



### Dear Friends, Colleagues and Supporters,

Beijing may not seem a likely place for a revelation about the wonders of nature. With over 12 million inhabitants and air pollution levels that are often among the worst in China, it is a place one does not immediately associate with greenery and wildlife. But my most memorable experience of 2000 happened here in China's capital, not in the wild mountains of Sichuan or deserts of Xinjiang.

In May, an Englishman contacted me to ask for advice on

where to go in Beijing to watch birds. He had worked here for three years in the early 1970s, and kept detailed records of all of the birds he saw then, but had not been able to return to Beijing in over twenty-five years. Interested to hear his "birdwatcher's perspective" on how Beijing had changed in a quarter of a century, I agreed to take him out for a day of birding.

I picked him up at his hotel at 4:30 in the morning, (you need an early start for birding!) and we headed northwest about 50 kilometers into the mountains. On the way, we saw many black-crowned night herons in the sky. This is not a rare species in China, but in his three years here in the 1970s, my friend had not seen a single one. We guessed that less harassment from people, and the recent large-scale planting of poplars and other trees for roosting, might have allowed the birds to come back. As we got into the mountains, he was again surprised. " The hills were so bare back then!" Over the past twenty-five years, there have been major efforts to plant trees on steep slopes around the capital. Just as important, farmers have new opportunities to make money from jobs in the city, so few still feel the need to plant corn or herd goats on slopes that are much better suited to growing forests.

Again and again during the day, the Englishman noted species that he had never seen in the early 1970s, most of them forest birds like the nutcracker, the grey-faced buzzard eagle, flycatchers and woodpeckers. By the time we got back to his hotel, around ten in the evening, we were exhausted but elated. We had seen over fifty species of birds in all, but more importantly, we had seen the power of nature to heal itself. Given the slightest relief from the abuses of humanity, life in its many forms was reclaiming the hills, and even creeping back into the city itself. The birds we counted were just one indicator, but I'm sure that you'd find the same trend if you looked at mammals or mushrooms or butterflies or soil microorganisms. Slowly but surely, the forests are returning.

Last winter, WWF saw another demonstration of nature's power to heal itself, in Hanshou County, Hunan Province. We had joined the previous summer with the Hanshou County government in a daring experiment to restore the eleven square kilometer Qingshan Polder as a wetland. This was the first demonstration project of our Yangtze Programme, and no one was certain how long it would take for land that had been planted with crops just a year before to again function as a wetland ecosystem. Fortunately, we didn't have to wait long. In the winter of 1999-2000, researchers from Hunan Normal University found that over thirty species of wetland birds returned to the site, including flocks of such rare protected species as the tundra swan and white spoonbill! They also found fish and aquatic plants re-establishing themselves much more rapidly than we had expected.

Of course, nature needs to be resilient in China. WWF works in many areas of the earth such as Brazil and Arctic, where one may travel for days or weeks without seeing another soul. Here in China there is hardly a square foot of land that doesn't bear the imprint of humanity. This raises the question: in a country of 1.3 billion people, can we afford to have nature at all? WWF believes that not only is nature affordable, but the tremendous needs of the human population make conserving the natural areas that remain and creating new spaces for nature vital for the country's future.

Fortunately, many people in China share this view. The government has promoted strong policies in recent years to ban logging of natural forests, increase the number of protected areas and restore forests on sloping agricultural lands. Recognizing the vital role played by wetlands in storage of floodwaters, the government has also promoted restoring reclaimed wetlands in the Central

Yangtze. The media in China has also come to play an increasingly important role in exposing and raising awareness of environmental problems. Finally, citizens groups, scientific researchers and local communities are becoming more and more active in finding solutions to ecological problems and asserting their rights to live in a healthy and plentiful environment.

Our role as an international organization is to support the government and people of China in these efforts. In this report, you can read about the progress of our programmes over the past year to adapt advanced conservation approaches from around the world to Chinese circumstances, and strengthen China's ability to solve its own problems.

WWF China grew during 2000. We hired Mr. Wu Haohan to serve as Protected Areas Officer; Ms. Wu Yusong to manage our field projects in Yunnan; Mr. Li Shengzhi to manage field projects in Pingwu County, Sichuan; Ms. Wang Xiaogeng to serve as Managing Director in our Beijing Office; Mr.Xu Wei to serve as Information Officer; and Mr. Li Qing to work on our Environmental Educators Initiative. Unfortunately, we also bade farewell to two good friends: Lu Zhi accepted a fellowship for post-doctoral study at Harvard University in the fall of 2000, and in November Gan Lin returned to Norway, where he will work once again at CICERO, an international energy research center. Fortunately, both Lu and Gan will continue to serve as WWF advisors and partners in their new positions.

The past year saw important new initiatives between WWF China and some of our closest Chinese partners. The Third National Survey of the Giant Panda and its Habitat, a cooperative effort with the State Forest Adminstration, was launched in the springtime. We also embarked on Phase Two of the Environmental Educators Initiative, a million-dollar partnership with the Ministry of Education and BP. And in July, we signed a five-year Memorandum of Understanding with the Tibet Forestry Department to work together on conservation on the Roof of the World.

We made many new friends, and started many new partnerships in 2000. A growing corps of enthusiastic and dedicated volunteers helped us with everything

from proposal-writing to promotion of ecotourism projects. New private sector partners included Lafarge China and the Pear Island Ecological Garden Corporation. We joined with a number of China's leading environmental NGOs to support Earth Day 2000 activities. And we teamed up with ChinaByte, one of China's leading internet companies, to develop WWFCHINA.ORG, to promote our work over the world wide web. As our capacity grew, we also began offering more and more training for partner organizations in fields such as project development, financial management, budgeting,

and reporting. In the coming year, we look forward to strengthening our partnerships and building many new ones.

I have no illusions about the severity of the environmental crisis in China. In many respects, the situation continues to deteriorate, and there is little that a small organization, acting alone, can do about it. The good news is that we are not alone, and that if we can work together to take away some of the pressure, nature will take care of the rest.



Jim Harkness Representative

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#### Forests of the Upper Yangtze

Although WWF's forest conservation work in China includes issues of national significance, such as forest certification, our field programmes focus on the Forests of the Upper Yangtze. Home to the giant panda and thousands of other unique species, this area has been identified by WWF as a globally-significant center of biological diversity. These forests also play a crucial role in providing fuel, wood and fresh water for local people, and in regulating the flow of water and nutrients in the mighty Yangtze River.

During 2000, WWF worked with Chinese experts to develop a clearer picture of the Forests of the Upper Yangtze ecoregion. Detailed mapping of biological resources, and studies of significant species (such as the golden monkey, takin, and crested ibis) will provide a basis for future efforts. We also made progress in field conservation in the following areas, which are described in this section:

- Panda Programme
- Baimaxueshan
- Forest Conservation and Sustainable Use

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### Ecotourism

People all over the world love the Giant Panda, but research on the impacts of uncontrolled tourism in panda habitat have shown that it is possible to "love" pandas to death. As part of the Pingwu Integrated Conservation and Development Project (ICDP), WWF is working with a protected area and local communities in northern Sichuan to demonstrate how tourism can be "panda-friendly." In October 2000, the Wanglang Nature Reserve's new ecotourism facility welcomed its first international visitors.

In the reserve, visitors learn about the Giant Panda and its habitat, and also contribute financially to support the reserve's anti-poaching and habitat monitoring patrols. The project is also working on the following issues: limiting the flow of tourists in the peak season and improving management to minimize impacts; monitoring the impacts of tourism on the habitat; and finding ways to spread the benefits from tourism more widely in local communities.

One of the major positive impacts of the project has been to improve the



relationship between reserve staff and local communities. The initial success and lessons of the Wanglang ecotourism project has also brought requests from the provincial government and other conservation organizations for training on ecotourism development.

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#### **Community Development**

Pingwu County, Sichuan probably has more pandas than anywhere else in China, but more than half live outside of protected areas. The major threat to these forests used to be logging, but after logging was banned in 1998, other problems continued: hunting, fuelwood cutting, and grazing. To be successful, the Pingwu ICDP has to understand the forest resource uses of local people, and help them find more sustainable development alternatives.

In addition to Han Chinese, Pingwu county is home to several ethnic groups with a long tradition of forest use: the Qiang, Tibetans and Baima people. These groups have managed forests sustainably in the past, maintaining a balance between exploitation and regeneration and nurturing rich, unique cultures. In recent decades, this balance has been disturbed by population growth, widespread commercial logging and most recently, the rapid growth of the market economy. As a result, forests are shrinking and resource use has become unsustainable.

In 2000, the Pingwu ICDP helped set up three resource "user's groups" in communities bordering Wanglang, to develop more sustainable development activities. The project provides technical assistance, skills training and small loans and the groups not only develop sustainable small businesses, but also agree to participate in forest conservation.



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## National Survey on the Giant Panda and Its Habitat

The third national survey on the giant panda and its habitat (jointly conducted by the State Forestry Administration of China and WWF) was launched in 2000 in Sichuan, Shaanxi and Gansu provinces. So far, field work in 11 counties and 9 nature reserves in Sichuan has been completed and all the field work is expected to be completed by the end of 2001. Over half of the field work in Shaanxi and Gansu provinces has been completed and all the field work is expected to be completed by June 2001. Analysis of collected data will be conducted in the first half year of 2002 and the result on the status of the giant panda population and its habitat will also be released then.

#### Monitoring and Patrolling in Panda Reserves

In 2000, WWF provided training and financial support for monitoring and patrolling in nine panda reserves. The patrols found that tourism has become a serious source of pressure on habitats in Wolong and Qianfoshan reserves, and discovered a major bamboo flowering event in Baiyang Reserve. Monitoring also indicated that although logging has been banned, other destructive human activities (poaching, illegal wood cutting, grazing and medicinal plant collection) have increased since the ban was put in place.

A workshop in April brought together staff from 23 different reserves for the first time to discuss how to improve their work. We hope that this lively forum will be the first step in setting up a platform for panda reserves to exchange information on conservation.

### **Capacity Building for Reserve Staff**

The training need assessment on the giant panda reserves in Sichuan was completed in June by the Sichuan Forest School. Twenty-one reserves were evaluated in terms of organizational structure, personnel arrangement, knowledge structure and professional skills of reserve staff; the gap between the work expected and the present situation; and the needs of staff in knowledge, techniques and skills. The assessment provides basic information and reference for the development of 3-5 year training plan for the giant panda reserves in Sichuan.

#### Research Projects on the Giant Panda and Its Habitat

Under the support of WWF, two researchers from Beijing University have been carrying out research on the problem of panda habitat fragmentation, the development of scientific and consistent methodologies for panda surveys, and the establishment of a GIS database on the giant panda population and habitats. The research results will provide a scientific basis for habitat restoration, ecological corridor establishment and future decision making on giant panda conservation.

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#### **Research on Panda Habitat Restoration**

The implementation of "Natural Forest Protection Program" and "Conversion of Agricultural Slopes to Forest and Grassland Program" provides a great opportunity for biodiversity conservation in China. In 2000, WWF and Beijing Forestry University initiated a research on the giant panda habitat restoration. The research will cover a few aspects: causes of panda habitat deterioration, criteria development and indicator system evaluation, experiences and lessons from previous habitat restoration attempts and proposal of a model for habitat restoration and rehabilitation. This project will end in June 2001.

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#### 🛝 🛛 Baimaxueshan ICDP

Located between the two great rivers - the Jinsha, a major branch of the Yangtze, and the Mekong - in northwestern Yunnan Province, Baimaxueshan Nature Reserve is one of China's richest reserves in biodiversity, but it is also one of the country's poorest areas. Despite its status as a protected area, the reserve is still threatened by the unsustainable exploitation of its resources. In 1999, WWF initiated a project to improve management of the reserve, reduce conflicts between the reserve and local communities, and improve the livelihoods of local people by enhancing their capacity for self-development and resource management.

In 2000, we provided technical assistance (a series of workshops and supporting social research) for development of a management plan for the reserve. The plan will be submitted for GEF funding in the spring of 2001. We also provided some essential material assistance to the reserve, including a patrol vehicle to facilitate management of the 300,000 hectare forest.

Recognizing that most residents in the reserve are Tibetan Buddhists, we supported some reserve-initiated activities such as inviting a living Buddha to deliver sermons on "nature protection and Buddhism" to villages in and around the reserve, compiling a range of materials on "natural resource conservation and Buddhism" into a brochure in both Chinese and Tibetan languages, and distributing the brochure to villagers.

WWF is working in six villages in Baimaxueshan to enhance the capacity of local people to improve their lives through sustainable management of natural resources. Reserve staff work on these village projects, which improves their relationship with the communities. During 2000, we organized an action research project that brought together forest ecologists, reserve staff and farmers to assess the management of collective forests in Baimaxueshan. These forests, which are controlled directly by communities, comprise roughly 50-60% of the area of the nature reserve. Participating villages elected management committees to improve forest protection, and revised village rules on forest resource use. Two

of the villages decided to close off certain mountainsides to promote faster forest regeneration, and invited a Living Buddha to give blessings to their actions.

Using participatory approaches, villagers themselves analyzed their situation, identified problems and devised solutions. In addition to improving forest management they focused on other key resource or capacity constraints, such as water supply, animal husbandry, crop yields, wood shortage, sanitation and health. The project has helped identify sources of technical assistance, mostly local, and many activities are underway. Fuel efficient stoves, built by farmers themselves, use less wood, and heat homes more efficiently with less smoke. Fixed cattle sheds, built of stone, have replace temporary wooden stalls. A revolving fund has been set up to help cover veterinary costs, and local veterinary

experts have been trained. Health training has targeted village women, who in addition to having many unaddressed health needs themselves are also primary health care providers for children. And several simply water supply projects have improved access to drinking water and increased the area of irrigated crops.

(See also 'Community Education in Baimaxueshan Nature Reserve', page 18)



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#### Strategic Planning for WWF's Forest Programme

In March 2000, we held a workshop to develop a strategic plan for WWF's Forest Programme in China, supported by the Forest for Life Campaign and Forest Programme of WWF International. The plan will help to guide the Forest Programme for the next five years.

# **Strategic Plan**

**Overall Conservation Goal** 

Conserving biodiversity and ecological processes of forests to secure the sustainable development for present and future generations.



#### Forest Conservation and Sustainable Use

China's forests are among the most diverse in the world, but they are also among the most threatened. Forest conservation and sustainable use is therefore a high priority for WWF in China. China's forestry industry has been undergoing a remarkable transition in the past fifteen years, from a traditional focus on logging to a more modern view emphasizing forest conservation and multiple uses. As a global conservation network that has set down roots in China, WWF is in an excellent position to help China through this difficult transition.

In 2000, we carried out the following activities to help promote more sustainable foresty in China:

- Policy Research and Awareness-Raising on Timber Trade and Certification
- Research on Agricultural Land Conversion
- Sustainable Forestry Development



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### Because of the logging ban, rapid economic growth and the liberalization of trade, China's demand for imports of timber and

**Forest products trade and certification** 

other forest products has grown rapidly in recent years. (see graph) These changes raise fears that well-intentioned forest protection policies within China might hasten forest destruction in other countries. In 2000, with support from TRAFFIC and WWF's Forests for Life Campaign, WWF China organized a major research to determine the nature and impacts of this tremendous increase in imports. Preliminary results have already been shared with others in the Asia-pacific region, and a final report will be released in 2001.

The best way to reduce the negative impacts identified in the research is to help China move beyond the logging ban and establish a sustainable domestic forest industry. In 2000, WWF worked with government, scholars and industry to promote forest certification as a key element in this transition to sustainability. In June, WWF sponsored a delegation including officials, scientists and journalists to attend the Millenium Forests For Life Conference and Global Trade Fair For Certified Products in London. In October, we published a Chinese version of "Certification - A Future For the World's Forests." And in December we received support from the WWF-World Bank Alliance for Forest Conservation to develop a National Working Group to promote certification in China.

Certification-A Future for the World's Forests Chinese version

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#### **Policy Research on Forest Restoration**

In addition to banning logging over much of the country, the Chinese government has also initiated a programme replant forests on agricultural lands with a slope of over 25 degrees. During the pilot phase of this programme, 174 counties were chosen to try out the agricultural land conversion. Areas with sloping agricultural lands were identified and farmers were provided a payment in return for planting trees instead of crops on these lands. In 2000, WWF worked with several partner organizations (The State Forest Administration, Sichuan Forestry Department, Chinese Academy of Forestry and Sichuan Academy of Social Sciences) to monitor the implementation of this programme in three of the pilot counties in Southwest China, assess its impacts, and provide suggestions for improvement.

The researchers combined high-tech tools such as Geographical Information Systems with face-to-face social research tools such as Participatory Rural Appraisal. They found that although farmers were happy to receive payments, the longer-term sustainability of the programme, and its ability to control erosion and restore forests, were not certain.

The researchers also helped local governments to devise more effective ways to implement and monitor the programme. This meant clear mapping of distribution. Ownership and productivity of affected lands; direct involvement of farmers in programme design; and development of clear ecological, economic and social objectives.

Results of this research will be provided to the Forest and Grasslands Task Force of the China Council for International Cooperation on Environment and Development.



### **Forest Land-Use Planning**

In the Forests of the Upper Yangtze ecoregion, forest areas feature a patchwork of land use types: agriculture, logging areas, community forests, protected areas, etc. Some land is owned by the central government, some by timber companies, some by local communities. These different groups also want different things from the forest: timber, ecological services such as erosion control, fuel wood, non-timber forest products, and biodiversity conservation. In 1999, WWF supported a project in three counties in Sichuan to find ways to help local government and communities balance the different demands placed on forest resources by different stakeholders.

In December 2000, WWF held a workshop in Sichuan province to share the results of its Forest Land-Use Planning project. The project was deemed very successful by local and provincial officials, who expressed interest in extending the project approach to other areas.

In 2001, WWF and partners will develop a larger-scale forest ecosystem restoration project building on the knowledge and experience gained from the Forest Restoration and Land-Use Planning projects.



Habitat fragmentation and soil and water erosion caused by cultivation on steep slope land.

Project staff working in the field.

The launch of the Yangtze Programme of WWF in September 1999 has effectively promoted the implementation of wetland restoration in the Central Yangtze. We established three demonstration project sites in Dongting Lake and the Jianghan Floodplain; completed a hydrological model and digital elevation model for Dongting Lake; and undertook a socio-economic study of the Central Yangtze region. In addition, the vision of the Programme has been promoted nationwide by means of communication and education.



#### Developing a Biodiversity Conservation Plan

Research and planning for biodiversity conservation is one of the three priorities of the Yangtze Programme. The research provides rich background information on biodiversity in the Central Yangtze eco-region. It is the basis for developing a conservation plan.

Scientists who analyzed the land use and species distribution in the region pointed out that the main factor causing the disappearance of wetlands is human activity such as land reclamation. Moreover, the lives of rare species, including their habitat and food chains, are vulnerable to human interference. A database on socio-economic development in the Central Yangtze region has been established, which can be used to analyze economic development trends.

Using the database, scientists developed a framework wetlands conservation plan. The research also include maps of the lake region, including nature, land use and species distribution.



#### Wetlands Restoration Demonstration Project

WWF started this demonstration project in 1999, and during 2000 farmers began to see initial benefits. In three pilot sites, activities such as livestock-raising, agriculture and fishery have been started, with farmers selecting the most suitable activity for their household. Techincal assistance and training in integrated utilization of wetlands was also provided. WWF provided farmers with micro-

credit and technology inputs needed for pig, chicken, duck and fish breeding. One household has initiated greenhouse planting, husbandry and small-scale processing.

Initial results from December 1999 to May 2000 have been highly promising with 149 households selling their produce in local markets, and learning new skills in livestock farming. Average incomes have increased from RMB2,020 (US\$246) in 1999 to RMB5,200 (US\$634) in 2000. Furthermore, thousands of birds have returned to the area in winter 2000, including 500 swans, 4 white storks, and 20 Eurasian spoonbills.

Building polders (farmland surrounded by dikes) has increased flooding and imperiled biodiversity in the Central Yangtze. WWF is helping local communities to restore wetlands and find alternatives to farming. Aquaculture and duckraising has been especially popular.



#### 🛞 Hydrological Models for Dongting Lake

Hydrological models and digital elevation models (DEM) can provide essential scientific support to the tasks of wetland restoration and flood management in the central Yangtze. The models are designed to measure the potential contribution of wetland restoration to reducing and eliminating the risk of floods and to assess the actual reduction in flooding achieved by specific restoration projects.

In the first phase of WWF's work, hydro-modeling was carried out separately for the Central Yangtze and Dongting Lake. The results from these two exercises were then coupled to create an integrated model. A digital elevation model for the Dongting region was also produced. Furthermore, a visual display using the hydrological and digital elevation models of Dongting Lake was created. This kind of modeling can be applied practically to calculate the effect of re-submerging particular polders and to design a demonstration system for the public. This research indicated that siltation in Dongting Lake has increased significantly; wetland reclamation and siltation have caused the lake's capacity to shrink; and wetland restoration in Dongting Lake is the key to flood control efforts.

Digital elevation model of Dongting Lake.

#### Social-Economic Study

WWF experts analyzed socio-economic development along the Central Yangtze. The initial conclusions of their research are as follows:

The benefit of agricultural production in the polders was marginal. Agricultural production in normal years yields low profits, and it is loss-making if labor costs are taken into consideration.



Costs and Benefits of Rice Production in Honghu basin in 1999

Floods in the Central Yangtze have a significant impact on people's lives. Investigating the flooded areas in the central Yangtze, we discovered that local people suffered heavily from property loss, debts incurred due to home rebuilding, and poor quality of life.

Farmers regard wetland restoration positively. According to the survey, 44% of farmers think that the negative effect of polders is greater than the positive. 75% realize that the polders increased the risk of floods.

Development of wetland industries would help to provide farmers with new economic opportunities.

Floods in the region are becoming more and more serious, affecting wider areas despite increasing investment on construction of flood defenses. The approach to flood management should be adjusted and the investment on flood defense and hydro construction should be rationalized.



Annual investment on structural construction in the Central Yangtze in 1950-1998



Annual flood affected and damaged area changes in the Central Yangtze in 1950-1998

#### Communication and Education

Communication and education activities of the Yangtze Programme target government officials, farmers in the region, students and the wider public. We aim to increase awareness of the ecosystem and culture of the Yangtze River and increase enthusiasm for protecting the river and its wetlands. With the initial successful implementation of the programme, Chinese and foreign journalists are interested in the vision and experience of restoring a living river. As a result of their reporting, the Yangtze Programme has received positive encouragement from central and local governments. The Yangtze Programme's goals, and its progress, have drawn close attention from the government of China. Premier Zhu Rongji and other senior leaders have expressed support for wetlands restoration and other solutions to current problems. Senior advisory bodies for State decision-makers have recommended the model of the Yangtze Programme to the central government.

WWF jointly organized the "Hope of the Yangtze" campaign during April and July 2000 with the local NGO Green River. The campaign put forward the vision of a living river to the public through lectures, books, a summer camp, and an awareness day organized by university students.

The Environmental Education Center established by WWF in Hunan Normal University has trained 26 teachers, who have applied new education methods in four pilot schools. The students spread awareness and information to their wider communities. The schools organized a summer camp focusing on the Yangtze.



 Twenty students from Beijing, Shanghai and Hong Kong universities took part in the Central Yangtze Ecological Investigation trip in July 2000.



In May and June 2000, 20 Hope for the Yangtze lectures were organized in 19 universities in major cities along the Yangtze River, attracting over 5,000 participants. A book about the culture and biodiversity issues of the Yangtze was sold out immediately.

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### China Wetland Conservation Action Plan

Wetland Conservation is one of WWF's priority areas, in China and globally. WWF has been supporting the development of China's Wetland Conservation Action Plan since its China Programme Office opened in Beijing in 1996. Based on joint work with 17 government ministries and agencies, the Action Plan was completed in September 2000. In following up the implementation of the Action Plan, WWF will continue promoting wetland conservation in the coming three years, with the following key objectives:

- To triple the number of Ramsar sites in China.
- To bring at least 300,000 additional hectares of wetlands under formal protection.
- To improve the effectiveness of biodiversity conservation in at least ten wetland protected areas.
- To develop a coordinating mechanism for implementation of the National Wetlands Conservation Action Plan.



#### Designation of China's New Ramsar Wetlands

China joined the Ramsar Convention in 1992 with six designated Ramsar sites. In 1997 Maipo was added to China's Ramsar sites when Hong Kong returned to China. The total area protected by these seven sites is 1.03 million hectares. Since 1997 no new wetland sites have been designated. From 2000 to 2002, the WWF Living Waters Campaign is strengthening China's ability to designate new Ramsar wetlands by providing training, capacity building, information collection, expert consultation, field investigation, and negotiation. By the end of 2000, endorsement had been obtained from provincial governments for 16 sites with a total area of 1.75 million hectares to be designated. It is expected that China's Ramsar wetlands will have tripled in terms of area and sites by 2002.

#### Conservation and Management Plan for Mangrove Coastline

Mangrove is a highly productive wetland ecosystem growing in tropical and subtropical tidal marshes, affording a habitat which is rich in bio-diversity. Worldwide, mangroves face severe environmental threats, and are subject to ongoing conservation programmes. The mangrove wetlands along 9,000km of coastline in southern China have been subject to serious degradation, with coverage dropping from 40,000 hectares in the 1950s to 14,000 hectares today. This degradation has led to a chain of ecological and economic problems threatening the marine environment and biodiversity, fishery resources and marine disaster resistance. As marine wetland conservation is one of WWF's focal concerns, WWF China is supporting the development of a Conservation and Management Plan for China's Mangrove Coast which government agencies and communities can implement to safeguard this valuable ecosystem.

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With conservation programmes established in the Forests of the Upper Yangtze and Wetlands of the Central Yangtze, WWF is now turning its attention to China's largest relatively intact grassland ecosystem. The Tibetan Plateau is home to a wide array of unique species such as the yak, Tibetan antelope, Tibetan gazelle, Argali sheep, and black-necked crane. In July 2000, WWF signed a five-year Framework for Cooperation with the Tibet Forestry Department. Work in Tibet will focus on building the capacity of resource managers and local people to conserve wildlife and manage grasslands sustainably. Geographically, WWF's work will focus on the vast high grassland called the Chang Tang, and on the inaccessible and little-known forests of Southeastern Tibet.

Some activities have already been initiated. A workstation in Chang Tang Reserve was established and a transportation facility purchased. To improve the awareness and capacity of conservation workers in Tibet, WWF organized a study tour for forestry officials from southeastern Tibet to the national parks and co-managed areas in Nepal. We also sponsored two trainees from Tibet to attend training on participatory management of protected areas at the Regional Community Forestry Training Center in Thailand. With WWF support, the Tibet Forestry Department produced and distributed a number of communication materials to better inform local officials and the public about wildlife protection laws. A website to publicize Tibetan antelope conservation was also set up by student activists in Beijing with help from WWF and other NGOs.

In order to protect Tibetan red deer (*Cervus elaphus wallichi*), white-lipped deer (*Cervus albirostrus*) and their habitat, the Tibet Forestry Department is in the process of gazetting a new 50,000 hectare nature reserve in Shannan. WWF was invited to assist in the Shannan reserve planning process, with a focus on ensuring full participation of local farming and pastoral communities. We organized workshops to introduce reserve management planning concepts and bring together reserve planners and local communities. Future cooperation will focus on participatory zoning and planning, controlling wildlife damage to crops and livestock, sustainable use of grasslands, and developing sustainable livelihoods.

WWF believes that education is essential for achieving conservation objectives, and critical to the long-term process of building a sustainable future. The work of WWF China's Education Programme can be divided into three major components which complement each other. They are formal education, community education, and education resources development.

## Environmental Educators Initiative for China (EEI)

The Environmental Educators Initiative Project is the centerpiece of WWF's work in the formal education sector. This six-year programme combines the resources of three organizations: the Ministry of Education, WWF and BP, and aims to embed environmental education/education for sustainability (EfS) within the national curriculum in China. The first phase (1997-2000) focused on the integration of professional development, curriculum development and resource development strategies. Teachers trained by the programme are key to extending its influence to wider sectors of civil society in China.

Based on the success of the first phase of the EEI Project, the three parties decided to continue their cooperation and extend the project nationwide. Therefore, MOE, WWF, and BP signed an agreement on October 12, 2000 to continue their cooperation in implementing the second phase of the Project.

This second phase will introduce the first Master's degree programmes and a graduate-level certificate course in EE/EfS in China, and will mobilize a national network of environmental educators. It will also develop and facilitate national adoption of a range of resource materials, including a K-12 National Guideline for Environmental Education and a set of K-12 environmental education activity guides. Moreover, the second phase will set up 6 new EE centres, thus making a total of 9 EE centres operating across China. Through teacher training, resource development, and links between schools and local communities, the project is expected to reach 3,000 education officials and benefit millions of students and their communities in China.

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#### National Environmental Education Guidelines

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In order to ensure the effective integration of EE/EfS into the national curriculum, WWF is working with the Ministry of Education to develop national guidelines for environmental education. The guideline development team, which is composed of teachers from environmental education centers, curriculum reform experts from MOE, and WWF staff, sought foreign experiences in developing and implementing EE guidelines. Bearing in mind the environmental status and the direction of curriculum reform happening in China, the team has also invited ideas and opinions from other institutions. The framework and the basic content of the guidelines have been decided after extensive discussions within the team. The third draft of the guidelines will be submitted to MOE for review and finalization in March 2001.

### Master's Degree Programme in EE/EfS

To develop a Master's degree programme in EE/EfS is an important component of the second phase of the EEI Project. From December 11 - 15, 2000, we held a workshop at Environmental Education Center of Beijing Normal University. Participants included professors from Beijing, Southwest, Hunan, and Nanjing Normal Universities.

The workshop reviewed the theories and principles of education for sustainability, and introduced the structures of similar degree programmes at South Bank University and Nottingham University in the UK. The participants were given insights into the dialectical and systemic philosophy that might underpin such a course, its relation to action research, and to notions of the critically reflective environmental educator. Agreement has been reached through discussions among the participants in terms of the course's objectives, structure, core components, and philosophical foundation. ŴŴŔ

## Community Education in Baimaxueshan Nature Reserve

Located between the Jingsha, a major branch of the Yangtze, and the Mekong Rivers in northwestern Yunnan Province, Baimaxueshan Nature Reserve is one of China's richest reserves in terms of biodiversity, but one of its poorest areas in economic terms. We have been working with the reserve management bureau since 1996. As most of the residents in the reserve are Buddhist, the project initiated activities relating to Buddhism and conservation. A living Buddha was invited by the project to provide education on "nature protection and Buddhism" to the villagers in and around the reserve. A range of materials on " Nature resource conservation and Buddhism" and " Nature and Buddhism" has been compiled, available in both Chinese and Tibetan languages. The brochure has been distributed to local villagers in and around the Nature Reserve.

In order to advance our community education work in the reserve, we decided to strengthen our cooperation with the reserve in 2000. WWF has signed an agreement with the reserve management bureau to implement a three-year community education project in two selected villages in the reserve. The project



aims to empower the local communities through a process of education to actively participate as citizens in decision-making and taking actions to manage their environment and natural resources sustainably.

As part of the project, two Community Learning Centers (CLCs) have been set up in the villages. A Committee has been set up at each village with members elected by the villagers. A range of activities has been initiated and coordinated by the CLCs, which include veterinary training, tree planting and bio-gas system installation.

## **Community-based Natural Resources Education for Chongming Island**

Located at the mouth of the Yangtze, the Chongming Nature Reserve is an important wintering area and stop for migrating birds.

In order to strengthen the effectiveness of the conservation efforts on the island, WWF and the Environmental Education Center (EEC) at East China Normal University (ECNU) started to implement the first phase of the five-year "Community-based Natural Resources Education for Chongming Island" Project. The main objectives of the project are to create better understanding among local people of their relationship to the environment and to encourage continuous improvement of responsible natural resource management on the island.

To achieve these, the EEC at ECNU compiled a baseline survey of the reserve, an EE needs assessment in the local communities, research on EE strategies in the reserve, and a resource pack for EE on the island. The EEC has also conducted three workshops for different audiences on the island, and established good relationships with Shanghai Agriculture and Forestry Bureau, Chongming Nature Reserve Management Bureau, Chongming Education Bureau, and Chongming County Government.

To help the reserve to set up an environmental education center is an important component of the project. Therefore, in July we organized a study trip to Australia for staff from ECNU, Shanghai Agriculture and Forestry Bureau, and Chongming Nature Reserve. In the ten-day trip, we visited many environmental education centers in and around Brisbane City, discussed with local staff various aspects of operating EE centers, and participated in activities for students by the centers. This study tour not only broadened the vision of the participants, and provided many valuable and inspiring ideas for the construction of an EE center in Chongming Reserve, but also laid a foundation for future cooperation and exchange projects with EE centers outside China.

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#### Development of Nature Conservation Education Packs

We are developing a set of nature conservation education packs with the Yangtze, the Cradle of Chinese Civilization, as the linking theme. With sustainable development as the core principle, the packs will enable students to explore social, economical, cultural as well as ecological issues in the four selected habitats found in the Yangtze River Basin. The packs will be activity-based and emphasize self-guided learning and participation by students, so that they will be able to develop the knowledge, skills, and values needed in solving environmental problems.

In June 2000, an initial workshop was held in Beijing with participants from Beijing, East China, Southwest and Hunan Normal Universities, the People's Education Press, Beijing Natural History Museum and 6 nature reserves. The team has agreed the framework and the key concepts to be covered. The first draft of the book is expected to be ready by April 2001.

#### Young Citizens' Initiative for Water in Beijing



In June 2000, WWF initiated cooperation with Beijing Normal University, People's Education Press, and the Beijing Association of Science and Technology to jointly implement the three-year Young Citizens' Initiative for Water (YCIW) Project sponsored by the Netherlands Organization for International Development Corporation (NOVIB).



#### **Other Activities:**

In addition to the projects mentioned above, WWF China's Education Programme has also carried out following activities in three aspects:

- Providing further professional development opportunities for master teachers:
- \* Two master teachers from Southwest Normal University were sent to a threemonth graduate level certificate course in environmental education at Jordanhill Campus of University of Strathclyde in Scotland from April - June 2000.
- \* Two master teachers from Hunan Normal University were selected to attend the "Adopt-A-Watershed Leadership Institute" workshop in Oregon, USA in early July 2000.
- Enhancing institutional exchange and coordination:
- \* WWF sponsored the first national " Greening Higher Education" conference held at Harbin Institute of Technology in May 2000.
- \* WWF supported the Northwest Sichuan Education and Research Center of Panda Protection at Mianyang Teacher's College to facilitate the learning process and provide technical assistance to activities initiated by the local community in Shangwu Village in Xiaozaizigou Nature Reserve.
- \* In June 2000, WWF sponsored a " Nature Summer Camp" and cosponsored the "Cleaning Three-lake and Tonghui River" project organized by Beijing Association of Science and Technology.
- \* WWF supported the Environmental Education Center of East China Normal University to conduct a "School-based Action Research" project in an EEI pilot school in Shanghai.
- \* WWF supported Fang Min of the Environmental Literature Association to write a novel and a reportage about the giant panda and its conservation.
- Producing a video programme for experience sharing.

In December 2000, WWF produced a short video documentary about a project initiated by Miyun Primary School to maintain a clean river basin. The school has been a pilot participant in the EEI project.

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#### Sustainable Road Transport and Greening of the Automobile Industry

China faces an increasing threat from air pollution caused by automobile emissions. Increased energy efficiency and the use of alternative fuels can lead to reductions in emissions. This is a policy-oriented research project to identify major barriers to sustainable urban road transport management, and promote alternative and innovative technologies to increase energy efficiency and reduce emissions. The objective of the project is to encourage government policies in favor of sustainable transport management and planning, and support the motor industry's move towards cleaner combustion and energy use.

#### Earth Day 2000 Celebration

WWF China was one of the six organizers for the global Earth Day celebration (22 April) in China. This is the first effort by environmental NGOs in China to collaborate on this important event. WWF collaborated with CCTV (China Central



Television Station) and supported a TV programme on climate change which was broadcast on CCTV, and held a workshop on sustainable rural development in Beijing.

#### Training for Journalists on Climate Change and Renewable Energy

WWF identified a need for awareness and technical knowledge among journalists in China on climate change and renewable energy development. Climate and Energy Program Staff led a field trip for a group of journalists and reporters to Inner Mongolia to visit renewable energy pilot project sites, which resulted in two TV programmes on wind energy development being made and shown on CCTV. A number of reports also appeared in other media.

#### <sup>4</sup> Tsinghua University/WWF Graduate Programme on the Human Dimension of Climate Change

This is a new initiative to help establish the human resource base in China on climate research and policy work with an emphasis on social and human dimensions. The aim is to train the next generation of scientists, leaders, policymakers and experts to work in multi-disciplinary areas of climate diplomacy, research and policymaking. International exchange on climate research is also strengthened through the project.

#### International Workshop on Energy Efficient Buildings

Conserving energy in commercial and residential buildings is an important priority for WWF China. This workshop gathered together a group of experts, industry representatives, government officials and international experts to discuss key issues in promoting energy efficient buildings in China. Capacity building was identified as a priority for future work.

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#### Renewable Energy Business Development Training

The market for renewable energy in China is expected to grow in the 21st century, as demand for sustainable energy (e.g. electricity generated from renewable sources such as wind, solar, small hydro power etc) increases. WWF is working to help strengthen the management and marketing capacity of enterprises involved in renewable energy technology development and production. Two training workshops were held, along with presentations from international experts about their experiences in renewable energy market development. A training center is expected to be established in 2001.

### Workshop on Renewable Energy and Sustainable Rural Development

Sustainable rural development is key to ensuring long-term prosperity in China. WWF China contributes to this goal by promoting wider dissemination of



renewable energy technologies. This workshop aimed to generate awareness of and support for renewable energy development among key government officials at the county level. Directory of the New and Renewable Energy Sector

There are thousands of renewable energy enterprises in China, but they are mostly small in size and have limited capacity in marketing and information exchange both in China and abroad. A directory is being developed, including key industries in solar PV, solar thermal heating, small-scale hydropower, wind energy, bio-gas and bio-mass technology development.

#### Bio-gas Plant Development

The rapid growth of large-scale livestock farms, particularly pig farms, to meet growing demand for meat and dairy products, has led to heavy water pollution in some areas. Waste treatment on livestock farms provides an opportunity to develop bio-gas facilities as an alternative source of energy. WWF is therefore researching the problems of waste treatment and the scope to promote bio-gas plant development on a commercial scale.

#### Website

In October, 2000 WWF China set up its official website at www.wwfchina.org.

The aim of the website is to encourage popular participation in nature conservation and provide reliable information to the public. The website is expected to be a platform for conservationists and the public to learn, exchange and help each other to contribute to nature conservation.

The Environment Forum on the website has attracted thousands of nature lovers and conservationists.

# www.wwfchina.org



#### WWF CPO staff

Back row: Wu Yusong, Zhao Jianguo, Li Qing, Wang Haibin, Xu Wei, Wu Haohan, Li Chao, Yu Changqing, Wang Xiaogeng, Zhang Chen

Middle row: Li Qin, Gu Anru, Li Ning, Gan Lin, Zhou Zengyi, Li Hui, Liang Haitang, Zhang Yi, Wei Juan

Front row: Ding Jing, Xu Xian, Jim Harkness, Yang Yiming, Zhao Yuntao, Cheng Wei, Yu Xiubo Not pictured: Liu Yunhua, Li Shengzhi, Lei Guangchun, Zhu Chunquan, Cui Ying

Photo Credits: Gao Guangde, Deng Jia, Zhang Yifei, Bian Yuan, Yang Xin, Xi Zhinong, Liu Yunzhen, George Schaller

#### WWF also wishes to thank the following volunteers:

Roger Ratcliff, Donna Young, Mark Davies, David Rennie, Cui Yi, Zhao Di

#### **Publications:**

- The Polder Economy Development in Central Yangtze: Its past, present and future
- Questionnaire Survey Report on Polder Economy Development and Ecological Environments in Middle Yangtze, China
- Integration of Sustainable Development in Local Planning in the central Yangtze
- Alternative Farming Systems in Polders in the central Yangtze
- Conception and Methods of Decision Making on Ecological Security in the Aspect of Land Use
- Pilot Study on Alternative Farming Demonstration Projects in Poyang Lake Region
- Interbasin Water Transfer--International Experiences, Lessons and Implications for the South-North Water Transfer in China
- Grassland Resources and Grassland Livestock Production in the Regions of Poyang Lake and Dongting Lake
- Agricultural Labor Transfer in Wetlands Restoration Areas in the central Yangtze
- Possible Approaches to Solve the Water Resource Shortage in the North China Plain
- Development of Rural Industry and Population Relocation-A Case Study of Dongting Lake Area
- Industrial Development Studies of the Central Yangtze in the Context of River Basin Economic Integration
- Cost Benefit Analysis in the Wetland Restoration Area in the central Yangtze-Case Studies in Jianli and Yuanjiang Counties
- The Status and Prospects for Water Quality in the Eastern Route of the South-North Water Transfer

- The Source of the Yangtze
- Dongting Lake
- Newsletter for Wetlands
- Functions of Wetlands
- Ecoregion-based Biodiversity Conservation Planning for the Central Yangtze
- Sustainable Forestry Handbook-A Practical Guide for Tropical Forest Managers
- Wanted Alive-Giant Pandas in the Wild
- Tibet's Biodiversity Conservation and Management
- International Workshop on the Feasibility of Giant Panda Re-introduction





Partnerships are central to all of WWF's work in China. From within the WWF family, from foundations and from the private sector, we receive essential financial and technical support. And our Chinese partners are the driving forces for conservation and development from all sections of society: government officials, scientists, nongovernmental groups, teachers, nature reserve staff and journalists. The following is a partial list of WWF China's partners in conservation.

#### Donors

- WWF Netherlands
- WWF UK
- WWF US
- WWF Switzerland
- WWF Germany
- WWF HK
- BP
- W. Alton Jones Foundation
- NOVIB

#### **Partners**

- State Forestry Administration
- Ministry of Agriculture
- Development Research Center of the State Council
- Ministry of Education
- State Environmental Protection Agency
- State Oceanic Administration
- Research Center of Eco-environmental Sciences, Chinese Academy of Sciences

- Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences
- Nanjing Institute of Limnology & Geographty, Chinese Academy of Sciences
- Changsha Institute of Agricultural Modernization, Chinese Academy of Sciences
- Chinese Academy of Forestry
- Agriculture Ministry's Rural Development Center
- Center for Renewable Energy Development, Energy Research Institute
- CITES Management Authority of China
- Chinese Academy of Social Sciences
- China Youth Development Foundation
- China Association of Science and Technology
- Chinese Research Academy of Environmental Sciences
- People's Education Press
- State Administration of Traditional Chinese Medicine
- Sichuan Forestry Department
- Yunnan Forestry Department
- Tibet Forestry Department
- Hunan Forestry Department
- Shanxi Forestry Department
- Pingwu County Government
- TRAFFIC East Asia
- Hunan Youth Development Foundation
- Hubei Youth Development Foundation
- Wetlands International
- Peking University
- Fudan University
- Tsinghua University
- Beijing Normal University

- East China Normal University
- Southwest Normal University
- Hunan Normal University
- Beijing Forestry University
- Sichuan Forest College
- Wanglang Nature Reserve
- Hanshou County Forest Agency, Hunan Province
- Office of Mountain-River-Lake Regional Development Committee of Jiangxi Province
- Anqing Forest Agency, Anhui Province
- Beijing Association of Science and Technology
- China Association of Environmental Literature
- Beijing Energy Efficiency Center
- Beijing Jikedian Renewable Energy Development Center
- East Dongting Lake Nature Reserve Administration
- Muping Lake Natural Reserve
- Green River
- Yangtze Development Research Institute
- Hunan Yuanjiang Municipal Government
- Changde Forest Agency, Hunan Province
- Wuhan Taohua Island Ecology Park Co. Ltd.
- Hunan Hydrology Administration
- Changging Nature Reserve
- Longxi Hongkou Nature Reserve
- Deqin County Government, Yunnan Province
- Baimaxueshan Nature Reserve

### **WWF China Financial Report**

January 1, 20	000 - December 31, 2000	
Balance Sheet		
	2000	1999
Assets		
Cash & bank balance	2,034,714	1,250,484
Accounts receivable	502,518	740,697
Total Assets	2,537,232	1,991,181
Liabilities, Restricted Funds and Equity		
Accounts payable and accrued expenses	72,755	80,561
Restricted funds	1,936,528	1,661,739
Unrestricted funds	527,948	248,881
Total Liabilities, Restricted Funds and Equity	2,537,231	1,991,181
Income		
WWF resources	3,127,520	2,487,095
GAA	0	
Other direct donations		44,936
	195,496	44,936 97,735
Project administration fees	195,496 195,571	
Project administration fees Other income		97,735
	195,571	97,735 140,629
Other income	195,571 59,936	97,735 140,629 -1,995
Other income Total Income	195,571 59,936	97,735 140,629 -1,995
Other income Total Income Expenditure	195,571 59,936 <b>3,578,523</b>	97,735 140,629 -1,995 <b>2,768,400</b>
Other income Total Income Expenditure Programme activities	195,571 59,936 <b>3,578,523</b> 182,298	97,735 140,629 -1,995 <b>2,768,400</b> 129,530



WWF is the world's largest and most experienced independent conservation organization. It has 4.7 million regular supporters and a global network active in more than 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption

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