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Understanding the Limits of Chinese Air Pollution Reporting

Environmental Mass Incidents in Rural China

China's Mercury Problem: A Sleeping Giant?

Mangrove Conservation with Chinese Characteristics

Public Health and Air Pollution in Chinese Cities

Plus: Notes from the Field, Spotlight on NGOs



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COVER PHOTO

Villagers begin to clean up the algae-filled Chaohu lake in Hefei on June 5, 2008 in East China's Anhui Province, China. For the past few years, blue-green algae has become a chronic problem in the west part of Chaohu Lake, which is China's fifth largest body of fresh water and the drinking water source for about 320,000 people.

Photo Credit: Wang Zhiqiang/ChinaFotoPress/Getty Images

ABOVE PHOTO

Beginning in 2007 with support from the U.S. Agency for International Development, karst researchers at Southwest University Beibei and the China Environmental Health Project at Western Kentucky University (CEHP WKU) set up a demonstration field site at Qingmuguan (Chongqing, China) to promote collaborative karst research to help poor communities better access water and study pollution impacts on karst groundwater. The Qingmuguan site will serve as a new study area where students from both countries can benefit from learning new approaches to karst water investigation.

Photo Credit: Brian Hame



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CHINA ENVIRONMENT SERIES

THE CHINA ENVIRONMENT FORUM

For ten years the China Environment Forum (CEF) has implemented projects, workshops, and exchanges that bring together U.S., Chinese, and other Asian environmental policy experts to explore the most imperative environmental and sustainable development challenges in China and to examine the opportunities for business, governmental, and nongovernmental communities to collaboratively address these issues. The networks built and knowledge gathered by meetings, publications, and research activities have established CEF as one of the most reliable sources for China-environment information and given CEF the capacity to undertake long-term and specialized projects on topics such as environmental health, food safety, water management, nongovernmental organization (NGO) development, and municipal financing for environmental infrastructure. The Wilson Center's Environmental Change and Security Program and Asia Program periodically cosponsor meetings with the China Environment Forum. The China Environment Forum meetings, publications, and research exchanges over the past year have been supported by generous grants from the U.S. Agency for International Development, Rockefeller Brothers Fund, Waters Corporation, and the U.S. Environmental Protection Agency. Jennifer L. Turner has directed the China Environment Forum since 1999.

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FOREWORD

Jennifer L. Turner, Editor

The nexus of pollution and health in China—the main theme of this issue of the *China Environment Series*—was an oft-reported issue in 2008, with the main story being Beijing’s poor air quality in the run up to the summer Olympic Games. While most articles and broadcasts focused on the impact of the pollution on the performance of Olympic athletes, many media stories did examine the broader environmental, economic, and human health challenges facing China and the new policies and projects the government has been taking to address them. Over nearly a decade the Beijing municipal government adopted stricter air pollution control policies and moved out hundreds of dirty industries, but pollution from trucks and cars in the city and from factories in the provinces surrounding the capital still meant smoggy skies. Some last minute measures—such as halting construction, ordering factories outside the city to shut-down temporarily, and prohibiting private cars on the roads—did succeed in clearing the air in time. Although since the Beijing’s Olympics, air quality has again worsened. The effort to clean up Beijing for the Olympics is a microcosm of the challenges facing the rest of the country, while national environmental policy is strict at the local level implementation is weak, which means health problems linked to pollution are worsening in China. In this issue of the *China Environment Series*, we have compiled a collection of articles that aim to get behind headlines to examine some of the broader health impacts of pollution and natural resource degradation and to delve into some emerging policies and projects that hold some promise for addressing environmental health problems in China.

The lead feature article by **Steven Q. Andrews** delves into China’s air pollution and health challenges in an examination of the regulatory, technical, and political obstacles that currently hinder the transparency and effectiveness of the country’s vast urban air quality monitoring systems. Steven

Andrews argues that while Chinese citizens can access a wealth of information on air quality, this information is not accurately informing them of actual health threats. Our second feature article by **Ma Tianjie** shines a light on a different aspect of the pollution-health nexus, namely, the growing number of environmental mass incidents that erupt after governments ignore—often for years—citizen complaints about excessive pollution that threatens their livelihoods and health. Ma Tianjie examines the growth in such protests and analyzes a large-scale environmental protest sparked by industrial pollution in a small village in Zhejiang Province that involved thirty to forty thousand villagers and thousands of armed police.

The topic of environmental health sparked a broad range of articles in our Commentary/Notes from the Field section with many authors discussing problems and solutions to pollution-health issues. For example, the magnitude of mercury pollution in China has long been an underreported topic and we greatly benefited from the insights **Celia Y. Chen** provides in her commentary based on extensive field research into the sources of mercury pollution in China. **Saleem Ali** also looks at another sensitive and relatively under-explored pollution problem, namely the poorly regulated mining sector in China. **Monica Liao’s** examination of the challenges in promoting ecotourism in Yunnan Province includes an important observation that tourism that protects the environment also can have a positive health impact on communities. Two authors look at whether China’s business sector could offer some solutions to the country’s pollution problems—with **Sean Gilbert** reflecting on how the concept of corporate social responsibility is evolving in China and **Jacob Park** relating the challenges and opportunities for greening China’s mobile phone and telecommunication industries.

We were lucky to receive a commentary by researchers **Sumi Mehta, Aaron J. Cohen, Davida**

Schiff, Daniel Greenbaum, Nick Moustakas, and Robert O’Keefe who introduce the Public Health and Air Pollution in Asia (PAPA) Program that was initiated by the Boston-based Health Effects Institute to inform regional decisions about improving Asian air quality to promote health. Their commentary focuses on environmental health research trends in China and on some promising PAPA-supported pollution-health studies that are building the capacity of Chinese researchers. We have included two commentaries that examine indoor air pollution, which is the fourth largest cause of death in China, mainly due to poor quality cook stoves in rural areas. **Emmy Komada** writes about the biogas work that the Chinese nongovernmental organization (NGO) Global Environmental Institute is carrying out to bring clean energy sources to poor rural communities in western China. **Jill Baumgartner** and **Nina Trautmann Chaopricha** make a strong case for how clean cook stoves in rural China could bring major health improvements and significant reductions in the greenhouse gas black carbon.

Guizhen He, Yonglong Lu, and Lei Zhang examine lessons learned from China’s 2008 snow crisis in their analysis of how the country could create better risk assessment and emergency disaster systems that could better protect ecological and human health after natural disasters and pollution accidents. The China Environment Forum has long been interested in bottom-up policymaking trends in China, which can come in the form of protests, court cases, petitions, and laws empowering the public. The issue of public participation in environmental policymaking is addressed in **Xiang Fang’s** analysis of how citizens in eastern Guangdong used lobbying of People’s Deputies to successfully oppose provincial plans to build a nuclear power plant in their area. In her commentary on China’s evolving laws on water and property rights **Sonya Schiller** argues that if Chinese people have clearer water use rights this could ultimately promote conservation and better protection of water and health of citizens. **Liu Yi**—the lead campaigner for the China Mangrove Conservation Network—shares stories on how an impressive network of NGOs and communities emerged to jointly research and protect China’s highly threatened mangroves. **Daniel Pulver** relates another story of an NGO network coming together to become environmental health advocates around water pollution in Beijing. Two other commentaries examine the role of provinces becoming environmental leaders—**See-Won Byun** on Jilin Province’s

involvement in the Greater Tumen Initiative and **Lei Bi** and **Qian Wang** on Hainan Province’s efforts to promote energy efficiency.

The number and diversity of our Spotlights on NGO Activism in China boxes grew again this year and I hope readers will enjoy as much as we did learning about groups working in remote areas—such as the **Xinjiang Conservation Fund’s** eco-toilet project in Xinjiang and the **Hengduan Mountain Society’s** research and policy advocacy linked to protecting rivers in western China. While *CES* has long featured articles and commentaries on dynamic environmental groups on university campuses, we were excited to learn details about the activities of the **China Youth Climate Action Network**, a relatively new NGO raising awareness and promoting action on university campuses to stem China’s CO₂ emissions. Four of our spotlight and feature boxes highlight international and Chinese groups working to green businesses in China, which is an important emerging trend that CEF will be exploring more deeply in meetings and online research briefs in 2009.

The main support for this issue of *CES* is from the **Rockefeller Brothers Fund**, which has become the leading funder of environmental health-related work in China. We are pleased to feature a number of boxes in this issue of *CES* that highlight the environmental health work supported by RBF, such as the **Social Science Research Council’s** China Environment and Health Initiative, **Business for Social Responsibility’s** Water and Environmental Health: Building Constituencies in Southern China project water, and the **Yunnan Health and Development Research Association’s** environmental health community projects, research, and websites.

Our partnership with Western Kentucky University (WKU) on the **U.S. Agency for International Development**-supported China Environmental Health Project (CEHP) continued this year, which enabled the China Environment Forum to publish more online CEHP research briefs, carry out our meeting work, and cover some of the staff and publication costs for this issue of the *China Environment Series*. We are very grateful for USAID’s continued support of our work. Under this project CEF has continued its outreach and information dissemination work linked to WKU’s karst water and coal monitoring environmental health work in China. A summary and webcast of their May presentation at the Wilson Center in 2008 is available on the CEF



A Threatened River. The Urumqi River flowing through the Houxia Valley (pictured above) where state-owned enterprises produce cement, rubber and other polluting resources. The Urumqi River is the drinking water source for Urumqi, the capital of Xinjiang. With support from Pacific Environment, the grassroots group Xinjiang Conservation Fund (XCF) has been working on water pollution issues in the Urumqi River basin. More information on XCF's water work in Xinjiang is discussed in a Spotlight Box on page 168. Photo Credit: Daniela Salaverry

website. Please see an overview of WKU's coal monitoring work in **Wei-Ping Pan's** Coal City box this issue of *CES*. In 2009 we will be working with WKU's **Chris Groves** to create a Circle of Blue (COB) multi-media story on karst water issues in southwest China, which will be launched online late summer. See www.circleofblue.org/reign for our previous COB story on desertification in Inner Mongolia.

In addition to thanking all of our authors and funders, I would like to thank the anonymous reviewers who provided extremely valuable input to our feature articles—this is the sixth year we have been using the blind review process and it has helped to strengthen our feature articles considerably.

The army of CEF research interns continues to grow and this year's group gave us invaluable editing, writing, and translation assistance that helped us get this publication out the door. Special acknowledgement of Jing Chen, Zhimin Mao, and Ma Tianjie who helped translate and edit some boxes and commentaries that came to us in Chinese, which in effect gave "voice" in English to some amazing Chinese environmentalists. Other talented and patient interns who edited and did extra

research for this publication included: Kimberly Go, Tod Kaiser, Elisa Chih-Yin Lai, Rongkun Liu, Erika Scull, Mayu Suzuki, and Pei-Yu "Catherine" Tai. Everyone worked hard on this publication, but I must single out Tod Kaiser who we discovered possessed a talent for doing wonderfully thorough edits. Thus, we gave Tod the tough job of "closer," which means he was tasked with the final nitpicky clean-up edits before submitting the publication for layout. When CEF interns are not helping with the publication they are researching and writing CEHP research briefs, which has become the biggest draw to our website—these talented individuals deserve a long round of applause for all that they do to make CEF a great project.

As usual I am grateful for Lianne Hepler's swift and careful design for the layout of this publication. She does such quality work that it inspires me to do my work even better. Last but not least is Linden Ellis who is the managing editor for the *China Environment Series*. Linden deserves a huge thank you (and probably some time off!) for all her work on this publication. Linden possesses a sharp editing eye, an organized mind, and a great sense of humor, all invaluable skills in pulling together this publication.