

A CHINA ENVIRONMENTAL HEALTH PROJECT RESEARCH BRIEF

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Victory: A Grassroots NGO Empowers a “Cancer Village” to Take Action

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In the two and a half years leading up to 2006, Qiugang—a village of 2,000 people in the Huai River Basin in Anhui Province—had 53 deaths due to cancer.¹ These deaths were not solely among the elderly; children as young as one-year old manifested malignant tumors. The air in the village smelled like rotten eggs. The Baojiagou River—a tributary of the Huai that is vital to the Qiugang's local economy and welfare—has actually been the source of serious environmental health problems. Turtles and fish were turning belly-up in the river and farmer's seeds that came into contact with river water would not sprout. Children in the schools near the river suffered from severe diarrhea, vomiting, nosebleeds and lightheadedness. The water had by turns a white, red or yellow film that would cover the riverbanks and irrigated fields after the water drained away. The villagers in Qiugang knew that the wastewater of local factories caused this discoloration, but did not know how the pollution related to their health problems. Furthermore, they did not know where they should report their suspicions.

The story of this Chinese village could have been a tragic one, like many other cancer villages in China, with increasing death rates, decreasing crop yields, and children who suffered lasting damage. The magnitude of Qiugang's serious environmental health problems in 2006 led Green Anhui, the first environmental nongovernmental organization (NGO) in the province to take actions that have given the citizens of Qiugang hope. Green Anhui has helped the Qiugang citizens publicize their situation and work with the government to find viable solutions to the pollution that is destroying health and the environment in this village.

WATER POLLUTION IN CHINA

If you visit one Chinese household at random—particularly in rural areas—and ask for a glass of water, chances are high you will be drinking from a polluted source. Out of a population of 1.3 billion, 700 million people in China drink polluted water. Untreated wastewater—particularly from municipalities—is a major contributor to this problem (See CEHP research brief on wastewater). From 2002 to 2005, 63 billion tons of industrial and municipal wastewater were dumped into China's rivers.² The long-term costs to local ecosystems or, in the case of Qiugang, the cost of the human lives lost to cancer are huge, but due to lack of data highly difficult to quantify.

Though China has a robust body of environmental legislation, these laws have not necessarily reduced water pollution as they are not always enforced at the local level (See CEHP research brief on environmental lawsuits). However, the 2007 moves to establish regional environmental protection offices under the Ministry of Environmental Protection (MEP) and the recent amendment of the Water Pollution Control Law suggest that the central government would like to improve local enforcement of water pollution regulations (See summary of October 2008 CEF meeting “Giving the Courts Green Teeth”). Outside of the law, both central and local governments have launched many efforts to improve municipal wastewater disposal. The construction of wastewater treatment facilities has been highlighted in multiple Five-Year Plans. Anhui Province, in which Qiugang village is situated, has applied for and received both World Bank and Asian Development Bank loans specifically to construct more municipal waste treatment facilities. However, the pace of facility construction is too slow to match the increase in population, and does nothing to address industrial wastewater pollution. In fact, concerning agricultural or industrial pollution, Anhui Province is no exception to the national problem of weak enforcement at the local level. The Huai River Basin, which passes through northern Anhui and Qiugang village, garnered national attention in 1994 when failure to contain industrial pollution resulted in massive fish kills and waterborne illness in villages bordering the river.

THE UGLY RIVER

In Bengbu, just upstream of where Baojiagou tributary joins the Huai River, bulldozers are parked on top of small hills of silt. These hills alongside the river are constantly growing as the dam on the Huai River south of Bengbu creates a buildup of silt. In the early days of Green Anhui, the NGO's director Zhou Xiang and his friend and colleague Kenny Ye walked the length of the Huai River, documenting pollution and talking to citizens along the way. They both call the Huai an "ugly" river, with many silt pile-ups and industrial centers along its length, few parks and of course the polluted water.³

The Huai River Basin remains one of the most polluted watersheds in China, a disturbing fact given its size. The river stretches 1,100 kilometers (km, 660 miles) across four provinces and the 190,000 km² basin supports more than 150 million people, the equivalent of half the population of the United States. Prior to a major fish kill in 1994, the basin also had 150 industrial plants, including some 5,000 small paper mills, tanneries and breweries.

In 1994, heavy rain caused a Huai tributary to rise above flood-control alarm levels, so multiple sluice gates were opened. The resulting flood of toxic chemicals and sediment created a 100-kilometer pollution belt along the Huai River. People living downstream suffered from nausea, vomiting and diarrhea until the water supply was cut for 54 days. During this time, bottled water was transported into the basin by the People's Liberation Army and cost more than petrol.⁴

The Chinese government responded to this crisis by tightening regulations on industrial enterprises. Three years later, 4,987 small companies, primarily heavily polluting pulp and paper factories, were closed and a further 1,562 enterprises changed their waste management to meet pollution control standards.⁵ There was also some progress in the construction of wastewater treatment facilities, though fewer than the stated goal of fifty by 2000. This paucity in wastewater treatment plants is a major issue, as in Anhui Province, organic, municipal waste is the major contributor to water pollution. In 1997, more than 40 billion cubic meters of urban wastewater, out of a total of 45 billion, were left untreated.⁶ Though official MEP documents claim that the state of the Huai River has improved due to stricter industrial regulations and increasing numbers of wastewater treatment facilities, there is some controversy—even between government agencies on the accuracy of these cleanup claims. Specifically, the Ministry of Water Resources (MWR) is charged with monitoring the allocation and use of water, with ambiguous responsibilities concerning water quality, and it disagrees with the MEP's method of measuring pollution levels.

MEP measures chemical and sediment content on the surface of the Huai River, but the MWR believes that this does not give sufficient information about the levels of pollution in the Huai's tributaries.⁷ An Asian Development Bank (ADB) report supports the MWR's argument that MEP is underestimating the rivers pollution. According to ADB, in 2002, out of 93 sample sites along the Huai River, over 80 percent fell into Class V or below, China's lowest ranking for its most polluted rivers.⁸ In Anhui Province, the health of the tributaries is especially important as it has over 1,500 kilometers of tributaries that feed into the province's 420-kilometer stretch of the Huai River. Furthermore, pollution in smaller tributaries can be more harmful than in large rivers because there is less water to dilute the pollutants. Dams on tributaries that slow the natural flow of water notably lower the capacity of the tributaries to dilute pollutants.⁹ Quigang sits on the Baojiagou tributary, and if the pollution of the Huai River really was improved in the years following 1994, Quigang's water certainly saw none of that reduction.

Beyond protests, citizens in the Huai River Basin have had few opportunities to shape the policies to improve the river's water quality, but in Anhui Province, the NGO Green Anhui has been helping pollution victims along the Huai seek solutions to the pollution that is damaging their health and environment.

GREEN ANHUI

Green Anhui, founded in 2003 by 17 student organizations, is Anhui Province's first NGO. Its mission is to:

(1) endorse actions that protect the environment and promote sustainable development; (2) improve public awareness and involvement in environmental issues; and (3) initiate the establishment of policies that protect the environment in Anhui. Originally called the Anhui Federation of Environmental Students, the environmental education of students remains a core part of its mission and activities. Most of Anhui's university environmental groups are affiliated with Green Anhui, and most of Green Anhui's volunteer base is university students.

From its grassroots beginnings, Green Anhui has grown into a multi-office, multi-branch organization that handles a range of environmental issues in Anhui Province. Seven board members direct Green Anhui, which employs nine full- and part-time staff and oversees 1,000 volunteers. It has won three international environmental prizes: the 2004 Ford Prize, the 2005 SEE Prize, and the 2006 Roots & Shoots Prize for its environmental education program. Green Anhui has been extremely successful in using international resources to promote environmental activism throughout Anhui, receiving thousands of dollars annually from international foundations and grant agencies.

Being a grassroots organization, Green Anhui's five programs are organized around local demand and need:

Green transportation. Anhui's capital, Hefei, has a double-digit growth rate and its roads are crowded with four million residents. Green Anhui has created an educational pamphlet that explains the environmental and economic advantages of biking and walking rather than owning a car or taking the bus. In 2008, Green Anhui convinced 400 people with cars to agree to drive one time less each week, and to sign a certificate to that effect.¹⁰ They plan to broaden their scope and convince more families to decrease their reliance on cars. As part of a worldwide effort to reduce urban pollution, Hefei joined hundreds of other Chinese cities in promoting Green Transportation for one day in September 2008.¹¹

Environmental health. Through this new initiative based in the Wuhu office along the Yangtze River, Green Anhui hopes to give medical students training and then offer them opportunities during their vacations to monitor and research how local pollution problems in Wuhu are impacting health. In 2007, Green Anhui received a Global Greengrants Fund grant to investigate reproductive health consequences of environmental pollution in Wuhu. Finally, Green Anhui has held forums on environmental health for Chinese citizens living near heavily polluted Chao Lake.

Ecology. Green Anhui's offices, particularly its Wuhu office, provide an ecology library that citizens can visit to learn about wildlife in Anhui Province. Green Anhui also encourages citizens to lobby for the re-introduction of the Yangtze River crocodile to its natural habitat, and educates the public about the rare Pei Lan flower, which naturally flourishes in Anhui, but is threatened by development.

Education. Green Anhui works with students from university to primary school to increase awareness of their local natural environment, the threat of pollution, and the importance of conserving resources. Green Anhui staff has developed environmental education curricula for primary school students and conducts training sessions and camps for older students. Green Anhui also provides small grants to student groups at universities and empowers other fledgling NGOs by helping them develop business plans and giving them access to useful resources. One veteran of Green Anhui went on to establish the highly effective environmental NGO, Green Camel Bell, in Gansu Province (See CES8 Spotlight on NGO Activism Box on page 109). Finally, it has recently founded the Green Salon for Journalists to generate news media interest in water pollution in the Huai River Basin.

Water Pollution Prevention. Green Anhui's largest and most important activity is its Water Pollution Prevention Program, centered in Bengbu, a small city on the Huai River. In addition to recruiting volunteers to document the water pollution of the Huai River and its tributaries, Green Anhui staff and volunteers have photographed battery dumping alongside the Huai River, which initiated government efforts to penalize the perpetrators and prevent its recurrence. Green Anhui also organized a conference on water pollution, with the aid of the

U.S.-based NGO Pacific Environment, which brought 20 NGO representatives from across China to discuss water pollution challenges and prevention strategies. In late 2008, Green Anhui received a grant to study the environmental impact of hydraulic construction projects in the Dabian Mountains, whose rivers flow into the Huai. Finally, in conjunction with environmental NGOs from other provinces on the Huai River, Green Anhui is publishing a newsletter updating local citizens on issues concerning pollution in the Huai River.

Green Anhui's Water Pollution Prevention Program is extensive due to the drastic pollution problems facing communities within the Huai River Basin. One of Green Anhui's most important water initiatives was documenting the declining health of villagers in Qiugang and working with community members to undertake grassroots activism to push for improvement of the water problems. This activism has engendered hope in the village's community.

A FARMER VERSUS THREE FACTORIES

The village of Qiugang is mostly filled with the old and the young, the middle generation having left to find better-paying work in China's larger cities. Some rather modern, European houses line the village streets; these are the families of the more successful migrant workers. Many Qiugang residents commute to work outside the village, though Qiugang also has 10-12 small factories including paper mills. Strikingly, apart from a few very poor residents, no one in Qiugang has ever worked at the three chemical factories that dominate the center of the village.¹²

Mr. Zhang—a farmer in Qiugang—has developed a particular passion for the environmental issues that are impacting his village. Though all of the village's crops have been affected by the pollution, his field is right next to one of the factories in the center of town. It is covered in black grime and white crystals, and he has not been able to grow crops on it for four years.¹³ While walking through the field, one can barely tolerate the stench, and liquid flicks onto one's hair and clothes. It is not rain.

In his spare sitting room, Zhang displays badges of multiple environmental conferences that he has attended over the past two years, with the sponsorship of Green Anhui. When asked about the story behind Qiugang's pollution, he relates a dark history of sabotaged water quality tests and local villagers being beaten. It is against this backdrop of fear that Qiugang villagers and Green Anhui began their campaign for reduced pollution and better health.

FROM AWARENESS TO ACTION

In 2006, Green Anhui volunteers were shocked to discover the disturbing red and blue colors of the river near Qiugang. The volunteers took pictures and reported the discoloration to Long Haizheng, a Green Anhui staff member at the Bengbu office. After conducting more research, Long Haizheng determined that the pollution likely came from the three chemical companies in Qiugang. All three companies manufactured multiple drugs and chemicals, the primarily the carcinogen benzene. One company had insufficient waste management facilities, violating local regulations; the other two had none at all. All three companies dumped their chemical waste directly into the river, flushing sediments and toxic chemicals into the river at an alarming rate.

In response to the blatant pollution and alarming cancer rates in the village, Green Anhui volunteers gave villagers information about how the pollution from the factories might be affecting their health. They distributed information about benzene exposure and water pollution in general.¹⁴ The symptoms of benzene exposure matched exactly the illnesses suffered by many villagers, particularly the high cancer rates. After educating the villagers about the potential source of their health problems, Green Anhui volunteers then recorded villager testimonies of how the pollution destroyed their crops, killed their fish, and made their children ill. Alongside these testimonies, volunteers also took photographs to visually confirm the health consequences of the water pollution. The villagers prepared a petition that outlined the factories' violations, as well as the consequences to the villagers' health. In March 2007, citizens in Qiugang signed and submitted a petition to the local Environmental Protection Bureau (EPB) in Bengbu.

When the EPB denied any violations, Green Anhui used its news media contacts to land a front page article in the *Anhui Xinwen* newspaper—the most widely read daily paper in Anhui Province—outlining the citizens' grievances.¹⁵ Both *Xinhua News* and *Xinan Evening News* picked up these stories on the tragic condition of Qiugang. The EPB eventually admitted on public television that the Qiugang residents' claims were accurate, and two factories were subsequently assigned to pay fines of 100,000 Yuan (about \$15,000) while the third was ordered to reduce its pollution. The fines, however, seem insignificant given the revenues of the companies. In fact, fining in general has not been an effective deterrent to pollution in China as the amount of the fine is often small and the local government, desperate to attract industry, sometimes refunds part or all of the fines to the polluting enterprise.¹⁶ To this day the citizens have never been compensated for their health costs, though it is doubtful a fine of that magnitude could be raised to cover them.¹⁷

While the local EPB solution was not sufficient for the people of Qiugang, MEP proved to be a far more effective enforcement agency in this case. Once the MEP was appraised of the situation in Qiugang, it ordered all three factories to shut down, giving new hope to Qiugang residents. Though it could not enforce its mandate in the same way as the local EPB could, MEP took advantage of the Green Credit Policy of 2007 to obtain cooperation of the chemical companies. Under this law—issued jointly by MEP and the Peoples' Bank of China with the aid of the World Bank's International Finance Corporation—banks suspend loans to companies with excessive polluting violations. Unfortunately, many local governments and banks do not enforce this law, and smaller companies tend to rely on personal connections rather than banks for loans.¹⁸ While a miniscule number, it is still encouraging that in 2007, the loan applications of 12 companies in China were suspended due to excessive polluting violations.

Qiugang village was doubly lucky in that the chemical companies did apply to a bank for loans and their pollution violations attracted the attention of the MEP, which subsequently suspended the loans and even intermittently shut down electricity. This pressure was effective, for on 20 December 2008, the final factory shut down and moved to an industrial site far from any residential areas and with sufficient waste treatment facilities installed. Both the villagers and Green Anhui were excited by the victory, but not surprised. In early December, the head of Bengbu's EPB pledged that he would resign if the factory did not move by the 20th of that month.¹⁹

RIVERS TO RECYCLING

The smell of rotten eggs may be gone from Qiugang village, but years of pollution have left the soil contaminated—the entire village is less than 17 acres, and 10 percent of its soil is severely polluted.²⁰ One chemical company offered to compensate the villagers for crops lost during the time it produced chemicals, but this compromise ignores the long-term damage to the soil and the many years to come during which Qiugang villagers will be unable to produce edible crops.²¹ The compensation also does not address lingering health problems.

Strikingly, the news media exposure of this “small victory” has been so extensive as to provide hope for similar victories in the future. At least five newspapers in Anhui Province printed stories about the closing of Qiugang factories.²² Green Anhui has grown from a collection of university student organizations to one that encompasses all age groups. Whereas environmentalism was a foreign concept to many Anhui residents ten years ago, the obvious effects of pollution have created a strong interest in environmental issues. The government has in part supported public interest by painting slogans encouraging environmental protection in Anhui's parks. Recycling has been systematized throughout the province, and throwing garbage into a green-colored bin now generates nasty looks. The tide of public interest may just prove powerful enough to turn small victories into big ones.

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1. Green Anhui. (2008). Huai River Protection Communication Committee Presentation. *Green Anhui*.
 2. United States Department of Commerce. (2005). *Water supply and wastewater treatment market in China*. [Online]. Available: <http://www.icwt.net/Chinapercent20Water.pdf>.
 3. Wang, C. & Ongley, E.D. (2004). *Transjurisdictional water pollution management: The Huai River example*. *Water International*, 29(3): 290-298.
 4. Ibid.
 5. World Bank. (2001). *Project Appraisal Document on the Proposed Loan to the P.R. China for a Huai River Pollution Control Project*. [Online]. Available: http://www-wds.worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=523679&menuPK=64187510&searchMenuPK=64187283&siteName=WDS&entityID=000114496_2004090200440020.
 6. Wang, C. & Ongley, E.D. (2004). "Transjurisdictional water pollution management: The Huai River example." *Water International*, 29(3): 290-298.
 7. Asian Development Bank. (2004). *Technical Assistance to the People's Republic of China for the Evaluation of Environmental Policy and Investment for Water Pollution Control in the Huai River Basin and the Taihu Lake Basin*. [Online]. Available: <http://www.adb.org/Documents/TARs/PRC/tar-prc-38555.pdf>.
 8. X. Zhou, personal communication, December 5, 2008.
 9. X. Zhou and K. Ye, personal communication, December 6, 2008.
 10. Meng, G.F. (ed). (2008). "In Hefei, 400 families pledge to drive one time less often every week." *Anhuinews.com*. [Online]. Available: <http://ah.anhuinews.com/system/2008/09/22/002122058.shtml>.
 11. Green Anhui. (2007). "Choose green transportation; choose a more energetic lifestyle; let us share all that is green." *Zhong An Forum*. [Online]. Available: <http://bbs.anhuinews.com/viewthread.php?tid=292706>
 12. G. C. Zhang, personal communication, December 6, 2008.
 13. *Anhui Legal News*. (December 25, 2008). "Who will pay for the destruction of land?" *AnhuiNews.com*. [Online]. Available: <http://ah.anhuinews.com/system/2008/12/25/002180880.shtml>.
 14. G. C. Zhang, personal communication, December 6, 2008.
 15. X. Zhou, personal communication, December 5, 2008.
 16. Economy, E. (2004). *The River Runs Black: The Environmental Challenge*. New York: Cornell University Press.
 17. G. C. Zhang, personal communication, December 6, 2008
 18. Zhou, X. (2008). "China green credit move meets resistance: Watchdog." *Reuters*. [Online]. Available: <http://www.reuters.com/article/environmentNews/idUSPEK28024220080213>.
 19. X. Zhou, personal communication, December 5, 2008
 20. *Anhui Legal News*. (December 25, 2008). "Who will pay for the destruction of land?" *AnhuiNews.com*. [Online]. Available: <http://ah.anhuinews.com/system/2008/12/25/002180880.shtml/12/25/002180880.shtml>.
 21. Ibid.
 22. X. Zhou, personal communication, December 24, 2008.