通过此次不乐观的诉讼来激活五十五条。

随后，北京东城区法院、内蒙古

“农牧民不相信神华的抽水泵能及时停下，不仅仅因为替代方案难以短期达成。他们唯一相信的是，从自治区到市、旗政府，都会为神华的取水想办法。”

中级法院果然分别拒绝了立案。

2013年7月中旬，就在绿和发布调查报告前夕，胡少波等两位律师陪同另一支民间力量——中科院动物所副研究员解焱及一位来自国家林业局下属研究机构的专家前往鄂尔多斯调查。随后，这支科学家力量出具了专家评估意见。

“之前他们（指绿和）找专家，不好找，很多人不敢说话。”解焱回忆道，当时初步了解之后，她决定支援绿和。她也是国内比较活跃的环保人士。“像这样的案例，环保调查非常难，专家应该站出来支持他们，给予科学上的支撑。”

“我们认为神华煤制油在其厂区附近排放废水导致土壤可能受到污染，抽取地下水导致地下水位下降明显。”在一份专家生态影响评估意见中，解焱等专家如此表示。

在近半年的集中调查之后，2013年7月23日，绿和发布了调查报告。

能源巨头的应对之道

在绿和新闻发布会的当天下午，神华便紧急约见绿和。

“第一次接触之后，我们内部也有争议。民间组织又不是我们的主管单位，也不是执法单位，也不是新闻媒体，我们有没有必要跟他们继续沟通？”张继明对南方周末记者说，“想来想去，神华愿意通过绿色和平来说我们做了什么，哪些有瑕疵，下一步会做什么。”

这次会面之后，神华煤制油派人前往鄂尔多斯调查，并于2013年8月8日，即报告发布两周后，按绿和的要求提供了《关于水源地开采及其生态影响的情况说明》。在绿和的

进一步要求下，8天之后，再次提供了《关于污水排放情况的说明》。

面对超采地下水、非法排污和破坏草原生态三大指控，神华认为地下水开采会对环境造成破坏“毫无疑问”，也认可5个采水点水位（共有22个采水点）下降、原本高于平均植被覆盖率的地区面积减少的事实，但不认可绿和将之归罪于神华的采水。

针对最关键的地下水超采一项，神华的回应是“本项目从法规和技术层面均未查出过度开采的实际行为”。

根据神华提供的取水数据，从2006年项目试运行到2012年，煤制油项目历年实际取水量日平均不到2万立方米，“低于法定许可的取水量”（神华取水证可日取水3.6万立方米），更远小于探明的地下水允



在绿色和平关于内蒙古地下水超采的报告发布八个月之后，央企神华决定将逐步停止其煤制油项目抽取当地地下水

许开采量（日取水8万立方米）。

从双方书面往来的次数和沟通内容看，排污问题交锋最烈。

被绿色和平图文并茂地披露违法排污后，神华主动提及，在报告发布前的2013年4月，就已被当地两级环保部门先后处罚，责令整改。但神华并不承认有意排污，而是技术原因导致的“临时存放”。

张继明说，被处罚后，神华按照环保部门的要求，以120元/吨的价格处理了上述三四千吨污水然后回用，并清理了排水区底泥，恢复了地貌。

尽管神华很认真，但还是很难说服绿和11次前往鄂尔多斯调查的调查员。NGO要求神华澄清，既然有预案，为何临时储存会超过两年且未作防渗处理，污水检测超标也没有合理解释，也不清楚临时存放的情况和预案，是否包括在环境评价报告中。

而绿和报告在污水中检出包括芳烃、苯酚在内的几十种物质，则让张继民感到很意外。和其他化工项

目一样，煤制油项目只做常规的老三样检测：COD（化学需氧量）、氨氮和总磷。张继明知道，煤制油污水处理后还会含有芳烃和苯酚类物质，但没有能力像绿和做得那样细致。“他们测出来我们也很震惊，下一步我们要继续检测混合芳烃。”


未尽的博弈 无法修改的悲剧

2014年4月，浩勒报吉水源地的牧民再次接到乌审旗政府的通知，要按每人2万元再加每户2万元、分三年付清的方式，补偿工业与他们争水的损失。同时确认的消息，还有神华的抽水泵将在2014年内逐步关停。

这样的消息并没有让等待说法和补偿的农牧民高兴。乌审旗牧民代表四灵记得，从2005年神华煤制油项目铺设输水管道开始，乌审旗政府曾两次提出整体移民方案，却从未实施。除了2012年起由旗政府发

放每人8000元/年的补偿外，牧民曾经听到的好消息无一落实。

农牧民不相信神华的抽水泵能及时停下，不仅仅因为替代方案难以短期达成。他们唯一相信的是，从自治区到市、旗政府，都会为神华的取水想办法。2010年当地一家官方网站上的一篇文章显示，神华煤制油项目，是当时鄂尔多斯市委市政府花了大力气“争取”来的。落户最重要的条件之一，就是提供充足的水。

不论是神华因为感受到水资源紧缺、从2009年开始寻求替代方案的行动，还是这次和民间组织对弈中体现的进步，都无法改变2006年水泵开动后，这片草原经历了水位下降、树死草枯、沙丘活化的濒死过程，无法扭转农牧民为生计不断堵路、上访、投告无门的悲剧循环。 

冯洁，南方周末记者

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How NGOs forced China's biggest coal company to back down

Sustained pressure from Greenpeace forced Shenhua to commit to major changes at a coal plant in the Mongolian grasslands

Feng Jie

China's biggest coal firm, Shenhua, has been forced to commit to changes in its operations in Inner Mongolia after sustained pressure from Greenpeace, in what has been described as a model for civil society action in support of the environment.

In April 2014, the local government announced that Shenhua would stop pumping groundwater over the course of the year. Since pumping started in 2006, the grassland in the region has seen falling groundwater levels, decreasing vegetation, and the destruction of sand dunes.

Shenhua's coal to liquid fuel plant in Ordos, in Inner Mongolia, became the subject of scrutiny in 2012, when Greenpeace published its "Thirsty Coal" report, detailing how expanding coal chemical operations in the west of China were competing with locals and the ecology for water resources.

During this period, another Beijing-based NGO, the Centre for Legal Assistance to Pollution Victims, got involved in the case. Hu Shaobo, one of the lawyers on the team, said that "legally speaking I wasn't very optimistic." Article 55 of the recently revised Civil Procedure Law allowed for public interest environmental litigation, but there were no detailed rules on how it should be done, he said.

Hu's assessment turned out to be accurate. Both Beijing's Dongcheng District People's Court and the Inner Mongolia Intermediate People's Court refused to hear the case.

Part of the problem for Greenpeace was finding experts willing to make environmental-impact assessments, as most didn't dare speak out for fear of reprisals. But in mid-July 2013, Hu and another lawyer accompanied Xie Yan, a researcher at the Chinese Academy of Sciences' Institute of Zoology, and another scientist employed by a State Forestry Institute, on a trip to Ordos.

According to Xie, "It's very hard to carry out environmental investigations in cases like this, so we experts should help out and provide scientific support." In their environmental impact assessment, Xie and the others said: "We believe waste-water dumped by Shenhua CTL near the plant may pollute the soil, and that pumping has led to a significant drop in groundwater levels." Their conclusion was echoed by Greenpeace's report that appeared at the end of July 2013.

The giant responds

Shenhua arranged an urgent meeting with Greenpeace

“The herders don't believe the pumps will stop running in the near future, and not simply because it will be hard to find an alternative source of water quickly.”

the afternoon that the report was launched. In an interview with the newspaper *Southern Weekend*, Zhang Jiming, president of Shenhua's Coal to Liquid and Chemical Company, recalled that "there were disagreements within Shenhua after that first meeting".

"They aren't our superiors, or law enforcement, or the media," Zhang said. "Is there any need for us to keep talking? After consideration we decided to communicate via Greenpeace what we'd done, what the problems were and what further action we were going to take."

After that meeting, Shenhua dispatched its own investigators to Ordos and in August 2013 provided an explanation of the company's groundwater extraction and its environmental impact, as requested by Greenpeace. Eight days later, again in response to Greenpeace requests, it provided another document on its release of waste-water.

Accused of over-extraction of ground water, illegal dumping of waste-water and damaging the grasslands environment, Shenhua admitted that there was "no doubt" extraction of groundwater harmed the environment, that groundwater levels had fallen at five out of 22 pumping stations, and that vegetation coverage had reduced – but rejected Greenpeace's claim that this was due to Shenhua's water extraction.

On the most crucial matter, excess groundwater extraction, Shenhua responded that "no actual excess extraction of groundwater was found, either in legal or technical terms."

According to data provided by Shenhua, in the six years from 2006, when trial operations started, to 2012, the CTL project extracted an average of less than 20,000 cubic metres of water per day, "less than the permitted amount" of 36,000 cubic metres for which it is licensed, and much less than the 80,000 cubic metres surveys have judged an acceptable level.

After Greenpeace published both text and images exposing illegal dumping of waste-water, Shenhua pointed out that in April 2013, prior to publication of the report, it had been fined by the environmental authorities and ordered to make changes. However it denied deliberate pollution, saying that the water was "stored temporarily" due to technical problems.

Zhang Jiming explained that Shenhua had, in accordance with the demands of the environmental authorities, treated and reused the three to four thousand tonnes of waste-water, at a cost of 120 yuan per tonne. The pond bed was then cleaned and restored to its former appearance.

Despite Shenhua's efforts, Greenpeace was unconvinced. Shenhua was asked to explain why that temporary storage was in place for over two years and why the pond was not sealed. Nor was there an explanation of why the waste-water was found to be in breach of pollution standards, and whether or not use of that temporary storage pond was included in the environmental-impact assessment report.

Zhang also claimed to be surprised that Greenpeace found several pollutants, including aromatic hydrocarbons and phenol in that water. As with other industrial operations, Shenhua only carried out three tests: chemical oxygen demands, ammonia and phosphates. "We were shocked they found it, and we're going to continue testing for aromatic hydrocarbons," said Zhang.

Greenpeace's investigation finally bore fruit in April 2014, when the local government told herders living near water sources in Haolebaoji Township that they would be paid 20,000 yuan (US\$3,200) per person, plus 20,000 per household, as compensation for loss of water resources to industry, to be paid over three years. It was also confirmed that Shenhua's pumping stations were to be shut down. However, Zhang Jiming said that a simplistic view of this as an "NGO victory" devalues a change arising out of a hard-fought negotiation between the two sides.

The villagers in the region are also more cautious about the verdict. A representative for some of the herders recalled that, since Shenhua installed pipes in 2005, the Wushen Banner government has twice proposed a wholesale relocation of the herders, but it has never happened. Apart from annual compensation paid by the local government of 8,000 yuan (US\$1,280) a year from 2012, none of the promises made to the herders by the local government has been kept.

The herders don't believe the pumps will stop running in the near future, and not simply because it will be hard to find an alternative source of water quickly. They are sure that the government, from the provincial-level downwards, will do its best to figure out how Shenhua can keep pumping groundwater: according to a 2010 article on a local official website, the Ordos government had to fight to get the Shenhua CTL project, and one of the promises made to win that fight was to supply plenty of water. ☺

Feng Jie is a reporter at Southern Weekend, where a version of this article was first published

食品公司试图以微信 溯源取信于消费者

公众对食品安全日益担忧，食品公司尝试通过微信开放供应链信息，以取得消费者信任。然而专家认为，消费者是否买账还未有定论。

王悦

韩家寰微信玩得很熟。58岁的韩先生并不是为了联系朋友才研究微信的。作为大成食品（亚洲）有限公司的主席，他说微信是公司重要战略的核心环节。

这一战略的第一步是扫描二维码。大成是中国最大的鸡肉加工企业，每年屠宰加工1.8亿只鸡。现在它正部署在每个产品包装上印制二维码。通过手机扫描，大成希望向消费者展示其供应链的每个环节。

“我们每一个产品都有可溯源码。有的输入到手机，就会出现生产日期是哪一天，显示是哪个生产者，喂的什么饲料。”韩家寰说。

大成并不是唯一研究通过微信开放生产过程的企业。随着消费者对食品安全问题愈发焦虑，大型食品公司开始采取类似方式来证明产品的安全性。

蒙牛也通过二维码扫描让消费者追溯其生产过程。2008年三聚氰胺事件后，蒙牛在中国的销量一度锐减。2012年业绩又受到黄曲霉素事件影响，净利润下降21%。同时，更多消费者选择去海外购买奶粉，而他们掀起的购买狂潮使香港、英国等地的超市库存减少。香港政府于2013年3月颁布禁令，规定每位大陆游客最多一次性购买两罐奶粉。

鸡肉养殖业的风险也不小。该行业接连受到“速成鸡”事件和H7N9禽流感的影响，整个产业出现普遍亏损。作为鸡肉加工企业，大成也受到消费端需求下降的冲击。同时，饲料价格居高不下。该公司2013年上半年净利润比2012年同期减少10.9%，为三亿一千万。

扫描二维码到底有没有用？中

国农业大学经济管理学院教授马骥认为，消费者很可能只把它当作公司的营销方式。马骥认为，消费者很难通过溯源判断产品质量，如果他们扫描二维码，也很可能是出于体验的心理。可溯源体系的建立，也需要消费者认知的同步提高。

“食品可溯源也要考虑成本问题。企业在食品可溯源中要素和人力的投入是很大的，”他说，“但消费者更关心的可能不是这牛、猪或者蔬菜在哪里生产、由谁生产，而是生产环节的管理情况。”

他说，消费者要的是安全。食品可溯源更重要的是促进企业生产管理水平的提高。但是如果作为一种事后机制、营销手段，“它无助于提高消费者对食品的信任。”

韩家寰说，他知道公司微信战略可能面临的挑战。他认为，移动

谈食品安全，一定要考虑生态安全。即使农产品的生产标准很高，又严格按照标准执行，但是生态环境破坏了，农产品能是好的吗？

——马骥

互联网为大成的可溯源系统提供了和消费者沟通的新机遇。通过扫描二维码，消费者能够在移动端看到不同批次产品的信息，包括饲料、农场、屠宰、加工等各个环节。

大成希望在下半年全面推出这一基于移动端的食品可溯源体系。它的第一代可溯源机制于2009年推出，消费者需要手动将溯源码输入到公司网站，才可以获得生产、加工等信息，也能看到产地、农民的图片。

韩家寰说：“食品安全是中国食品后发者的优势，我们通过可溯源系统让大家都可以看到每一个产品诞生的过程，让消费者获得真正的安心。将来我们还要装摄像头，让大家随时可以看，可以监控。”

“我觉得互联网会改变很多。消费者的信心也会改变。”他说。

公司还想将可溯源理念引入电商业务。韩家寰说，大成未来希望开展网上超市，里面卖的全部是可溯源产品。这一网上平台还会开放给其他供应商，邀请不同创业者。作为引领者的大成，可以从供应链的管理和产品溯源上为他们提供帮助。他想将大成的网上超市打造成中国版的全食超市公司（Whole Foods Market）。全食是美国最大的天然食品和有机食品零售商，有265家分店。

韩家寰希望这个超市里有青菜、水果等，每一个产品都是可溯源的。“它们有共同的DNA。”大

成作为这一平台最重要的供应商，将提供肉、蛋、奶产品。其他的供应商，比如有机农场，“如果可以做到可溯源，也欢迎它们上来。”

韩家寰说，这一电商平台的进度不会太快。大成现在也在规划和第三方认证机构共同推进供应链的认证。日后，大成不排除将这一平台变成独立的公司。

作为一家来自台湾的食品公司，大成的可溯源体系已经在台湾践行了多年。韩家寰说，他在美国和欧洲出差时也看到了当地可溯源体系推行几十年的成果：消费者对食品是放心的，基本没有人会去追查食品来源。

在中国，大成提出可溯源这个概念已经有很多年。韩家寰说，现在的挑战是如何让消费者对这个话题从低度关心变为高度关心。他说，公司希望让移动端显示的可溯源信息不要那么“冰冰冷冷”，而是将真正对健康有影响的信息提取，以更加“温暖”的方式呈现。

“我们想做到非常非常准确，但是我们也在学习如何和消费者沟通。”他说。

政府也希望通过建立可溯源体系解决食品安全难题。现在全国范围内大概有15个食品可溯源试点地区。商业部曾经发布条文，鼓励龙头企业尝试建立可溯源机制。

四川省人大代表黄润秋认为，建立覆盖全国的可溯源机制刻不容缓。他在三月两会期间呼吁，食品

溯源体系需要在《食品安全法》中作出明确规定加以推行。“尽快建立我国食品质量的可追溯制度，即建立一个覆盖食品从初级产品到最终消费品各个阶段资料的信息库，从而一旦发现食品质量问题就能立即找到是什么地方出了问题，是谁出了问题。”

但是马骥说，食品可溯源也许不是解决食品安全问题的最好的方式。要使这样的机制覆盖到全国将近50%的农业人口是一笔不小的花费。而机制的成本很可能最终反应在物价上。

他说，加强地区政府的协调，在主要生产基地建立溯源体系也许更实际。

据食品安全治理协同创新中心与美国社会科学研究协会发布的一份报告，政府也需要更专业的食品安全监管者。该报告说，国家食品药品监督管理局人手严重短缺，它至少另外需要4万人，才能发挥更大作用。

然而，食品安全要与生态环境安全挂钩。马骥说，考虑到目前生态环境现状，确保食品安全将是一项长期的工作。

“谈食品安全，一定要考虑生态安全。即使农产品的生产标准很高，又严格按照标准执行，但是生态环境破坏了，农产品能是好的吗？”

王悦，原中外对话北京办公室记者

China's largest chicken producer opens up to smart phone users

As fears over food safety grow in China, companies are letting customers trace their products via WeChat, the country's most popular messaging app

Wang Yue

Han Jia-Hwan is schooled in the ways of WeChat. But the 58-year-old chairman of China's largest chicken meat processor, Dachan Food (Asia), isn't interested in using the popular messaging app to chat. He has a grander scheme.

It starts with a simple swipe of a smart phone. Dachan, which slaughters 180 million chickens every year, plans to show customers its entire supply chain by assigning each product a QR code, a complex pattern that can be scanned by the messaging app.

"By scanning the code, customers can immediately see in WeChat which farm produced the chicken, how it was

fed and who processed it," Han said. "We control every step and now we are letting everyone see it."

Dachan is not the only food company laying bare its production process. As anxiety grows in China over environmental degradation and its potential impacts on the food chain, big Chinese companies are using similar schemes to prove the safety of their products.

China's top dairy producer, Meng Niu, also lets customers trace its products via WeChat. Meng Niu saw its sales suffer after the 2008 tainted baby formula scandal. Its profit declined 21% in 2012 when a batch of milk was found



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"By scanning the code, customers can immediately see in WeChat which farm produced the chicken, how it was fed and who processed it"

to have been contaminated with aflatoxin, a carcinogenic mould found in corn grown in humid climates.

The poultry industry faces equally big risks. Dachan and its peers were hit by last year's outbreak of H7N9 influenza, while the high prices of corn and soybean animal feed have added to its woes. At a time of weaker demand and higher production costs, the Taiwanese company reported a net profit of 310 million yuan from its mainland China operation in the first half of 2013, a 10.2% decline from the same period in 2012.

Could the QR code-scheme help? Ma Ji, an economist at China Agricultural University, said the public was likely to see it as a marketing stunt. Ma said it is hard for consumers to assess a product's quality via the traceability system and, if they scan the codes at all, they are probably doing it for fun.

"A food traceability system is very costly," he told *chinadialogue*. "But do consumers really care to know which farm produced their food and the name of the farm owner?"

"People just want their food to be safe. If a traceability system helps to improve a company's overall management, then it is a good thing. If it is used for marketing, then it doesn't help to increase consumers' confidence."

A "Chinese Whole Foods"

The official launch of Dachan's WeChat plan is scheduled for the second half of 2014. The new scheme is designed as an improvement of the company's current traceability platform, where consumers have to manually type codes into Dachan's website to locate the producers and see pictures of their farms.

"China is catching up in food safety," he said. "We want people to feel safe via our traceability system. We plan to incorporate footage of the production sites as well."

"The internet is changing a lot of things," he added. "Hopefully consumers' confidence will change as well."

Dachan also aims to launch an online market where only traceable food will be sold, according to Han, who said the market would be open to any supplier able to trace his production process. The goal is to build the site into a Chinese version of Whole Foods, the largest organic retailer in the United States with 265 stores nationwide.

"Vegetable, fruits... everything in this market shares the same DNA. Every product is traceable," he said. "Dachan will be the biggest supplier of eggs, meat and milk."

Han said development of the e-commerce site would be

gradual. If everything works out well, he said, the site may eventually evolve into an individual company.

The biggest challenge in China is how to make people care more about traceable food, according to Han, who said Dachan is working on presenting the health impact of its production process in a better way.

"We want to be very, very specific," Han said, without disclosing the exact cost of the company's food traceability system. "We are thinking about how to communicate better with consumers as well."

More inspectors needed


The Chinese government also wants to address the country's vexing food safety issue by rolling out various traceability mechanisms. It has built some 15 trial programmes in different cities and is encouraging big companies to take the lead.

Huang Runqiu, a representative of the southwestern Sichuan province, proposed during China's parliamentary meetings in March that the system be expanded nationwide to allow the origin of any food safety problem to be traced.

But Ma said the system might not be the best way to guarantee food safety. Rolling it out across the country would be very expensive, and the cost may eventually be borne by consumers, who are already seeing food price inflation.

It would be better to establish regional food traceability systems to cover major production bases, according to Ma, who said the task would require much more coordination among local governments.

The central authorities also need to train more professional inspectors to put a stop to high profile food-safety incidents such as cadmium-tainted rice and rat meat sold as lamb, according to a report published by the Beijing-based nonprofit group, Forum on Health, Environment and Development. It says that the state regulator – China Food and Drug Administration – needs another 40,000 people to do a proper job.

Eventually, food safety comes down to China's soil and water. In a country where years of breakneck growth have left the environment heavily polluted, protecting food safety is long-term work. Ma said: "Ecological safety is paramount to food safety. No matter how tough the food safety laws are, food will not be safe if the ecology is damaged." 

Wang Yue is a former reporter in chinadialogue's Beijing office

消除中国的“洗绿”

解决中国的环境危机，我们仍需付出更大的努力，让更多的公司承担起社会责任并兑现环保承诺。

克里斯·马奎斯
杨晨

鼓励企业实施对社会和环境负责任的行为是一个挑战。过去三十年中，一场社会和环境可持续发展报告的全球运动已促使企业在记录其社会和环境方面变得更加公开和透明。比如，联合国全球契约组织（UNGC）和全球报告倡议组织（GRI）均已经制定出国际公认的框架，供企业在对其环境和社会表现进行测量和报告时遵循。指导这一运动的是“变化的一般理论”，即：通过信息披露，企业将会更加意识到其影响，同时也更加开放地对待利益相关方（如政府、公民社会甚至投资者）的监督。

近来，越来越多的中国企业加入到了这一行列中。根据中国可持续性咨询企业中的翘楚——商道纵横公司的一份最新报告，2012年中国有1722家企业发布了企业社会责任报告，比2006年的仅有一家（国家电网）有了飞跃式的增长。商道纵横的报告指出，2012年有22.6%的央企发布了企业社会责任报告，但发布该报告的私企则仅有9.4%，说明这一趋势的推动力是中央政府对

国有企业的影响。然而，这一趋势仍然面临重大的质疑，比如：报告的质量如何？这一趋势是真的体现了透明度的提高，抑或仅仅是一种精巧的“洗绿”方式（即企业意在树立一个可持续的形象，但实际上并未真的采取可持续行动）？

中国企业社会责任的增强

自从2001年加入世贸组织（WTO）以来，在遵守国际规范方面，中国面临的压力与日俱增。随着中国走向全球，企业社会责任是中国企业展现友好姿态，更容易获得海外认可的一个方法。尤其是2006年以来，中央政府全力建设和谐社会，使企业社会责任和可持续性得到更多的重视，其焦点则是提升全面信息披露的标准。比如，一些深交所和上交所的上市企业被要求发布可持续性报告，深交所甚至向上市企业提供有关数据收集和报告撰写方面的培训。2008年，中国社科院制订出一套《中国企业社会责任报告编写指南》（CASS-

CSR），如今受到中央政府官员的高度推崇。

中国大型企业越来越多地引入了企业社会责任报告，还有许多著名企业，尤其是国企由于其报告而受到赞誉。比如，中国航运巨头——中远集团（COSCO）2010年被全球契约组织列为报告典范，2011年被中国《WTO经济导刊》列为“金蜜蜂优秀社会企业责任报告”企业。另外，获得“金蜜蜂2012优秀企业社会责任报告”奖的企业还有中国石油天然气集团公司、中国石油化工集团公司、国家电网、中国电信、中国铝业等，大部分都是国企。

“洗绿”之忧

但是仅仅看到中国企业正在发布报告，并不意味着这些报告全面而准确地反映了该企业的经营情况。关于环境主义全球化的研究表明，这样的环境报告可能仅仅是在“洗绿”。例如，内蒙古包头钢铁（集团）有限责任公司称在环境保

护及废物处理上仅一年就投入了数千万美元，并且其企业社会责任和可持续发展也得到了肯定。但在今年初，有报道指出包钢将大量的重金属和其他化学物质排放到空气中，且渗入到了地表水和地下水中。在受灾最严重的村庄之一的打拉亥，调查证实了与周边的村镇相比，其癌症发病率以及骨质疏松症和皮肤、呼吸系统疾病要高得多，辐射水平是周围村镇的十倍之高。

另一个例子则是11月29日中华环保联合会起诉中国石油天然气集团公司（CNPC），指责该集团在吉林的排放污染了当地的土壤和地下水。中石油是企业社会责任的又一领军企业，曾以其出色的社会责任表现荣获多个奖项。这两个例子和其他诸多事例都反映出，中国企业在某些方面的环保和可持续发展得到赞扬的同时，可能还存在着漂绿行为，他们实际环保行动可能低于他们应负起的环境责任。

消除“洗绿”

尽管中国已经成功地迈出了引入和促进企业可持续性报告的第一步，但作为走向可持续经济的下一步，政府必须把注意力更多地放在设置监督机制上，以便消除“洗绿”。比如，马尔奎斯和钱翠丽的研究发现，只有那些受到监督的企业才会真实地报告，而那些没有受到监督的报告大多都是象征性的。我们建议应该鼓励企业更有效地落实全球性标准，政府应该设置一个更好的民间监督体系。

更好地执行国际标准。企业社会责任报告的目的是提高透明度，将企业置于公众监督之下。前美国



中国的企业社会责任报告，是企业“透明度”的提高，还是企业的一种“洗绿”方式？

最高法院大法官路易斯·布兰代斯有一句名言：“阳光是最好的消毒剂”，但在我们对许多社会企业责任报告的探讨中，会发现“洗绿者”们倾向于弄出一些标准模糊的复杂报告，只会让读者看得满头雾水。因此，我们建议中国的企业责任报告更好地落实国际标准，使其能够成为国内外利益相关者的有效参考。中国少数几个企业社会责任报告做得最好的企业均已采用国际公认的框架。比如，宝钢从2006年开始就根据GRI标准公布信息。此外，作为一个能耗大户，宝钢还报告了与能耗、水耗、温室气体排放以及污水排放相关的信息，这些均已超越了标准的要求范围。但根据商道纵横的数据，2012年的企业社会责任报告中，只有17%的企业提供了这些关键信息。

建立民间监督机制。其他很多国家都依靠非政府机构来对企业进行有效监督。但是，在中国最有影响力的非政府组织（NGO）实际上都是由政府建立、或者挂靠政府机

构的，常常发挥管理职能。最近，马尔奎斯和杨的研究认为：由于过去几十年企业力量的极大增加，中国必须发展独立的非政府组织来更有力地监督这个力量，并让社会经济系统更加顺畅地运行。

11月12日发表的《中国共产党第十八届中央委员会第三次全体会议公报》，强调了建立系统完整的生态文明制度体制的紧迫性。《公报》体现了政府在可持续发展上的决心，因此企业社会责任活动无疑将更受重视。面对国内和海外日益增大的压力，企业将会发现在社会和环境上不负责任的代价会越来越大。在履行上述生态承诺的第一阶段，“洗绿”或许是一块跳板，为了消除中国的环境危机，必须做出更大努力让企业履行其环境承诺。



克里斯·马奎斯，哈佛大学副教授
杨晨，上海海事大学的副教授

Chinese companies still guilty of greenwashing

Better monitoring is needed to make sure Chinese companies stick to their environmental commitments

Chris Marquis

Yang Chen

Over the past three decades, a global movement for social and environmental sustainability reporting has catalysed companies to be more open and transparent in documenting their social and environmental impacts. For instance, both the UN Global Compact (UNGC) and Global Reporting Initiative (GRI) have developed internationally accepted frameworks for companies to follow when measuring and reporting on their environmental and social performance.

By encouraging information disclosure, companies become more aware of their impacts and also more open to monitoring by interested stakeholders (such as the government, civil society and even investors).

Recently, Chinese companies have increasingly embraced this trend. According to a recent report by Syntao, a leading sustainability consulting company in China, 1,722 Chinese companies issued Corporate Social Responsibility (CSR) reports in 2012, a large increase from just one in 2006 - State Grid. According to Syntao, in 2012, 22.6% of central government-led enterprises issued CSR reports compared to only 9.4% of private enterprises, suggesting that this trend is being driven by central government influence on State Owned Enterprises (SOE). Yet, significant questions remain about the quality of these

reports and whether this trend truly indicates increased transparency or just an elaborate form of “greenwashing”, whereby firms aim to present a sustainable image while not actually being sustainable in practice.

The growth of CSR in China

Since 2006, the central government’s focus on “Building a Harmonious Society” has led to greater focus on CSR and sustainability, with a focus on increasing overall information disclosure standards. For example, some Shenzhen and Shanghai exchange listed companies are required to issue sustainability reports and the Shenzhen exchange even provides training on data collection and report writing for listed companies. In 2008, the Chinese Academy of Social Sciences established a set of corporate social responsibility reporting guidelines which is now highly recommended by central government officials.

Large Chinese firms have increasingly adopted CSR reporting, and there are many examples of well-known companies, particularly SOEs, even being lauded for their reporting. For example, COSCO, the Chinese shipping giant, was awarded Model Practice Company by Global Compact in 2010.

Just because Chinese companies are now issuing reports does not mean that these reports are presenting a full and accurate picture of the firm’s operations. Research on the globalisation of environmentalism suggests that much environmental reporting may simply be greenwashing. For example, with regard to China, we have found that the top-down, governmentally driven process China has followed

“ Our findings were that only firms that were monitored ended up implementing substantive reporting and that without monitoring, reports were mainly symbolic. ”

may have the advantage of leading to rapid construction of policy and regulatory framework, but one weakness is that it does not necessarily lead to better behaviour, owing to a lack of supervision and high monitoring costs.

Anecdotal evidence also suggests that some of the same companies that were lauded for their reporting work were not necessarily following through with more responsible actions in the rest of their enterprises. For example, Baogang Group, a steel company located in Inner Mongolia, claims to have invested tens of millions of dollars a year in environmental protection and waste processing, and has also been recognised for its CSR and sustainability activities. But in early 2013, the company was reported to emit large amounts of heavy metals and other chemicals into the air, which leak into surface and ground water. Official studies carried out in Dalahai, one of the worst affected villages, confirmed there were unusually high rates of cancer along with high rates of osteoporosis and skin and respiratory diseases and the radiation levels are ten times higher than in the surrounding countryside.

As a further example, on November 29, 2013, China National Petroleum Corporation (CNPC), which has received a number of awards for its outstanding performance in CSR reporting, was sued by All-China Environment Federation (ACEF) because its emissions polluted soil and underground water in Jilin province. These two examples and many others suggest that there may be significant greenwashing among Chinese companies – while they are lauded for some areas of environmental performance and their sustainability reporting, in fact, their actual activities may be less than environmentally responsible.

While China has taken a good first step in introducing and promoting adoption of corporate sustainability reporting, the government needs to focus much more on creating monitoring mechanisms monitoring in order to eliminate greenwashing. For example, we found that only firms that were monitored ended up implementing substantive reporting and that without monitoring, reports were mainly symbolic. We recommend that companies should be encouraged to incorporate global standards more effectively, and the government should develop a better grassroots monitoring system.

Closer adherence to international standards


CSR reporting aims to increase transparency and bring companies under public scrutiny. After all, as former

US Supreme Court Justice Louis Brandies famously noted, “sunshine is the best disinfectant.” But in our examination of many CSR reports, greenwashers tend to issue complicated reports with obscure criterion, which just confuse their readers. We suggest that Chinese CSR reports adhere more closely to international standards that make them verifiable for stakeholders, both domestic and overseas.

A few leading CSR companies in China have already adopted internationally accepted frameworks. For example, Baosteel, a state-owned iron and steel company based in Shanghai, has disclosed information according to GRI standards since 2006. Moreover, as a high energy consumption enterprise, it also reported information related to energy consumption, water consumption, greenhouse gas emissions and wastewater discharge, which are beyond the standard requirements. But based on Syntao’s report, among 2012 reports, only 17% supplied such critical information.

Role of NGOs

Many other countries have relied on active non-governmental sectors to effectively monitor corporations. However, in China most influential NGOs are established by or dependent on government agencies, often executing administrative functions. Recently we have argued that, given the tremendous increase in corporate power over the past decades, China needs to develop independent NGOs in order to apply greater checks on this power and allow the social and economic system to run more smoothly.

The Communiqué of the Third Plenum, released in November, highlights the urgency of building a comprehensive system for ecological protection. The Communiqué demonstrates the government’s commitment to sustainable development, and there’s no doubt that more attention will also be placed on CSR activities. Facing increasing pressure both at home and overseas, companies will find it increasingly costly to be socially and environmentally irresponsible. Perhaps, in the first stages of ecological commitment, greenwashing is a stepping stone, but to overcome China’s environmental crisis, more needs to be done to make sure Chinese companies adhere to their environmental commitments. 

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铅蓄电池回收难 利益均衡或可治

中国铅蓄电池正规回收不足30%，非法回收处理渠道难遏制且污染大，均衡利益或是解决之道。

张 春

中国每年产生废旧铅蓄电池数量超过260万吨，而正规回收的比例不足30%。中国环保部环境与经济政策研究中心（PRCEE）与美国自然资源保护协会（NRDC）2013年12月11日发布报告称。

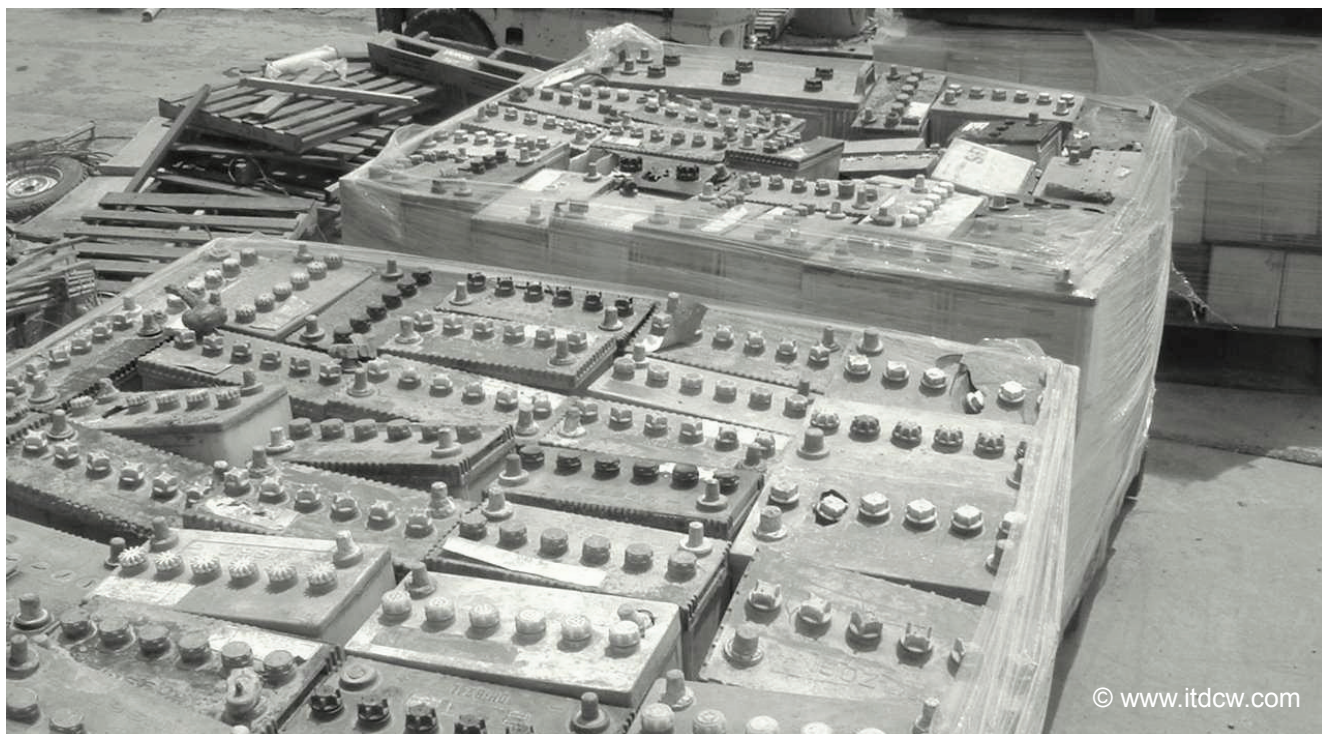
比起发达国家95%以上的正规

回收比率，30%是很低的。中国并不缺少正规回收处理的产能——山西吉天利公司等一些大型的铅蓄电池回收处理企业，每年可以处理10万吨，却只能收到1.5万吨。

剩余的废旧铅蓄电池去了哪里？报告称，约80%的废旧铅蓄电

池通过个体商贩流入非法回收处理环节。由于收购价低于非法商贩，大型正规企业常常“吃不饱”，无法正常运行。

小商贩和非法处理厂拆解铅蓄电池拆解处理，含铅酸液和非法冶炼会严重污染大气、土壤和水源。



中国通过正规渠道回收率的铅蓄电池不超过30%，废旧电池大多被小商贩买走

NRDC化学品管理顾问王英说：“凡是非法处理的都是有污染的，他们都会倒掉硫酸液。”她说，电池近1/3重量都是酸液，商贩拆解电池一是为了节省空间便于运输存贮，同时，一些小型的回收企业甚至明言只回收铅板。

环保部环境与经济政策研究中心高级工程师杨小明说，废铅蓄电池是《国家危险废物名录》中的49类危险废物之一，对其贮存和处置都有严格的规定，“但是在实践中，因缺乏相关配套政策、措施和监管，存在违法经营和无序竞争的现象。”

他说，铅蓄电池回收，有很多政策疏漏、监管缺失的问题，要整顿，也面临整个生产使用和回收系统各环节的责任不明晰、正规体系难建立，正规许可经营门槛高，非法跨省转运，缺少部门联合执法等问题。

这些问题，也直接导致当前最

大的难题——废电池收不上来。

山西吉天利科技有限公司副总经理万雪捷说，他们公司投入了2个亿，从意大利进口国际最先进的生产处理设备，并做了改进，可以将废旧电池中的酸、金属等完全分离回收。这样的设备开工后消耗巨大，如果回收价格超过4000元/吨，就会亏本。但是，小商贩可以以7000元/吨的价格回收。这是他们落败的主要原因。

他对中外对对话说，上海因为废旧电池收不上来，原本收上来的那部分送到浙江和江苏处理。现在江浙不收上海电池了，他们被迫送到安徽去处理。“上海担心安徽可能不收了。小商小贩违法作业太多，这些地方都面临收不到电池的情况。”他说。

万雪捷说，最基层的回收单位是汽车修理厂和零售店。在汽车电池坏掉以后，他们可以以150元每块的价格买下旧电池，将新电池卖给

顾客。换下来的旧电池，他们可以转手以更高的价格卖给回收的小商贩，最后卖到非法的回收处理厂。这是一个庞大的利益网。

NRDC高级律师大卫·勒奈特说，美国也曾面临中国的状况，可以尝试平衡利益链，“让蓄电池回收系统内每一个参与者都有利可图。”

他介绍美国的做法：零售商和生产商定协议，如果回收所有的电池，就可以更低的价格从厂家进货；回收处理商和厂家定协议，厂家将需要处理的废旧电池都交给处理厂，后者保证将再生铅低价卖给生产商。而消费者，他们在购买新电池时交回旧电池，也可以以较低的价格购买电池。如此降低了整个系统的运行成本，也保证了每个人都获益。🌀

张春，中外对话北京办公室助理编辑

Recycling lead batteries blocked by cheaper, more polluting methods

Illicit recycling of lead batteries is blocking more environmentally-friendly methods of disposal

Zhang Chun

Less than 30% of the 2.6 million tonnes of old lead-acid batteries discarded in China every year are properly recycled, according to a new report by the Ministry of Environmental Protection and the US NGO National Resources Defence Council (NRDC).

This is much lower than the 95% figure seen in developed countries. But the problem is not a lack of recycling capacity – firms such as Jitianli in Shanxi can handle 100,000 tonnes of lead-acid batteries a year, yet receive only 15,000 tonnes.

Where do the rest go? According to the report about 80% are bought up by individual traders who sell onto illegal recyclers. This means legitimate firms can't obtain the batteries they need to operate normally.

The methods used to disassemble lead batteries by illegal recyclers pollute the air, soil and water. Wang Ying, an NRDC consultant on the management of chemicals, said that "any illegal recycling will be polluting, they all dump the sulphuric acid." She added that one-third of the weight of a battery is sulphuric acid – the traders dump it for easier transportation, and some recyclers say openly that they only want the lead plates.

Yang Xiaoming, senior engineer at the Policy Research Center for Environment and Economy (PRCEE), said that old lead-acid batteries are listed as a type of hazardous waste: there are strict standards for storage and disposal. "But in practice there's no supervision, so illegal operations do exist and compete with the legitimate firms."

Yang added that there were many policy loopholes and regulatory failings, and dealing with the problem will

require facing up to issues within the entire production, use and recycling system: unclear responsibilities, obstacles to setting up a legitimate recycling system, high licensing barriers, the cross-provincial operations of illegal recyclers, and a lack of joined-up enforcement.

These problems all give rise to the biggest problem faced today – the legitimate recyclers can't get the batteries. Wan Xuejie, deputy president of Jitianli, explained that his company spent 200 million yuan on importing and upgrading top of the range equipment from Italy. That machinery can extract the acid and metals from the battery, but is costly to run – to earn a profit the company needs to buy in batteries at less than 4,000 yuan a tonne. But smaller operations can pay 7,000 yuan and still make money, so Wan's firm is losing out.

Yang told *chinadialogue* that when Shanghai was unable to collect enough batteries to make recycling worthwhile, it had to send those batteries it had obtained to Zhejiang and Jiangsu provinces. But Zhejiang will no longer take them, and they have to be sent to Anhui. "And now Shanghai's worried Anhui won't want them either. There are too many of the smaller traders stopping the batteries reaching the legitimate recyclers."

At the bottom of the chain, Wan explained, are car repair shops and sales lots – they will buy an old battery for 150 yuan and sell the customer a new one. The old one is sold on at a profit to a trader who will in turn sell it on to an illegal recycler.

David Lennet, an attorney to the NRDC, explained that the US once faced the same problem. Under the US system,



US consumers get a discount on a new battery if they hand their old one in

he said, consumers get a discount on a new battery if they hand their old one in. The retailers pass those batteries back to the manufacturer, in return for a cheaper price on new stock. The manufacturers then pass the batteries onto a recycler – who sells the recovered lead back to the

manufacturer at a discount. Operating costs throughout the chain are cut, and everyone benefits. 🔄

Zhang Chun is assistant editor in chinadialogue's Beijing office

“运动式”环境治理对企业不负责任

中国环境科学学会副理事长、环保部原总工程师杨朝飞表示，政府积极协助企业顺利退出或实现转产，才是上策。

冯安琪

近日，广西贺江铊镉水污染事件，正在引发下游广东省对于用水的担忧。据中国新闻网报导，污染源基本锁定为上游沿岸冶炼、选矿企业，当地政府已将112家沿岸的非法采矿企业关停并进行取样。贺州市副市长闭海东指出，政府早前已对相关企业进行多次整治，但屡禁不止。

强制性关停污染企业，是地方政府应对公众投诉及突发污染事件时的常用手段。

北京市在2012年年关停了200家“两高”企业（高污染、高耗能行业企业），今年计划再关停200余家；山西太原在今年上半年已关停了118家环境违法企业。被关停企业集中在建材、化工、铸造、电镀等行业。这些行业的确是污染和排放的常见主体，集中关停对短期内的环境改善具有正面作用。

但中国环境科学学会副理事长、环保部原总工程师杨朝飞认为，单纯利用行政措施关停污染企业并未能有效解决环境问题，如何

帮助企业顺利退出或转行才是关键。

杨朝飞对中外对对话说，“在民众的怨声下，很多时候，政府在关停企业之前根本没有考虑到企业的实际情况，比如是否经过政府审批的合法企业，企业自身的投资等。”

当企业违反环保法规后，是否应当允许其继续经营，这并不是一个简单的问题。许多企业处于政策前后不一和自相矛盾的困境，一些行业因得到地方性政策鼓励而大为

兴起，但随后政府却缺乏有效的环境监督，企业最后不得不面临被迫关停的窘境。

去年山东省一环保局副局长被袭击事件，便是企业走投无路的典型例子。行凶者曾经营一家非法炼铁作坊，一年前被当地环保局副局长带队查封，作坊被关一年后，他闯入副局长办公室连刺6刀后逃离，副局长重伤。该商户在法庭上说：“他不让我活，我也不让他活了。”

杨朝飞说，环境需要得到保护，但投资者的利益也不能被漠视。对于污染企业的管理，无论合法非法，政府都应付起责任，“地方政府不能开始时为了抓GDP，鼓励企业上马后，又因为污染事件爆发，要求企业一晚关停。”

他提议，政府应该制定污染企业淘汰计划，调查企业背景，并与问题企业的业主面谈，商议解决方案。对于有条件升级或转行的企业，政府应该提供技术帮助及相关的优惠政策。

虽然污染企业被关停是否应该得到补偿这一观点值得商榷，但企业建设要与当地产业发展相结合无疑是至关重要的。



强制性关停污染企业，是地方政府应对公众投诉及突发污染事件时的常用手段

如果必须关停，应提前通知业主，并得到其同意；对于合法企业，政府应该按职工、土地和设备给予赔偿；即便是非法企业，也应该给予时间作退出的准备。

虽然污染企业被关停是否应该得到补偿这一观点值得商榷，但企业建设要与当地产业发展相结合无

疑是至关重要的。2013年大连市东港区即将完成石材加工企业整体搬迁计划，恰是这一思路的体现。这里的石材企业普遍规模小、环境污染较重，特别是其聚集区紧邻市区主水源地——日照水库，对水源地存在污染隐患。区政府通过跟当地石材企业的座谈会，成功说服全区

190家企业签订转产、转业或自行关停协议；针对无能力转移的商户，区政府拨款2800万元作为补助。



冯安琪，原中外对话北京办公室实习生

Do China's polluting firms deserve better treatment?

Yang Zhaofei, deputy chair of the China Society for Environmental Sciences, argues that local authorities need to engage with polluting companies more constructively

Fong On Kei

When Guangxi's He River was polluted by thalium and cadmium, the downstream province of Guangdong became concerned about its water supply. According to China.com.cn, the source of the pollution is most likely smelting and ore dressing plants upstream. The local government has shut down 112 illegal mining firms along the river and is taking samples for testing. Hezhou deputy mayor Bi Haidong pointed out that the firms had been punished previously, but

to no effect.

Local governments often shut down polluters in response to public complaints or emergency situations, a practice that is increasing.

In 2012 Beijing shut down 200 polluting or energy inefficient firms, with a similar number to be closed this year. In Taiyuan 118 firms were shut down in the first half of the year. The companies closed were mostly producing



Local governments often shut down polluters in response to public complaints or emergency situations

construction materials, chemicals, or were foundries and electroplating plants. These sectors are often responsible for pollution and carbon emissions; shutting them down will certainly have a positive environmental impact in the short-term.

But Yang Zhaofei, deputy chair of the China Society for Environmental Sciences and formerly chief engineer at the Ministry of Environmental Protection, believes that simply ordering polluting firms to shut down will fail to resolve environmental problems. The real question is how to responsibly help the companies cease operations or change sector.

Yang told *chinadialogue* that “when faced with public anger the government often shuts down the firm without even thinking about its circumstances – i.e. is it a legal business, what investments have been made, etc.”


Whilst it’s hard to argue that a firm breaking environmental laws should be allowed to continue operating, many companies are caught between the prongs of incoherent and contradictory policies. Industries may be offered incentives to locate in an area, and then receive little environmental oversight until they are closed down. Last year’s attack on the deputy head of a Shandong environmental bureau was an example of how businesses can be backed into a corner. The operator of an illegal iron foundry, closed down a year earlier by the deputy head, burst into her office and badly wounded her. In court the attacker said, “If she won’t let me live, I won’t let her.”

According to Yang the environment does require protection – but the rights of investors must not be ignored. The government should take responsibility for

the management of all polluters, illegal or otherwise. “Local governments can’t encourage firms to start up to boost GDP and then later just shut them down because of environmental problems.”

He suggests the government draws up a plan for the elimination of polluting firms, looks at the background of the companies, and talks with the owners to come up with solutions. Those that can be upgraded or shifted to a different sector should be provided with technological support and other assistance.

Yang also argued that if a firm must close, the owner should be informed well in advance. Companies should be given compensation in line with the number of employees, amount of land, and value of equipment involved. Even illegal firms should be given time to prepare.

Though it’s debatable whether polluting firms warrant such extensive compensation, it’s important to consider constructive forms of engagement with local industries. A plan to relocate stone processing plants from Dalian’s Donggang district, due for completion this year, is a good example. These firms tend to be small and polluting, and in Donggang present a particular threat to water supplies as they are close to the city’s Rizhao reservoir. The government met with company bosses and persuaded 190 of them to change sector or quit. The government will provide £2.65 million in subsidies for those that cannot afford to move. 

Fong On Kei is a former intern at chinadialogue’s Beijing office

光伏业全面复苏？

融资困难和恶性竞争恐会阻碍中国光伏行业的回暖。

张 春

因为生产过剩，以及欧盟、美国反倾销政策的双重影响，2012年光伏业爆发严重危机，导致国内光伏企业领头羊尚德公司在内的大量中国光伏企业遭受重创。近一年后，光伏行业又开始回暖。

“光伏是绿色能源，（虽然经历低谷），但是代表着未来的发展方向。目前光伏整个国际市场是在回暖的。”国家能源局新能源和可再生能源司（简称新能源司）副司长梁志鹏在12月3日的“中国可再生能源海外投资论坛”上对记者说。

在欧盟制订《环境和能源资助纲要》的能源新战略，拟将可再生能源发展列入欧盟能源新纲要的同时，中国也在行动，推动包括光伏、风能、生物质能在内的可再生能源产业的海外业务拓展。光伏是主打。

中国民生银行、中国工商银行、中国农业银行等，都继国家开发银行之后，开始支持可再生能源的走出去战略。中国民生银行贸易金融部包育栋对中外对对话说，民生银行针对光伏的投资项目没有总额

限制，单个项目也没有额度上限。

国家能源局新能源司邢翼腾对中外对对话说，光伏行业的复苏，有多方面原因共同作用的结果。企业产业链完善、抗风险能力增强是其一，欧盟、美国、日本等需求加大的国际环境是其二，而国家能源局的24号文也是一个重要的信号。

中央政府今年7月出台《国务院关于促进光伏产业健康发展的若干意见（2013）24号》，简称24号文件。邢翼腾说：“按国家发展规划，到2015年中国光伏的总装机容量将提升到2100万千瓦，24号文中，已经把装机容量提高到3500万千瓦，这是一个大幅的增长。”

拜尔能源王志军也说，光伏电站不论是项目开发、工程建设还是后期持有运营，回报都很高，很多大的国际公司都乐于作此投资。

即便如此，也有人持谨慎态度。浙江正泰太阳能公司副总裁陆川对市场复苏说法还保持谨慎，他认为目前可以说政策回暖，市场复苏还不能下结论。

此外，国家能源局新能源司梁志鹏说，当前中国光伏走出去还面临四个主要困难：缺少政府配合——企业各自为政甚至恶性竞争；融资困难；国际话语权不足；投资风险大。

梁志鹏说，考虑企业对其他国家法律、政策、标准不熟悉，靠自身去摸索很耗时间，国家能源局新能源司也为此建立了专门的服务机制，并建立海外法规、政策信息共享交流平台。

张春，中外对话北京办公室助理编辑

当前中国光伏走出去还面临四个主要困难：缺少政府配合——企业各自为政甚至恶性竞争；融资困难；国际话语权不足；投资风险大。

Has China's solar power sector risen again?

Lack of investment and unfair competition may hinder the recovery of China's solar photovoltaic (PV) sector

Zhang Chun

Last year the Chinese solar sector was in crisis – many Chinese firms, including sector leader Suntech, were in a dire financial situation due to over-capacity. The sector was built on exports to the European Union (EU), and in many cases heavily locked into long term contracts for various components. In 2012 trade dried up because of recession and the end of Feed in tariffs (which aim to encourage investment), leaving many Chinese companies with no other significant revenue stream. But only a year later, there are already claims of a recovery in the sector.

At the start of December Liang Zhipeng, deputy head of the National Energy Administration's (NEA) New and Renewable Energy Department told reporters that “solar PV is green energy, and [despite its problems] represents the direction for the future.”

One potential source for optimism is that the EU has produced a new strategic document on environmental and energy subsidies, and plans to include renewable energy development in overall energy plans. Solar PV firms, like the now insolvent Suntech, could benefit by exporting panels to European countries if there were new subsidies. In addition, China is working to help its renewable energy firms expand overseas. This includes wind and bio-energy, but the main effort will be with solar PV.


The China Minsheng Bank, the Industrial and Commercial Bank of China and the Agricultural Bank of China have all followed the China Development Bank's lead in supporting renewable energy firms expanding overseas. Bao Yudong of the Minsheng Bank's trade and finance department told *chinadialogue* that there was no limit to the bank's funding for solar PV.

The recovery is due to a combination of factors, according to Xing Yiteng of the NEA's New Energy Department. One is that companies now have more robust supply chains and are more resilient. Another is increasing demand in the EU, US and Japan. Also, the NEA sent an important policy signal in July, with a State Council circular on promoting development of the solar PV sector.

“National plans already included installed solar capacity of 21GW by 2015, but this was increased to 35GW – a large increase,” said Xing.

Wang Zhijun of Baysolar said that there is money to be made at all stages of the solar PV cycle – project development, construction and ongoing operation. Therefore many international companies are happy to invest.

Even so, some are still cautious. Lu Chuan, deputy president of Zhejiang Astronergy, isn't sure about talk of a recovery – he thinks policies have improved, but it's too soon to decide if the market has recovered. According to Liang Zhipeng, China's solar PV sector still faces four challenges: a lack of government coordination, with the companies working alone or even competing unfairly; funding difficulties; lack of international presence; and high investment risks.

Liang added that firms are not familiar with the laws, policies and standards of other nations, and it is time-consuming for them to learn. To this end the NEA has set up a new body to provide relevant services, as well as a platform for information on overseas laws and policies. 

Zhang Chun is assistant editor in chinadialogue's Beijing office

湖南发展有色金属产业是亏本生意

绿色和平污染防治项目武毅秀认为，发展有色金属产业是湖南政府做的一个亏本买卖，未来在土壤污染治理上的投入可能远超其所带来的税收收入。

林 娜

国际环保组织绿色和平于四月底发布了《“有色”米——湖南衡东县稻米重金属污染调查》，该调查对以有色金属企业为主的湖南省衡阳市衡东工业园周围的稻谷、稻田土壤及地表水样本进行了检测。

检测结果显示：13个稻米样本中有12个样本的镉含量超标，超标最严重样本镉含量为国标近21倍，稻米样本中还检测到不同程度的铅、汞、砷等其他重金属。除稻米样本外，稻田土壤样本的镉含量也全部超过土壤环境质量二级标准。

调查团队结合当地主导风向、实地检测结果等多因素的综合分析，结论为：该工业园有色金属企业是当地重金属污染的重要来源。

中外对话就此调查报告内容及更广泛的土壤污染问题，专访了负责本次调查的绿色和平组织污染防治项目主任武毅秀。

林娜：您对近期环保部和国土资源部联合发布全国土壤污染状况调查公报有何评论。

武毅秀：从信息公开层面来说，本次公开是环保部的一个正面举动。此前，土壤污染公报一直都被列为是国家机密，环保部对外秘而不宣，因此本次公开值得肯定。

但同时，本次公布的信息非常有限。一个经历了7年的全国普查，最后只公布了5页纸的pdf文档，其中必然存在关键信息缺失。（注：4月中旬发布的全国土壤污染状况调查公报显示，中国土壤污染形势严峻，逾16%的土壤点位污染超标，其中超过八成的污染类型为无机物污染。）

已公开内容中没有标明其中污染的点位的集中地区或集中类型，污染源的信息缺失，对于公众和科研工作者来说借鉴的价值就很小——我们只是知道一个很大的概

情况。

因此，我们呼吁进一步公开更详细的信息，包括采样点位、污染所在地。2006年的污染公报的方案里曾提出检测地表水和农作物，但是现在的公报里面没有体现农作物和地表水的检测结果，我们也呼吁向公众公开此类信息。

此外，我们还建议把公布结果和1995年的土壤本底值调查做一个对比，看现在土壤污染的趋势究竟是什么样的。

总之，更多的信息公开，一方面有助于学者展开相应调查，另一方面也将提高公众自我防护意识和对土壤污染的认识。

林娜：湖南为有色金属产区，可能存土壤重金属背景值偏高，你

湖南省曾测算，在未来二十年，仅湘江治理费用超过四千亿，而在2011年，有色金属对湖南的纳税总值才350多亿。

们这次调查是否考虑到了这方面的因素？

武毅秀：这次考察排除了背景值高的因素。我们有对照样本，是在距离工业园10公里的地方采集的，而对照样本重金属含量并没有超过国家标准，由此可说明工业园周围土壤中重金属是有其他来源，土壤超标不是背景值高导致的。

另外，政府颁布的土壤调查报告提到，在我国的一些地区，与1995年公布的本底值比较，土壤一些重金属含量增加50%，说明更多的污染是由工业排放和外来污染造成的。

林娜：湖南是重要有色金属产区，关闭有色金属产业并不现实，应该如何解决有色金属产业发展和生态环境的矛盾呢？

武毅秀：经济发展和环境的矛盾固然存在，但有色金属产业可以通过更严格规范及优化产能，来将对环境的危害降到最低。首先，应当淘汰落后产能、设立严格的准入标准、对在生产企业的排放进行严格的监督，更精细化地管理产业。湖南现在土壤问题其实是历史遗留的环境债，和当年疯狂上马小冶金企业、采用落后的冶炼技术有关。

另外，通过采用先进的污染处理工艺也能减少重金属的排放。同时应当对有色金属冶炼企业进行监控，鼓励企业自行申报污染数据，完善公众监督。

有色金属产业并不是不能发展，但要通过合理的规划来降低其对环境的危害。

林娜：如您所说，湖南的有色金属行业的继续发展需要不少投入

才能保证其对环境不会造成危害，这笔帐是否划算？

武毅秀：发展有色金属产业可能是湖南地方政府做的一个亏本买卖。湖南省曾测算，在未来二十年，仅湘江治理费用超过四千亿，而在2011年，有色金属对湖南的纳税总值才350多亿。治理费用远超税收收入。

发展有色金属产业虽然对GDP有拉动，也会带来税收，但在短期的利益前，政府需要更长远的眼光看待问题。湖南政府过去几年存在目光不够长远的问题。有色金属的盲目扩产冲动造成的环境债，也许需要很多年才能还上。

现在湖南政府已经开始意识到这个问题，其在湘江治理中也提到了要控制有色金属，关停小厂，但我们希望湖南政府能走得更远，不



湖南的有色金属产业污染巨大，近年曾频繁传出大米遭受重金属污染的事件

仅是关停小厂，而是要对有色金属行业有更合理的规划。

林娜：湖南乃至全国现有的土壤污染严重，是否会对中国的粮食安全构成威胁？

武毅秀：究竟全国有多大面积的耕地被污染还需要进一步更加详细的调查。湖南省也对自己的耕地污染情况做过调查，但是结果没有公布。但公报所调查的耕地点位有19.4%超标，这多少反映了目前耕地污染的情况。耕地污染对于粮食的产量和质量都有影响。一方面会导致粮食大量减产，我们在衡阳调查有农户反应粮食减产约50%，而另一方面生产出的粮食镉超标，一旦流入市场也会对健康产生威胁。如此大量的耕地污染势必影响中国粮食安全。湖南是我国最大的稻谷生产省，有很多原本质量很好的高产

田，遭到污染会带来严重的损失。

林娜：有学者建议，可以通过改变作物结构来解决土壤中重金属超标的问题，您对此怎么看？

武毅秀：通过种植不同作物消化污染是一种思路，但要避免富集了重金属的作物成为转移污染的途径。即使是要改变作物结构，首先也还是要把土地污染情况摸清，然后把不宜种植的作物情况告知当地农民。

另外，改变作物结构必然导致大米减产，仍然难以解决粮食安全问题。大米是中国的主粮，不能过度依赖进口。

林娜：据媒体报道，土壤污染的治理涉及的资金将是万亿级别的，这个钱应该由谁来出？

武毅秀：由政府出钱治理污染其实是不合理的。当前国际上治理土壤污染的总原则是污染者付费。

欧盟的土壤污染指令里第一条原则就是污染者付费，谁污染谁治理。在英国有两个原则：第一步先确定污染源，如果是工业污染，则由这个地方的污染源去付费治理；如果无法确定污染源，则由土壤的使用单位来支付土壤修复和治理的费用。

总的原则是把土壤修复的费用转移到对这个土壤有破坏和有利利用需求的这些人身上，我觉得这才是一个正确的方向。

现在我们国家很多时候是企业污染政府买单，企业污染造成的环境损失和经济损失由所有纳税人来承担，无法对企业形成有效压力。



林娜，中外对话北京办公室记者

Taxpayers to bear costs of polluted Hunan soil

The cost of cleaning up metals pollution in Hunan, south China, will outstrip tax revenue from the smelting industry, says Greenpeace campaigner Wu Yuxiu

Luna Lin

Wu Yixiu, head of toxics campaigns at Greenpeace, talked to *chinadialogue* about the findings of their soil pollution survey and heavy metal contamination in Hunan Province, south China.

Luna Lin (LL): What do you make of the Chinese government's national soil survey, released in April, which revealed that the country is suffering from severe soil pollution?

Wu Yixiu (WY): In terms of openness of information, this publication is a positive move by the Ministry of Environmental Protection. In the past such reports have remained undisclosed, classed as state secrets.

But at the same time, only very limited information has been made available. This was a seven-year, nationwide survey, and only a five-page PDF document has been published so far.

The data published does not say where the polluted sites are, what types of pollution were found, or where the pollution comes from. We've called for more detailed information to be released, including the locations of sampling sites and pollution.

We also suggest a comparison between the baseline established by a 1995 national survey and the new data, so we can see what the trends are.

Overall, more openness would help academics carry out related studies and also increase the public's awareness of what soil pollution is and how to protect themselves.

LL: Hunan may have a high background level of heavy metals in its soil. Did your survey take this into account?

WY: We accounted for that factor. We took control samples from a site 10 kilometres away from the industrial zone, and those control samples did not breach national standards. The government also says that heavy-metal pollution in some regions is up 50% on the 1995 baseline. That shows that the contamination is coming from industry and external sources.

LL: Hunan is a major producer of metals. How can the province balance the needs of industry with environmental demands?

WY: The conflict between economic growth and the environment remains, but a more efficient and compliant metals industry would minimise future environmental risks. First, out-of-date processes should be eliminated, and high thresholds for market entry put in place, along with strict monitoring of emissions and more careful supervision of the

At present, the provincial government may make a loss. Clean-up costs far outstrip tax income.

industry. The soil pollution problem in Hunan is the legacy of widespread building of small-scale smelters using out-of-date technology.

Adopting advanced pollution-control techniques could also help to cut heavy-metal emissions. Meanwhile smelting firms should be monitored and encouraged to report pollution data, in order to allow for better public oversight.

It's not that we can't have metals production. But it needs to be properly planned in order to reduce environmental harm.

LL: You say that the industry in Hunan will require considerable investment if it is not to harm the environment. Is it a good financial investment?

WY: At present, the provincial government may make a loss. It once calculated that it would spend 400 billion yuan (US\$675 billion) in the next two decades just on cleaning up the Xiang River. In 2011, the non-ferrous metals sector contributed just 35 billion (US\$59 billion) in taxes to the province. Clean-up costs far outstrip tax income.

Developing the sector will drive GDP and increase tax income. But the government needs to take a longer-term view, and we've seen a failure to do that in Hunan in recent years. Rampant expansion of metals production has created environmental debts that will take years to pay back.

The provincial government has started to realise this, and has mentioned the need to control this sector and shut down smaller firms as part of the Xiang clean-up. But we hope they can do better: close down the smaller plants, but also plan better for the development of the sector.

LL: Does China's soil pollution pose a threat to its food security?

WY: More detailed surveys are needed to assess how much farmland around the country has been polluted. Hunan has carried out such a survey, although the results have not been published. However the provincial authorities did announce that 19.4% of farmland sampling sites breached standards.

Soil pollution affects both the quantity and quality

of crops: yields are lower – farmers in Hengyang county reported a drop of 50% – and cadmium levels are high enough to endanger health if those crops reach the market. Pollution across such large areas of farmland will inevitably impact food security. Hunan is China's biggest rice-grower – pollution there would be a heavy blow.

LL: Do you agree with academics who have suggested that switching crops would resolve the soil pollution problem?

WY: Planting different crops to absorb the pollution is one idea, but we need to avoid a situation where crops that absorb high levels of heavy metals simply move the pollution elsewhere. And if we do change the crop structure, we need first to be clear on what pollution is present, and tell the local farmers what they shouldn't plant.

This will inevitably result in reduced rice harvests, so it won't help food security. Rice is China's staple food; we can't rely too much on imports.

LL: Who should pay to clean up China's soil pollution?

WY: It isn't actually reasonable to expect the government to pay. Internationally, the "polluter pays" principle is often used.

The EU's soil pollution directive establishes this principle in its very first article. In the UK, two principles are applied: first, identify the source of pollution. If it's industrial, the polluter pays. If the source can't be identified, then the user of the soil pays the costs of remediation.

Overall, the costs are incurred by those who damaged the soil, or those who use it. I think that's the right approach.

Very often in China, the government picks up the bill for corporate pollution, meaning all taxpayers pay for the environmental and economic harm those companies inflict. There is no pressure on the companies to change. ☺

Luna Lin is a reporter in chinadialogue's Beijing office

中国环保标准外紧内松

波士顿大学国际关系学副教授、拉美问题专家凯文·盖拉格接受中外对话采访，探讨中国的海外投资问题。

杰维斯·保尔登

中外对话：中国在拉丁美洲投资的重要性如何？

凯文·盖拉格：目前中国是该地区最重要的投资国。2010年，中国金融机构承诺的贷款额达到了370亿美元，超过了世界银行、美洲开发银行、美国进出口银行的总和。其中，中国国家开发银行贷款额占81%，中国进出口银行和中国工商银行则分别占到12%和6%。

西方和国际金融机构的贷款涉及政府、社会、环境等领域，而中国的贷款则主要集中在基础设施和重工业。另外，中方的贷款多采用企业在拉美开展项目或直接贷与地方政府的形式。例如，中方贷款在厄瓜多尔修建的水电设施就由厄瓜多尔自己管理。

中外对话：在把环境核算纳入贷款程序方面，您如何评价中国金融机构所做的工作？

盖拉格：我认为，就文字材料看，他们的工作可以评为B+，尤其

是考虑到中国的人均GDP水平。当初美国人均GDP仅为5000美元的时候，我们的煤矿里不仅依然有9岁童工的身影，而且也没人关心环境标准的问题。而中国却没有听之任之，出台了一系列指引文件，如要求所有贷款项目发放前必须提交环境影响评估报告。

从书面材料上看，他们做得很不错，能够开始考虑这些问题就很好。但是，如果要对他们所做的工作分别进行打分的话，在透明度和

问责机制方面，他们还有所欠缺。虽然出台的指引性文件要求必须提交贷前环境影响评估报告，但是，我所认识人中，没有一个人看到过这份报告。

环境核算的一个重要作用就是企业可以通过它发现风险，减少损失，公众和政府同样可以利用环境核算的这一功能。但是，中方并未向投资所在地政府或当地群众披露其所做的环境评估报告的内容。这一做法在很多国家引起了一些公民



中国目前是拉美地区最重要的投资国

组织的担忧。

中外对话：国际金融机构的做法与中国银行有何不同？

盖拉格：如果世界银行贷款兴建水电设施的话，他们会这样表明自己的态度，‘我们不会贷款修建一个会使灌溉用水、或者是当地群众长期以来的用水资源受到影响的大坝。’为了确保项目获得融资，有关方面还必须出具环境影响评估报告，并且要在网站上公布评估报告的内容。当地群众和各级政府有时间就其内容发表看法，并且展开对话。而中国方面在为大型水电项目提供贷款时是否有相应的监督程序目前还不十分清楚。

中外对话：中方是否仅仅只是遵从其它国家的环境法律，而不是采用自己的标准？

盖拉格：中国确实有他们自己的环境标准。但是，这些标准并不符合全球规范。很明显，中国希望几乎所有项目都达到所在国政府的要求。

人们曾指责美国和世界银行，认为我们在标准问题上采取内紧外松的做法。环保人士曾对美国企业说，“我们知道你们明白该怎么办，你们在加州怎么做，那么现在

在国外也应该这么做。”

有趣的是，中国的做法却是内松外紧。中国从迈出国门之始就有违海外投资国已有的公民社会准则和规范。中方贷款过程中对环境评估和咨询环节的要求较为宽松，所以，获得贷款较为容易。这让其它发展银行和大型贷款机构感觉落在了下风。因此，国际货币基金组织（IMF）和世界银行等机构便向中国伸出了橄榄枝，想要通过分享自己的最佳实践来使中国的银行走出困境。如果中国能够学习国外的做法，或许，他们可以把这些经验带回国内。

中外对话：迫使中国金融机构提高标准的压力源自哪里？

盖拉格：中国海外投资给当地环境带来了太多的问题。因此，很多重要的国际非政府组织目前都派专人对其环境影响进行监督。大多数国际非政府组织都联手项目所在发展中国家当地的合作伙伴，共同向中方施加压力。

中国的海外投资在国内也开始面临压力。但是，这些压力更多地关注于国内项目。中国海外投资仅有10-15年的历史。对于其如今的发展速度，了解的中国人并不多，而且也没有引起环保界足够的重视。

有一些国际非政府组织直接在

中国设立了办公室，比如将这些机构指导纲领翻译成英文的全球环境研究所。但是，这些组织的数量毕竟还是太少了。

中外对话：最终是否还是需要拉美国家对中国贷款施加压力，从而确保贷款项目不会破坏环境？

盖拉格：没错。在我看来，中国问题中有90%的部分是拉美地区所面临的挑战。在美欧投资停滞不前的情况下，来自中国的投资对于这一地区来说是很好的机遇。但是，拉美国家需要注意的是，中国正处于工业化发展阶段，就目前这一发展阶段而言，他们想要的大多都是资源类产品。

拉美地区需要建立相关政策和奖励机制，利用这一新的增长点来推动国家全方位的可持续发展。如若不然，15到20年后，留给他们恐怕只有土地上满目疮痍的矿眼和大批饥肠辘辘的群众！

凯文·P·盖拉格，波士顿大学国际关系学副教授，《屋中之龙：中国与拉美工业化前景》一书作者

杰维斯·保尔登，原中外对话实习生

China's environmental standards are higher overseas

Latin America expert Kevin Gallagher, professor of International Relations at Boston University, speaks to chinadialogue about Chinese overseas investment.

Gervase Poulden

chinadialogue: How important is Chinese investment in Latin America?

Kevin Gallagher: China is by far the most important lender in the region. In 2010, Chinese institutions committed \$37 billion in loans, which was more than the World Bank, the InterAmerican Development Bank and the US Export-Import Bank combined. The Chinese Development Bank was responsible for 81% of those loans, whilst the Chinese Import/Export Bank and Chinese Industrial and Commercial Bank contributed 12% and 6% respectively. Whilst loans from Western and International institutions cover a range of governmental, social and environmental projects, Chinese loans are focused on infrastructure and heavy industry. They tend to be either to a Chinese company to do a project in Latin America, or directly to a government in the region. For example, Ecuador is in charge of hydroelectric plants for which they borrowed money from the Chinese to build.

CD: How would you rate Chinese financial institutions' efforts to integrate environmental accounting into their lending practices?

“Even though their guidelines require that they do an ex-ante environmental impact statement, nobody I know has ever seen one!”

KG: I would say they deserve a B+ on paper; especially given where they are in terms of GDP per capita. When the United States was at US\$5,000 GDP per capita we still had 9-year-old boys in coalmines and did not think about environmental standards. The Chinese are trying and they are publishing guidelines, such as the requirement for ex-ante environmental impact statements for all projects they finance. On paper these folks are doing great and it's great that they are thinking about these things. But if you look at the individual scores for everything they do, the one thing they are falling very short on is transparency and accountability. Even though their guidelines require that they do an ex-ante environmental impact statement, nobody I know has ever seen one! A key component of environmental accounting is that it is supposed to be a tool for the company to identify risk and mitigate costs but it is also supposed to be a tool for the public and the government to do the same. But Chinese environmental assessments are not being shared with the host government or local communities so that is impossible. That is starting to cause some civil society concern in many countries.

CD: How are international financial institutions different from Chinese banks in their approach?

KG: When the World Bank lends you money to build a hydroelectric plant, they say “we are not going to lend you money to build a dam that is going to divert water supplies from people's irrigation or where indigenous people have lived for a long time”, and there will need to be

an Environment Impact Assessment to secure the funding for that project. The assessment goes on their webpage and there is time for comment and dialogue with local communities and governments. In the Chinese case they are lending money to big hydroelectric projects and it's not clear that the monitoring process is there.

CD: Does China simply adhere to the environmental laws of another country rather than impose its own standards?

KG: The Chinese do have their own environmental standards, but they are not up to the global norm. It is clear that in almost every case China is willing to meet the requirements of host governments. The criticism of the US and World Bank used to be that we had high standards at home but did not apply them when we went abroad. Environmentalists were able to say to US companies, "we know you know how to do this, you do it in California, so now do it abroad." What is fascinating about the Chinese case is that they have low standards at home and they have higher standards when they go abroad. When the Chinese first went abroad there were ready-made civil societies and regulations that they were breaking. Other development banks and large lenders felt like they were losing ground to the Chinese who were able to lend money more easily as they operated with less rigorous environmental and consultative processes. Organisations like the IMF and World Bank therefore reached out an olive branch to the Chinese, trying to share their best practises and help them avoid the problems they were having. If China can learn this abroad, maybe they can take the lessons back home.

CD: Where does the pressure on Chinese financial institutions to raise their standards come from?

KG: A lot of major international NGOs now have full time staff that are looking at the environmental impact of Chinese investment abroad because there have been so many local environmental problems. Most of the international NGOs work with local partners in developing countries to pressure the Chinese in those host countries. In China, there is just the beginning of domestic pressure on China's overseas investment. But the focus is much more on domestic projects. Since Chinese overseas investment is really only a 10-15 year phenomenon not a lot of Chinese people know it's happening as fast as it is and the environmental community is not so focussed on this. There are also a couple of international NGOs with offices directly in China working on this, such as the Global Environment Institute, which did a translation of these institutions' guidelines into English, but they are few and far between.

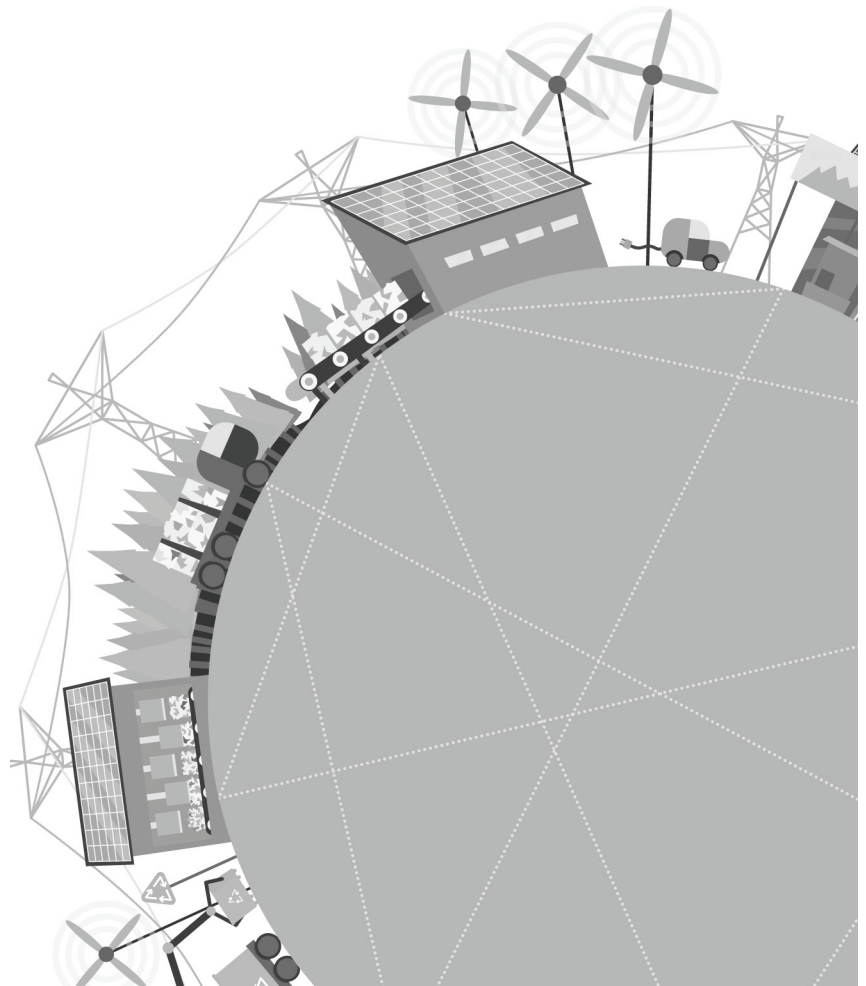
CD: Will the pressure for ensuring Chinese loans go to environmentally friendly projects ultimately need to come from Latin American countries?

KG: Yes. I see the China question as 90% of Latin America's challenge. There is a great opportunity here with Chinese investment at a time when US and European investment is sluggish at best. But they need to be careful because what the Chinese want, at their current stage of development, is very national resource-based stuff as they are in the process of industrialisation. Latin America needs to put in place the policies and incentives to use this new growth pole to channel diversified growth in a sustainable manner or in 15 to 20 years they might have a lot of holes in the ground and a lot of angry people! 🌀

Gervase Poulden is a former intern at chinadialogue

国际视角

-CHINA AND THE WORLD-



中国能源巨头中石油 进入亚马孙参与油气开采

中国石油天然气集团公司(CNPC)即将获得秘鲁油气开发特许权,覆盖亚马孙地区100多万公顷,其中部分区域环境问题严重。

大卫·希尔

如果获批,中国最大的石油天然气生产商中国石油天然气集团公司(以下简称“中石油”)将着手开发秘鲁亚马孙地区超过100万公顷的区域,这一单高达26亿美元。

这项交易于上月公布,交易双方分别是中石油控股的上市公司中国石油天然气股份有限公司(以下简称“中国石油”)和巴西国家石油公司(以下简称“巴西石油”)。很多人担心交易会对原住民、当地环境以及未来资源的控制造成影响。

公司发布声明称,交易必须经由秘鲁和中国政府批准,中国石油两个子公司将收购巴西石油秘鲁子公司一个石油区块、一个天然气区块的100%权益以及另一个天然气区块46.16%的权益。

此次收购的目标资产X区块位于秘鲁北部沙漠地区,据秘鲁石油管理局介绍,该区块是2012年秘鲁第二大产油区块。它距离中石油的子公司Sapet经营的另外两个区块非常近,去年这两个区块的产油量位居秘鲁第五。Sapet在20世纪90年代

初获得了这两个区块的特许权,标志着中石油开启海外原油生产。

两个天然气区块均位于秘鲁东南部的亚马孙雨林地区。中国石油取得100%权益的是58区,面积340133公顷,去年巴西石油称在此发现了天然气。

另一个区块是57区,多数股权为普鲁索尔公司所有。该公司12月4日发表声明称,将“在未来几周内”开始生产工作。

57、58区位置相邻,属于亚马孙地区的敏感地带,居住着阿沙宁卡(Asháninka)、卡昆特(Caquinte)、马奇根加(Machiguenga)、伊纳(Yine)等原住民部落。

在其东部是88、56区,均由阿根廷普卢斯石油公司经营,合称卡米西天然气项目,是秘鲁迄今最大的能源开发项目。尽管该项目因强迫原住民签订“自愿隔离”合同、天然气泄漏、破坏鱼类资源、酗酒事件、引入艾滋病毒/艾滋病等社会和环境问题而不断遭到批评,但88区扩建的筹备工作依然在进行中。

秘鲁非政府组织“法律、环境和自然资源”的瓦内萨·奎托说:

“中国石油面临的挑战是,要在57、58区真正实现原住民社区的可持续发展,实施透明的补偿和谈判政策,继续支持和加强其环境监测项目。公司必须积极参与秘鲁政府组织的对话,进一步实施社会责任政策以满足当地人的需求、适应当地文化。它必须意识到,当地人的需求主要集中在医疗、教育两个方面,在这样一个文化、生物多样性都很高的地区,公司必须采用较高的社会、环境标准。”

中国在亚马孙地区的油气管道计划

中石油在秘鲁亚马孙地区至少参与了两个区块的开发,即1-AB和8区。这两个区块都由普卢斯石油公司经营,2012年产量分居秘鲁首位和第四位。2003年以来,中石油获得了两个区块45%的权益,这意味着,一旦收购巴西石油的计划获得批准,中石油在秘鲁亚马孙地区参

与开发的面积将超过100万公顷，而且经营、参与的四个区块产量均排在秘鲁前五位。

秘鲁报纸Gestion报道，一位“在中国石油代表访问利马期间与之接触”的不愿透露姓名的人说，中国石油可能会买下“南方天然气输送公司”，该公司拥有在亚马孙地区和秘鲁沿海之间铺设油气管道的合同。

秘鲁圣马科斯大学的经济学家卡洛斯·阿基诺说：“看起来中国的策略似乎是要控制从开采、运输到加工的整个流程。中国希望能保证原材料的供应安全，将成为秘鲁最大的石油生产商，或许还会是最大的天然气生产商。我们与中国经济联系密切，在中国人看来，秘鲁是个做生意相对容易的国家，当然这并不是说不会遇到任何问题。”

环境之忧

在中石油参与1-AB和8区开发之前，已有公司在此经营多年，今年政府宣布三个河流域进入“环境紧急状态”。总部位于秘鲁的非政府组织Alianza Arkana称，当地“土壤和水资源的重金属、碳氢化合物含量已威胁到人体健康”。

此外，据当地联合会PUINAMUDT介绍，过去5年中共发生了100多起漏油事件。近日，普卢斯石油公司因破坏环境被罚了700万美元。

联合国原住民特别报告员詹姆斯·安纳亚对该地区进行了短暂访问，并于12月13日召开发布会说：“我亲眼看到石油开采活动给这一地区带来严重的环境问题，如当地人的饮水、土地被污染，身体健

康、食品安全也受到影响。”

Alianza Arkana的阿曼达·加勒特说：“1-AB和8区的环境、社会问题给当地居民带来灾难性的影响。如果57、58区依然由这些投资者开发，当地人就要为家人健康和环境而担心了。”

垄断之忧

中石油在秘鲁业务的扩张只是中国公司在拉美甚至整个世界投资快速增长的缩影，石油天然气领域尤甚。据路透社报道，2009年以来中国的石油公司“在拉丁美洲等地区已投入近1000亿美元购买油气田”，在秘鲁邻国厄瓜多尔，“2013年上半年，国有公司占到石油出口的85%”，“其中60%的运输都由中国石油经手”，中国公司“几乎垄断了原油出口”。

确实，中国公司业务广泛，金融服务公司Analytica Investment称，在厄瓜多尔与中国达成交易后，“由于债务违约，中国几乎可以获得厄瓜多尔除军事设备外的任何资产”，所以说厄瓜多尔此举无异于损害主权。

中国公司海外业务之所以快速扩张，一个重要原因是国内市场对原材料的需求增长迅速，但路透社的研究表明，中国公司购买的石油并非完全由国内市场消化：

“上个月一位官员告诉路透社，尽管中国的石油进口量不断增长——今年9月达到了630万桶——但中国几大国有石油公司的海外交易量超过了进口至中国的数量。作为世界第二大上市石油公司，中国石油将厄瓜多尔的原油转售给其他贸易商而非运至中国国内是完全合

法的。”

美国圣克拉拉大学法学副教授斯蒂芬·戴蒙德说：“在某种程度上，中国资源需求增长是因为中国已成为世界经济的发动机。不过，其中也有地缘政治因素。他们也许是想与某种类型的国家结成联盟，也许是想支持这些国家。这么一来，他们与厄瓜多尔总统科雷亚合作也就在情理之中了。如果中国与他们结为战略同盟，就为自己的石油和技术找到新的购买者，同时使厄瓜多尔脱离欧美。他们给中国经济带来的利益远不止原材料。”

中国石油与中石油引发的争议

近来中国石油和中石油都引发了不小的争议。中国石油因非法处理钻井垃圾而面临诉讼，中石油则因环保违规遭到中国环保部通报。此外，中国石油还陷入腐败丑闻之中，8月3名高管因此宣布辞职，公司在美国还面临诉讼。

非政府组织“全球见证”的莉齐·帕森斯说：“中国石油确实是企业界真正的巨头，而且过去十年中一直走在中国政府‘走出去’战略的前沿。它在几个动乱的国家都有投资，如尼日尔、乍得、伊拉克、南苏丹，在一些案例中它一直遵循较高的国际标准。”

巴西石油拒绝就中国石油收购做出评论，截止发稿日，记者也未能与中国石油、中石油和秘鲁矿产能源部取得联系。🌀

大卫·希尔，南美自由撰稿人

Chinese energy giant acquires Amazon resources

China National Petroleum Corporation (CNPC) is on the brink of taking on oil and gas rights across more than one million hectares of Peru's Amazon region

David Hill

China's largest oil and gas producer, China National Petroleum Corporation (CNPC), is set to take over more than one million hectares of Peru's Amazon if a US\$2.6 billion deal is approved.

The deal – announced last month by PetroChina, a listed company in which CNPC is the controlling shareholder, and Brazil's state oil and gas company, Petrobras – is already arousing concerns about its potential impact on indigenous peoples, the environment and future control of resources in the region.

According to company statements, the deal must be approved by both Peruvian and Chinese governments and it involves the sale by Petrobras's Peru subsidiary of 100% stakes in one oil and one gas concession and a 46% stake in another gas concession to two PetroChina subsidiaries.

The oil concession, Lot X, is in Peru's northern desert region which, according to Perupetro, the state agency promoting oil and gas operations, was the second most productive oil concession in the country in 2012. It is extremely close to two other concessions operated by another CNPC subsidiary, Sapet, which were acquired in the early 1990s, marked CNPC's first foreign oil production, and together were Peru's fifth most productive concession last year.

By contrast, the two gas concessions are both in the south-east of the country in the Amazon rainforest. The concession in which PetroChina will have a 100% stake is Lot 58, a 340,133 hectare area where Petrobras announced it had made a discovery last year.

The other concession, Lot 57, is majority-owned

by Repsol where, according to a 4 December Perupetro statement, production will begin “in the next few weeks.”

Lot 57 and Lot 58 are contiguous and in a highly sensitive Amazon region inhabited by indigenous peoples including the Asháninka, Caquinte, Machiguenga and Yine.

Immediately to the east are two other concessions, Lot 88 and Lot 56, both run by Pluspetrol and together known as the Camisea gas project. These two concessions constitute Peru's biggest ever energy development and plans are currently afoot to expand operations in Lot 88, despite serious criticism of social and environmental impacts such as forced contact with indigenous peoples in “voluntary isolation”, gas leaks, declining fish stocks, alcoholism, and the arrival of new illnesses including HIV/AIDS.

“PetroChina's challenge is to help create truly sustainable development in the indigenous communities in Lots 57 and 58, implement transparent policies of compensation and negotiation, and continue to support and strengthen their environmental monitoring programmes,” said Vanessa Cueto, from Peruvian NGO DAR. “The company must participate actively in dialogue organised by the state, and broaden its social responsibility policies

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CNPC's expansion in Peru is part of a rapid, much wider expansion by Chinese firms in Latin America and the world.
”



CNPC is already involved in at least two other concessions in Peru's Amazon region

to meet the needs and cultures of local people. It must be aware that their main needs revolve around health and education, and it must apply the highest social and environmental standards in a region of such high cultural and biological diversity.”

China's Amazon pipeline plans

CNPC is already involved in at least two other concessions in Peru's Amazon, Lot 1-AB and Lot 8, both of which are run by Pluspetrol and were two of Peru's most productive oil concessions in 2012. CNPC has held 45% stakes in both lots since 2003, meaning that if the Petrobras deal is approved, CNPC will operate across more than one million hectares of Peru's Amazon and it will be running or participating in four of the country's five most productive oil concessions.

It has also been reported, by Peruvian newspaper *Gestion*, citing an anonymous source who “was in contact with PetroChina representatives during a recent visit to Lima”, that PetroChina could buy a consortium called Kuntur Transportadora de Gas which has a contract to build a pipeline network from the Amazon to Peru's coast.

“That looks like a Chinese strategy to control the entire process, from the exploitation, to the transportation and the

processing,” says Carlos Aquino, an economist at Peru's San Marcos University. “China wants to secure supplies of raw materials and is on track to become the biggest producer of oil and maybe of gas in Peru. We have very close economic ties and in Chinese eyes Peru is a relatively easy country in which to do business, although that's not to say there aren't problems.”

Environmental concerns

Although companies have operated in Lot 1-AB and Lot 8 for many years before CNPC became involved, the government declared three “environmental emergencies” in three river basins this year after “life threatening levels of heavy metals and hydrocarbons were found in soil and water sources”, as Peru-based NGO Alianza Arkana described it.

In addition, there have been over 100 spills in the last five years, according to a collective of indigenous federations called PUINAMUDT, and Pluspetrol was recently fined more than US\$7 million for environmental damages.

“I've personally witnessed the serious environmental problems that exist in this region as a result of oil activity,” the UN's Special Rapporteur on Indigenous Peoples, James

Anaya, told a press conference in Lima on 13 December after a brief visit. “This includes the contamination of water and soil used by the indigenous people and which is affecting their health and food sources.”

Monopoly fears

CNPC’s expansion in Peru is part of a rapid, much wider expansion by Chinese firms in Latin America and the world, and the oil and gas industry in particular. According to Reuters, Chinese oil firms “have spent some US\$100 billion [since 2009] to buy oil and gas fields, in Latin America and elsewhere” and in Peru’s neighbour Ecuador they have established a “near monopoly control of crude exports”, with “state-controlled firms. . . allocated 83% of Ecuador’s oil exports” in mid-2013 and “about 60% of these oil shipments. . . handled by PetroChina.”

Indeed, China’s power is so extensive that some argue Ecuador has compromised its own sovereignty following a deal allowing China “to seize almost any assets short of military equipment in the event that Ecuador falls into arrears with payments”, according to Analytica Investment.

A key reason for China’s expansion is its growing domestic need for raw materials, but as Reuters’ research shows, oil bought by Chinese firms doesn’t necessarily end up in China:

“Although China’s oil imports are rising - they reached around 6.3 million barrels per day in September - several of its state oil firms now trade more oil abroad than they import to China, an official told Reuters last month. . . It is perfectly legal for PetroChina, the world’s No. 2 publicly-traded oil firm, to enlist traders to market Ecuador’s crude, little of which is shipped to China.”


“At one level there’s a raw need for resources because China has become the world economy’s industrial powerhouse,” said Stephen Diamond, associate professor

of law at Santa Clara University in the US. “But there’s a geopolitical piece to this too. They’re either trying to exploit alliances with certain types of regimes, or they have a motivation for strengthening those regimes. It’s no surprise they’re working with [President Rafael] Correa in Ecuador. If the Chinese can build up a strategic alliance, they can offer an alternative sales outlet for their oil and technologies and help move Ecuador away from the USA or Europe. That would benefit China’s economy beyond just raw materials.”

PetroChina and CNPC controversy

Both CNPC and PetroChina have also attracted considerable controversy for their domestic conduct recently – with one announcement that PetroChina will be sued for illegally disposing drilling waste in Jilin province, and another that CNPC has been found guilty of environmental misconduct by China’s Ministry of Environmental Protection. In addition, PetroChina has found itself at the heart of a domestic corruption scandal, which led to three senior officials resigning in August and a lawsuit being filed against the company in the US.

“Petrochina’s a true giant of the corporate world and has been at the forefront of the Chinese government’s ‘going out strategy’ over the past decade,” said Lizzie Parsons, from NGO Global Witness. “It operates in several high risk countries such as Niger, Chad, Iraq and South Sudan, and in some cases it operates according to the best international standards.”

Petrobras declined to comment on its sale to PetroChina, and neither PetroChina, CNPC nor Peru’s Ministry of Mines and Energy could be reached. 

David Hill is a freelance journalist based in South America

可口可乐公司在缅甸的运营报告能否成为其他企业的楷模？

在中国企业海外经营面临越来越大压力的情况下，可口可乐公司在缅甸的做法能否为中国企业提供有益的启示？

唐娜·格斯特

可口可乐公司近日依照《负责任投资报告要求》首次向美国国务院提交报告说明其在缅甸经营的情况。《负责任投资报告要求》适用于所有在缅甸投资50万美元以上的美国企业。

基于对缅甸当局改革措施的认可，美国政府放松了对缅甸的制裁措施，但要求新近获准在缅甸投资的美国企业提交报告。美国国务院此前表示，报告制度旨在帮助美国企业减轻投资带来的负面影响，使公民社会得以更有力地监督企业在缅甸的投资，并与企业一起促进负责任的投资行为。

报告要求涵盖了企业在缅甸进行商业经营的关键业务领域，包括土地收购、劳动权益、申诉机制、利益相关方参与、反腐败、与军方的沟通以及环境政策和流程。按规定，企业应在投资总额达到50万美元水平之后的180天内提交报告，并在此后每年提交一次。

那么可口可乐公司的报告与其他企业提交的报告相比水平如何，

又是否该被其他企业视为榜样呢？

首先，自《要求》2013年5月生效以来已有六家企业公布了报告，应该说可口可乐公司的报告是这六家中实质性内容最丰富、最全面的一份。人权与工商业研究院（IHRB）认为，可口可乐公司这份报告的长处在于它不仅写明了公司采取的积极措施，还指出了其面临的人权方面的挑战。

第二，可口可乐公司的报告公布了其按照联合国《工商业和人权

指导原则》的规定进行人权方面尽职调查的情况，这在企业中是少见的。根据这份报告，可口可乐公司2009年就预计缅甸将开放投资并开始在该国开展尽职调查活动，远早在美国国务院提出报告要求之前。

值得注意的是，可口可乐做上述工作的初衷并非为了满足监管要求，而是为了符合公司内部政策规定，并研究如何在缅甸这样一个高风险市场经营。这大概就是这份报告传达出的最重要的信息——这份



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负责人投资报告制度旨在帮助美国企业减少投资带来的负面影响

报告并非为了满足美国报告要求而做出的最低限度努力，而是一个显然十分周全的尽职调查过程，能帮助企业按照联合国《工商业和人权指导原则》内容和精神的方式在高风险环境中进行经营。另外，这份报告为其他将要遵守美国报告要求的企业树立了榜样。

可口可乐的报告开篇描述的其进行尽职调查的过程给其他企业提供了有益的启示。可口可乐公司聘请独立专家和审计师进行初步的风险评估，并与一系列利益相关方进行沟通。在缅甸腐败盛行的背景下，可口可乐公司将减少疏通费用作为首要目标，这是另外一个令人振奋的举措。

在腐败、人权和工作场所权益方面，员工可以通过多种机制对违反上述政策的行为进行申诉。可口可乐还明确提出，希望其供应商也要建立申诉机制。

报告接着提供了在可口可乐公司收购的两座工厂中进行的人权和工作场所权益评估的详细结果。评估发现在上述工厂中存在性别歧视的现象，女性员工的工资比男性员工低11%；加班时间超过法定限度（这是缅甸另一个十分严重的问题），加班费不是计算错误就是根本没有；此外，一些生产设施有排放未经处理的废水的现象。对于这些问题，报告都提出了改正方案。

可口可乐还与人权与工商业研究院和丹麦人权研究院联合建立的缅甸负责商业中心（Myanmar

Centre for Responsible Business）合作作为供应商提供工商业与人权方面的培训，并安排当地工会人士介绍情况。

可口可乐聘请独立专家开展环境方面的尽职调查，并依据评估结果制定了整改方案。可口可乐认为，在缅甸环境保护法律及监管框架极其脆弱的背景下，上述举措至关重要——虽然缅甸2012年出台了环境法，但到目前为止还没有针对水污染和空气质量等问题的法规。


可口可乐大范围地与各类利益相关方接触，以尽可能地减轻投资对缅甸人权状况的负面影响。我们希望可口可乐能在接下来的报告中进一步阐述上述沟通的细节，接触中提到了哪些问题，以及这些问题是如何解决的。一个值得关注的方面就是可口可乐通过什么渠道接受非员工利益相关方的申诉。

报告表示，报告期间可口可乐公司并未收购任何土地。可口可乐前期进行的调查未能弄清土地所有人如何从政府获得土地，而这也反映了外国投资企业对缅甸土地所有问题的关切。土地领域的法律和法规十分复杂，而且规定各异，因此很难确定土地所有的历史情况。另外在过去几十年中，缅甸农村地区强占土地和强行迫迁的问题一直存在。随着缅甸对外开放、土地价格上涨，土地侵权问题将更加严重。

在这方面，可口可乐近日承诺在全球范围内对强占土地实行零容忍政策，人权与工商业研究院对此

表示欢迎。随着可口可乐从本地获得的原料越来越多，特别是在其开始更多使用缅甸本地生产的糖料的情况下，土地将是一个重要的风险因素。虽然现存的工厂可能不存在明显的与土地有关的风险，可口可乐在构建供应链的过程中如何解决土地等风险将值得我们的关注。

据说可口可乐为使其在缅甸经营行为合规而进行的尽职调查和审计共花费了上百万美元。但这一支出应该与可口可乐的规模、盈利状况以及其将在缅甸投入的2亿美元放在一起看待。当企业进入缅甸这样的高风险市场时，进入成本必然会高。对于一个规模像可口可乐这么大并准备在新兴市场进行长期投资的企业来说，这样的成本是它可以承受的。的确，在可口可乐全球经营面临严格监管的情况下，这份成本是不花不行的。

可口可乐对其在缅甸经营做出的首份报告为其他企业定下了一个很高的标准。这份报告以及可口可乐公司负责经商的做法不仅对于那些面临类似挑战的缅甸地方企业和外国投资企业大有裨益，对于其他正在进入“前沿市场”的企业来说也有很大的参考借鉴价值。也许更为重要的是，可口可乐的报告为缅甸公民社会和社区组织就重要人权事宜与企业进行沟通提供了一个绝佳的起点。 

唐娜·格斯特，人权与工商业研究院高级顾问

Coca-Cola in Myanmar – a model for others?

As pressure grows on Chinese companies operating overseas, does Coca-Cola's approach in Myanmar offer a way forward?

Donna Guest

The Coca-Cola Company recently submitted its first report on its Myanmar operations to the US State Department under the Responsible Investment Reporting Requirements required of all US companies investing more than US\$500,000 in Myanmar.

In recognition of Myanmar's reform efforts, the US government eased sanctions but established reporting requirements for newly authorised investment in the country. The State Department has said the reports are intended to help companies address impacts and empower civil society to monitor investment in Myanmar and work with companies to promote responsible investment.

The US reporting requirements cover key areas of business operations in Myanmar including land acquisition, labour rights, grievance mechanisms, stakeholder engagement, anti-corruption, communications with the military, and environmental policies and procedures. Companies are due to submit reports 180 days after meeting the US\$500,000 investment threshold, and annually thereafter.

A model for overseas companies?

So how does the Coca-Cola report match up with those

submitted thus far, and should it be seen as a model for others?

First, it should be said that Coca Cola's report is by far the most substantive and comprehensive of the six reports which have been made public since the requirements came into force in May 2013. The Institute for Human Rights and Business (IHRB) commends Coca-Cola for publicly reporting not only on the positive steps it has taken but also ongoing human rights challenges it faces.

Second, the report serves as a rare example of a company reporting transparently on how it has undertaken human rights due diligence in line with the UN Guiding Principles on Business and Human Rights.

It is important to note that this process appears to be driven not by regulatory requirements but to meet the company's internal policies and to figure out how it would do so in a high-risk environment like Myanmar. This is probably the most important message from the report – not how to do the minimum to meet the US reporting requirements, but instead an apparently thoughtful and well-structured due diligence process that supports the company in doing business in high risk environments in a manner that is aligned with the content and spirit of the UN Guiding Principles on Business and Human Rights. At the same

“With the country opening up to foreign investment and land prices escalating, the risk of land rights abuses has increased.”

time, the report sets an important precedent for subsequent reporters under the US Reporting Requirements.

Coca-Cola's report sets out a description of the company's due diligence processes that will provide useful tips for other businesses. The company used independent experts and auditors to conduct an initial risk assessment and engaged with a broad range of stakeholders. The company has prioritised the prevention and elimination of facilitation payments, another welcome step.

With regard to corruption, and human and workplace rights, employees can make complaints about violations of these policies through several mechanisms. Coca-Cola also makes clear that it expects its suppliers to establish grievance mechanisms.

The report goes on to provide details about the results of human and workplace rights assessments in the two plants Coca-Cola acquired. Some of the findings include gender discrimination, with women being paid approximately 11% less than male colleagues; overtime above the legal limits and overtime payments either incorrectly calculated or not provided at all; and the discharge of untreated wastewater from facilities. A plan for corrective action was developed on these and other issues.

As part of training efforts, the Myanmar Centre for Responsible Business (IHRB's joint initiative with the Danish Institute for Human Rights) worked with Coca-Cola on an initial training session for its suppliers on business and human rights, and arranged for a briefing by a local trade unionist.

Environmental due diligence was conducted by an independent external expert and a corrective action plan was put in place, which Coca-Cola recognised was crucial given the weak environmental legal and regulatory frameworks in Myanmar – although an Environment Law was adopted in 2012, no regulations are yet in place covering issues such as water pollution and air quality.


The company has developed a wide stakeholder engagement program to address the high risk of adverse human rights impacts in Myanmar, and we hope that Coca Cola's next reports will highlight how this is being developed, what issues are being raised and how they are

being addressed. One particular aspect to focus on will be what complaints and grievance mechanisms Coca-Cola is using with non-employee stakeholders.

Land grabs

The report explains that the company did not acquire any land during the reporting period. Coca-Cola's investigations were not able to establish how the land had originally been acquired from the government, which highlights a major concern with regard to land tenure in Myanmar. Land laws and regulations are complicated and not properly harmonised and it is difficult to establish the history of legal tenure. Moreover land grabs and forced evictions in both rural and urban areas in Myanmar have been ongoing for decades. With the country opening up to foreign investment and land prices escalating, the risk of these land rights abuses has increased.

In this regard, IHRB welcomes Coca-Cola's recent commitment of zero tolerance for land grabs globally. As Coca-Cola starts to source more local inputs, and in particular if it switches to sourcing Myanmar sugar, land grabs will be a key risk. While there may be no obvious land risks related to current plants, it will be interesting to learn how Coca-Cola is addressing land grabs and other risks that will arise as it builds a local supply chain.

Coca Cola's first report on its operations in Myanmar has set a high bar for other companies to meet. This report and Coca Cola's approach to responsible business conduct will be a useful resource for Myanmar companies who face similar challenges and for international companies investing in the country, but also for companies entering other "frontier markets". Perhaps most importantly, Coca Cola's report has also provided a helpful starting point for Myanmar civil society and community-based organisations to engage with it and other companies on these important issues. 

Donna Guest is a senior advisor at the Institute for Human Rights and Business

中国能够摆脱“碳锁定”效应

化石燃料价格上涨、物流问题、环境破坏以及公众日益增强的反对之声，都能帮助中国重新走上低碳发展路径。

琳达·韦斯曼

不能否认，中国的碳排放形势非常严峻。中国已经是世界上最大的能源消费国。但是，据国际能源署（IEA，政府间能源政策顾问机构）预测，2007-2030年，其能源需求还将翻一番。由于中国70%左右的电力依然依靠燃煤，因此，随着能源需求的扩大，碳排放量也会大增。2006年中国已经成为世界上排放量最大的国家，再过几十年，到2030年，全球排放增长中预计将有四分之三来自中国。

为了应对这一趋势，中国领导人制定了很多宏伟的低碳目标。“十二五”规划中就纳入了主要针对工业企业和电力部门的强制能源标准和减排目标。虽然这些标准和目标取得了显著进展，但是，中国的低碳工作究竟能够在多大程度上取得成效则受到某些“碳锁定”因素的制约；社会技术系统领域的研究认为，化石燃料体系已深深地根植于社会之中，要改变难度很大。

化石燃料体系的这种难于撼动的局面就是人们常说的“碳锁定效应”，即高碳技术、基础设施体

系、经济结构和社会结构之间存在的相互联系、相辅相成的关系。碳锁定效应由三个层面的因素构成——实体系统、规章制度、企业利益。

第一个层面的锁定效应主要来自于高碳基础设施投资。在中国，这类锁定效应非常可观，其中最大的一部分就是燃煤电厂的沉没投资。“十一五”规划期间，中国计划通过关停并转小型低效电站来提高电力部门的能效。然而，煤电的需求不止，新建电厂投资就不会停。新建的电厂将会在未来几十年里继续生产下去。到2035年，这些燃煤电厂正常经营周期内锁定的碳排放将超过850亿吨，高于美国同期

理想和价值观造成的碳锁定效应源自中国过于看重经济增长。这些增长目标与最后一种锁定效应密切相关，涉及企业的利益。

锁定的碳排放总量。

工业部门也存在类似的锁定效应。工业能源消耗占中国能源消耗总量的三分之二，其中大部分为电机的能耗。由于大部分电机的能效低于最佳能效标准，采取措施进一步提高能效或许能够降低排放。然而，这种升级措施提高的能效可能只有几个百分点而已。过去几十年，大量投资快速流入工业部门。据IEA估计，到2035年，中国工业设备锁定的碳排放将达440亿吨左右，几乎相当于2020年全球温升不超过2摄氏度所允许的总排放量。

建筑领域所用的材料也存在碳锁定效应。建筑能源消耗在中国能耗中所占份额有限，到2035年锁定的排放量仅为80亿吨。然而，随着建筑行业投资规模的加大，其碳足迹也在快速增加。2002至2007年，中国排放增长中大约有60%左右出自资本投资，而大型建设项目投资是导致排放增长的主要因素。建筑行业及其供应链（如钢铁和水泥）的扩张促进了碳排放密集型产业活动。很多快速增长的中国城市也开



化石燃料体系深深根植于社会之中,这种难于撼动的局面就是人们常说的“碳锁定效应”

始出现无序扩张的趋势,从而陷入低能效的发展模式。

第二种碳锁定效应源自支撑和强化高碳体系的各种规则,其中包括规制(立法、市场规则),认知(习惯和惯例)以及规范(理想和价值观)。

在中国,这里面还包括与高能耗单位签订的合同。例如,与大型工业企业签订的合同,以及他们与供应商和员工签订的法律协议等。另外,还包括市场化因素,如化石燃料补贴等,虽然这些补贴正在逐渐退出历史舞台。低碳技术成本过高也是一个重要的市场壁垒。工业和建筑行业的私营企业倾向于选择具有成本效益的解决方案,而绿色发展往往不在其选择范围之内。例如,安装环保设备或者采用工业回收技术的成本对于小型工厂来说通常很高。同样,绿色建筑和生态城市建设在众人眼中也往往代表着高

成本,而并非常规的建筑标准。

与这一问题相关的是,包括规划方、工程技术方、设计方以往经验在内的各种习惯也会给低碳发展带来障碍。他们在节能建筑施工等低碳技术应用领域缺少经验阻碍了低碳实践的推广。

理想和价值观造成的碳锁定效应源自中国过于看重经济增长。这些增长目标与最后一种锁定效应密切相关,涉及企业的利益。研究表明,工业单位和能源企业等实力雄厚的企业,他们的既得利益往往会成为低碳发展的障碍。这类组织在中国的影响力虽然在人们看来相当可观,但是,由于决策过程不透明,仍然无法对其进行估量。从国家石油企业(NOC)和地方产业能够成功地影响石油(以保护生产方)、电力(以保护最终用户)的价格就可见一斑。而这一影响也使化石燃料的生产和消费有了持续下

去的支撑点。

另外,主要决策者一般会将经济发展作为他们的首要发展任务,从而为高碳经济发展提供了立足点。究其原因,首先是因为中国地方领导干部的业绩考核机制主要以经济增长作为奖励标准。虽然能效已经成为一项“硬性”业绩考核目标,但是,地方干部仍然将增长置于环境绩效之上。其次,中国的金融体制限制了地方政府的收入,从而促使地方领导愿意支持那些能够扩大税收、创造预算外收入的经济活动。这些首要因素导致那些创收快、排放高的活动受到鼓励,如产业扩张、土地开发建设等。

社会技术变革领域的研究认为,假以时日,随着变革压力的增大,多个社会部门就会开始做出响应。到那个时候,碳锁定效应是可以打破的。而在中国,变革的压力源自价格上涨、物流问题、环境破坏、公众日益增强的反对之声等与化石燃料使用相关的问题。应对这些压力的方法包括颁布政策鼓励使用替代能源、经济结构调整向低排放领域倾斜以及推广低碳技术等。

这些动态的发展趋势或许就是我们实现低碳未来与经济发展并举的希望。当前的优先发展目标 and 规划实践决定着未来锁定的碳排放,因此,需要从今天开始对其进行改革,才不会被关在低碳发展机遇的大门之外。 ☺

琳达·韦斯曼, 伦敦大学学院博士生

Can China break its carbon lock-ins?

Rising fossil fuel prices, logistical problems and growing public opposition can help re-direct China towards low-carbon development

Linda Westman

It has become impossible to deny the urgency of China's carbon emission challenge. Already the world's largest energy consumer, China's energy demand is predicted to double between 2007 and 2030, according to the IEA. As power generation continues to be 70% reliant on coal, this expansion is associated with an enormous increase in carbon emissions. China became the world's largest emitter in 2006, and is expected to contribute three-quarters of the growth of global emissions until 2030.

China's leadership has adopted a number of ambitious low-carbon goals in response to these trends. The most recent Five-Year-Plan (FYP) incorporated mandatory energy standards and emission targets, primarily for industrial units and the power generation sector, which have led to significant progress. However, the extent to which China's low-carbon efforts may be successful is limited; fossil fuel systems are difficult to change because they are already embedded in society. This resistance is often referred to as "carbon lock-ins", a concept that describes how high-carbon technologies, infrastructural systems and economic and social structures are interconnected and mutually reinforcing. Carbon lock-ins are created on three dimensions: physical systems, rules and actor interests.

Carbon lock-ins

The first set of lock-ins consists of investments into high-carbon infrastructure. In China, such lock-ins are considerable – the largest consist of investments into coal plants. China's 11th FYP included a strategy of improving the efficiency of the power sector through shut-downs and

retrofits of small, inefficient plants. However, the continued need for coal power generation required investments into new plants that will be active decades into the future. The operation of these coal plants over a normal economic lifetime accounts for locked-in emissions of over 85 gigatonnes until 2035. This is an amount larger than the total locked-in emissions of the US over the same period.

Similar lock-ins exist in the industrial sector. Industry accounts for about two-thirds of China's energy use, out of which the majority is consumed by electric generation. As a large proportion of industrial machinery operates below optimum energy standards, further adoption of efficiency measures may contribute to reduced emissions. However, such upgrading will likely only raise efficiency by a few percentage points. Due to the large and rapid investments into the industrial sector over the past decades, the International Energy Agency (IEA) estimates that around 44 gigatonnes of carbon emissions is locked into industrial equipment until 2035. This is equivalent to the estimated total size that global emissions are allowed to reach in 2020, for global temperatures not to rise above two degrees Celsius.

Material carbon lock-ins also exist in the built

“These dynamics may hold the promise of a low-carbon future to come hand-in-hand with economic development.”

environment. The share of energy consumed by buildings remains comparatively limited in China and locked-in emissions amount to only about 8 gigatonnes until 2035. However, large investments into the construction sector contribute to a rapidly deteriorating carbon footprint. Out of China's increase in emissions between 2002 and 2007, around 60% was created through capital investments, with investments into large construction projects acting as a key driver of emission growth. The expansion of the construction sector and its supply chain (e.g. steel and cement) thus fuels the growth of carbon-intense industrial activities. Many rapidly growing cities in China are also beginning to display tendencies towards urban sprawl, which may lock cities into unplanned urban shapes that are not optimal in terms of energy use.

The second form of carbon lock-in consists of rules that support and reinforce high-carbon systems. This includes regulative rules (legislation, market rules), cognitive rules (habits and routines), and normative rules (ideals and values).

In China, this includes existing contracts with high energy using units, such as contracts signed with large industrial enterprises and their legal agreements with suppliers and staff. It also includes market-based factors, such as subsidies for fossil fuels, although these are being gradually phased out. A crucial market barrier is made up of prohibitively high costs of adopting low-carbon technologies. Private actors in the industrial and construction sectors tend to opt for cost-efficient solutions that often exclude green development. For example, the cost of installing environmental protection equipment or industrial recycling technologies is often too high for small factories. Similarly, green construction and eco-city building are often seen as high-cost options rather than common building standards.

In relation to this issue, habits that create a barrier to low-carbon developments include the experience of planners, engineers and designers. Their lack of experience in the adoption of low-carbon technologies, for example ways to construct energy saving buildings, prevents the spread of low-carbon practises.


GDP growth is still king

Ideals and values contribute to carbon lock-ins in China through the over-arching priority attached to economic

growth. These growth ideals are closely related to the last form of lock-ins, made up of actor interests. Research shows that vested interests of powerful actors, such as industrial units and energy enterprises, tend to act as a barrier to low-carbon development. In China, the influence of such organisations is thought to be considerable, but it remains opaque, due to the lack of transparency of policy-making processes. It has been suggested that the influence of national oil companies (NOCs) and local industry has been visible through their success in influencing prices of oil (to protect producers) and electricity (to protect end users), supporting continued production and consumption of fossil fuels.

Moreover, the development interests of key decision makers tend to be based on economic priorities that support high-carbon development. This is, firstly, because China's performance evaluation system primarily rewards local leaders for creating economic growth. Although energy efficiency has been turned into a "hard" performance target, local leaders continue to prioritise growth over environmental performance. Secondly, as China's financial system limits local government income, local leaders are incentivised to support activities that expand their tax-base and create off-budget income. These priorities lead to encouragement of rapid, revenue-creating activities, which tend to be high-carbon development options: industrial expansion, land development and construction.

Research on sociotechnical change suggests that over time, carbon lock-ins can be broken when pressure for change rises and responses begin to develop in multiple sectors of society. In China, pressure for change is caused by issues related with fossil fuel use, such as rising prices, logistical problems, environmental damage and growing public opposition. Responses to these pressures include policies that encourage the adoption of alternative energy sources and economic restructuring towards low-emission sectors, as well as popularisation of low-carbon technologies.

These dynamics may hold the promise of a low-carbon future to come hand-in-hand with economic development. But current development priorities and planning practises determine the carbon lock-ins of tomorrow. These need to be re-framed today, to avoid further closure of low-emission windows of opportunity. 

Linda Westman is a PhD candidate at University College London

向消耗和浪费说再见

基于回收利用和产品升级的循环经济，受到了包括可口可乐以及联合利华在内的越来越多的企业的青睐。

玛蒂尔达·李

如果你已经用上了城市公共自行车，加入了一家汽车俱乐部，与邻居分享园艺工具，或者“交换来的”衣物，那你就已经参与到循环经济中来了。这一运动旨在用一种全新的消费方式来替代“占有、制造、处理”的消费文化，这种新方式并不一定会降低消费水平，但会提高消费效果。

专家们指出，循环经济中今天的产品并不会被扔掉，而是以昨天的价格成为明天的原材料。

据估计，未来二十年全世界中产阶级消费者将增加成百上千万人，因此循环经济的理念得到了越来越多的支持，其中既有急欲占领新市场又面临资源短缺威胁的跨国公司，也有苦于应付不断加剧的污染和碳排放的各国政府。在这样一个闭环系统中，产品都模仿自然设计，零部件都完全可循环利用或可以升级。对产业界来说，循环经济最吸引人之处在于其重点是经济收益，环保效益不过是副产品。

“循环经济与我们的消费文化并不矛盾，这是因为如果能用一种

再生方式把产品和材料保留在技术圈内，把生物材料放回生物圈内的话，就会大大提高材料的利用率，大大降低能源和水的需求，并且减少碳影响。”艾伦-麦克阿瑟基金会的“循环经济100”项目主管安德鲁·莫莱如是说。

“我们对那些中等生命周期，即3-10年的商品做过研究，范围从手机到电脑，发现其中可以通过循环经济的原料代替获取的价值高达6500亿美元。比如，一体式智能手机用坏了也不能拆，但如果改变一下设计，使用那些可以分离的部件，就可以升级，而不是让它们变成一次性产品。这不会增加生产成本，但却能再利用。”莫莱说。

绿色联盟循环经济工作组的约翰尼·哈泽尔指出，尽管相当长时期内还看不到设计阶段的变化，但

整个价值链上的产业界都可以参与到循环经济中来。厂商可以通过采购要求增加对回收或再用产品的需求。他提到了英国的“闭环回收”，该项目已经与玛莎百货和可口可乐签订了为期十年的承购合同，这样就有资金建立自己的工厂，玛莎百货等将收购其回收的PET和HDPE塑料瓶，并由威立雅环境服务公司向其提供从家庭回收的瓶子。

安德鲁·莫勒特说，跨国公司转向循环经济是由利益驱动的，而非为了良好的公共关系。他说，雷诺在其传动系统和引擎的再制造中雄心勃勃，生产中所用的能源、水和碳的75%甚至更多实现了再利用。“他们可以把这些以较低成本再制造的汽车零件卖出去，获得更高的利润。同样的，联合利华正在

中国现在水、能源和污染问题都非常严重，必须找到能够治本的办法，不能只是抑制消费。



废旧瓶子做的凉亭。循环经济中的产品不会被扔掉，而是作为原材料生产新的产品

寻求发起一场全行业的行动，以保证包装中所用的回收聚丙烯有更好的供应。而翠丰集团（欧洲最大的家居建材零售商）则旨在未来十年中通过出租、返回、产品设计和使用的其他类型的塑料实现其200种产品的循环。”他说：“这些商业案例是极富吸引力的，这些投入对利润和股东回报具有积极的影响。”

约翰尼·哈泽尔说，对企业来说，比设计可持续性的产品更难的是摆脱以“每年都把一个新产品卖给某人的”为基础的商业模式。“随着所有权责任回到他们身上，产业界大大改变了与消费者的关系。在实践中，这意味着把维修合同和一个生命周期很长的产品一起卖出，或者出租产品，甚或回购对其进行再生产，并在新市场上出售。”他还说，（企业）之所以不太采用租赁的方式，是因为“顾客诉求不够强烈”。“现在很少有租

赁方案能够靠比购买产品更加经济实惠的方式来打动顾客。买不起才会租，现在仍然是这样，因为从更长远来说你的情况会更坏。”

萨宾·欧伯尔胡波是Turntoo公司的共同创立者，这家荷兰公司为循环经济开发和落实新的商业模式。他说，循环经济的重点在于产品表现，而非产品所有权。Turntoo公司的首个任务是RAU内部的建筑师与供货商一起制订可循环经济概念。“在RAU的办公室，照明、地毯和家居都作为一项服务来付费。飞利浦公司安装了照明设备，由于他们支付照明费，照明系统的设计就利用LED灯泡、感应系统和工作区上方的浮动‘天花板’将电耗降到最低。这样就节约了一半的能源。我们支付固定的月租费，其他都由他们负责。”飞利浦公司目前正在逐步推广“照明是服务”的概念，实际上就是用户为获得照明而

付费。荷兰地毯制造商Desso公司和家具厂商Steelcase公司也基于上述“表现”大于“所有”的理念，将可分解、可回收的办公家具出租给办公室。

约翰尼·哈泽尔指出，欧盟的《废弃电子电气设备指令》（WEEE，指明如何处理废弃材料）等政府立法在某些情况下与企业在报废后回收材料的能力相左。在欧盟层面上，规定产品的能效《生态设计指令》应该扩展，包括对电子及其他产品的耐久性、可修复性、可回收性要求。他说：“我们已经看到此类立法推动了汽车产业的变化，欧盟的报废车辆指令要求按照重量计算，汽车85%的部件应该是可回收的。此举引发了变化，尤其是在汽车零件及其标记中使用的塑料，使其更容易被用于回收。另外还应该提高在材料而非劳动上的税收，这样能够减少来自资源密集型商业模式的浪费。”

中国这样一个从出口型生产转向内需型生产的国家，与循环经济相容吗？莫勒特说二者不仅相容，而且“这是一个中国必须彻底探索循环经济的很有说服力的理由。新的中产阶级会导致有限的资源更加紧缺、价格飙升。伴随这一趋势，人们对于提高效率的模式兴趣也会与日俱增。对消费者自身来说，新的所有模式、可再利用的产品以及新产业出现的机会非常大。中国现在水、能源和污染问题都非常严重，必须找到能够治本的办法，不能只是抑制消费。”

玛蒂尔达·李，自由撰稿人

What is the circular economy?

An economy based on recycling and upgrading products is already attracting the support of a growing number of global businesses, including Coca-Cola and Unilever

Matilda Lee

If you have ever hired a city bike, joined a car club, shared garden tools within your neighborhood or “swapped” clothes, you have taken part in the circular economy, a movement that aims to replace the linear “take, make and dispose” culture of consumption with a radical new way of consuming not necessarily less, but better.

The idea is backed by a growing number of multinationals anxious to capture new markets but threatened by exposure to resource scarcity, and by governments forced to contend with rising pollution and carbon emissions. In such a closed-loop system, products are designed to mimic nature, with parts manufactured to be totally recyclable or upgradable. What is most appealing about the circular economy, for businesses, is that its focus is on economic benefits; gains for the environment are simply a by-product.

“The circular economy is not incompatible with our consumer culture because if products and materials can be kept in the technosphere, and biological materials placed back into the biosphere in a regenerative way, there is a vastly more efficient use of materials, much lower demands on energy and water, and less carbon impact,” says Andrew Morlet, who runs the circular economy 100 programme at the Ellen MacArthur Foundation.

“We did research into medium-life complex goods, those with three to 10 year life spans such as mobile phones and computers and found that in Europe there is an estimated US\$650 billion of value that could be captured through circular economic substitution of materials. For example, smart phones that are glued together on the inside are inseparable at end of life, but by shifting to a design

using clips or screws or ways of separating components, you can upgrade rather than making them single use products. These don’t add to the cost of production but enable end of life reuse,” says Morlet.

How businesses can get involved

Changes in the design stage are foremost, but businesses throughout the value chain can join the circular economy, says Jonny Hazell, who works on the circular economy Task Force at the Green Alliance. Manufacturers can increase demand for recycled, or reused goods through procurement requirements. He points to the UK’s Closed Loop Recycling which got funding to build their plant through a 10-year contract from Marks & Spencer and Coca-Cola to buy their recycled PET and HDPE plastic



Circulation doesn't add to the cost of production but enables end of life reuse

bottles, and with Veolia Environmental Services to provide the recycled bottles from households.

Andrew Morlet says that multinationals making a shift to the circular economy are driven by profitability, rather than good PR. Renault is aggressively exploring remanufacturing in its drive trains and engines, he says, recovering 75% or more of the embedded energy, water and carbon.

“They are able to sell these remanufactured parts in cars at a lower cost and make a greater profit. Equally, Unilever is looking at sector-wide initiatives that will ensure a better supply of recycled polypropylene in packaging. Kingfisher [Europe’s largest home improvement retailer] aim to make 1,000 of their products circular by 2020 through leasing, returning, product design, and using different types of plastics.”

“The business case is compelling,” he adds. “Earnings and shareholder returns have been very positively impacted by these investments.”

A hiring economy

An even more significant barrier for companies than designing sustainable products is the business model predicated on, “selling someone a new product every year,” says Jonny Hazell. “Businesses are taking on a radically different relationship with consumers as the responsibility of ownership leads back to them. In practice, this means selling a long-lasting product with a repair contract, or leasing a product, or even buying back and remanufacturing it and selling it on in a new market,” he says.

The lack of uptake in leasing and hiring is due to a “lack of compelling customer propositions”, he says. “There are very few leasing packages today that work out less expensive to consumers over the term of the lease that are actually cheaper than buying the product. It’s still the case that you lease only if you can’t afford to buy, because in the longer term you are worse off,” he adds.

Sabine Oberhuber, co-founder of Turntoo, a Dutch company which develops and implements new business models for the circular economy, says the focus should be on the performance of, rather than ownership of, a product. Turntoo’s first assignment was the interior of RAU architects developing Circular Economy concepts together with the suppliers

“At the RAU office, the lighting, carpeting and furniture is paid for as a service. Royal Philips installed

the lighting, and as they are paying the lighting bills, the system was designed to minimise light use through LED lightbulbs, sensor systems and floating “ceilings” over workplaces. This led to a 50% energy reduction. We pay a fixed monthly fee, they are responsible for everything else,” says Oberhuber.


Royal Philips is currently rolling out this “light as a service” concept, where consumers essentially pay to access light. Dutch carpet manufacturer Desso and furniture maker Steelcase have introduced decomposable and recyclable office furniture on lease to the office on a “performance” basis.

Government legislation, such as the EU’s Waste Electrical and Electronic Equipment Directive (WEEE), which defines how waste materials are handled, in some instances works against companies’ ability to recover materials at end of life, says Jonny Hazell.

On an EU level, the Ecodesign Directive, which dictates products’ energy efficiency, should be expanded to include durability, reparability and recyclability requirements for electronics and more, he says. “We’ve seen this kind of legislation drive change in the car industry The EU’s End-of-Life vehicles directive requires cars to be 85% recyclable by weight, which led to changes, particularly in the kinds of plastics used in car parts and their labeling, making it easier to send off to recycling. There also needs to be higher taxes on materials, rather than on labour, to disincentivise waste stemming from resource intense business models,” he says.

A circular economy in China

Is the circular economy feasible in a country like China, as it evolves from export to domestic consumption? Morlet says it is not only feasible, but it is a compelling reason why it needs to be explored fully. A significant new consumer base will drive up pressure and prices on limited resources. As this happens there will be increased interest in models that drive greater efficiency.

For the consumers themselves, there is a tremendous opportunity for new ownership models, products made to be reusable, and new industries to emerge. China, with its significant water, energy and pollution issues needs to find solutions that address the cause rather than just dampen consumption. 

Matilda Lee is a freelance journalist

联合利华的可持续经济计划

联合利华这样的大型企业，在吸引消费者购买更多产品的同时，能真正促进绿色经济可持续发展吗？

伊菲恩·雷斯

作为世界上历史悠久的跨国公司，联合利华已承诺逐步停用未经可持续认证的棕榈油和纸张，去年公司又启动“阳光计划”，在可持续的道路上迈出新的一步。

联合利华旗下众多品牌都参与了阳光计划，借此鼓励消费者清楚自己的环境足迹并加以改进，该计划的关键在于向消费者展示其产品如何能帮助减少环境足迹。

该计划的实施有赖于联合利华的广泛影响力——联合利华的产品在190多个国家出售，公司认为通过其影响力可以使消费者更注重环保，从而达到2010年可持续行动计划中设定的目标。

在一系列目标中，最重要的是2020年前实现收入加倍的同时环境影响减半，要减少产品整个生

命周期内对环境造成的不利影响，使“产品生产和使用过程中环境足迹”减半。

但有评论者认为，对这样一个规模庞大、追求利润的企业来说，真正做到绿色是不可能的。另外，公司也从未对其数百条生产线的碳排放逐一进行精确量化，更别提消费和运输环节了。

大多数的观察者认为，与同业相比，联合利华已经采取了很多措施。例如，2008年以来，公司研发了冷水浓缩洗涤剂，而其推出的小瓶装压缩喷雾除臭剂减少了100万吨CO₂排放。

其运营环节也有很大改善：联合利华降低了工厂的能源、材料和水资源的消耗量，改善废水处理设备，新装热电联合系统和生物燃料

锅炉，建设区域运输中心以降低交通废气排放。

尽管如此，很多人依旧认为，公司“将业绩增长与环境影响分离开来”即在减少环境不利影响同时增加利润的目标是不可能实现的。

Jericho Chambers公司的创始人、可持续领域专家朱尔斯·派克说：“既要使环境影响减半，又要使收入加倍，这意味着不会有什么真正的改变。联合利华认为其他公司在环保效率不及自己，所以它占的市场份额越大，消费者的碳足迹越小。也就是说它的市场份额越大就越环保。这非常值得怀疑。”

“未来论坛”可持续部门的负责人本·凯拉德强调，所有企业都应该具备长期的战略眼光，看到资源短缺、气候变化等挑战，他支持联合利华为此做出的努力。他说我们不应低估联合利华对自己提出的挑战，其难度就好比“掉转一艘巨大的油轮”向可持续发展方向驶去。

凯拉德说：“顾客希望实现可

“由于企业都是逐利的，在可持续发展和气候领域等方面，无论是联合利华还是其他公司，做的都远远不够。”

持续，零售商也一样。这会推动创新、降低成本。联合利华等企业开始意识到可持续发展的趋势带来的风险和机遇。尽管政府还在推诿，企业却已决定行动起来占据‘先动优势’。遗憾的是，还有很多企业只顾眼前利益，未来的挑战可能会使其经营模式完全失效，它们却可能无力应对。”

“社区企业”总经理斯蒂芬·霍华德说，鼓励顾客改变习惯对企业来说是个“巨大的机遇”，这对企业自身的财政和环保都有益处。而且，现在整个世界联系日益紧密，“企业采取的任何行动，无论多小，其影响的传播速度和距离都比过去大得多，能使消费者习惯发生巨大的转变”。

尽管联合利华致力于生产更“可持续”的产品，试图改变消费者行为，但像其他企业一样，它绝对不会做的是减少产量。

相反，联合利华还打算建设新厂，以在中国等市场吸引更多的客户。联合利华预计2020年发展中国家的市场将占到其总销售额的70%（目前的份额为57%）。在这种情况下，人们很难相信它还能控制环境负面影响，更不用说减小影响了。有一个联合利华不乐于见到的，就是消费者购买习惯的改变。

朱尔斯·派克说：“联合利华绝对不会问‘您需要这个吗？’。除非它能说服消费者减少使用量，否则就不能对消费产生任何影响，也就不会实现可持续。随着中国这样巨大的市场逐渐打开，它有责任不制造需求，不去鼓励新的消费者



有评论者认为，对联合利华这样一个规模庞大、追求利润的企业来说，真正做到绿色是不可能的

形成西方那样的习惯。”

他补充道，由于企业都是逐利的，在可持续发展和气候领域等方面，无论是联合利华还是其他公司，做的都远远不够。

“说到气候变化，要想使全球平均气温控制在‘安全’水平，即2050年前升温不超过2℃，我们必须使每年每一美元经济产值的能源消耗降低11%。2050年前，单位产值的能耗必须每年都降低11%，年年如此。联合利华2020年前使环境足迹减少一半的承诺，达到这个水平了吗？还要增加产量？不可能。现在哪一家公司能达到要求？一家都没有。”

所以，要求顾客注重环保从而卖给他们大量的“环保”产品的阳光计划是不是也可以被看作是一种漂绿行为，只不过更高级一些？

东英吉利大学企业和气候变化领域的高级讲师吉迪恩·米德尔顿说，现在还很难判断，“如果一

个企业真的想让世界向可持续的方向转变，这倒是它们应该采取的行动”。

“联合利华首席执行官保罗·波尔曼似乎一直致力于推动联合利华及其他企业履行社会责任，联合利华的项目也遵循了循环经济原则和共同价值策略（解决与企业相关的社会问题），这一策略迅速传播并被很多组织所采纳。”

在派克看来，政府才是有责任改变消费者习惯的一方。他说：“现在的问题是，很多人不再指望政府，让政府脱离了干系，这样就给企业造成巨大的压力，但实际上企业受限于市场，制定规则的还是政府。”

在被要求对本文中提到的质疑进行回应时，联合利华表示拒绝。



伊菲恩·雷斯，伦敦自由撰稿人

Unilever and the case for sustainable business

Can businesses like Unilever ever be sustainable if they keep trying to get people to consume more products?

Eifion Rees

After committing to phasing out non-certified palm oil and giving unsustainable paper the chop, the launch last year of Project Sunlight marked the latest effort by Unilever, one of the world's oldest multinational corporations, to burnish its green credentials.

The cross-brand initiative aims to encourage its customers to become more aware of their environmental footprint and how to improve it by using Unilever's products.

The corporation is banking that with its reach and influence – Unilever products are sold in more than 190 countries – it can create greener consumers, helping it meet the ambitious targets set out in its Sustainable Living Plan in 2010.

Key among them is the pledge to double revenues and halve negative environmental impacts by 2020 – to “achieve absolute reductions” across the lifecycle of the goods it sells, halving “the environmental footprint of the making and the use of our products”.

But critics suggest it is impossible for an enterprise so vast, and predicated on profit, ever to be truly green. And the company has yet to quantify precisely the carbon cost of manufacturing each of its hundreds of product lines, let alone that of their consumption and disposal.

Most observers agree that it has already taken huge steps forward, certainly in comparison to its competitors. For example, it has developed concentrated cold-water detergents and introduced smaller compressed aerosols to its deodorant ranges, helping to save the equivalent of one million tonnes of CO₂ since 2008.

Operational changes are also positive: Unilever has reduced energy, materials and water use in its factories; improved waste disposal; fitted CHP (combined heat and power) systems and biomass boilers, and created regional transport hubs to cut down on vehicle emissions.

Still the claim to be able to “decouple growth from environmental impact” – to harm the environment less while making more money – sounds a false note for many.

“The logic of halving environmental impact while at the same time doubling revenue appears to suggest there will be no real change,” says sustainability expert Jules Peck, a founding member of communication consultancy Jericho Chambers. “Unilever’s argument is that other companies are not as efficient, therefore growing its market share at their expense will drive down the carbon footprint of its customers. The bigger its market share the better, is the argument. This is highly questionable.”

Ben Kellard, head of sustainable business at Forum for the Future, a UK-based NGO, supports Unilever’s efforts. He underlines the fact that all businesses will need to take a longer-term strategic view of challenges such as resource scarcity and climate change. He says the scale of

“But critics suggest it is impossible for an enterprise so vast and predicated on profit ever to be truly green.”

the challenge it has set itself shouldn't be underestimated, likening it to "turning a supertanker" onto the path of sustainability.

"Consumers want sustainability. Retailers want it. It drives innovation and cuts costs. Companies like Unilever are recognising the growing risks and opportunities that sustainability mega-trends are presenting to business. As governments prevaricate they are deciding to step in and benefit from 'first-mover advantage'.

"Unfortunately, too many businesses are focused on the short term, so much so that they are risking their ability to adapt to future challenges that could fundamentally undermine their business model," says Kellard.

Stephen Howard, chief executive of London-based Business in the Community, says businesses have a "huge opportunity" in terms of encouraging their customers to change their habits, improving both the financial and environmental bottom lines. And in an increasingly connected world "any action business can take, however small, will travel further and faster than ever before, influencing greater behaviour change".

Despite its more "sustainable" products and attempts to engage with and alter the behaviour of its customers, what Unilever (and other businesses too) is not doing is committing to manufacturing fewer products. The one habit it doesn't want people to kick is shopping.

Instead, it intends to build new factories and attract new consumers in countries like China. By 2020 the corporation expects developing markets to account for 70% of its total sales (the figure currently stands at 57%). In this context, any claim to be able to limit negative environmental effects, let alone decrease them, seems implausible.

"What Unilever is categorically not doing is saying, 'Do you need this?'" says Jules Peck. "Until it is actively communicating the need to use less, it will have no overall impact on consumption and thus on sustainability. And with a vast market like China opening up, it has a responsibility not to manufacture need and encourage the same pattern of consumption as we see in the West."

In terms of sustainability and climate, geared as it is towards profit, neither it nor any other company is going far enough, he adds.


"In terms of climate change, to keep temperatures globally within a 'safe' threshold, a rise of no more than 2C, by 2050, then we need an 11% per annum reduction in the energy intensity of every global dollar of economic output. The energy footprint of every unit of economic output should fall by 11% every year, year on year, by 2050. Does Unilever's commitment to halving its environmental footprint by 2020 equate to that – let alone factoring in increased production? It doesn't. Are any companies currently equal to what's required? No."

So is Project Sunlight just a higher grade of greenwash, asking consumers to become more eco-minded in order to ply them with a proliferating number of "eco" products?

Gideon Middleton, senior lecturer in business and climate change at the UK's University of East Anglia, says it's difficult to tell at this stage: "If a company did seriously want to help catalyse a change to a more sustainable world then this is the type of action they would be taking.

"Paul Polman, Unilever's chief executive, seems very committed and actively engages and promotes corporate responsibility internally and externally, and the Unilever programme seems to be following the principles of the circular economy and shared value [addressing social problems that intersect with the business], which is spreading fast and being adopted by lots of organisations."

For Peck, it is governments that ultimately have the responsibility to change consumer behaviour, however: "The problem currently is that too many people have given up on governments and let them off the hook, thus putting pressure on companies – but in reality companies are just slaves of the market and it is government that sets the rules."

Unilever were asked to comment on the issues raised in this piece, but declined the opportunity. 

Eifion Rees is a freelance journalist based in London

中国应该复制美国农业经营模式吗？

有越来越多的证据显示美国集约化养殖模式会对环境和人类健康造成危害，但中国官员却不管不顾，一味强调在中国复制这种模式有多么重要。

汤姆·莱维特

过去30年，中国肉类产量取得了惊人的增长。如今，中国肉类产量占世界总量的三分之一，养猪总数占到世界的一半。虽然中国的人均肉类消费水平还低于欧美国家——至少目前还是如此——但也已经从1961年的4千克增长到2010年的61千克。

但不同于美国，中国肉类生产所需的资源更为稀缺，比如，中国人均水资源量约为2000立方米，美国则为9000立方米；中国人均耕地面积则仅为经合组织成员国平均水平四分之一。

尽管中国对此一直措辞谨慎，但自给自足的政策确实已难以为继。虽然粮食、肉类的产量均大幅提高，但依然不足以弥补不断增长的粮食贸易逆差。经合组织的数据显示，2012年中国粮食贸易逆差为310亿美元。

政府新提出的解决方案是，允许进口小麦、大豆等商品，从而为肉、奶制品集约化生产释放土地和水资源。

然而，中国环保部一月公布的

数据表明，中国为过去30年肉类产量提高付出了极大代价，牲畜已成为水污染和土壤污染的主要源头。

另外，动物饲料的集约化生产也会引起土壤退化和水资源短缺，其中尤以玉米种植最为严重。一项研究表明，中国最主要的粮食生产基地华北平原的地下水位在2000至2006年期间下降了61%，该研究对农业发展的可持续性提出质疑。

环保部官员将污染归咎于大规模农业生产，但未来20年，预计这种经营方式会成为肉类生产的主流。去年，双汇国际（近已更名为万洲国际）收购了世界上最大的猪肉生产商史密斯菲尔德食品公司，这再次证明中国公司希望借助美国的经验来发展集约化肉类生产。

“环保部官员将污染归咎于大规模农业生产，但未来20年，预计这种经营方式会成为肉类生产的主流。”

然而，农业和贸易政策研究所最近发布的报告称，照搬美国的肉类生产模式很可能会引发很多新问题。这样做除了会很消耗资源，还会引起抗生素耐药性（中国畜牧业使用的抗生素种类占到现有种类的一半）和与饮食有关的疾病。

中国的糖尿病发病率呈上升趋势，约有50%的人口表现出糖尿病早期症状，11%的人口已确诊患病（1980年发病率仅为1%），人们发现这与模仿西方饮食习惯、增加肉类和奶制品比例不无关系。

报告指出：“中国决策者把美国集约化猪肉生产模式视为维持中国粮食安全的手段。然而正是这种工业化农业经营模式，在美国引发了环境、公众健康和动物福利方面的问题。”

报告的作者之一莎法利·沙玛说：“有人说，污染严重的美国式肉类生产模式不适合中国，但中国却欣然接受了这种模式。”

总部位于北京的非政府组织公众环境研究中心主任马军说，集约化农业生产会对生态脆弱的地区造

成压力，中国追求西方那种过量的肉类消费是不对的。“这会破坏环境，对人类健康也无益。中国不应该学西方国家，不应该倡导这样的消费模式。”

中国科学院生态学家蒋高明赞同马军的观点。他说：“盲目照搬美国模式对中国没有好处。我参观过很多中国的养殖场。污染非常严重。有的养殖场压根就没有排污设施，有的虽然有设施却不愿意用。养殖场还需要大量的水，特别是一些规模较大的养殖场。它们一味追求利益，不考虑环境。我们要吸取这方面的教训。”

农业和贸易政策研究所的报告还警告说，中国出现了农业综合企业的游说集团，由万洲国际等企业主导，阻止政府对养殖业设限。

沙玛说肉类生产行业和政府官员之间有一种“共生关系”，这使致力于推动新型集约化农业生产的、所谓的“龙头企业”能够对政府决策产生较大影响。



蒋高明认为盲目照搬美国模式对中国没有好处

她说：“政府支持龙头企业的发展，龙头企业也认可政府指定的发展方向，这样就强化了农业综合企业对食品行业的控制。”

世界农场动物福利协会的中国代表周尊国也说：“我认为，政府层面，即智囊团和各级官员，已经认识到了这对环境的影响，但他们优先考虑的问题还是老百姓的吃

饭问题。多年来他们（农业综合企业）一直引导着行业的发展，并被同行和政府看作是成功的典范。”



汤姆·莱维特，中外对话伦敦办公室执行编辑

Should China replicate the US factory farming model?

Chinese officials continue to emphasise the importance of replicating a US style of meat production, despite growing environmental and health costs

Tom Levitt

The scale of growth in China's meat production over the past three decades is staggering. Today, one-third of the world's meat is produced in the country and half of all pigs live there. While per capita consumption may still be below the US and Europe – for now at least – it still managed to jump from 4kg to 61kg between 1961 and 2010.

Unlike the US though, China must produce this meat with a comparative scarcity of resources. For example its water availability per capita is around 2,000 cubic metres (cm), according to the World Bank, compared to 9,000cm, 22,000cm and 82,000cm respectively in the US, Australia and Canada – all countries with major agricultural surpluses.

Although China's leadership has been wary, until recently of admitting it, the country's long-standing self-sufficiency policy in key food crops has become unsustainable. Huge increases in grain and meat production have not been enough to prevent a growing food trade deficit, which stood at US\$31 billion in 2012, according to the OECD.

A shift towards greater imports of commodities such as wheat and soyabeans may relieve pressure on China's land and water resources, but not, as officials have been

indicating, if it is accompanied by a hike in the domestic production of meat and dairy.

China has already paid a high price for its rapid increases in meat production, with livestock now the main source of both soil and water pollution, according to data released by China's Ministry of Environmental Protection in January. China can ill-afford to lose more of its scarce resources, with Wang Shiyuan, a government official, admitting in December 2013 that around three million hectares – or an area roughly the size of Belgium - was now too polluted to grow crops.

While environmental officials are pointing the finger of blame for livestock-related pollution at large-scale farms, these same operations are expected to take over the vast majority of meat production within China over the next two decades. As the takeover of Smithfield Foods, the world's biggest pork producer by Shuanghui International (recently renamed WH Group) last year showed, Chinese companies are keen to tap into US expertise in intensive meat production. "There are those that say China is not cut out for the highly polluting US meat industry model which it seems to be embracing," says Shefali Sharma, from the Institute for Agriculture and Trade Policy (IATP) and co-

While environmental officials are pointing the finger of blame for livestock-related pollution at large-scale farms, these same operations are expected to take over the vast majority of meat production within China over the next two decades.

author of a report published this month on the intensification of China's livestock sector.

The report warns of the emergence of new problems for China from replicating the US model of meat production, including a rise in antibiotic resistance (nearly 50% of antibiotics produced are already used by the livestock sector in China) and dietary-related diseases.

The adoption of western diets high in meat and processed dairy has been linked to an emerging epidemic of diabetes in China, with 50% of the population showing a prevalence of pre-diabetes and 11% already diabetic (up from 1% in 1980).

“Chinese policymakers see the US intensive pork production model as the solution to China's food safety problems. Yet it is precisely this system of factory farming that has led to drastic environmental, public health and animal welfare problems in the US,” says the IATP report.

Ma Jun, director of the Institute of Environmental and Public Affairs, a Beijing-based green NGO, said China was wrong to try to follow a western model of excessive meat consumption.

“In some cities, excessive consumption does exist amongst some people whose income is higher than average. This can affect the environment and is not beneficial for human health. China should not model itself on western

countries and promote this kind of consumption.”

However, the IATP report goes on to warn of a new and powerful agri-business lobby in China, led by companies such as WH Group, blocking any restraints on the livestock sector.

Sharma said there was a “symbiotic relationship” between the meat industry and officials, which was likely to be giving so-called “Dragon Head Enterprises”, tasked with promoting new forms of intensive agriculture, a strong influence in policy making.

“The government supports the formation and strengthening of dragon heads and the dragon heads support the policy direction China is heading, which is further consolidation and control of agribusiness over the food system,” she said.

Jeff Zhou, the China representative of Compassion in World Farming, agreed. “I think at a governmental level – the think tanks and officials – are aware of the environmental costs, but still the priority is to feed the people. They [agribusinesses] have been leading the development of the industry for many years and are considered as successful models by other followers, as well as the government.” 

Tom Levitt is managing editor in chinadialogue's London office

“开私家车将来会像抽烟一样招人反感”

美国网上租车公司Zipcar的创始人罗宾·蔡斯女士认为，未来城市中的汽车数量必然锐减。

奥利维亚·博伊德

Zipcar是全球最大汽车共享服务提供商，以“汽车共享”为理念的。Zipcar为用户提供自助消费的模式，会员用户可以直接上Zipcar的网站或者手机软件搜寻车辆，通过会员卡直接在Zipcar汽车停放区取车及还车。目前，Zipcar在美国、加拿大及欧洲共拥有1000多辆车，85万会员。罗宾·蔡斯是Zipcar的联合创始人和前CEO，目前正在经营一家点对点汽车租赁公司Buzcar。

奥利维亚·博伊德（以下简称“博伊德”）：您是出于保护环境而创立了Zipcar和Buzcar吗？

罗宾·蔡斯（以下简称“蔡斯”）：虽然Zipcar和Buzcar既便民又环保，但这不是我创建公司的初衷。在Zipcar和Buzcar出现以前，我自己很希望能享受到这种租车服务，而我当时也觉得这种服务可以商品化。Zipcar的出现让租车变得简单轻松，就好像你在用自己的车一样。大家总觉得租车麻烦，手续繁多，想在一两个小时之内租

到车是绝不可能的。但由于Zipcar让不可能变成了现实，很多人现在意识到加入Zipcar成为租车一族，要比自己买辆车划算得多。

博伊德：您认为租车对环保有什么好处？

蔡斯：一辆租赁车可以满足30到60人的用车需求。这些人中，有四成的人表示有了租赁车，他们可以不必买车，或者可以卖掉自己的车。计算下来，每辆租赁汽车可以取代15辆私家车。在实际生活中，每辆车至少需要三个停车位。这样一来，每少一辆车，就可以少建三个车位。

每一辆Zipcar租赁车可以满足30到60人的用车需求。而最重要的一点是租车是计时收费的，这让租车族们减少了80%的出行。开自家车只需要考虑油费，偶尔也考虑一下停车费。而租车是按小时和按天计费的，随着表针不停转动，人们必须决定出行一趟是否值得花费10美元、20美元甚至100美元？八成的情

况是，这趟出行并不值得。

汽车服务共享最大的贡献是让人们开始理智选择出行方式。自己有车的时候，如果哪天突然很想吃冰欺凌，我可能立刻跳上车一路奔驰去买冰欺凌；而如果我是租车族，我突然想吃冰欺凌，我就会想，路上花费是每小时10美元，我还是哪天下班顺路买一个吧。成为租车族后，你就会理智选择是步行、坐地铁、骑自行车、打车出行，还是干脆把所有行程并在一起，一趟解决。

博伊德：租车会不会让更多的人养成依赖汽车的生活方式？

蔡斯：这方面有人做过很深入的研究，研究结果表明这种担忧与事实恰好相反。租车并不会引诱人们多开车。每位城市居民平均每年驾车行驶7500英里（约12070公里）。对比之下，一辆可以满足50到60人用车需求的租赁车每年仅行驶16,000英里（约25749.5公里）。还有，一旦开始减少开车，人们就

会逐渐感到开车麻烦，因为开车需要集中精力，如果开得太快又很吓人。一旦你不开车了，出门办事的时候，只要能选择其他出行方式就绝不开车。

现在越来越多的人住在人口稠密的城市里。未来属于城市，未来的城市会更拥挤，想像今天这样畅快开车、自由停车绝不可能。纽约是美国人口最密集的城市，如今只有40%的家庭有车。想一下亚洲城市的人口密度，未来这些城市又会怎样？未来，这些城市中有车的家庭一定大大低于40%。

未来人们将更多地分享交通工具，因为这样能最大限度地节省停放空间，车内空间也将被充分利用。如果是一个人出行的话，可以租辆小车，骑摩托车或者电动自行车；四个人出行则可以租辆大点的车。而一个人开一辆大车出行是

不太可能的了。现在美国92%的旅行是驾车游，将来只有8%的旅行是驾车游。

博伊德：但还有很多蓬勃发展的城市希望看到更多的汽车在路上奔驰。

蔡斯：我认为这就是我们这个时代的噩梦，未来的生活需要什么，我们自己又想要什么，人们对这两个问题的看法是不同步的。最近很多研究表明，美国汽车保有量和驾车行驶里程数双双过了峰值。

在中国，许多蓬勃发展的城市都给汽车发展留出了一片广阔空间，这就是一场噩梦。将来这些城市必定会栽跟头，就像现在世界上很多城市那样，陷入一片痛苦中。在上海，当我看到无数高耸着的新居民楼和配套的地下停车场时，我

突然感到震惊，以后这些高楼将会住满居民，停车场也会停满汽车，涌入的汽车可能让整个城市陷入瘫痪。我前段时间在孟买，那里正重蹈上海的覆辙，只是情况更糟糕。

博伊德：政府可以做什么？对汽车共享计划给予补贴？

蔡斯：关键要保证停车费能真实反映房价。在波士顿，人们可以领取停车许可，在小区免费停车一年。购买一个私人车库的月停车证要花300美元。在繁华地段购买一个露天车位要花25,000美元。但是当地政府经常给予补贴，人们也就经常可以在这些高昂地带免费停车。所以谈交通补贴，不要再给汽车各种补贴就好，我觉得这才更实用。

恩里克·佩纳罗萨曾担任波哥大大市市长，他曾经有一句精彩总



平均一辆租赁车可以取代15辆私家车；少一辆车可以节省3个停车位

结，“波哥大只有3%的市民有车，我为什么要花掉95%的交通运输基础设施经费为这3%的人服务？”我觉得这句话也很适于中国。恩里克在当地建了很多很棒的自行车道、人行道、还建立完善的公交运输系统，他说这才是市民们需要的。

一旦停车变得很贵，而路上又有畅通的人行道、自行车道、完善的公交运输系统，那么开车就变得更麻烦更昂贵了。

博伊德：您对中国政府还有哪些建议？

蔡斯：最大的建议是让点对点汽车共享业务合法化。政府应该允许车主用自己的车赚钱，比如载客或者把车租出去。我认为，这种点对点的汽车租赁公司将来必有一席之地，而且会稳健发展，前景美好。点对点汽车租赁可以大大减少传统租赁公司的前期投入。而且，这种共享服务可以以更少的车满足

更多人的需求。在美国和欧洲，私家车只有5%的时间在用，其余95%的时间都是闲置的。除了房子，汽车大概是人们购置的最贵的资产了，人们却让这份资产在95%的时间里闲置着。

最近在交通运输领域，又有新的发明，谷歌正在研制无人驾驶汽车，而且即将投入市场。如果操作得法，这将大大改变当今汽车领域的格局。我们不但可以共享汽车，还可以共享旅程，未来我们只需要相当于现在10%的汽车。

博伊德：这会给您的经营模式带来什么影响？

蔡斯：和任何公司一样，Zipcar和Buddycar要时时走在行业最前沿，不断自我调整满足顾客需求，并关注这些需求发生着怎样的变化。那些不思进取的公司大都遭遇了严重的危机。我注意到，全球汽车行业的发展很依赖政府的支持，而汽

车行业在很多事情上又顽固不肯改变。行业发展变得僵硬，就像慢慢走上一个陡峭的悬崖，最终可能摔得粉身碎骨。

很多大型汽车公司，尤其是福特，正努力寻找策略，让自己的公司从一家汽车公司转变为移动服务公司。这是一项严峻的挑战。这些传统大公司有成千上万的员工和工厂，从事着我们不再需要的生产。要让老员工接受新的工作方式并非易事，传统大公司的转型将会很困难，而我并不想重蹈他们的覆辙。

租车行业巨头安飞士（Avis）刚刚收购了Zipcar，我可以预见安飞士把Zipcar看作一个汽车公司，因此，他们将错过转型的机会。其实他们可以把自己定位成共享经济公司，或者车联网公司，他们有很多选择，但他们偏偏不这么想。



奥利维亚·博伊德，中外对话副总编

The future for transport is mobility, not cars

Our cities are destined to have dramatically fewer cars, says Zipcar founder Robin Chase in an interview with chinadialogue

Olivia Boyd

Robin Chase is co-founder and former CEO of Zipcar, the world's largest car club with more than 10,000 cars in the US, Canada and Europe. She now runs Buzzcar, a peer-to-peer car sharing service.

Olivia Boyd (OB): Did environmental concerns motivate you to develop Zipcar and Buzzcar?

Robin Chase (RC): Yes there was a social and environmental benefit. But for me personally that was not the primary reason. It was a service I wanted to have and I could see there was a business model. I would say that Zipcar made renting a car as easy and convenient as owning your own car. In people's minds, renting a car was an arduous annoying long process, so you would never do it for just an hour or two. Now a bunch of people have realised that it's cheaper to be a member of a car club than it is to own your own car.

OB: What does car clubbing offer the environment?

RC: A well-used shared car is used by anywhere between 30 and 60 people. And 40% of those people have

said that they were able to avoid buying a car, or sold a car, because of it. That means that each one of these well-used shared cars is replacing 15 personal cars. What's interesting about those 15 cars is that every time you put a car into a city, you have to have three parking spaces associated with it. So when you take out the one car, there are three parking spaces that don't need to be created.

Each Zipcar is making 30-60 people satisfied with one car. And the most important attribute is that when people pay by the hour for cars, they turn out to drive about 80% less. That's because when you drive your own car, you're only thinking of the price of fuel, and sometimes parking. But when you rent by the hour and the day, in real time, right in front of your face, you're having to say is this trip worth \$10, \$20, \$100? And 80% of the time, no it's not worth that.

So the most important thing for me that car sharing and car clubs do is make you rationalise your car use within your transportation options. When I own my own car and I want ice cream, I jump in the car and go buy ice cream. When I don't own my own car and I want ice cream, I think wow that will be \$10 an hour to go buy it, I'm going to get it on my way home from work. It forces you to choose

“ Like any company you have to stay on the edge and evolve to meet your customers' needs and pay attention to how those needs are changing. The companies that don't, in general have really hard crashes. ”

rationally between whether you should walk, take the subway, bike, take a taxi, or bundle all your trips together.

OB: Might car clubs simply hook more people into a car-centric lifestyle?

RC: Very deep research shows that it does the exact opposite. It doesn't induce more driving. The average urban dweller drives around 7,500 miles a year. But when we put 50-60 people on that car it's only going 16,000 miles. Another interesting side effect is that once you start driving less, driving becomes annoying. It's very high stress and it's scary when you go fast. Once you stop using a car, it's a higher hurdle for you to go choose a car for that errand rather than all your other choices.

More people are living in dense urban areas. The future is urban, the future is primarily dense urban and there's no way in hell we can move and store cars the way we do today. New York City is the US's densest city. Right now in New York, only 40% of households own a car. Then look at the density of Asian cities. What does the future hold? The future holds dramatically fewer than 40% of households owning cars.

I think we will have motorised transport and that motorised transport will always be shared because that minimises the storage issue, and those cars will be filled to capacity. You will get a very tiny car, or a motorcycle or an electric bike to move your own body and when you need to move four people, you'll be four people in a car. But the idea of one person driving in a big car is not part of the future. Right now in the US, something like 92% of trips are done by car. The future will be the reverse.

OB: But a lot of cities are still being constructed with the car in mind.

RC: I think that is the nightmare of our times, that there's a lag between people's understanding of what the future demands and what people want. In the US, there's a lot of recent studies that say we've passed peak car and peak miles travelled.

I think in China it's a horrible nightmare that they're building cities with this expectation and those cities will fail and be miserable like many cities in the world. In Shanghai, I was contemplating the huge number of very high-rise residential buildings that had gone up but were not yet populated and are built with parking underneath. And I was struck by the fact that when they are fully populated,



Research shows car club membership doesn't induce more driving

when those households come in with their cars, Shanghai will come to a complete standstill. I was just in Mumbai and it was the exact same thing happening but on a more cataclysmic scale.

OB: What should governments do? Subsidise car sharing schemes?

RC: I think key in all of these cities is to make sure that the price of parking reflects the cost of real estate. In Boston, you can get a residential parking permit and park for free for a year. Yet to buy a monthly parking pass in a private parking garage is US\$300. One open air parking space in a very fancy part of Boston sold for US\$225,000. And the city government is giving that away for free day in day out. So when we talk about subsidies for transport, I think let's just remove every subsidy associated with cars. That's a logic that feels more powerful to me.

Enrique Peñalosa, who used to be mayor of Bogotá, said something that I think applies to China precisely – for Bogotá he was saying “only 3% of my population owns cars. Why am I spending 95% of my transportation infrastructure for those 3% of people?” I feel China can be making that compelling argument. Enrique built amazing bike paths, amazing pedestrian ways, fabulous transit, because he said this reflects my population's needs.

And once you get parking that's expensive and make streets that provide the right balance between humans and cars then driving is even more annoying and expensive.

OB: What else would you recommend to Chinese policymakers?

RC: My biggest piece of advice around ride sharing – that’s the peer to peer sharing – is to make it legal. We need to make it legal for personal car owners to be able to accept money on their cars, to give someone a ride or to rent someone their car. In my mind, the future is clearly going to be comprised of these kinds of peer-created companies and it’s a very solid and good future. It really dramatically minimises the investment required to get these things to work and it makes more people satisfied on fewer cars. We know that cars in the US and Europe are used 5% of the time and sit unused for 95% of the time. It’s the second most expensive asset people ever buy and yet they’re letting it sit around for 95% of the time.


That said, in transportation, there’s this new thing looming and that’s the autonomous car that Google is producing and it’s coming out really, really fast. I think that’s actually going to be a huge game changer if we do it the right way. We can share the car and we can share the trips and we can get to about 10% of the number of cars we have today.

OB: What does that mean for your business model?

RC: Like any company you have to stay on the edge and evolve to meet your customers’ needs and pay attention

to how those needs are changing. The companies that don’t, in general have really hard crashes. One of the things that’s fascinating to me about the auto industry is that it has been very propped up by government support world around. And they’ve been very adamant about not changing all sorts of things. I think when you’re very rigid it sets you up for a very precipitous plunge.

I know that the big car companies – Ford in particular – are trying really hard to figure out how to turn themselves into a mobility company and not a car company. But it’s very challenging for legacy companies because they have tens of thousands of employees and factories doing something we don’t want anymore. It’s hard to transition those individual employees into a new way of doing things. It’s definitely a hard path for them and I am not eager to be in their shoes.

Avis just bought Zipcar and I have every expectation that they will think of it 100% as a car company, and they will miss that transition. They could have thought of themselves as a sharing economy company, as a connected vehicles company. They could have gone many other paths, but that’s not what they saw. 

Olivia Boyd is deputy editor at chinadialogue

缅甸反华情绪正在增长

中国有许多战略性资源项目处于危险之中，中国企业正在努力试图平稳度过缅甸新近的抗议风潮。

贝丝·沃尔克

中缅油气管道在红土丘陵间形成了一个刺目的光秃条带，最终消失在晨雾之中。在一片用竹篱笆围起来的区域挂着一个标志，上面用英文写着警告：“破坏管道，必将严惩”。

“许多人家被迫迁移，他们获得了一些补偿金，但已经没有地方种庄稼了。”31岁的奥马尔说。他是一个伯朗村寨的村长，这个村子靠近昔卜镇，就在缅甸北部通往中国的公路旁。他说，这里没有人企图破坏管道，但在更北面，那些被部署来保护这管道的缅甸政府军与各种民族地方武装之间的战斗，迫使成千上万的人逃离自己的村庄。在缅甸南部的若开邦，17名在管道上工作的当地人因为纵火烧一座仓库而被捕。

造价50亿美元的管道是一个中缅合作项目，旨在穿越缅甸将来自印度洋的进口油气输送到中国西南地区。这条管道在战略上对中国很重要，可以减轻中国对海盗出没的马六甲海峡能源运输通道的依赖。但缅甸国内强烈反对这条管道，相

关问题包括土地征用、土壤侵蚀和污染，激化延续多年的民族地方武装与缅政府军之间的冲突等。

近年来有大量争议性的中国在缅投资项目陷入麻烦，油气管道只是其中之一。自缅甸文官政府2011年上台以来，一改原来对中国的亲近态度，转而把一个新出现的独断自信的公民社会推向台前，由此中国企业在缅甸的运营变得更加困难。如潮水般跨境涌入的廉价中国商品和人口，同时也在缅甸各地激起了更广泛的反华情绪。

尽管存在上述众多挑战，尽管投资受到严重威胁，但中国企业几乎没有采取什么有效的行动来解决问题。未能“搞定”当地社区的结果，就是成为缅甸冲突重重、各民族聚集游行抗议的焦点。

日益增长的不满

“减少对华依赖的势头在不断增长，政府欢迎西方企业，为实现多样性而有意为之，”维吉·鲍曼说。她是设在仰光的缅甸责任商业

中心主任，也是前英国驻缅大使。

登盛总统之所以决定在2011年开始实行自由化，部分原因就在于精英阶层担心缅甸变得过于依赖中国，他的政府改革计划就是寻求用西方的投资和政治关系来对中国进行“再平衡”。结果，2011年以来中国在缅甸的投资锐减，不过中国在水电、油气和采矿等领域仍然占据重要地位。

在缅甸普通百姓中，对华不满绝不鲜见。我在缅甸各地旅行，遇到很多人说他们觉得中国践踏了当地的利益，支持了不得人心的军政权，掠夺了这个国家的自然资源。

在仰光居住了20多年的鲍曼说，伊洛瓦底江上中国出资修建的密松大坝在2011年被暂停，理由是引发了广泛的民众不满，这成了极少数能让缅甸千差万别的民族团结一致的事项。“尽管环境破坏是反对密松大坝呼声最大的借口，但这并非唯一的原因，密松地区的文化意义也是举足轻重的。”

这个意义怎么强调都不为过。设计发电量600万千瓦的密松大坝

位于伊洛瓦底江的源头，这是当地克钦人的圣地，也被视为缅甸文明的发祥地。缅甸各地的茶馆和小餐馆都挂着密松崇拜的相关图片。大坝使已经停火17年的缅甸政府军与各克钦民族武装之间重燃战火，其暂停时限是到2015年的下次大选之前，但很多人都认为大坝建设永远都无法再启。

密松大坝的建设方——中国电力投资集团公司（中电投）用小恩小惠的承诺争取当地社区支持的尝试最终失败了。众所周知，该项目几乎所有的电力都将出口到中国云南，当地人几乎得不到什么利益。

最近在接受《伊洛瓦底》新闻杂志采访时，中电投的公共事务负责人江立哲（音）表达了他对重启密松大坝项目的决心。他说：“实际上，当地人并不反对这个项目，他们只不过是对于大坝有误解，因为在谣言和错误的信息中，他们并不了解实情。”

中电投已经向缅甸责任商业中心寻求建议，但仍然没有听取公众

意见。鲍曼说：“中电投还是没弄明白人们为什么不想建密松大坝。”

公民行动

如今，缅甸的非政府组织正在协调针对那些不受欢迎项目的抗议行动，包括密松大坝。有一个联合组织正在云南省一些更有经验的中国非政府组织的支持下，确认大坝现有环境影响评估中的差距。

关于针对中国项目的公民行动的增加，另一个典型是位于缅甸腹地的莱比塘铜矿。该铜矿是中国兵器工业集团下属万宝矿产有限公司与缅甸军方控制的一家公司的合资企业，但在2012年底由于农民抱怨由酸性废物引发的环境和健康问题而叫停。

一个主要由和尚构成的抗议营地，被缅甸安全部队用磷手榴弹暴力镇压，将一场地方争议变成了全国性事件。铜矿公司被迫重新谈判合同、答应将2%的收入让渡给当地

社区后几个月，项目重新启动了。

但这还不够。鲍曼说：“该公司想要通过建桥和植树计划来让当地社区满意，但这些都结束不了人们的担忧。”紧张形势在今年三月再度爆发，人们游行反对万宝公司为进一步扩展矿区而迁移一座重要的宗教建筑。该矿区扩展项目目前澳大利亚的一家顾问公司进行新的环境和社会影响评估，在万宝公司网站上可查看到相关信息，这是中国公司在缅甸的项目第一次有环境评估。

与国际企业相比，中国企业的历史纪录也不怎么好。中石油在修建中缅油气管道北段时没有雇佣一个当地工人，但负责修建南段的印度企业Punj Lloyd公司并非如此。

中国非政府组织——云南省大众流域管理研究和推广中心（简称绿色流域）最近所做的一项调查有类似的发现。韩国企业向当地提供了一些学校或健康服务，但中国企业却没有这么做。绿色流域指出，甚至有时中国企业的确也提供了服务，却并没有赢得声誉，因为他们要么是通过不得人心的政府做的，要么并未让当地人真正受益。

鲍曼说：“所有有争议的项目都是中国项目”。

移民与廉价商品

对中国的不满，并不新鲜。1967年仰光就曾经发生过大规模排华事件，整个70年代缅甸华人受到了严重歧视。实际上，几百年来缅甸一直都有华人，在英国统治期间和1949年中国内战末期还发生过多次中国移民浪潮。还有一些是跨境居住的中国果敢族（汉族）。



在缅甸普通百姓中，对华不满绝不鲜见

但是，中国移民和主导经济的影响力在近几十年中以指数方式增长，从这个背景来看，目前的反华情绪是可以理解的。

中缅两国由著名的滇缅公路相连。这条路修筑于20世纪30年代，为的是给远赴缅甸抗击日本帝国主义侵略军的中国军队提供至关重要的给养。80年代西方对缅甸开始制裁后，这条路又成了被孤立的缅甸政权的生命线。满载着翡翠、柚木和食品的卡车如潮水般穿越边境进入中国（常常是非法的），回程时则装满了廉价消费品。

这些商品在一个自身制造业尚未起飞的国家的市场泛滥，于是就引发了不可避免的不满。正如当地的俗语所说：“中国吐口水，缅甸被淹死。”

缅甸北部宗教古都曼德勒的居民普遍抱怨中国资金、商品和人员

的流入导致该市房地产和生活用品价格飞涨，将当地人“赶”出了市中心。在曼德勒的100万左右居民中，如今一半都是中国人。随着来自富裕的中国果敢族海洛因贩子的大量“毒资”流入，曼德勒也发生了扩张。这些忧虑已经成为2015年全国大选前的一个政治问题。

中国著名历史学家秦晖在2012年的缅甸之行后说，华人只顾低头赚钱，不愿参与政治。中缅贸易的增长提供了充足的致富机遇。

当谈到目前在缅甸经营的中国企业时，乐观主义者认为它们只需要在公关方面下一点功夫。中国驻缅甸使馆政治处主任高明波一直带头努力为在缅中企修补形象，他说：

“这些企业必须保持当地社区的支持，使馆一直叮嘱他们说：要开放、要参与。”他创建了驻缅甸使馆的Facebook网页，尽管Facebook在

中国是被封的，但中国驻缅官员们则利用它来接近缅甸民众。

但这些观念仍未渗透进企业文化之中。中国的北方矿业投资公司在缅甸西部的钦邦开发了一座价值4.8亿美元的镍矿，但似乎正重蹈覆辙。该公司在缅甸没有办公室，没有网站也没有代言人，完全依靠政府联系。如今由于该公司在没有向当地人传递任何信息的情况下就对露天矿进行调查，不满情绪已经开始酝酿。

对缅甸北部的村民们来说，中国的形象很复杂。去年在草房顶上装了中国产的太阳能板后，奥马尔所在的伯朗族村寨才首次通上了电。他说：“离了中国人我们没法活，但我并不喜欢这样。”

贝丝·沃尔克，中外对话文化频道编辑，同时也是第三极项目编辑

Anti-Chinese sentiment on rise in Myanmar

Chinese companies are struggling to come to terms with a new culture of protest in Myanmar

Beth Walker

The Shwe pipeline shaves an angry bald strip across the red clay hills and disappears into the morning mist. A sign hanging above an area cordoned off by bamboo fencing warns in English, “Severe punishment on pipeline destruction”.

“Families were forced to move,” says Omar, a 31-year-old Palaung village chief based just outside Hsipaw town in northern Myanmar on the road to China. “They were given some money but left with nowhere to grow crops.” No one has attempted to sabotage the pipeline here, he says, but further north fighting between Burmese troops deployed to protect the energy project and various armed ethnic groups have forced thousands of people to flee their villages. In Arakan State to the south, 17 locals working on the pipeline were arrested for setting fire to a warehouse.

The US\$5 billion Shwe pipeline is a Sino-Burmese project intended to bring imported oil and gas from the Indian ocean across Myanmar to China’s south-west. It is strategically important for China, which aims to reduce the country’s dependence on energy transported by ship through

the pirate-infested Strait of Malacca. But there has been fierce opposition in Myanmar – over land expropriation, soil erosion and pollution, enflaming longstanding conflicts between ethnic groups and the Burmese military.

The Shwe scheme is one of a slew of controversial Chinese investment projects in Myanmar that have run into trouble in recent years. Since the civilian government came to power in 2011, rolling up the red carpet previously laid out for China and opening the way for a newly assertive civil society, the country has become a more difficult place for Chinese companies to operate. A flood of cheap Chinese goods and people across the border has meanwhile fomented broader anti-Chinese sentiment across the country.

In spite of these challenges – and the level of investment at stake – Chinese companies have taken little meaningful action to address concerns. Instead, their failures to appease local communities have made them a focus of protest for Myanmar’s conflicted and ethnically diverse population to rally around.

Growing resentment

“The move away from reliance on China is growing,” says Vicky Bowman, director of the Myanmar Centre for Responsible Business in Yangon and former British ambassador to the country. “The government is welcoming western companies as a deliberate policy to diversify.”

President Thein Sein’s liberalisation in 2011 was in part fuelled by elite concerns that Myanmar had become

“For villagers in northern Myanmar, China’s image is a complicated one. Omar said, “We can’t live without the Chinese, but we don’t like it.”

too dependent on China, and his government reform programme sought to rebalance Chinese influence with Western investment and political relations. As a result, there has been a sharp drop in Chinese investment in Myanmar since 2011, though China remains an important presence in hydropower, oil and gas, and mining.

At a popular level, anti-Chinese resentment abounds. Travelling around Myanmar, I spoke to many who said they felt the Chinese had trampled over local interests, propped up the unpopular military regime and pillaged the country's natural resources.

The Chinese-backed Myitsone dam on the Irrawaddy River – suspended in 2011 amid widespread popular unrest – has been one of the few issues to unite the ethnically diverse country, argues Bowman. “Although environmental damage is the concern most prominently voiced by opponents to the dam, it is not the only reason they fight it. It is also the cultural significance of the area.”

Citizen action

That significance cannot be overstated. The 6,000-megawatt dam was planned for the source of the Irrawaddy – a sacred place for local Kachin and also considered the founding place of Burmese civilisation. Pictures of the iconic Myitsone hang in tea houses and small eateries across the country. The dam, which rekindled fighting between Burmese and ethnic Kachin armies after a 17-year-long ceasefire, has been suspended until after the next elections in 2015, but many people believe it will never go ahead.

Attempts by the company building the dam, China Power Investment Corporation (CPI), to woo local communities with piecemeal promises failed. It's well known that almost all the hydropower will be exported to China's Yunnan province and local people will see little benefit.

In a recent interview with the Irrawaddy, Jiang Lizhe, CPI's director of public affairs, spoke of his determination to resume the dam project. “Local people are, in fact, not against this project. They just misunderstand it because they don't know the reality, and because of rumours and wrong information,” he said.

But the company is still not listening to public opinion. “CPI just don't seem to get that people don't want the dam, or why,” says Bowman.

Burmese NGOs are now coordinating action against unpopular projects, including Myitsone. One coalition is working to identify gaps in the existing environmental

impact assessment for the dam, with support from more experienced Chinese NGOs in Yunnan province.

The Letpadaung copper mine in central Myanmar offers another example of increased citizen action against Chinese projects. A joint venture between Wanbao Mining (a subsidiary of the Chinese arms manufacturer Norinco) and a company controlled by the Burmese military, the project went into lockdown at the end of 2012 after farmers complained of the environmental and health problems caused by acid waste.

A protest camp – mainly of monks – was violently suppressed by Burmese security forces using phosphorous grenades, transforming a local dispute into a national cause. The project restarted months later only after the company was forced to renegotiate the contract giving 2% of revenue to the local community.

But this wasn't enough. “The company hoped to satisfy the community with schools and tree-planting, but that won't address their concerns,” says Bowman. Tensions erupted again in March this year as people rallied against Wanbao's removal of an important religious building to make way for further mine expansion. The company has now invested in a new environmental and social impact assessment, conducted for them by an Australian consultancy, and available on their website – a first for any Chinese company in Myanmar.

Chinese companies also appear to have a poor track record compared to international competitors. China National Petroleum Company (CNPC) has employed far fewer local workers along the upper section of the Shwe pipeline than the Indian company, Punj Lloyd, who built the lower section.

A recent investigation by Chinese NGO Green Watershed revealed similar discrepancies. Although Korean companies provide some schools or health services, the Chinese companies do not. Even where Chinese companies do provide services, they do not get the credit because they do so through the unpopular government, or do not really benefit local people, according to Green Watershed.

“Almost all the controversial projects are Chinese projects,” says Bowman.

Immigration and cheap goods

Resentment is not new – Chinese were targeted in riots in Yangon in 1967 and faced severe discrimination during the 1970s. Ethnic Chinese have, in fact, had a presence in Myanmar for centuries, with waves of

immigration under British rule, and the end of the Chinese Civil War in 1949. Some are also members of the ethnically Chinese Kokang group who straddle the border.

But Chinese immigration and economic dominance have grown exponentially in recent decades, and current anti-Chinese feeling has to be understood against that backdrop.

The two countries are linked by the famous Burma Road – built in the 1930s to supply vital provisions for Chinese Nationalist forces battling the Japanese imperialist army. It has been the lifeline for an otherwise isolated Burmese regime since western sanctions were imposed in the 1980s. Trucks loaded with Burmese gems, jade, teak and food pour across the border into China – often illegally – and rumble back with cheap consumer goods.

These goods have flooded the market in a country whose manufacturing industry has yet to take off, causing inevitable resentment. As the local saying goes, “When China spits, Burma drowns”.


A common complaint among the residents of Mandalay – the ancient religious capital in the north of the country – is that the influx of Chinese money, goods and people has inflated the prices of real estate and living, forcing locals out of the city centre. Almost half of the city’s million or so inhabitants are now Chinese. It has also grown with the massive influx of drug money from wealthy ethnic Chinese Kokang heroin traffickers. These concerns have become a political issue ahead of national elections in 2015.

Ethnic Chinese have preferred to keep their heads down and make money, rather than get involved in politics, as eminent Chinese historian Qin Hui noted after a trip to Myanmar in 2012. The growth in trade between Myanmar

and China has provided plenty of opportunities to get wealthy.

When it comes to Chinese companies operating in Myanmar today, optimists believe they just need a little public relations boost. Gao Mingbo, former head of the political section at the Chinese Embassy in Yangon, has been spearheading efforts to repair the image of Chinese companies working in Myanmar. “The companies must retain the support of the local communities. That has been the consistent message of the embassy: to be open, to be engaged,” he said. He created the embassy’s Facebook page; although Facebook is blocked in China, Chinese officials in Yangon are using this to reach Burmese citizens.

But these messages are yet to permeate corporate culture. The Chinese-owned North Mining Investment Company, which is developing a US\$480 million nickel mine in western Myanmar’s Chin state, appears to be repeating past mistakes. The company has no office in Myanmar, website or public face and relies exclusively on government contacts. Unrest is now brewing as the company carries out surveys for the open-top mine and refinery without giving any information to local people.

For villagers in northern Myanmar, China’s image is a complicated one. Omar’s ethnic Palaung village – some 15 kilometres uphill from Hsipaw town – got electricity for the first time last year, after Chinese-made solar panels were installed on top of straw roofs. “We can’t live without the Chinese, but we don’t like it,” he says. 

Beth Walker is chinadialogue’s culture editor. She is also editor of thethirdpole.net

《中国环境：绿色革命》

China and the Environment: The Green Revolution



山姆·吉尔 主编
Zed Books 出版社, 2013

Edited by Sam Geall
Zed Books, 2013

中外对话隆重推出新书《中国环境：绿色革命》，为您讲述中国的环境故事。

世界上污染最严重的20个城市中，中国占了16个，这里平均每两到三天发生一次严重的水污染事件。中国经济的高速增长在引起全球关注的同时，也引发了人们对中国对全球环境所造成的影响的担忧。不少人将中国看成未来解决气候变化问题的源动力，但中国人如何真正地解决环境问题？本书带您走进不为人知的环保故事，了解现实中的中国及其紧张的环境局势。

本书由中外对话主编伊莎贝尔·希尔顿作序。中外对话北京办公室主编刘鉴强撰写了其中一章。

A new book from *chinadialogue* provides access to stories of environmental activism in China.

Sixteen of the world's 20 most polluted cities are in China. A serious water pollution incident occurs every two to three days. China's breakneck growth is causing great concern about its global environmental impacts, as others look to China as a source for possible future solutions to climate change. But how are Chinese people really coming to grips with environmental problems? This book provides access to otherwise unknown stories of environmental activism and forms the first account of China and its environmental tensions.

The book includes an introduction by *chinadialogue* editor Isabel Hilton and a chapter by Beijing editor Liu Jianqiang.



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