



C h i n a S u s t a i n a b l e E n e r g y P r o g r a m
中 国 可 持 续 能 源 项 目

C H I N A C L I P P I N G S

Issue 2

March 1999

As Chinese and US leaders prepare to meet in April this year, US leaders were urged to help China address its environmental problems. A recent survey showed Chinese urbanites becoming more concerned about ecological and environmental problems.

Lately, the Three Gorges Dam Project has been fielding attacks by the Chinese press including *Strategy and Management*, a main stream Chinese journal, and the *China Daily*, the official English language newspaper.

The UNDP announced the launching of a \$26 million dollar renewable energy commercialization project in China that will be co-financed by several other nations. In China's electric utility sector, the State Power Corporation announced a ban on new conventional power plants due to an oversupply of power and a slow-down in economic growth.

Air pollution in China continues to top the priority list of environmental problems that are being addressed. Few of the many steps China is taking to combat air pollution include ceasing the production of leaded gasoline and encouraging the use of diesel vehicles.

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News Briefs

CHINA: The Chinese Environmental Protection Admin. reports that the country's environmental protection efforts resulted in an increase in investment equal to 1% of the gross domestic product in 1998 (Xinhua News Agency, 3/2/99).

Meanwhile, the volume of major air pollutants like sulfur dioxide, nitrogen oxide and carbon monoxide in Beijing dropped by an average of 10% due to the city's "intensified efforts" to combat air pollution since 1/99 (Greenwire, 2/10/99) (Xinhua News Agency, 3/2/99).

Us-China: Foreign Affairs Examines Green Cooperation

China's approach to global and domestic environment issues has "direct and serious implications" for a wide range of US international affairs objectives, from ensuring human rights to stopping global warming, writes Elizabeth Economy in the current issue of Foreign Affairs.

Economy, deputy director of Asia Studies and a fellow for China at the US-based Council on Foreign Relations, urges US leaders not to treat the environment as "a low-priority issue with plenty of common ground" when the leaders of both countries meet in Washington in 4/99.

She notes that the environment "is beginning to shape China's economic and political choices in important ways." Not only are hundreds of thousands of Chinese people dying every year "from air-pollution-related diseases," but also large internal migrations, political conflict and open violence are being driven by scarcity of resources such as water. And poor land and river management are taking an economic toll, as massive floods in the Yangtze River valley last year caused damages estimated at \$20 billion or higher. The costs of environmental degradation are estimated to range between 8% and 12% of China's GDP.

Economy: "In the race between development and the environment, Chinese

leaders have bet on development. ... China has placed the burden of global environmental problems on the rest of the world." She offers three suggestions for US leaders:

- o VP Al Gore should "incorporate businesses, foundations, and NGOs from both countries" into the US-China Forum on Environment and Development, and the forum should take on projects that "address both US priorities like global climate change and Chinese domestic needs," such as reforestation and renewable energy.
- o The US should provide "action credit" to companies that undertake efforts in China to reduce greenhouse-gas emissions, with a "focus on activities with a long-term payoff, such as training Chinese officials and researchers in environmental planning and enforcement."
- o Congress should lift sanctions imposed on China following the 1989 Tiananmen Square massacre. "The US-Asia Environmental Partnership, the Trade and Development Agency, and the Overseas Private Investment Corporation could all facilitate exports of environmental goods and services to China," Economy writes (Elizabeth Economy, Foreign Affairs, March/April 1999).

(Greenwire 3/11/99)

G E N E R A L

Chinese Leader Calls For Action On Environment

BEIJING - Chinese President Jiang Zemin has called for action to curb pollution and control population growth, the China Daily newspaper reported.

"We still face an arduous task in dealing with these issues," it quoted Jiang as telling delegates to the annual session of the National People's Congress, or parliament, which ends on Monday.

Jiang said China's huge population of 1.2 billion, serious pollution and resource shortages were urgent problems hindering social and economic growth, the newspaper said.

It said he ordered officials to "pay close attention to co-ordinating economic construction efforts with population control and resource and environmental protection efforts" to achieve sustainable growth in the next century.

Nine of the 10 most polluted cities in the world are in China, according to the Washington-based World Resources Institute.

Jiang called on officials at all levels to reform industrial and infrastructure construction methods to reduce pollution, the newspaper said.

China's major cities and industries should meet set environmental quality standards by 2000 and all regions must protect cultivated land from encroachment, he said.

The newspaper quoted State Environmental Protection Administration Minister Xie Zhenhua as saying factories spewing out pollution would be closed, early warning systems enhanced and environmental supervision increased.

China spent more than 80 billion yuan (\$9.6 billion) on the environment last year, which accounted for one percent of the country's GDP, it said.

(\$1.0 = 8.28 yuan).

(C) Reuters Limited 1999. (Planet Ark, 3/16/99)

Environmental Awareness High For Urbanites

Chinese urbanites are dreaming of owning a car and a house, but a healthy environment is what the overwhelming majority want, according to a recent survey released on Wednesday.

The survey was carried out by the State Forestry Administration (SFA) and the Horizon Market Research Group. One-third of the respondents chose "clean air" as the most indispensable thing for an ideal living environment, compared to 2.2 per cent favouring an automobile, 1.4 per cent an apartment, 2.1 per cent more expressways and 0.5 per cent a modern factory.

Answering the question about "the relation between economic development and environmental protection," 62.4 per cent said that priority should be given to long-term economic development.

However, they made it clear the growth of the economy should not be achieved at the cost of damaging the environment.

Better than that, about 30 per cent said even if economic development is affected, priority should be given to environmental protection as environmental damages affect the future.

Only 7.7 per cent thought the primary task is economic development, with environmental protection subordinate to that goal.

This shows that public awareness about the importance of environmental protection has increased, according to the analysis of the survey results.

It also indicates people are more sensitive to ecological crisis and it has become one of the most significant factors to assess the achievements of governmental work today. Indeed, people have realized a worsening environmental state would exert harmful effects on the existence of human beings, the analysis concludes.

Although 55.6 per cent of China's urban residents knew the government formulates policies to protect the environment and forest resources, they agreed those policies were not carried out "effectively" enough.

The survey shows 73 per cent of China's urban residents have been paying more and more attention to ecological and environmental problems in the past several years.

The survey attributed the new attitude to the havoc caused by severe natural disasters such as last summer's floods, said the survey of more than 1,000 families living in Beijing, Shanghai, Guangzhou, Wuhan and Chengdu, all large cities.

Such results are in accord with another Horizon survey, said a Horizon's researcher.

Public security, inflation, anti-corruption, children's education and housing reform are the top five hot spots arousing widespread public concern.

(China Daily, 03/12/99)

Feature - Chinese Cities Fight To Save Environment

By Christiaan Virant

CHANGCHUN, China - China's northeastern rustbelt is reeling from decades of environmental abuse.

Residents of smokestack-studded cities choke on air clogged with dust from thousands of coal-burning stoves.

Rampant logging has created soil erosion, eating away at already scarce arable land and increasing floods in low-lying areas. Rivers, once frozen during long bitter winters, run free, warmed by scalding industrial discharge.

But officials in at least one northern city are on the march, fighting the degradation with an ambitious green programme.

In the former Japanese colonial capital of Changchun, government workers are scrambling to undo decades of Maoist neglect and spur the region's once-vibrant agricultural economy.

SPRING CITY SEEKS GREEN REBIRTH

Over the next year, a team of green workers will plant millions of trees, replace thousands of antiquated coal-burning stoves and reinforce dozens of shoddily built dikes.

The programme, part of a 10-year cleanup effort, aims to reduce or end logging by 2010 and extend clean-water irrigation to all arable land.

Municipal officials kicked off the effort after nearly five decades of continuous environmental abuse, first by invading Japanese armies and then by China's own breakneck drive to bring its economy out of the dark ages.

Since the green push began more than 10 years ago, Changchun and the Jilin provincial government spent two billion yuan (\$242 million) on the effort, focusing on reforestation and water conservation.

But the scars remain.

Smokestacks still ring the city, belching acrid black smoke that coats the winter snow and shrouds the skyline in yellow haze.

Nearby Jilin was recently cited by the Washington-based World Resources Institute as having the second worst air pollution in the world after Lanzhou in China's northwest Gansu province.

"Things have improved markedly," said one environmental worker gesturing at the tree-lined streets outside the city's environmental bureau. "But we still have a long way to go."

LEADERSHIP SOUNDS WARNING ON POLLUTION

Changchun is but one of the battlefields in China's long-term war on pollution, a struggle that fuelled vigorous debate in Beijing during the annual session of the National People's Congress, or parliament, this month.

Nine of the 10 most polluted cities in the world are in China, according to the World Resources Institute. The odd one out is the Indian city of Rajkot at number five.

Even senior communist officials admit the degradation threatens to stall China's economic development.

"The large population, shortage of resources and serious environmental pollution have emerged as factors hindering China's economic and social development," President Jiang Zemin told congress delegates during an 11-day session.

"We still face an arduous task in dealing with these issues," he added.

Last year, Beijing allocated a record 80 billion yuan to clean up the environment and has pledged to boost the amount this year.

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Most of the funds went to curbing urban air pollution, a growing concern in a nation with rising incomes and rising car ownership.

China's green effort also received a shot in the arm after devastating floods killed nearly 4,000 people and destroyed billions of dollars worth of crops and homes last summer.

The government blamed the floods on silting and uncontrolled logging along the banks of the mighty Yangtze and Yellow rivers and ordered an immediate ban on forest cutting.

Loggers thrown out of work by the ban were assigned to environmental protection work.

Other funds have gone toward educating China's urban millions about the need to reuse and recycle precious water.

NATION UNDER SIEGE

Despite the massive injection of money and public awareness campaigns, China's environment remains under siege.

Respiratory diseases are the leading cause of death. Seventy percent of China's waterways are drying up because water is diverted for industrial or agricultural use, or are so polluted they contain no fish.

China is also the world's second largest source of greenhouse gas emissions, mostly carbon dioxide produced by low-grade coal used for household heating and power-hungry industries.

Acid rain falls on nearly one-third of the country. Coal dust cakes cars and clothing.

Faced with such monumental problems, residents of Changchun say they are satisfied with their government's green push and that any improvement, no matter how small, is welcome.

"I'd love it if our city was cleaner," said one shopkeeper in the bustling Guangfu warehouse district. "Even if I could just wear my white blouse again, then I'd be happy."

(\$1=8.3 yuan).

(C) Reuters Limited 1999.
(Planet Ark, 3/24/99)

Chinese Journal Boldly Criticizes Government's Dam Project

By Erik Eckholm

BEIJING -- In an unusual critique of Government policy, a mainstream journal here has published a searing exposé of social problems caused by construction of the giant Three Gorges Dam.

The article, by a Chinese scholar using a pseudonym, describes in vivid detail the obstacles to resettling 1.3 million people whose homes and farms will be flooded by the reservoir behind the dam, on the Yangtze River, which starts filling in 2003.

If current trends continue, the article warns, the plight of these people "may become an explosive social problem, and the dam region will become a hotbed of sustained upheaval."

While similar concerns were expressed here a decade ago, before construction was approved, they were silenced after the 1989 crackdown on pro-democracy demonstrators at Tiananmen Square and some opponents were imprisoned.

Such blunt dissection of a major Government program is almost never seen in China now.

The article is likely to cause speculation about possible cracks in high-level support for the dam, which is considered a pet project of Li Peng, a former Prime Minister who remains No. 2 in the Communist Party and heads the National People's Congress, China's parliament.

When the dam was formally approved by the Congress in 1992, at Prime Minister Li's urging, one third of the delegates voted against it or abstained, an unprecedented gesture of opposition. Still, there is no sign that the Government intends to abandon the project, the world's largest hydroelectric dam.

Today's leaders publicly portray the dam as a triumph of the national will and describe a resettlement program on schedule. Officials recently reported that more than

160,000 people have been successfully relocated and another half million will be moved by 2003, when flooding starts. The reservoir is to be filled by 2009, forcing more than half a million more people to move.

When the project was formally approved, officials promised that those displaced would be given a better life on modern farms or in newly built towns where they would find jobs in expanding industries.

But the critical article, which appeared in the journal Strategy and Management, details the acute scarcity of arable land in the mountains along the Yangtze where most people are supposed to establish new lives. Initial efforts to transplant farmers onto the steep hillsides have fared poorly, it says.

The region's industries are more often failing than booming, the article notes, and it documents a serious lack of funds, widespread corruption and deceptive reports by officials.

The article echoes arguments raised by longtime opponents of the dam, in China and abroad, who argue that the environmental, archeological and social costs will outweigh the promised benefits to navigation, energy supplies and flood control.

Domestic critics have been muted in recent years. The official press, while sometimes providing hints of problems bred of corruption and the complexity of resettlement, has generally gushed with praise.

So it is all the more surprising to see such a detailed critique appear in a journal seen by thousands of officials and scholars.

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"Such an article could never be published in newspapers here, which are more strictly controlled by the authorities," Li Rui, a Communist Party elder and a rare open critic of the Three Gorges Dam, said in an interview. "But as Chinese now have more freedom to speak out, I don't expect any actions against the journal or the writer."

The article is signed Wei Yi, of Central China Normal University in Wuhan. That is a pseudonym for a Chinese sociologist with long experience in the Three Gorges region, said a person familiar with the research.

Strategy and Management publishes 6,000 copies every other month. The journal was long known as having a conservative bent, but in the last year or two it has become more provocative.

"Often we publish pieces that are not in keeping with official views, in order to encourage discussion," said Zhang Jian, an editor at the journal.

Still it is hardly a radical forum. The journal is published by the Strategy and Management Research Society, a small research organization with close ties to the Government and military. It is formally registered with the State Council Office of Economic Restructuring, but it calls itself an independently financed, nongovernmental group. The society's directors include retired military and economic leaders; one is Wang Daohan, an elder statesman and a mentor of President Jiang Zemin.

The latest journal was printed in mid-February as the Chinese New Year holiday was winding down, and the critique of the dam has not yet been widely noticed. Zhang, the editor, said he knew of no official objections to the article up to now.

Officials of the Relocation and Development Office of the Three Gorges Project Construction Committee, in Beijing, said today that they only saw the article this week and could not yet comment.

Li Rui, the party elder and most senior critic of the dam, said the project was too far along to cancel. But, he added, "there is no second thought or debate on this among the leaders," and he dismissed speculation that Prime Minister Zhu Rongji might try to halt the project, which by the latest official estimate, widely seen as low, will cost \$25 billion.

On Tuesday the official New China News Agency quoted officials overseeing the project as saying it faces a \$3 billion deficit for the current phase of construction, from 1998 to 2003. They expect to raise most of the money needed with domestic bank loans and bond and stock issues.

The Yangtze has already been diverted around the dam site, near Yichang, and construction is well under way. China hopes to gain international financing for some of the costs.

Li said he and other domestic opponents hoped the Government would at least decide to hold the reservoir -- a serpentine 400-mile-long lake -- to a lower level than planned. This could lessen the number of uprooted people but would also reduce the economic benefits.

Under the current design, the dam's generating capacity would be 18,200 megawatts, nearly twice as powerful as the Grand Coulee.

The journal article features a detailed case study of Yunyang County, near Chongqing, where 120,000 of an impoverished population of 1.24 million must be moved.

To fight erosion and flooding, the Government has declared that steep slopes should not be cultivated. But in Yunyang County, the article notes, nearly half the existing farms are on illegally steep slopes, and every patch of decent farmland is already in use.

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The funds allocated for terracing and other measures to create sustainable cropland in the hills are less than half the amount needed, the article says.

With industry in the region faring poorly, so is the search for new factory jobs.

"Since 1995, Yunyang County has basically been unable to relocate any more people into factories," the article says. Instead, many displaced townspeople have been given a "living allowance" of \$8.50 a month, which is "unable to satisfy the elementary living needs."

In the county, the article says, more than \$240,000 of the resettlement funds were

embezzled or otherwise misused between 1993 and 1998 and numerous officials have been imprisoned or disciplined. Towns have commonly added fake names to the resettlement list to get more funds, it says, creating "a piggy bank from which power-holders can extract private gain."

One way to relieve the overcrowding would be to transfer displaced people to distant regions. This is a Government goal, but has proved unpopular and made little headway.

"In China," the article says, "all of the areas with better natural conditions were filled with people long ago."

(New York Times, 3/18/99)

China Faces Fresh Water Shortage In 21st Century

BEIJING, March 9 (Agence France-Presse) - China will be facing a shortage of fresh water supplies in the next few years, the official media said Tuesday, citing parliamentary advisers.

"The problem of fresh water supplies is likely to be the most important issue of the 21st century," the China Daily said, quoting Hou Jie, chairman of an environmental subcommittee of the Chinese People's Political Consultative Conference (CPPCC).

Hou said the problem of fresh water supplies will determine how China can adequately feed its 1.2 billion population in the next century.

"Our priority at present is to carry our special investigations and research into the distribution and saving of fresh water, and the treatment of sewage before the second half of this year," Hou said.

Hou said that China has been working on cleaning up pollution in China and has invested 1.02 percent of its 1998 gross domestic product in environmental protection.

Beijing city, notorious for its choking smog, will invest 40 billion yuan (4.8 billion

dollars) to treat air pollution in the next four years, the newspaper said.

The city will be spending some 11 billion yuan (2.3 billion dollars) this year to clean up its air, it said, quoting Jia Qinglin, secretary-general of the Beijing Party Committee.

Beijing city "will focus on dealing with three major pollution sources -- coal, car emission related nitrogen oxides and dust particles," it said.

China's rapid urbanization has strained water supplies and sewage treatment as well as augmented demands for scarce energy.

China has built up an impressive body of environmental legislation but local environmental officials frequently bemoan the lack of political will to implement the law.

A recent World Bank report said the volumes of air and water pollutants across the country exceed World Health Organization standards by two-to-five times.

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Energy Programme Launched

China Daily, 03/10/99--

A NEW project to promote the widespread commercialization of renewable energy technologies in China was launched on Monday.

The United Nations Development Programme (UNDP) Beijing office inaugurated the project in collaboration with the Chinese Government, UNDP sources said.

The project will cost US\$25.83 million, which is jointly financed by the Global Environment Facility through UNDP (US\$8.8 million), the government of Australia (US\$3 million), the government of the Netherlands (US\$2.53 million) and the Chinese Government (US\$11.5 million).

The project, which will last five years, from March 1999 to December 2003, is to be carried out by the State Economic and Trade Commission with assistance from the State Environmental Protection Administration.

It will be supervised by the Department of Economic and Social Affairs of the UNDP office.

China is one of the world's largest emitters of greenhouse gases, which cause global climate changes, because of its dependence on fossil fuels for energy.

The Chinese Government has realized that sustainable energy sources offer an environmentally sound alternative to fossil fuels, the commission said.

The project supports government initiatives to lessen the dependence on fossil fuels and strengthen the capacity in China to promote sustainable energy in the country.

The commission said that the project aims to develop market-oriented institutions and instruments to attract new technology in the energy industry, such as rural electrification by solar and wind power, and industrial production of biogas.

Project activities include supporting the formation of a China Renewable Energy Industries Association, international training for policy makers and professional standard of development.

China Initiates Three-Year Ban on New Power Plants

Economic Daily (Jingji Ribao)
25 January 1999

China's State Power Corporation announced on 19 January that, in principal, no new conventional power plants will be approved for construction over the next three years. Oversupply of power capacity combined with slowing economic growth

have led to the measure. While power developers will be hurt by this announcement, new opportunities now exist to upgrade or close some of China's most inefficient power plants. In 1998, inefficient plants with an installed capacity of almost 3 GW were shut down and another 2 GW is slated to go this year.

China: Leaded Gas Production To Stop; Natural Gas Pushed

China's state-run oil refining company will stop producing leaded gasoline by 2000, according to a senior official.

Sinopec has been revamping and upgrading its refineries to meet demand for cleaner fuels, said Hong Dingyi, a company official, speaking at a Chinese-European energy conference in Brussels.

China imports diesel with a sulfur content of 0.5% to 1.0%, but such imports will be cut off later this year and replaced by diesel with 0.2% sulfur content, officials said (Reuters/Planet Ark).

Beijing Pushes Natural Gas Use To Curb Air Pollution

Meanwhile, Beijing officials last week proposed 28 measures to reduce air pollution in the city. Beijing Mayor Liu Qi and other officials signed a "letter of responsibility" promising cleaner air by 2000. As part of the campaign, the government is urging the use of natural gas instead of "dirtier fuels."

After Beijing launched 19 anti-pollution regulations in December, sulfur-dioxide emissions fell by 17% in one month (Greenwire, 12/23/98) (Reuters/Planet Ark). (All cites 3/8.)

China Plans To Encourage Use of Diesel Vehicles

BEIJING - Chinese authorities plan to encourage the use of automobiles fuelled by quality diesel to reduce pollution, the China Daily said.

"To lower auto-exhaust emissions, the administrator of China's automotive industry is stepping up efforts to dispel prejudice against diesel cars," the official newspaper said.

"Diesel vehicles provide better fuel economy and discharge lower amounts of hydrocarbon and carbon-monoxide emissions than gasoline vehicles," it said.

The newspaper quoted a researcher at the State Machine-Building Industry Bureau as saying that "state regulatory authorities are in a position to promote development of high-performance and low-emission diesel vehicles".

Some Chinese cities, including Lanzhou, Urumqi and Xamen, ban the use of diesel-

powered light commercial vehicles in the belief they cause major pollution, it said.

The newspaper said the pollution was caused by low-quality diesel, and China would enact a set of rules on diesel quality this year.

It also said Beijing's plan to impose fuel consumption tax to replace a host of random fee charges would stimulate demand for diesel.

With the tax, diesel would cost about 700 yuan (\$84) per ton less than gasoline, the newspaper said without elaborating.

China produced about 400,000 diesel-powered vehicles annually in the past few years. Heavy trucks and buses accounted for less than 30 percent of the total, it said. (\$1.0 = 8.28 yuan)

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(Planet Ark, 3/24/99)

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Asia Pollution Reaches West Coast

WASHINGTON (AP) -- The air that people breathe in Seattle today may contain chemicals that spewed from a factory in China last week.

In the first published study of airborne chemicals from Asia reaching the United States, researchers measured carbon monoxide, radon, aerosols, hydrocarbons and other chemicals in air arriving at Cheeka Peak Observatory in Washington State.

It's believed to be the first time anyone has detected Asian pollution in the United States, said Dan Jaffe, a professor at the University of Washington, Bothell, and lead author of the report in the March 15 issue of Geophysical Research Letters.

Jaffe, who first reported his findings last December at a meeting of the American Geophysical Union in San Francisco, added more detail in the published paper.

Since the mid-1970s, the production of such pollutants as nitrogen oxides and sulfur dioxide has been increasing in Asia as more factories opened and more cars came into use. These pollutants previously have been tracked into the central North Pacific by NASA.

In March and April, 1997, the researchers recorded 10 instances of pollutants arriving at their observatory on the Olympic Peninsula, he said. They traced those air masses backwards to find the source of the pollution.

The chemicals included carbon monoxide, radon, hydrocarbons and peroxyacetyl nitrate, which Jaffe described as a precursor of smog. "Chemists in LA (Los Angeles) are very familiar with it," he said.

While the air normally contains what are called background levels of these chemicals, the amounts measured in air arriving from Asia topped those amounts.

For example, the scientists measured 146 parts per trillion of peroxyacetyl nitrate in air samples arriving from Asia, jumping to 201 parts per trillion on the strongest day. By comparison, air samples not containing Asian air had just 71 parts per trillion.

They concluded that 22 percent of the carbon monoxide arriving at Cheeka Peak originated in East Asian emissions.

The concentrations of the pollutants measured were not high enough to be an acute hazard to health, Jaffe said.

The air masses took about six days to travel from Asia to North America along the westerly winds.

Jaffe was reluctant to be critical of Asian countries.

"We make pollution too. Everybody's pollution goes somewhere else," he said.

Tom Cahill, a professor of atmospheric science at the University of California at Davis, who was not part of Jaffe's team, said measuring these pollutants and detecting their source is very difficult.

But he said he believes Jaffe's group is correct and has found evidence of chemical pollution arriving from Asia.

"It's a small world," he said.

Cahill is studying dust crossing the Pacific Ocean from Asia and noted that at the same time the chemical measurements were being made, there was also a dust plume stretching from Asia to North America.

The dust particles he found included arsenic, copper, nickel, zinc and sulfur, which are not natural but are clearly from industry from Asia, Cahill said.

With new techniques, scientists are able to tell the difference between coal sulfur dust from Shanghai and typical industrial

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pollution from Manchurian smelters, Cahill said.

The Asian air was carried on relatively low-level winds, between the surface and 2 miles high, rather than the powerful high-altitude jet streams.

Cahill said dust pollution traveling great distances is a problem in many areas.

He has traced dust from northern Africa across the Atlantic Ocean, into Texas, north through the Midwest and back into the ocean again across Maine, he said.

And 11 years of data from the Mauna Loa Observatory on Hawaii, Cahill added, indicate that mountain "is effectively a suburb of Beijing each spring."

Pollution Threatens Cultural Heritage

China Daily, 03/02/99--

PROMPT measures should be taken to protect China's rich heritage of cultural relics from further damage by pollution, according to a senior official.

"We are faced with the urgent task of rescuing China's cultural relics, which are suffering from acid rain, suspended particles produced by coal burning, and sulphur dioxide emissions," said Huang Kezhong, deputy director of the China Institute of Cultural Property, in a recent interview with China Daily.

Some 23 million tons a year of suspended particles are emitted by burning coal. Relics experts consider this as the biggest threat to China's cultural heritage.

Suspended particles have accelerated the corrosion of stone sculptures at such rich cultural sites as the Yungang Grottoes in Shanxi Province, the Yaowangshan Grottoes in Shaanxi Province, and the stone sculptures at the Song Tombs in Henan Province, where most of the emperors of Song Dynasty (960-1279) are buried.

Experts blamed acid rain and sulphur dioxide for the fading or peeling of the colourful frescoes and sculptures.

Acid rain has led 500-year-old bronze astronomical instruments in Nanjing Purple Mountain Observatory in Jiangsu Province to corrode at four times the speed bronze normally corrodes in an unpolluted environment.

Sulphur dioxide emitted by chemical plants within 10 kilometres of Guangsheng Temple in Shanxi Province since the 1970s has darkened the temple's 400 square metres of frescoes and 100 coloured sculptures.

"Few tourists are aware that they have also become a source of pollution," Huang said.

Indoor temperatures and air humidity in the Forbidden City, the Terracotta Warriors buildings, and the Mogao and Longmen grottoes have been raised by the dramatic increase in visitors over the past decade.

Nine kinds of mould have been found in the Terracotta Warriors No 3 pit after a long period of exposure to dusty and humid air conditions, largely caused by visitors, say local environmental experts.

The decorative patterns carved on the white marble at the Taihe Hall in the Forbidden City are almost worn down, Huang said.

Corrosion has turned the outer layers of the marble into plaster, which breaks off easily at the slightest touch, he said.

In an effort to curb the pollution damage to relics, experts established an environmental monitoring network at major relics sites in 1995, with the aim of assessing pollution damage and its causes.

"We are always gripped by the fear that some relics may be damaged beyond repair before they can be rescued. This would be an irreplaceable loss," Huang said.

Nation To Improve Environment

China Daily, 03/03/99--

CHINA plans to tighten pollution controls and improve ecological conditions this year in a bid to halt environmental deterioration, according to Xie Zhenhua, minister of the State Environmental Protection Administration.

Xie said in an interview with Xinhua that the fight against pollution this year is crucial to the country's objective of improving the environment in the next century and that China plans to stop environmental deterioration by 2010.

He explained that priority will be given to controlling emissions and ensuring that all industries meet discharge standards and all major cities meet environmental quality standards by 2000.

The State will draw up a raft of policies, he said, and local environmental protection departments have been asked to increase law enforcement efforts.

China will begin an all-out battle against water and urban air pollution this year. The government has told all industries in the Dianchi Lake area in Southwest China's Yunnan Province to meet emission standards before May 1, and polluters in the Chaohu Lake area in Anhui Province to do so before the year-end. The authorities are also urging polluters in the Liaohe River valley in Northeast China and the Haihe River valley in the north of the country to meet emission standards as soon as possible. Governments in the Huaihe River valley and Taihu Lake area in Jiangsu and Zhejiang provinces have been asked to consolidate pollution control, urban sewage treatment and ecological protection efforts to clean up the area by 2000.

The government plans to clean up the Bohai Sea in three decades and is taking steps to fight acid rain in about half of the country.

Beijing is determined to improve its air quality before October 1, the 50th anniversary of the founding of the People's Republic of China.

Polluted Beijing Proposes Smog Clean-Up

BEIJING, Mar. 05, 1999 -- (Reuters) Beijing, one of the world's most polluted cities, proposed 28 measures on Friday to clean up its air, the state-run Xinhua news agency said on Friday.

In the second stage of a program to cut smog, Beijing Mayor Liu Qi and other senior officials signed a "letter of responsibility" promising cleaner air by 2000, the news agency said.

The Chinese capital launched 18 anti-pollution regulations in December to control excessive coal burning and exhaust

emissions. Sulfur dioxide emissions fell by 17 percent in January, Xinhua said.

It said the second set of measures would include urging the use of natural gas instead of dirtier fuels and improved construction site management to cut down on dust.

Beijing and eight other Chinese cities are ranked among the world's 10 most polluted cities, according to the Washington-based World Resources Institute. ((c) 1999 Reuters)

A I R P O L L U T I O N

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Pollution Trend Likely To Be Reversed Next Year

China Daily, 03/09/99--

MEMBERS of the Ninth National Committee of the Chinese People's Political Consultative Conference (CPPCC) expressed their confidence yesterday about environmental protection in China.

"Yes, pollution is serious here, but we have the will conquer it," Hou Jie, chairman of the committee's Subcommittee on Population, Resources and Environment, said at a press conference yesterday.

"Pollution has nothing to do with our development mode, but stems from a lack of understanding. Now that we have realized our mistakes and made up our minds to correct them, we have no reason not to trust ourselves."

To back up his words, he referred to Beijing's scheme to eliminate the miandi, a minivan taxi, whose tail gas is highly polluting.

The campaign, which started in the second half of last year, is scheduled for completion in July when the last of the 10,000 miandi prepare to meet its maker.

Wang Jirong, a member of the subcommittee and deputy director of the State Environmental Protection Administration, said some foreign experts' forecast that China's environment will not improve before 2030 was "too gloomy."

"According to our plan, which has already been made public, we are set to reverse the pollution trend next year," she said. "And I am confident this goal will be achieved."

The subcommittee was established in the First Session of the Ninth CPPCC National Committee last year. It was widely acclaimed as a significant indication that China was paying more attention to protecting its environment.

The subcommittee's large-scale investigation into the natural environment in the upper reaches of the Yangtze River immediately after last year's severe floods helped the central government to decide that one essential means of preventing such floods in the future was to forbid illegal logging and other human activities damaging the ecology.

Another significant point is that China's investment in environmental protection reached 1.02 per cent of the country's gross domestic product in 1998, the first time ever it has gone above 1 per cent, Wang said

Fresh water is now topping the subcommittee's agenda.

The problem of fresh water supplies is likely to be the most important issue of the 21st century, Hou said. Whether the problem can be dealt with properly will decide whether China can adequately feed its huge population in the next century.

"Our priority at present is to carry out special investigations and research into the distribution and saving of fresh water, and the treatment of sewage before the second half of this year," he said.