中外对话 chinadialogue

气候援助资金仍旧是谈判桌上的难题
Little money in sight at climate summit

“一带一路”是否“适配”《巴黎协定》？
Is the Belt and Road compatible with Paris?

中国亟需监管海外投资的环境和社会影响
China needs urgent oversight of investments

波恩气候大会
Can there be climate leadership without the US ?

总编　伊莎贝尔·希尔顿

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chinadialogue's primary vehicle is our website (http://www.chinadialogue.org.cn), 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 is now read in 208 countries and regions and in all regions of China.

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Produced on a bi-monthly basis, our journal brings you the best articles and reports from *chinadialogue*. If you want to contribute to the discussion you can visit our website (http://www.chinadialogue.org.cn) to add your comments and thoughts. Join the debate and be part of the solution.

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目 录
CONTENTS

聚焦波恩气候大会 Climate summit

高端访谈 Top Interview

中国与世界，环境危机大家谈

China and the world discuss the environment

环境新视野 New takes on global environment

海外投资 Overseas investment

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2020年前气候行动成波恩峰会焦灼点

发展中国家代表认为，本届波恩气候峰会对于巴黎协定生效前发达国家的行动缺乏讨论。

□ 乔伊迪普·格普塔

《联合国气候变化框架公约》第23次缔约方会议主席、斐济总理弗兰克·姆拜尼马拉马致辞

在一场有关是否将立即采取气候行动纳入今年德国波恩气候峰会议题的闭门会议上，发展中国家与发达国家之间的讨论未能打破僵局。

自11月6日联合国峰会开幕起，以印度、中国和伊朗为首的发展中国家就一直要求将立即采取气候行动纳入会议议程中。

发达国家一直对此表示反对，因为这将主要对他们造成影响。《巴黎协定》将于2020年正式生效，因此在此之前的限制气候变化的行动在很大程度上将是《京都议定书》第二阶段框架下工业化国家的责任。但很多工业化国家的立法机构还没有批准通过《京都议定书》第二阶段。

在今年这届由斐济担任主席国的峰会召开之前，名为“立场相近发展中国家（LMDC）”的谈判联盟提议将2020年之前的行动也纳入COP23会议议程当中。LMDC国家包括孟加拉、中国、印度、巴基斯坦、斯里兰卡、伊朗、越南等24个国家。

但这一提议受到了以美国和欧盟为首的发达国家的反对。来自摩洛哥的即将卸任的缔约方会议主席萨拉赫丁·迈祖阿尔组织了非正式磋商，试图打破僵局。他的努力失败之后，斐济总理弗兰克·姆拜尼马拉马召集了闭门会议，但同样没有解决问题。

据一位参会的发展中国家代表称，LMDC希望了解发达国家正在采取哪些行动“兑现他们现有的承诺”。

据一位发达国家与会代表称，发达国家代表认为这完全是浪费时间，因为“2020年之前的问题已经在另外多项议程中得到讨论，不需要更多单独的讨论”。

非洲集团、印度和中国认为，现有议程项目并未解决眼下的问题。

“在2020年前缩小减排差距的问题上，发达国家需要加快行动速度、提升目标，不能将负担转嫁到《巴黎协定》下2020年后发展中国家的身上。”非洲某国一位不愿具名的代表告诉中外对话。

发展中国家指出，暴风、洪水、海平面上升、干旱、海洋酸化等气候变化带来的影响都需要马上面对，并寻求立即采取行动。

对此，据称一位美国代表表示，“再增加议程是没有意义的；2020年前的问题已经占据了太多时间。”

欧盟某国一位代表说：“我认为，即便将这个议题纳入议程也不能减少一吨排放或者增加额外的资金。”这让发展中国家代表团更加愤怒。

据多位在场的政府代表称，包括中国和印度在内的多个LMDC联盟国家在闭门会议上起身怒斥工业化国家代表的论调。

作为全球最大的发展中国家组织七十七国集团的代表，厄瓜多尔代表提醒全体与会代表，去年摩洛哥气候峰会闭会前各方曾共同承诺要对2020年前的行动问题进行进一步讨论。

印度代表指出，目前在应对由气候变化影响带来的损失与损害方面，会谈进展甚微，应该设定明确的时间表，确保承诺得到兑现。

据称，上述印度代表还表示，各国“做出了多项决定，但并未得到充分实施，考虑到2020年前缩减排放差距的时间所剩不多，迫切需要立即采取行动。”

中国代表试图要求大会明确2020年前行动的时间表，并直指工业化国家的气候变化“目标与现实之间的差距日益扩大”。他指出，某些国家甚至下调了承诺。

来自巴西的代表表示，他“无法理解”为何任何国家政府要抵制将2020年前的相关问题纳入议程。据称，他反问道：“这是否意味着有关2020年后的计划目标也不过是耍嘴皮子？”

据一位在场代表称，会议最后，姆拜尼马拉马要求各位与会代表私下相互讨论，“寻求推进问题解决的方法”。此外，姆拜尼马拉马还表示，他还将继续组织非正式磋商。

大多数观察气候谈判进展的非政府组织均支持发展中国家立场。

E3G高级政策顾问卡米拉·博恩代表气候行动网络表示，“有必要对2020年前行动进行讨论。我们需要看到气候峰会主席国将这一议题纳入会议议程。”

中国代表团高级谈判代表陈志华表示，将2020年前的行动纳入会议议程“对于回顾行动目标将是十分重要的机制，但我们在这方面尚未看到太多进展。”

“发展中国家集团在这一问题上的立场是十分坚定地，因为发达国家在[减缓]行动及其对发展中国家的支持方面仍有很大的差距”。

他指出，2013年华沙气候峰会曾达成决议，发达国家对发展中国家的支持应该逐年递增。

“但我们并没有看到这种增长。我们希望将此纳入议程，并讨论如何缩减差距。发达国家忙于应对《巴黎协定》，但这件事更为紧迫。”他说。

乔伊迪普·格普塔，中外对话第三极项目南亚总监。

Deadlock at climate summit

The US and EU are leading opposition to discussions, leaving India, China and other members incensed

□ Joydeep Gupta

A closed-door meeting over the inclusion of immediate climate action in the agenda at this year's climate summit in Bonn, Germany, has failed to break the deadlock between developing and developed countries.

From the start of the UN summit on Monday, developing countries led by India, China and Iran have been asking for the inclusion of immediate climate action in the agenda.

Developed countries have been opposing this because it puts their actions under the spotlight. The Paris Agreement comes into force in 2020 so prior efforts to limit climate change are largely the responsibility of industrialised countries under the second phase of the Kyoto Protocol. But many industrialised countries have not even ratified the second phase in their legislatures.

Before the start of this year's summit, the presidency of which is held by Fiji, countries in the negotiating bloc called Like Minded Developing Countries (LMDC) submitted a proposal to include pre-2020 actions onto the COP23 agenda. The LMDC group of 24 countries includes Bangladesh, China, India, Pakistan, Sri Lanka, Iran, and Vietnam, among others.

But the proposal has been opposed by developed countries, led by the US and the EU. Outgoing COP president Salaheddine Mezouar of Morocco held informal consultations to break the deadlock. When he failed, Fiji Prime Minister Frank Bainimarama called a closed-door meeting. But that did not resolve the matter either.

The LMDC wants to know what the developed nations are doing to "honour their existing commitments", according to a developing country delegate who was present.

Developed country delegates said this would be a waste of time because "pre-2020 issues were already being discussed under several other agenda items and did not need any more dedicated space," according to a developed country delegate.

The Africa Group, India and China have argued that existing agenda items do not address the matters at hand.

"There was need for developed countries to accelerate and raise their ambition in reducing the emissions gap in the pre-2020 timeframe and to not shift the burden onto developing countries in the post-2020 timeframe under the

Paris Agreement," a delegate from an African country told chinadialogue, speaking on the condition of anonymity.

Developing countries have pointed to climate change impacts such as storms, floods, sea level rise, droughts and ocean acidification being faced right now, and are seeking immediate action.

In response, one US delegate reportedly said, "There is no point in adding on more items; pre-2020 issues have been taken up for quite some time."

One delegate from an EU country reportedly said, "I do not think having this item on the agenda will reduce one single tonne of emissions or add any additional finance." That angered the developing countries further.

A number of countries in the LMDC, including China and India, got up at the closed-door meeting to strongly refute the contention of industrialised countries, according to many of the government delegates present.

Speaking on behalf of the G77 – the largest group of developing countries – the delegate from Ecuador reminded everyone that discussion over pre-2020 action had been promised at the end of the last year's climate summit in Morocco.

The delegate from India pointed out that there had been little progress in addressing loss and damage caused by climate change impacts, and fixed timelines should be put in place for promises made.

Countries had "taken several decisions which were not fully implemented and given the short time left to close the pre-2020 gap, there is an urgent need to act," the Indian delegate reportedly said.

The delegate from China sought clear timelines on pre-2020 actions, and pointed to the "increasing gap in ambition" by industrialised countries to combat climate change. Some countries have even re-adjusted their commitments downwards, he pointed out.

The delegate from Brazil said he found it "incomprehensible" why any government should resist having the pre-2020 item in the agenda of the COP. "Does it also mean that all the talk of post-2020 ambition is also mere lip service?" he reportedly asked.

The meeting ended with Bainimarama asking delegates to meet one another informally and "seek ways to move forward on the matter," according to one delegate who was present. He added that he would continue with the informal consultations as well.

Most of the non-governmental organisations observing the climate negotiations supported the stand taken by developing countries.

Speaking on behalf of their umbrella group Climate Action Network, Camilla Born, senior policy adviser at E3G, said, "There is a need to talk about pre-2020 action. We need to see the COP presidency find space for it here."

The senior negotiator in the Chinese delegation Chen Zhihua said that having pre-2020 action on the agenda would be an "important mechanism to revisit targets, but we don't see much progress."

"The whole group of developing countries is very firm on this because there are very big gaps in [mitigation] action by developed countries and their support to developing countries" to deal with the impacts of climate change.

He noted that in Warsaw during the 2013 climate summit it was decided that support by developed countries to developing countries would be increased year by year.

"But we don't see much of that. We want this on the agenda to discuss how to close the gap. Developed countries are very busy with the Paris agreement. But this is more urgent," he said.

Joydeep Gupta is South Asia director of The Third Pole.

气候援助资金仍旧是谈判桌上的难题

遗憾的是，目前大量资金都是以贷款而非赠款的形式存在，而且大部分还需要繁琐的审批流程。

□ 乔伊迪普·格普塔

11月6日—17日在德国波恩举行的联合国气候峰会第一周的会程已经告一段落，欧盟、瑞士和加拿大重申到2020年前把对发展中国家的资金援助增加至每年1000亿美元。但是，据《联合国气候变化框架公约》（UNFCCC）秘书处的官员说，自2009年做出该承诺以来，发达国家向发展中国家提供的上述目的的资金总额不超过450亿美元。

而发达国家公布的这个数字则要高得多，有些估算额高达900亿美元左右。不过，据密切关注全球气候谈判进程的非政府组织——气候行动网络（CAN）的分析师计算，所宣称的金额中有约一半的资金都是贷款。

考虑到大部分造成气温升高的额外温室气体都是富裕国家自工业时代初以来排放到大气中的，“这就像是撞了一个人的车，然后给了他一笔贷款来支付维修费。”一位CAN成员说道。

世界银行及其下属机构最近发布的一份联合报告称，发达国家去年共筹集了270亿美元的气候资金。其中只有4%是赠款。

一些发达国家政府在公开场合提到气候融资总额时，并没有提及其中有多少是以贷款的形式存在。但这部分数据可以在提交给《联合国气候变化框架公约》秘书处的两年一度的报告中看到。从各国提交的材料来看，法国只有2%的资金是赠款，日本为5%，德国45%。挪威、瑞典、丹麦、瑞士和加拿大等国家都表示其气候融资全部都为赠款的形式。

考虑到发达国家应担负的历史责任，《联合国气候变化框架公约》和1997年达成的《京都议定书》所遵循的基本原则都是发达国家必须为发展中国家提供应对气候变化及其影响的资金支持。这是保障全球公平正义的基本准则。发展中国家的政府和大多数非政府组织认为，这个意义上的资金支持应该是以赠款而非贷款的形式提供。

反对该原则的国家主要是美国、日本、澳大利亚和新西兰。他们指

出，目前中国是世界上最大的温室气体排放国，印度位列第三。正是由于这种反对的声音，2015年达成的《巴黎气候协定》基本上忽略了发达国家和发展中国家之间有区别的责任的原则，不过协议文本中仍保留了该部分内容。

气候融资如何计算

与之相关的一个问题就是《联合国气候变化框架公约》系统在气候融资的定义、分类、追踪和评估等方面的制度薄弱。联合国开发计划署（UNDP）和联合国环境规划署（UNEP）等其他联合国机构未将其气候相关活动汇报给《联合国气候变化框架公约》，从而增加了确定资金流向和使用情况的难度。这是本届峰会讨论的重要议题之一，但进展非常缓慢。

出钱的发达国家一直更加热衷于资助控制温室气体排放的气候变化减缓项目，而发展中国家则希望气候适应项目也能获得同样的资金。双方在这一问题上的争持不下实际上等于宣布了《联合国气候变化框架公约》适应基金的死亡，该基金已经在很长一段时间里没有得到几乎任何资金投入了。本届峰会开始时，德国政府宣布向该基金赠款5000万欧元。这样一来，适应基金还能再坚持一年。

其他基金，如旨在帮助最贫穷发展中国家的最不发达国家（LDC）基金，处境也十分艰难，因为现在大部分资金都流向了绿色气候基金（GCF）。与名目繁多但单项基金数额低下相比，许多观察人士更看好这种将钱统筹到一起的模式。但是现在很多发展中国家都对绿色气候基金冗长僵化的流程表示不满，就像他们多年来对世界银行不满一样。

一个实际存在的问题是，GCF希望在投资一个项目之前看到这个项目能够带来多大的协同效益。如果一个发展中国家想要申请GCF资金建一个太阳能电厂，GCF想要知道从煤和石油转向太阳能可以减少多少碳排放。有这种协同效益落到纸面固然看起来很好，但是一些发展中小国却因为碳排放量太低而遭到拒绝。“我们的碳排放几乎为零，还能再减多少呢？”不丹国家环境委员会负责人廷里·拉姆在本届峰会的边会上哀怨地问道。

这些都是发展中国家希望作为2020年前气候行动的一部分进行讨论的问题（2020年《巴黎协定》将进入实施阶段）。印度首席谈判代表拉维尚卡尔·普拉萨德告诉第三极网站：“我们需要知道目前所说的资金中有多少是公共资金。”中国高级谈判代表陈志华说，这对发展中国家来说是一个“生死攸关”的问题，并将影响《巴黎协定》谈判中所有的其他问题。

普拉萨德说：“这个问题的解决需要足够的空间。众所周知我们正在制定全球盘点机制的准则、透明度保障和国家自主贡献的实施细则。有关（发达国家的公共资金援助）的信息对发展中国家具有重大意义，因为这将有助于谈判中各项议题的讨论。”

但是，由于发达国家反对将任何2020年前行动纳入本次大会的议程，该问题还有待解决。资金问题讨论的协调人建议各国制定相应机制，就资金问题每两年与UNFCCC进行一次信息沟通，但这一点也未达成共识。美国代表说：“其他没有什么需要解决的问题了。”

乔伊迪普·格普塔，中外对话第三极项目南亚总监。

Cash dries up in Bonn

A lot of the climate finance promised to developing countries is being provided as loans not grants

□ Joydeep Gupta

Germany, the European Union, Switzerland and Canada have all reiterated their commitment to increase financial help to developing countries to US$100 billion per year by 2020. But right now, the grants provided since this promise was first made in 2009 do not total much beyond US$45 billion, according to officials in the UN Framework Convention on Climate Change (UNFCCC) secretariat.

The figure given by developed countries is far higher, and some estimates put it at around US$90 billion. But analysts at the Climate Action Network (CAN) – the umbrella group of non-governmental organisations that track global climate negotiations – have calculated that around half the advertised amount is in the form of loans.

When it comes to financing the costs of adaptation, money seems to be largely missing for developing countries

Considering that most of the extra greenhouse gases warming the atmosphere were put there by developed nations since the start of the Industrial Age, "this is like crashing into someone's car, and then giving them a loan to pay for the repairs," said a CAN member.

A recent joint report from the World Bank and its associates said they had collectively committed US$27 billion in climate finance last year. Of that, only 4% was in grant form.

Governments of some developed countries mention the total climate finance figure in public without mentioning how much of it is in the form of loans, but that can be seen in the biennial reports submitted to the UNFCCC secretariat. France reported that only 2% was provided as grants, Japan 5%, and Germany 45%. Norway, Sweden, Denmark, Switzerland and Canada are among countries that said their climate finance consisted exclusively of grants.

Given the historical responsibility of developed countries, the UNFCCC and the 1997 Kyoto Protocol are both based on the principle that providing finance to developing countries to combat climate change and deal with its effects is an essential aspect of global justice. Developing country governments and most NGOs have held this implies providing money in the form of grants and not loans.

The main opposition to this has come from the US, Japan, Australia and New Zealand, who point out that right now China is the world's largest greenhouse gas emitter, and India the third largest. It was mostly due to this opposition that the principle of differentiation between developed and developing countries was largely ignored in the 2015 Paris climate agreement, though it was kept in the text.

Counting climate finance

An associated problem is the weakness of the UNFCCC system for defining, categorising, tracking, and evaluating climate finance. Other UN organisations such as UNDP and UNEP do not report their climate related activities to UNFCCC, which makes it even harder to figure out how much money is being spent where and for what. This is one of the important topics under discussion at this summit, but progress has been painfully slow.

Developed countries that give the money have always been keener to fund mitigation projects that would control greenhouse gas emissions, while developing countries want equal amounts for projects that help adaptation to climate change impacts. This tussle has seen the virtual death of the UNFCCC's Adaptation Fund, which was given hardly any money for a long time. At the beginning of this summit, the German government announced a grant of 50 million euros to this fund. That will ensure its survival for another year.

Other funds – such as the Least Developed Countries fund, which is meant to help the poorest developing countries – are also in intensive care, as most of the money is going to the Green Climate Fund (GCF) instead. Many observers have welcomed this consolidation, preferring to see one major fund rather than many with little. But some developing countries are now complaining about the detailed and rigid processes of the GCF, just as they have done about the World Bank for years.

One genuine problem is that the GCF wants to see the extent of co-benefits before financing a project. If a developing country wants money to set up a solar farm, the GCF wants to know the volume of carbon emissions that will be saved by moving over from coal and oil. That is good on paper, but the really small developing countries are finding that their emissions are so small their proposals are being rejected. "We emit almost nothing. How much emission reduction can we show?" asked Thinley Lhamo, the head of Bhutan's National Environment Commission, on the sidelines of the Bonn summit.

These are among the problems developing countries want to discuss as part of pre-2020 climate action (the Paris agreement only becomes operational in 2020).

India's lead negotiator Ravishankar Prasad said: "The issue requires adequate space. We know we are developing guidelines for a global stocktake, transparency arrangements and implementation of nationally determined contributions. Information [on public finance provided by developed countries] is very relevant for developing countries as this would contribute to each and every agenda item listed under negotiations."

Senior Chinese negotiator Chen Zhihua said this was a "life and death" issue for developing countries and would impact all other elements under negotiation in the Paris agreement.

But with developed countries opposing the inclusion of all pre-2020 action in the agenda of this summit, the issue is yet to be resolved. The facilitator of the finance discussions proposed that countries figure out modalities so that they could communicate finance information to the UNFCCC once every two years, but there is no consensus on this either. The United States delegate said, "No additional matters need to be addressed."

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波恩气候大会：“非国家层面力量”引人注意

一如正式会场外的“非官方美国馆”所显示的，
城市、州省等国家政府以外的力量在这届气候大会上表现抢眼。

□ 乔伊迪普·格普塔　苏姆亚·萨卡尔

既然特朗普总统已经宣布美国政府将退出《巴黎气候协定》，并为此致信《联合国气候变化框架公约》，那么波恩气候峰会召开期间，身处谈判室内的美国政府代表们又在做什么呢？答案是，和以前一样，在谈判。

一位不愿透露姓名的美国政府谈判代表告诉第三极网站：“我们没有接到其他方面的指示。”

曾任克林顿政府白宫气候团队负责人的保罗·布莱索表示：“我已经与本届（美国政府）代表团成员进行了交流。他们预计美国在2020年会重回《巴黎气候协定》。他们已经决定按照原计划进行谈判，以确保美方利益不受损失。”

《巴黎气候协定》规定，在协议生效之日起的前三年内，任何缔约国都不得退出协定。因此，美国在2019年11月3日之前是无法开启退出流程的，而3年结束后仍有一年的通知公告期。也就是说，美国真正启动退出《巴黎气候协定》的程序最早也要等到2020年11月3日，而届时美国又将迎来新一轮总统大选。

与此同时，此次大会也基本上保持了常态。美国仍对发展中国家试图讨论发达国家目前气候变化应对工作的提议进行了全面的阻击。全球知名气候变化组织——国际行动救援（ActionAid International）资深谈判观察家哈吉特·辛格表示：“美国不是一个人，它背后还有欧盟、加拿大、澳大利亚和其他一些国家。”

在乔治·W·布什和巴拉克·奥巴马两届美国政府的“不懈努力”下，《联合国气候变化框架公约》（UNFCCC）中要求富裕国家应承担控制温室气体排放的主要责任的原则在《巴黎气候协定》中被大大淡化了。《联合国气候变化框架公约》的基本原则之一就是“共同但有区别的责任和各自的能力”。这一原则是在认识到工业时代以来排放的造成气候变暖的温室气体绝大多数都来自富裕国家的基础上提出来的。

1997年的《京都议定书》就是根据这一原则设立的，并将减排责

任分配给了工业化国家。而这也是乔治·W·布什领导下的美国政府拒绝签署该协议的主要原因。而在进行《巴黎气候协定》的谈判时，奥巴马政府领导下的气候谈判代表团也反复强调，中国才是如今全球最大的温室气体排放国，第三位是印度。这也就是为什么《巴黎气候协定》规定，所有195个成员国均需承诺控制排放。

制定规则手册

今年的气候峰会打算制定出《巴黎气候协定》的规则手册，并确保其于2020年正式生效。不过起草的过程并不顺利，每一部分都遭遇了不少意见的冲突。因此，目前该议程只有3项条款取得了进展。除非参与大会最后三天高级别会议的各位部长能够打破僵局，否则到2018年我们看到的仍将是一份到处是括号中带有补充内容的规则手册，这也就意味着与会各方就手册中带有方括号的提议并未达成一致意见。

11月15日一项最重要的突破就是有关2020年前行动的议题取得了进展。讨论这项内容的谈判小组最终达成一致意见，将在2018年与2020年对富裕国家给予贫穷国家的气候变化资金总量进行审核。此外，达成的一致意见中还包括要求所有发达国家批准《京都议定书》第二承诺期的各项内容。不过鉴于《京都议定书》第二承诺期将于2020年结束，这样做的象征意义远大过实际意义。重要的是，意见还要求各国政府在2018年5月1日前向《联合国气候变化框架公约》秘书处汇报其在减排、适应气候变化影响、通过提供财政与技术转移帮助其他国家适应气候变化方面所做的工作。

计划将于2018年底举行的一个有关《巴黎气候协定》的重要会谈，还将讨论有关2020年前行动的问题。此外，明年召开的波兰气候峰会还将对2020前的行动计划进行一次专门的盘点。以上回顾审查工作将由专门组建的工作组完成。

这对印度政府代表团来说应该是个好消息，因为他们一直力主将2020年前行动规划纳入气候议程。在取得这次突破之前，印度环境、森林与气候变化部秘书长C·K·米什拉就曾对媒体说："共同但有区别的责任（common but differentiated responsibilities，简称CBDR）、气候融资、气候正义这几点都事关公平，对我们来说是最根本的。"

基础四国（即巴西、南非、印度和中国）代表团的领导们已在11月13日晚进行了会晤，并准备发表一份与上述观点一致的联合声明。

另外一项关于控制农业部门的排放，帮助农民适应气候变化影响的协议也令大多数国家感到满意。此外，还有一个协议是关于如何处理气候变化影响带来的损失和破坏的，不过哈吉特·辛格认为，这个协议的"作用甚微"。

辛格表示："发展中国家期待这次由斐济担任主席国的气候峰会能够取得积极的进步，帮助那些饱受毁灭性飓风和海平面上升侵袭和困扰的人们。"

"他们希望有关损失与破坏问题的讨论能够保留在将来所有气候对话的议程中，这样才有可能取得实质性进展。然而，以美国为首的发达国家却只愿通过一次性协商来讨论融资问题，而这根本无法保证那些受到影响的人们能够及时得到帮助。欧盟、加拿大和澳大利亚一直躲在美国后面。他们不仅让斐济感到失望，更让全球所有气候脆弱地区的人们感到失望。"

加州与其他国家一同在波恩气候大会上呼吁更强有力的气候行程

美国才是最该受到指责的国家

面对这样一份满是补充内容和无力条款的草案，大多数发展中国家代表和非政府组织观察家都对美国政府提出了批评，认为美国代表团阻挠大会就大部分意在提升发达国家责任比例的协议内容达成一致意见。作为回应，来自欧盟、加拿大和美国政府的代表团成员反复表示，他们不可能满足发展中国家在温室气体减排或气候适应方面的费用预期，原因很简单，“因为没有那么多的公共财政资金。”

正如一位美国资深谈判代表所说：“发展中国家应该意识到，我们的政府财政状况并不理想。唯一能够为气候融资提供充足资金来源的地方就是全球期货与股权市场。随着养老基金逐渐脱离煤炭与石油板块，气候融资投资也相应显示出了一些令人鼓舞的迹象。”

美国政府与非政府组织之间就煤炭问题爆发了本次峰会以来最大的一次公开意见冲突。今年也是这么多年以来，美国代表团首次没有设立独立的会场，而谈判代表们也纷纷小心翼翼地与非政府组织保持距离。唯一一次例外发生在一个有关煤炭问题的非正式会议上。当时，会场上挤满了反对特朗普政府的美国团体组织，然而仍有大部分人无法挤进会场。最后，这些人决定在门外举行示威抗议活动。

来自美国的非官方行动

自本次峰会开幕以来，非政府组织、一些州政府、智库和学术机构都曾指出，不是所有人都同意特朗普总统对《巴黎气候协定》的看法。他们在会场外面的草坪上搭建了一个“非官方美国馆”，并且组织和参与了许多非正式会谈，这说明各州政府已经采取了很多气候行动，并且计划未来仍将继续下去。

前任加利福尼亚州州长阿诺德·施瓦辛格在一次地方与区域领导人的活动上表示：“通过这种自上而下和自下而上的方式，我们能够赢得决定性数量的群众基础。特朗普退出并不代表什么。城市为气候[一个调动地方与地区力量改变气候进程的全球合作计划]会帮助我们重新振作起来，并引领我们的清洁能源革命。”

前任纽约市市长迈克尔·布隆伯格也在这份声明中多次重申：“正因为特朗普不再为气候变化(行动)而努力，各城市与市长才更应该发挥好带头作用。所有有着共同意愿的民族国家必须要提高他们(对抗气候变化)的目标，而非国家参与者则是推动这项进程的决定性力量。”

英文原文首发于中外对话子网站第三极网站。

乔伊迪普·格普塔，中外对话第三极项目南亚总监
苏姆亚·萨卡尔，新德里记者及编辑

COP23: Sub-nationals take lead

The US is blocking efforts to discuss immediate climate action but is getting plenty of pushback

□ Joydeep Gupta Soumya Sarkar

As President Trump has announced his intention to withdraw the US government from the Paris Agreement and sent a letter to this effect to the UNFCCC, what are US government delegates doing in the negotiating rooms during the ongoing climate summit in Bonn? Negotiating as before.

"We have no instruction to do anything else," a delegate in the US negotiating team told thethirdpole.net on the condition of anonymity.

Paul Bledsoe, who headed the White House climate team during Clinton's presidency, said: "I've been speaking to members of this (US government) delegation. They expect the US to return to the Paris Agreement in 2020. They've decided to negotiate as usual so that their interests are protected in the meanwhile."

Under the rules of the Paris Agreement, no country can withdraw for the first three years from the date it was ratified. As such, the US cannot begin its process of withdrawal before November 3, 2019, when the one-year notice period will start. The earliest the US can actually exit the Paris Agreement is November 3, 2020 – around the same time voters in the country will elect their next president.

Meanwhile, it has been business as usual for most of this summit. The US has blocked all attempts by developing countries to discuss what rich nations are doing now to combat climate change, "while the EU, Canada, Australia and some other countries hide behind the US", said veteran negotiations observer Harjeet Singh, global lead on climate change at ActionAid International.

Largely due to US insistence – under George W Bush and then Barack Obama – the UNFCCC principle that rich nations should take most of the actions to control greenhouse gas emissions was diluted in the Paris Agreement. One of the founding principles of the UNFCCC is "common but differentiated responsibilities and respective capabilities", which recognised that since the start of the Industrial Age, rich nations have emitted most of the greenhouse gases that warm up the atmosphere.

The 1997 Kyoto Protocol was based on this principle and gave the responsibility of reducing emissions to industrialised nations – the main reason why the US, under George W Bush, refused to ratify it. While negotiating for the Paris Agreement, US delegates under the Obama administration repeatedly pointed out that China is currently the biggest emitter, and India third. That is why all 195 countries have committed to control their emissions under the agreement.

Writing the rulebook

This year's climate summit is intended to write the rulebook for the Paris Agreement, which comes into force in 2020, and there have been repeated clashes in just about every part of the draft. As such, only three items on the agenda have shown any movement. Unless the ministers who are now gathering for the last three days of this summit – called the High Level Segment – are able to break some deadlocks, the rulebook will go into 2018 full of square brackets, signifying proposals on which there is no agreement.

The most important breakthrough on November 15 was around pre-2020 action. The group negotiating this text finally agreed to review how much money rich nations have given to poor nations to combat climate change in 2018 and 2020. It also agreed to request that all developed countries ratify the second phase of the Kyoto Protocol – though this may be largely symbolic as the phase ends in 2020. Importantly, it asks all governments to inform the UNFCCC secretariat – by May 1, 2018 – on what they have done to mitigate emissions, to adapt to climate change effects and to help other countries do the same by providing finance and technology transfer.

A major dialogue scheduled for the end of 2018 to discuss the Paris Agreement will now also discuss pre-2020 actions. There will be a separate stocktake of pre-2020 actions at next year's climate summit in Poland. Working groups will be constituted to review all this.

This should be music to the ears of the Indian government delegation, which had spearheaded the demand to include pre-2020 action in the climate agenda. Before the breakthrough, C K Mishra, secretary in India's ministry of environment, forests and climate change, had told the media: "CBDR [common but differentiated responsibilities], climate finance, climate justice –these are all matters of equity, so they are fundamental to us."

Delegation leaders of the four BASIC countries (Brazil, South Africa, India, China) had met in the evening of November 13 and prepared a joint statement to say the same.

Another agreement that has satisfied most countries is over controlling emissions from agriculture and helping farmers adapt to climate change effects. The other is around how to handle the loss and damage being faced by such effects, though Harjeet Singh described that part of the draft as "very weak".

"Developing countries expected this climate summit, under the presidency of Fiji, to be remembered for making a robust process that will help those who are battered by devastating hurricanes and rising sea levels," said Singh.

"They wanted the issue of loss and damage to remain on the agenda of all future climate talks so that meaningful progress can be achieved. Instead, developed countries – led by the US – have only offered a one-off consultation to discuss finance, which will not take us far in ensuring that people get help once they are affected. The EU, Canada and Australia have been hiding behind the US. They have failed Fiji and failed the world's climate-vulnerable people."

Climate finance

Most developing country delegates and NGO observers blame the US government for the square brackets and weak drafts, accusing its delegates of blocking agreement on most things that would increase the responsibility of developed countries. In response, delegates from the EU,

> 'Since Trump is not working for climate change (action), it is all the more important for cities and mayors to take the lead' – New York Mayor Bloomberg

Canada and US governments said repeatedly that they could not possibly meet the expectations of developing countries on paying for greenhouse gas emission mitigation or for adaptation, "because there simply isn't enough public finance available".

As the veteran US negotiator put it: "Developing countries have to realise that our governments are not in good financial shape. The only places in the world from which sufficient climate finances can be generated are the global bond and equity markets. There are encouraging signs, as pension funds move away from coal and oil."

The issue of coal has led to the largest public spat between the US government and non-governmental organisations (NGOs) during the summit. For the first time in years, the US delegation has not put up a pavilion and delegates have been careful to stay away from NGOs. One exception was a side event on coal, which was swamped by US groups opposed to the Trump administration. Most were still outside when the room filled up and so decided to hold a protest outside the closed door.

Unofficial US action

Since the start of the summit, NGOs, some state governments, thinktanks and academics have been making pointing out that not all Americans agree with President Trump's view on the Paris Agreement. They have put up an "unofficial US pavilion" in the lawns outside the venue, and have been hosting and participating in many side events, signalling that state governments have been taking lots of climate actions and plan to continue.

"With a top down and bottom up (approach), we can reach critical mass," said Arnold Schwarzenegger, former governor of California at an event for local and regional leaders. "When Trump backs out, it doesn't mean anything. Cities4Climate [a global partnership to bring about change at the local and regional level] will pick up the slack and lead the clean energy revolution."

The former mayor of New York, Michael Bloomberg, reiterated this statement: "Since Trump is not working for climate change (action), it is all the more important for cities and mayors to take the lead. Nation-states will have to up their ambition (to tackle climate change). Non-state actors are driving the bus."

This article is republished from The Third Pole.

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美国代表团：波恩气候峰会上的另类存在

我们仍有理由对由各级政府组成的美国代表团在波恩气候峰会发挥积极作用抱有希望。

□ 谭·科普塞

今年的国际气候谈判本应完全围绕提高目标以及在资金支持、适应以及损失弥补措施等方面取得进展而展开。在COP23会议上，各国需要通力合作，找出更快减少温室气体排放的方案。联合国环境署的一份最新报告强调，如果我们不能在更短时间内取得更多进展的话，那么到本世纪末地球气温将上升三摄氏度。

但是，美国总统唐纳德·特朗普宣布要退出《巴黎协定》，打乱了上述一切计划。美国是对气候变化贡献最大的国家，美国的退出将导致严重问题。但这究竟意味着什么？

首先，美国尚未真正退出《巴黎协定》。即便美国真的要退出，最早也要等到2020年11月初。而这一时间点刚好是特朗普面临连任竞选的时候（如果他确定再次竞选的话），而他的对手几乎可以肯定会支持气候行动。

美国气候谈判代表仍将出席波恩的会议，但他们将发挥怎样的作用却仍有待观察。考虑到特朗普对于气候行动的敌意以及他对煤炭的热爱，美国代表团的作用不会是建设性的。我们已经确知的是，特朗普总统曾明确表示反对用于支持发展中国家应对气候变化的绿色气候基金，认为基金“浪费了美国一大笔钱”，“好多好多好多亿美元”。

实际上，到目前为止美国的贡献比特朗普所说的少很多。美国承诺贡献总额30亿美元（约合200亿元人民币），而至今为止实际贡献了10亿美元（约合66亿元人民币）。预计美国近期不会继续提供资金，而这将激怒那些本就指责美国没有充分尽责的发展中国家。

但是我们仍有理由对于美国在波恩以及未来继续发挥积极作用抱有希望。美国除联邦外的各级政府均将派代表参加波恩会议，且主要目的就是表明他们仍将致力于兑现美国在巴黎做出的承诺。

在美国国内，成千上万的市长、州长、部落首领、企业高管以及普通美国人都在努力降低温室气体排放。

这个名为“我们仍在守约（We Are Still In）”的联盟的成员代表了美国一半以上的人口以及54%的经济产出。加州州长杰瑞·布朗与迈克尔·布隆伯格联合发起了一项倡议，收集整理并量化这些自发的行动，以确保美国兑现其在《巴黎协定》下做出的碳减排承诺。

他们这么做是有政治和经济动机的，因为民调显示，美国民众强烈支持《巴黎协定》以及发展清洁能源。清洁能源产业已经蓬勃发展，太阳能光伏设备安装技师以及风力发电涡轮检修工人是美国就业增长最快的两个工种。

除此之外，还有其他动机支持这样的行动。即将发布的《美国国家气候评估报告》草稿近期流出，报告指出，气候变化已经在加剧哈维、厄玛、玛利亚等飓风以及加州等地山火等极端天气现象的影响了。

今年的飓风季已经成为历史上造成损失最严重的一年，而政府问责局新近发布的一份报告显示，未来美国将承受的气候变化相关成本将增加数十亿美元，到2050年或将达到每年350亿美元(约合2320亿元人民币)。被飓风玛利亚摧毁的圣胡安市市长很可能将出席波恩会议，并现身说法，证明美国有必要在应对气候变化的行动中发挥应尽角色。

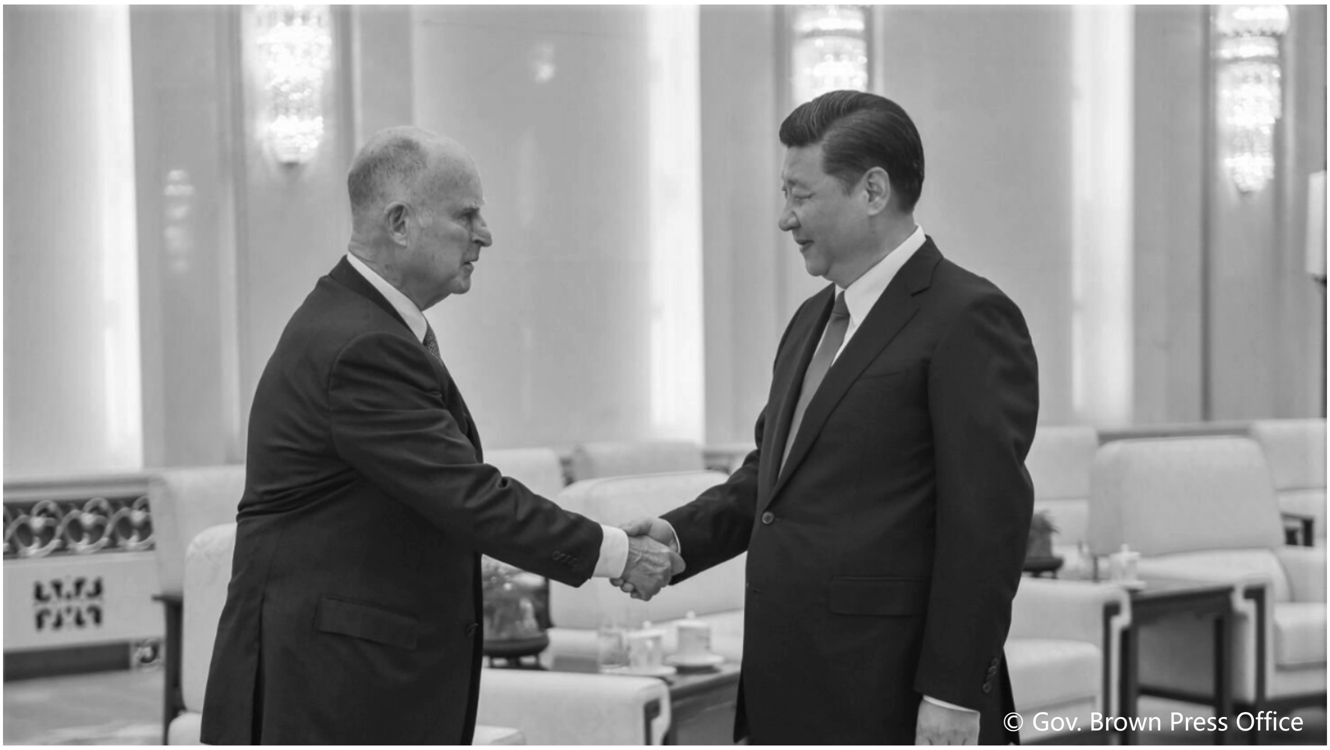
在缺少美国作为领袖的气候谈判中，其他国家或将挺身而出。中国国家主席习近平近期重申了中国对于气候行动和落实《巴黎协定》的承诺，但鉴于中国不属于发达国家，其可以发挥的作用有限。正常情况下，欧盟此时应该有望担负起领导的重任，但正在进行的德国联合政府谈判以及英国脱欧可能限制欧盟在波恩的作为。说到底，要阻止危险的气候变化，美国必须兑现、甚至超额兑现其在《巴黎协定》下的目标。我们欢迎各城市、州及商业机构自发采取行动，而这些行动也将产生切实的积极作用。但是，我们仍然希望美国联邦政府尽早回归谈判，参与对话并认真对待其所做出的国际承诺，越早越好。

谭·科普塞，气候联结 (Climate Nexus) 网站总监

US divided at climate talks

Despite Trump's hostility, the US can still play a productive role at this year's climate negotiations

□ Tan Copsey



China's President Xi Jinping meets California Governor Jerry Brown in Beijing, June 2017

This year's international climate negotiations in Bonn, Germany, were supposed to be about increasing ambition and making progress on issues like finance, adaptation and loss and damage. At COP23 countries need to come together to work out ways to reduce greenhouse gas emissions faster. A new report from the United Nations Environment Program has highlighted that we risk three degrees of warming by century's end unless countries act more quickly.

Instead, President Donald Trump has thrown a spanner in the works by announcing his intent to withdraw from the Paris Agreement. The US is the largest single contributor to climate change, so this looks like a real problem. But what does this actually mean?

For starters, the United States hasn't actually withdrawn from the Paris Agreement, yet. The earliest they can do so is likely to be at the beginning of November 2020. This happens to be when President Trump is up for reelection and, if he runs again, he'll almost certainly face a challenger who is for climate action.

US climate negotiators will still be present in Bonn but it's not clear what role they'll play. Given Trump's hostility to climate action and fondness for coal, it's unlikely to be productive. It's believed that the Trump administration will use the negotiations to emphasise the importance of continuing to use coal, natural gas and nuclear energy, two of which are major contributors to greenhouse gas emissions.

And we know that President Trump has been hostile to the Green Climate Fund, which supports developing nations to respond to climate change, saying it was "costing the United States a vast fortune" of "billions and billions and billions" of dollars.

In reality US contributions to date have been much smaller, totalling US$1 billion (6.6 billion yuan) out of a total pledge of US$3 billion (20 billion yuan). It's unlikely that more funds will be forthcoming in the near future, which will anger some developing nations that had already accused the US of not paying its fair share.

But there are reasons to be hopeful that the US can play a productive role in Bonn and beyond. Every other level of the US government will be represented and for the most part they'll be there to show their commitment to the pledge the US made in Paris.

Back home, thousands of mayors, governors, tribal leaders, CEOs, and regular Americans are working to reduce greenhouse gas emissions. These parallel efforts, and a coalition called We Are Still In, represent more than half the US population and 54% of US economic output. California Governor Jerry Brown and Michael Bloomberg have now launched an initiative to compile and quantify these actions, with the aim of ensuring that the US achieves the reduction in carbon emissions it pledged under the Paris Agreement.

They have political and economic incentives to do so. Polling shows that Americans strongly support the Paris Agreement and developing clean energy. The clean energy industry is booming, with solar photovoltaic installers and wind turbine service technicians the two fastest growing jobs in the country.

There are other incentives to act. The new US National Climate Assessment, finds that climate change is already amplifying extreme weather such as hurricanes Harvey, Irma, and Maria, and wildfires like those in California.

This hurricane season is expected to be the costliest in history, and a recent report from the Government Accountability Office has shown that the US stands to suffer billions more climate-related costs, potentially reaching US$35 billion (232 billion yuan) a year by 2050. The Mayor of San Juan, which was devastated by Hurricane Maria, is likely to attend the conference, and make the case for the US to play its part in fighting climate change.

In the absence of US leadership in the negotiations, other actors are likely to step up. President Xi recently renewed China's commitment to climate action and the Paris Agreement. But there are limits to the role China can play as it is not classified as a developed country. Under normal circumstances the European Union would be expected to provide leadership in Bonn, but ongoing German coalition negotiations and Brexit may limit its ability to do so.

Ultimately to stop dangerous climate change, the US will need to meet and probably exceed its Paris targets. The efforts of cities, states and businesses are to be welcomed and can make a real difference. But the sooner the federal government is back, engaged and serious about its international commitments, the better.

Tan Copsey is a Director at Climate Nexus.

波恩气候会谈闭幕：未能就资金问题达成一致

波恩联合国气候大会在一项重大议题上归于失败，但在其他方面取得了一些成功。

□ 乔伊迪普·格普塔　夏·洛婷　白莉莉　姚喆

联合国秘书长安东尼奥·古特雷斯在波恩气候大会上发言

2017年联合国气候变化大会在德国波恩落下帷幕，各国未能就为发展中国家提供资金的问题达成一致意见，但承诺将在明年继续讨论这一议题。

尽管加班加点、彻夜工作，195个国家的政府代表仍未能在周五会谈结束前打破这一僵局。本届大会主席、斐济总理弗兰克·拜尼马拉马最后不得不表示，“讨论将会继续”，并一锤定音，将其纳入本次会议的决议之中。

融资方面取得了一些积极进展。大会决定将旨在帮助贫困国家应对气候变化影响的适应基金纳入2015年签订的《巴黎协定》。工业化国家

一直以来都反对这么做，因为担心自己会被迫向这一已经几乎破产的基金注入资金。

一番闭门协商之后，各国代表设法敲定了将在明年的气候峰会上举行的“塔拉诺阿对话”的议程安排。这一对话的初衷是提高各国控制温室气体排放的国家承诺，但在发展中国家的努力下，有关发展中国家应从发达国家得到怎样的帮助的议题也被纳入议程。

富裕国家的代表虽然不同意提供《巴黎协定》下本国政府将为贫困国家提供财政支持的具体数字，但同意定期汇报自己目前提供的资金数。许多发展中国家代表认为这也是一种进展。

在过去的一年里，全球出现风暴、洪水、干旱等极端天气事件的次数创历史新高，但在相关损失及损害的资金赔偿问题上，此次会议并未取得显著进展。工业化国家坚称这是保险公司的责任，发展中国家则称许多巨灾不属于保险理赔范围。这个问题将留到明年继续讨论。

政府间气候变化专门委员会（IPCC）表示，全球变暖不仅导致洪涝，风暴和干旱的频次和程度都有所增强，还引起海平面上升和海水酸化，渔业的苗圃——珊瑚也因此死亡。

其他积极进展

今年的气候大会还在其他方面取得了积极进展；各国政府就制定2020年生效的《巴黎协定》的实施细则取得了进展。发展中国家则促使大会将2020年前工业化国家采取的气候变化行动列入未来谈判议程。

另外两个长期存在的问题也得到了解决。大会最终定稿《性别行动计划》，这将使更多人关注气候变化给妇女带来的尤为严重的影响，尤其在全球变暖导致可用水资源变得愈发不稳定的情况下。大会还通过了一项计划，进一步促进原住民社区更加充分地参与全球气候决策。

反应不一

虽然许多发展中国家代表离开峰会时抱怨“许多议程内容未得出结论”，以及“把问题又踢给了未来”，但一些观察员确也得到一些积极的收获。

“第二十三届缔约方大会完成了它最初的计划，”欧洲气候基金首席执行官劳伦斯·图比亚娜说，“此次大会上，我们为将在波兰举行的第二十四届缔约方会议上完成‘塔拉诺阿对话’和巴黎协定实施细则制定了流程。真的没时间可浪费了；今年气候变化在全球各地造成的破坏性影响让我们痛苦地意识到了扩大集体气候行动规模的紧迫性。”

另一方面，气候与能源智库E3G高级政策顾问卡米拉·博恩说：“今年谈判得到的有限成果提高了对各国的要求。全球正准备采取进一步的气候行动，各国现在必须制定规则。”

《联合国气候变化框架公约》执行秘书帕特里夏·埃斯皮诺萨称赞《性别行动计划》说：“经验告诉我们，将女性置于应对气候变化的中心位置，有助于提升行动的影响力、公平性和可持续性。这个计划的目的正在于此。它强调并支持女性在抵御及适应气候变化影响过程中能够以及正在扮演的角色。它把全球的注意力集中到我们如何把语言付诸行动上来。”

世界资源研究所气候项目全球总监保拉·卡瓦列罗说：“随着气候变化的加剧，世界上最易受其影响的人群也会遭受越来越严峻的毁灭性影响。气候融资对于帮助发展中国家应对气候变化至关重要。有关资金支持的讨论现在是、以后也将继续是这些谈判中的一个重要议题。”

“在加大对发展中国家的财政扶持和能力建设援助，帮助他们部署清洁能源及其他气候解决方案，适应日益增强的气候变化影响这个关键问题上，大会几乎没有取得任何进展；在未来的峰会上，必须将这个问题放到更高的优先级上，”忧思科学家联盟的战略与政策总监奥尔顿·梅耶尔说。

“气候融资对于帮助发展中国家应对气候变化至关重要。有关资金支持的讨论现在是、以后也将继续是这些谈判中的一个重要议题。”

国际环境与发展研究所总监安德鲁·诺顿说："有迹象表明这次的谈判将取得一些重要进展，但在《巴黎协定》实施细则的制定以及明确融资承诺方面，本次大会还是缺乏必要的果断行动。这说明我们还缺乏一种紧迫感，在全球已经面临气候变化的灾难性影响的情况下，这一点令人担忧。"

全球气候、环境保护基金副主席纳撒尼尔·基奥恩说："不管特朗普政府的立场如何，美国各州州长、市长、商界高管和民众组成的广泛联盟已经明确了他们对气候变化的承诺。这些气候会谈告诉我们，无论唐纳德·特朗普多么想让我们在气候变化问题上开倒车，世界上其他国家——其他美国人——都决意继续前进。"

基督教援助协会的国际气候负责人穆罕默德·阿杜说今年的会议显示出对2020年前减排行动的决心，这一点令人鼓舞。"然而，尽管取得了这一进步，第二十三届缔约方会议仍未能就帮助发展中国家加快清洁能源转型所需的财政支持达成一致。发展中国家不希望被留在过去，与造成气候变化的污染性化石燃料体系为伍，但他们需要富裕国家承诺的财政支持来改变自己的发展路径，充分利用自身的清洁能源资源。

世界自然基金会（WWF）全球气候与能源项目负责人、前气候大会主席曼努埃尔·普加达-维达尔说："在这一年里，极端天气灾难频发，碳排放量四年来首次增长，我们正在做的和需要达成的结果之间的差距很明显：各国必须确立更高的气候目标，尽快采取行动，让全球走上通往1.5摄氏度控温未来的道路。"

国际行动援助在本次气候谈判的最后一天表示了失望，该组织气候变化责任人哈吉特·辛格说："我们本来期待美国宣布退出《巴黎协定》后，团结在一起的各国能展现出更强的领导力。今年的洪灾、火灾和飓风还历历在目，我们本以为他们会迫切地想要解决问题。但谈判一开始，欧盟、加拿大和澳大利亚非但没有推动真正的变革，还缩回了自己的舒适区，与美国为伍。他们继续阻碍气候行动，拒绝为挣扎应对气候影响的国家提供财政支持。虽然易受气候变化影响的社区得到了极大关注，但这些关注并没有转化为他们所需要的支持。"

乔伊迪普·格普塔，中外对话第三极项目南亚总监
夏洛婷，伦敦记者，主要关注中国及环境问题
白莉莉，中外对话气候问题专员
姚喆，中外对话气候战略传播项目官员

No cash deal

The negotiations failed a major test but there were some successes

□ Joydeep Gupta
Charlotte Middlehurst
Lili Pike
Yao Zhe

The annual UN climate summit ended in Bonn, Germany, on Friday with no agreement on providing money to developing countries, but a promise to talk about the issue again next year.

Despite working overtime and through the night, delegates from 195 national governments failed to break the deadlock at the summit. Frank Bainimarama, Fiji Prime Minister and President of this year's COP (Conference of Parties), was finally forced to say, "discussions will continue", and gavel that through as a resolution.

There was some positive movement on finance. It was decided that the Adaptation Fund, which is designed to help poorer countries deal with the effects of climate change, would now be under the aegis of the 2015 Paris Agreement. Industrialised countries had been opposing this because they feared it would compel them to put money into the fund, which is almost bankrupt.

Working behind closed doors, delegates also managed to finalise the design of a meeting called the Talanoa Dialogue, which is slated for next year's summit. That dialogue was originally meant to raise national pledges to control greenhouse gas (GHG) emissions. However, developing countries have pushed in a discussion of the support they should receive from developed countries.

While delegates from rich countries did not agree to provide detail on how much financial support their governments would provide poorer countries under the Paris Agreement, they did agree to report regularly on how much they were providing. Many developing country representatives saw this as a step forward.

In a year that has seen a record number of extreme weather events, such as storms, floods and droughts, there was little progress on how to manage the financial aspect of the loss and damage that results from such events.

> 'We have been painfully reminded of the urgency to scale up our collective climate action by the devastating climate impacts across the world this year'
> – Laurence Tubiana, CEO of the European Climate Foundation

Industrialised countries insisted that the matter be left to insurance firms, while developing countries kept saying that insurance did not cover many of the catastrophes. The issue will continue to be discussed next year.

Positives

There were positives at this year's summit, with governments making progress developing a "Paris rulebook" that will operationalise the agreement, which comes into force in 2020. And developing countries secured a discussion about what industrialised countries are doing to combat climate change before 2020.

Two other long-standing issues were resolved. A Gender Action Plan was finalised that will bring greater attention to the disproportionate impacts of climate change on women, especially when global warming is making water availability less certain. There is also a plan to develop fuller participation of indigenous communities in global climate decision making.

Mixed reactions

While many developing country delegates came out of the summit muttering about "unfinished agenda items" and "kicking the discussions forward", some observers did have some positive takeaways.

"COP23 delivered on what it set out to do," said Laurence Tubiana, CEO of the European Climate Foundation. "We now have the processes in place to conclude the Talanoa Dialogue and the Rulebook for Paris at COP24 in Poland. There really is no time to lose. We have been painfully reminded of the urgency to scale up our collective climate action by the devastating climate impacts across the world this year."

Patricia Espinosa, executive secretary of UN Climate Change, was pleased by the summit's developments on a gender action plan. "We know from experience that putting women at the heart of tackling climate change can result in more impactful, equitable and sustainable actions. The plan is designed to do just that. It highlights and supports the role women can and do play in building resilience and adapting to the impacts of climate change. It focuses global attention on how we can turn words into deeds."

Despite President Trump's announcement earlier this year that the US would withdraw from the Paris Agreement, "governors, mayors, business executives and citizens made clear their commitments to climate action", said Nathaniel Keohane, vice president for global climate at the Environmental Defence Fund. "The story of these climate talks was that however much Donald Trump wants to take us backward on climate change, the rest of the US – and the rest of the world – is intent on moving forward."

While some gains were made, many delegates were concerned about the lack of progress made to ramp up financial and capacity-building support to help developing countries deploy clean energy.

"Developing countries don't want to be left with the polluting fossil fuel systems of the past that drive climate change, but they need the promised financial support from richer nations to switch tracks and make the most of clean energy resources." said Mohamed Adow, Christian Aid's international climate lead.

ActionAid International also expressed disappointment on the last day of the climate negotiations. "We expected much more leadership from countries who pulled together when the US declared they were leaving the Paris Agreement," said Harjeet Singh, the organisation's lead on climate change. "We had assumed they would come keen to get the job done but once the talks started, the EU, Canada and Australia slunk back to their comfort zones – siding with the US – instead of driving real change. Though vulnerable communities were in the spotlight, this hasn't translated into the support they need."

Joydeep Gupta is South Asia director of The Third Pole.

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旱灾死亡人数超过其他灾害致死人数的总和

在世界土壤日，联合国防治荒漠化机构负责人讲述荒地在应对气候变化问题上可发挥的作用。

□ 乔伊迪普·格普塔

如果能修复3亿公顷的土地，2050年之前的全球粮食供应安全就可以确保

2015年，当世界各国政府被问及将如何应对气候变化时，为什么140多个国家都提及土地问题呢？

《联合国防治荒漠化公约》（UNCCD）执行秘书莫妮卡·巴布说，答案是干旱。

“从非洲向欧洲移民的社会和政治影响大家有目共睹，但不知诸位是否意识到这些移民全都来自干旱地区？”巴布最近在与一些前往德国波恩报道联合国气候峰会的记者们交谈时曾经这样问他们。

巴布解释说：“大多数人唯一的财产就是土地，由于气候变化，人们

的土地资源越来越贫瘠。每年旱灾导致的死亡人数都超过其他灾害的致死人数总和。今年，非洲之角有2500万人失去了赖以生存的基础。”

这个问题是可以解决的——每英亩土地的恢复成本仅不到300美元（1986人民币）。巴布表示，为满足日益增长的人口需求，恢复土地势在必行。每年需要新增四百万公顷（六千万亩）可耕土地。

而这些新增土地从哪里来呢？唯一的解决办法是恢复退化的土地。全球有20亿公顷的退化土地具备恢复潜力。据巴布的观点，只要恢复其中3亿公顷的土地就可以确保2050年之前的全球粮食供应安全，并且还可以使二氧化碳的排放缺口减少三分之一。

巴布表示，人们围绕气候变化的其他应对方法展开了大量讨论，但却“很少提到土壤荒漠化治理这个方法，原因就是这个方法的大部分成本是人工成本，而且也缺少大公司的参与。”

“但是土地修复的确可以提高土壤的碳封存能力，所以也开始引起了一些关注。”

做好准备

巴布认为，在一个气候变化日益严峻的时代，所有国家都需要做好应对干旱的准备。目前，美国、澳大利亚、以色列三国已经建立了干旱防范系统。她说：“我们已经开始筹建干旱防范机制。”

该机制以土地退化零增长（LDN）基金的形式，计划到2018年初筹集3亿美元（19亿元人民币），规模仅次于可再生能源发展基金。巴布说，该基金与可再生能源基金的使用方式一样，以援助资金作为担保，开发符合银行贷款条件的项目。

不可持续的耕作方式和气候变化每年导致1200万公顷的土地遭到破坏。巴布称，“我们希望每年恢复相同数量的耕地，争取在2030年达到土地退化零增长的目标。”

她发现，《防治荒漠化公约》仅靠植树造林项目防治荒漠化是不够的。该组织还有必要开展其他相关项目。

巴布说：“土地权属不清会导致荒漠化。

牧民与农民之间的水资源冲突日益严峻，并且在世界各地普遍存在。《防治荒漠化公约》的全球行动目标是在这个气候变化的时代，恢复农业的可持续性，特别是恢复边缘地区和旱作农业区的可持续农业。这样才能保留住1万多年来人类文明赖以生存的基础。

乔伊迪普·格普塔，中外对话第三极项目南亚总监

Drought is a killer

On World Soil Day, the UN desertification chief explains how wastelands can help fight climate change

□ Joydeep Gupta

When governments around the world were asked in 2015 what they would like to do to combat climate change, why did over 140 countries include the issue of soil?

Drought is the answer, says Monique Barbut, executive secretary of the UN Convention to Combat Desertification (UNCCD).

"You can all see the social and political consequences of migration from Africa to Europe. But do you realise that 100% of the migrants are coming from drylands?" Barbut asked, while talking at the recent UN climate summit in Bonn, Germany.

"The only asset of most people is land, and that asset is becoming less and less productive all the time due to climate change. Every year, more people die of drought than of all other calamities put together. This year, 25 million people in the Horn of Africa have been left without means to feed themselves," she elaborated.

> Restoring just 300 million hectares would ensure global food security until 2050, according to Barbut.

Solutions are available – land can be restored at less than US$300 (1,986 yuan) per acre. And this, according to Barbut, is a must to feed the growing global population. Four million hectares (60 million mu) of new land have to be in production every year.

Where will this new land come from? The only solution is to restore degraded land, of which two billion hectares are available. Restoring just 300 million hectares would ensure global food security until 2050, according to Barbut. It would also close the carbon dioxide emission gap by a third.

A lot of noise is made about other ways to combat climate change, but "this does not get any publicity because most of the cost is labour cost, and there are no large companies involved," said the UNCCD head, adding:

"But restoring land does improve soil carbon sequestration, so this is starting to generate some interest."

Be prepared

In an era of climate change, all countries need to be prepared for droughts, Barbut believes. Three countries have drought preparedness systems – US, Australia and Israel. "We have started a drought preparedness initiative," she said.

This takes the form of the Land Degradation Neutrality (LDN) Fund – which hopes to gather US$300 million (1.9 billion yuan) by the start of 2018. Barbut said the plan is to use the grant money in the same way as the renewable energy fund, by using it to guarantee bankable projects.

Twelve million hectares of land are destroyed each year due to unsustainable farming practices and climate change. "We want to restore an equal amount each year to reach neutrality by 2030," Barbut said.

She has found that it is not enough for the UNCCD to have projects to plant trees that will keep deserts at bay. The organisation has to get into related issues.

"Lack of land rights causes desertification," said Barbut.

Water conflicts between herders and farmers are increasing everywhere. What the organisation is trying to do around the world is nothing less than to restore the sustainability of agriculture, especially in marginal and rain-fed farms, so that the foundation on which human civilisation has rested for over 10,000 years may be maintained.

Joydeep Gupta is South Asia director of The Third Pole.

“一带一路”是否“适配”《巴黎协定》？

今年的联合国气候大会上，中国的海外碳足迹倍受关注。

□ 白莉莉

《联合国气候变化框架公约》一年一次的缔约方大会上，中国作为世界最大的碳排放国，历来都备受关注。在特朗普当选美国总统之后，国际社会迫切需要一个领头羊来引领气候行动，而曾经被看作全球气候行动绊脚石的中国则成为了热门之选。然而，中国在国际气候舞台上地位的提升也引来了人们对其国内气候行动更深入的探究。

在今年举行的德国波恩气候大会上，民间团体开始对中国雄心勃勃的全球发展计划提出质询。参加此次气候谈判的195个国家中，有68个国家为中国的“一带一路”倡议所涵盖。作为中国当下最重要的对外政策，“一带一路”倡议起初是力图通过基础设施建设，复兴古丝绸之路。而后，逐渐发展成为中国的一个全方位的海外发展战略。

这个发展与外交相结合的策略对气候变化的影响可谓深远。一方面，中国为 解决“一带一路”国家的能源困境而提出的解决方案往往包含燃煤电厂建设，从而可能增加这些国家的排放。但另一方面，中国还同时为其中一些国家提供气候融资，帮助他们建设可再生能源项目。

对比这些项目之后，我们不禁要问，中国的海外碳足迹是否与其在《巴黎协定》中的承诺相一致呢？波恩气候大会作为国际社会讨论一带一路倡议的一个契机，或许能解答这一问题。

有中国特色的气候融资

今年气候峰会的核心议题之一是如何向发展中国家提供融资，帮助他们减缓和适应气候变化的影响。一些国家，比如今年的主席国斐济，亟需各国伸出援手，帮助其应对海平面上升的影响。在2009年的哥本哈根气候谈判中，发达国家承诺：在2020年之前，每年融资1000亿美元（6614亿元人民币）帮助发展中国家应对气候变化。这一承诺后来还被写入了《巴黎气候协定》。

中国的“一带一路”战略必须与《巴黎协议》方向一致，严控海外投资标准

但特朗普政府拒绝继续为《联合国气候变化框架公约》下的政府气候融资机制——绿色气候基金（GCF）注资，使得该承诺遭遇了不小的打击。随着美国在气候问题上“开倒车”，中国挺身而出，肩负起气候行动领头羊的压力更重了。

“其他国家希望中国填补资金缺口，但我们并不打算这样做。”中国气候变化事务特别代表解振华表示，“我们没有义务向绿色气候基金注资，我们坚持我们作为发展中国家的立场。”

虽然近几十年来中国人均收入大幅增长，但仍远低于世界银行定义的发达国家水平。

中国可能无意填补美国退出绿色气候基金造成的空白，但它已经按自己的方式向发展中国家提供了帮助。在2015年的巴黎气候谈判中，中国承诺通过南南气候合作基金为其他发展中国家提供31亿美元（205亿人民币）的支持。该基金与绿色气候基金类似，也是利用不同的金融机构向发展中国家提供资金。

既然绿色气候基金与中国自己的基金很有可能会出现援助目标国重叠的现象，那么，中国何不向已经成立的基金直接注资呢？这个问题的答案就是，如果中国加入绿色气候基金这个由发达国家组成的援助国组织，就有可能会传达出这样的信号：中国愿意放弃其“共同但有区别的责任”原则，并且准备回应国际社会在气候变化问题上对发达国家的所有期待。

中国自己的气候融资机制使其在坚守自己发展中国家地位的同时，可以像发达国家一样慷慨解囊。

中国气候基金将开展气候变化南南合作“十百千”项目，即10个低碳示范项目、100个气候减缓和适应项目以及提供1000个面向发展中国家的应对气候变化培训名额。

据国家气候变化战略研究与国际合作中心（NCSC）柴麒敏介绍，该项目的细节仍在讨论中。但是一些培训项目已经启动。联合国气候峰会赞比亚谈判代表之一、能源部主任阿诺德·斯瓦巴对中外对话表示，他曾到杭州参加为期三周的小水电开发培训。

“说起培训，我们能源领域的很多人，其中既有政府部门的人也有公用事业单位也就是发电公司的人，都到中国参加短期培训课程。”斯瓦巴说道。

巴黎协定范畴之外

中国可能正在走自己的气候融资之路，但它的做法很好地契合了《巴黎协定》的目标。不过，中国的“一带

一路”倡议却并非如此，它并不受《巴黎协定》的直接监督。这是因为,《巴黎协定》没有针对海外投资的相关规定。《巴黎协定》的基础只是各国根据自身情况做出关于“国家自主贡献”（NDCs）的承诺，其规定的减排行动仅限于国内。《协定》中并没有关于海外投资监管的条款。

这是《巴黎协定》的一个盲区。包括中国在内的“一带一路”沿线国家的温室气体排放量占全球排放总量的一半以上，而且他们的排放预计还会增长。“一带一路”倡议决定着他们的增长轨迹。而他们的增长轨迹又将决定2℃的全球温升控制目标（相对于工业化前水平）是否能够实现。

民间组织创绿研究院的郭虹宇强调，很多“一带一路”沿线国家的“国家自主贡献”目标是有条件的，也就是说他们只有从其他国家获得足够资金支持才能实现低碳发展。

“一带一路”投资能否与这些国家的低碳发展路径相契合，在很大程度上取决于中国能否通过对海外融资实行更严格的标准来促进低碳项目。

越南计划投资部部长阮志勇表示，中国目前仍在投资高碳基础设施项目。“目前在越南的中国投资者感兴趣的似乎主要是煤炭发电”，他说道。但他同时也指出，中国投资者也开始在越南建设太阳能光伏板生产设施。他说，越南的电力部门仍然需要大规模的投资，而且需要在基础设施建设需求与气候目标之间做出谨慎的权衡。

最近的研究表明，越南的情况并非个例。与可再生能源相比，中国海外投资更倾向于煤炭发电，特别是在东南亚国家。不过这个趋势可能会逐渐下降。全球环境研究所的一项研究显示，中国在火电项目上的参与在2010年达到峰值，现在已经略有下降。

确保海外融资，遵守《巴黎气候协定》

如何管理和引导中国的海外融资，也是此次气候峰会期间“绿色一带一路”分会讨论的重点。中国绿色金融委员会主任马骏谈到了该组织新出台的《中国对外投资环境风险管理倡议》，该倡议要求中国境外投资者必须尽可能遵守所在行业的最高环境标准。

中国银行业监督管理委员会（银监会）巡视员叶燕斐表示，银监会于2017年1月发布了境外投资的环境和社会风险指南，并派出工作组对银行的境外投资进行检查，以确保投资符合指南的要求。

环境律师张兢兢曾到世界各地的中国投资项目进行调研，她认为，指南对于标准的制定和期望值的转变肯定有帮助，但是不具有约束力。她对中外对话表示：“约束中国投资项目的环境和社会风险主要还是靠东道国的法律。”

她补充说，国家发展和改革委员会正在努力强化国内的法律制度框架，不仅已经起草了《企业境外投资管理办法》，而且还正在制定一个敏感行业清单，这些行业的海外项目需要经过特别的审批程序。

提供项目融资的亚洲基础设施投资银行、新开发银行以及亚洲开发银行等多边机构也致力于提高标准。这些银行在进行基础设施投资时越来越把重点放在可再生能源和绿色能源项目上，而不是传统能源项目。

在波恩气候大会上，亚行首席气候变化专家吕学都介绍了亚洲开发银行将在2020年把气候融资提高一倍的新战略，并表示亚行已经与中国财政部签署了“一带一路”项目融资协议。“我们将继续秉承亚行在环境和气候变化方面的高标准…… 真正发挥‘一带一路’的示范作用，”他说道。

言必信，行必果

各国如何兑现他们在《巴黎协定》下做出的减排承诺，那是他们自己的事。这意味着，严格意义上来说，中国不需要为海外投资项目的碳排放负责。

但是，在2015年的一次中美双边会议上，中国同意“严控公共投资流向国内和国外的高污染、高排放项目。”

在10月召开的中国共产党第十九次代表大会上，习近平主席发表讲话称，中国应成为“全球生态文明建设的重要参与者、贡献者、引领者”。当前，中国的“一带一路”战略正面临着来自国际社会的压力，要求其与全球减排行动相一致。

中国通过南南合作支持其他国家应对和减缓气候变化，这表明中国在气候外交领域发挥的作用已经超越其发展中国家的地位。但这些倡议并不能抵消中国海外化石燃料项目带来的影响。中国发挥全球气候领导力所面临的更大考验在于能否推动“一带一路”计划基础设施投资由高碳项目向低碳项目的转型。

白莉莉，中外对话气候问题专员

Do BRI and Paris align?

From the COP sidelines, Lili Pike reports on the future direction of China's overseas investment and climate finance

□ Lili Pike

China has long been the object of scrutiny at COP – the annual United Nations climate conference – as the world's largest emitter. Once seen as an obstructionist, the country has become the darling of a climate community desperate for a champion after Trump's election. But this elevated status has also invited further inquiries into its climate actions.

At this year's COP in Bonn, Germany, civil society observers began to interrogate China's vast global development ambitions. Of the 195 nations that attended the climate negotiations, 68 of them are members of the Belt and Road Initiative (BRI) – China's dominant foreign policy. The initiative started as an effort to build infrastructure along the historical Silk Road routes and has since ballooned into a catch-all for the country's booming overseas development.

This conjoined development-diplomacy has strong implications for climate change. China is increasing emissions in Belt and Road countries by offering coal-fired power plants as a solution to their energy poverty crises. At the same time, China is providing climate finance and building renewable energy projects in some of the same countries.

Weighing these actions against each other, does China's overseas footprint align with the Paris Agreement? As a convener for civil society debate on the Belt and Road Initiative, the Bonn COP helped to inform a verdict.

Climate finance with Chinese characteristics

One of the central negotiating issues at the COP was how to provide financing to developing countries to mitigate and adapt to climate impacts. Some, like this year's co-host Fiji, need immediate help to respond to rising sea levels. In 2009 at the Copenhagen climate talks, developed countries pledged to mobilise US$100 billion (661.4 billion yuan) per year in climate finance by 2020, a pledge further cemented in the Paris Agreement text.

But the Trump administration has dealt a blow to this commitment by refusing to make further payments to the Green Climate Fund (GCF), the UNFCCC mechanism for national governments to deliver climate finance. With the

US abdicating, China has come under pressure to step up.

"Others expect us to fill the financial gap, but we do not plan to do so," said Xie Zhenhua, China's top climate envoy. "We are not obliged to pour money into the Green Climate Fund. We insist on our stance as a member of the developing countries."

Although per capita income in China has risen significantly in recent decades, it is still well below the developed country line as defined by the World Bank.

China may have no intention of filling the void in the GCF left by the US, but it has offered to assist developing countries on its own terms. At the Paris climate talks in 2015, it pledged US$3.1 billion (20.5 billion yuan) of climate financing to developing countries through its South-South Climate Cooperation Fund.

The GCF and China's own fund will likely support many of the same recipient nations, begging the question: why does China not contribute directly to the established fund? Joining the body of developed country donors to the GCF might send the signal that China is ready to abandon its "common but differentiated responsibilities" position and be answerable to all the expectations of a developed country on climate change.

China's home-grown climate finance scheme allows it to maintain its identity as a developing country while adopting the magnanimity of a developed country.

China's fund is expected to support the "10-100-1000" South-South climate cooperation initiative, developing ten low-carbon development demonstration projects, one hundred climate mitigation and adaptation projects, and climate training programmes for one thousand representatives from developing nations.

The details of the fund are still being hashed out according to Chai Qimin of the National Centre for Climate Change Strategy and International Cooperation (NCSC). But some of the training programmes are already underway. Arnord Simwaba, one of Zambia's COP delegates as director of the Department of Energy, told me he had travelled to Hangzhou for a three-week training course on mini-hydro development.

"In terms of training our people, so many people from the energy sector – be it from the government side or from the utility, that is the power generation company – so many officers ... they go to China for short courses," said Simwaba.

Beyond the border of the Paris Agreement

China may be charting its own path on climate finance but its efforts align clearly with the aims of the Paris Agreement. This cannot be said for its Belt and Road Initiative. The BRI has no direct oversight under the agreement, which is built on country commitments known as Nationally Determined Contributions to deliver emissions cuts within national borders. It has no provisions for monitoring overseas investments.

This is a blindspot for the Paris Agreement. BRI countries (including China) contribute over half of global greenhouse gas emissions and their emissions are projected to grow. Shaped by the Belt and Road, their growth trajectories will determine whether the world can limit average global temperature increase to two degrees Celsius.

Guo Hongyu of Greenovation Hub, a Beijing-based non-governmental organisation, highlighted that the Nationally Determined Contributions of many BRI countries are conditional, meaning they will only be able to achieve low-carbon development with sufficient financial support from other countries.

Whether BRI investments will align with a low-carbon path in these countries rests in large part on China applying stricter standards to its overseas financing to promote low-carbon projects.

Nguyen Tuan Anh, Vietnam's Minister of Planning and Investment, reported that China is still investing in high-carbon infrastructure. "The Chinese investors presently in Vietnam appear interested mainly in coal power generation," he said, while also noting that Chinese investors have begun building solar PV manufacturing facilities in the country. He cautioned that the Vietnamese power sector still requires major investment and will need to carefully balance its infrastructure needs and climate goals.

Recent research shows that Vietnam's experience is not unique. Chinese overseas investment skews heavily toward coal power over renewable energy, particularly in Southeast Asia. This trend could be on the decline, though; a study from the Global Environment Institute shows that Chinese investment in coal-fired power projects has decreased slightly since it peaked in 2010.

Aligning overseas finance with Paris

How to manage and redirect China's overseas finance was a major topic of discussion at the COP Belt and Road side events. Ma Jun, chair of China's Green Finance Committee, spoke about the committee's new Environmental Risk Management Initiative for China's Overseas Investment. Its guidelines call for Chinese investors operating overseas to adhere to the highest environmental standards for their industry whenever possible.

Ye Yanfei, an inspector at the China Banking Regulatory Commission, said that the government oversight body released its own guidelines on environmental and social risk for banks investing outside of China in January. To ensure they are meeting the guidelines, the CBRC dispatches teams to inspect the bank's overseas investments, according to Ye.

Guidelines are certainly helpful for setting standards and shifting expectations but they remain non-binding, said Zhang Jingjing, an environmental lawyer, who has visited Chinese projects across the world. She told chinadialogue that "it's mainly the laws of the host nation that control the environmental and social risks of projects with Chinese investors."

She added that the National Development and Reform Commission is working to strengthen the domestic legal framework. It has drafted a Method for Management of Company Investments and is creating a list of sensitive sectors that will require extra approval processes for overseas projects.

Multilateral institutions that provide project finance such as the Asian Infrastructure Investment Bank, New Development Bank, and Asian Development Bank are also helping to raise standards. Increasingly, these banks are focusing their infrastructure investments on green rather than conventional energy projects.

Speaking in Bonn on the Asian Development Bank's new strategy to double climate finance by 2020, Lu Xuedu, the bank's lead climate change specialist, said it has signed an agreement with China's Ministry of Finance to support BRI projects. "We will continue to use ADB's high standard on environmental safeguarding and climate change ... so that we can really have a demonstration role for the Road and Belt development," he stated.

Growing expectations

How countries choose to meet their commitments to reduce emissions under the Paris Agreement is their responsibility, meaning China is not technically accountable for the carbon emissions of projects it invests in abroad.

However, during a US-China bilateral meeting in 2015, China agreed to "strictly controlling public investment flowing into projects with high pollution and carbon emissions both domestically and internationally."

And in the wake of President Xi's speech at the 19th Party Congress in October where he described China as a "participant, contributor, and torchbearer in the global endeavour for ecological civilization," the nation will face increasing pressure to align its BRI decision-making with its rhetoric.

China's efforts to support other countries through South-South cooperation show the country stepping beyond its status as a developing country in the realm of climate diplomacy. But these initiatives do not cancel out the country's overseas fossil fuel projects. The greater test of China's global climate leadership remains whether it will commit to shifting Belt and Road investments from high- to low-carbon infrastructure.

Lili Pike is a strategic climate communications specialist for chinadialogue.

中国在摸索中升级南南气候合作

中国正在为更具雄心的南南气候合作探索新的资金机制和项目模式。

□ 马天杰

8月中旬我在北京见到拉尼什·皮尤马尔·赫提格时，他明显心情不错。这位来自斯里兰卡马哈威利发展和环境部的年轻官员刚刚在古城西安结束了一周的培训课程。虽然西安有著名的兵马俑，但这场培训与文化遗产保护没有太大关系。赫提格去那里是为了学习中国的经验，帮助自己的国家应对气候变化。

应中国政府之邀，来自23个国家的29名人员参加了8月2日到15日举行的以气候变化为主题的培训，赫提格就是其中一员。一同参训的还有来自巴西、巴基斯坦、莱索托等国的学员。他们有一个共同点：都来自南方发展中国家。

由中国气象局承办的此次培训是中国气候变化南南合作倡议的一部分。早在巴黎气候峰会召开之前的2015年9月，中国国家主席习近平承诺出资200亿人民币成立南南气候合作基金。在两个月后的巴黎峰会上，习近平主席进一步表示，2016年起中国将在发展中国家开展10个低碳示范项目、100个气候减缓和适应项目及提供1000个面向发展中国家的应对气候变化培训名额。这一系列项目自此有了“十百千项目”的昵称。

赫提格不仅是这1000位代表中的一个，和其他许多参加培训的代表一样，他们的国家还有可能是100个

气候减缓和适应项目以及10个低碳示范项目的接收国。赫提格的经历从另一个侧面突显了中国在气候变化南南合作这个领域做作出的努力，也让

我们注意到了中国在全球留下的一种新足迹。到目前为止，这些努力在全球范围内并不广为人知。

需求和优势的匹配

此次培训所涉及的内容非常广泛，包括中国的气象服务、低碳经济等一系列话题，并安排参训人员实地参观中国应对气候变化的示范点。

“‘海绵城市’示范项目对我们所有人来说都是很好的例子。”赫提格在参观了西安西咸新区的一个试点项目后说。该项目通过改善基础设施的透水性，提高雨水的吸收、储存、利用和回收。面对气候变化造成的暴雨等极端天气事件的增加，中国很多城市都采取了一系列应对措施，“海绵城市”建设就是其中的一环。

“大多数的斯里兰卡城市仍处于发展阶段，基础设施的建设必须未雨绸缪。”赫提格反思说，“斯里兰卡的降雨模式已经改变。对正在开发的城市而言，应该趁现在还有机会打好基础，引入这种雨水管理体系。”

虽然两国经济实力悬殊，但我们反复谈到了中、斯两国各自发展阶段中的共性。“我也是来到中国才意识到，这里有很多地方一下雨就会积水。中国创建海绵城市的方法很有用，值得我们借鉴。”赫提格说。

这与联合国开发计划署2016年就中国的气候援助对发展中国家进行调查时所得到反馈信息一致。很多人认为中国本身作为发展中国家，“在开展国内气候变化适应和减缓行动方面有着丰富的经验、相关技术和大批技术专家”，所以在为发展中国家提供援助方面比较有优势。

中国南南气候合作项目的构建者们深知自己国家作为全球最大的发展中国家所具有的特殊地位。“中国有自己的办法。”时任中国国家发展和改革委员会副主任解振华2014年就中国对绿色气候基金（GCF）的注资问题回答中外对话提问时说。绿色气候基金是联合国气候变化框架公约下的融资机制，公约规定了发展中国家和发达国家在气候变化问题上承担有区别的责任。中国一直以来拒斥向该基金提供资金的提议，认为那应该是发达国家所履行的历史责任。中国认为包括200亿人民币的南南气候合作基金（SSCCF）在内的南南气候合作项目属于自己的“自选动作”，是对全球气候资金池的有益补充。

中国民间组织全球环境研究所（GEI）主任金嘉满说：“美国退出《巴黎协定》导致全球气候融资出现缺口。中国南南气候援助虽不能代替发达国家的角色，却可以在这个时间点做出更显著的贡献。”

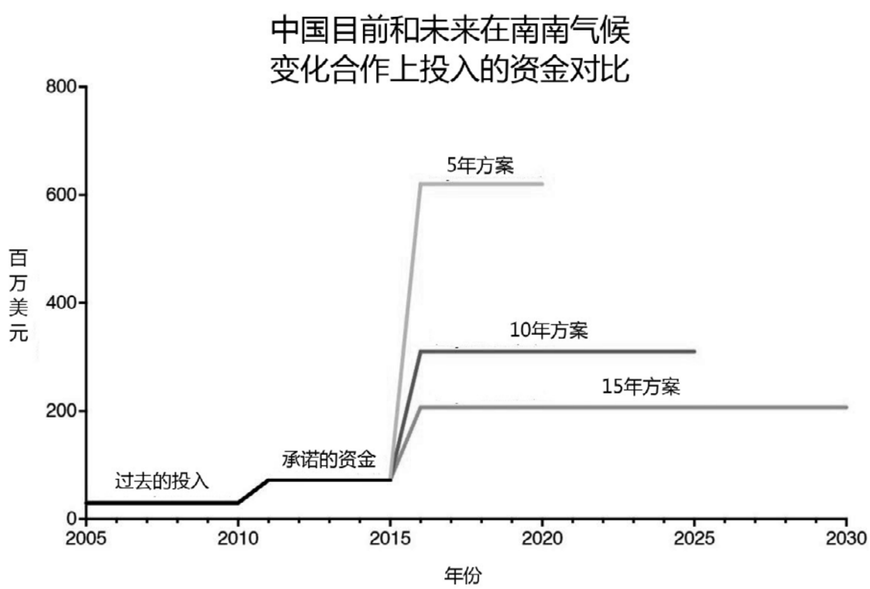
雄心遇上现实

虽然赫提格对中国南南气候合作的反馈大部分都很积极，但也坦言，即便参加了两周的培训，他还是不清楚南南气候合作基金和“十百千项目”是如何运作的。“我明白（南南气候合作基金）是真的想帮助其他国家，但这次培训没有展示它是什么样的，有着怎样的架构，以及如何运作。”

赫提格说，参训人员缺乏对项目的理解可能不利于他们回国后对项目的推进。

但导致外界对倡议理解不够的部分原因在于，中国还在研究相关细节。参与南南气候合作基金设计的国家应对气候变化战略研究和国际合作中心（NCSC）国际合作部主任柴麒敏解释说：“基金仍处于准备阶段。”他说主要问题在于200亿元人民币的融资。

“财政部可能没法提供全部的



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200亿基金在3种使用方案之下，
中国当前和未来各阶段预计在气候变化南南合作上投入的资金

200亿资金，因此可能需要中央、地方和国企等各方面共同来建设，相关方案目前还在筹划推进中，”他说。

中国对发展中国家的气候援助并非始于习近平主席2015年的承诺，早在2007年以前，中国对外援助项目就已经涵盖了气候变化领域。2012年，中国气候援助上了一个大台阶。国家发改委当年宣布，将气候变化援助金额翻一番，每年的南南气候合作资金支出达到约7200万美元。

此后，应对气候变化物资赠送项目启动，该项目由国家发改委应对气候变化司管理，依托财政部的专项资金，协调物资捐赠，帮助受援国更好地应对气候变化。该项目目前运行顺利，并与受援国签署了28个谅解备忘录。其中的亮点包括中国向埃塞俄比亚捐赠气象卫星，帮助这个非洲国家“更好地监测洪水、干旱以及水和森林资源发生的变化。”

由于南南气候合作基金仍在筹备阶段，“十百千项目”的大部分活动只能在原先物资赠送项目的资金框架内进行。这对以设备和物资为中心的100个适应和减缓项目来说没太大问题。“一百个减缓和适应项目主要通过物资赠送的方式来实施，相当于一种‘嫁接’。”柴麒敏表示。

但对于目标更高的10个低碳示范项目而言，原有的对外援助资金模式会是个挑战。“财政部对这类资金的使用方式有着非常严格的规定”柴麒敏说，“比如不能把钱直接提供给外国接收方，所有的采购都必须在中国境内完成。”上文提到的联合国开发计划署报告也证实“规章制度要求分配给发改委的气候变化南南合作资金必须在中国境内使用。”

> “从简单的物资赠送到项目化运作的综合性低碳示范，由政府制定标准、社会力量参与、甚至引导绿色投资进来，这对中国而言将是一场创新、一次新的挑战。”

这10个低碳试点项目本意突破和超越原有的一次性物资捐赠模式。它们旨在一定的小区域内（如工业园区或居民区）进行低碳发展的示范，由地方政府部门、企业和民间社会共同参与，囊括了规划、设计、基础设施、运营等多种元素。这些项目需要更大的资金投入，及更灵活的资金使用方式。物资赠送项目严格的资金管理模式可能无法满足如此综合性的项目需求，这也是为什么中国需要更多类似南南气候合作基金这样创新型融资方案的主要原因。

逐渐成型

中国的“升级版”气候变化南南合作最终的表现形态可能会由多方共同塑造。联合国开发计划署的调查显示，传统上受援国对此类援助项目的发言权很大。“基于需求”和“受援国主导”是这类项目的关键词。

类似全球环境研究所这样的中国民间组织也可能在南南气候合作，尤其是十个低碳示范项目的成型过程中发挥自己的作用。全球环境研究所曾促成中国气候援助顺利在缅甸落地。“从简单的物资赠送到项目化运作的综合性低碳示范，由政府制定标准、社会力量参与、甚至引导绿色投资进来，这对中国而言将是一场创新、一次新的挑战。”该所主任金嘉满说，“我们目前也还在摸索，现在实际上还没有一个固定的模板。”柴麒敏表示，针对10个试点项目的甄选标准仍在制定中。

私营部门的参与将会是中国南南气候合作机制设计中的关键因素，而且其作用不仅限于提供设备或服务。在2014年利马气候大会上，中国科学院科技政策与管理科学研究所所长王毅曾表示，商业性融资应该是南南气候合作基金的组成部分之一。柴麒敏认为，南南气候合作基金是否接受商业性融资仍是一个“开放的选项”。“因为最终还没有决策，到底它的出资方是否可以开放给市场，现在还在讨论中。”

马天杰，中外对话运营副主编

China gives aid to South

New methods and more funding are key to China's climate assistance overhaul

□ Ma Tianjie

China is sharing lessons from its efforts to build climate-resilient cities with developing countries

Ranish Piyumal Hettige was visibly upbeat when I met with him in Beijing in mid-August. A young official from Sri Lanka's Ministry of Mahaweli Development and Environment, he had just completed a one-week training session in the ancient Chinese city of Xi'an, home to the famous terracotta warriors. The training, however, had nothing to do with the preservation of cultural heritage. He was there to learn how his country could respond to climate change, with the help of Chinese experience.

Hettige was among 29 participants from 23 countries who were invited by the Chinese government to take the climate-themed training from August 2 to 15. His fellow trainees hailed from countries as far as Brazil, Pakistan and Lesotho, but shared one thing in common: they were all from the global south.

The training, undertaken by the Chinese Meteorological Administration, was part of China's climate change south-south cooperation initiative. In September 2015, ahead of the Paris climate summit, Chinese President Xi Jinping pledged 20 billion yuan (US$3.1 billion) for a fund dedicated to climate assistance to developing countries. Two months later, at the summit in Paris, President Xi elaborated that from 2016, China would implement, in the global south, ten low-carbon development demonstration projects, one hundred climate mitigation and adaptation projects, and climate training programmes for one thousand representatives from developing countries. It has since been nicknamed the "10-100-1000 Initiative".

Hettige is not just one of the thousand trainees. He and many of his fellow participants are also from countries that may host climate mitigation and adaptation projects and the ten low-carbon demonstrations that President Xi announced. His experience highlights aspects of China's climate change south-south cooperation efforts that have largely stayed outside the global spotlight, and brings attention to a new kind of footprint that China is leaving around the world.

Matching needs and strengths

The training covers a wide range of topics including meteorological services in China and low-carbon economics. It also includes visits to sites where China demonstrates on-the-ground responses to climate change.

"The 'sponge city' demonstration was a very good example for all of us," says Hettige, referring to a tour of a pilot project in Xi'an's Xixian New District, which is designed to improve absorption, storage, utilisation and recycling of rainwater through improved infrastructure. Sponge cities are just one component of a national effort to prepare Chinese cities for excessive rainfall as a result of climate change.

"In Sri Lanka where most cities are still developing, the infrastructure has to be set up properly," reflects Hettige. "The rainfall patterns have shifted in Sri Lanka. We should adopt these kinds of water management systems in our developing cities, when we still have a chance to lay the foundation for them."

A recurring theme in our conversation is the similarities between China and Sri Lanka in their development stages, despite the seemingly wide gap in wealth. "In many places in China, when it rains water gets collected in areas and creates little swamps. The way they are creating sponge cities is very useful for us to learn," says Hettige.

This is in keeping with comments from developing country respondents to a 2016 United Nations Development Program (UNDP) survey on China's climate aid. Many believe that China's own status as a developing country, with its "vast experience in domestic adaptation and mitigation actions as well as access to relevant technologies and a large number of technical experts" is a comparative advantage when it comes to offering assistance to its peers in the global south.

Architects of China's south-south climate aid programme are keenly aware of the country's peculiar standing as the world's largest developing country. "China has its own methods," Xie Zhenhua, then vice minister of the National Development and Reform Commission, told chinadialogue in 2014 when responding to questions about its contribution to the Green Climate Fund (GCF). This is the financial mechanism under the United Nations Framework Convention on Climate Change (UNFCCC) that enshrines differentiated responsibilities among developed and developing countries on climate change. China has resisted calls for it to put money into the GCF, which it views as representing the historical obligation of developed nations. It sees its south-south cooperation programme, including the 20-billion-yuan South-South Climate Cooperation Fund (SSCCF), as parallel and complementary to such efforts.

As Jin Jiaman, director of the Chinese non-governmental organisation Global Environment Institute (GEI), observed, "the US withdrawal from the Paris Agreement creates a global gap of climate financing. China's climate change south-south cooperation initiatives could make a more timely contribution at this point, though it may not replace developed countries' role."

Ambition meets reality

Despite the largely positive response to the south-south cooperation initiative, Hettige admits that he was still unclear how the programme, including the SSCCF and the "10-100-1000 Initiative" functions, even after two weeks of training. "I understand [the SSCCF] is actually trying to help other countries. But in the training, there was no presentation about what it is like, how it is structured, and how it is run."

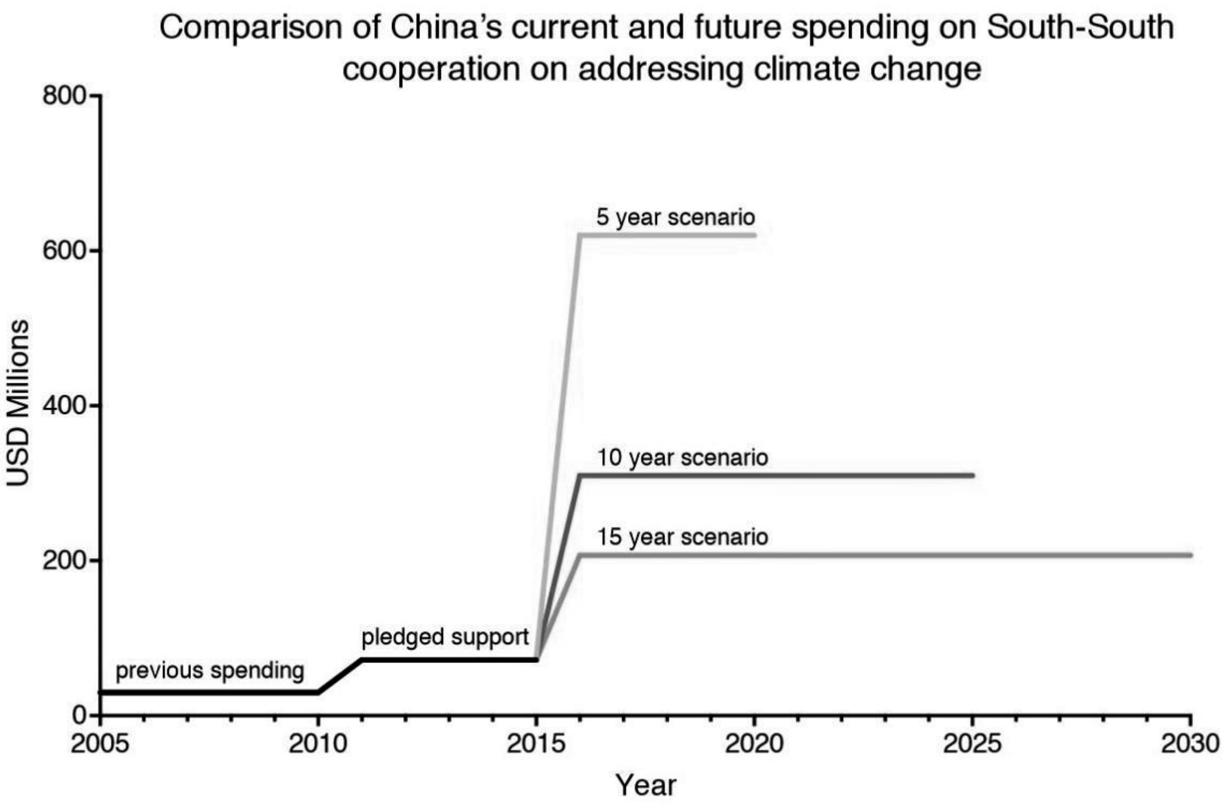
Hettige says the lack of understanding among his fellow trainees may be an impediment to them moving things forward back home.

Part of the reason why the initiatives are poorly understood though is because China is still hashing out the details. Chai Qimin, an expert with the National Centre for Climate Change and Strategy and International Cooperation (NCSC), who is involved in the design of the fund explains that "the fund is still in [the] preparatory stage." He says the main issue concerns the financing of the pledged 20 billion yuan.

"The Ministry of Finance alone would not be able to provide the full amount. Some form of co-financing involving stakeholders such as state-owned enterprises and local governments might be needed, which takes time to formulate," he says.

China's climate-related assistance to the developing world did not start with President Xi's 2015 pledge. From as early as 2007, China's foreign aid programme already incorporated climate elements. It underwent a major upgrade in 2012 when the National Development and Reform Commission (NDRC), the ministry in charge of climate and energy issues, announced its intent to roughly double its aid for addressing climate change, bringing its annual spending on south-south climate cooperation to about US$72 million.

Since then, a specifically designated Climate Change



China's current and projected spending on climate change south-south cooperation based on three scenarios of spreading the 20-billion-yuan fund.
Source: UNDP 2016

Equipment Donation Programme has been running under the management of the NDRC's climate change arm, which coordinates the donation of goods that help recipient countries to better respond to climate change, with a designated line of financing from the Ministry of Finance. The programme has so far operated smoothly with 28 Memorandums of Understanding (MOU) already signed between China and recipient countries. Some of the highlights include China donating a meteorological satellite to Ethiopia so that the African country could "better monitor flood, drought, and changes to its water resources and forestry."

With the SSCCF still under preparation, much of the "10-100-1000 Initiative" has to be carried out within the financial framework of the original equipment donation programme. This works fine for the 100 adaptation and mitigation projects that are equipment focused. "We have basically adapted the equipment donation programme to fit the 100-project," Chai tells me.

But for the 10 low-carbon demonstration projects, which are more ambitious, the old foreign aid financing model presents a challenge. "Ministry of Finance has set very strict rules about how such funds can be dispensed," says Chai, "for example, payments cannot be made directly to the foreign recipients. All procurement is supposed to happen within China." The above-mentioned UNDP report also confirms that "administrative guidelines dictate that the funds allocated to NDRC for climate change south-south cooperation need to be spent within China."

The 10 low-carbon pilot projects are expected to go beyond one-off donations and demonstrate low-carbon development within a defined area (e.g. an industrial park or a residential neighbourhood) that involves multiple elements such as planning, design, infrastructure and operation, with participation from local authorities, businesses and civil society. They simultaneously require more substantial funding and more flexible ways to spend such funds. The restricted financing scheme of the equipment donation programme would be ill-equipped to carry such integrated and comprehensive endeavours, which is the main reason why more innovative funding schemes such as the SSCCF might be needed.

Taking shape

The exact form of China's newly upgraded climate change south-south cooperation initiative is likely to be shaped by multiple stakeholders. Recipient countries have traditionally been influential in determining the content of such aid, as the UNDP survey suggests. "Needs based" and "recipient country driven" are some of the key words describing such projects.

Chinese non-governmental organisations such as GEI, which has been instrumental in facilitating China's climate change south-south cooperation projects in countries like Myanmar, may also leave their mark in the formulation of the initiative, particularly the low-carbon development demonstration projects. "It's going to be an innovation and a new challenge for China as it moves from simple equipment donation to integrated development projects, where the government sets standards, civil society participates and green investment from the private sector comes in," says GEI's director Jin. "We are feeling our way at the moment. There is no fixed template for such projects yet." Chai Qimin indicates that criteria for selecting the 10 pilot projects are under development.

The involvement of private sector actors will be a key factor informing the design of China's south-south cooperation scheme, and not just in getting equipment or service providers on-board. At the 2014 climate talks in Lima, Wang Yi, director of the Chinese Academy of Sciences' Institute of Policy and Management, implied that commercial funds should be part of the mix that would finance SSCCF. Chai suggests that it is still an "open option" for the SSCCF to accept financing from commercial sources. "Nothing is off the table at the moment, as no final decision has been made yet."

Ma Tianjie is chinadialogue managing editor in Beijing.

欧洲与中国将提振全球气候行动雄心

劳伦斯·图比娅娜与邹骥认为，随着美国宣布退出《巴黎协定》，其他国家别无选择，必须承担更大的责任。

□ 冯 灏

2017年波恩联合国气候大会开幕在即，各国政府将就2015年《巴黎协定》签署之后的后续行动方案展开磋商。在这个关口，以下几个问题非常关键：我们距实现1.5℃或2℃温控目标要求的减排量还有多远？美国退出《巴黎协定》将对本届大会产生怎样的影响？此外，欧洲与中国是否已经准备好带领各成员国，共同提高全球气候雄心？

我们采访了两位分别来自欧洲和中国的杰出的前气候谈判专家——欧洲气候基金会首席执行官劳伦斯·图比娅娜和能源基金会北京办公室总裁邹骥教授。虽然气候行动在没有美国参与的情况下看似仍在不断向前推进，但行动与目标之间尚存在较大差距。

中外对话（以下简称“中”）：从全球看，我们距实现地球1.5℃或2℃温控目标所需的减排量还有多远？

劳伦斯·图比娅娜（以下简称“图”）：我们必须认识到，当前各国总的自主贡献量并不足以实现全球减排目标。

举例来讲，我们知道到2030年全球排放量将不会达到峰值。当前各国所提出的减排承诺最多只达到了所需减排水平的三分之一到一半左右。因此，全球减排缺口依然很大。

中：您如何评价《巴黎协定》签署以来，欧洲成员国的行动？

图：欧洲必须做出更大的努力，尤其是在实现2030年目标的问题上。有迹象表明，欧洲的国家正各自采取更加雄心勃勃的行动。法国计划到2040年停止销售汽油车和柴油车，并在2050年前实现碳中和，这些都比整个欧洲层面的行动计划要更进一步。

一些国家已经决定在2022年之前逐步淘汰煤炭（例如意大利），并在2040年达到零排放。能效方面的投资也至关重要。瑞典、丹麦、英国、德国等国也在采取类似的措施。

基于此，我认为每个欧洲国家都能拿出比现有的2030年减排承诺更加具有力度的目标。这才是此刻需要做的。

这并不是说我们要修改之前各国的国家自主贡献量，对此还没有达成共识。不过，每个国家都可以采取新的步骤、计划或决策。我看到有积极的迹象表明，欧洲之外的国家也正在这样做。

中：美国退出《巴黎协定》会对今年的谈判产生怎样的影响？国际社会对于中国填补领导力空缺给予了怎样的压力？

图：随着美国的退出，每个国家都在观望其他国家的行动，尤其是欧洲和中国的行动，看他们是否愿意承担更多。此事是全世界共同的责任。在欧洲，每个国家都愿意付出更大的努力，我们当然希望中国也能如此。

我们不能否认差距的存在，并且一致认为我们需要取得进展。因此，每个人都承受着压力。中国政府已经认识到了这一点。我认为，肩负压力的不单单是中国，这是一个联合行动，压力是共担的。

习近平主席近来多次提到中国在全球领导力中的角色。有积极的迹象表明，中国已经在国家自主贡献量的基础上采取了更多的行动。其煤炭、零排放汽车、绿色金融等政策中都出现了一些令人鼓舞的内容。

邹骥（以下简称"邹"）：《巴黎协定》中明确界定了包括欧盟与中国在内的所有缔约方的责任。这是（推进）气候行动的基础。在我看来，特朗普总统的退出并不会带来任何改变。

为了建立起中国与国际社会的联系，发挥好中国的角色，我们需要做的和展现的还有很多。建立起全球气候问题与本国环境问题之间的联系至关重要，尤其是在空气质量问题上。我必须强调，经济转型升级、能源转型、本地空气质量问题与全球气候问题之间是一致的。这就是为什么中国会自信地讲，"这是我们职责所在。"

从中国共产党第十九次全国代表大会传递的信息来看，2035年将是中国发展的一个里程碑。（编者注：在2017年中国共产党第十九次全国人民代表大会期间，国务院环境保护部部长李干杰郑重承诺："到2035年实现生态环境根本好转，美丽中国目标基本实现"。）如果光外有承诺而内无动作，那么中国就不能说自己扮演了领导角色。

我们还需要制定实现路径，将短期、中期和长期目标联系起来。目标、政策以及体制安排需要在不同层面加以落实。基于高效增长的经济结构调整，以及在可持续能源系统转型过程中对长期减排目标的评估和调整，也是这个意思。

中国在技术领域已经有了明确的路线图。但是技术的应用与否取决于利益相关方、融资方、投资方、企业、消费者、地方政府以及中央政府的采纳程度。这就是为什么政策与体制安排对改变行为和动机至关重要。

中：欧洲方面有一些声音认为，欧盟与中国正合力推进《巴黎协定》的落实，加快全球清洁能源转型的步伐。您认为是否存在"中欧气候联盟"？这是一种怎样的联盟？

图：贸易现在是，将来也一直会是双方关注的重点，这很正常。清洁技术领域存在国际竞争是好事。

另一方面，可以看到两个市场间的联系开始变得逐渐紧密。中国在清洁技术上取得了很大的进展。除了太阳能电池板，欧盟与中国在电动汽车等制造领域上的合作也更加紧密。

之前中美关系非常引人关注。中欧之间的联盟更侧重于技术，更偏外

中欧将迎来气候及能源领域上的新契机

交，而实质合作不多。中德、中法、中英之间仍需开展大量的双边讨论，从而将气候问题纳入更广泛的讨论之中，比如经济问题的磋商。

我们需要从各层面推进这种讨论。随着美国政府缺席气候问题的讨论，我们需要开展更多的高层对话。

这种对话已经开始。中国已经与欧洲和加拿大一道，邀请世界主要经济体共同成立气候论坛，以填补（美国退出留下的）领导力空缺。世界各国都意识到了合作的政治必要性——这与竞争并不冲突。

邹：如果我们根据一国国内气候行动评判该国所承担的责任份额的话，中国和欧盟无疑是两大主要的减排力量。中国承担了一个发展中大国所应承担的责任，而欧盟也承担了一个发达经济体集团所肩负的责任。除了多边合作外，我们还应探讨如何从双边层面更好地发挥各自角色。

过去，我们曾认为中美关系是最重要的双边关系。但是我们不应该忘掉中欧关系也至关重要，不论是从双边层面，还是从全球角度。近年来，中国与欧盟在贸易、投资、技术等领域开展了合作，共同履行《巴黎协定》。

中欧双方成立了联合工作组，并建立了常规合作机制。劳伦斯女士和我都曾直接参与过政府和非政府层面与企业和学术机构的合作。我们都有着共同的目标，那就是可持续发展和低碳转型，只不过我们处于不同的发展阶段。

除此之外，我们也应该思考下未来。我认为双方仍有探索、加深和拓展合作的空间。当然，“一带一路”倡议就是实现此类合作的平台之一。

中：中国的气候领袖角色存在一定复杂性。一方面，中国是世界可再生能源领域的领头羊，并主导着《联合国气候变化框架公约》体系之外的南南气候联盟。但另一方面，中国公司在海外不断建立新的燃煤电厂。我们应如何理解中国在全球气候行动中扮演的角色？

邹：我们的海外投资应坚持绿色和低碳，这是一个基本原则。但也要考虑当地的具体情况，比如东南亚的煤炭资源丰富。我们对一带一路沿线国家做了一些调研。

但问题是，我们能像经合组织国家以及世界银行的指南中规定的那样，停止支持燃煤电厂吗？你能阻止各国建设新的燃煤电厂吗？我的答案是不能。那么结果会怎样呢？如果没有技术和资金的支持，各国建设的将会是高污染、低能效的小型燃煤电厂。

一个解决办法就制定燃煤电厂环保标准。但这也不是最终的解决之道，因为这种方式无法大规模减少碳排放。近年来，这些水力资源丰富的国家开始考虑水力发电。国际社会应为能源转型提供支持，从而使煤炭的优先级降到最低。

图：中国向其他发展中国家提供投资和基础设施意义重大。我们愿与中国联手，使“一带一路”倡议更加绿色、清洁。如何使“一带一路”倡议与绿色发展原则相结合，是一个前景十分广阔的研究领域。至少在学术层面上，我们可以展开思考。

欧洲国家对绿色“一带一路”，以及鼓励各国摆脱煤炭很感兴趣，这也必将成为未来双方合作的领域之一。

本文在访谈基础上编辑整理而成。

冯灏，中外对话研究员

EU & China raise ambitions

With the US backing away, other countries have no choice but to do more, say Laurence Tubiana and Zou Ji

□ Feng Hao

Governments are convened in Bonn this week and next for the 2017 United Nations climate conference to discuss next steps on from the Paris Agreement in 2015. At this juncture, the key questions include: how far are we from reaching the emission reduction goals needed to cap global warming at 1.5 or 2 degrees Celsius above pre-industrial levels? How will the US withdrawal from the Paris Agreement impact this year's talks? And are Europe and China ready to take the lead in raising ambitions among member states?

We talked to two prominent former climate negotiators from Europe and China: Laurence Tubiana, chief executive officer of the European Climate Foundation, and Professor Zou Ji, president of the Energy Foundation China. While climate action is moving forward without the US, the gap between goals and actions on the ground is still alarming.

chinadialogue (CD): Globally, how far are we from achieving the targets needed to keep the planet on a 1.5 or 2 degree Celsius pathway?

Laurence Tubiana (LT): We have to recognise that with all the contributions that have been presented we are still not on track to meet the global goals. We know that, for example, global emissions will not peak by 2030. The contributions that are on the table only meet a third to half of [the reductions] needed, at best. So there is a global gap.

CD: How would you assess the action of European members since the Paris Agreement was signed?

LT: Europe has to do more, particularly to reach the 2030 goals. There are signs that individual countries in Europe are taking more ambitious steps. France aims to end the sale of gasoline and diesel vehicles by 2040 and become carbon neutral by 2050, which goes beyond what has been decided at the European level.

Some countries have taken the decision to phase out coal by 2022 [for example, Italy]; and to reach zero emissions by 2040. Investment in energy efficiency is also critical. Countries like Sweden, Denmark, the UK and Germany are undertaking similar measures.

What I take from this is that every European country can make their national targets more ambitious compared to what is on the table for 2030. That is what needs to happen now.

That is not to say that we should revise the contributions, there is no consensus on that. But every country can take new steps, new plans and new decisions. I see good signs that countries beyond Europe are doing this as well.

CD: What impact will the US decision to withdraw have on this year's talks? And what is the level of international pressure on China to fill the leadership void?

LT: With the US backtracking, each country is looking at what others are doing, particularly Europe and China, to see whether they are willing to do more. It is a joint responsibility. In Europe, every country would like to do more and we certainly wish that China can do the same.

The gap is there, we can't deny that. And there is a common understanding that we need to make progress. So the pressure is on everyone. The Chinese government recognises this. I don't think the pressure is on China alone, this is a joint movement.

President Xi has repeatedly mentioned China's role in global leadership recently. There are positive signs that China is already taking steps beyond its nationally determined contributions. There are encouraging elements in its coal policy, on its zero-emission car policy, and on green finance.

Zou Ji (ZJ): All parties' responsibilities, including the EU and China's, were defined very clearly in the Paris Agreement. This is the fundamental basis [for moving forward]. I don't see any change resulting from President Trump's decision to withdraw.

To link China with the international community, we have so much to do and to show in playing our role. It is important to link global climate concerns with local environmental concerns, especially around air quality. I must emphasise that aims around economic upgrades, energy transformation, local air quality and global climate concerns are consistent with each other. That is why China is confident in saying, 'this is our business'.

We also saw a milestone reached in the 2035 goal according to the message conveyed at the 19th Party Congress. [During the 2017 Chinese Communist Party Congress Environment Minister Li Ganjie vowed that "by 2035 there will be a fundamental improvement in the environment, and the goal of building a 'Beautiful China' will basically be attained".] If international promises are not acted upon domestically, [China] cannot say that it plays the role of leader.

Pathways are needed to link long-term, mid-term and short-term goals. Targets, policies, and institutional arrangements are required at different levels. Other aspects include economic restructuring based on high efficiency for growth and a transition to sustainable energy systems.

China now has a clearer roadmap for its technology sector. But the uptake of technology requires adoption by stakeholders, financiers, investors, enterprises, consumers, local governments and central government. That is why policy and institutional arrangements are critical to changing behavior and motivation.

CD: There are voices from Europe saying that the EU and China are joining forces to forge ahead on the implementation of the Paris Agreement and accelerate the global transition to clean energy. Do you think there is an "EU-China climate alliance"?

LT: Trade is an important concern for both sides, and will continue to be in the future, which is normal. It is good to have global competition around green technology.

On the other side, you see two markets beginning to become very closely linked. There are big developments in China concerning green technology. Other than solar panels, there are manufacturing sectors, such as electric vehicles, where the EU and China are working closely side-by-side.

There was so much attention on the US-China relationship. The EU-China alliance is something more technical, more diplomatic, but not as substantive. A lot of bilateral discussions are needed, between Germany and China, France and China, UK and China, and so on, to make climate part of a broader discussion, for example, an economic discussion.

We need this discussion at all levels to move forward. With the United States administration absent from climate discussions, we need more high level dialogue.

It is already taking place. China, together with Europe and Canada, has invited major economies to form climate forums to fill the gap [left by the US]. The world has seen the political necessity of cooperation – it has not been contradicted by competition.

ZJ: If we judge [a country's share of] responsibility based on its domestic implementation, undoubtedly, China and EU are the two major players. China is taking responsibility as a large developing country, while the EU does so as a group of developed economies. Besides multilateral cooperation, we should explore how to optimise our roles at a bilateral level.

We used to take the China-US relationship as the most important bilateral relationship but we should not forget that the China-EU relationship is also critical. Not only in a bilateral sense, but in a global sense. China and the EU have cooperated on trade, investment, technology and so on in recent years to implement the Paris Agreement.

The two parties have formed joint working groups to establish a regular mechanism for delivery. I myself and Madame Laurence have experienced that kind of cooperation directly, both on the governmental level and non-governmental level, with enterprises and academics. We have the same goals: sustainable development, low-carbon transition, but a different status.

Having said that, we should think about the future. I still see room for both sides to explore, deepen and enlarge this cooperation. One of the platforms on which to do this, of course, is the Belt and Road Initiative.

CD: China's climate leadership is a complicated matter. On one hand, China is the world leader in renewable energy, and runs a South-South climate alliance outside of the UNFCCC system. But on the other, Chinese companies are building new coal power plants overseas. How should we understand China's role in global climate action?

ZJ: We should make our overseas investments green and low carbon, this is the basic principle. But when we look at specific contexts – take Southeast Asia, for example, which is rich in coal – the question is can we say that we will not support coal power plants, like the guidelines of OECD countries and the World Bank? Can you stop countries from building new coal power plants? My answer is no. And then what happens? Without technical and financial support, countries will build highly polluting, inefficient and small-sized coal power plants.

One solution is to set up environmental standards for coal power plants. But this is not the final solution, as carbon emission cannot be reduced on a large-scale this way. Nowadays, hydro power, which is a rich [resource] in these countries, is under consideration. The international community should provide support for the energy transition to make coal the last priority.

LT: It is important for China to offer investment and infrastructure to other developing countries. Making the Belt and Road Initiative greener is something which we would like to work on together. How to introduce the principle of green development to the Belt and Road Initiative would be a very promising avenue. At least at the academic level, we can certainly develop the thinking.

Europe is very interested in greening the Belt and Road Initiative to encourage countries to move away from coal. That would certainly be one of the cooperation areas.

Feng Hao is a researcher at chinadialogue.

中国绿色金融需兼顾气候变化和环境污染

如何看待清洁煤这样的争议项目被纳入中国绿色金融范畴？中国和欧洲绿色债券标准不同怎么办？请看G20绿色金融研究小组共同主席马骏的权威解读。

□ 薛 晗

中国已经成为绿色金融政策和实践的一块重要试验田。在全球范围内，绿色债券占总债券比例仅有0.2%；而在中国，比例是2%，是全球水平的10倍。

在国际上，去年，中国政府倡导发起了G20绿色金融研究小组，提出了推动全球绿色金融发展的七项倡议，写入《G20杭州峰会领导人公报》。今年，研究小组又提出了推动金融机构开展环境风险分析和改善环境数据可获得性的倡议，写入了《G20汉堡行动计划》。

在国内，中国政府于今年六月推出了五个省级绿色金融改革创新试验区，试图通过在不同地区试水找到绿色金融健康发展的成功秘诀。

绿色金融在中国的迅速发展给政策制定者提供了哪些经验？目前绿色金融在全球和中国的推进面临着哪些障碍和问题？近期在由中国金融学会绿色金融专业委员会与联合国环境规划署等五家机构共同主办的绿色金融国际研讨会上，无所不能就这些问题采访了重要的绿色金融专家，联合国环境规划署特别顾问、G20绿色金融研究小组共同主席、中国绿金委主任马骏。

无所不能：目前绿色金融发展的主要挑战和难点是哪些？

马骏：绿色金融发展主要面临四个方面的挑战，即缺乏政策信号、长期项目的贷款期限不相匹配、缺乏能力建设，以及缺乏通行的对“绿色资产”的定义。

在G20绿色金融研究小组成立以前，还没有很多国际政策信号。向政府、政策制定者、金融机构、市场参与者阐述和宣传绿色金融理念是重要的。

另一方面，如果研究中国的银行体系，你会发现中国的平均贷款期限仅有两年。所以如果你要为一个10年期的项目融资，你就需要融资5次。这很大程度上增加了投资风险，也就是说，只要没有拿到下

一期的融资贷款，项目就被迫要停止，(之前的贷款也就）成为了不良贷款。许多绿色金融项目，比如地铁、铁路、水处理、固废、新能源等等，投资周期长，收回投资可能需要10年、15年甚至20年时间，远远超过了发展中国家银行系统的贷款期限。

对于解决贷款期限的不匹配问题，最有效的工具是绿色债券。我认为，绿色资产证券化也是解决贷款期限不匹配问题的一个非常聪明的手段，但还有待开发。

缺乏能力建设也是面临的挑战之一。在政府、金融机构、学者的能力以及行业的融资能力建设上，起码还需要5到10年时间。对于金融机构来说，鉴定环境风险、分析和量化风险方面尤其需要提高。这也是为什么第二年G20绿色金融研究小组在推动金融机构开展环境风险分析。

再来就是缺乏标准化。许多绿色资产没有被标准化和归类，即使投资者想要投资绿色资产，他们也找不到投资对象。

绿色资产标准化是个非常复杂的问题。实际上，比起其他一些国家，中国的行动更快。我们现在有绿色贷款、绿色债券的标准，但还没有绿色保险、绿色基金等等的标准，在建立绿色标准体系的路上，我们才走了一半。但是有些国家现在还没有任何的定义，比如绿色信贷，目前全球仅有三个国家推出了这个概念；关于绿色债券，许多国家目前也没有这个概念。所以，绿色资产标准化不是一个简单的问题，而是要走许许多多步，才能最终通向一个统一的全球绿色资产标准体系。

无所不能：说到绿色金融标准的匹配，中国和欧洲的界定标准就不一致。您如何看待这种局面？

马骏：事实上，目前欧洲并没有一个统一的标准可以拿来同中国比较。欧洲许多银行包括欧洲投资银行（EIB）有自己的以市场为基准的绿色债券规则。许多不同的“标准”没法同一个标准来做比较，一旦欧洲达成共识，就有可能比较标准的不同。中国和欧洲的合作最早是从绿色金融委员会和EIB开始，如今已经推进到了欧盟委员会层面，对于欧洲是不是应该有自己的绿色债券标准也在讨论之中。

从技术角度来看，目前西方世界的许多绿色金融品种和中国的品种都有重叠的部分。如果我们设计一套系统，欧洲的绿色品种的目录是中国的绿色品种目录的子目录，这样既可以削减交易成本，又可以降低国际投资者寻找项目需要付出的成本。

当然，发展中国家和发达国家在设定绿色金融标准时优先考虑的事项有所区别。对于以中国为例的发展中国家，从环境角度出发，我们的目标不仅仅是要降低碳排放，还要应对大气、水体、土地污染等诸多环境问题，而这些问题的其中一些在欧盟国家并不显著，这就是为什么在界定绿色债券的问题上，中国的一些优先事项在欧洲也许就不是优先事项。

中国的绿色债券目录相比欧洲，就像一件夹克衫，更长更大。欧洲呢，就是穿在里面的那层衬衫，小一些，但也更干净。

无所不能：中国绿色债券支持的项目类型中最受争议的可能就是清洁煤炭了。您如何看待这类项目获得绿色融资？

马骏：绿色金融的标准不仅仅要从基本的技术角度来定义，也同时反映了国家在环境政策方面的优先考虑事项。清洁煤反映了环境层面需要考虑的优先事项。比如中国有优先解决大气污染问题的需要，就会投入很多力量去降低二氧化硫和氮氧化物。这些污染物主要来自燃煤发电，浓度降低可以通过脱硫、脱硝工艺来实现。但如果优先考虑的是碳减排，就需要禁止燃煤发电来实现零排放。

不过，在清洁煤领域，或许可以通过更严格的定义规定，选择特定的技术列入绿色债券支持的项目中。一旦标准变得更严格，两种标准之间的不同将会缩小，这是我们可能采取的方法之一。

无所不能：今年六月中国政府决定在浙江、江西、广东、贵州、新疆5省（区）设立绿色金融改革创新试验区，根据您的观察，这些试验已经开始对绿色项目融资产生影响了吗？

马骏：我们已经看到了一些好的信号，激励和刺激措施已经在形成。目前，一些地方政府已经开始激励当地公司发行绿色债券。5个地区试点项目每个地区都有一个不同的政策，对绿色项目提供津贴补助或者是担保。绿色项目的融资成本将会下降。

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薛晗，财新传媒旗下能源专业新媒体“无所不能”的高级分析师

China & EU: Green finance

China must tackle both climate and pollution challenges says finance expert, keeping door open to clean coals

□ Xue Han

China is rapidly emerging as an important testing ground for the development and implementation of green finance policies. While green bonds account for just 0.2% of the global bond market, in China this figure is already 10 times greater, at 2%.

The country has been particularly active recently on the green finance agenda. In 2016, the government launched the G20 Green Finance Study Group (GFSG) at the G20 meeting in Hangzhou, which resulted in a seven point plan to scale up green financing globally that was included in the leaders' communique.

Green finance standards must reflect each state's environmental protection priorities

At this year's G20, the Hamburg Action Plan to address pressing global challenges included GFSG proposals on encouraging financial institutions to undertake environmental risk analysis and improving the availability of environmental data.

And domestically, the Chinese government announced five provincial-level trials in June aimed at reform and innovation in green finance. These will allow each province to pursue their own approach to developing green finance.

So what are policymakers learning from China's actions? And what are the challenges both globally and for China?

At a recent event on green finance organised by five bodies, including the China Society for Finance and Banking's Green Finance Committee and the UN Environment Programme, Caixin put these questions to Ma Jun, who is chair of the Green Finance Committee, special advisor to the UN Environment Programme on Sustainable Finance, and co-chair of the G20 Green Finance Study Group.

Caixin: What are the main challenges to the development of green finance currently?

Ma Jun (MJ): There are four main challenges: a lack of policy signals; loan periods that aren't suitable for long term projects; a lack of capacity building; and a lack of a common definition of 'green assets'.

Before the G20 Green Finance Study Group was founded there weren't many international policy signals. It's important to set out and propagate the ideals of green finance – to governments, to policymakers, to financial institutions, and to market participants.

Another thing is that if you look into China's banking system, you find the average length of a loan is only two years. So if you need funding for a ten-year project you need to raise funds five times. That greatly increases investment risks because if you fail to get the next loan the project is forced to shut down.

A lot of green finance projects: subways, railways, water treatment, solid waste, new energy, etc., have lengthy investment periods. It might be 10, 15 or even 20 years before investments see a return. This is far beyond the loan periods offered by banks in developing nations.

The best way to resolve this issue is green bonds. I think turning green assets into bonds is an extremely clever solution to the problem of loan length but it needs development.

Another challenge is a lack of capacity building. We need to spend at least five to ten years building capacity in government, financial institutions and academia, and for industry to raise finance.

There's a particular need to boost the ability of financial institutions to evaluate environmental risks; to analyse and quantify risks. This is why in its second year the G20 Green Finance Study Group is encouraging financial institutions to analyse environmental risks.

Then there's a lack of standardisation. Many green assets haven't been standardised or categorised. So even if investors want to invest in green assets, they can't find them.

Standards for green assets is a hugely complex issue but China is moving more quickly on this than some other countries. We've got standards for green assets and green bonds, but not yet for green insurance, green funds and so on.

We're only halfway along this road but some countries don't have any of these standards... it isn't a simple matter; there are many, many steps to be taken before we get to a final unified global system of standards for green assets.

Caixin: On the topic of standards, the definitions of green finance differ between China and the European Union. What's your view on that?

MJ: There's no single European standard that can be used as a point of comparison with China. Many European banks, including the European Investment Bank, have their own market-based rules on green bonds. You can't compare all those different standards with our single standard. Once there's consensus in Europe you could carry out a comparison with China.

The earliest cooperation between China and Europe started with the Green Finance Commission and the European Investment Bank, and that's now advanced to the European Commission where there's discussion on whether Europe should have its own standard for green bonds.

"'We've got standards for green assets and green bonds, but not yet for green insurance, green funds and so on. We're only halfway along this road but some countries don't have any of these standards...'

– Ma Jun"

In technical terms, many green financial products in the West partially overlap with those in China. If we designed a system where green products in Europe were included as a sub-category of China's green products, we'd reduce trading costs and the expenses international investors incur in the search for projects.

Of course, developed and developing nations have different priorities when setting green finance standards. For developing nations such as China, it's not just about reducing carbon emissions – we also want to deal with a range of environment issues, such as air, water and soil pollution. Some of those issues aren't significant problems in Europe. So when defining green bonds, Europe and China have different priorities.

Caixin: The most controversial of the project types supported by green bonds in China may be clean coal. What do you think about such projects getting green financing?

MJ: Defining green finance isn't just a matter of basic technology, it also reflects a nation's environmental protection priorities. Clean coal reflects this: China needs to prioritise reduction of air pollution, so it's going to put a lot of effort into reducing emissions of sulphur dioxide and nitrogen oxides. Those come primarily from coal-fired power generation, but can be reduced by the use of sulphur and nitrogen scrubbing technologies. If your priority was reduction of carbon emissions, you'd ban coal-fired power to bring about zero emissions.

But with clean coal perhaps it would be possible to use a stricter definition to ensure particular technologies are used in projects getting green finance. Once the standard is tougher the difference with the other standard will shrink. That's one approach we could take.

Caixin: In June, the Chinese government started trials of green finance reform and innovation in Zhejiang, Jiangxi, Guangdong, Guizhou and Xinjiang. Have these had any impact on funding for green projects?

MJ: We've seen some positive signs, with preferential and stimulus measures taking shape, and some local governments are encouraging local firms to issue green bonds. Each of the five trial areas has its own policy on providing subsidies or underwriting. We'll see the cost of financing for green projects come down.

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对话UNEP执行主任 埃里克·索尔海姆

从中印两国能源革命到非法野生动物贸易，从城乡关系到打击恐怖主义，联合国环境规划署执行主任埃里克·索尔海姆侃侃而谈。

□ 奥梅尔·艾哈迈德

欧米尔·艾哈迈德(以下简称“艾”)：*您认为环境规划署(UNEP)对于当今世界，尤其是对于发展中国家，发挥着怎样的作用？*

埃里克·索尔海姆(以下简称“索”)：联合国环境规划署(UNEP)的主要使命是为环境“代言”。在这个框架下，我们的作用是推动经济发展与环境保护的共赢。我们与各国政府开展合作，如在印度开展“清洁印度运动”[Swachh Bharat]，以及太阳能和绿色发展工作等。

环境规划署能够帮助推广最佳实践，与私营部门开展合作，并和各国公民一道，共同致力于环境保护。Afroz Shah就是一例。他长期以来一直支持马哈拉施特拉邦Versova海滩的“海滩清理”志愿活动。这项活动被誉为全球历史上规模最大的海滩清理运动，并得到马哈拉施特拉邦首席部长和印度总理的认可。环境署通过树立此类成功的案例为自下而上的草根运动提供支持。

埃里克·索尔海姆认为，联合国环境规划署（UNEP）的主要使命是为环境“代言”

艾：*亚洲各国面临的一个重大挑战是能源和电力供应的可及性，这个挑战在中国尤为明显。基于此，中国不得不选择一条严重依赖煤炭的增长路径，南亚各国也是如此。电力需求增长带来污染的增长，我们应该如何平衡两者的关系呢？*

索：人们享有用电的权利，这是无可厚非的。前任联合国秘书长潘基文谈及他的童年时，曾说他常伴着荧荧烛光读书。在电力匮乏的状况下实现发展不是没有可能，但也是异常艰难的。我们必须努力用一种绿色环保的方式满足人们的用电需求。

从这个意义上讲，中国和印度这样的国家实际上做出了很大贡献。太阳能和风能的成本之所以能够大幅降低，也正是得益于两国广阔的市场压低了可再生能源的运营成本，即便忽略煤炭带来的长期污染治理成本及巨大的健康成本，仅仅是可再生能源利用所带来的经济效益已经十分可观。

艾：面对这样的趋势，发达国家和发展中国家未来应如何开展合作？

索：发达国家和发展中国家的区分似乎已经没有那么重要了。像中国广东这样的地方，其购买力水平已经超出了欧洲很多地区。因此，双方应该加强学习，互相借鉴。我刚刚去过越南，那里15岁孩子的教育水平已经超过了美国和欧洲国家。我们必须携起手来，共同努力。那些鼓吹各国可以依靠自身努力获得成功的政客，实则是大错特错。

艾：您最近写了一篇文章，关于非洲大象之死以及农业用地与动物生存环境之间的矛盾。可以简单谈谈人类与动物之间的争端吗？

索：动物的生存受到两大威胁。其一是由于城市的扩张，以及人类粮食需求的增长带来的农业扩张，导致动物生存环境不断缩小。其二是动物制品的非法贸易。后者已传来一些利好的消息，比如野生虎数量减少的趋势已出现逆转。这很重要，因为野生虎需要很大的生存空间，而且它会伤人。这一点与其他动物不同，比如说斯堪的纳维亚地区的狼，那里的狼就从未伤过人。对此，我们需要感谢像普京总统一样付出努力的人，也需要感谢中国在该方面做出的努力，比如四川在大熊猫保护方面所做的工作。他们利用科技，避免大熊猫与人类的接触，这样他们更容易适应野外的生存环境。

艾：然而中国的“人工老虎繁育场”问题很多。

索：养殖老虎并非易事。它需要更多更大的保护空间，才能保证它们不轻易与人类接触。但人们常常忽略的是，大部分动物的适应能力很强，它们很容易与人类共生共存。

城市化发展可以产生一定积极的效果。城市地区一直都是让人们摆脱贫困的最大的驱动因素，但同时需要确保这些城市是宜居的，有绿地、交通便利、人民基本温饱。我们应加强城市设计，优化交通系统。

这些都是可以实现的。新加坡就是一个很好的例子，这个城市之所以能够从贫困中走出来，并发展成为一个绿色高效的城市，完全得益于选择了合理的城市发展政策。深圳也几乎是从无到有发展到今天成为一个拥有1500万人口的大城市的，而这里的公共交通网络的确令人赞叹。

所有这些都离不开国际合作，需要我们的共同努力。而如果我们听信那些互相指责的政客的话，我们将一事无成。

艾：但是不合理、不协调的政策法规仍然存在，这些差距造成了系统的不公，从而被暴力组织所利用。您在冲突管理上经验颇丰，能告诉我们这些问题之间的联系吗？

索：恐怖主义及相关问题的主要根源之一是犯罪。无论是出于意识形态还是犯罪，它们的资金来源往往都是毒品，或是盗猎、非法砍伐等环境犯罪。而造成这种问题的原因之一在于世界对以上问题的重视程度不够，使得此类国际性犯罪逃脱法网。

打击此类犯罪比打击无人机等复杂武器容易得多。非法贩卖动物制品是全球化犯罪活动的一部分，需要予以打击。值得高兴的是，中国已禁止生产象牙制品，并且取缔了象牙贸易。越南也正朝着这方面努力，打击非法贸易应成为警察部门的头等要务。

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奥梅尔·艾哈迈德，第三极网站（thethirdpole.net）执行编辑

Interview with UNEP chief

The executive director of the UN Environment Programme speaks with Omair Ahmad about wildlife and energy access in China and India

□ Omair Ahmad

Omair Ahmad (OA): In today's world, what do you think is the role of UNEP, especially vis-à-vis developing countries?

Erik Solheim (ES): The main role of UNEP [United Nations Environment Programme] is advocacy for the environment. Within these parameters, I see my role as the promotion of economic systems which work to help the environment. We partner with governments, such as with India on its Clean India [Swachh Bharat] campaign, its solar energy and green growth campaigns.

UNEP has the capacity to help highlight best practices, to help partner with the private sector, and to work with citizens such as Afroz Shah, who has been behind the volunteer campaign to clean Versova beach in Maharashtra. It's become the biggest beach cleaning campaign in the world and has been recognised by the Chief Minister of Maharashtra and the Indian Prime Minister. We can support such bottom-up initiatives by highlighting their effectiveness and success.

OA: A big challenge for countries in Asia is energy and access to electricity. China highlighted this as it pursued a heavily coal-dependent growth path, and countries in South Asia are also engaged in this. How do we manage the demand for electricity that is pushing forward polluting growth?

ES: There is no dispute about the right to electricity. The former UN Secretary General [Ban Ki-moon] has talked about his childhood and reading by candlelight, so development is possible without access to electricity — but it is incredibly hard. We must work to satisfy this demand in an environmentally-friendly manner.

In this regard, countries like China and India are actually a help. The price of solar and wind power has plummeted because Indian and Chinese markets are so large. This has made the purely implementation part of renewable energy cheap – even if we ignore the long-term costs of cleaning the pollution and the health costs associated with coal, which are massive.

OA: How do developed and developing countries work with each other to make this future possible?

ES: I am not sure these categories matter as much anymore. Places like Guangdong in China are much richer in purchasing power parity terms than many parts of Europe. There is, in this, a lot of opportunity for mutual learning. For example, I have just been in Vietnam which has better education for children aged 15 than the United States or European countries. We must work together. Politicians arguing that countries can succeed on their own are promoting a failed concept.

OA: You recently wrote an article about the death of African elephants and the conflict between land for farming and animals. Can you talk a little about the human-animal conflict?

ES: There are two main threats to animals. The first is this shrinking space due to the expansion of urban areas and because of the need for farming to provide food for the human population. The second is the illegal trade in animal products. There is some good news in the latter, as the decline in tiger numbers has reversed. This is a big deal because tigers require huge spaces and can also kill people unlike, for example, wolves in Scandinavia which have never killed a person. We need to acknowledge the work of people like President Putin in Russia. We also have to acknowledge the work of China, especially its leaders in Sichuan, on the panda. They have worked with technology so that pandas don't have to interact with humans and can be released into the wild more easily.

OA: But China's tiger farms have not helped.

ES: Tigers are difficult, and we need more and larger preservation areas for such species that cannot interact with humans easily. What we sometimes ignore, though, is that most animals are immensely adaptive and co-exist easily with humans.

Urbanisation should be a positive possibility. Urban areas have been the greatest drivers that bring people out of poverty, but we need to make sure that these are liveable cities with green spaces and limited traffic and slums. We need better design and better traffic systems.

This can be done. Singapore is an excellent example of a city that has gone from poverty to being green and efficient due to getting urban policy right. Shenzhen, in China, a city that is almost new and is already home to 15 million people has a good public transport system.

For all of this we need global cooperation; we need to work on this together. If we listen to politicians who are engaged in blaming others we will achieve nothing.

OA: But bad and uncoordinated policies exist and those gaps have created unjust systems that violent groups exploit for their own purposes. You have a background in dealing with conflict management, can you tell us how these issues intersect?

ES: One of the main issues in terrorism and such issues is crime. Whether they start with ideology or crime, it is often financed by drugs or environmental crime such as illegal poaching and logging. One of the mysteries and failures of global systems is the lack of attention that means such types of global crime are ignored.

It is cheaper to fight these types of crimes than fight complex weapons systems such as drone warfare. The sale of illicit animal products is a part of global crime that needs to be dealt with. I am glad that China has banned ivory products and is clamping down on the ivory trade. Vietnam is also moving in this direction, and it needs to become a police priority.

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加工食品：一场全球健康危机

今年气候大会的一个重要成果是，认定肥胖与气候变化之间的密切联系。

□ 朱迪·班克曼

在波恩举行的《联合国气候变化框架公约》第二十三次缔约方大会（COP23 ）上达成的一个最可能具有深远影响的协议之一便是决定将农业生产方式与气候变化联系在一起，并探索解决方案框架。

《碳简报》（Carbon Brief）认为，这是一个“低调、却值得关注的成果”。国际社会一致同意共同研究并应对农业与气候变化之间的关联，并承诺将在 2018 年 3 月 31 日之前就应该纳入其中的议题达成一致。未来的技术对话将同时考虑上述两个问题。

这一决定不仅仅是在应对农业生产造成的温室气体排放方面迈出的重要一步，它还给未来在可持续饮食方面取得突破带来了希望，因为正如总部位于纽约的政策智库 Brighter Green 新发布的一份文件显示，劣质的饮食与破坏环境的农业生产是相互关联的。

在 COP23 会议期间发布的《慢性疾病、饮食习惯改变与可持续性：西方式饮食习惯的全球化推广及其影响》报告通过中国、南非、印度、墨西哥和巴西等国的案例研究，揭示了饮食习惯、公共卫生以及环境可持续性之间相互交织的关系。

危害地球与人类

“‘西方饮食习惯’含有大量的盐分、糖、廉价的植物油以及动物脂肪，毫无悬念地与中低收入国家快速增长的非传染性的疾病联系起来。”报告指出。

饮食习惯正在“以前所未有的速度”发生着变化。在南非、巴西、墨西哥等新兴经济体国家，糖尿病、心脏病、肥胖、癌症这些曾经被称作是“富贵病”的患病人数正在增长。

随着收入水平的提高，过去以植物性食物摄入为主的中低收入国家消费者饮食结构也逐渐发生着变化，开始向美国消费者高糖、高肉类摄入的饮食习惯靠拢。

自 20 世纪 80 年代以来，全球肥胖患者人数翻了一番。到 2014 年，

饮食习惯的改变导致了全球性的肥胖问题

全球大约有 6 亿成年人和 1 亿儿童属于肥胖，约占全球人口的 13%。地球上大约有 39% 的人口超重。肥胖导致人们罹患糖尿病和心血管疾病的风险显著提升。

根据世界卫生组织数据，全球因糖尿病死亡的人口比例从 2000 年的 1.9% 上升到 2012 年的 2.7%，而心血管疾病更是全球范围内最大的致死元凶。

中国的糖尿病状况

中国的肉类消费量自 1980 年起增长了 400%，如今已经成为全球糖尿病人口数量最多的国家：2015 年中国有 1.09 亿糖尿病患者。糖尿病会增加心血管疾病的患病风险，而心血管疾病造成的死亡人数占死亡人口总数的 38%。

中国目前肉类消费量占全球总量的 28%，相当于每人每年摄入 63 公斤，是普通美国人肉食摄入量的一半。今年六月，中国在时隔 14 年之后首次放开了美国牛肉的进口，以满足其日益增长的需求。

文化吸引力

全球南方国家的很多人将美式快餐与时尚和全球文化融合联系起来。

所谓“餐饮巨无霸”（Big Food）指的是麦当劳以及百胜餐饮集团（肯德基和塔可钟的母公司）等大型跨国餐饮公司。这些公司正在全力进军新兴经济体国家。

圣保罗大学健康与营养流行病学研究中心主任卡洛斯 · 蒙泰罗认为，一旦加工食品在一个国家卡路里摄入量中的占比达到 60% 时，餐饮巨无霸企业便倾向于寻求开拓新的市场。美国、英国和加拿大早在几十年前就已经达到了这一水平。

报告指出，全球快餐巨头在全球南方国家的市场投放了大量广告宣传，并且往往还会针对当地口味对菜单进行调整（比如麦当劳在印度推出的“皇家麦奶酪汉堡”）。

中国市场是这些巨无霸企业的重要目标。2011 年，肯德基母公司百胜报告称，其 18 亿美元利润中有一半来自中国。26 年间，肯德基在中国开设了 4200 多家新门店，而其竞争对手麦当劳开设新店的速度则达到每周 10 家。快餐企业精心营造的富足、愉悦的消费者形象使得汉堡成为了人们用餐的流行选择。

农村人口迁居城市也是快餐和加工食品快速增长的因素之一。2014 年，

全球 54% 的人口居住在城市地区，而 1950 年这一数字只有 30%。

日益严重的问题

报告详述了餐饮巨无霸企业对农产品的需求如何导致肉类产品和牲畜饲料生产的增加，从而加剧了全球变暖。报告指出，大量土地被用于饲养牲畜以及种植玉米和大豆，导致大面积土壤退化、毁林、生物多样性丧失、以及温室气体排放。

农业（包括运输和包装）所贡献的温室气体占人类活动造成的温室气体排放总量的 20% 到 30%；全球畜牧业产生的温室气体占 14.5%。牲畜业产生的甲烷排放虽然总量上少于二氧化碳，但其温室效应更强。

棕榈油用途非常广泛，从零食到化妆品等各类产品中都能发现它的身影。然而，它却引起了人们的担忧，因为棕榈树生长于泥炭丰富的土壤中。根据忧思科学家联盟 2013 年一份题为《棕榈油与环境》的研究报告，棕榈树种植过程中释放的二氧化碳远远高于其树冠所吸收的二氧化碳。该报告认为，营养摄入的快速增长将同时给人类和环境造成伤害。

双重负担

一方面，刚刚完成城镇化的消费者们开始摄入营养更加丰富的饮食；另一方面，仍留在农村的人口却往往因为食物匮乏而营养摄入不足。

例如，在中国农村地区，品种分化日益加深的农业生产模式虽然总的来讲也许有利于经济，但却使食品更加缺乏。在膳食和生活方式快速变化的情况下，一个家庭中有时可能会同时出现营养不良和营养过剩的情况，这样的情况甚至还有可能发生在同一个人的不同的人生阶段。这种奇特的现象被称为营养不良的双重负担。

报告还简要概括了当前正在采取的慢性病应对措施。

正面行动

2016 年 6 月，中国营养学会发布了新的居民膳食指南，指出人均肉类消费量应该减半。这一大胆的建议如果得到采纳，将有助于改善中国人的饮食结构，并降低食品生产和消费过程中的温室气体排放。

今年八月，国际保护网络野生救援推出了由名人代言的名为“蔬食”的媒体宣传行动，以应对气候变化，改善公众健康水平。

报告中研究的其他国家也开始采取行动，通过法律和公众健康教育活动改善人们的饮食习惯。墨西哥 2010 年通过法律，要求学校开展体育活动并在校园内禁止销售不健康的食品。在墨西哥，肥胖与高糖分饮料有很强的联系，而且距离美墨两国边境越近的地方这种现象越是普遍。南非出台法律限制某些食物中的盐分含量，并推出绿色星期一的活动，鼓励多吃蔬菜。巴西的宣传活动则鼓励人们用新鲜的食材自行烹饪食物。

由于全球南方国家日益严重的慢性疾病负担，医疗系统必须做好应对肥胖、糖尿病和心血管疾病的准备。在中国，13% 的医药费用与糖尿病有关，并且预计到 2030 年糖尿病相关的医疗费用每年将达到 470 亿美元。

这一现状要求加速对于饮食、健康与环境之间关系的讨论。近期联合国气候谈判做出的探讨农业在全球变暖中所扮演的角色的决定将会让我们以更加审慎的态度反思我们所摄入的食物以及为何摄入。

《慢性疾病、饮食改变与可持续性：西方饮食习惯的全球化推广及其影响》作者为朱迪·班克曼。该报告由 Brighter Green 发布。

朱迪·班克曼，曾在纽约明绿行动智库（BrighterGreen）担任实习研究员和顾问

'Big Food' health crisis

Judy Bankman calls for action on links between 'Big Food', climate change and poor health

□ Judy Bankman

One of the most potentially far-reaching agreements at the UN's COP23 summit on climate change in Bonn was the decision to link farming methods to climate change, and to explore a framework of solutions.

It was a "notable, yet low-profile outcome", according to *Carbon Brief*. The international community agreed to work on the links between agriculture and climate change, and to agree which issues should be included by March 31, 2018. Future technical talks on the two issues will take account of each strand.

The decision is not just a huge step towards tackling greenhouse gas emissions from farming. It also offers hope for future breakthroughs in sustainable diet, because poor diet and environmentally damaging agriculture are linked, as a new paper from New York based policy thinktank Brighter Green shows.

Released at COP23, "Chronic Disease, Changing Diets, & Sustainability: The Globalization of Western-style Eating & Its Implications" sheds light on the intersection of diet, public health, and environmental sustainability, with case studies from China, South Africa, India, Mexico and Brazil.

Bad for planet and people

"The 'Western-style diet' – replete with salt, sugar, cheap vegetable oil, and animal fat – is inextricably linked to the fast-rising increase in non-communicable diseases (NCDs) in low and middle income countries," it says.

Dietary changes are taking place at "unprecedented speed," and people in emerging economies such as South Africa, Brazil, and Mexico are suffering a rise in what used to be "diseases of the rich" – diabetes, cardiovascular disease, obesity, and cancers.

As incomes rise, consumers in low and middle income countries are increasingly eating diets similar to those of consumers from the United States, in a "nutritional transition" from plant-based to meat-centric, sugar-rich diets.

Obesity has doubled worldwide since 1980. By 2014 roughly 13% of the global population was obese, roughly 600 million adults and 100 million children. Nearly 39% of everyone on the planet was overweight. Obesity puts people at greater risk of diabetes and cardiovascular disease (CVD).

Diabetes-related deaths rose from 1.9% in 2000 to 2.7% in 2012, and CVD is the biggest single cause of death worldwide, according to the World Health Organization.

China's diabetes epidemic

China, where meat consumption has risen 400% since 1980, now has the most diabetics in the world: 109 million people in 2015. Diabetes is a risk factor for CVD, and CVD accounts for 38% of deaths.

China currently consumes 28% of the world's meat, or 63 kilogrammes per person per year, half the meat consumption of an average American. In June, it opened its doors to American beef for the first time in 14 years to meet its growing demand.

Cultural allure

Many in the Global South associate American-style fast food with modernity and inclusion in a global culture.

"Big Food", meaning large transnational food companies like McDonald's and Yum! Brands, the parent company of KFC and Taco Bell, are concentrating their efforts on emerging economies.

Big Food tends to seek out new markets once processed foods provide 60% of a country's total calories, according to Carlos Monteiro, director of University of Sao Paolo's Centre for Epidemiological Studies in Health and Nutrition. The US, UK, and Canada reached this level several decades ago.

Global fast food giants advertise heavily in their Global South markets and often adapt their menus to local tastes (e.g. the "McPaneer Royale" in India), the report says.

China's market is an important target for Big Food. In 2011, Yum! Brands, KFC's parent company, reported half of its US$1.8 billion profit came from them. KFC has opened over 4,200 new Chinese locations in 26 years, while rival McDonald's has opened new restaurants at the rate of 10 a week. Fast food's associations with success have made burgers a popular treat.

Migration from rural to urban environments is one factor that enables increased access to fast food and processed food. In 2014, 54% of the world's population lived in urban areas, compared to 30% in 1950.

Growing problems

The report details how the agricultural needs of Big Food contribute to global warming, through increased production of meat and feed for livestock. Vast tracts of land turned over to livestock, corn and soybeans have led to massive soil erosion, deforestation, loss of biodiversity and greenhouse gas emissions, it says.

Agriculture (including transport and packaging) contributes from 20% to 30% of anthropogenic greenhouse gas emissions (GHG); the global livestock industry produces 14.5% of all GHGs. Methane from livestock is less abundant than CO2 overall, but has a stronger greenhouse effect.

Palm oil, found in many products from snacks to toiletries, is a particularly worrying example as the trees thrive on peat-rich soil. Far more CO2 is released in planting them than is sequestered in the canopy, as the Union of Concerned Scientists warned in a 2013 paper 'Palm Oil and the Environment.' The nutrition transition is harming both people and the environment, the report says.

Double burden

While newly urbanised consumers are eating richer diets, those who remain in rural areas often suffer nutritional deprivation from scarcity.

> "Malnutrition can occasionally coexist with overnutrition within a household."

For instance, in rural China, increased specialisation of food production, while perhaps economically advantageous overall, has led to greater food insecurity. As diets and lifestyle change rapidly, malnutrition can occasionally coexist with overnutrition within a household, or even within an individual's lifetime. This curious phenomenon is referred to as the double burden of malnutrition.

The report also outlines moves being taken to tackle chronic diseases.

Positive steps

In June 2016, the Chinese Nutrition Society released new dietary guidelines suggesting meat consumption per capita needs to be halved. This bold suggestion, if followed, could help improve Chinese diets and also reduce the amount of GHGs released from food production and consumption.

In August, the international conservation network, WildAid, launched Shu Shi: a celebrity endorsed media campaign to fight climate change and improve the public's health.

Other countries studied in the report are also taking steps to use the law and public health education. Mexico passed a 2010 law for schools that requires sports and restricts the sale of unhealthy food. Obesity there is strongly linked to sugary drinks, and is commoner closer to the US border. South Africa has limited the salt quantities in some foods by law, and a Green Monday's campaign encourages eating vegetables. Brazilian campaigns stress home cooking with fresh ingredients.

Because of the increased burden of chronic disease in the Global South, health care systems must equip themselves to deal with obesity, diabetes, and cardiovascular disease. In China, 13% of medical costs are related to diabetes, and it is estimated that by 2030, yearly costs associated with diabetes will reach US$47 billion.

The situation calls for an accelerated discussion of the links between diet, health, and environment. The decision to address agriculture's role in global warming at the recent UN climate talks will increase scrutiny of what we eat and why.

Chronic disease, changing diets and sustainability – the globalization of Western-style eating and its implications, is researched and authored by Judy Bankman. It is published by Brighter Green.

Judy Bankman is a former research intern and consultant at Brighter Green.

杜克大学研究：雾霾显著降低光伏发电效率

雾霾可令中国光伏电站发电效率降低至少六分之一，
煤炭和新能源的矛盾也许比我们想象的更直接。

□ 冯 灏

根据国际能源署的数据，2016年中国新增光伏装机34GW，这一数字是美国的两倍还多，占世界新增装机容量的近一半。以太阳能为代表的清洁能源若得以替代燃煤为主的发电结构，将极大地改善中国的环境状况，在清洁能源领域的巨额投资正是中国各级政府的重点举措之一。

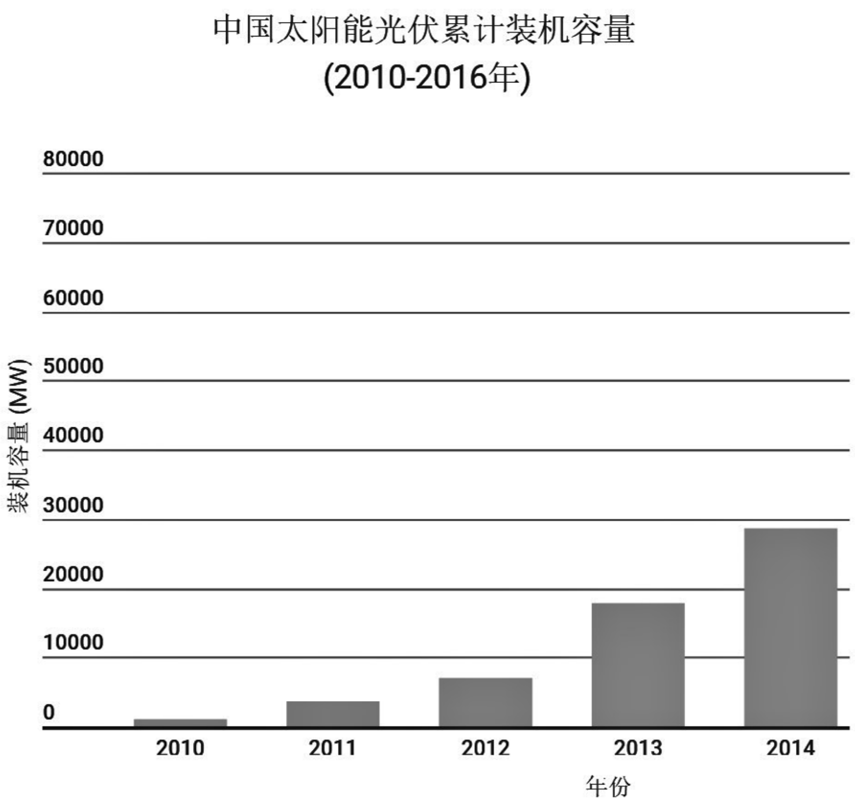
铺设光伏电板会改善空气质量，这是我们一直理解的因果关系。但是，反过来呢？尚待改善的空气质量会不会反过来影响光伏电板发电？

杜克大学的最新研究肯定了我们的疑问，基于NASA GISS的全球气候模型数据，研究发现，空气污染中的颗粒物会大规模折损光伏发电效率，幅度甚至可以达到17%以上。

中国有三成光伏发电能力被雾霾耽误

而短波的太阳辐射光线由于受到灰尘和颗粒物的阻碍，被吸收和散射，这一被称为太阳光减弱(solar dimming)的现象使得光伏组件接收辐射强度被降低，从而带来发电损失。根据该研究，以中国目前的光伏发电能力估算，雾霾造成的电力损失高达11GW，这一数字是中国新增光伏装机容量的近三分之一。

> “英利集团通过对比并监控自动清洁机器人的光伏组件与常规安装组件户外发电量发现：在河北邢台、保定等“著名”的雾霾城市，雾霾时段的发电量可以降低80%以上，在雾霾最为严重的时候，几乎就不发电。”



值得注意的是，人为造成的颗粒物对光伏发电的影响超过了自然界的灰尘。研究人员对于光伏组件表面的沉积物进行了采样和组分分析，发现其中仅有 8% 是非尘土颗粒物，即人类活动产生的。这 8% 虽然听起来不足为虑，但是因为其中含有有机碳、炭黑等成分，碳原子吸收阳光的能力更强；而且由于粒子更小，阳光更容易被散射。也因此，人类活动对于发电效率的损失甚至超过占比 92% 的尘土。

世界最大的光伏组件生产商之一英利集团对此感受颇深，技术中心副总经理倪健雄介绍说，英利通过对比并监控自动清洁机器人的光伏组件与常规安装组件户外发电量发现：在河北邢台、保定等“著名”的雾霾城市，雾霾时段的发电量可以降低 80% 以上，在雾霾最为严重的时候，几乎就不发电。

研究团队成员，杜克大学土木与环境工程系教授 Drew Shindell 表示，这些由人类活动产生的颗粒物，使得中国比其他国家面临更为严重的光伏发电损失。根据研究，中国中部和东部地区，在每月擦洗一次光伏组件的情况下，颗粒物将造成光伏组件发电效率降低 17%~25%；若擦洗间隔为 2 个月，光伏组件的发电效率则将降低 25%~35%。

擦洗很有效，可是光照资源丰富的地方多缺水

中国的地面大型电站对于擦洗并没有统一标准，一般是通过监控发电量来决定什么时候擦洗。总部位于山东省青岛市的萨纳斯新能源科技有限公司专门服务于光伏电站的运营维护，公司总经理耿文强告诉中外对话，从组件维护的角度，现在中国北方的大型地面电站，基本上要保证标准的每年四次擦洗，在污染严重的情况下，可以根据现场情况适当增加擦洗频次。

根据该研究，擦洗后的光伏组件单日发电量会提高 50%，效果显著。

倪健雄表示，毋庸置疑，保持光伏电板的清洁非常重要，提升发电效率的同时，还能有效维护光伏组件，因为颗粒物的长期聚集可能使组件大量发热，造成热斑现象，威胁组件寿命。

但是，对于企业而言，更现实的问题是擦洗需要用到的水。在中国光照资源丰富的西北地区，水往往比电珍贵得多，用水量提升发电量是显然不值得的。耿文强表示，因为擦洗需要大量水资源的投入，是一笔不小的成本，因此企业需要对擦洗投入和发电实际收益进行综合对比，以此决定擦洗频次。更专业的光伏运维企业，还会利用光伏大数据分析和挖掘的结果，得出清洗的最佳性价比。

难以控制的系统性风险

分布式电站其实是雾霾影响的主要受害者。与大型地面电站定期擦洗维护不同，小型的屋顶项目建成后普遍仅依靠雨雪等自然天气擦洗，缺乏后期运营维护，这进一步加剧了雾霾污染的影响。

爱康科技公关总监张卫红告诉中外对话：“很少会有居民用户想到爬上自家的楼顶去擦拭光伏电板”。

空气质量差，折损清洁能源发电；清洁能源发展的不好，又不利于环境的改善。张卫红坦言，对于光伏领域的投资者而言，频发的雾霾天气增加了一项难以控制的系统性风险。

不过据张卫红介绍，在中国，政策支持的效力大过商业思维：迫于改善空气质量的压力，反倒越是雾霾严重的地区，地方政府越有动力推广地面电站及屋顶光伏项目，减少污染。以雾霾常有爆表的河北保定为例，政府部门曾提出以建设“光伏之都”作为建设低碳城市的重要内容之一，并意向规划把西部太行山区变成“太行光谷”。该设想如能实现，对于解决京津冀地区的雾霾会有一定的效果。

新加坡能源专家 Cleantech Solar 公司营运总监 Andre Nobre 在接受《印度时报》采访时表示，空气污染已经成为印度太阳能厂商做出商业决策的重要考量因素，开发商会谨慎考虑在空气污染严重的地区签署能源采购协议。

雾霾治理的协同效应

频繁擦洗之外，从源头上根治空气污染中的颗粒物，似乎才是更为合宜的选择。

倪健雄表示，雾霾降低光伏发电效率是短期的阵痛，而下大力气多方面协同治理，改善整个城市的空气质量并非天方夜谭。以大同为例，这个曾经在煤坑上的城市如今的空气质量颇令当地人自豪，而英利集团在大同的“光伏领跑者”基地也运转良好。 Shindell 也从研究的反方向为中外对话做了解读，“政策越倾向于清洁能源，清洁能源的发展就越好，至少在太阳能领域”。

与印度和阿拉伯半岛不同，中国影响光伏发电效率的颗粒物主要来源是人类活动，所以政府有更大的潜力可以减少排放、降低污染。政府有多种手段可以选择，包括燃料选择、排放权定价、可再生能源优惠政策。其效益也是显而易见的，光伏发电量提高之外，考虑到可吸入颗粒物的健康隐患，无疑也会大幅提高人们的健康水平。

另外，这也从另一个角度说明，一边发展光伏发电，一边继续修建燃煤火电站的折衷做法可能并不是一个好主意，因为后者会很大程度影响前者的运行。

冯灏，中外对话研究员

Dirty air harms solar

China is losing the equivalent of 11 gigawatts of solar power from polluted air

□ Feng Hao

As China reduces air pollution, it can expect its solar farms to become more efficient

China is investing big in solar PV but new research from Duke University suggests that particulate matter in air pollution is slashing panel efficiency by as much as 17%.

Solar radiation can be blocked, absorbed or scattered by particulate matter in the atmosphere – a phenomenon known as solar dimming. This reduces the intensity of sunlight reaching solar panels, resulting in less power being generated.

This is a major issue in China because air pollution is notoriously bad and investment in solar PV is being promoted as a way to fix it.

In 2016, China added 34 gigawatts of solar panels, more than twice as much as the US and about half of the new solar capacity installed worldwide that year.

However, China is losing as much as 11 gigawatts of power as a result of solar dimming, according to the research. That's almost one third of the solar PV capacity China installed in 2016, and twice as much as Europe installed that same year.

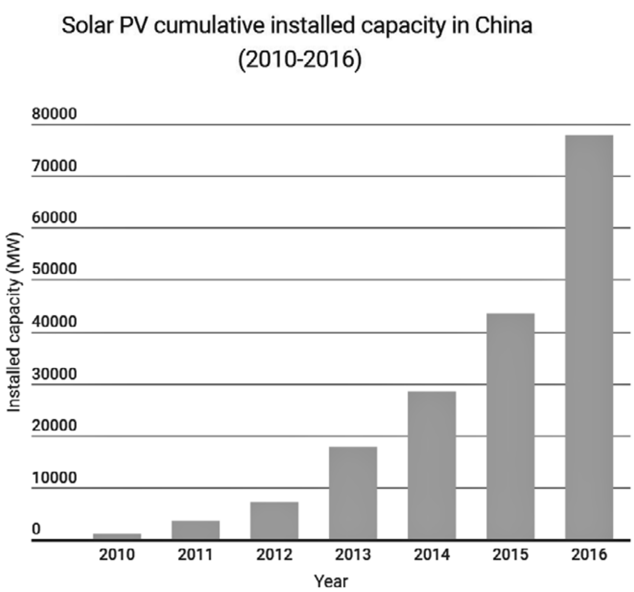
The study found that particulate matter from human activity has a bigger impact than natural dust. The researchers sampled and analysed matter that collected on solar panels and found that 8% was from anthropogenic sources. That might not sound like much, but that 8% contains organic carbon and black carbon, which are more likely to absorb or scatter sunlight.

In fact, the 8% of anthropogenic particles cause more reduction in power than the 92% of natural dust.

Yingli Group, one of largest solar cell manufacturers globally, is keenly aware of the problem. Ni Jianxiong, deputy head of the company's technology centre, explained that in really smoggy cities, such as Xingtai and Baoding in Hebei province, generation can be reduced by over 80% unless panels are regularly cleaned. When air pollution is really bad almost no power is generated.

Drew Shindell, a member of the research team and Nicholas Professor of Earth Sciences at Duke University, said the effect of the anthropogenic particles means that China is getting less power from its panels than countries with better air quality.

According to the research, if panels in central and eastern China are cleaned every month, particulate matter will reduce efficiency by 17-25%. If cleaned every two months, efficiency falls by 25-35%.



Source: IRENA

Why not clean the panels more?

Although there's no single approach to cleaning solar panels in China, most solar farms clean once power output falls below a certain point.

Sarnath is Qingdao-based company operating utility-scale solar farms. Geng Wenqiang, the company's general manager, told chinadialogue that solar farms in northern China are cleaned four times a year usually.

Cleaning not only maintains power output, it also prevents panel damage from accumulated dust that can result in overheating and hot spots, which reduces lifespan.

But while China's north-west has plenty of sunshine, it doesn't have a lot of water. Geng Wenqiang said the large volumes needed make cleaning expensive so operators have to weigh up those costs and the extra income they can expect from higher power output.

Right idea, wrong location

But it is distributed solar, such as rooftop installations, that suffer from efficiency drops most as these get far less maintenance than utility-scale solar farms, typically being cleaned only by rain or snow.

Zhang Weihong, public relations director with solar developer Akcome Technology, told chinadialogue that "very few people think of going up onto their roof to clean their solar panels."

Zhang admitted that for investors, the impact of smog on solar panel efficiency is a key risk that is factored into investment decisions.

This is echoed by Andre Nobre, head of operations at Singaporean firm Cleantech Solar. He told the *Times of*

India that firms are cautious about signing agreements to buy power from solar farms in highly polluted areas.

However, Zhang explained that for the government, policy support often overrides these industry concerns. The pressure to improve air quality in polluted areas is leading local governments to promote utility-scale and rooftop solar installations as the solution.

In Baoding, which is known for its severe air pollution, the local government produced a low-carbon plan that included the ambition of becoming a "solar city", turning Taixingshan district to its west into a "solar valley".

If successful, that plan would go some way to reducing smog in the Beijing-Tianjin-Hebei region.

Extra benefits of cleaner air

Of course, a better alternative to regular cleaning of panels is to minimise the particulate matter that reaches the atmosphere.

Ni Jianxiong said that the problem of particulates is a short-term one, and that reducing air pollution is not impossible if real efforts are made. The city of Datong, for example, was built on coal mining but now has air quality to be proud of.

Shindell told *chinadialogue* that "the more policies favour clean energy, the better clean energy works! At least the solar kind!"

Unlike in India and on the Arabian Peninsula, solar power in China is affected primarily by anthropogenic particulate matter, so there is more potential for the government to help by reducing emissions and pollution.

There are a range of options it can choose, including fuel choices, emissions pricing and preferential policies for renewables. The benefits would be significant – alongside improved solar power generation there could be major improvements to human health, as particulate matter is a risk to health when inhaled.

This also shows that the idea of simultaneously building coal power plants while developing solar power may not be wise, as the coal power plants will have a major impact on solar power generation.

"If you really did the economic analysis of these things, you would find that this is yet another reason why the apparently cheap, but very dirty fossil fuels are actually not so cheap," said Shindell.

Feng Hao is a researcher at chinadialogue.

港口建设遇阻，斯里兰卡被迫对华“求援”

与中方投资者签订的新协议将为汉班托特港引入更多的资金，但斯里兰卡急需提升自身的造血能力。

□ 乌迪达 · 贾亚辛格

2010年的马加普拉 · 马欣达 · 拉贾帕克萨港

中国投资者曾经满怀信心，打算将低调的斯里兰卡南部小镇汉班托特改造成一个重要港口和投资区，但是如今这个计划却遇到了很多问题，比如港口贸易萧条，斯里兰卡债务问题恶化，附近居民抗议现有投资区扩大等等。

该项目官方名称为马加普拉 · 马欣达 · 拉贾帕克萨港。这个以前总统马欣达 · 拉贾帕克萨的名字命名的项目，在其所在小镇原有港口的基础上改建成了深水港，并于 2011 年

正式投入运营。前总统马欣达·拉贾帕克萨执政风格强硬，在2015年下台之前一直致力于推动斯里兰卡与中国的密切合作。

截至目前，中方已向港口及20平方公里港区建设投资12亿美元，而中方对斯国基础设施项目投资累计达到60亿美元。

中国“一带一路”倡议致力于推动沿线国家的基础设施建设，促进海陆两线的跨区域贸易与互联互通。与巴基斯坦的瓜达尔港和孟加拉国的吉大港一样，汉班托特也是该倡议重要的一环。仅未来五年，中国就计划在“一带一路”沿线国家投资7500亿美元。

债务问题如何解决？

不过有人担心，中国投资的很多汉班托特基础设施项目前景并不看好，甚至可能给政府带来严重损失。

在其后半段任期中，拉贾帕克萨总统因不断为其家乡汉班托特引资，建设一些并无价值的项目而备受指责。目前这一地区已经有一座扩建了的港口、新机场、会议中心、和一个板球体育场，几乎所有的设施都没怎么使用过。

拉贾帕克萨也因为将大把的钱花在意图不明的基础设施项目上，而在2015年1月的大选中意外落败。新任总统迈特里帕拉·西里塞纳虽然赢得了选举，但却要面对另外一个严重的问题：斯里兰卡的负债率已接近2016年国内生产总值的80%。

评级机构穆迪今年8月警告称，2019到2022年间斯里兰卡需要偿还的贷款总额为138亿美元。为帮助斯里兰卡管理债务问题，2016年5月国际货币基金组织（IMF）同意向该国提供15亿美元的紧急援助。

此外，斯里兰卡政府也向中国政府寻求帮助，希望能将与中方的未偿债务转换成项目股权。

2017年，在经过5个月的讨论后，中国招商局港口控股有限公司（China Merchant Port Holdings，简称CMP）与斯里兰卡方面签署协议，以11.2亿美元的价格接手汉班托特港。此外，招商局港口控股有限公司还同意再向港口运营增资6亿美元。

当地游客在空置的汉班托特港会议中心参观拍照

但是这项交易计划却遭到了反对派与港口工人的强烈批评，他们担心可能会因此将项目土地控制权与安保工作拱手让给招商局港口控股有限公司。

迫于压力，斯里兰卡政府同意成立两家由斯里兰卡港口港务局（SLPA）和招商局港口控股公司共同所有的企业。

这样就可以保证项目土地不会被直接租赁给中国招商局港口控股有限公司。斯里兰卡港务局主席帕拉克拉马·蒂萨那雅克博士表示，10年之后，中国招商局港口控股有限公司将会把名下股份的20%转让给斯里兰卡港务局，从而使该国对该项目的持股份额增加到50%。

项目协议于今年7月底正式签订，但是批评的声音仍然不绝于耳，并最终导致总统于今年8月下令解除了司法部长维杰达萨·拉贾帕克舍的职务。

如何扭转港口运营颓势？

金砖招商局港口控股有限公司最早在今年11月份就可以启动汉班托特项目。蒂萨那雅克表示，鉴于港口目前糟糕的表现，可能无法在短期内获得额外的投资。

他表示：“2015年港口船舶仅停靠过19艘船只，2016年为14艘，而今年截至6月份停靠的船只只有10艘。仅仅拥有一个港口或者靠近关键航线还是不够的，必须有一个国际专业机构来引导，以吸引更多的船只、

服务和投资。而这正是中国招商局港口控股有限公司能够做到的。”

中方投资者也表示，有信心通过刺激20平方公里港区的投资发挥港口在中国“一带一路”规划中的战略区域优势，扭转港口发展颓势。

招商局港口控股有限公司副总经理杭天表示：“我们希望将汉班托特港口建设成一个重要枢纽，将周边国家和整个世界都联系在一起。这不仅是斯里兰卡的国家愿景，同时也是我们运营方的使命。”

杭天表示，按照招商局港口控股有限公司现有的商业规划，未来汉班托塔港的发展将以包括港口服务、商业孵化器、综合物流和船舶供应和服务在内的多项业务为基础，吸引更多来自世界各地的企业。此外，该公司还考虑通过与中石化或中石油合作，提供燃料贮存服务。

杭天指出，港口的地理位置得天独厚，是发展地区船运业务的理想之地。“我们希望，南亚和非洲，尤其是东非地区，未来能够成为又一个世界工厂。斯里兰卡恰好可以同时覆盖这两个临近的内陆贸易区，帮助上述地区25亿人口实现经济转型。”

斯里兰卡国有投资委员会负责人曼格拉·亚帕指出，有两家中国企业正计划投资25到30亿美元共同在此建立一家炼油厂，不过他并未透露这两家企业的具体名称。

今年8月，当地大型企业Laugfs Gas与中国进出口信用保险公司（Sinosure）签订了8000万美元的汉班托特3万吨级液化石油气进出口码头融资合同，成为斯里兰卡首个获得融资的私营企业。该码头建成后将成为南亚地区规模最大的液化石油气进出口码头。

> “一个本就步履维艰的项目却还要继续进行扩张，可能这才是一些汉班托特居民真正担心的问题。”

尽管亚帕（Yapa）承认目前的项目规划仍然比较“混乱”，但他也表示：“从发展角度来看，码头和工业园区必须成为一个紧密协调的整体。有了工业园区，才会有需求。”

“一切都必须按照规划来，通过扩张我们能在附近建立新的工业园区。”

一个本就步履维艰的项目却还要继续进行扩张，可能这才是一些汉班托特居民真正担心的问题。

项目扩张
引发当地居民担心

马拉提·维克拉玛格一家住在附近的博拉伽马（Beragama）村，这里也属于汉班托特区。她的亲戚大多数也都住在附近，走路就能到，家不远就是自家的水稻田。与很多当地人一样，她的祖先一个多世纪以前来到这里定居。汉班托特地区平原广布，拥有其他地区难以企及的充沛水源，可以说是理想的水稻产地，吸引了很多人在此定居。

今年早些时候，斯里兰卡总理拉尼尔·维克拉马辛哈与中国驻斯里兰卡大使易先良共同出席了中-斯工业园区的奠基仪式。就是在那一天，马拉提眼看着邻居们与维护秩序的警察发生了冲突，因为这个15000英亩的工业园将会包围整个村庄。

这个项目将由中国港湾工程有限责任公司管理，独立于现在由招商局港口控股有限公司管理的20平方公里港区。

马拉提热情好客，为每一个来到家里的客人奉上一杯加糖的热茶。但是一提到这个新的工业园区，她就收起了脸上的笑容。她说：“无论是政府还是企业，谁都没有权利夺走我们的土地。我们该去哪儿？就让他们来吧，反正我们是不会走的。”

据了解，已有近2000户当地居民聚集在寺庙周围抗议工业园区的建设计划，并一度与政府形成对峙。

目前，工业园区只是完成了奠基仪式，受抗议活动影响，政府还未宣布下一步进展计划。不过，预计这一情况不会持续太久。

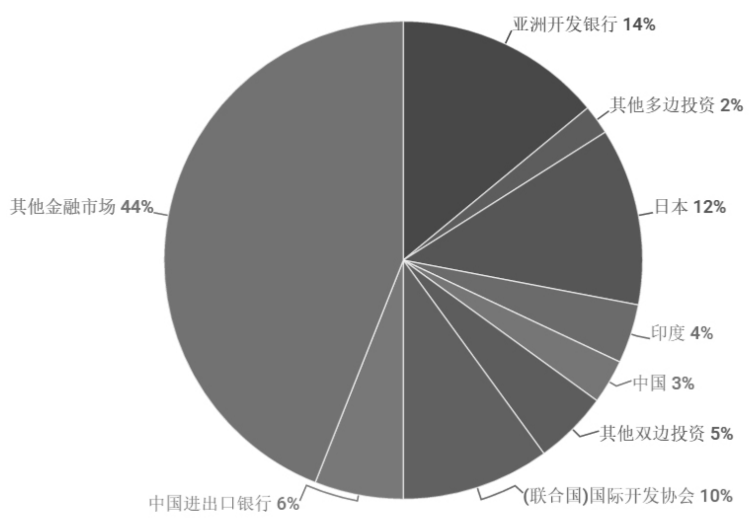
平衡各方利益

斯里兰卡是中国“一带一路”倡议下对外投资的主要受益方。然而斯里兰卡的经验表明，借款建设大规模项目不仅会带来经济风险，将大量资源耗费在利用率很低的基础设施上也会带来潜在的环境风险。

尽管如此，经济学家、Verite研究智库负责人尼尚·德·梅尔博士仍然认为，斯里兰卡重启汉班托特项目和另一港口项目的谈判说明，斯中关系正朝着积极方向发展。

“许多人认为，中国的投资是斯里兰卡经济的生命线，其实没到这个地步。”

2016年斯里兰卡外债分布情况



数据来源: Verité Research; Central Bank of Sri Lanka, Annual Reports

他指出，2010 年和 2016 年，中方资金都只占斯里兰卡贷款总量的 3%。出现变化的只有中国进出口银行的对斯贷款比例，2010 年该机构的对斯投资额几乎为零，而现在的贷款投资比例已经达到了斯国的 6%。其实，国际金融市场才是斯里兰卡外资投资的最大来源，占比 44%。

尼尚 · 德 · 梅尔博士还指出，中国投资 14 亿美元建设的科伦坡港口城市项目就是中斯双边关系发展的一个例证。2015 年该项目被新政府叫停。鉴于该项目受到一些社会与环境方面的批评，2016 年 8 月双方就项目协议重新展开谈判。港口运营方中国港湾（China Harbour）同意为当地渔民的生计项目投资 320 万美元，并放弃追讨因项目停工、工程延期造成的损失。

然而，德 · 梅尔博士指出，对斯里兰卡这样负债累累、并且在不同形式上依赖中国和印度的小国来说，提高管理能力和可持续标准才是解决利益冲突最关键的因素。

他表示，这就要求斯里兰卡“在决策时要坚守自己价值立场和原则，这样才能保持决策的一致性和责任性，而不会被看作是在站队。”

“为了实现这个目标，斯里兰卡必须付出更多努力。”

乌迪达 · 贾亚辛格，从事新闻报道14年，主要关注政治、商业和社会问题，目前担任斯里兰卡唯一一家商业日报《每日金融时报》的副主编

Sri Lanka's problem port

New deal with Chinese investor will see more money poured into Hambantota port

□ Uditha Jayasinghe

On the road to the airport, a sign wishes former President Rajapaksa a long life

China's ambitious plan to transform Hambantota, a sleepy southern town in Sri Lanka, into a major port and investment zone has been beset by problems, including sluggish activity at the port, Sri Lanka's worsening debt problem, and protests from people living nearby against a proposal to expand an existing investment zone.

The Magampura Mahinda Rajapaksa Port, as it's officially known, involved turning the town's harbour into a deep-sea port. It became operational in 2011 and was named after former strongman President Mahinda Rajapaksa, who for nine years steered Sri Lanka closer to China before losing power in 2015.

China has provided loans worth US$1.2 billion to build the port and a 2,000-hectare investment zone. In total, it has invested more than US$6 billion into Sri Lankan infrastructure projects.

Like investments in the ports of Gwadar in Pakistan and Chittagong in Bangladesh, Hambantota is a key part of China’s Belt and Road initiative (BRI) that is building infrastructure and boosting regional connectivity and trade across strategic maritime and land routes. China plans to invest US$750 billion in BRI countries over the next five years alone.

Dealing with the debt

But there are concerns that many of the China-backed infrastructure projects in Hambantota are bad investments that could prove costly for the government.

During the latter part of his term, President Rajapaksa was increasingly censured for funnelling money into white elephant projects in Hambantota, which is his home state. The area now includes an expanded port as well as a new airport, convention centre and cricket stadium, all of which are little used.

This flow of cash to questionable infrastructure projects contributed to Rajapaksa’s shock defeat in January 2015. But the new president, Maithripala Sirisena faced a serious problem: Sri Lanka’s debt was almost 80% of gross domestic product in 2016.

The rating agency Moody’s warned in August that Sri Lanka will have to repay loans worth US$13.8 billion between 2019 and 2022. To help Sri Lanka manage its debt, the International Monetary Fund (IMF) agreed to a US$1.5 billion bailout in May 2016.

The government also reached out to the Chinese government, asking Beijing to convert its outstanding debt into equity.

In 2017, after five months of discussions, China Merchant Port Holdings (CMP) signed an agreement to take over Hambantota port for US$1.12 billion. The company also agreed to invest a further US$600 million into port operations.

But the proposed deal was heavily criticised by opposition politicians and port workers concerned about ceding control over land to CMP and the handling of security.

Under pressure, the government agreed to set up two companies that would be owned by the Sri Lanka Port Authority (SLPA) and CMP.

This approach would ensure that no land would be leased directly to CMP. And after ten years, CMP will divest 20% of its shares to government-owned SLPA, thereby increasing the state’s share in the port to 50%, according to SLPA chairman Dr Parakrama Dissanayake.

The final agreement was signed at the end of July but criticism of the deal rumbled on, leading the President to sack Justice Minister Wijedasa Rajapakshe in August.

Turning a failing port around

CMP could begin work at Hambantota as early as November. And given the port’s poor performance, additional investment cannot come soon enough, according to Dissanayake.

“In 2015 the port got 19 ships, in 2016 it was 14 and this year till June it got only 10 ships. It is not enough to have a port or be close to key shipping lines, we need to have a global player directing ships, services and investment. That is what CM Port can do,” he said.

The Chinese investor is confident it can turn things around by galvanising investment to its linked investment zone of 2,000 hectares and capitalising on the port’s strategic importance to the regional vision of China’s BRI.

“We are targeting to turn the Hambantota port into a major hub connecting the neighbouring countries as well as the rest of the world. That is the national vision of Sri Lanka and it is also our mission as an operator,” said CMP deputy general manager Hang Tian.

CMP is currently developing a business plan that will include port services, a business incubator, integrated logistics and vessel supply service to attract more international companies, Hang said. The company is also considering bunkering services by tying up with Sinopec or China Petroleum.

The port’s strategic location makes it ideal to be a hub for shipment growth in the region, said Hang. “Our expectation is that South Asia and Africa, especially east Africa is set to become another global factory. Sri Lanka happens to cover these two economic hinterlands, encompassing a population of 2.5 billion people seeking economic transformation.”

Children play in a village earmarked for a 15,000-hectare Chinese investment zone

Mangala Yapa, a director at the state-run Board of Investment, notes that two Chinese companies have put forward a joint venture proposal for a petroleum refinery, with an investment between US$2.5 and US$3 billion although he did not name the firms.

And local conglomerate Laugfs Gas in August signed the first ever private sector financing facility in Sri Lanka supported by China Export & Credit Insurance Corporation (Sinosure) to the tune of US$80 million for a 30,000-metric tonne liquid petroleum gas import and export terminal in Hambantota. The aim is to make the terminal the largest in South Asia.

"From a development angle the port and the investment zone have to be integrated," Yapa said. "To create demand we need the investment zone," although he admitted that planning had been "haphazard".

"This has to happen in a planned manner and depending on expansion we will create new investment zones nearby."

But expanding a project that is already struggling is exactly what some residents of Hambantota fear.

Local concerns over expansion

Malathi Wickramage's family lives in the close-knit village of Beragama, which is part of the Hambantota district. Most of her relatives are within walking distance and farm rice on nearby land. Like many in the area, her ancestors settled here over a century ago, attracted by verdant plains that are ideal for paddy farming and the abundant water resources that are rare in this otherwise arid area.

Earlier this year Malathi watched her neighbours clash with police as Prime Minister Ranil Wickremesinghe and Chinese Ambassador Yi Xianliang laid the foundation stone for a 15,000-acre investment zone that would swallow her village.

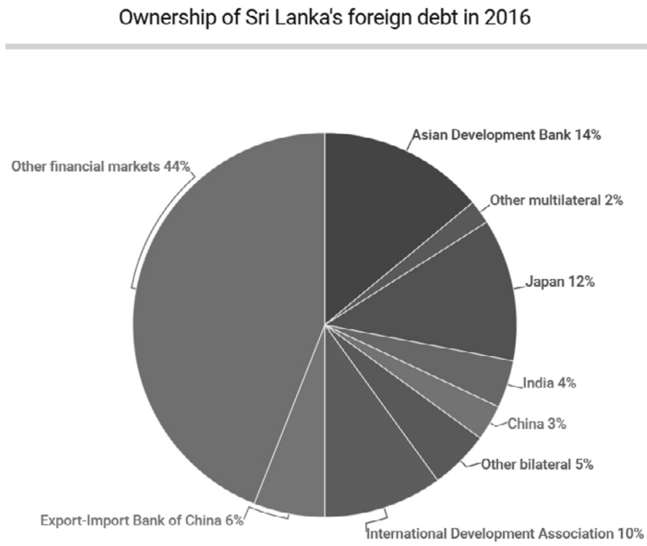
The proposed venture would be managed by China Harbour Engineering Company and is separate to the 2,000-hectare zone currently managed by CMP.

Malathi is genial, greeting people stepping into her home with a hot cup of sugar-laden tea. But mention this new investment zone and her amiableness is replaced with anger.

"No government or company has the right to take away our land. Where will we go? Let them come. We will not go," she says.

About 2,000 families in the area have banded together around their temple and have pledged to fight the new investment zone, setting the stage for a standoff with the government.

For now, the venture is limited to the foundation stone and since the protests, the government has not announced plans to proceed. But it may not remain that way for long.



Sources: Verité Research; Central Bank of Sri Lanka, Annual Reports

Balancing great power interests

Sri Lanka is a major beneficiary of Chinese foreign investment under the BRI. However, the country's experience illustrates not just the economic risks of borrowing to fund large projects, but the potential environmental risks of ploughing resources into infrastructure that is largely unused.

Nonetheless, Sri Lanka's efforts to renegotiate the Hambantota port deal, and another port project in Colombo, suggest that the country's relationship with China is moving in a positive direction, said Dr Nishan de Mel, economist and head of thinktank Verite Research.

"Many people think that somehow Chinese finance is the be-all and end-all for Sri Lanka. It is not."

He said that in 2010, China's share of the country's loan portfolio was 3% and in 2016 it was the same. What has grown is the portfolio of China's Export-Import Bank, which basically had invested almost nothing in 2010 but now has 6% of the loan portfolio. The biggest share of 44% is held by international financial markets.

Dr Nishan de Mel also points to the US$1.4 billion China-financed Port City project in capital Colombo as an example of an evolving bilateral relationship.

This project was suspended by the new government in 2015 but later renegotiated in August 2016 to deal with some of the social and environmental criticisms against it. The port operator, China Harbour, agreed to allocate US$3.2 million to a livelihoods programme for fishermen and waive compensation payments on construction delays caused by the suspension.

However, for small countries like Sri Lanka that have debt and other forms of dependence with China and India, de Mel argues that improved governance and sustainability standards are essential to navigating their competing interests.

This requires Sri Lanka "to anchor its decisions on explicit values and principles so that the country can remain consistent and responsible in its decisions, without being seen as picking sides" he said.

"Sri Lanka needs to do more to get itself into that position."

Uditha Jayasinghe has been a journalist for 14 years and has written on politics, business and social issues.

绿色“一带一路”需要多元融资

中国“一带一路”发展倡议的可持续性如何，
将取决于各国和借贷机构如何参与。

□ 克里斯多夫 · 戴维

四年前，中国提出了陆路和海路基础设施建设、实现区域互联互通的“一带一路”倡议，但如何落实这一宏伟倡议，及其是否能够兑现自己的可持续发展承诺，迄今都还是未知数。

这是我们从英国皇家国际事务研究所10月16日在伦敦举办的“一带一路”会议上获得的一个信息。另一个信息则是，这一倡议虽由中国主导，但其长远的成功还要取决于让更多伙伴接受这一愿景并为项目投资。

在实践中，这意味着中国需要不断转变与“一带一路”65个沿线国家的合作方式，由双边合作转向多家银行和投资者共同出资的多边合作。

这种融资方式的多元化有助于提升寻求投资国家的项目环境标准，确保兼顾收益性和可持续性。但是，如果标准遭到无视，也存在中国通过利用破坏环境的煤炭和水电投资项目，来转移其国内产能过剩的风险。

如何理解中国的海外投资行为？

这种风险是否会发生，部分要看“一带一路”倡议是否能解决其合法性问题。仍然有人担心，这一倡议只是中国为了在亚洲、欧洲和非洲地区加强贸易、开拓市场，扩大政治影响力的工具。

另一个担心是，随着中国经济的放缓，“一带一路”倡议将主要为国内发展艰难的企业提供新的海外机遇。

这些担忧与环境关系尤为密切。

中国政府一直强调通过新的公路、铁路和港口建设改善战略性通道沿线的互联互通，如耗资600亿美元的中巴经济走廊。但“一带一路”在能源项目上的投资力度也很大，包括中企在建燃煤电厂在内的很多项目都有可能让沿线国家陷入碳密集型发展模式。

发展项目的政治动因使得投资不仅仅要看商业效果。一位与会者认为，“丝绸之路经济带”会努力吸引足够的贸易来保持活力，另一位

与会者则认为，80% 的投资都会“打水漂”，这本就是中国期待中的事。

中国在那些难以吸引其他渠道资金的欠发达国家投资，必然会面临风险，而如果注入大量有形资源来建设利用不足的项目，也会让环境遭受挑战。

中国在那些难以吸引其他渠道资金的欠发达国家投资，必然会面临风险

投资背后

在皇家国际事务研究所的会议上，中国驻英国公使兼使馆副馆长祝勤对上述担忧提出强烈质疑。

他说，“一带一路”倡议体现了中国在参与国互利基础上促进包容的和可持续经济发展的方式，是通过多边发展方式来改善治理、促进和平，绝不是为了支配其他国家及通过经济手段来实现霸权。

但是，有证据表明中国参与的一些海外项目违反了巴西等国的环境标准，并且在斯里兰卡造了一些“形象工程”。

至少，平衡中国大型政策性银行在“一带一路”倡议的项目融资中的比例，对于避免类似问题出现是很必要的。中国国家开发银行已经向“一带一路”投入 1600 亿美元，中国进出口银行也投入 1000 亿美元。未来五年中国的海外投资可能会高达 7500 亿美元。

中国主导投资的一个风险就是要依赖中方兑现推动可持续项目的承诺，并督促企业公开环境、社会和治理方面的信息。上个月新颁布的《中国对外投资环境风险管理倡议》是朝着正确方向迈出的一步，但海外投资管理方面具有法律约束力的法律法规仍在起草之中，距离实行还有一段时间。

扩大引资、提高标准

中国无法通过其政策性银行包揽“一带一路”的融资。据亚洲开发银行（亚行）估计，如果计入气候相关成本，到 2030 年单是亚洲每年就需要 1.7 万亿美元的基础设施投资。

私营投资者非常渴望加入“一带一路”，毕竟沿线国涵盖了三分之二的世界人口。据一位与会者估计，这一倡议将在未来 20 到 30 年里成为世界贸易的主要推动力。

亚洲基础设施投资银行和新开发银行等借贷机构制订中的社会和环境标准都面临着强大的社会监督，因此他们都声称将更紧密地向最佳实践靠拢。

尽管这些借贷机构的规模都相对较小，但随着它们越来越多地参与世行、亚行、以及欧美政策性银行等老牌融资机构的融资项目，或共同为项目出资，这些金融机构将有望在可持续标准上达成共识。

所以，一方面，对中国在“一带一路”沿线国海外投资的监督不能放松，另一方面，其他国家和金融机构也应发挥重要作用，帮助中国兑现其可持续经济发展承诺。

克里斯多夫·戴维，伦敦编辑

Greening the BRI

How countries and lenders engage with China's development initiative will determine how sustainable it is

□ Christopher Davy

Four years after China announced its Belt and Road vision to develop infrastructure and regional connectivity across strategic land and maritime routes, it's still unclear how the ambitious initiative will progress on the ground and whether it will deliver on its promise of sustainable development.

This was one of the messages from the Belt and Road conference held by Chatham House in London on Monday, October 16. Another was that while China is leading the scheme, it's long term success will hinge on getting more partners to embrace the vision and finance projects.

In practice, this means a continuation of the shift from the bilateral deal-making that China has been engaged in with the 65 countries that officially make up the Belt and Road towards a multilateral approach that sees more projects co-financed by other banks and investors.

This diversification of financing could help raise the environmental standards of projects proposed by countries looking for investment, ensuring both profitability and sustainability. However, there are also risks that China will use projects to offload its surplus industrial infrastructure, through environmentally damaging investments in coal and hydropower if standards are ignored.

Mixed motivations

Whether this will happen depends partly on whether the Belt and Road Initiative (BRI), as it's now known, can overcome its legitimacy problem. Concerns persist that it is mostly a vehicle to align China's economic interests to increase trade and expand markets, predominantly in Asia, Europe and Africa, with a political agenda to grow the country's influence.

Another concern is that as China's economy slows, the focus of the BRI is on providing new opportunities abroad for Chinese companies struggling to grow domestically.

These concerns have particular implications for the environment.

China's government has emphasised improving connectivity along strategic routes, such as the US$60 billion China-Pakistan Economic Corridor, through new roads, railways and ports, but BRI is also investing heavily in energy. Many projects include Chinese companies building coal-fired plants, potentially locking countries into carbon intensive development.

The political motivation for developing projects has already led to investments that would not be made on the business case alone. One participant at the conference, which was held under Chatham House rules, noted that the land route may struggle to attract enough trade to remain viable, while another suggested that China expects to lose up to 80% of its investments.

While China is certainly taking risks in investing in less developed countries that have struggled to attract project financing from elsewhere, it is also the environment that stands to lose if enormous physical resources are poured into projects that could well be under-utilised.

Emerging from China's shadow

These concerns about the BRI were strongly contested in public remarks at the Chatham House conference by Zhu Qin, minister and deputy head of mission at the Chinese Embassy in London.

He said the scheme is China's way of fostering inclusive and sustainable economic development that is based on the shared interests of participating countries. The vision is not about China dictating terms and striking economic deals in the pursuit of hegemonic interests but instead a multilateral approach to development that can improve governance and foster peace.

However, there is already evidence that some of China's overseas projects are violating local environmental standards in countries such as Brazil, and creating white elephants in Sri Lanka.

At the very least, balancing the role played by China's big policy banks in BRI project financing would seem necessary to avoid such problems. The China Development Bank has already invested US$160 billion into Belt and Road countries, and the Export-Import Bank US$100 billion. The next five years will see China spend US$750 billion on overseas investments.

One risk of this dominance is that it relies on China's own commitment to deliver sustainable projects and to force companies to release information on environmental, social and governance factors. Recent guideline standards announced in Beijing last month are a step in the right direction, but the government is still drafting, rather than implementing, legally binding regulations to manage overseas investments.

More investors, better standards

China cannot finance BRI solely through its policy banks. The Asian Development Bank (ADB), for example, estimate that Asia alone will require US$1.7 trillion of infrastructure investment each year to 2030, factoring in climate-related costs.

Private investors are keen to get involved. After all, BRI countries make up more than two thirds of the world's population and are expected, according to one conference participant, to drive world trade for the next 20-30 years.

Lending institutions such as the Asian Infrastructure Investment Bank and the New Development Bank have faced significant public scrutiny of their emerging social and environmental standards, and claim to be aligning themselves more closely with best practice as a result.

Although these lenders are relatively small, as they join more established funders such as the World Bank, ADB and large US and European policy banks to finance or co-finance projects, it is expected that a consensus on sustainability standards will emerge.

So while scrutiny of China's overseas investments in BRI countries remains as important as ever, other countries and financial lenders will be crucial in helping China to deliver on its promise of sustainable economic development.

Christopher Davy is a managing editor at chinadialogue, based in London.

张兢兢：中国亟需监管海外投资的环境和社会影响

相比指引和鼓励，张兢兢认为中国政府和立法机关更应该做好监管和追责，为海外投资设置坚固的法律底线。

□ 张 春

伴随着“一带一路”倡议的提出，中国连年增长的海外经济活动更加引人关注。仅在拉丁美洲，中国直接投资就已超过1100亿美元，在巴西等国的外商直接投资额与美国和西班牙不相上下。

随着哥伦比亚结束长达半个世纪的内战迎来和平，这座南美第三大产油国亦有可能跻身巴西、秘鲁、墨西哥、阿根廷之列，成为中国油气企业追逐的新目标。

越来越多的批评家认为，矿产等大宗产品为主导的贸易合作无法帮助拉丁美洲实现可持续发展。而由于环境和社会意识的薄弱，中国企业与海外东道国社区的互动屡屡遭遇挫折。尽管近年来不同政府部门先后发布多种关于提升海外经济活动环境社会表现的指导性政策文件，中国企业的国际形象并未得到改变。

环境律师、华盛顿环境法研究所访问学者张兢兢从2010年开始关注中国海外投资项目引发的环境社会风险。过去一年，她在拉丁美洲、非洲和亚洲的多个国家调研，到访了多个产生社区环境冲突的有中资参与的海外矿产项目，去了解企业和当地产生冲突的文化、政治、法律背景，中资企业与社区交流的方式，以及解决冲突的方法等。

环境律师张兢兢

我们在北京与她进行了一次深入的访谈。在采访中她坦言，相比种种最佳实践的指引，中国政府和立法机关更应该做好监管和追责，为海外投资设置坚固的法律底线。

中外对话（以下简称“中”）：您一直在做中国海外投资环境风险的调查，过去这一年的调查有什么特别感触？外国当地居民怎么看待您这个来自中国的公益律师？

张兢兢（下文简称“张”）：中国海外的投资确实引发不少环境和权利损害的问题；而且中国公司在海外非常不善于处理社区关系。

这一年在非洲、南美和东南亚的调研中，我听到最多的是来自中国海外投资所在国受影响的社区、本地NGO对中国公司不透明、难以沟通的抱怨。很多大型采掘类项目、基础设施项目是多国企业联合投资，但出现问题时，舆论首先指向中国公司，因为中国公司在环境表现上的形象不佳，又不善于沟通交流。经常听到他们解决当地投诉的方式和在国内是一样的，就是告诉投诉者：你们去找你们的政府去，我们这个项目是你们的政府招商引来的。

> 但出现问题时，舆论首先指向中国公司，因为中国公司在环境表现上的形象不佳，又不善于沟通交流。经常听到他们解决当地投诉的方式和在国内是一样的，就是告诉投诉者：你们去找你们的政府去，我们这个项目是你们的政府招商引来的。

我在塞拉利昂北部调研的中国国企投资的一个铁矿，是由于合伙的英国上市公司申请破产，中国公司不得已买了对方在该项目的份额，成为了该铁矿项目的唯一所有者。

我和本地NGO一起去调查的时候，村子里孩子们特别兴奋，不断用本地语言重复着一个词，我问同行的NGO同事，她说孩子们是在说“白的白的！”。我是他们见到的第一个中国人，所以被孩子们当成了“白人”。

很显然，中国公司的中方员工从来没有到过和矿区比邻的这些村子；在我之前，山区里的村民们没有见过中国人。在随后和当地NGO一起与当地行政长官（district chief）见面时，他也表达，从铁矿勘探到开采，他只见过中国公司委托的两位本国管理人员，但是从没见过中方管理人员。

铁矿的开采毫无疑问地影响到当地村民的生活，临近矿区的三个村落被搬迁，未搬迁的村庄则面临着饮用、灌溉水的污染和露天开采带来的噪音污染。我去的村庄附近的河流呈现铁锈红色，而矿区位于河流上游，污染状况是明显的。当地行政长官代表辖区内的民众反映污染和土地问题，但公司的回复是这个项目是塞拉利昂国家政府引进的项目，如有问题，他只能向首都的政府部门反映。中国公司回避和疏于交流的状态在这个矿区的土地和污染争议里体现得很明显。

此外，塞拉利昂2002年结束长达十年的内战，社会重建的过程现在还在持续进行之中；土地的确权也没有完成。中国公司矿区涉及到的土地问题，基本是以口头约定的方式确定的，包括村民的拆迁，如何征地，怎么建房，全部是口头的；没有文书来确认土地的归属，这也留下了公司矿区和社区矛盾的隐患。

因为埃博拉爆发的原因，这个矿实际运行时间不算长，造成水和土壤污染的程度还不重。但是因为矿区是露天开采，加之热带地区雨量充沛，露天矿区的重金属成分很容易在雨水冲刷下进入河流、渗透到土壤里。如果公司不采取合理的防范和治理措施，可以预见到的是今后污染问题会越来越严重影响村民的生活和身体健康，公司和相邻村庄的冲突在所难免。

中：在革命武装力量和政府签订了和平协议之后，哥伦比亚可能是一个新的投资去向，但是矿产等投资区域往往比较偏，可能在武装力量监管下。就您的调研了解来说，有什么好的经验可以帮助缓解项目方和当地社区的冲突的么？

张：我没有听到特别好的案例。五矿商会出台的公司社会责任指引，可以作为一个参考，只不过它是一个很高的标准。另外，它是针对矿业的，对基础设施等项目不适用。或许可以将一些原则分解出来进行试用。 更可行的是进行中国和哥伦比亚在环境法、劳动法方面的交流，将比较先进的中国立法和执法经验，比如中国的环保法第五章(注1.)“信息公开和公众参与“介绍到哥伦比亚，供他们的立法者和行政机关参考。这是中国已经在操作实践的。中国有很多的NGO（依据《环保法》第五章的条款）在获取环境信息、组织听证、发起公益诉讼，中国的社区和公民也借此来维护自己的权利 。这个是更务实的，中国公司也更容理解。

中：您对考虑在哥伦比亚投资的中国企业有什么建议？

张：我觉得，首先是需要有一个开放的心态，和当地受影响的社区和个人，以及当地NGO去进行沟通

和交流，不能只和政府交流。姿态上，需要他们是开放的。很多问题是可以协商解决的，比如多赔一点地（的钱），或者帮助社区把住房改善一些，修一条好点的路，这些都是非常实际有效的。有些时候甚至只是需要减少粉尘污染这么简单的工作。

我调研的两个矿业开采引发冲突的案子，其实村民抱怨的是一个简单的问题，就是装载矿石的货车载重很大。货车要经过村庄，公司为此修的路质量不好，粉尘很大，噪音也很大，村民日常生活受到了往来矿区车辆的严重影响。这么简单的事情，本是可以去讨论协商的，完全没必要到发生冲突、动用警力甚至产生人身伤亡的程度。但在秘鲁的矿区出现了村民在和矿区的冲突中伤亡。

这类问题，只要有意愿，公司也是有能力去解决的。我觉得中国公司经营者应该意识到，需要打交道的不仅是当地政府，也有当地公众，环保组织，甚至是工会。不能去回避问题。

中：中国绿色金融委员会最近刚和几个与投资相关的全国性行业协会联合发起了一份海外投资的环境风险管理倡议。您怎么看这个倡议？您走访过的海外投资东道国人士又是怎么看待这种政策文件的？

张：我看到了倡议的英文版，虽然起草制定的主体不同，但是目标和效果上来说，应该说它和2015年中国五矿进出口商会颁布的《中国对外矿业投资行业社会责任指引》和《中国负责任矿产供应链尽责管理指南》（2017年7月修订）是类似的，都是表达良好愿望的。真正落实到怎么去实施，目前还没有通过法律形式的具体化和保障。

而事实上，更值得注意的问题是，中国海外公司、中国投资所在国（东道国）的环保组织、社区、个人对与中国海外投资的法律、政策的性质往往有误解。

经常被海外的环保组织、社区讨论、援引使用的是这几个文件：2012年银监会颁布的《绿色信贷指南》；2012年中国对外承包工程商会颁布的《中国对外承包工程行业社会责任指引》；2013年商务部和环保部颁布《对外投资合作环境保护指南》；以及前述2015年中国五矿进出口商会发布的两个指引文件。这些都是行政机关、行业商会、公司自行制定颁布的指南、指引，不是法律。我国现在并没有规范中国公司海外投资环境和社会影响的统一法律，只有零星散见于行政法规、部门规章里的相关规定。

我在今年的调研过程中发现，中国海外投资东道国的NGO、社区对这些文件有很模糊的认识，无法清楚区分这些文件和中国法律法规的区别。

五矿商会的《中国对外矿业投资行业社会责任指引》，吸收了《联合国工商业和人权指南》的原则和其它一些国际实践 (good practice)，比如“自主的和事先的共识”（free and prior consent），是非常高标准的指南。如果中国矿业公司在进行海外投资时能够自愿使用这个指引，将会大为减少和社区的矛盾、控制环境风险、减少对劳工权利等的影响。

但是从现状看，这个立意良好的高标准指引，大部分中国公司目前是无法做到的。虽然我国在环境领域的信息公开和公众参与在过去十多年取得了长足的进步，《环保法》将这种进步以立法的形式确定了下来，但如果将《环境保护法》第五章《信息公开和公众参与》与这个指引中关于项目信息公开和公众参与的规定相比，我们会发现两者之间有着一个不小的差距。把这个指引和中国投资所在的发展中国家环境法的内容相比，也不出意外地会是一样的情形。

无论是中国法还是东道国的法律，设定的是公司必须遵守的底线；而《指引》代表的是底线之上的、公司可以采取的最好做法；它具有指引性、导向性，不是马上可以实现的，而是中国公司应该努力的方向。

此外，理论上，行业商会制定的规则，只适用于加入商会的会员。加入五矿进出口商会的中国母公司是会员，但是它们在海外运营的、以合资、参股或收购形式在东道国注

> 因为没有明确地分析出法律和这类非法律的指南的区别，会给不了解中国政治法律制度的、东道国受到中国海外投资影响的社区和个人一种印象：这是中国公司“应当”遵守的标准；若没有遵守，就应当受到谴责和承担责任。

册的法律实体，它们并非五矿商会的会员。这是会员制的行业商会指南的局限性。

对这类的指南，一些海外NGO在解读时，将它们和中国的法律放在一起分析，认为可以拿来作为在对中国海外公司进行倡导活动的压力点（presure point）。虽然它们会提及这些指南的非强制性，但是，因为没有明确地分析出法律和这类非法律的指南的区别，会给不了解中国政治法律制度的、东道国受到中国海外投资影响的社区和个人一种印象：这是中国公司“应当”遵守的标准；若没有遵守，就应当受到谴责和承担责任。

还有些海外NGO呼吁要给这类的指南加上“牙齿”。这类关于企业社会责任的指南，是对公司“社会责任”标准的设置；如果给它加上强制执行的“牙齿”，这将不再是“社会责任”，而是法律责任。公司的社会责任，是公司遵守法律基本底线后的更高自我约束和要求。

中：所以倡议、指南本身是没有约束力的，还得靠法律来约束。您刚才提到，针对中国企业的海外环境和社会影响，中国现在只有零星散见于行政法规、部门规章里的相关规定，没有专门的法律，能否具体谈谈，目前中国海外投资都受到哪些监管？

张：对中国公司来说，在国内的行为是中国的法律来约束他们，国外就要受中国投资东道国（接收国）法律的约束。此外，就要看双边的投资贸易协定。

中国海外投资商务活动在国内阶段是有一定程度的监管的，体现在对资金输出的行政审批环节：公司要拿到商务部的许可之后才能到国家外汇管理局去转款。而中国海外投资东道国的法律，在规范有中国资本参与项目的环境和社会风险上起着主要的作用。

但是对这些投资的海外环境和社会影响，现在的中国政府是持指导而非监管的态度。前面提到的《对外投资合作环境保护指南》等政策文件，大多数条款都使用“鼓励”的字样，即使使用了“应当”的条款，也不对不作为的后果设置法律责任。

中国作为资本输出国，是否就能回避监管责任呢？必须看到，在经济全球化的今天，公司的经济活动已经不再局限于一个国家的政治法律疆界之内。《联合国工商业和人权指南》的起草者、哈佛肯尼迪学院教授John Ruggie今年发表的一篇文章认为，在全球化的今天，许多跨国公司有着比一些小国家有更强大的经济影响，如Apple，阿里巴巴。但对于环境治理而言，全球没有一个统一的法律制度来规范这类经济体。你可以看到，这些公司有最好的律师和会计师，可以帮它使用法律的灰色空间。不同国家在同一问题上的法律尺度不同，它就可以利用这种差距来实现公司的利益最大化。母公司在中国的跨国公司，和BP、Shell等总部在欧美发达国家的跨国公司在追逐利润的本质上并无实质区别。

但欧美跨国公司在自己国家被比较完备的法律监管、被环保组织和公民起诉，逐渐被逼发展出一套处理环境风险和社区关系的做法。反观中国公司，在国内环境表现名声不佳，在海外投资造成环境问题后又回避与当地社区、NGO的沟通，很容易成为众矢之的。

一个负责任的经济大国，要对源自自己国家的经济实体在其他地区的经济行为进行一定程度的监管，这个责任，中国应该勇于去承担。这个确实是一个很高的标准。我们需要说服我们国家的政府去负起这个责任，因为这符合中国的利益，作为一个大国需要这个形象；也因为符合中国公司的利益，会减少环境风险和冲突引发的对中国公司资产的危害。

中国是《联合国经社文公约》的缔约方，承担着公约项下的义务。经社文公约委员会今年七月在一条对公约的解释中呼吁签约方，当一国的商业主体行为产生了对经济社会文化权利影响时，该成员国的公约责任不受国界的限制。

中国也有对控制气候变化的全球行动的承诺。我在肯尼亚和蒙古了解到中国资金支持的、中国公司承建并将运营的煤电项目受到当地居民和NGO的激烈反对，当地环保组织已经针对这些煤电项目提起一系列的法律行动。如果中国政府对这些中国公司的海外商务行为不加以监管的话，那对世界的承诺就有一半成了空头支票。

从上世纪的改革开放之后，政府推动“走出去”的政策，到现在作为国策“一带一路”更大规模地推动中国公司在全球范围活动，如果政府不承担监管的义务，中国作为一个主权国家对国际社会的承诺就会落空。

不过，政府已经表现出了对中

国企业境外投资环境影响进行一定程度监管的意愿。国家发改委正在对《企业投资管理办法》草案征集公众意见，并且正在制定一份敏感行业清单，这些行业的海外项目将需要接受额外的核准程序。

中：有人观察人士认为，拉美国家在环境执法上似乎对中国公司压低了门槛，应该加强自己的环境执法力度。这一点您怎么看？

张：我觉得不能说这些国家只是对中国公司放松了监管，而可能是对所有外来资本都如此。原因不难想象，是当地希望引来更多投资。但中国公司采用中国国内经营的惯例，特别明显地力争和当地政府建立起比较好的关系，以期在出现社区和公司的纠纷时，政府会倾向于保护公司的权益。

我交流过的一些非洲和拉美的环保、人权NGO组织表示，中国公司在他们国家的商业运作中，对当地官员行贿受贿行为是之后产生土地、环境、劳工纠纷的根源；虽然他们并没有提供非常明确的证据来支持他们的说法，但这样的表达经常可以听到。

跨国公司商务活动的腐败问题是普遍存在的问题，特别是当它们在法治本来就比较 薄弱的发展中国家运营时，情况尤为明显。美国是通过“海外反腐败法（Foreign Corrupt Practice Act）来对于和美国有关联的公司的腐败行为进行监管，控制他们利用腐败达成交易的可能性。中国目前没有这样的专项法律，只有在《刑法》第164条有一个罪名的规定（“对外国公职人员、国际公共组织官员行贿罪”），而且目前没有看到根据这一条定罪量刑的案例。

中国海外投资东道国法律的监管程度，很大程度决定了中国公司在环境、劳工、透明度等方面的表现。在加拿大、美国、澳大利亚、南非，中国公司通常表现出遵守法律的状况，因为当地的法律完备、环保人权组织对于污染者提起法律行动已经有了多年的经验积累。事实上，中国公司也愿意去那样的国家，风险小。

中：您对关注中国投资项目的海外当地NGO又有什么样的建议？

张：更多去了解中国公民运动的一些特点。非洲和拉美国家是民主选举制的国家，他们的NGO习惯了在这样的政治环境里工作。但中国有着非常不同的政治结构和环境，中国的环境运动是一个从上到下和从下至上并行的进程，借助了行政力量。例如在环评风暴中，其实就有很多NGO和环保局配合的行动。海外NGO了解这些之后，再选择合适的做倡导的手段，以及选择合适的中国合作伙伴。当然现在没有太多中国环保、劳工权益NGO可供选择。中国本土NGO本身也在夹缝中生存，有视野有能力去关注中国国境之外的议题的，还不多。

注1：《中华人民共和国环境保护法》第五章，是关于信息公开和公众参与的规定，其中第五十五条和五十六条，规定了重点排污企业应当依法向社会公开污染物排放的相关情况，应编制环境影响评价书的项目在编制环评时要充分征求公众意见；而第五十七和五十八条规定了，任何公民和组织发现破坏环境行为可以向环境相关主管部门举报，社会组织在一定条件下可以提起公益诉讼。

张春，中外对话高级研究员

More oversight needed

In an in-depth interview, lawyer Zhang Jingjing says
China needs legal requirements for overseas investment, not guidelines

□ Zhang Chun

With the advent of the Belt and Road Initiative, China's ever-increasing overseas investments have been attracting more attention. In Latin America alone, China has direct investments worth over US$110 billion, and in countries such as Brazil, China's investments rank alongside those of the US and Spain.

Accompanying this, and due to weak environmental and social awareness, there have been frequent failures in how Chinese companies deal with communities in the host countries. Recent years have seen various government bodies publish guidance on environmental and social performance in overseas investment, but the international image of Chinese companies has not improved.

> Chinese companies are not transparent and are hard to communicate with.

Zhang Jingjing, an environmental lawyer and visiting scholar at the Environmental Law Institute in Washington DC, has been studying the environmental and social risks associated with China's overseas investments since 2010. Over the past year she has visited Chinese-backed projects in Latin America, Africa and Asia that have caused social and environmental conflict to learn about the cultural and political basis for opposition, how companies and communities are communicating, and how conflicts can be resolved.

chinadialogue met with Zhang Jingjing in Beijing for an in-depth interview. She was frank, arguing that rather than providing information on best practices, China's government and legislative bodies should be focusing on oversight and accountability to set a clear bottom line for the performance of Chinese firms overseas.

chinadialogue (CD): You've been investigating the environmental risks of China's overseas investments. What have you learned from this past year? How do the locals you met regard you, a public interest lawyer from China?

Workers at the Chinese-funded Coca-codo Sinclair hydroelectric plant in Ecuador

Zhang Jingjing(ZJJ): China's overseas investments have led to many cases of environmental damage and infringed rights. Meanwhile, Chinese firms are very bad at handling community relations overseas.

In my research in Latin America, Africa and Asia this year what I heard most often in affected communities and from local NGOs [non-governmental organisations] is that Chinese companies are not transparent and are hard to communicate with. Many large extractive and infrastructure projects are joint investments by companies from lots of different countries, but when things go wrong public opinion blames China as their environmental image is weak and they're bad at communicating. I often heard that these companies didn't deal with problems in the same way as local companies. Often they'd tell those complaining to go and talk to the government, as it was the government that had brought them in.

In the north of Sierra Leone I visited a Chinese iron ore mine. The UK partner had gone bust so the Chinese company had to buy them out, becoming the sole owner of the project.

When I went there, accompanied by a local NGO, the children in the village were excited and they kept on saying one word over and over. I asked what it was and was told it means 'white'. I was the first Chinese person they'd ever seen, so they thought of me as white.

Clearly, none of the Chinese staff at the mine had visited this nearby village. The villagers here in the mountains had never seen a Chinese person before. When we met with the district chief later, he told me that in the entire process, from prospecting to the start of mining, he'd only met with two local managers employed by the Chinese firm, but never a Chinese manager.

There is no doubt the mining has affected local life; three villages nearby were relocated, and drinking and irrigation water in those that were not relocated has been polluted, and there's noise pollution from the opencast mining. The river near the village I visited, downstream of the mine, had a rusty red colour. The pollution was obvious. The district chief reported the pollution and land issues to the company on behalf of the locals but the response was that the project had been arranged by the Sierra Leone government and any problems should be taken up with the government. That evasiveness and lack of communication was a major feature of that particular dispute.

In 2002, a decade-long civil war ended in Sierra Leone; the country is still rebuilding, and confirmation of land ownership is still ongoing. The land issues in this case were all settled by verbal agreements: relocations, how land was acquired, how buildings were constructed, it was all verbal. There's no documentation to specify who owns land. That leaves a risk of conflict between the mining company and the community.

Due to the Ebola outbreak the mine hasn't actually been running for very long and the water and soil pollution isn't severe yet. But this is an opencast mine and there's a lot of rainfall in the tropics. The heavy metals in the mine are easily washed into the rivers and soil. If appropriate measures aren't taken to prevent that, we can expect the pollution will get worse and affect the lives and health of the villagers, making conflict hard to avoid.

CD: Colombia has become a new destination for Chinese investment following the signing of the peace deal between the FARC and the Colombian government. But the mining locations China is investing in are often remote and possibly under the control of armed groups. What have you learned about reducing the risk of conflict between investors and local communities that could be applied to this context?

ZJJ: I've not heard of any very good examples. The corporate social responsibility guidelines from the China Chamber of Commerce for Minerals, Metals and Chemicals Importers and Exporters could be used as a reference, but that's a particularly high standard. That's also aimed at the mining industry, it wouldn't work for infrastructure, for example. Maybe you could take some of the principles and use those. More practical would be communication on environmental and labour law between China and Colombia, introducing China's more advanced legislative and enforcement experiences (such as the Environmental Protection Law, Chapter 5, on openness of information and public participation) to the Colombians, for reference by their legislators and administrative bodies. This is something China is already doing. Many Chinese NGOs are (in accordance with that section of the law) acquiring environmental information, organising hearings and bringing lawsuits, and Chinese communities and individuals are using this to protect their rights. That's more practical, and something the Chinese firms can understand.

CD: Do you have any advice for Chinese firms considering investing in Colombia?

ZJJ: First, you need to have an open approach, to go and communicate with the communities and individuals affected, and with local NGOs. You can't only talk to the government. You need to be open. A lot of problems can be resolved by negotiation, for example by offering a bit more land (or money), or helping the community improve its buildings, building a good rood – these are all very effective. Sometimes it can be as simple as reducing dust pollution.

I've studied two cases where disputes arose over mining projects where the villagers' complaints were actually very simple. The trucks carrying the ore were huge and the road the company had built wasn't very good so there was a lot of dust and noise as they passed through the village. That's a very simple issue, there's no need for a dispute to arise, for the police to get involved and even for people to be injured or killed. But in Peru there was a case where a villager was killed in such a clash.

If there's the will then the company can solve issues like this. I think Chinese managers should realise that it's not enough just to talk to the government, they should talk to the locals, to environmental groups, even unions. You can't hide from the issues.

CD: The Green Finance Committee and several industry associations relevant to overseas investments have recently published an initiative on managing these environmental risks. What's your view of that? What do

> When it comes to overseas environmental and social risks, the Chinese government approach is one of guidance rather than oversight.

the people you've met in investment destinations think of these kinds of documents?

ZJJ: I've seen an English version of it, and while it's been drafted by different bodies the aims and effects are similar to a 2015 document on social responsibility in mining investment from the China Chamber of Commerce for Minerals, Metals and Chemicals Importers and Exporters and the July 2017 revision of its guidelines for due diligence in mineral supply chains. The intentions are very good but when it comes to implementation there's no specific legislation ensuring it actually happens.

In fact what's more worthy of attention is that Chinese firms overseas, environmental NGOs in the host nations, communities and individuals often misunderstand the nature of Chinese law and policy on overseas investments.

Those NGOs and communities often discuss several documents: the 2012 China Banking Regulatory Commission's Green Lending Guidelines; the 2012 China International Contractors Association's Social Responsibility Guide for Chinese Contractors; the 2013 Ministry of Commerce and Ministry of Environmental Protection's Environmental Protection Guidelines for Overseas Investment Partnerships; and the previously mentioned two documents from the China Chamber of Commerce for Minerals, Metals and Chemicals Importers and Exporters. These are all guidelines from administrative bodies and industry associations, rather than laws. There's currently no single law overseeing the environmental and social impact of Chinese companies working overseas, just regulations scattered amongst administrative regulations and ministerial rules.

In my research this year I found that NGOs and communities in host nations have a confused understanding of this – they don't see that these documents are distinct from Chinese law.

The China Chamber of Commerce for Minerals, Metals and Chemicals Importers and Exporters produced its Social Responsibility Guidelines for Chinese Mining Investment Overseas and included the principles of the UN guidance on human rights for businesses and some other international good practices, such as [International Labour Organisations' convention 169 on] "free, prior, and informed consent." These standards are very high. If Chinese mining firms choose to use that document then conflict with local communities would be greatly reduced, environmental risks controlled, there'd be less infringement on labour rights, and so on.

But as things stand those lofty standards are too hard for the majority of Chinese firms to implement. Although there have been huge steps forward in openness of environmental information and public participation over the least ten or more years, and these advances have been made concrete in the Environmental Protection Law, if you compare Chapter 5 of that law on openness of information and public participation with those guidelines, you find major differences. The same is true if you compare the guidelines and the environmental law of the host nations.

Both Chinese and host nation law set a minimum standard for the company. The guidelines represent something higher, a best practice the company can opt to apply. It's pointing the way, rather than something to be immediately implemented. It's the direction Chinese companies should be moving in.

In theory, guidelines produced by industry associations only apply to companies that are members of that association. The parent companies of the firms investing overseas are members of the China Chamber of Commerce for Minerals, Metals and Chemicals Importers and Exporters, but overseas subsidiaries, the joint ventures, the companies they have a stake in or buy outright, which are registered in the host nation, aren't members. This is a limitation of industry guidelines produced by membership bodies.

When some overseas NGOs read these guidelines they regard them as equal to Chinese law, they think they can use these to apply pressure to the companies. The guidelines will specify that they are non-binding, but as they haven't understood the difference between the guidelines and the law, as they don't understand how the Chinese political and legal system works, communities and individuals affected by the work of the Chinese firm think this is a document that the Chinese company must abide by, and that if they don't, they should be held to account and bear responsibility.

Some overseas NGOs have called for guidelines like these to be given 'teeth'. These guidelines are standards for corporate social responsibility. If you want to give them the teeth to be enforced, that stops being social responsibility, it's legal responsibility. Corporate social responsibility is a higher and voluntary undertaking, after a company has done the legal minimum.

CD: You mentioned that China's regulations on the environmental and social impact of Chinese companies overseas are scattered through administrative regulations and ministerial rules, that there's no specific law on this. Could you explain what actual oversight China's overseas investments are subject to?

ZJJ: For Chinese companies, at home they're constrained by Chinese law, overseas by the law of the host nation. Apart from that, you need to look to bilateral investment deals.

There's a certain degree of oversight of overseas investment and business activities at the domestic stage when approval to send funds overseas is sought: the company has to get approval from the Ministry of Commerce before it can go to the State Administration of Foreign Exchange and transfer the funds. But it's mainly the laws of the host nation that control the environmental and social risks of projects with Chinese investors.

> "If you want to give guidelines the teeth to be enforced, that stops being social responsibility, it's legal responsibility."

But when it comes to overseas environmental and social risks, the Chinese government approach is one of guidance rather than oversight. I mentioned policy documents such as the Environmental Protection Guidelines for Overseas Investment Partnerships earlier, most of the articles there use language like 'encourage', even if something like 'shall' is used there are no legal consequences for failures to comply.

Can China, as an exporter of capital, avoid the responsibility of oversight? It has to be recognised that in a globalised world, a business's activity is no longer confined within the borders of one country. One of the authors of the UN Guiding Principles on Business and Human Rights, John Ruggie of the Harvard Kennedy School, pointed out in an article written this year that under globalisation many multinationals, such as Apple and Alibaba, have more economic influence than some small countries. But there's no single legal system governing the environmental actions of these actors. These companies have the very best lawyers and accountants, who can help them take advantage of grey areas in the law. Different countries take different legal approaches to the same matter, and the companies use those gaps to maximise profit. There's no difference between companies headquartered in China, or those such as BP and Shell in the EU and US, when it comes to the pursuit of profit.

However, multinationals from the EU and US are, at home, subject to more powerful legal systems and can be sued by environmental NGOs and citizens, and so have been forced to develop ways to handle environmental risks and community relations. Meanwhile, Chinese firms don't have a good environmental reputation at home, and overseas are responsible for environmental problems and avoid communicating with communities and NGOs – and so easily become the targets of public anger.

A responsible major economy should exercise some degree of oversight of the business activity of its firms overseas, and China should not shy away from that. It is a very high standard. We need to persuade our government to take up that responsibility. It's in China's interests as it's part of our image as a major power; and it's in the interests of the businesses as it'll reduce the loss of assets through environmental risks and conflict.

China is a signatory to the UN International Covenant on Economic, Social and Cultural Rights, and has obligations under it. In July the Committee on Economic, Social and Cultural Rights told signatories that when a company infringes on economic, social or cultural rights, the home nation's obligations under the covenant should not stop at national borders.

China has also made commitments to global action on climate change. In Kenya and Mongolia I saw fierce opposition from locals and NGOs to coal-fired power stations, funded by China, built by China and to be operated by China. Local environmental NGOs have already taken various legal actions against these projects. If the Chinese government does not exercise oversight over these companies, its commitments to the world are greatly undermined.

Since reform and opening up last century, the government has encouraged overseas investment, with the One Belt, One Road initiative now pushing Chinese firms to work around the world on an ever-larger scale. But if the government does not provide oversight, China will fail to fulfil commitments it has made as a sovereign nation to international society.

However, the government has indicated it is willing to exercise some degree of oversight. The National Development and Reform Commission has solicited public opinion on a draft of its Method for Management of Company Investments and is drawing up a list of sensitive sectors which will require extra approval processes for overseas projects.

> "The government has indicated it is willing to exercise some degree of oversight."

CD: Some observers hold that Latin American countries seem to have lowered environmental standards for Chinese firms and should better enforce their own laws. What's your view?

ZJJ: I don't think you can say they've just done it for Chinese firms, but for all overseas firms. It's not hard to see why – they want more investment. But Chinese companies do what they usually do at home, which is to very obviously strive for good relations with local governments in the hope that when conflicts arise with local communities the government will protect their interests.

Some of the African and Latin American environmental and human rights NGOs I've talked to say that when Chinese firms are working in their countries their bribery of local officials leads to land, environmental and labour disputes later on. They didn't have evidence to support this, but it's something you hear a lot.

Corruption in multinationals is a common problem, in particular when they're working in developing nations where the rule of law is weak. The US used the Foreign Corrupt Practices Act to control corruption in companies with US links to reduce the likelihood of corruption in deal-making. China doesn't have a specific law like that yet, just a crime listed in the Criminal Law, Article 164: bribery of a foreign civil servant or official of an international organisation. So far we haven't seen any prosecutions for that crime.

How well Chinese companies do on the environment, labour and transparency is determined primarily by the degree of legal oversight from the host nation. In Canada, the US, Australia and South Africa, Chinese firms usually follow the laws, as the legal system is sound and local environmental and human rights groups have many years of experience in taking legal action against polluters. And Chinese companies are happy to work in those countries as there are fewer risks.

CD: Do you have any advice for the overseas NGOs?

ZJJ: Learn a bit more about the characteristics of civil society action in China. African and Latin American countries are democratic and have elections, and that's the environment their NGOs are used to working in. But China has an entirely different political system, and the environmental movement here has been both a top-down and a bottom-up process, using government power. For example in environmental crackdowns, many NGOs worked alongside the environmental authorities. Foreign NGOs that understand this can choose appropriate methods and Chinese partners. Of course currently there aren't many Chinese environmental or labour NGOs to choose from. China's own NGOs are still surviving in the cracks, there aren't many with the vision and capabilities to look at issues outside China's borders.

Zhang Chun is a senior researcher at chinadialogue.

多边开发银行群聚埃及“光谷”

包括亚投行在内的多家多边发展银行纷纷瞄准了尼罗河边的一座小镇，
这里将成为埃及光伏革命的摇篮。

□ 刘琴 姚喆

包括埃及在内的非洲国家人口占全球的15%，但一次能源消费仅占全球3%

萌芽中的埃及光伏市场正在受到各家多边发展银行的瞩目。

先是欧洲复兴开发银行于今年6月率先宣布批准了总额5亿美元，用于支持埃及13座共750兆瓦的太阳能电站建设融资计划。紧接着，世界银行旗下的国际金融公司(IFC)于7月批准了总额6.6亿美元的融资计划，用于总装机490兆瓦的11座埃及太阳能电站。最近，亚洲基础设施投资银行亦于9月5日宣布总额2.1亿美元的融资计划，将与IFC共同为上述11座光伏电站注资。而此前，非洲开发银行也于6月宣布正在考虑向埃及光伏项目投资。

所有这些资金全部将流入一个叫做本班（Benban）的小镇。在这个位于古城阿斯旺以南25英里(约35公里）的村子，39家开发商正在加班加点，建设一座包含41个光伏电站，总装机1.8吉瓦的光伏基地，埃及政府将2020年达到2吉瓦光伏发电装机目标的宝几乎全部押在了这个基地上。

国际能源署可再生能源部门分析师亚丝米娜·阿布德里拉表示，获得负担得起的融资对埃及未来光伏业的发展至关重要，而这一领域的融资条件正在改善，在支持性政策环境的推动下，预计未来五年太阳能光伏发电能力将持续增长。

亚投行信守“清洁”承诺

在《能源行业战略》发布不到三个月后，亚投行就紧接着发布了这一系列投资光伏的大型计划。这也是该行6月发布《能源行业战略》以来投资的第一批能源项目，预计每年可帮助埃及减少50多万吨二氧化碳排放。

副行长约阿希姆•冯阿姆斯贝格告诉中外对话，正如《能源行业战略》所强调的，亚投行希望通过投资清洁的可再生能源来帮助成员国加快实现低碳转型，履行《巴黎气候协议》中的减排承诺。

在谈到为何选择光伏时，冯阿姆斯贝格说：“与核能的高成本、水电对生态环境可能造成的影响来比，光伏投资对环境影响更小。而且由于技术进步，所需成本比起十年前已经在大幅下降。”

冯阿姆斯贝格表示目前亚投行还没有投资煤炭等化石能源的打算。但他也透露，该行还没有设定新能源在能源投资中所占比重的目标。

光伏发电在非洲：潜力巨大

包括埃及在内的非洲国家人口占全球的15%，但一次能源消费仅占全球3%，且目前约有6亿人仍未通电。目前，非洲的能源基础设施薄弱，能源消费主要以生物质和化石能源为主。

随着该地区的人口增长和城市化加快，能源需求也在迅速增长。国际能源署2014年预计，撒哈拉以南非洲到2040年经济规模会翻两番，能源需求会增长80%。

此外，该机构还认为撒哈拉以南非洲地区开始释放其巨大的可再生能源潜力，到2040年的电力产出增长的几乎一半都是来自可再生能源，而农村地区安装的微电网和离网系统的三分之二的电力会由太阳能光伏、小水电或风能提供。

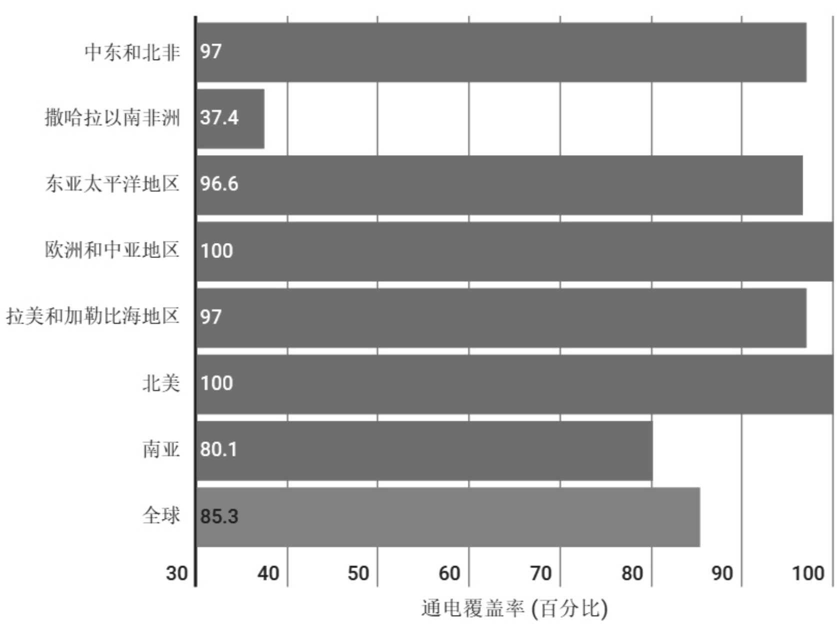
太阳能开发成本也在迅速下降。根据国际可再生能源机构的数据显示，2013年和2014年非洲光伏的度电成本在每千瓦时0.13-0.24美元之间，而2015年该值低于0.075美元。

在埃及，公共事业规模的光伏发电还处于萌芽阶段。据国际能源署分析师亚丝米娜·阿布德里拉介绍，目前埃及绝大多数光伏发电都未接入主电网，这些微电网和离网项目的装机容量加在一起不到100兆瓦。因此，任何超过这个数字的光伏发电项目都可以说会带来该国光伏发电的重大增长。

埃及光伏市场崛起的地区意义

亚投行副总裁和首席战略官潘笛安特别指出，这11个光伏发电项目不仅会增加埃及本国的可再生能源产能，还会帮助埃及成为区域能源枢纽，造福整个区域的经济发展。

全球各区域通电覆盖率



数据来源：世界银行（全球发展指数：电力生产、来源和接入，2014年）

“跨境电力贸易确实是满足地区间的电力增长的一个有效方式。”阿布德里拉告诉中外对话，“但发展潜力有多大，这取决于非洲国家物理电网和非洲国家间电力市场的相互关联程度。”

埃及模式能否成功?

阿布德里拉告诉中外对话：埃及在太阳能光伏发电方面确实有很大的发展动力。电力需求快速增长以及降低对化石燃料进口的依赖，再加上丰富的太阳能资源，都给埃及的光伏投资提供了机遇。

埃及拥有丰富的太阳能资源，被认为是一个“太阳带”的国家，阳光照射每天可达到9-11个小时。

阿布德里拉说，埃及对于光伏的发展制定了长期目标，而且对上网电价补贴和竞争性拍卖形式也有专项政策。例如，公用事业规模太阳能光伏到2020年要达到1.7吉瓦，分布式光伏到2020年达到300兆瓦，且有向开发商提供长期合同的政策（通过竞争性拍卖和上网电价补贴）。

冯阿姆斯贝格对于投资埃及光伏项目充满信心。他认为，埃及有很多有利条件，有望建设成为“可被复制的、成功的新能源投资模式”，带动周边地区的能源转型。

亚投行本次批准的11个埃及光伏电站中有9个的装机容量都是50兆瓦（另外两个为20兆瓦）。创绿研究院研究员白韫雯分析说：“50兆瓦是一个中等规模的投资，更易被一些新兴发展中国家学习和借鉴，风险更可控。”但她同时认为，能否做到绿色，还要看项目过程中的具体实施情况。

一位匿名的中国电力行业人士则告诉中外对话，对于非洲地区，新能源尤其是光伏发电有利也有弊。一方面，光伏电站建设周期短，安装速度快；另一方面，下雨天或夜晚发电量下降甚至为零，波动大稳定性低，对电网容量要求高。而非洲国家目前电网容量小，设备质量比较落后，管理水平也不高，这是光伏投资中需要注意的问题。不过相对而言，埃及电网是非洲最好的国家之一，容量大，质量高，管理水平好，比较适合光伏电站的发展。

阿布德里拉则指出，合同谈判和行政程序方面的延误对于项目的实施会提出挑战，而竞争性拍卖，上网电价补贴政策影响下的太阳能光伏项目采购的进展等是埃及光伏行业发展的重大影响因素。

武毅秀和白莉莉对本文亦有贡献。

刘琴，中外对话研究员
姚喆，中外对话气候战略传播项目官员

AIIB in Egypt

A small town by the side of the Nile is the cradle of Egypt's solar revolution

□ Liu Qin Yao Zhe

It's early days for solar power in Egypt but already the sector is attracting significant attention from big development banks, including investment by the China-backed Asian Infrastructure Investment Bank (AIIB)

In July, the International Finance Corporation (IFC), a member of the World Bank Group, approved US$660 million in funding for 11 Egyptian solar plants, with an installed capacity of 490 megawatts. These projects are being co-financed by the AIIB with additional funding of US$210 million.

This follows investments in Egyptian solar from other development banks, most of which are being directed at the small town of Benban, which lies just 25 miles south of the ancient city of Aswan in the south-east of the country.

In June, the European Bank for Reconstruction and Development agreed framework funding of US$500 million for up to 16 solar plants totalling 750 megawatts. This funding is also expected to stimulate private investment in more than four gigawatts of wind and solar power.

In total, there are 39 developers working in Benban to establish a solar power hub of 41 solar plants, with a total generation capacity of 1.8 gigawatts. The Egyptian government is targeting two gigawatts of solar power by 2020, relying almost entirely on this one area.

The investment in renewables in Egypt is part of a much larger push to expand the country's grid. In 2014, Egypt had 32 gigawatts of installed capacity but is investing heavily in new gas-fired plants, coal and nuclear, as well as renewables.

Keeping promises

The AIIB's investment in Benban solar should avoid 500,000 tonnes of carbon emissions annually. It also comes less than three months after the bank published its Energy Sector Strategy.

Joachim von Amsberg, an AIIB vice-president, told chinadialogue that the investments in renewable energy should facilitate member states to make a low-carbon transition and achieve commitments under the Paris Agreement.

When asked why the bank has opted to invest in solar power, von Amsberg explained that "when compared with the high costs of nuclear power and the potential environmental impacts of hydropower, solar power has a smaller environmental impact. Also, better technologies mean that costs are much lower than they were a decade ago."

Von Amsberg indicated that the AIIB still has no plans to invest in coal and other fossil fuels, which is a running concern of environmental groups. But he also revealed the bank has not yet set a target for what proportion of its energy sector investments should be in renewables.

Africa's solar potential

Africa has 15% of the world's population but accounts for only 3% of global primary energy use. The continent has 600 million people with no access to electricity, principally in the sub-Saharan region. Limited energy infrastructure means that energy demand is met mostly from bioenergy and fossil fuels.

But high population growth and urbanisation is resulting in rapid energy demand growth. In 2014, the International Energy Agency (IEA) predicted that the economy of sub-Saharan Africa would grow fourfold by 2040, and energy demand by 80%.

The IEA predicts that renewables will meet half of this demand by 2040, helped by rapid cost reductions in solar. IEA data shows that in 2013 and 2014 the cost of a kilowatt hour of solar power in Africa was between US$0.13 and US$0.24 – but that fell to US$0.075 in 2015.

Can the Egyptian model succeed?

Egypt is regarded as a "sunbelt" state, with between nine and eleven hours of sunshine per day. However, utility-scale solar is just getting started, according to Yasmina Abdelilah, an analyst with the IEA's Renewable Energy Division. Currently the bulk of Egyptian solar power is in mini or standalone grids that are unconnected to the main grid, and which total less than 100 megawatts.

But as well as meeting its own growing electricity demand, the country is looking to become an exporter of renewable energy through interconnections with Saudi Arabia, and potentially North African countries, Europe, and Sudan.

The government has set long term solar power targets and put in place feed-in tariffs and competitive auctions to encourage investment and provide developers with stable profits. Utility-scale solar will provide 1.7 gigawatts, with distributed solar of 0.3 gigawatts making up the two-gigawatt target.

DJ Pandian, an AIIB vice-president and chief investment officer, said that the 11 solar plants the bank is investing in will help Egypt become a renewable energy hub, and spur economic development for the whole region.

"Cross border trade in electricity is one way of meeting increased regional demand," said Abdelilah. "But how big that potential is depends on how interconnected physical grids and markets become."

Of the 11 solar plants the AIIB is co-financing, nine are 50-megawatt plants and two are 20-megawatt. These are "medium-sized investments, more appropriate for emerging nations to study and adopt, and with a manageable level of risk," according to Bai Yunwen, researcher at Greenovation Hub, a Chinese environmental NGO..

Egypt has one of the most developed and well managed power grids on the continent, according to one anonymous insider from the Chinese electricity sector. But this stands in contrast to most grids in Africa, which tend to be smaller, less resilient and poorly managed, posing significant risks to investors. This also places a limit on Egypt's ambition of becoming a renewable power hub.

Wu Yixiu and Lili White also contributed to this article.

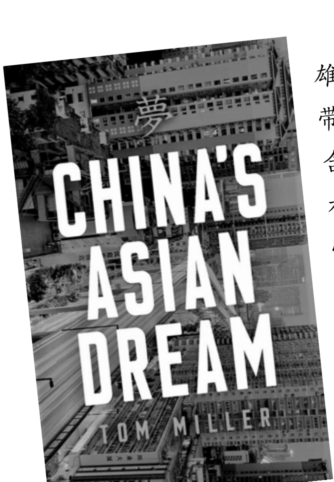
Liu Qin is a researcher at chinadialogue.
Yao Zhe is a strategic climate communications officer at chinadialogue.

从中国梦到亚洲梦，有多远？

新书《中国的亚洲梦》作者汤姆·米勒认为，
“一带一路”倡议体现了中国重建亚洲强国地位的雄心。

□ 山姆·吉尔

近年来，中国在其“一带一路”倡议上投入了大量的资金和政治资本，希望通过新的金融机构、基础设施路线和贸易关系，拓展海外投资和对外关系。



规模宏大，雄心勃勃的“一带一路”，既蕴含种种环境和社会风险，也带来了很多机遇。中国企业一直因出口燃煤电厂等污染行业而备受批评，但也因加速了低碳基础设施的推广而受到赞誉。

在Zed Books出版的新书——《中国的亚洲梦：沿着新丝绸之路崛起的帝国》中，经济分析师汤姆·米勒介绍了他周游中国及其周边国家的经历。为了更好地了解一带一路倡议的实地影响，米勒的足迹遍布湄公河河谷和中亚草原。在这本书中，他用生动的笔触介绍了中国的这个逐渐清晰的倡议及其带来的经济和外交影响。

我有幸与作者本人对话并询问了他的所见所感。为了确保文章清晰易懂，我们对采访文稿进行了编辑和压缩。

山姆·吉尔（以下简称“吉”）： 您书名中提到的“中国的亚洲梦”指什么？

汤姆·米勒（以下简称“米”）： 中国领导者提倡的“中国梦”，指的是“中华民族的伟大复兴”，与美国总统川普或者印度总理莫迪现在讲的其实没有太大区别。主要的观点就是，中国曾经是亚洲一个伟大的文明古国，而中国需要实现“伟大复兴”。在这本书里，我想要探讨的是，这个复兴的梦想对亚洲其他国家会产生怎样的 影响，以及中国的计划在实践中要怎样落地。

很多年来，中国一直奉行的是“韬

光养晦”的策略，但在习近平领导下，中国已经采取了更积极的外交政策，在亚洲事务中也发挥了比以往更加积极的作用。所以中国通过其经济外交想要达到的目标，便是在亚洲地区扮演更重要的角色。

对于一些人来说，这是十分积极的：中国可以帮助一些国家建设自身难以完成的建设项目；在基础设施建设和投资方面中国一向很积极。中国拥有资金实力，这使得中国在周边国家中更具影响力，并帮助它成为一个在国际上更加具有影响力的大国。

吉：大约两年前，英国宣布加入亚洲基础设施投资银行（AIIB），随后一些其他国家也纷纷加入。考虑到亚投行的规模比国家开发银行或进出口银行这些政策性银行都要小，成立它的意义何在？

米：中国将更多地通过政策性银行和商业银行发挥其金融实力。亚投行以及丝路基金在资本规模上更小，但却非常重要。首先，亚投行的建立是出于中国对其在亚洲开发银行以及世界银行中无法扮演更重要角色的不满。世界银行作为布雷顿森林体系的一部分，美国在其中影响力非常大，中国对此感到不平。中国一直感到被束缚了手脚，无法发挥更大的作用，直到有一天中国决定：“我们单干吧。”

所以这是一个中国崛起并成为世界领袖的标志性举动——建立自己的机构、邀请其他国家加入并在中国的领导之下。但亚投行的成功也带来了问题：如果亚投行没有这么多成员，中国本可以有更大的权力选择项目，但现在英国、德国等西方国家的加入稀释了中国的影响力。

吉：随着中国国内绿色经济的不断发展，以及在价值链上位置的不断提升，中国企业有可能会将本国过剩产能转移到海外，并将污染更严重、能源密集度更高的产业输出。你实地考察过程中有没有发现这样的迹象？

米：显然，为存在产能过剩或者亟需新市场的出口部门或者行业培育新的海外市场，是中国战略的一部分。当然，对于钢铁、水泥或者高速铁路这样的行业，海外市场多多益善。中亚等地有很多公路铁路建设的例子。其中的很多项目能够上马，但一些则出现问题。比如我们在印度尼西亚就见过烂尾的铁路建设项目。除了交通设施，中国还会在海外建工厂和进行生产：就拿中巴经济走廊来说，它不单单是公路、管道和铁路，我也听到建设工业区的想法，而这其中可能就包括电厂等项目。

吉：海外的风险项目会不会损害中国领导人政治声誉呢？

米：中国的国有企业并没有需要保护的国际品牌，这一点跟来自发达国家的企业不一样——中国的国有企业被视为中国政府的一部分——所以受损的是中国的海外形象。不过这是一个学习的过程，并且一些企业已经开始做得更好——就像日本和韩国的企业过去经历过的一样。中电集团在缅甸的名声曾经很差，并因为密松水电站项目而遭到强烈的抵制，但他们经过努力，已经可以更加严肃地对待企业社会责任以及业务中有关环境保护的部分。中国企业必须小心谨慎，因为如果他们受到了民众的反对，未来在这些国家开展业务可能会更加困难。这对于任何国家来说都是一个学习的过程，是需要时间的。

吉：在您研究和撰写这本书的时候，美国支持的跨太平洋战略经济伙伴关系（TPP）能够正常推进还是一个合理的假设。如今，随着川普当选美国总统并宣布退出TPP，这一计划也宣告搁浅。这对于中国在东南亚的地位有何影响？

米：现在下结论还为时太早，但中国对于川普政府退出TPP肯定是感到高兴的。其他国家可能在没有美国参与的情况下尝试重启TPP，并指望美国会在未来重新加入。但对于美国来说，TPP的意义在于，不仅仅是从经济上，更从政治上确保美国在东南亚地区的领导地位，并向其他国家保证美国会在东南亚地区发挥积极的作用。如今对于这一点人们产生了很多疑虑。曾经快速向美国靠拢的越南就是一个很好的例子。现在中国试图介入这个真空的局面，推动东盟领导的区域全面经济伙伴关系协定（RCEP）。中国也是该协定的成员国。这个项目目前的进展已经落后于计划，并且还不清楚它究竟可以取得多大的效果，但很显然，中国现在比以前更有机会，毕竟这一地区现在出现了政治领导力的真空。如果美国决定退出，中国一定会介入。

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Taking the measure of China's Asian Dream

Tom Miller's new book looks at how President Xi's plan to make China great again is affecting geopolitics across the region

□ Sam Geall

China has expended enormous financial and political capital in recent years on its Belt and Road Initiative (BRI); a strategy to expand its overseas investments and engagement through new financial institutions, infrastructure routes and trading relationships.

The scale and ambition of BRI presents a variety of environmental and social risks but also opportunities. Chinese companies have been criticised for exporting polluting industries, such as coal-fired power, but also praised for hastening the roll-out of low-carbon infrastructure.

A new publication from Zed Books, *China's Asian Dream: Empire Building along the New Silk Road*, sees economic analyst Tom Miller travel around China's Asian neighbours to better understand the impacts of BRI from the ground up, from the Mekong Basin to the Central Asian Steppe, in a vivid and useful guide to China's unfolding strategy and its economic and diplomatic ramifications.

I spoke to Tom and asked what he learned. The interview has been edited and condensed for clarity.

Sam Geall (SG): What is "China's Asian Dream", to which you refer in the title of the book?

Tom Miller (TM): President Xi Jinping's "Chinese Dream" is about "Making China Great Again", which is not so different from what President Trump is talking about in the United States, or Prime Minister Modi in India today. It's the idea that China used to be the great civilisation-state in Asia, and that China should launch a "Great Rejuvenation". In the book, I wanted to look at how that relates to Asia, and how it works in practice.

China, for many years, was characterised by the taoguangyanghui doctrine of "hide your influence and bide your time", but under Xi Jinping, China has become much more proactive in its foreign policy, becoming an active presence in Asia in a way that it wasn't before. So what China has tried to do, through its economic diplomacy, is play a much bigger role in Asia.

For some, this will be very positive: it can help infrastructure development; it can help to build things that

Under Xi Jinping, China's doctrine of "hide your influence and bide your time" has given way to a proactive foreign policy

countries would have trouble building themselves; and it can provide finance. China has the money to do that, and this gives China more influence in the neighbourhood and helps it to become a much more influential power.

SG: It's around two years since the United Kingdom announced it was joining the Asian Infrastructure Investment Bank (AIIB), setting off a cascade of other countries joining. What's the significance of the AIIB, particularly given it is smaller than China's policy banks, like the China Development Bank and Exim Bank?

TM: China will exercise its financial power more through policy banks and commercial banks. The AIIB and the Silk Road Fund are much smaller in terms of capital. But they are important – the bank was founded, in the first place, because of a sense of irritation and unfairness that China couldn't play a bigger role in the Asian Development Bank and the World Bank, which as part of the Bretton Woods architecture, had a very strong US presence. There was a sense China was shut out of playing a larger role, until they eventually said: "Let's do it ourselves".

So it's a symbolic move about China standing up in the world and becoming a leader – starting its own institution, and inviting other countries to be members, under China's leadership. The AIIB has been something of a victim of its own success: China might have had more power to choose projects to be involved in had it not had so many members, particularly Western countries like the UK and Germany, diluting China's presence.

SG: There is a risk that as China greens its economy domestically and moves up the value chain, Chinese companies find an "escape valve" for overcapacity overseas and effectively export their more polluting, energy-intensive industries. Is that something you have seen playing out?

TM: Clearly one part of China's strategy is to foster new markets overseas for goods exporters or industries that have overcapacity, or otherwise need new markets. Certainly when it comes to things like steel, cement or high-speed rail, an industry will want as many markets overseas as possible. There are many examples of this in Central Asia and elsewhere, where roads and rail are being built out. A lot of these projects will go ahead, but some will not – we saw a railway project abandoned in Indonesia, for example. China will also set up plants and manufacturing overseas: if you look at the China-Pakistan Economic Corridor, it's not just about roads, pipelines and rail, there's also talk about an industrial belt, which may also include power stations and so on.

SG: Do Chinese lenders face particular reputational risks if they support risky projects overseas?

TM: State-owned enterprises don't have an international brand they need to protect, as much as a firm from a developed country might – they are seen as arms of the Chinese state – so it is China's image abroad that suffers. It's a process of learning though, and some are starting to do a better job – much as firms from Japan or South Korea learned in the past. In Myanmar, China Power had a terrible reputation and suffered a backlash there due to the Myitsone Dam project, but they have tried hard to become more serious about Corporate Social Responsibility (CSR) and green aspects of their operations. Companies have to be careful, because if they do suffer a populist backlash, it can make it more difficult to operate in future in those countries. It's a learning process for any country, and it takes time.

SG: When the book was being researched and written, it would have been a fair assumption that the US-backed Trans-Pacific Partnership (TPP) would go ahead. Now, with Trump's election in the United States and his announced withdrawal, this seems unlikely. How does this affect China's position in Southeast Asia?

TM: It's too early to say, but certainly China would have been delighted when Trump pulled out of TPP. It's possible that other countries might try to revive the TPP without the United States, hoping that the US might join it in the future. But the point of TPP was not only economic but also political, from the US perspective – to ensure US leadership in Southeast Asia, and reassure other countries that the US would be an active presence there. Now there are a lot of doubts about that.

Vietnam is a good example, because the country was moving closer to the US. China is now trying to step into the void, and helping to push the ASEAN-led Regional Comprehensive Economic Partnership (RCEP), of which it is a member. This is behind schedule, and it is unclear how much it can really do, but it's clear that China has more of an opportunity than it had before, given the political leadership vacuum. If the US decides to step back, then China will step in.

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镜头下的美丽与哀愁

Wildlife competition highlights diversity and threats

游泳俱乐部 *Swim gym / Laurent Ballesta*

在南极的东部，一只威德尔海豹正向它的同伴展示在冰水中畅游的身姿。

In east Antarctica a Weddell seal introduces her pup to the icy water.

被救的困兽 *Saved but caged / Steve Winter*

这个六个月大的苏门答腊虎的后腿被一个圈套夹住，不得不截肢了。它幸运地活了下来，此前它被困于印度尼西亚苏门答腊岛上的亚齐省热带雨林长达4天。

A back leg of this six-month-old Sumatran tiger cub was so badly mangled by a snare that it had to be amputated. He was lucky to survive at all, having been trapped for four days before being discovered in a rainforest in Aceh province on the Indonesian island of Sumatra.

华丽的搬用工 *Resplendent delivery/ Tyohar Kastiel*

华丽的格查尔鸟连续一周夜以继日将水果和昆虫或蜥蜴喂送给两只幼鸟。

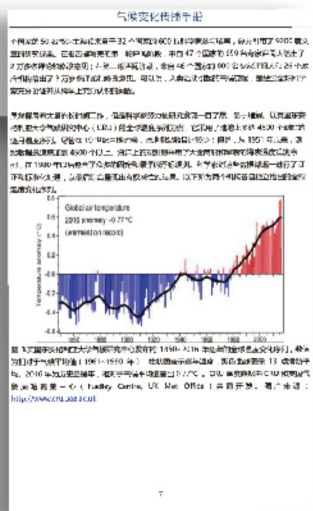
Resplendent quetzals work from dawn to dusk for more than a week to deliver fruits and the occasional insect or lizard to their two chicks.

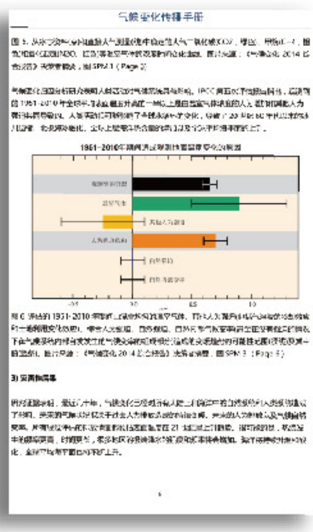
气候变化传播手册

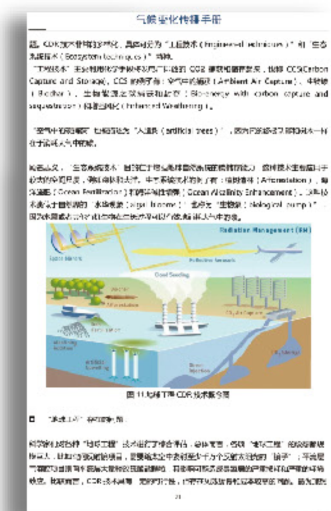
Climate reporting 101

气候议题的媒体工作者，特别是年轻记者，可以从《气候变化传播手册》中获得关于气候变化报道的知识、线索和资源，并分享资深专业人士的丰富经验。该手册由中外对话，邀请气候传播领域的专业人士参与编纂。

Climate Reporting 101 (in Chinese) is a practical guidebook for journalists and those working on climate communications, created by China Dialogue. It includes basic knowledge about climate change and climate talks, and lessons learned by seasoned climate reporters from covering past climate talks.







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