

A CHINESE WEEKLY OF NEWS AND VIEWS

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## HUNAN: AN OPEN INLAND PROVINCE

Proposals for 10-Year  
Development  
Programme



A farmer is "sitting pretty" on his bumper harvest.

*Photo by Chen Baosheng*

# HIGHLIGHTS OF THE WEEK

## Proposals for 10-Year Development Plan

□ The recently published CPC Central Committee's proposed drafts of the ten-year programme (1991-2000) and the Eighth Five-Year Plan (1991-95) for national economic and social development note that the first-stage strategic goal for China's modernization, namely, doubling the 1980 GNP and providing the people with adequate food and clothing, has basically been achieved. Between 1991 and 2000 China is expected to realize its second-stage strategic goal of quadrupling the 1980 GNP (p. 17).

## Striving for Peace and Development

□ In the so-called "post-cold war era," although the possibility of a war between the two major military blocs has been avoided, regional tension, confrontation and even war still endanger peace and development. So, tremendous efforts are needed from the international community to maintain world peace and promote development (p. 9).

## Development of China's Nuclear Science

□ This is a slightly abridged translation of an article by Qian Sanqiang, a noted Chinese atomic nucleus physicist, on the course of development of atomic nucleus science in China. The article originally appeared in the first issue of the Hong Kong-based "Bauhinia" magazine in October 1990 (p. 34).

## An Open Inland Province

□ Hunan is the home province of the late Chairman Mao Zedong. In order to make full use of its richly endowed natural resources, the inland province will speed up its opening to the outside world (p. 24).

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### COVER: This scenic valley in the

Mengdong River of west Hunan

Province has a pleasant climate

and is an ideal tourist area.

Photo by Xu Xiangjun

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# A Decade Crucial to Modernization

by Ge Wu

According to the proposals put forward last December by the Central Committee of the Communist Party of China, excerpts of which are carried on pp.21-27 of this issue, China will realize its second-stage strategic goal for socialist modernization in the next decade. The next ten years, therefore, are very important.

After 1978, China formulated a three-step strategy for its modernization drive. In the first stage, China spent ten years doubling the 1980 gross national product (GNP), and solving the problem of food and clothing for its people. In the second stage, China expects to spend another ten years, i.e., by the turn of this century, to redouble its GNP and bring about a comfortable life for its citizens. In the third stage, i.e., in the middle of next century, China will boost the per-capita GNP to the level found in a moderately developed country and basically modernize society.

China has achieved its first strategic goal, with the 1990 GNP some 123 percent higher than that of 1980. The quality of life for the country's 1.1 billion people, except for some 40 million residents, has dramatically improved. Food and clothing for the majority are guaranteed and one section of society has become well-off. In the second stage of its modernization programme, China will consolidate and develop the fruits of the first stage and prepare conditions for the third stage. This means carrying forward the past achievements and opening up new possibilities for the future. It is thus an important stage of modernization.

In the next decade, China plans to achieve an average annual 6 percent increase of GNP. It will then be able to quadruple the 1980 GNP by the end of the century. Annual grain output will be increased from 420 million tons in 1990 to 500 million tons by the year 2000, raw coal output from 1.09 billion tons to around 1.4 billion tons, electricity output from 615 billion kwh to 1,100 billion kwh, steel from 65.80 million tons to over 80 million tons, chemical fertilizers from 90 million tons to 120 million tons, ethylene from 1.5 million tons to 3 million tons, cotton yarn from 24.50 million bales to around 31 million bales and railway freight volume from 1.46 billion tons to around 1.9 billion tons. By the year 2000, China's national strength will have greatly increased, all of the people will have sufficient food and clothing and intellectual life in society will be enriched. This blueprint for society is magnificent, particularly in regard to its rapid speed of development.

In order to bring about a healthy development of the national economy on the basis of national conditions, China has, under the guidance of the general policy of reform and opening to the outside world,

worked hard to effect the following far-reaching changes over the past decade: a switch from the pure pursuit of growth in output value to an improvement in economic benefits; a change in the system of economic management from rigid and excessive centralized control to the more viable system of the socialist planned commodity economy; and, in regard to foreign economic relations, a shedding of the nation's full or partial closure to the outside world and the establishment of an open economy that makes full use of international exchanges on the basis of independence. These important changes during the 1980s resulted in an enormous increase in economic vigour and quicker economic growth. The transformation process, however, is not completed. Development is uneven and, the deeper the changes, the greater the difficulties faced by the nation. In a bid to elevate the economy to a new level and achieve the nation's second-stage strategic goal, however, China will unswervingly continue to put the above changes into effect.

For historical reasons, the socialist revolution did not succeed first in developed capitalist countries, as predicted by classic Marxist writers. Instead, socialism took root in some underdeveloped countries plagued by contradictions and facing weak reactionary domination. Socialism developed first in colonies, semi-colonial and semi-feudal countries like China which were economically backward. China's poor foundation has thus made its modernization drive more arduous and difficult. Moreover, socialism is facing even more severe tests today as some socialist countries suffer setbacks. Despite this, China will continue to press for significant progress in production and a narrowing of the economic gap between itself and the developed countries during the 1990s. Its achievements will prove China's choice to have been a correct one and that socialism is still a vital force.

Currently, China enjoys a stable domestic environment. Although it is still faced with certain difficulties, the people have benefited from the remarkable achievements gained in national construction, reform and open policy over the past decade and are satisfied with the state of affairs and full of confidence in the future. Moreover, despite the changing international situation and current instability in some parts of the world, the general situation of peace can still be maintained. China will continue to strive for a positive external environment favourable to realizing its second-stage strategic goal. By doing so, it will help bring about further prosperity to the nation and contribute to world peace and development. ■

## Indian Foreign Minister in China

Chinese Premier Li Peng and Indian Foreign Minister Vidya Charan Shukla expressed their desire to continue improving and developing mutual relations during their meeting in Beijing on February 2. Shukla's six-day stay in China was the first official visit by an Indian foreign minister in the past 11 years.

Sino-Indian relations have markedly improved since Indian Prime Minister Rajiv Gandhi's visit to China three years ago, Li said, and added that China is willing to develop a positive good-neighbourly relationship with India on the basis of the Five Principles of Peaceful Co-existence. He said that these principles, which were initiated by China and India, are "manifesting more and more vitality."

Agreeing with Li's remarks, Shukla referred to the Indian prime minister's 1988 visit to China as a new turning point in bilateral relations.

Shukla repeated India's invitation for Li to visit his country. Li responded by saying he expects the visit to occur at the earliest date convenient to both sides. It will be the first visit to India by a Chinese premier in the past three decades.

On the Dalai Lama issue, Shukla reiterated that India does not recognize the so-called Tibetan government-in-exile and will abide by an understanding reached with China which prohibits political activity by the Dalai Lama and his followers throughout India.

During their talks, the foreign ministers of the two countries exchanged in-depth views on regional and international issues.

Shukla briefed Chinese Foreign Minister Qian Qichen on the initiative taken by India and

some Non-Aligned countries to bring about a swift peaceful settlement to the Gulf war. Both sides agreed on the urgent need for a peaceful settlement since the continuation of hostilities will cause more human suffering and damage worldwide. The foreign ministers agreed to remain in close touch on the development in the Gulf.

Both sides expressed satisfaction over recent improvements of the bilateral relations in various fields. They have agreed to resume border trade between the two countries. ■

## 'Unacceptable': US Human Rights Report

The Human Rights Report issued by the US State Department on February 1 "is entirely unacceptable," said Li Zhaoxing, the Chinese Foreign Ministry spokesman, at the Ministry's weekly news briefing on February 7.

China accused the report of "distorting and attacking China over its domestic matters" by citing rumours.

Li said the annual Human Rights Report "is in essence an unwarranted criticism of and an unscrupulous interference in the internal affairs of many countries on the pretext of human rights."

He said that it is particularly ridiculous that the report should categorize China's population policy, the purchasing of state treasury bonds, contributions by the public to the Asian Games projects and the building of water conservancy works as human rights violations.

"This can only testify to the prejudice of the report's drafters and their ignorance about

China," said Li.

Ever since the founding of the People's Republic of China in 1949, the Chinese people, as masters of their own country, have enjoyed extensive democratic rights and freedom, Li said, adding that these are the facts that cannot be changed by any distortion or attack.

Also at the news briefing, Li said that China welcomed the proposal by F.W. de Klerk, president of South Africa, to abolish the "Group Area Act" and other basic legislation of the apartheid system. It is "a positive move that will contribute to the process leading to a political settlement of the question in South Africa," he noted.

Li said China hoped the proposal will be carried out as soon as possible, and the promise made by the South African authorities to remove the obstacles to constitutional negotiations will be honoured so that all the parties concerned will be able to finally establish, through negotiation, a new unified, democratic South Africa with racial equality.

Commenting on the possible use of chemical weapons in the Gulf war, Li said that prohibition of the use of chemical weapons is an established norm of international law.

China is always opposed to any act of using chemical weapons in violation of the norms of international law and the 1925 Geneva Protocol. ■

## Housing Reform: The Pressure Is On

With a monthly income of 300 yuan, 52-year-old Li Fuzeng and his family could never have been able to afford his 180,000-yuan-worth new home, were it not for the housing reform undergoing in

Beijing. The Lis have recently moved into a double-room apartment with all facilities and a small yard which they could make into a garden.

Since the age of seven, Li and his parents had lived in an old house without either heating or a bathroom at the northwest corner of Beijing city proper. With a poor sewage system and leaky roofs, each heavy rain could make life unbearable for the households in the neighbourhood, where most houses were badly in need of repair if not in peril.

As a pilot project in the city's housing reform scheme, the neighbourhood set up a renovation foundation in 1988. Each member family deposited 30 percent of the total price of their future new home while agreeing to repay the rest as a low interest bank loan within 10 years.

These, along with a state investment accounting for one-third of the total construction cost, enabled the dilapidated neighbourhood to be rebuilt into a brand new residential quarter.

Such an urban housing reform was initiated first in Yantai, Tangshan, Shenyang and Bengbu in 1987.

Since then, many Chinese cities and towns have adopted various kinds of housing reform measures according to local conditions. They include increase in rents and public housing sales. New apartment buildings have been built by pooling the funds from the state, enterprises and individuals. In some cases, aspiring house owners pay deposits to raise the money.

Today, the urban housing reform has been popularized in more than 200 cities and towns and has become a much talked-of topic among Chinese residents.

Even though the state has invested more than 35 billion yuan

(about US\$7 billion) in residence construction and maintenance each year in the past decade, housing problem has remained acute for many urban residents like the Lis.

According to Lin Hanxiong, minister of construction and head of a housing reform leading group under the State Council, more than 20 million people in 5.38 million Chinese families live in very poor housing conditions, and 550,000 of these families average less than two square metres of floor space for each of their members. And the 2 million new families every year have widened the gap between the country's house demand and supply.

On the other hand, rents, as housing was always considered as welfare granted by the state, are extremely cheap, accounting for only 1.2 percent of per-capita income, Lin said.

Consequently, the state subsidizes as much as over 10 billion yuan each year to keep house maintenance going, with little left to invest in new housing.

"In the absence of a reform, we can never expect to achieve the goal of providing each our urban residents a dwelling space of eight square metre by the turn of this century," Minister Lin said.

In addition to meeting the needs of housing, economists see other positive aspects of housing reform — consumer funds can be directed into buying houses and related commodities; the sluggish market can be invigorated and surplus funds can be withdrawn from circulation.

But not every one considers the reform as a necessity. Many employees find a rent accounting for 10 percent of their salaries hard to accept, for they already have to spend 55 percent on food. And buying house seems to them an impossible pro-

position. "Only those upstarts will feel good about this," a retired teacher said.

"If the housing reform is postponed till six years later the present size of state subsidy in this field could be doubled, while residence shortage could hardly be expected to ease," the construction minister said.

by Staff Reporter Wang Xin

## Giving Rein to United Front Work

The Communist Party of China (CPC) should give further play to the important role of its united front in a bid to build socialism with Chinese characteristics and realize the strategic goal for the country's economic development in the next 10 years.

Jiang Zemin, general secretary of the CPC Central Committee, made the remark during a discussion on February 4 with provincial-level Party officials attending a recent national seminar on united front work in the capital.

"The more people we unite with and the closer we keep in touch with them, the better the socialist cause will be served," Jiang said.

The Seventh Plenary Session of the 13th CPC Central Committee convened last December put forward a 10-year plan for national economic and social development, that is, to quadruple the 1980 GNP by the end of this century, which means a 6 percent annual growth.

Such a strategic goal can be reached only through the common efforts of the whole nation. Therefore, Jiang said, the Party should consolidate and expand the united front, unite all those who can be united, and bring every positive factor into play.

In addition, he stressed, it is

## 'Chinafrica' Published

*Chinafrica* (English edition), a monthly magazine devoted to developments in China and Africa and other parts of the world as well, was launched by the Beijing Re-

view Press in January this year. Its French edition, *Chin-afrique*, was launched three years ago. Ambassador Extraordinary and Plenipotentiary of Zaire H. E. Mr. Lom-



bo Lo Mangamanga spoke highly of the magazine in his speech at a celebration ceremony on February 6 (picture on the right). Li Ruihuan (left in the left picture), member of the Standing Committee of the Political Bureau of the Central Committee of the Chinese Communist Party was present at the function.

by Staff Reporter Yang Liming

necessary to safeguard national and social stability, uphold and improve the multi-party cooperative and political consultative system under the CPC leadership, develop new socialist relations among nationalities based on equality, unity, mutual help and love, and give full scope to the positive role of intellectuals in construction and reform.

He also called for continuous effort to foster patriotism, uphold the principle of "one country, two systems," and promote the peaceful reunification of the motherland.

The general secretary urged Party committees at all levels to strengthen and improve the leadership of the united front work, maintain close ties with non-Communists, and adopt all measures so that non-communist parties and personages with no party affiliation can participate

in and supervise the work of the government. ■

### Principles Outlined for Environmental Issues

As the world's worsening environment is threatening human existence and social development, China is willing to co-operate with the international community in search of the ways and means of resolving this global issue.

Speaking at a national seminar on climatic changes and environmental protection held recently in Beijing, Li Xuer, deputy director of the Environmental Protection Commission of the State Council, said that to protect the common interest of mankind in general and developing countries in particular, the following principles should be

followed:

— Correctly handling the relationship between environmental protection and socio-economic development. This principle, Li said, applies especially to developing countries, which can only deal with environmental issues as part of their economic development.

— Having prospered by using the world's resources, the developed countries should now shoulder a greater share of the responsibility, and use their funds and technology to protect and improve the global environment. The deputy director pointed out that the ecological deterioration results primarily from the industrialization of developed countries over the past two centuries. Today, these countries remain the major consumers of the world's natural resources and major sources of pollutants.

— The right of developing

countries over the use of their natural resources cannot be violated, and no country's internal affairs should be interfered in in the name of environmental protection.

— Necessary measures must be adopted to ensure the participation of developing countries in international environmental affairs.

— An international law governing environmental issues, based on science and supported by developing countries, should be enacted.

Li said the United Nations Environment and Development Congress, scheduled for June, 1992, will be vital to the interests of developing countries as it may lead to changes in the current state of international relations. ■

## Knowing China By Trade Marks

Who's the president of the United States?" a Chinese teacher asked his nine-year-old pupils one day.

"Cocacola, I guess," answered one boy.

The story, though a joke, tells the fact that many trade marks are so famous that they, to some extent, stand for their home countries and sometimes even overshadow the countries' leaders, national flags or emblems. You may hear that the Japanese are "Sony people," while Mercedes Benz is the "roving ambassador" of Germany.

However, one can hardly find a Chinese trade mark of similar calibre. Yes, the word "china" means porcelain; that's probably how the Central Kingdom got its Western name. But it is a well-known product, not a Famous Trade Mark (FTM). China has not had its FTM yet; that's why a current campaign to select China's first FTMs is launched.

The campaign, sponsored by some press organizations, began in late January. Trade marks for 20 kinds of commodities, including TV sets, refrigerators, washing machines, bicycles, clocks and watches, clothing, liquor, soft drinks and cigarettes, will be selected by customers through a survey. And the winners are expected to come out in June.

The initiative is conducive to boosting Chinese exports and will help the world know China by its FTMs, said Li Jizhong, director of the Trade Mark Office of the State Administration for Industry and Commerce (SAFIC).

According to Li and other initiators, the activity is obviously a promoter to China's industrial competition in the international market. It will also help Chinese products gain trade mark protection in accordance with relevant international treaties, and contribute to the protection of intellectual property.

The FTM, a rather unfamiliar term for most Chinese, was coined in the Paris Convention for the Protection of Industrial Property (1883). The Chinese government and the Paris Convention, of which China became the 95th member in 1984, will provide special protection to the country's first FTMs, once they are chosen and acknowledged.

There are two ways so far in the world to establish a FTM. One is the authorities' affirmation; the other, public survey. An American poll-taking organization, for example, picked up the world's top 10 FTMs last year. They were Cocacola, Sony, Mercedes Benz, Kodak, Disney, Nestle, Toyota, McDonald, IBM and Pepsicola.

China is now out of the global FTM club, but analysts and legal experts here have seen hope through the country's FTM initiative.

The nation-wide effort to choose FTMs, made possible because of the on-going reform and open policy, can be interpreted as an important step towards improving the country's intellectual property system, said Liu Jiyang, secretary-general of the China Intellectual Property Society.

Intellectual property refers to patent, trade mark and copyright. China did not have its first patent law until 1985. Its first trade mark law was issued in 1982 and is expected to be revised this year. And the long-awaited copyright law is effective on June 1, 1991.

"We already have these laws enacted. That means intellectual property protection. But it's not good enough. Much work remains to be done to improve and implement the laws. We've got to admit that we've lagged behind in this regard," said Liu.

The Chinese have long neglected trade marks as intellectual property, and even today many still do not realize that a FTM is an embodiment of a country's economic prowess, technical capacity and people's creativity, said Dong Baolin, a senior economist of SAFIC.

Violations of the trade mark law are not uncommon. For instance, Maotai, the country's number one liquor, has been found imitated almost everywhere. In 1987 alone, more than 70 illegal Maotai producers were caught nationwide. And a market survey showed that more than half of the liquor on sale were imitators.

When what a trade mark means to an enterprise and the country and how it can be protected is brought home to most citizens, said Dong, things will be better. "Then we'll find a niche for our FTMs in the world market."

by Staff Reporter Li Haibo



# Peace and Development A Strenuous Task in '90s

by Jin Dexiang

*The post-bipolar-confrontation world will be a troubled one, both complicated and contradiction-ridden. In such an environment, no efforts should be spared to ensure peace and development.*

The author is deputy director of the China Institute of Contemporary International Relations.

The bipolar world order, which had lasted for nearly half a century, eventually came to an abrupt end in the closing months of the 1980s as a result of dramatic changes in Eastern Europe. A so-called "post-cold war era" is setting in. What is the nature of this era? How will the world evolve during it? What new order is indispensable for world peace and economic growth in the unfolding international environment of this era? These are the fundamental questions crying out for answers.

As a matter of fact, the spate of international events in the opening months of the 1990s, the Gulf crisis in particular, have revealed that the end of the bipolar order, though symbolic of a world free from the threat of a

global war, does not spell the end to regional tensions and confrontation. Rather, far from diminishing, the danger of potential small- and medium-sized regional wars has heightened.

## Conflicts From Within

Post-World War II intense confrontation between the two military blocs once dictated mutual accommodation and compromises among the Western allies in the face of the Soviet threat. US preeminence over other allies also silenced any intra-bloc defiance.

Now, however, the Soviet Union no longer poses a serious threat to the West and accordingly has forfeited its function as a cementing force of Western unity, whereas both Japan and Ger-

many are growing into economic superpowers on par with the United States. These international developments caused deep concern on the part of Washington which was expressed in the "National Security Strategy of the United States," the first official document in the 1990s on world affairs issued by President George Bush. He pointed out that "one of the dramatic strategic devel-



Promoting regional development: A summit meeting of Central American countries in early January in Mexico City, Mexico.

ZHANG NIN

opments of the 1990s will be the new role of Japan and Germany as successful democracies and economic and political leaders" and that "a shifting balance of economic power and the trade disputes in an era of economic change and adjustment could strain political and security ties. Such strains would be especially damaging at such a moment when one needs to maintain strength and unity to take best advantage of new opportunities in East-West relations."

Fred Bergsten, director of the US Institute for International Economics and former assistant for international affairs to the National Security Council, even bluntly declared that the "ultimate paradox of the 20th century would be a realization of the Marxist prophecy of an inevitable clash among the capitalist nations," and that such conflict is more likely to surface between the United States and Japan...-US-European economic confrontation could erupt as well."

This is precisely the case. For years US-Japanese contradictions have been intensifying, having extended from an economic to a political sphere. The US trade deficit with Japan reached US\$57 billion in 1989 and Japan's investment in the United States skyrocketed to US\$300 billion. Bilateral frictions over protection of intellectual property rights, patents and other fields have been mounting, while competition in a wide range of the newly emerging high-technology industries has also been increasingly fierce. As a consequence, anti-Japanese feelings are running strong in the United States with ever deepening emotional antagonism in political and cultural realms. An increasing number of Americans believe that Japan has replaced the Soviet Union as the greatest threat.

On the other hand, Japan is bitterly resentful towards US

pressures calling for economic structural readjustments and institutional reforms. There lurks the great danger of the verbal bickering escalating into politico-economic confrontation despite the current co-operative effort based on mutual economic, political and security needs.

What's more, the potential for conflict also foreshadows the complicated US-Japanese-European relationship. The 1992 European single market programme has turned US and Japanese concerns into stepped-up efforts to build confrontational economic blocs respectively. Washington joined hands with Tokyo in warning Western Europe against discriminative policies at the risk of joint retaliation. On the other hand, Washington stands together with West European countries in demanding Japan to open its market wider. Tokyo, on its turn, finds allies in Western Europe for asking the US to correct its twin deficits. Not surprisingly, the United States fears that closer Japan-West European cooperation may lead to its exclusion because of its status as the world largest debtor nation and the more dynamic economies of the other two.

In addition, a united Germany is bound to touch off a variety of conflicts. The new Germany, a nation of 77.4 million people with its GDP accounting for 30 percent of that of the European Community, will certainly turn into not only an economic superpower but also a major political power, flexing its muscles inside and outside the community in its bid for supremacy over the entire Europe.

At present, both Washington and Moscow are vying for the friendship of Berlin to strengthen their own position at the expense of the other side. The dynamics of US-Soviet-German triangular relationship will have

great bearing on the future of Europe. Moreover, the unification of Germany has galvanized the EC into promoting an "EC-centred greater European economic bloc" comprising the European Free Trade Association and East European countries. With Germany as the nucleus, the EC will probably evolve into a more formidable competitor for both the United States and Japan and eventually deprive Washington of its control over the on-going European process.

### Beyond Containment

A shift in the balance of power among Western developed countries, socialist nations and the third world, the three major global forces, surfaced in favour of the West as a result of dramatic changes in the Soviet bloc and the ever-widening North-South gap. Such a new situation may tempt some Western countries to recklessly impose their will on others, interfering in the internal affairs of other countries and practising power politics and hegemony in international relations. This will in turn trigger off strong opposition from the oppressed parties concerned and the international community.

The Bush administration worked out a "beyond containment" strategy as its foreign policy guideline for the 1990s. This strategy pays closer attention to employing political, economic, cultural, religious and other non-military means to exert Western influence on the socialist countries for their evolution into capitalism while maintaining their sustained containment through military means. To achieve this, the United States spares no effort in fostering pro-Western forces in socialist countries and using economic-technological aid and political pressure as leverage for driving some countries into domestic politico-economic re-

forms modelled after the West.

Under these circumstances, the seven-nation summit, a meeting devoted largely to the search for solutions to thorny economic problems among Western countries, tends to give priority to political issues. At the October 1990 summit in Houston, the United States, apart from the top priority issue of US-European trade frictions over agricultural products, such political topics as aid to the Soviet Union, economic sanctions against China, support for political liberalization in Eastern Europe and the third world and marketization of economies stood out glaringly. Even a "Political Declaration" was issued at the meeting. Compared with the 15 previous meetings, the Houston summit can be regarded as an attempt by Western powers to jointly construct a new post-cold war international order.

In recent years, some Western countries resorted to direct military invasion of other sovereign states or imposed their political and economic systems and values on other nations either through economic aid, economic sanctions or under the pretext of upholding human rights or democratization. This has aroused strong resentment among these countries, thus sparking new tensions and confrontation in international relations. This phenomenon will undoubtedly persist throughout the 1990s.

### New Hot Spots

In the wake of the end of confrontation between the two major military blocs, the Soviet Union has lost its power of restraint over its former allies and its international standing and control capability of the United States have also been significantly weakened. This in turn makes it possible for some regional powers to go their own way or prac-



Thousands of Muslims pray for peace on January 18, one day after the outbreak of the Gulf war.

TANG SHIZHENG

tise regional hegemony themselves, at the connivance of other major powers. Moreover, a variety of old regional conflicts may also get out of control and escalate into unrest and turmoil. Therefore, new regional hot spots may continue to surface after existing ones are settled.

At present, the Middle East tops all regions in terms of unrest and instability. The Iraqi occupation of Kuwait presents a most serious violation of international norms. The Israeli occupation of Arab land is another. And there are still other trouble spots. Rich oil resources coupled with crucial strategic location have already turned the Middle East into a bone of contention for the major powers. Deep cuts in military spending will turn the massive arms industry in the West to the Middle East in search for a new market. In addition, the region is plagued with complicated and fierce ethnic, religious and class conflicts. All these augur ill for the future of this region.

Europe may also turn out to be another troublesome place. Nationalism of ethnic minorities is running high in many parts of

Europe. Calls for autonomy of Scots, Wales, Korsicans ... and demands for independence in the Northern Ireland, Kosovo, Transilvania are also resounding throughout the area. So much so that Lojze Peterle, Prime Minister of the Slovenian Republic of Yugoslavia warned that ethnic contradictions in the country may trigger off violent separations or even a civil war. Conflicts also exist between Albania and Greece, Turkey and Bulgaria, and Hungary and Romania over minority issues. No wonder the Balkan Peninsula is still widely regarded as a tinderbox.

The Asia-Pacific rim has been a region replete with hot spots for years. Though to varying degrees political settlement seems to be in sight for some of the issues, such as Afghanistan and Cambodia, yet no one can predict with certainty whether stability will be restored even with the end of civil war. A turning point appeared in North-South relations on the Korean Peninsula with the meeting between prime ministers of both parts of the country. Yet a long, tortuous journey still lies ahead before the

reunification of Korea is achieved. Tense confrontation remains in Kashmir between India and Pakistan. US-Soviet military confrontation remains an overriding issue in the Asian-Pacific region. Meanwhile, Japan has become the third largest country in the world in terms of military spending, arousing anxiety and concern among other Asian countries.

### World Economy

Multiple destabilizing factors lurk in the world economy. The most serious post-war economic crisis in the world broke out at the beginning of the 1980s. Many economists predict that the coming years will be a decade of slow growth for the world economy. Forecasts by four prestigious institutions — UN Commission for Trade and Development, UN Commission for Industry and Development, the World Bank and the International Monetary Fund — indicated that the average annual growth rate for the world economy during 1990-2000 will fall somewhere between 3.1 percent and 3.7 percent, with that of Western developed countries between 2.6 percent and 3.1 percent. Compared to the economic performance of the 1980s, the 1990s will be slightly better. However, other economists are not so optimistic; they predict a somewhat poorer performance in the years to come. Most observers believe that a new economic crisis, if any, will possibly not be so serious. But all of a sudden, the Gulf crisis appeared out of the blue, touching off staggering oil price fluctuations. The US economy has already slipped into a recession.

In the context of slow economic growth in the 1990s, world economic giants will step up their efforts to set up and strengthen their own economic blocs,

solidifying their spheres of influence. Along with East-West détente, the arms race will subside and economic competition will intensify. This situation will confront the third world countries with a far less conducive international economic environment.

The declining and fluctuating trend of prices for primary products will not change for the better in the 1990s. Confronted with heightening trade protectionist policies of developed countries and a back-breaking debt burden, many developing countries will remain bogged down in their economic predicament. Meanwhile, demands for domestic political and economic reforms will spring up in these countries. However, reforms cannot be introduced overnight. Moreover, economic difficulties, resulting from misguided reform policies, may destabilize the political situation and lead to social disorder. Under such circumstances, party strife, tribal animosities, religious disputes and polarization between the rich and the poor will surely intensify.

Faced with such a grim reality, countries in the South are strengthening their solidarity and co-operation. A variety of regional or transregional organizations have been set up throughout Asia, Africa and Latin America. In its August 1990 report, the South Commission pointed out that unfavourable prospects for North-South relations have forced the South to attach greater importance to its collective strength. The grouping trend in the North will also give an impetus to unity in the South. The report is pessimistic about prospects for North-South relations. It believes that capital flow from the North to the South will stagnate; that science and technological progress will decrease the North's dependence on the South; and that East-West détente may shift attention and the

flow of capital to the North away from the South. Therefore, it calls for a South summit conference to discuss the appropriate counter-measures to be taken.

### A New Order

The 1990s, as analyzed above, will be a transitional period of heightened unrest and turmoil. To prevent the international community from falling into a state of anarchy, it is imperative that a new international order be established.

A new international political order should not replace the old bipolar order with any new bipolar or tripolar domination of the world. Instead, the role of the United Nations should be brought into full play to continue to foster the world trend towards multipolarity. The international behaviour of all countries should be subject to restraint by the generally accepted norms governing international relations. Thus all sovereign states, big or small, strong or weak, rich or poor, can participate in international affairs on an equal footing, manage their own domestic affairs free from foreign interference, strengthen competitive co-operation and co-exist peacefully with other nations.

Back in the 1950s, state leaders of India, Burma and China proposed the well-known Five Principles of Peaceful Co-existence — mutual respect for sovereignty and territorial integrity; mutual non-aggression; mutual non-interference in each other's internal affairs; equality and mutual benefit; and peaceful co-existence. These five principles, which embody the most fundamental norms in international relations, are in full accord with the purposes and principles of the UN Charter and have enjoyed enduring vitality in practice. Accordingly, they have won

increasingly extensive international support over the past 30 years. In the coming decade, the establishment of an international political order based on these five principles will greatly benefit world peace, conforming with universal aspirations of the international community. At the 45th Session of the United Nations General Assembly, Chinese Foreign Minister Qian Qichen elaborated on the Chinese government's view on major world events in the spirit of the five principles. He said, "We believe such a new international political order should include the following points:

1. Every country is entitled to choose its own political, economic and social systems in accord-

ance with its own internal conditions;

2. All countries, particularly the superpowers, must strictly abide by the principle of non-interference in the internal affairs of other countries;

3. All countries should respect one another, seek common ground while putting aside their differences, live together in peace, treat each other as equals and carry on mutually beneficial co-operation;

4. International disputes should be settled on a fair basis through peaceful means without resorting to threats or use of force; and

5. All countries, big or small, strong or weak, are entitled to take part in the discussion and

management of world affairs on equal footing.

Qian also added, "We insist that it is essential to change the unfair and inequitable international economic order. In the handling of international economic relations, it is essential to abide by the principle of equality and mutual benefit. The developed countries are obliged to play their part in improving the international climate and particularly in solving the issue of foreign debt of the developing countries. People of all countries have the right to determine their own economic system and their own path of development, making the necessary readjustments in their economic policies as the need arises." ■

# Western Europe Conceives Future Security Plan

by Ma Lanpu and Yang Yipin

*The present European security structure, characteristic of the bi-polar confrontation between the US-headed NATO and the Soviet-led Warsaw Pact, is falling apart and the issue of establishing a new security pattern in Europe is on the agenda. Without a doubt, in the course of setting Europe's future new order and designing the continent's 1990s security system, Europeans will have a bigger say than ever before.*

**W**estern Europe consists of 26 independent sovereign states. The different geographical locations and indigenous economic characteristics have led to varied conceptions of security among these countries. However, the leading aspect is that their daily deepening mutual dependence, a result from their longstanding close relationship in both political and economic activities within the same capitalist system, has also led to many common views in their basic conceptions of strategic se-

curity goals for the continent.

### Security Concerns

West European countries believe that the threat to their security in the near future will come from the "East." They generally accept Mikhail Gorbachev and support him in his attempt to stabilize his position and accelerate reform.

However, they also realize that, even under favourable circumstances, it will take a long time for the Soviet Union to re-

duce its conventional as well as nuclear arsenal to a level inadequate of posing any serious threat. The question remains whether the Soviet Union will change its long-attempted strategic goal to dominate the European Continent, not to mention the consequential disasters facing Western Europe when Gorbachev's position shakes, and abrupt changes occur, sending the continent reeling back into a cold war. Even if Gorbachev's position remains stable and his reform movement achieves suc-

cess, this will also spell trouble for Western Europe. For once the Soviet Union succeeds in its economic take-off, it will, driven by its economic interest, proceed to launch a comprehensive competitive economy, and become an economic threat to the European Community, the United States and Japan. Moreover, ethnic contradictions are intensifying daily in the Soviet Union. If no proper solution is found and the central government loses control of the situation, the result will be that European security as a whole will be hurt. Therefore, West European strategists urged their countries to be keenly aware of the potential threat from the East. Most West European countries maintain that they should seize all profitable opportunities to consolidate the reform movement in the Soviet Union and Eastern Europe in order to promote arms reduction talks in Europe and establish a low-level military balance. Meanwhile, they believe more flexibility must be added to their general strategy towards the Soviet Union, the focal content of which is described as defence plus detente and evolution, so as to turn enemies into friends and achieve victory without war.

The reunification of Germany has placed other West European countries in a panic that Germany may some time in the future become a destabilizing force within Europe. The military potentialities of this reunified country must not be underestimated. Germany not only possesses powerful military strength, advanced military production and military technology, but it also has a strong capacity to mobilize for a war. A re-armed Third Empire could have a grave impact on European security. Politically, the rise of Germany will not only upset the balance of power between the West and the East, but will si-

multaneously break the delicate balance within the Economic Community as well.

Economically, the former Federal Germany's gross national product accounted for one fourth of that of the EC. This figure will rise to one third following reunification. The reunified Germany will maintain its status as a major power in foreign trade in the Western world. Its gold reserve currently ranks first among EC members and fourth in the world. The Deutsche mark is the second strongest currency in the world, and will be further strengthened after the reunification. Germany will continue to be an European economic superpower in the future, led by its development as one of the world's most powerful industrialized nations. Besides, the increase in mutual reliance between the Soviet Union and Germany in the last year has increased Western Europe's anxiety towards Germany's inclination towards neutralization. If Germany becomes a neutral nation, the strength of the Western world will be dispersed and NATO will subsequently collapse. This foreshadows a gloomy prospect for Western Europe. Therefore, many West European countries propose strict restric-

tions on the rearmament of a reunified Germany and that efforts must be made to incorporate the country within NATO and the European security system, and economically, to bring its economic development into the same orbit of the EC so as to keep the country from becoming estranged from the EC.

Another unstable factor West European countries are concerned about comes from the Middle East, the Mediterranean and northern Africa. Though conflicts in these areas are regional and limited, the threat they pose to European security is very real. The most recent Gulf crisis will in many respects have a negative impact on the European integration process. Europe's southern flank, described by West European strategists as the "soft belly" of the European Continent, is a region of great significance for European security. The Middle East and northern Africa are also Western Europe's major energy supply bases. Any warfare here will have direct influence on Europe's economy. Therefore it is no wonder that as soon as Iraq invaded and annexed Kuwait, the European Community agreed with unprecedented speed to implement economic sanctions against Iraq.

**West European-Soviet co-operation:** On October 29, 1990, Soviet President Mikhail Gorbachev (left) visited France and exchanged views with French President Francois Mitterrand on the Gulf situation and European security issues. XU BU





Coordinating positions: On December 10, 1990, foreign and defence ministers of the West European Union held a meeting on the Gulf situation.

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France, Britain, Italy, the Netherlands and Belgium immediately dispatched troops to impose a military deterrent against Iraq. Besides, Western Europe is also greatly concerned over the research and development of nuclear and chemical weapons by southern European countries, observing that the threat of nuclear weapons in the hands of these countries is more severe than those held by major powers.

### Basic Principles

West European countries have formulated their basic security policies on NATO, the EC and the Conference on Security and Co-operation in Europe (CSCE), the three different but related security systems presently existing in Europe.

During the transitional period, NATO should continue to play a defensive role, but at the same time must make some substantial readjustment in its function.

It is widely accepted as necessary for NATO to continue to exist. Britain is most persistent on this point, and France does not reject the idea, for NATO is still the major consultation organization in the West. The need to discuss significant issues with

in its scope remains. While acting as a bond linking the common interests of Europe and the United States, NATO is also an important organization allowing Western countries to formulate united strategies and coordinate their relations. West European countries believe that the simultaneous dismantling of the NATO and the Warsaw Pact before Western Europe is capable of organizing a strong and independent defensive force will surely bring about unimaginable disasters. Excessive self-weakening by the NATO and a premature US withdrawal from Europe will create a power vacuum on the continent, hence providing a good opportunity for hard-liners in the Soviet Union to once again establish control. On the other hand, the existence of NATO and the retaining of a proper number of US troops in Europe can help ease fears within Western and Eastern Europe, as well as in the Soviet Union, of the potential threat posed by a reunified Germany. NATO can thus restrain Germany to a large extent.

However, NATO itself must also make fundamental strategic adjustments. NATO's postwar strategy of flexible response and

forward position defence, which included the initial use of nuclear weaponry, must be altered, as a response to the continual changes within Europe. The realized German reunification spells the vanishing of NATO's forward position. Therefore, Germany strongly demands an alternate position to the existing forward position strategy. Moreover, NATO's former military deployment was aimed at the Soviet Union's East European satellite nations, which are presently becoming new friends of Western Europe. Therefore NATO's military deployment must also be readjusted.

NATO's political function should be enhanced while its military importance is diminished. West European countries demand a renewal of relations between the two sides of the Atlantic, and Western Europe's influence in NATO be expanded. The declaration issued in May 1990, at the summit meeting in London proposed that NATO should continue to exist as an defensive military union in the future, but should also strengthen its political function. Britain is a very active proponent of this position and other West European countries agree on this point as well. Only France is hesitant about the strengthening of NATO's political function.

Moreover, in the process of forming a new order in Europe, West European countries are trying to gradually establish Europe's own security and defence system.

On the issue of designing Europe's future security pattern, France emphasizes the development of Europe's strength, consolidating the EC, repelling and weakening the influence of the United States and the Soviet Union in order to safeguard and expand France's function and position in European affairs.

Germany has proposed the establishment of a European security union, which is intended to be a wholly European integrated organization excluding the United States, Canada and the Soviet Union. Britain emphasizes the necessity of US protection. It attaches particular importance to NATO's role in the European security structure and to the continuing presence of US military force in Europe during a specifically designated period of time in the future. It proposes that after the reunification of Germany, the United States, Britain and France retain a minimum number of troops and their nuclear weapons in Germany. London also supports the increased security role of the EC.

The West European Union was formerly a defensive organization established in the 1950s by Britain, France, the Netherlands, Belgium and Luxemburg. However, for a long period of time it never played a substantial role. It was not until October, 1984 that the union held its first meeting of foreign and defence ministers in Rome and adopted at the conclusion of the meeting a resolution strengthening the union's function as Europe's pillar. It was also decided that a meeting would be held each year to discuss such issues as European security, military co-operation and strategic coordination between the allies. Currently the EC countries are proposing to make the West European Union the organic basis of a future European security system. This indicates that security and defence co-operation among West European countries tends to be institutionalized and legal. It is a significant breakthrough in the West European countries' efforts to organize collective strength on the security issues.

Simultaneously, West European countries are beginning to establish a European multi-

national force. As early as in 1987, the then West German chancellor, Helmut Kohl, proposed a mixed French-German brigade. The proposal received an immediate response from French President Francois Mitterrand, and in November that same year, the two sides reached an agreement creating a troop of about 4,000 soldiers. Not long ago, the troop was officially commissioned. Recently, Britain and France also discussed the possibility of establishing a united French-British army, as well as a European multinational force of a large dimension. Although the organization of such a European force will face a series of obstacles including differences in languages, unified commandship and weaponry standardization, the trend is of significant proportions.

West European countries' co-operation in weapons production had begun as early as the 1960s and the 1970s. In the 1990s, West European countries will attach greater importance to taking advantage of their technological superiority to carry out joint research. Currently, in Western Europe's weaponry production co-operation, British-French nuclear co-operation is the most visible.

### **Role of the CSCE**

According to West European countries' conceptions, the 35-member CSCE will be more advanced and comprehensive in terms of membership than NATO, the Warsaw Pact as well as any regional organizations that may be established in the future, for only the CSCE can admit the membership of 35 nations with different social systems and different inclinations, both alligned and non-alligned. In addition, only the CSCE can absorb those East European

countries destined to resign from the Warsaw Pact.

The CSCE was formerly advocated by the Soviet Union. When its first meeting was held in Helsinki in 1973, Western Europe was quite suspicious about the Soviet Union and adopted a cold attitude towards participating in the organization. However, it is a different case now. West European countries are carrying the flag of CSCE and are shifting from a defensive to offensive position on the issue of security and co-operation in Europe.

The 1990s will see improvement in CSCE's organizational structure. A standing secretariat will likely be set up. Summit meetings and foreign ministerial meetings will be held regularly and committees responsible for such affairs as economic and trade exchanges, mutual visits, guarantee of human rights, border as well as ethnic conflicts, will also be organized. It is also likely that a multi-national European force will be established to maintain the "new order." Moreover, some confidence-building measures will probably taken to strengthen trust among NATO, the Warsaw Pact and other countries concerned, and there will be also a possibility of signing a mutual non-intervention treaty or an agreement on friendly co-operations. In short, although in the near future the CSCE may not be able to play a decisive defensive role, it will certainly help to improve the European atmosphere, strengthen co-operation and promote European unity. Issues of European and global significance will be widely discussed by the CSCE. Therefore it will undoubtedly favour the removal of the antagonism between the two military alliances and promote comprehensive co-operation among CSCE member nations. ■



# CPC Central Committee's Proposals For Ten-Year Development Programme And 8th Five-Year Plan

On January 28, 1991, the Central Committee of the Communist Party of China published its proposals for formulating the ten-year programme (1991-2000) and the Eighth Five-Year Plan (1991-95) for national economic and social development.

The proposals, adopted at the Seventh Plenary Session of the 13th CPC Central Committee on December 30 last year, suggested that the gross national product (GNP) grow at an average annual rate of about 6 percent in the next decade and the people's living standards reach the better-off level.

The proposals also put forward tasks and measures for further opening to the outside world and deepening the reform, and recommended the priorities and orientation for the development of the economy, science and technology, education, culture, public health and other undertakings.

The Chinese government is drafting outlines of the ten-year programme and the Eighth Five-Year Plan on the basis of the proposals, to be submitted to the Fourth Session of the Seventh National People's Congress for deliberation in the coming spring.

According to the proposals, which run to 28,000 Chinese characters, the first-step strategic objective for China's modernization, namely, doubling the 1980 gross national product and providing the people with adequate food and clothing, has basically been attained. From 1991 to 2000, China will realize the second-step strategic objective and raise the quality of the national economy as a whole to a new level.

The five basic requirements for materializing the second-step strategic objective in the next ten years are:

—To quadruple the gross national output of 1980 by the end of this century in terms of constant price on the basis of greatly improving economic efficiency and optimizing the economic structure.

—To raise the people's living standards from just having enough to eat and wear to a state of

leading a fairly comfortable life, with ampler means of subsistence, increasingly rational consumption pattern, significantly improved dwelling conditions, more colourful cultural life, and continuously improved health and social services.

—To expand educational undertakings, promote scientific and technological progress, improve economic management, readjust the economic structure, and give priority to key construction projects so as to lay the material and technological foundation for China's sustained economic and social development in the early 21st century.

—To initially establish an economic structure and operating mechanism, which suit the development of a socialist planned commodity economy based on the public ownership and which combine planning with market regulation,

—To raise socialist culture and ethics to a new level, and further improve socialist democracy and legal system.

The proposals required that noticeable progress be made in economic construction in the following three aspects: (1) to adjust the industrial structure, strengthen agriculture, basic industries and infrastructural facilities, reorganize and transform the processing industry so as to continuously rationalize the industrial structure and gradually modernize it; (2) to use advanced technology and equipment to transform the traditional industries and the existing enterprises; (3) to correctly deploy the productive forces, actively promote the rational division of work and co-ordinated development of the regional economies and promote the formation and development of a unified national market.

The proposals stressed the necessity of carrying on the basic national policy of opening to the outside world and called for efforts to expand economic and technological exchanges and co-operation with other countries, actively and effectively utilize foreign funds, further implement the coastal economic development strategy, develop the export-oriented economy, run the special economic zones still better and consolidate and

develop the existing economic and technological development zones and coastal open cities and areas.

The proposals pointed out that China's ongoing economic structural reform is to eliminate the drawbacks in the economic system formed under certain historical conditions, and initially establish a new system of the socialist planned commodity economy, a task whose accomplishment requires continued efforts in the next decade.

The proposals also explained and made specific arrangements for the establishment of an economic operating mechanism which combines planning with market regulation as well as for the reform in various economic fields.

The proposals urged efforts to organize forces to tackle key scientific and technological problems in modernizing the technology and equipment of industrial and agricultural production, achieve new results in high-technology and strive to approach or reach advanced international levels in some areas.

The proposals recommended more input in education as well as the effort to readjust and optimize the educational structure, raise the quality of education and establish a socialist educational system with Chinese characteristics which gears to the 21st century.

The proposals also called for efforts to strengthen modernization of national defence, appropriately increase defence spending, actively and prudently push forward the political structural reform and build socialist democracy with Chinese characteristics.

The document stressed the importance of following the road of building socialism with Chinese characteristics and called for strengthening and improving leadership by the Chinese Communist Party, maintaining national and social stability, expanding friendly exchanges and sincere co-operation with other countries, and pushing forward the great cause of reunification of the motherland.

### **Build Socialism With Chinese Characteristics**

The proposals explained 12 principles for the basic theories and practice in building socialism with Chinese characteristics.

The proposals stressed that firmly following the road of building socialism with Chinese characteristics is the fundamental guarantee for attaining the strategic objective of quadrupling the 1980 gross national product by the end of this century.

The 12 principles listed in the proposals are:

(1) Persist in the people's democratic dictatorship led by the working class and based on the worker-farmer alliance, constantly improve the system of people's congresses, constantly improve the system of multi-party co-operation and political consultation under the leadership of the Communist Party, constantly consolidate and develop the broadest possible patriotic united front, and make efforts to strengthen socialist democracy and the socialist legal system.

(2) Make the development of the social productive forces the fundamental task of socialism, go in for modernization with devotion, and constantly improve the material and cultural life of the people.

(3) Constantly improve the socialist economic and political system and the managerial system in other domains through reform, and give full scope to the initiative, enthusiasm and creativeness of the central and local authorities, enterprises and the working people.

(4) Constantly expand the scope of opening to the outside world by using varied forms such as the expansion of foreign economic relations and trade, use of foreign funds and import of advanced technology, and through running special economic zones and economic open areas and adopting necessary special policies and flexible measures.

(5) Persist in an ownership structure embracing diverse economic sectors with the socialist public ownership as the main body, bring into play the supplementary role of the individual, private and other economic sectors beneficial to the public sectors of the economy, and administer and guide them in a better way.

(6) Actively develop a socialist planned commodity economy, combine planning with market regulation, and promote sustained, stable and coordinated development of the economy.

(7) Follow the system of distribution that takes to each according to his work as the main form supplemented by other modes of distribution, allow and support a portion of the people and areas to get rich first through honest labour and lawful business operation, and encourage those who are better-off to help those who lag behind, so that all the people and areas will gradually achieve prosperity.

(8) Persist in taking Marxism-Leninism and Mao Zedong Thought as the guidance, inherit and carry forward the fine legacies of culture of the motherland, draw on and absorb all fine cultural achievements in the world, constantly raise the ideological and ethical standards and scientific and cultural levels of the whole nation,

and develop socialist culture and ethics.

(9) Establish and develop a socialist relationship among ethnic groups characterized by equality, mutual assistance, unity, co-operation and common prosperity, persist in and improve the system of national regional autonomy, and oppose ethnical discrimination, oppression and separation.

(10) Promote the realization of the great cause of reunifying the motherland according to the concept and practice of "one country, two systems."

(11) Persist in the independent foreign policy of peace, develop friendly relations with all other countries on the basis of the Five Principles of Peaceful Coexistence, oppose hegemonism and power politics, support the just struggle of the oppressed nations and peoples, safeguard world peace and promote progress of mankind.

(12) Uphold leadership by the Communist Party, constantly improve the Party's leadership system, style and methods, and strengthen the Party politically, ideologically, theoretically and organizationally, so that it remains the staunch core of leadership of the socialist cause.

### Measures to Boost Agricultural Development

Deepen rural reform, harness the Changjiang (Yangtze), Huanghe (Yellow) and other major rivers and lakes, raise per-unit yield and develop wholesale and futures grain market—these are among the measures China is to adopt to boost agricultural development in the next decade, according to the proposals.

The proposals said that China's annual grain output should hit the mark of 450 million tons and 500 million tons successively in the coming decade.

Besides, efforts will be made to increase the output of cash crops, expand forestry, livestock breeding and aquatic products industry, and guide the rural industries along the road of healthy development in order to promote an overall growth of the rural economy.

To this end, the proposals recommended the following major measures:

—To continue deepening rural reforms. While keeping the responsibility system with the household contract linking output to remuneration as the main form, vigorous efforts should be made to develop the socialized service system, improve the dual management system that integrates household and collective operations, combine the advantages of collective operation with the enthusiasm of farmer household operation,

and gradually expand the collective economy. Where conditions permit, different forms of optimum-scale farming should be encouraged according to local conditions and on a voluntary basis.

—To increase input. A number of large and medium-sized flood control, water storage and water diversion projects should be built, projects to divert water from the south to the north be speeded up, and work on comprehensive regional development of agriculture be intensified. Efforts will be made to build a number of major agricultural commodity centres, transform low-yielding land and reclaim wasteland suitable for farming.

—To continue the effort of invigorating agriculture by applying scientific and technological achievements and promoting education, raise the scientific and cultural levels of the peasants and expand the contingent of agro-scientists and technicians, increase the acreage sown to improved strains, and popularize the superior cropping system and farming methods and techniques. In the next ten years, a greater part of the increased agricultural output should result from the popularization and application of scientific and technological achievements than that in the 1980s.

—To reform the distribution system of farm produce to facilitate its circulation, increase storage, transporting and processing facilities, gradually build and perfect the grain reserve system at the national and provincial levels, develop wholesale and futures grain markets in a planned way, and introduce a purchasing and marketing system and price policies in favour of grain production.

—To further help poor areas develop after the majority of people there have enough to eat and wear, and enable most of the households in such areas to become better off by the end of this century.

—To treasure and make rational use of land, gradually stabilize the acreage of cultivated land, and protect forest resources.

The proposals also called for efforts to guide the rural industries to develop in a healthy manner by adjusting their structure, improving product quality and economic results and maintaining an adequate rate of growth.

China has made much progress in agriculture since it adopted the policies of reform and opening to the outside world. From 1980 to 1990, its grain output rose from 320 million tons to more than 420 million tons, an increase of 31 percent. Cotton output went up from 2.71 million tons to 4.25 million tons, increasing by 56.8 percent. Rural industries have developed by leaps and bounds,

playing a big role in promoting the growth of the rural commodity economy, increasing the income of farmers and bringing a new look to the rural areas.

### **Strengthen Development of Science and Technology**

China Will strengthen the development of its science and technology along the lines of economic construction, hi-tech research and development of a new and hi-tech industry and basic science research in the next decade and strive to make some of the achievements approach or reach advanced world levels, said the proposals.

According to the proposals, China will undertake the following tasks of developing science and technology in the coming decade:

—To launch scientific and technological task projects focusing on key subjects concerning the modernization of the production technology and equipment in industry and agriculture, population control, protection of the ecological environment and national defence,

—To strengthen applied science research and popularize on a large scale scientific and technological achievements that are cost-efficient and can yield quick returns.

—To keep abreast of the new technological revolution and try to make fresh achievements in such hi-tech fields as biological engineering, electronic information technology, automation technology, new materials, new energy, aerospace, maritime engineering, laser, superconductor and telecommunications.

—To strengthen basic science research, step up the construction of key and specialized laboratories, promote the integration of natural and social sciences, and pay attention to the development of new and frontier branches of science.

The proposals stressed the urgency of creating, through reform, a vigorous and efficient new mechanism that combines scientific research, import, innovation, popularization and application and enables them to promote each other. Such a new mechanism will be compatible with economic development.

The proposals called on the central and local authorities and enterprises to increase input in science and technology.

The proposals said that research in social sciences should be guided by Marxism and focus on major theoretical and practical issues arising in the process of building socialism with Chinese characteristics, especially major issues concerning China's economic and social development, reform and opening to the outside world in the 1990s.

### **Build Education System With Chinese Characteristics**

China is to establish in the coming decade an educational system with Chinese characteristics which gears to the 21st century, according to the proposals.

The document said that this will be achieved by deepening China's educational reform, readjusting and optimizing the educational structure, raising the quality of education and efficiency of schools and strengthening the ranks of teachers.

According to the proposals, developing educational undertakings and raising the quality of the whole nation are of fundamental importance to the building of socialism.

The proposals required that the compulsory primary education be made basically universal in China by the end of this century, compulsory junior middle school education be basically popularized in towns and economically developed rural areas, and senior middle school education be popularized in large cities on a trial basis.

According to the proposals, various forms of vocational education will be developed rapidly. The proportion of vocational school students to the high school student body will be raised from the present 45 percent to over 50 percent in 1995. At the same time, short-term technical training courses will be offered in various forms.

By the end of this century, the majority of the newly added labour force in the rural areas will have received vocational education or technical training, and new workers in enterprises must receive education before work and undergo on-the-job training.

Statistics show that there are 1,075 institutions of higher learning in China, with 2.06 million students.

The proposals noted that the scale of university and postgraduate education should be kept as it is, with improvement to be made in the Eighth Five-Year Plan period. Specialized education should be expanded appropriately according to needs and possibilities, and a number of key branches of learning should be established in accordance with the actual need.

Doctoral students should mainly be trained at home, the proposals said, adding that the policy of sending students abroad for academic studies should be continued and improved, and international exchanges and co-operation further promoted.

The proposals called for vigorous efforts to develop adult education and wipe out illiteracy. The document set the goal of eliminating illiteracy among the young and middle-aged people ac-

ross the country by the year 2000. A recent survey shows that there are 180 million illiterate people in China.

The proposals also set requirements for the press, publication, radio, television, literary and art and other cultural undertakings, calling for continued implementation of the policy of serving the people and socialism.

The proposals urged concrete measures to improve the living and working conditions of the intellectuals in the coming decade to bring their initiative into fuller play.

### **Raise People's Living Standards**

One of the important goals for China's economic development in the 1990s is to ensure the Chinese people a fairly comfortable life, according to the proposals.

The proposals required that in the next decade the people's material and cultural life be improved and enriched, and both the consumption level of individual residents and the social welfare and labour environment be uplifted and improved.

According to the proposals, this goal of life improvement should be reached gradually and from region to region because of the uneven economic development in the country.

The document stressed that varied forms of distribution, with "to each according to his work" as the main one, should be earnestly implemented, and that the policy of allowing and encouraging a portion of the people and areas to become rich first through honest labour and lawful business operation should continue.

The proposals said that equalitarianism in wages should be overcome while big gaps in incomes other than wages should be eliminated. Legal income should be protected, excessively high income should be regulated through tax, and illegal income must be prohibited according to law.

The proposals called for readjustment of the consumption pattern, proper guidance of individual consumption, help to provide jobs for people in urban and rural areas, improvement in the dwelling conditions of rural and urban residents, strengthening of environmental protection, development of public health facilities and improvement of people's health.

The document said that a social insurance system for the aged should be established for people of different occupations in cities and towns, with the state, collectives and individuals sharing the cost in a rational way. The scope of insurance for people waiting for jobs should be enlarged, and a

multi-level social insurance programme be practised. In the countryside, different forms of insurance system for the aged should be gradually established.

To ensure the improvement of the people's living standards and the quality of the whole Chinese nation, the proposals suggested that the average natural population growth should be kept within 1.25 percent a year in the next decade.

### **Establish New Economic Structure in Ten Years**

The proposals pointed out that it is the basic orientation of deepening economic restructuring to set up an operating mechanism that combines planning with market regulation in line with the requirements for developing a socialist planned commodity economy.

The proposals laid down the following four principles for integrating planning with market regulation:

First, planning can maintain a proportionate development of the national economy and a rational disposition of resources while market regulation can play the role of keeping the superior and eliminating the inferior and add vigour to economic development. A combination of planning and market regulation can bring into play the advantages and strong points of both so as to promote a sustained, stable and harmonious development of the national economy.

Second, planning is not limited to mandatory plans. Both mandatory and indicative plans are concrete forms in operating a planned economy. The coverage of mandatory plans will be reduced, that of guidance plans expanded, and the role of market mechanism given greater scope, along with the deepening of economic restructuring, the improvement in economic structure and economic restructuring, the improvement in economic structure and the steady growth of markets. Management through plans must be conducted consciously according to the law of proportionate economic development and the law of value and by taking into account the market supply and demand. Market regulation must operate within the framework of the overall plans, laws and regulations of the state.

Third, planning should be applied in matters such as the control of aggregate supply and demand, readjustment of economic structure and layout, and other major economic activities affecting the overall situation whereas economic activities such as the routine production and operations of enterprises, ordinary technical transformation and small-scale construction, should be

left to market regulation.

Fourth, the principal tasks of the state in economic management are to work out proper plans and programmes for the development of the national economy and set overall control targets, formulate correct industrial, regional and other economic policies, do a good job of overall balance, co-ordinate the ratios between accumulation and consumption, between industry and agriculture and between the heavy and light industries, and guide and regulate economic operations by employing legal and administrative means in a comprehensive and co-ordinated manner.

### **Tasks of Economic Reform for Next Decade**

The proposals also specified reforms in the following aspects:

—To reform the financial and taxation system and establish a stable and standardized financial and taxation system. During the Eighth Five-Year Plan period, the financial contract system will be stabilized and perfected while a system of sharing tax revenue between the local and central authorities will be implemented on a trial basis.

—To give proper play to the role of banks, deepen the reform of the banking system, further strengthen the functions of the central bank with respect to overall regulation, control the scale of money issue and credit, promote the overall balance and structural readjustment of the country, and develop money markets.

—To continue reforming the planning and investment systems in line with the requirements for the development of a planned commodity economy.

—To reform the wages system, increase the wages in a planned and proportionate manner on the basis of economic development, and establish a new wages system that can reflect in an overall manner the quality and quantity of the labour of the staff members and workers.

—To deepen the reform of the commercial and materials supply system, actively develop various forms of trading and eliminate all blockages and barriers.

—To gradually establish an overall regulating and control system that relies mainly on government planning and combines economic, administrative and legal means, perfect the indirect regulating and control mechanism, and make better use of price, tax rate, interest rate, exchange rate and other means to regulate economic operations.

—To establish a scientific system for making economic decisions and accelerate the construc-

tion of the economic legal system.

### **Measures to Revitalize Enterprises**

In the proposals the Central Committee of the Chinese Communist Party called for continued efforts to invigorate the enterprises, especially large and medium-sized state-owned ones, deeming it as the key link in deepening the economic reform.

There are more than 10,000 large and medium-sized enterprises in China. By contributing to 60 percent of the country's total profit and tax revenue from industry, these enterprises form the pillars for sustaining China's modernization effort.

To make them play an even greater role, the proposals recommended the following specific measures:

—To improve and develop the contract responsibility system in enterprises. During the Eighth Five-Year Plan period, the existing contract method should be stabilized and improved, while the method of repaying debts and signing contracts after tax will be practised on a trial basis.

—To persist in the separation of functions and responsibilities between government and enterprises and the appropriate separation of ownership and the right of management so as to gradually make most state-owned enterprises truly independent socialist commodity producers or managers responsible for their own profits and losses.

—To accelerate technical transformation of enterprises and development of new products through such means as raising the depreciation rate properly.

—To reduce the burdens on enterprises and forbid arbitrary charges on them other than the taxes and fees imposed according to law.

—To actively develop enterprise groups, stimulate the reorganization, association and amalgamation of enterprises and establish a number of trans-regional and trans-departmental competitive enterprise groups in a planned way.

—To deepen the reform of enterprise leadership system and operational mechanism, strengthen enterprise management, and improve the personnel, wages, profit distribution, accounting and auditing systems in enterprises.

—To continue trials of the leasing system, shareholding system and other reforms.

—To strengthen the control of state-owned assets.

—During the Eighth Five-Year period, petrochemicals, coal, iron and steel, nonferrous metals and railways industries will continue the practice of turning over to the state a fixed amount of

taxes and profit according to the contract.

### Open Wider to Outside World

China will, on the principle of equality and mutual benefit, expand its foreign economic and technological exchanges and co-operation and strive for greater progress in foreign trade, utilization of foreign funds, import of foreign technology and exchange of experts, the document said.

It stated that China will carry on its economic development strategy for coastal regions and promote their export-oriented economy.

According to the proposals, effective policies and flexible measures will be continued to run the special economic zones still better, consolidate and expand the existing economic and technological development zones, coastal open cities and open areas, and give full play to their role as the window, bridge and base of China's opening to the outside world.

The proposals singled out the opening and development of the new Pudong area in Shanghai as an important task in the coming decade.

The proposals noted that foreign funds should be used mainly in support of the projects of agriculture, water conservancy, energy, transport, telecommunications and important raw and semi-finished materials, adding that more attention should be paid to the efficiency in using foreign funds.

The document urged efforts to further improve the investment environment and encourage foreign businessmen to launch more export-oriented projects or projects using advanced technology. It said that the lawful operations and legitimate rights and interests of foreign-funded enterprises should be protected and necessary supervision and control over them should be strengthened according to law. Foreign debts should be paid on time.

The proposals noted that in the next decade China's export should be expanded, the structure of export commodities be made more rational, the quality of export commodities be improved, and the import structure be adjusted.

To develop China's foreign trade, the proposals stressed that a foreign trade system characterized by independent operation, sole responsibility for profits and losses and a combination of trade and industry, should be practised.

The document pointed out that key large enterprises, especially enterprise groups, should be given more autonomy in foreign trade. A state-controlled, flexible and rational exchange-rate regulating system should be established and per-

fect, and the foreign exchange regulatory markets be improved, it added.

### Push Forward National Reunification

China will actively work for the peaceful reunification of the motherland while materializing the return of Hong Kong and Macao in the 1990s.

This is reaffirmed by the Central Committee of the Communist Party of China in the proposals. The proposals said that efforts will be made to promote the establishment of direct links in postal service, air and shipping services and trade between the two sides of the Taiwan Straits and push forward the cause of peaceful reunification of the motherland according to the principle of "one country, two systems."

The proposals encouraged business people from Taiwan to invest in the mainland and efforts to increase exchange and mutual understanding.

The proposals said the CPC Central Committee called on the people of all nationalities in the country, including compatriots in Hong Kong, Macao and Taiwan and Chinese nationals residing abroad, to take an active part during the 1990s in the great cause of making China powerful and prosperous and promoting the peaceful reunification of the motherland.

### Press Ahead With Political Structural Reform

The proposals pointed out that the political structural reform is a guarantee for the success of the economic reform and an important component of China's general scheme of reform and opening to the outside world and socialist modernization.

The proposals stressed the need of building socialist democracy with Chinese characteristics.

To this end, the proposals called for efforts to uphold and improve the system of people's congresses and the system of multi-party co-operation and political consultation under the leadership of the Communist Party, establish and improve the procedures and systems of democratic decision-making and democratic supervision, and establish a leadership system that is efficient and can mobilize the initiative of all quarters.

The proposals also called for efforts to reform the administrative structure, smooth out the relationship among government departments at various levels, reform the cadre and personnel system, take effective and resolute measures to keep government clean, check unhealthy tendencies and malpractices, simplify administration, reduce overlapping structures, cut down on overstaffing, raise efficiency and carry on the struggle against corruption resolutely and perseveringly. ■

# Hunan: An Open Inland Province

by Our Staff Reporter Hong Lanxing

*Hunan, home province of the late Chairman Mao Zedong, is richly endowed with natural resources. In order to make use of its advantages, the inland province will speed up its opening to the outside world.—Ed.*

**H**unan, one of China's inland provinces, has always been a land of attraction for talented people. Hunan residents will cite in support of this statement names such as Cai Lun who invented techniques for making paper, Qu Yuan who was a famous poet in the Chinese history, as well as the founders of New China such as Mao Zedong, Liu Shaoqi and Peng Dehuai. While taking pride in famous Hunan people, residents are also quick to say, "We Hunan people are knowledgeable and good at military affairs but we are not so good at business."

This is perhaps one reason why, in the wave of reform and opening to the outside world, Hunan lags behind the coastal areas, the Changjiang (Yangtze) River Delta and many others in economic development. Not content with the situation, however, Hunan people are eager to catch up with the other areas and even surpass them. "In order to develop, our only option is to speed up our opening to the outside world," according to Chen Bin-fan, deputy provincial governor.

## A Land for Investment

Located on the southern bank of the middle reaches of the Changjiang River, Hunan Province borders Guangdong in the



south and is therefore not too far from Hong Kong and Macao. Though it does not command many of the advantages held by coastal open cities, it does have its own advantages.

Hunan is richly endowed with natural resources. "In terms of natural resources, even Fujian which boasts the Xiamen Special Economic Zone is no match for us. As the saying goes, 'Bumper harvests in Hunan and Guangdong will provide enough food for the whole nation.' Hunan is a large province richly endowed with natural resources," said Deputy Provincial Governor Chen who is in charge of the province's

foreign economic relations and trade.

Hunan Province is in the subtropical zone, covers a total area of 210,000 square kilometres and has a total population of 57.83 million. It has 5,600 kinds of animals and plants, and 15.3 million kw of hydroelectric reserves.

Hunan is China's "Home of Nonferrous Metals" and "Home of Non-Metallic Ores." Of 111 kinds of nonferrous ores discovered in the province, the reserves of 83 types have been verified. In terms of their reserves, antimony and tungsten are in the world's forefront; bismuth, realgar, fluorite, barite, feldspar and se-



piolite rank first in the nation; and lead, zinc, mercury, kaolin clay and graphite take second place. The reserves of manganese, beryllium, molybdenum, lithium, sulphur, phosphorus and diamond are also very large.

Hunan Province is also China's "Hometown of Rice and Fish." Its rice and ramie production ranks first in China; its tea and pig output ranks second in the nation; and its production of tangerins, jute and bluish dogbane, cotton, tung oil, cured tobacco, lotus seeds, day lily and edible plant oil holds an important position in the country.

Hunan embroidery, originating in Changsha and having a history of 2,000 years, is known worldwide for its beautiful and lifelike designs, unique stitching and bright colours. Its silk products have always been loved by domestic and foreign customers. The area's china-ware is also famous for its exquisite workmanship and its fireworks have won awards many times for quality, once winning an international competition. The fireworks are sold to more than 50 countries and regions in Europe, America and Asia.

Hunan is also rich in tourist resources with ten major tourist areas and some 100 tourist spots. With its ancient architecture, the Yueyang Pavilion is one of the three major pavilions south of the Changjiang River. The Henshan Mountain is a holy site of Buddhist worship. China's first forest park in Hunan is referred to as the "labyrinth of the great nature" and attracts an endless flow of visitors. In addition, Hunan has preserved the former homes of Mao Zedong and his wife, Yang Kaihui, and of Liu Shaoqi, as well as many areas of national minorities. The famous Mawangdui tomb, site of a female corpse dating back to the Western Han Dynasty some 2,100 years ago, and many valu-

able burial objects, have been unearthed in Hunan.

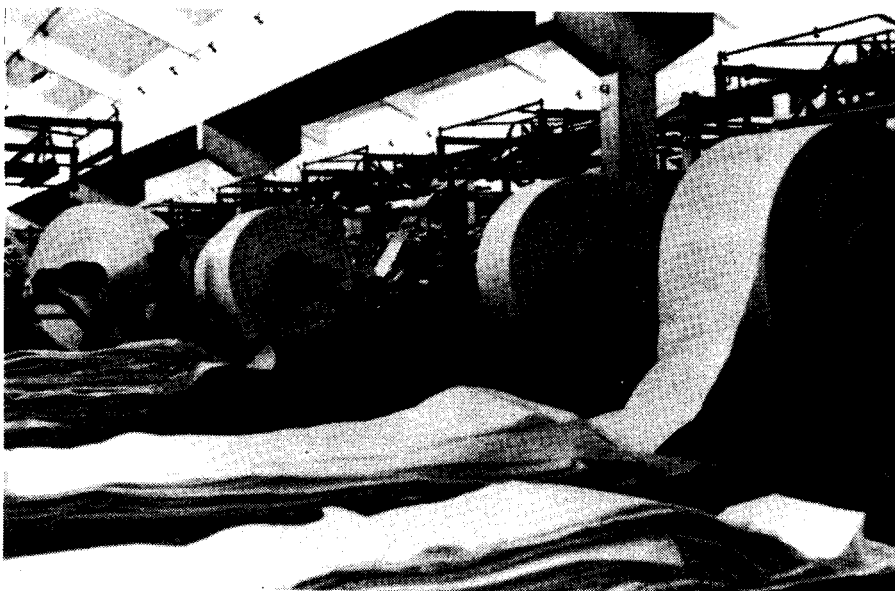
Although Hunan's communications are not as good as the coastal cities, the area has obvious advantages among inland provinces. Inside the province flow four rivers which converge in the Dongting Lake, China's second largest freshwater lake, before emptying into the Changjiang River. The crisscrossing five trunk railways, including the Beijing-Guangzhou and Zhejiang-Jiangxi railways, link the province to various parts of the country and to major coastal ports. Navigational routes total 10,000 km. Changsha operates regulate cargo shipment services to Shanghai and other coastal areas in south China. Already, Hunan has started co-operative relations with various ports along the Changjiang River and opened up an international through-transport business. Hunan exports two trains of fresh and perishable goods directly to Hong Kong via Shenzhen every other day. Its highways radiate in all directions,

with five national roads cutting through the province. Hunan has 56 regular flights from Changsha to Beijing, Shanghai, Guangzhou, Xian and other major cities in the country.

Hunan has 49 institutions of higher learning, the major ones including Zhongnan Industrial University, Hunan Medical University, National Defence Science and Technology University, Hunan University and Changsha Railway College. In addition, Hunan has started adult education and on-job training. Hunan's educational level is so high that its students routinely beat all other provinces in university entrance examinations held each year. There are 184 scientific research institutions in Hunan which employ 858,000 technical personnel. They lead the whole nation in hybrid rice cultivation, in research of the human chromosome, and in the development of the 100 million-operation Milk Way Computers. Some of the research results have reached or approached the advanced world levels. In addition, Hunan is in

The gunny-sack production line of the Sino-American Fengren Plastic Products Co. Ltd.

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## Information on Hunan

1.2. Hunan embroidery, with a history of more than 2,000 years, is one of the four famous styles found in China (the other three are Suzhou embroidery in Jiangsu Province, Guangdong embroidery in Guangdong Province and Sichuan embroidery in Sichuan Province). The tiger and lion designs of the Hunan embroideries, known for their bright, colourful and graceful techniques, are traditionally famous.

3.4. The women of the Tujia nationality are clever and quite good at knitting. The more than 100 designs demonstrate the exquisite and colourful knit handicrafts of the Tujia people.

5. With numerous rivers and lakes, Hunan is China's major freshwater fish producer. This ancient style of fishing can be found throughout the province.

6.8. Located in western Hunan, Zhangjiajie and the Tianzi Mountain are one of China's hottest tourist spots. There is a forest of strangely shaped stones, towering old trees, numerous rare birds, continuously flowing mountain spring and countless karsts and waterfalls.

7. Bordering on Zhangjiajie and the Tianzi Mountain, the Mengdong River is a tourist area waiting to be opened. This area with the features of an ancient town has a backdrop of rugged hills and clear bodies of water, numerous caves and a variety of fauna and flora. There is the charm of the nationality custom, most notable in the scenic area of Yixiantian.

9.10. Hospitable villagers of the Miao nationality treat guests in a traditional manner. At the entrance to the stockaded village, Miao nationality girls block the way, insisting that guests enter only after they have drunk the maize wine they made. In photo 9, some young men demonstrate the lion's dance and take the guests on a tour of the stockaded village.

11. With their distinctive upturned eaves, the suspension building of the Miao nationality is fitted with three passageways and wood balustrades. The lower part of the building is used for storing grain, furniture and farm implements; the upper part is for a study and bed rooms and sometimes used as a reception room. Both beautiful and practical, the suspension building expresses the most distinguishing features of the Miao nationality dwelling.

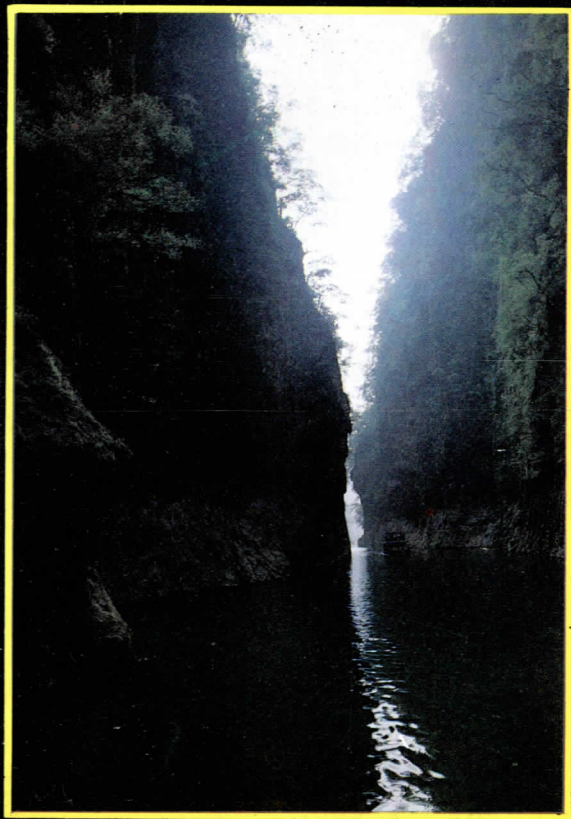
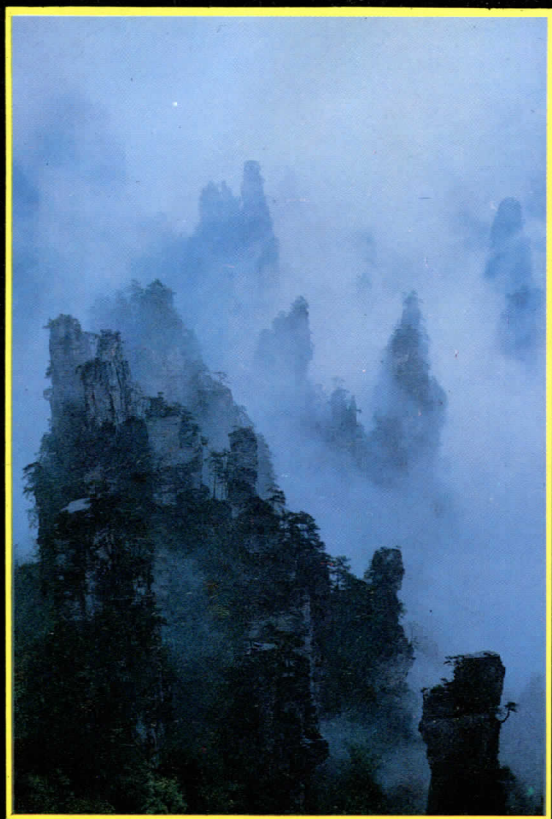
12. Hunan, a well-known rice producer in China, has had bumper harvests for several years running. Here, a busy farm family at work.

**Photos by Our Correspondent Xu Xiangjun**

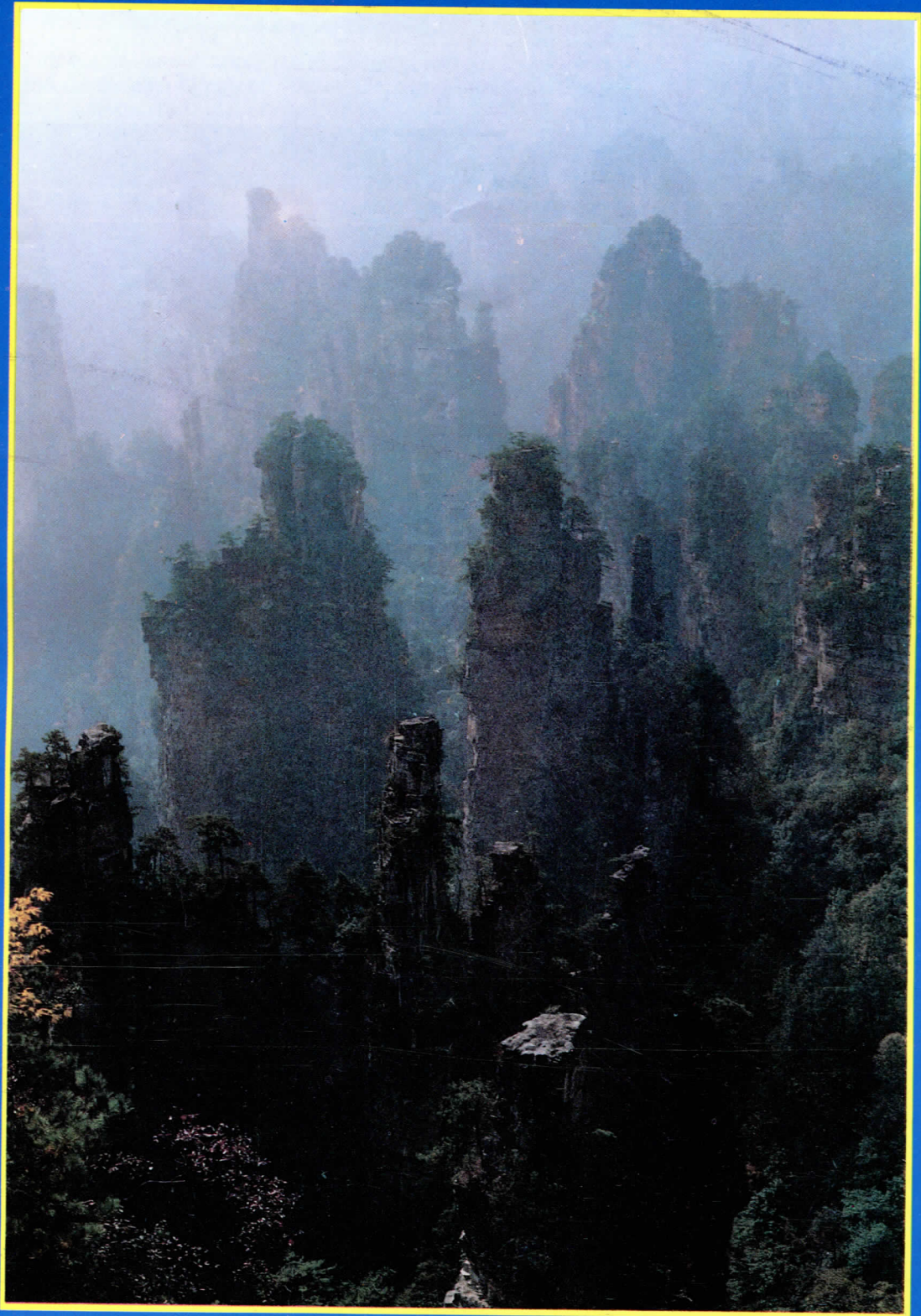
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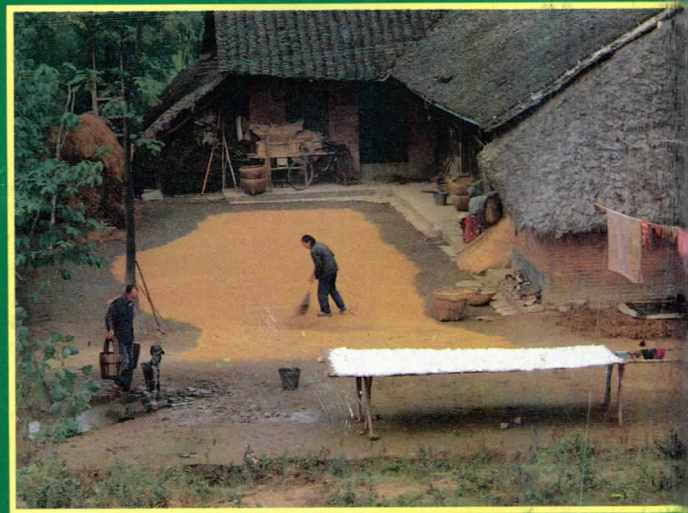
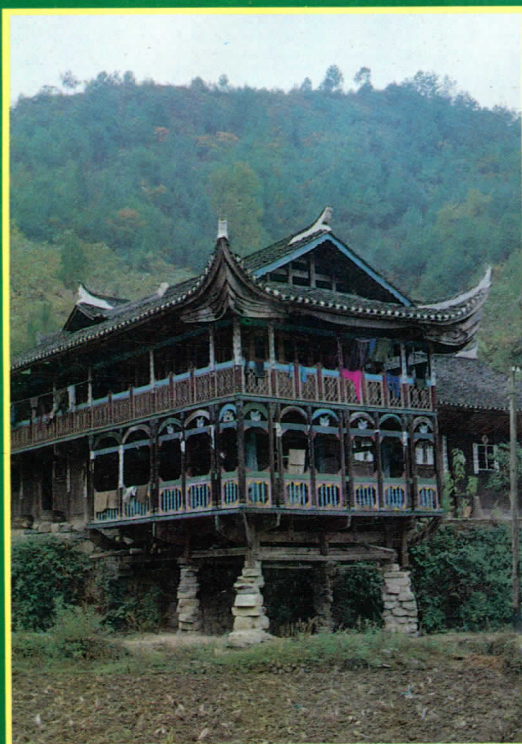
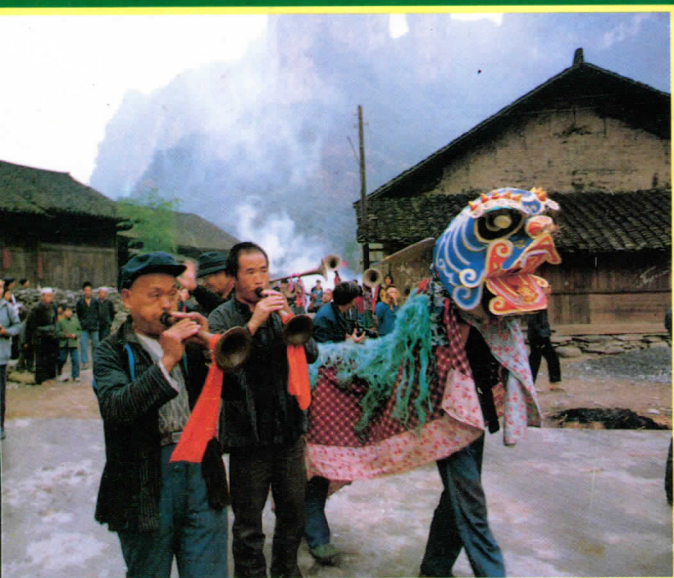
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# HUNAN



# HUNAN



the national forefront in the overall number of patent applications and the number of patent applications approved. Some of the province's technologies have been exported abroad.

The development of scientific research and education make it possible for Hunan to expand international scientific and technological co-operation and provide foreign-funded enterprises with various qualified technical and managerial talents and skilled workers. When compared with the coastal cities, Hunan's labour is cheaper, more numerous, and higher in quality—advantages which translate into a boon for the business of processing foreign supplied materials and for labour-intensive and technology-intensive businesses.

Some foreign businessmen have gained much from their co-operation with Hunan. Showing this correspondent several pairs of stylish women's leather shoes, Cai Weiming, the Hong Kong general manager of the Xingji Shoes Co. Ltd. which was set up with Hong Kong investment, said, "With only 37 days of training, my workers can make such nice shoes." He said that Chinese are industrious and intelligent and he has full confidence in doing business on the mainland. According to the Hong Kong entrepreneur, this joint venture went into production in August 1990 and already two of its imported production lines are in operation. Between September 1 and October 7 last year, 40,000 pairs of leather shoes were made, about 90 percent of which were sold to the United States. The joint venture is expected to produce 100 million yuan of output value and earn US\$16 million from exports a year.

Its sincere co-operation has earned Hunan a lot of foreign investment. A case in point is the Xianglong Electronics Co. Ltd., a joint venture co-financed by the

Hunan Xinhua County No.2 Radio Factory and the Hong Kong Jihui Electronics Co. Ltd. It was set up in January 1987. The joint venture's electron gun glass bar of its TV picture tube has passed a quality examination by the relevant Hunan department and is considered likely to easily meet market demands. This product, considered a match for its Japanese and American counterparts, is being exported to other countries and regions (130,000 items were exported to Hong Kong in September of last year alone). Its general manager, Luo Shili from Hong Kong, is very satisfied with the co-operation of his Chinese counterparts. "Our joint venture is the crystallization of mutual, sincere co-operation and friendship," Mr Luo said. "I have proposed an extension of co-operative period from the current ten years to 15 years."

The Xiangpeng Refined Chemical Co. Ltd. is a joint venture between Hunan's Xiangtan and Singapore. "I come here to invest mainly because of the good local investment environment," said the foreign general manager of the joint venture. Set up in May 1989, the joint venture now produces more than 1 million yuan in output value a month. Of the seven separate dyestuffs used for chemical fibres, three are new to China. They are sold to the United States, Japan, Italy, Spain, India, Thailand and other countries and regions. "China has great potential for further development," said the Singaporean entrepreneur. "In addition to the market environment, Xiangtan also has advantages of transport, raw materials, technical personnel, water, electricity and gas. In particular, local leaders at various levels are very helpful in their support of joint venture like ours. I am absolutely confident our joint venture will be run well."

## Investment Environment

Deputy Hunan governor Chen holds that Hunan is poor mainly because many of its resources have not been developed. "In other words, our advantage in resources has not been turned into an advantage via products and commodities," the deputy governor added. "In order to have a change in the situation, our province has worked out a strategy of 'promoting renovation through introduction, promoting foreign trade through foreign economic relations, and promoting development through the opening up.' We are determined to improve our investment environment with a view to attracting more foreign investment and speeding up the development of resources and economic rejuvenation."

Of its 25,000 old enterprises, Hunan has selected 100 with the conditions required for foreign co-operation such as possibility for export and a 15 percent profit rate. "We do so with a view to enabling foreign businessmen to make money out of their investment here," Deputy Governor Chen said. "On this basis, we will have to be more involved in foreign business in order to pave the way for the favourable cycle of renovation—export—renovation."

Since China's reform and opening up, Hunan has racked up trade ties with 110 countries and regions. Thus far, it has won 3,000 customers by its efforts. In 1989, its import and export value reached US\$890 million. A number of export-oriented production bases have been set up as exports have been transformed from their initial emphasis on raw materials and other primary products to mainly manufactured goods. Hunan has given approval to 673 projects for the use of US\$1 billion in foreign funds and the establishment of 181

foreign-funded projects. However, Hunan is still below the national level in exports. To catch up, it is speeding up construction of infrastructure facilities in a bid to improve the investment environment. The first-phase expansion project of the Huaneng Yueyang Power Plant, with an annual generating capacity of 700,000 kw, was completed in 1990. The province plans to continue construction of the Wuqianxi Hydroelectric Power Station (with an installed capacity of 1.2 million kw), build a new one—the Shimen Power Plant—and renovate the Zhuzhou Thermal Power Station. In addition, Hunan will build the Changsha-Shimen Railway and other special highways connecting Yueyang, Changsha, Xiangtan and Zhuzhou, and install 220,000 programme controlled telephones. At present, the major cities in the province have introduced international cable and telex businesses. The newly built Huanghua Airport, one of China's best airports, operates 21 flights to other cities, including Hong

Kong. In order to help with the business operation of the foreign-funded enterprises, Hunan has set up a material supply company headed by the provincial governor, worked out a series of policies with preferential terms for foreign investment and provided various kinds of facilities to foreign businessmen and Taiwan compatriots who invest in the province.

In 1988, with the approval of the State Council, Hunan Province set up a number of experimental zones to promote opening up, each zone having its own characteristics. These include:

**The scientific and technological experimental zone in Changsha.** Inside the zone, institutions of higher learning, scientific research institutions and enterprises in Changsha form an integrated academic-industry-trade entity. Over the past year, this zone put more than 300 scientific research results into production. Some of products are being exported abroad.

**Transitional experimental zone for reform and opening up.** This zone is located in Hengyang,

Chenzhou and Lingling areas which are close to Guangdong Province. This zone follows a policy similar to that of Guangdong but different from that of the hinterland. It is richly endowed with mineral ores and water resources, and blessed with a good agricultural foundation, important conditions for opening up.

**The mountain area development experimental zone.** The Huaihua area in Western Hunan is attracting Chinese and foreign investment for the development of local resources in the form of joint management, contracting and leasing. The World Bank has loaned funds for construction of a fruit centre and afforestation. This area has built a production base for bamboo shoots and other native produce, US\$61.64 million of which were exported between 1988 and 1989.

**Energy and raw material development experimental zone.** The Loudi area in central Hunan boasts 45 kinds of nonferrous metal ores including antimony, zinc, manganese and coal. It has reached agreements on 815 cooperative projects with various localities throughout the nation. As a result, 500 new products were developed.

During the 8th Five-Year Plan that begins this year, Hunan will turn Yueyang by the Changjiang River into an open port city and comprehensively develop the Changsha-Xiangtan-Zhuzhou triangular area into a city group. This will boost Hunan's ability to attract foreign investment.

### Seeking Co-operation

Lu Huiyun, an official with the Hunan provincial government, told *Beijing Review's* reporter in a recent interview that during the ongoing 8th Five-Year Plan Hunan will emphasize development of agriculture, energy, communications and te-

Electric locomotives manufactured by the Zhuzhou Electric Locomotive Plant.

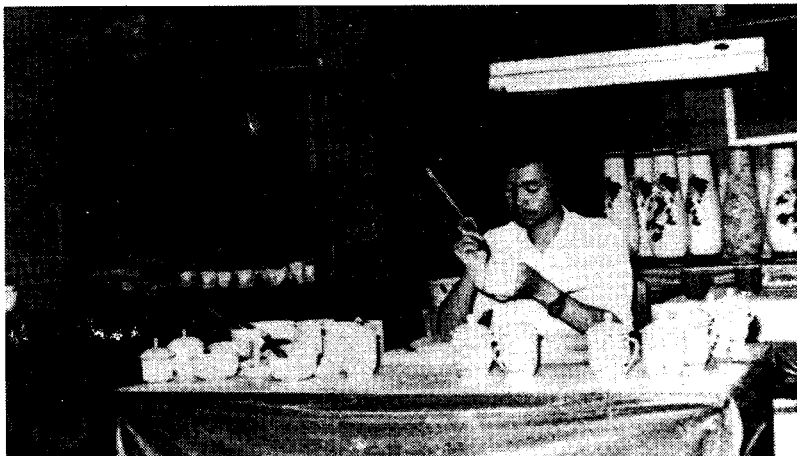
LIU GANGJUN





lecommunications, raw and processed materials and other basic industries. Efforts will be made to expand such major industries as machinery, food-processing, petrochemical, metallurgical and textile industries. At the same time, new industries with high additional value will be developed. To this end, as Deputy Governor Chen also said, efforts will be made to expand foreign economic trade, introduce more foreign capital and advanced technology, develop co-operation in labour service and so promote Hunan's foreign economic and technological co-operation in every possible field.

Since 1979, Hunan gradually shifted its focus of work onto the technological transformation of its existing enterprises. As a result, they have expanded their production scope and produced a number of important products with a ready market both at home and abroad. In terms of production, Hunan has 28 products including raw coal, ferroalloy, timber, chemical fibre, refrigerator, mining equipment, alternating current engine and locomotive which rank among the country's top ten; its lead, zinc and antimony rank first in the country; its nonferrous metals and chemical pesticides rank second in the country; and its railway freight trains rank second in the country. The electric locomotive is unique to Hunan. The introduction of foreign advanced technology and equipment has made special contributions to the improvement of products in some enterprises. For example, the Changsha Water Pump Factory has introduced advanced technology to develop vertical-type slant-flow pumps and adjustable pumps which match their American and German counterparts in major technical features. Hunan's Zhuzhou Sparking Plug Factory introduced German equipment to im-



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A craftsman of the Hunan Xinhua Ceramics Factory.

prove its processing technique. Now more than 30 of its products are exported to the United States and Canada.

Many other factories in Hunan are speeding up their technological transformation and, for this purpose, are seeking co-operative partners.

The Lianshao Coal Mine, with a complete variety of quality products, is the largest coal mining centre south of the Changjiang River. Its Niumasi Mine's extremely high quality, low-sulphuric, low-phosphorous and low-ash coking coal is accepted as the best in the world together with the coal produced in an American coal mine; it has the best raw material for metallurgical coal and casting coal and is well received in Japan, the United States and Canada. This coal mine has prospective reserves of more than 3 billion tons and a guaranteed reserve of 1.1 billion tons. The mine extends some 1,600 square kilometres and has convenient transport facilities. However, only 2 percent of the prospective reserves have been exploited. Domestic and foreign businessmen are welcome to participate in its development and construction.

The Hunan Rubber Factory has a 30-odd-year history. In

1990, it began large-scale technical transformation including construction of workshop buildings and machinery equipment. Upon completion of the project, the factory will be able to increase its export from 3 million pairs of rubber shoes to 10 million pairs and raise its proportion of high-quality products from 20 percent to 50 percent. This factory is inviting foreign co-operation.

Xiangtan, one of China's major export commodities centres, has proposed 40 projects for foreign economic and technical co-operation. These include a polyester chip production line with an annual capacity of 60,000 tons for an investment of US\$45.53 million; the Xiangxiang Brewery with an annual production capacity of 200,000 tons (for export) and using quality mineral water as raw material for an investment of US\$7 million in the form of joint venture or compensatory trade. The Xiangtan No. 9 Plastic Factory plans to spend US\$2.6 million to introduce a production line with an annual production capacity of 500,000 soft container bags. Foreign businessmen are welcome to invest in the project or invest half of the sum in the form of compensatory trade.

## People

## The Man Who 'Brought Gospel to the World'

by Our Staff Reporter Li Xingjian

*Yuan Longping is now absorbed in his study of rice cross breeding by means of the improved "two line system." He has succeeded in breeding an inter-varietal hybrid rice which yields on average 5 percent more than hybrid strains developed through the former system. He has also made remarkable breakthroughs in cross breeding inter-subspecies of rice using the new process, making it possible to finish the research project within two to three years. This new hybrid, which is likely to appear on the market sometime around the middle of the Eighth Five-Year Plan period (1991-95), will bring about a dramatic change in China's grain production by increasing hybrid rice yield by 15-20 percent on average.*

**A** bright Saturday morning. 9 o'clock. I dialed the number of the world-famous scientist's office. As luck would have it, the speaker at the opposite end of the line happened to be the man himself.

I introduced myself and requested an interview. Without hesitation he agreed to squeeze me into his busy schedule. "Please come to my office this morning. I don't have any free time this afternoon," he said.

It was already 11 o'clock when I hurried to his office in the suburbs of Changsha City in Hunan Province.

A man of medium height with a sun-burnt face greeted me cordially in the corridor of the Hunan Hybrid Rice Research Centre. I followed him into his plainly furnished reception room.

In exchanging calling cards, I discovered his card was simply

printed with just two titles: Yuan Longping, research centre director and senior rice breeder. No fancy titles as many other noted erudite authorities have.

I knew I was short of time, so I asked my questions in a straightforward manner, focusing on the recent developments of his fascinating hybrid rice research.

Lighting a cigarette, he began to speak with a slight flavour of a Sichuan accent.

"In 1989, the output of hybrid rice accounted for 56 percent of the nation's total, and hybrid rice is planted on 220 million mu of land (one mu is equal to 1/15 hectare), or 46 percent of the total rice growing area nationwide.

"From 1976 to 1989, the output of hybrid rice increased progressively to 120 billion kg with a total growing area of 1.4 billion mu of land. Given the fact that

**In 1985, Yuan Longping won the Gold Medal of Outstanding Invention awarded by the World Intellectual Property Organization. The picture shows the face (left) and the back of the medal.**



each person consumes approximately 400 kg of rice every year, the amount can feed more than 50 million people for five years.

"In the new year," he added after making a quick calculation with his minicomputer in hand, "the acreage sown to hybrid rice will expand to half of the nation's total rice growing area.

"In the next two or three years, the hybrid rice output will certainly continue to increase as we already have made significant breakthroughs in improving the present cultivating technique. During the middle of the Eighth Five-Year Plan period, more dominant hybrid strains will be available on the market. I have no doubt about it.

"Today we produce the hybrid strains through an improved two-line system as opposed to the three-line system used in the past 15 years. The new system is easier and more efficient than the former, producing inter-varietal hybrids that raise per-mu yields by an average of 5 percent. If the inter-species hybrid rice is successfully produced, the per-mu output is expected to increase by 15 to 20 percent," Yuan predicted confidently. "Top Party and government leaders in Beijing are expecting good news of our achievements. It would certainly be another revolution in cross breeding research if the goal is completely attained."

Yuan's name became a household word in China in 1981 when he was awarded a special state honour for his outstanding invention of the world's first strain of hybrid rice. The hybrid technique was first transferred to a seed company affiliated with the Occidental Petroleum Company in the United States in 1980. In the following few years, he was invited to many countries to demonstrate and lecture on his findings. More than 100 countries since then have introduced the hybrids. As a result, he re-

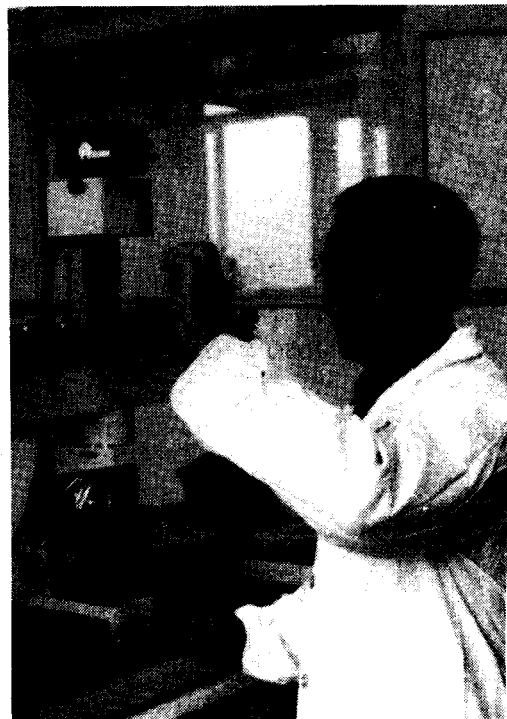
ceived honours from many international and foreign institutions, including the United Nations Educational, Science and Cultural Organization, the World Intellectual Property Organization and a British fund.

In 1987, an international symposium in Paris attended by some 200 agricultural scientists from all parts of the world, Dr. M.S. Swaminathan, the former Indian minister of agriculture and director general of the International Rice Research Institute, declared Mr. Yuan the "Father of Hybrid Rice," and stated: "... because his outstanding achievements have brought pride not only to China, but the whole world. He has brought the gospel to all humankind."

Yuan told me his 60th birthday was approaching. I found him to be in good health though he appeared a little weather-beaten. During the course of the interview, I came to know that most of his work had to be done outdoors under the sun.

Agreeable and open-minded apparently, he looks like a scholar with a farmer's mental capacity and appearance. Confident smiles often flashed across his face. "I was born in Beijing (now Beijing)," he said, "where my father was working with the Beijing-Wuhan Railway Administration. That is why I am called 'Longping.' However, my native home is in Dean County near Jiujiang in Jiangxi Province. In my childhood, I travelled with my father to Wuhan and then to Sichuan, where I spent most of my schooling years. I graduated from the Southwest Institute of Agriculture in 1953 in Sichuan, and was assigned to Qianyang (now Anjiang) Agricultural School in Hunan Province where I became a teacher that same year.

"I have worked most of my life in Hunan. So it's no wonder that I am able to speak to you in both



XU XIANGJUN  
Yuan Longping works in his laboratory.

Hunan and Sichuan dialects."

As he learned I was working for a multilingual weekly, he occasionally used an English word or two to translate Chinese agricultural technical terms. He told me he had studied English in a missionary school in Wuhan during World War II.

Yuan chose to study hybrid rice in the early 1960s when one day he stumbled upon a special variety of rice, growing high and dominant among the traditional rice crops in his experimental field.

The past achievement in the hybridization of maize suddenly popped in his mind. He knew well about the heterosis of cross-bred plants, and hoped to breed a strain of rice just like the one he found.

However, he knew quite well that it was by no means an easy job; until then no one in the world had blazed a trail in this field with any success. It is more



Yuan Longping works in the field together with a foreign scholar.

difficult to cross breed rice than maize because rice is a self-pollinating plant with the stamen and pistil growing in the same part of the flower.

The artificial alteration of the genetically acquired self-pollinating characteristic of rice is the first step towards developing a strain of hybrid rice that can be used for large-scale farming. Moreover, to cross breed rice, three different species of rice plants must be found and combined, as was the case with the hybridization of maize. The point is to first find an infertile male rice plant, from which more infertile male plants would be produced when crossed with another specific and normal species of rice. A third specific and normal species of rice is then used to cross with the infertile male plant to restore its self-pollinating function, thus producing the first filial generation of hybrids. However, whether the cross would work on rice remained a big question.

Yuan was frustrated by the conclusion of a foreign authoritative scholar who had stated in his book *Principles of Genetics* that "as rice is a self-pollinating

plant, hybrids generally present no heterosis." This means that even if one had succeeded in cross breeding three strains of rice, it would be uncertain if the dominant first filial generation crops could be produced.

But he worked on, inspired by an ambitious dream: to become the first man to invent the rice heterosis.

In 1964, Yuan set off on a tedious journey in his obsession. Carrying a magnifying glass, he went to search for the required parental rice plants in the vast farm fields under the scorching southern China sun. After having examined more than 14,000 flowers, he finally found six plants bearing sterile stamens. By carefully cross breeding them with other strains of rice, he reaped a number of seeds to produce sterile male rice.

In early 1966, he published his first paper on the male infertility of rice crops. Soon afterwards, the research on hybrid rice was included as a key project in Hunan Province's programme for scientific and technological development. Several assistants were assigned to him to form a special research team for the pro-

ject.

Since then, they have cultivated their own experimental farmland and created more than 3,000 combinations using about 1,000 varieties of rice. Yuan and his team had to carry out their experiments in the fields every autumn, travelling between Hainan, Yunnan and Guangxi. Six years had passed, but little was achieved. It appeared there was no hope of successfully producing the dominant first filial generation of hybrid rice.

He persisted. Now that the hybrid sorghum which was crossed between the South and North African sorghum strains, he could not believe that there was no rice heterosis on earth. For this went against universal biological understanding.

After thorough analysis, Yuan designed a totally new approach. He wanted to cross wild rice with traditionally cultivated rice.

By the end of 1970, a wild infertile parental rice plant was surprisingly found in Hainan by Li Bihu, a young assistant researcher on the team. This valuable wild plant brought great hope and encouragement to the team. In the following year, Yuan provided all the first-hand data he had collected from his studies to the scientists and technicians who came from 13 other provinces to join in a nationwide effort to scale this scientific summit. In 1976, having conducted numerous experiments and overcome unimaginable difficulties, they eventually succeeded in breeding the dominant hybrid rice (F1). Later, they invented the process of seed propagation and summed up a systematic method of developing hybrid rice for large-scale production. Yuan's long-cherished dream had at last come true.

According to Yuan, the average per-mu yield of hybrid rice is 85 kg higher than that of traditional rice.

In 1986, he published his paper on a strategic plan to improve the breeding of hybrids, in which he planned to shorten and simplify the cross breeding process from three steps to two and finally to one to improve the heterosis.

His proposal was soon approved and placed on the list of the state's high technology development programme in 1986. In the following year, a professional contingent of about 300 agricultural scientists was organized under Yuan's leadership to tackle the task.

"So far, some satisfactory results have been produced," Yuan said. "However, we are still trying to improve the quality of the hybrid by increasing the level of its plumpness. This is the last problem left unresolved.

"The latest achievements have paved the way for the change of the cross breeding process from the three line system to the two line system, thus ushering hybrid rice research into a new stage of development.

"Currently trial production of hybrids through the two-line system is under way in Guangxi, Hubei and Hunan provinces, and a total planting area of 200,000 mu of land have been devoted to this purpose. In the new year, an additional 300,000 mu of experimental land will be used. And by 1993, the new hybrids are expected to be available on the domestic market,"

### Happy Family

Professor Yuan has a happy family of five members, living in a cozy two-story villa close to the research centre. He was married in 1964 when he was working at the agricultural school. His wife Deng Zhe, a former student of his, is now working with him in the same centre. They have three sons. The oldest son has started a job. Three brand new motorcy-

### For Your Reference:

## The Breeding of Hybrid Rice

Today, of all the approaches to breed hybrid rice, the Three Line System is the most widely used. The three line system consists of the crossing of three specific varieties of rice plants. The first is the sterile male line (variety) of which the stamen of the rice flower has withered and lost its normal function of self-pollination, but its pistil is normal, capable of bearing seeds and being pollinated by other varieties of rice. This sterile male line can be used as a parental plant to produce seeds without emasculation.

The second one is the sterile male maintenance line which is used to cross with the parental plant of the first line, and makes the sterile male plant produce seeds that still generate the characteristic of infertility. The stamen and pistils of the plant in the second line are normal. This second step of the process plays the role of propagating production of the sterile male seeds.

The third one is the sterile male restoring line which restores fertility to the first line when they cross with each other. The sterile male restoring line plays the important role of making the filial generation

of the hybridization of the first line produce normal seeds capable of self-pollination with dominant heterosis.

The first line's cross with the second is designated as propagation. The seeds reaped from the plant of the first line are infertile. Most of these seeds are used for reproduction, namely, to be crossed with the third line plants. The offspring of their hybridization is called the first filial generation (F1).

However, the cross breeding process of the three line system has the drawback, among others, that it is too complicated and expensive to expand the growing area and raise the yield on a large scale.

To date an improved Two Line System has been invented. Also called the "Dual-Function Nucleus Sterile Male Line," it can either be self-pollinating or present a characteristic of male sterility. This is due to the fact that the reproductive trait of the rice plant using this system is controlled primarily by a pair of recessive genes and has no relation to cytoplasm. As a result, the sterile male maintaining line of the former system can be substituted. ■

cles parked in the lobby caught my attention immediately. I guessed they were their means of transportation.

"I've been invited to India to attend a symposium and offer consultation concerning hybrids next month," he said to me. "I have been fully engrossed in preparations for the visit these

days."

Bidding good-bye to him, I felt satisfied and proud to have met a great man who has done so much in his field. He has already worked miracles, but he is not resting on his laurels. He toils on, for he wants to realize his ultimate goal: eradicating starvation from the face of the earth. ■

*The following is an abridged translation of an article by the noted Chinese atomic nucleus physicist, Qian Sanqiang, on the course of development of atomic nucleus science in China. It originally appeared in the first issue of the Hong Kong-based "Bauhinia" magazine in October 1990.—Ed.*

## Development of China's Nuclear Science

by Qian Sanqiang

**T**he atomic nucleus science is a mysterious, fascinating subject. In the 1930s this science experienced inspiring advances. It was precisely at that time that I became interested in atomic nucleus science. In 1932 I changed my original intention of studying engineering science and was admitted into the physics department of Qinghua University.

Coincidentally, on February 27 the same year, British Physicist J. Chadwick, basing himself on the news that spread from France about a new experiment done by I. Curie and F. Joliot, conducted a series of experiments, confirmed their laboratory results and declared his discovery of a new particle—the neutron, thus winning the 1935 Nobel prize in physics.

Again coincidentally, in 1936 after leaving Qinghua University, I sat for an examination organized by the Chinese-French Education Foundation for students to be sent to study in France. At that time, one student was to be chosen for radium science, one for hydro-mechanics

and one for microbiology. I passed the examination in radium science and was sent to the Curie laboratory of Paris University, one of the most advanced atomic nucleus science research institutions in the world. The teachers coaching me in my research work were Joliot and Curie, the couple who discovered artificial radiation.

In late summer of 1937, I arrived in Paris. I had never expected that I would live and work there for 11 years.

In 1940 I was awarded the French state doctorate degree, and in 1946, a special prize in micro-physics. In 1947 I was promoted to be a research teacher at the French State Scientific Research Centre. Among the 40 research papers which I published in 11 years was an account of the discovery of three uranium nuclear splits (about one three-splits in 300 fissions) and four splits (one four-splits in some 10,000 fissions). This was seen by Joliot as the first important work of his laboratory since World War II. The discovery was

made with the co-operation of R. Chastel, L. Vigneron, and He Zehui. He Zehui and I got married in Paris in the spring of 1946. The explanation of the uranium nuclear three splits mechanism has been accepted by physics circles and has further enriched people's cognition and understanding of the fission phenomenon.

### The Beginning of Hope

As a foreign scientific worker promoted to be a "research teacher," and given certain honours, I would naturally have been expected to stay on permanently at the Curie laboratory.

However, He Zehui and I were very clear on this matter! Although science knows no national boundaries, scientists have their own motherland, which, however poor, is their own. Precisely because China was poor and backward, it was all the more necessary that we should work hard to transform it.

In early summer of 1948 I ear-



*XINHUA*  
On July 25, 1956, China conducted its first test of nuclear radiation (left, bottom). On October 16, 1964, China successfully exploded its first atom bomb (right).

nestly told I. Curie and F. Joliot that I wanted to return to China. Although they were reluctant to let us go and were sorry to see us leave, after hearing our explanations, they indicated that they understood and favoured our decision. Mr F. Joliot said, "If I were you, I would do the same."

In the summer of 1948 I came back to my motherland from which I had been away for 11 long years and taught at Qinghua University.

Nineteen-forty nine was an extremely unusual year in Chinese history and I was extremely lucky to experience those remarkable days personally. At the time I felt that everything

seemed to have changed in an instant. Big and sudden changes like this are simply incredible to anyone who has not gone through the experience.

One day in March 1949, in less than two months after the Chinese People's Liberation Army's peaceful advance into Beijing, I suddenly received a notice asking me to take part in a delegation to Paris to attend a meeting on world peace. The delegation was headed by Guo Moruo whom I greatly admired when I was young but whom I had never met.

As a natural scientist, I saw my visit to Paris as a wonderful opportunity to meet my teacher,

Joliot—Curie, and to ask for his help in buying some instruments, equipment, materials and books on research in atomic nucleus science which we needed, and transport them back to China through blockade. But the question flashed through my mind: Can China afford foreign exchange? I just wanted to have a try regardless of whether I could succeed, so I mentioned the matter to a person who was in charge of the organization of the delegation. Three days later, Li Weihan, head of the United Front Work Department of the Central Committee of the Chinese Communist Party, gave me US\$50,000. On receiving this sum of money for developing atomic nucleus science, I was greatly elated and full of anticipation.

Half a year earlier, that is, in the latter half of 1948, it was in this same city of Beijing that I had once gone round campaigning for an appropriate concentration of the country's atomic nucleus science research forces, but each time I came back disappointed.

After repeatedly running into snags my hopes were blighted. I cudgelled my brains and tossed all night long. For more than a century, the Chinese nation had remained backward and vulnerable to attack, had been invaded and ravaged. Could we impute this to China's poor and backward economy? To its inability to develop any sort of enterprise or cause? Could it be said that China lacked people of lofty ideals or that the Chinese were inferior in intelligence? Definitely not. The root for this historical humiliation lay in the ignorance, corruption and incompetence of the rulers of past dynasties.

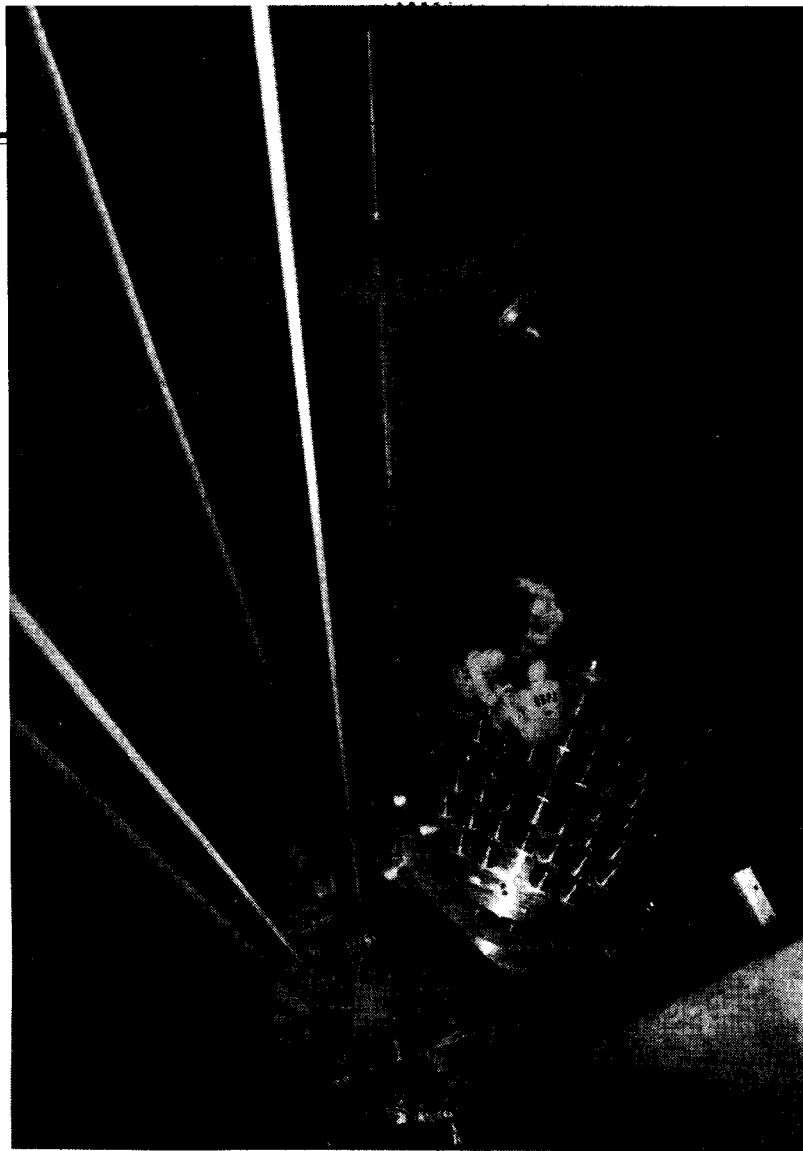
The situation is quite different in the case of the people in power at present. Although US\$50,000 for the development of atomic nucleus science was not an exces-

sive demand, their far-sightedness and method of administering the state as typified in this instance were crystal clear, inspired confidence and gave people hope.

### Policy Decision

As everyone knows, brilliant scientific and technological achievements were made by the Chinese in ancient times. This is acknowledged worldwide. Contemporary Chinese science and technology lagged far behind, and many new disciplines, particularly those strongly experimental, such as atomic nucleus science, were almost nonexistent. Before 1949, although there was an atomic science research institute under the Beijing Research Academy, the research institute had a staff of only five people. I was director of the institute at that time. There were two research fellows—He Zehui and Prof. Peng Huanwu, a theoretical physicist, in addition to an assistant and an office clerk. Part of the institute was located in a quadrangle in East Huangchenggen Street. The funds allocated by the authorities monthly were only enough for the purchase of a dozen or so vacuum valves; the laboratory was virtually empty, with an acute shortage of instruments and equipment.

As far as I know, the same situation prevailed in other scientific spheres in China before 1949. In those years, scientists, imbued with enthusiasm to build a prosperous and powerful country, with the spirit of dedication to science, did some work within their power on their own initiative under difficult conditions such as little or no funding, a shortage of personnel, backward methods and social upheaval. As a result, two fatal weaknesses paralysed China's scientific research: First, the lack of a plan



CHEN BAOWEN

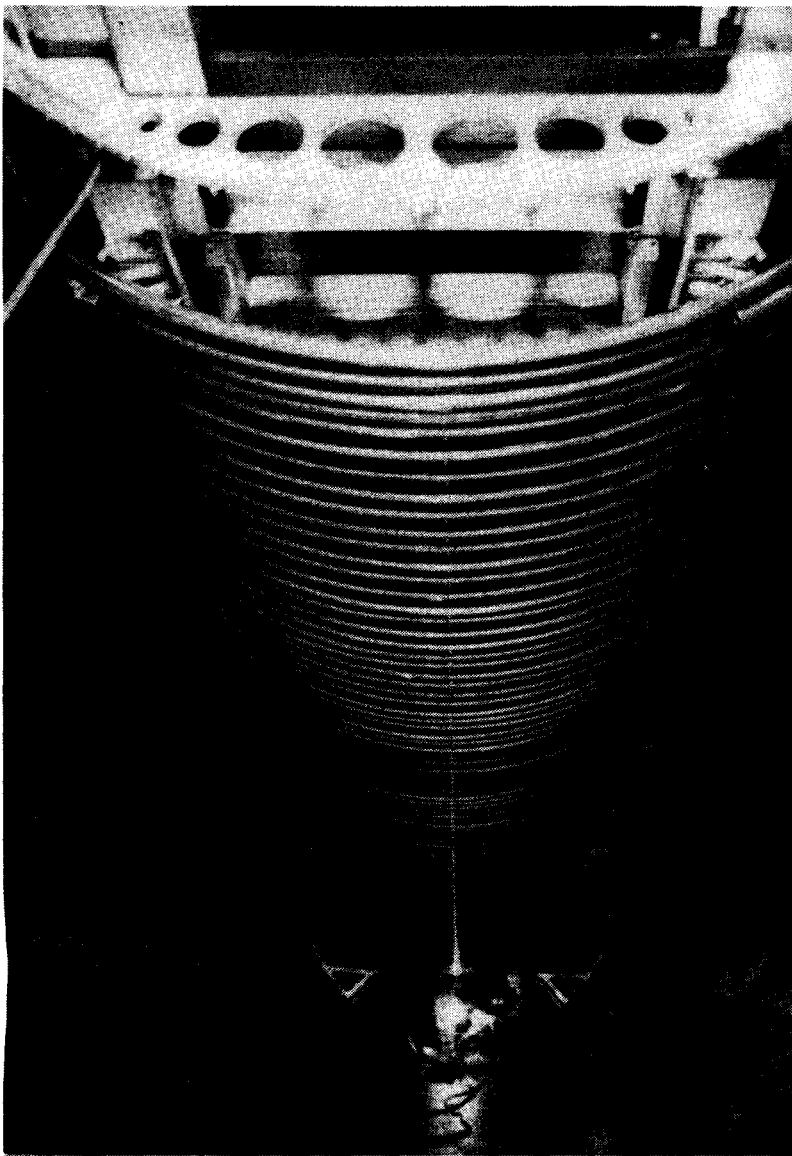
The construction of China's first nuclear power station, the Qinshan Nuclear Power Plant, will be finished soon.

—no one had made any long-term preparations; second, the lack of mutual understanding and contact made it hard to take part in collective co-operation.

In November 1949, after the Chinese Academy of Sciences was established, it began at once, with the effective support of the government, to change the previous situation so that science could truly serve the country's industrial, agricultural and defence construction, the people's health and their cultural life. The late Premier Zhou Enlai gave a special instruction: It is necessary to develop new disciplines, such as atomic nucleus science and experimental biolo-

gy. Before long, the first atomic nucleus science research organization, the Modern Physics Research Institute (later renamed the Atomic Energy Research Institute) under the Chinese Academy of Sciences, was established. First, Wu Youxun, concurrently president of the China Physics Society, was director of the institute and I was deputy director. A year later, I became the director, and Wang Ganchang, a high energy physicist, and Peng Huanwu were deputy directors. Research fields included: experimental atomic nucleus physics, radiation chemistry, cosmic ray research, theoretical physics, and electron-





WU SENHUI

The heavy water research reactor designed by the Chinese Academy of Atomic Energy Scientific Research.

ics. In two to three years alone, a large number of highly accomplished atomic nucleus scientists with lofty ideals and practical ideas came to our institute, including some returning from study in the United States, Britain, France, Germany and Eastern Europe as well as those from domestic universities and research units. With such a large number of competent researchers and scientists, we organized the China Atomic Nucleus Science Research Centre. Our operational funds and working conditions were much better than before. In 1950 alone, thanks to the late Premier Zhou Enlai's personal loving care, the

government, despite financial difficulties, allocated 2.872 million yuan in the budget to the Chinese Academy of Sciences. Moreover, the atomic nucleus science research received major support.

On the whole, however, considering the weak foundation and poor material conditions, plus external pressure and blockade, how China was to develop atomic nucleus science according to its own national conditions and resources really required a correct policy decision.

On January 14, 1955, Geologist Li Siguang and I were called to Zhou Enlai's office. Bo Yibo, who was in charge of state work,

and Liu Jie, vice-minister of geological resources were also present. Zhou Enlai first asked Li Siguang to give an account of the exploration of China's uranium resources and then asked me to introduce the research in atomic nucleus science and technology. Zhou Enlai, listening attentively to every word we said, gained an insight into the crux of the matter. He inquired in detail about the basic theories regarding the atomic reactor and atom bomb, as well as the necessary conditions for the development of these undertakings. Then he told us: "Tomorrow Chairman Mao and other leaders of the Central Committee would like to hear what you have to say on these matters. You should prepare well and make it simple and concise. You may bring with you some uranium ore and simple instruments to make some on-the-spot demonstrations."

The following day, Li Siguang and I arrived at the conference room in Zhongnanhai at the appointed time. Many leaders were already there, such as Mao Zedong, Liu Shaoqi, Zhou Enlai, Zhu De, Chen Yun, Deng Xiaoping and others with whom we were familiar.

This was an enlarged meeting of the Secretariat of the Central Committee to specially study matters concerning the development of China's atomic energy.

Chairman Mao Zedong, who presided over the meeting, began by saying, "Today, we have come here to be your pupils to attend a class on atomic energy."

Li Siguang took out some small yellow-black specimens of uranium ore, explaining the close relationship between uranium resources and the development of atomic energy. In the first half of 1954, China discovered uranium resources deposits for the first time in South China's Guangxi Zhuang Autonom-

ous Region.

The leaders passed the uranium specimens around and marvelled at the surprising energy of uranium ore.

I reported on several major developments in atomic energy research and the work China had done in the previous years. Some leaders discussed and asked about problems they were concerned with.

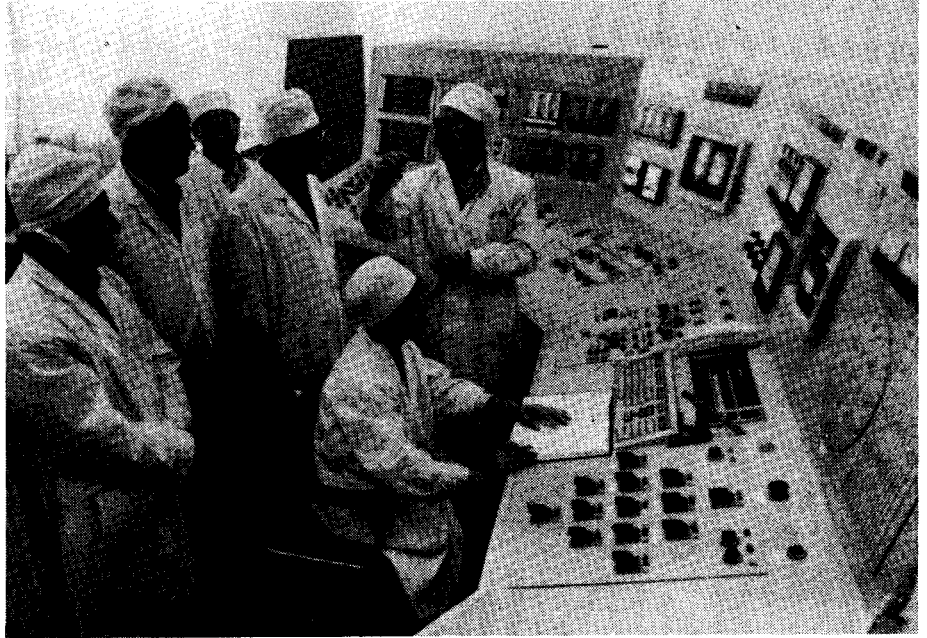
Mao Zedong lighted a cigarette and began his summary, "Now we know our country has deposits of uranium. Further exploration will certainly help find more. We have trained a

number of people, laid a foundation and created certain conditions for scientific research. In the past few years, we've been preoccupied by many other things and so had no time to take on this matter, which, nevertheless, should be tackled sooner or later, in any case. Now it is high time that we took it up. As long as we place it on the agenda and pay serious attention to it, we can certainly have it developed."

"What do you think about this?" Mao Zedong looked around at us and then said emphatically, "Now the Soviet Union is helping us, and we must make it a success. We should do it ourselves and I am sure we can do it well. As long as we have people and resources, we can work any wonder."

The conference came to an unanimous conclusion and expressed great interest and determination in developing atomic energy.

Mao Zedong suddenly changed his tone and, from the



WANG CHENGXUAN

On September 17, 1990, the 5 mega-watt low-temperature heat-supply experimental nuclear reactor designed by Qinghua University passed state technical evaluation.

viewpoint of a philosopher, asked me a question concerning atom's internal structure:

"Is the atomic nucleus composed of neutrons and protons?"

"Yes, it is." I answered readily.

"Then what are protons and neutrons composed of?"

His question was not at all strange, but it was hard for me to give an accurate answer. So I could only answer as things stood, "The question is under exploration; according to what has been achieved in research, protons and neutrons are the basic particles that form the atomic nucleus. The so-called particle is the smallest and cannot be further divided."

After a moment's thought, Mao Zedong said, "I don't think so. From a philosophical point of view, material can be divided infinitely. Protons, neutrons and electrons should also be divisible. This is one divided into two, and the unity of opposites! However, experimental conditions are not now available. In the future, par-

ticles will be proved divisible. Do you believe this? If you don't, I do anyway."

That was a prediction, the philosophical prediction of a statesman.

Coincidentally, later that same year, US scientists E. G. Segre and O. Chamberlain published their research results: They used a proton with 6.2 billion electronic volts of energy to bombard the copper target. They first discovered anti-proton, and at the same time, discovered a kind of uncharged, opposite spin neutron, which they called an anti-neutron.

After the discussion, Mao Zedong invited us to stay for dinner.

At dinner, Mao Zedong raised his glass and stood up, saying in a loud voice, "Let's drink a toast to the development of China's atomic energy!"

Isn't it that all great statesmen have far-sightedness in regard to major scientific issues and can promptly turn their eyes to the

future?

There was once such an instance in the United States: When the flames of battle were raging everywhere during World War II and when constant dramatic progress was made in atomic nucleus science, Albert Einstein, a physicist who had taken a pacifist stand, prompted by his hatred towards and fear of Adolf Hitler's atrocities of destroying civilization and persuaded by L. Szilard and others, wrote a letter on August 2, 1939 to US President F.D. Roosevelt. In his letter Einstein called the president's attention to the recent development of nuclear physics, pointing out the dangerous military potential provided by nuclear fission. He warned the president that Germany was possibly developing this potential and the US government must take quick action to prevent Germany from being the first to control the atomic bomb.

At first, F.D. Roosevelt did not pay particular attention to the warning. In March 1940, Einstein wrote a second letter to F.D. Roosevelt who, enlightened by the repeated warnings of scientists, was by this time determined to appropriate massive human and material resources to ensure that the United States was the first to produce and control reactor and atom bombs.

It should be said that China's atomic nuclear scientists had all along been lucky in this respect.

Top-level leaders of the state not only resolutely made the policy decision, but saw to it that conditions and measures for carrying out the policy were prepared under the guidance of the then Premier Zhou Enlai. In the beginning when there was not enough technically trained personnel, Zhou Enlai personally decided to transfer some 300 students studying in the Soviet Union and Eastern Europe to the study of the speciality related to atom

energy. He approved the establishment of a technological physics department at Beijing University and the transfer of a group of students from the physics department in various universities across the country to major in atomic energy science. Before long, an engineering physics department was established in Qinghua University.

Premier Zhou then called on us to give proper attention to publicity work, especially among leaders at all levels. In response to this call, the Chinese Academy of Sciences organized a group of nuclear experts in Beijing to travel around the country and lecture on the importance of atomic energy. The Common Lesson on Atom Energy was published with a distribution of 200,000 copies. As a result, many things which were once thought to be impossible were accomplished and wonders which were barely thought of previously were wrought.

## Severe Tests

In the late 1950s and early 1960s, natural and man-made disasters simultaneously hit China with a devastating impact. As a result, the research and development of China's atomic energy industry were hindered.

In its letter of June 20, 1959, the Central Committee of the Communist Party of the Soviet Union refused to supply China with teaching models and relevant technical materials to produce the atom bomb. On August 23, the Soviet Union again unilaterally terminated the agreement signed between the two countries on the new technology for national defence, withdrew all Soviet experts, leaving nothing behind, not even a piece of paper. It ridiculed China, saying, "Without outside help, China will not be able to produce an atom bomb even in 20 years. Just

keep this heap of scrap iron and steel."

As a patriotic intellectual, I found it hard to describe my feelings at that moment. I was fully aware of the consequences the Soviet action would have to the development of China's atom nucleus science and even to China's history. There was one difficulty after another facing us. If only one barrier was not surmounted, the charge of a powerful army would run aground. If this should really happen, the independent spirit of the Chinese nation would suffer another enormous trauma, not to say economic losses.

As a matter of fact, on May 16, 1958, Mao Zedong gave a written instruction on a report submitted by the Second Ministry of Machine-Building Industry (that is the original Ministry of Nuclear Industry), which said, "Respect the Soviet comrades, study hard with an open mind. But we must do away with blind faith, overthrow Jia Gui! Jia Gui is looked down upon by everyone."

Jia Gui is a subservient fellow in the Peking Opera *The Buddhist Temple*. When he was asked to sit down, he said he had been used to standing. Such people and instances were very common in old China. That's why the big powers in the world could do as they wished to bully China and despised the Chinese people.

However, the progress of history is an objective fact. Many dynastic changes have taken place in China. Dignity and backbone are no longer minerals buried in the depth of the earth layer.

At the Beidaihe meeting on July 18, 1960, Mao Zedong again issued the call, "Use our hands, start from the very beginning, be prepared to turn out our own atom bomb in eight years..." "Be resolute to develop sophisticated technology. Nikita Khrushchev refused to give us sophisticated

technology. That's very good. If he had given, it would be difficult to settle the account."

Under the guidance of the correct policy, scientific and technological personnel on the atomic energy front, leading cadres, workers, PLA soldiers, men and women, old and young, all full of energy, plunged themselves into the great cause of developing nuclear science by relying on exclusively Chinese resources.

In order to remember the day when the contracts were torn up, the engineering code name for China's first atom bomb project was set as "596," representing June 1959.

A group of outstanding scientists in theoretical and experimental physics headed by Wang Ganchang, Peng Huanwu, Guo Yonghuai, Zhu Guangya, and Deng Jiaxian were transferred from the Chinese Academy of Sciences and institutes of higher learning to the nuclear weapon research institute, directly shouldering the task of tackling key technical problems.

After the withdrawal of Soviet experts, Zhou Guangzhao, once a middle-level research fellow with the Moscow United Atomic Nucleus Research Institute, immediately called together some of the Chinese experts working at the Soviet Dubna United Atomic Nucleus Research Institute to discuss this question: Can China research and manufacture its atom bomb without foreigners' help and by relying on its own resources? The answer was affirmative. A score of people sent a joint letter home expressing their desire to return home. After their return to China, Zhou Guangzhao became deputy head of the theoretical department of the Nuclear Weapon Research Institute and Deng Jiaxian was the head of the department. With the necessary technical forces and co-ordination of work, the task of researching and manufac-

turing progressed swiftly.

The diffusion separating membrane is the most decisive and confidential part in the production of Uranium 235. The Soviets never allowed Chinese scientists to have access to it, not even on their study missions. The Chinese were only allowed to have a distant view of it. Our Atomic Energy Institute, therefore, organized a tackle-the-key-problem group led by Qian Hao-yun, an academic secretary, and composed of several research units such as the Chinese Academy of Sciences, the Ministry of Metallurgical Industry and Fudan University. After four years of hard work, we succeeded in producing quality diffusion separating membrane and began its batch production, making China the fourth country after the United States, the Soviet Union and France to be able to produce diffusion separating membrane.

The Computing Technology Research Institute under the Chinese Academy of Sciences successfully manufactured China's first large general computer and successfully undertook the work of analysing and evaluating plans to produce China's first atom bomb.

The Atomic Energy Research Institute promptly organized Yu Min and Huang Zuqia, associate researchers of the institute, and other young theoretical physicists to carry out the work of advance research on hydrogen bomb theory; while conducting the research on atom bomb. After nuclear weapon research and manufacturing work entered a decisive stage, more than 30 people including Yu Min and Huang Zuqia were transferred to work in the Nuclear Weapon Research Institute. Their efforts accelerated the research and manufacture of hydrogen bomb and created miracles in the advance from atom bomb to hydrogen bomb.

Successes in these fields of work were inseparable from the direct leadership and guidance of Zhou Enlai and Nie Rongzhen, a responsible leader with the national defence industry, nor from the hard-working spirit of the people at all levels who worked in close unison to make China's nuclear dream a reality.

The course China traversed in its development of atom bomb and hydrogen bomb may be described in the words of these two lines:

Where the path seemed to end,  
barred by hill and stream;

Another village came in view,  
charming with willows and flowers.

The dark clouds over the vast expanse of China had been dispelled, doubts and suspicions in hearts had been erased. The crucial juncture once thought to be full of hardships became a "golden age" in which the Chinese people worked with the greatest joy, energy and ease. The principle is just so simple and clear: The less we were controlled by others, the more things we could accomplish ourselves.

On October 16, 1964 when the first mushroom cloud floated over China's western sky, some foreigners considered it to be no more than a play toy. It was not until they analysed the fall-out in the atmosphere that they were surprised at China's accomplishment.

The explosion of China's first hydrogen bomb after an interval of only two years and eight months made China the fastest developer of atomic and hydrogen bombs in the world. This time some people said, "The Chinese are really wonderful." As a matter of fact, this is not true. The correct understanding should be: The Chinese are not stupid at all. What foreigners can do, the Chinese, through hard work, can accomplish as well. ■

# Cultural Life at Shoudu Iron & Steel Co.

by Our Staff Reporter Lou Linwei

*The Shoudu Iron & Steel Co. with its labour force of 180,000 is China's fifth largest enterprise owned by the whole people. The "Beijing Review" series on the company cited it as an example of reform in state-owned enterprises (BR No.50, 1989 to No.3, 1990). —Ed.*

The economic reform which centred on the contract responsibility system beginning in 1979 helped the Shoudu Iron and Steel Co. increase its profits at an average annual rate of 20 percent for ten successive years. In 1990, its annual profit, 7.2 percent of which was turned over to the state, reached 2.264 billion yuan. The company spent a lot of its profit to enrich and enliven the cultural life of employees.

The company now has its own newspaper and closed circuit TV which broadcasts news to employees. There are parks, cinemas, stadiums, ballrooms, and food centres which provide bread, biscuits, soft drinks, beef, mutton, fruits and vegetables as well as cold storage and a storehouse for keeping food fresh. Workers and staff can buy commodities and food at prices lower than outside the company and have a variety of opportunities for recreational activities.

Even though the workload for employees under the con-

tract responsibility system is often more than other enterprises, workers make good use of their spare time.

## Ballroom Dancing

Every weekend evening, people gather in front of the Cultural Centre, waiting for the dance to begin. Some, though, have no tickets. There are four ballrooms but the centre, usually used for meetings, attracts the largest crowd because it's more attractive and has better facilities than the others.

The tickets, free of charge, are distributed by the company's trade union. They are often in great demand, particularly for the Cultural Centre, because dances are only held once a week at weekends. In contrast, dance tickets for most of the commercial halls around Beijing cost at least five yuan. So, not every dance enthusiast has the opportunity to get into the hall.

Li Fengchen, an official in charge of the company's cul-

tural life, said the dance programme in the company has just begun. He said that no other activity attracts workers and staff like dancing. Fu Chaoying, a member of the company's publicity department, said that within two hours after dance training classes are advertised, the course is filled and people must wait until the following term. In 1989 and 1990, nearly 150 dance courses were held. So many people learnt how to dance and then wanted to display their newly discovered talent that the ballroom facilities were unable to accommodate the crowd.

The musicians, the company's own employees, often play popular waltzes and tangos, music to which the crowd dances with care and grace. The art of dancing is taken seriously and everyone does his or her best to perform well. A certain distance must be kept between dancing partners and dancing face close to face and wearing slippers are not allowed. In summer, women must wear skirts. With one

glance around the room, it's clear that everyone has a good time.

### Social Associations

The company's Dance Association has more than 10,000 members and is the largest among the 39 amateur associations. These 39 associations, called the Association of Staff Interests and Hobbies, had been set up successively since 1983 and have now expanded to more than 30,000 members. They are overseen by three members of the company's trade union.

Before the establishment of the Bridge Association in 1983, most of the players were old intellectuals. As of now, however, the association has a membership of 500, many of whom are young college graduates. They play bridge every day after work in the sports

center room. Zhang Xianqing, the company's deputy general manager, is the honorary president of the association. The association selected its best members to form a team for outside competitions. In July last year, Wan Li, chairman of the Standing Committee of the National People's Congress and honorary president of the China Bridge Association, played with team members of the company's Bridge Association.

The 39 associations encompass nearly every aspect of staff social activities with membership varying from dozens to several thousands. Sport activities include football, basketball, volleyball, table tennis, badminton, billiards, chess, *Qigong*, *Taiji*, track and field, wrestling, bridge, massage, callisthenics, martial arts, swimming, skating, fishing, cycling and the

21 items of the Sports Association for the Elderly. Literature and art activities include 11 varieties of song and dance, literary creation, literary criticism and film reviews. Others include tailoring, horticulture, bird watching, cooking, lantern riddles and flower lanterns.

Every association holds its activity after work hours. They manage activities on their own. Membership is voluntary.

Tailoring is most popular among female staff. They have classes in design, tailoring and holding fashion shows. The Skating Association holds its activities mainly in winter, each year holding an ice sports competition. In January there were sixteen activities which attracted several hundred skaters.

The operational funds for the association are limited and

Each Spring Festival, the company's New Year Team performs in residential districts.

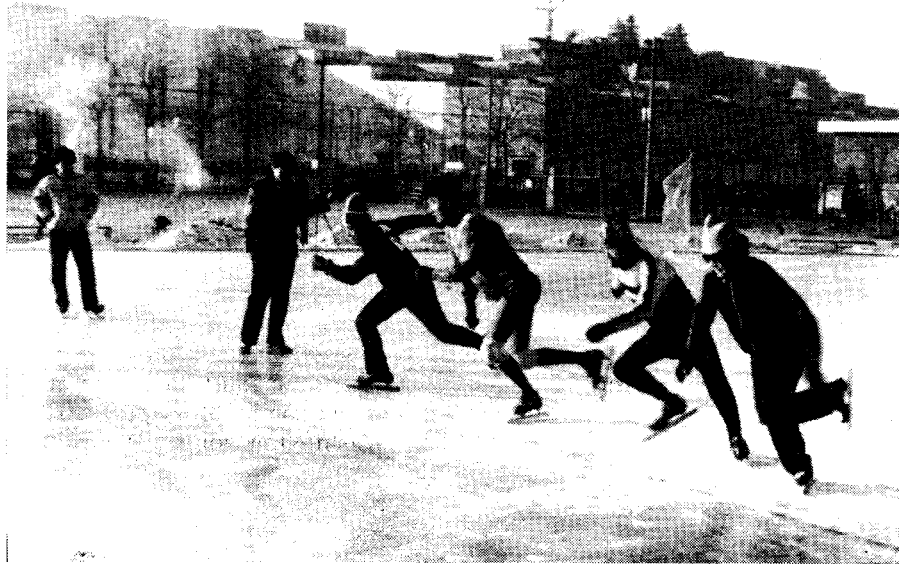
ZHU YUPING



their distribution is uneven. In 1990, the trade union of the company spent 360,000 yuan on association activities, including 70,000 yuan to join the Eighth Beijing Sports Meet. Of the 39 associations, The Callisthenics Association was particularly expensive because of the high cost of equipment, clothes and coaching.

The company leaders all support the associations. Thirty-six year-old general manager Zhao Yuji, the company's No.2 leader, is the honorary president of the Swimming Association, the scale of which is second only to the Dancing Association. Zhao is quite versatile in sports but takes special interest in swimming. Twice a week, he goes to the Shijingshan Swimming Gymnasium to train with other staff and often attends competitions sponsored by the association. Zhou Guanwu, the company's No.1 leader and director of the company's Factory Committee, is a *Taijiquan* addict. Although not active in association posts, he has always supported the company's effort to enliven cultural life. As early as 1984, Zhou, a deputy to the Sixth National People's Congress, said the company needed to develop highly qualified sports teams for the state.

In 1986, the company recruited members from 15 provinces and cities for its own men's and women's basketball teams and an all-male football team. Currently, Beijing municipality's men's and women's basketball teams have been integrated into the company and the members' wages and bonuses are paid by the Shoudu Iron and Steel



FU JIANWEI

On January 13, 1991, the company's Trade Union held its fourth ice-sports meet.

#### Company.

In its various sports activities, the company's competitive level is surprising. The male football team, for example, defeated a football team from West Germany and a team from Britain while the male basketball team distinguished itself on a visit to the Phillipines. One member was selected for the national team.

#### Other Entertainments

In 1986, disco dance exercise for the elderly took hold in the company and then spread to enterprises throughout Beijing. As of now, more than 100,000 people are practising disco exercises. Every morning, it is a common sight of people taking part in the company's exercise programme.

Li Fengchen said the company provides every recreational activity which can be

found outside.

Karaoke is a good example. The entertainment bars have been in Beijing for four or five years. By the end of December last year, the Laoshan Cultural Centre in Laoshan residential district for workers and staff began to offer the type of recreation which only wealthy people could previously enjoy. In January, the karaoke was opened to staff and family members. In addition, a reading room for workers and their families was set up in the centre. Other staff will often take advantage of cultural centres reserved for chess, poker or mahjong which are found in each residential district.

The karaoke hall is not as extravagant as others found in Beijing. Still, it offers three large screens and can accommodate several dozen people. While the average admission ticket into the karaoke hall in



ZHU YUPING

Rui Naiwei, a famous Chinese *weiqi* (go) player, competes with *weiqi* players from the Shoudu Iron and Steel Co.



FU JIANWEI

On February 4, a "Members Family" Photography Association was established. Here members discuss their works.

Beijing is about 20 yuan, that for the Shoudu Iron and Steel karaoke hall is free of charge.

In the cultural club, the 20 video games attract young workers. The company has a nominal charge for use of the games and videotapes, 0.5 yuan for a game and one yuan for a videotape. Videotapes are rented by those families

who are unable to watch the company's closed circuit TV. Li said that more people watch the company's cable TV than CCTV because they often show Hong Kong, Taiwan and Western films of the United States. Only those families in Shijingshan District where the company is located, however, can watch the pro-

grammes.

The company's social life is not sealed off from the world outside but keeps up with the changing times. At the same time, Li said, it has its own features.

In 1990, the company invited 15 professional literary and art troupes to perform 27 acts for 84,026 people. The Beijing No.4 Peking Opera Troupe, for example, came twice to the company. Other troupes included the Central Song and Dance Ensemble, the Central National Orchestra and the Central Drama Institute. Li said the folk songs and bel canto style are as popular as pop songs among audience. Last year, the Russian Song and Dance Ensemble and an international folk dance troupe were invited to the company. The first showing of the China-made feature film *Deep in the Courtyard* based on a story by Chiung Yao was held by the company and received a warm response.

Despite various activities offered by the company, many young unmarried people are still unsatisfied. The No.2 dormitory district has ten buildings, each accommodating at least 500 people. Two of the buildings are for female workers and there is only one colour TV in one room which can hold 30-40 people. The other eight are for male staff and they have only two TV sets. Though some of the female staff have learnt how to dance, they seldom have the chance because of limited dance halls. They spend most of their after-work-hour time knitting sweaters, and some male bachelors often idle away their time by playing poker. ■



## International Symposium on Tourism

A 1991 international tourism symposium sponsored by the Beijing Xinhua Tours Corporation Holding Group was held at the Intercontinental Hotel, Beijing, from January 21 through 24. Attending the symposium were representatives of more than 70 travel agencies from 14 countries and regions including Japan, the United States, Germany, Italy, Switzerland, Poland, Singapore, Indonesia, South Korea, Taiwan and Hong Kong. Additional European and American travel agencies would have attended the symposium if it were not for the Gulf war. At the symposium, several agreements and contracts were signed between the Chinese sponsor company and the travel agencies present.

The aim of the symposium, said Wang Shaogeng, general manager of the Xinhua Tours Corporation, is to keep abreast with trends in the travel market and consult with foreign travel agencies about his company's plans for 1991.

The Beijing Xinhua Tours

Corp. has seen rapid growth in business since it was established in November 1989. Last year, it played host to more than 38,000 tourists coming from 26 countries and regions, thus ranking fourth in a rating of Beijing's 90 travel agencies.

Zhao Xichen, deputy general manager of the company, said that his company's good services have won it a high reputation among tourists. All the staff from the general manager down to section managers, he added, pay particular attention to improving services through better management. To this end, they have specific rules for their entire operation, from preparation, reception and departure, boarding, traffic, itinerary arrangements, amusement, safety, security and medical care to dealing with possible accidents. For example, staffers are required to respond within 24 hours upon getting a fax, telex, telephone or correspondence from clients if the request is within their capacity. When a travel group is expected, staffers are required to

notify the foreign organizer, within 72 hours upon learning the news, of the hotel in which the guests will stay, traffic arrangements, itinerary and the name of the receiving travel agencies, their telephone numbers and contact persons.

In their offer of standard services, the company has established a management section to regularly supervise all service items on behalf of the general manager and formulate preventive measures for most problems. The section also distributes questionnaires and conducts telephone interviews of tourists to solicit their opinions and suggestions and responds quickly to any complaints.

The high level of service has not only won the company high acclaim but also the trust of domestic travel agencies. Air China has commissioned the company as its domestic ticket agent, the first out of many travel agencies to have such a privilege. With computers hooking up to all of Air China's ticket offices throughout the country, the company is able to tell foreign travellers their arrival and departure flights, thus making it much more convenient for them to prepare an exact itinerary before they start on a trip.

To diversify their services, the general manager said his company plans to open more tour items and itineraries of distinctive national flavour such as kite flying, water melon festival, peach festival and mountain climbing during the Double Ninth Festival (9th day of the 9th lunar month) in suburban Beijing. Such single-item tours as *qigong* (deep breathing exercises), gymnasium exercises, medicated food preparation and traditional Chinese medicine classes are also on the tour scheduls.

by Han Baocheng

Wang Shaogeng with representatives of the US-based Jumbu Travel Co.

HAN GONG



## **Building Material Exports Soar**

It was reported that China's export of building materials in 1990 soared to US\$1.2 billion, an increase of 23.8 percent over the previous year. Cement exports, for example, climbed from 436,000 tons in 1989 to 6.83 million tons in 1990, a jump of 15.6 times.

Wang Yanmou, director of the State Bureau of Building Materials, said that the state exported almost 30 kinds of building materials valued at more than US\$300 million. Of these, the export of cement and glass topped US\$100 million. "We have also succeeded in exporting high-tech building material equipment," Director Wang said.

Wang went on to say that the number of countries and regions to which China sold these products rose from 80 in 1989 to 110 in 1990 and that the proportion of markets has continued to grow. For instance, China's share of the cement market in Hong Kong shot up from 7 percent in 1989 to 25 percent in 1990.

The export of building materials has spurred international cooperation in this field, and foreign businessmen are enthusiastically establishing joint-ventures here. Negotiations are under way for the construction of cement factories with a combined annual production capacity of 6 million tons; a total foreign capital of US\$400 million will be introduced for this purpose.

China's export of building material products is expected to rise steadily in the 1990s. The economy of the Asian-Pacific region has been developing at a fast pace and the economic boom has stimulated the building indus-

try, thus bringing a sharp increase in demand for the products. Between 1988 and 1990, the value of export of 14 kinds of China's principal building materials to the Asian-Pacific region registered an annual jump of 35 percent. It was over US\$600 million in 1990, accounting for 66.4 percent of the total value of China's export of these kinds of building materials. In the next few years, there will be a further growth in demand for China's building materials in this region. Moreover, in recent years a number of developed countries have been moving their factories abroad so the number of foreign businesses coming to establish solely owned and Sino-foreign joint ventures has risen. This is a favourable trend for China's enterprises and will help to expand exports.

According to Director Wang, by 1995 the export value of China's building materials will reach US\$2-2.5 billion, and the proportion of finished products will go up from one-third at present to 50 percent.

by Li Ping

## **Funds Solicited for Telecommunications**

According to a work conference on posts and telecommunications held in Beijing on January 22, 1991, the Ministry of Posts and Telecommunications will, during the Eighth Five-Year Plan period (1991-95), put 35 billion yuan into developing posts and telecommunications. Already, it has self-raised 20 billion yuan and will solicit the remaining funds from abroad.

Yang Taifang, minister of the posts and telecommunications, said that using foreign capital, particularly through government loans, was one of the

main principles in the Eighth Five-Year Plan and the ten-year programme. The foreign funds will be used to establish a 20,000-km optical cable communication trunk line, 10,000-km digital microwave trunk line, large-capacity programme-controlled telephone exchanges, and automatic post processing equipment.

He said that during the Seventh Five-Year Plan period (1986-90) China used foreign funds to import about 3.068 million-channel programme-controlled telephone exchanges worth of US\$917 million. These equipment greatly strengthened the post and telecommunication capacity in various provincial capitals, coastal open cities and some other cities and counties.

He said that the loans were mainly from the governments of Japan, Spain, Sweden, Canada, France, Australia and Germany and other countries, as well as from the Asian Development Bank. With French government loans to the tune of 73 million francs, China set up the Wuhan-Chongqing microwave trunk line and the Xian-Chengdu-Chongqing microwave trunk line. With government loans from Switzerland, China established 2,000-channel telegraph exchanges respectively in Xian, Nanchang, Fuzhou, Hangzhou and Qingdao. In addition, each province set up about 3,300 km of optical cable trunk lines and 9,800 km of microwave trunk lines.

Foreign capital and foreign advanced technology and equipment have been used to upgrade China's telecommunications networks. At present, there are more than 3.5 million-channel programme-controlled telephone exchanges in urban areas. Construction of long-distance automatic telephone networks including one in Lhasa which has

basically been completed. Some 296 cities can directly dial more than 180 countries and regions in the world. In addition, 80 percent counties and administrative areas above the county-level use automatic exchange networks.

Yang said that during the Seventh Five-Year Plan period, the volume of international communication business increased by 50 percent annually. At the same time, some new services were also put into place such as cellular telephones, telephone modems, charge cards, fax and data communications, video screen telephones, special telegraph service, electronic letters and multi-functional telephone services. Domestic and foreign express mail service was offered in 1,960 cities. Express mail service reaching more than 170 countries and regions saw an increase of 25.7 times in business volume over 1985.

by Kou Zhengling

## Harbin's Trade With USSR Expanded

From June 15 to 24 this year, China will hold the second symposium on economy and trade with the Soviet Union and East European countries in the city of Harbin, Heilongjiang Province. This was announced by Jin Naipeng, deputy director of the Harbin Commission of Foreign Economic Relations and Trade at the Seventh Ice and Snow Festival held in Harbin between January and February 1991.

Harbin is China's largest inland trading port city open to the Soviet Union. Since 1986, the city's exports increased at an annual rate of 46 percent, reaching US\$206 million in 1990. The major factor of Harbin's export growth is the rapid development of border trade with the Soviet

Union. Harbin's exports to the Soviet Union ranked first in its export trade in 1989 as against the 14th in 1987. Statistics indicate that in 1987 Harbin signed contracts for trade with the Soviet Union, with contract value amounting to 5.13 million Swiss francs. The figure reached 100 million Swiss francs in 1988, 200 million Swiss francs in 1989 and 560 million Swiss francs in 1990. The 1990 figure includes 362 million Swiss francs worth of contracts signed at the first symposium on economy and trade with the Soviet Union and East European countries held in June 1990.

In addition to its foreign trade, Harbin is now developing a variety of foreign economic and technological co-operation. For example, it has established 20 Sino-foreign joint ventures abroad, nine of which are in the Soviet Union, and signed US\$120 million contracts for projects, nine of which are worth US\$89.51 million in the Soviet Union, accounting for 79.9 percent of the total contracts. Also, Harbin sent 5,000 workers abroad, of whom, more than 3,000 people were in the Soviet Union. The co-operative scope between China and the Soviet Union is from the co-establishment of electronics typewriter plant, hospitals, restaurants to planting of vegetables and holding of ice carving exhibitions, which have achieved good results.

The economic and political systems of the Soviet Union are now changing, Jin said. In its trade with the Soviet Union and East European countries, China has since this year changed the transaction for account into the trade for spot exchange this year. All this has brought about difficulties for the expansion of China's trade with the above countries. However, the enlarged

power of the Soviet Union's local enterprises has also provided China with opportunities for the expansion of border trade with the Soviet Union.

It is reported that in order to seize the chance, Harbin is now making efforts to prepare for the establishment of the economic and technological development zone so as to attract more foreign and domestic investment. The plan's first stage is to develop 0.6 square km in the Pingfang District in 1991. The whole plan is to develop 8 square km in the Pingfang District and build a 4.5-square km economic and technological development district in the city proper.

by Li Ping

## China and US Jointly Develop Oilfields

In order to further develop the South China Sea's largest oilfield, the Liuhua 11-1 Oilfield, the National Offshore Oil Corp. signed the China South China Sea Liuhua 11-1 Oilfield Development Additional Agreement with the AMCO Oil Co. of the United States on January 24.

The oilfield is about 240 km southeast of Hong Kong in water 300 metres deep. To exploit the expected reserves of 1.5 billion barrels, the Chinese side contributes 51 percent and US side 49 percent to the total investment of US\$500 million. The daily output will reach 50,000 barrels. The exploitation will require the advanced technology of a horizontal well, an underwater well mouth and a floating-style production system. It is expected to be put into operation in 1995 and produce 2.5 million tons of crude oil annually.

China began to co-operate with AMCO soon after it opened its doors to the outside world. As of now, there are seven offshore oil contracts in effect with AMCO. ■

## Telemovie Captivates Beijing Viewers

**E**xpectations, a 50-part telefilm, has won immediate acclaim since it was first televised in Beijing in December 1990. Adverts are seen everywhere, in the street or on the public bus, telling people the show schedule. The programme has become the center of television attention not only in Beijing but throughout the country.

Beijing television had a prosperous period last December. In addition to more than ten Chinese TV series (including two produced by Taiwan), local residents were able to enjoy five US, one British and one Singaporean programmes. One college student happily exclaimed, "There are so many good programmes. I can hardly decide which one to tune in."

Beijing residents are somewhat privileged in this regard. In addition to Beijing's five-channel programmes, they can also receive signals from neighbouring Tianjin and Hebei Province. In early 1989, a sample survey revealed that 80 percent of all households owned a colour TV set, 55 percent had a black and white one. Almost every family has a TV set, some even having two or more.

Even as the outside temperature dipped to 10 degree centigrade below zero, although some young people entertained themselves at a party or dancehall, many local people were offered a wealth of entertainment possibilities via television.

### Expectations: A Sensation

*Expectations* is the first large-scale indoor telemovie ever produced in China. A story between two families, the serials describes more than ten characters, their ideas and attitudes towards life, love, work and morality. Covering a period of roughly 20 years from the late 1960s to the late 1980s, the telemovie reveals the sufferings of the common people during the "cultural revolution" and the tremendous changes brought by the decade-long reform touching the souls of tens of thousands of people.

In the story, Liu Huifang, the heroine, is a worker who falls in love with the unfortunate college graduate Wang Husheng

during the chaotic years of "cultural revolution." As a senior intellectual, Wang's father is attacked and isolated at that time. At the same time, his mother dies of an illness. The warm-hearted Liu adopts a baby girl. In the course of events, Wang's father is rehabilitated and his family's status restored. He changes of mind turning against his "disgraced" wife because of the baby girl. His sister Wang Yaru, long estranged from Liu, goes even further. As Liu is forced to divorce, Luo Gang, a college teacher and boy friend of Wang Yaru, shows his sympathy for Liu, discovering in the process that Liu's daughter is, in fact, his own daughter lost before he was imprisoned during the "cultural revolution." Despite her affection for the girl,

A scene from *Expectations*.



The cast of the television movie *Expectations* in a talk with fans.





Scenes from the telefilm *Fortress Besieged*.

Photos by JU ZHAO

Liu returns the girl to her parents, Luo Gang and Wang Yaru. At the story's end, Liu has an accident and is paralyzed.

The tragic and emotional story found a place in the hearts of Chinese viewers. The director and actors have received hundreds of telegraphs, calls and letters praising their performances. To meet audience demands, despite the fact that the movie has been aired at some local TV stations, CCTV, China's state television network, decided to reshoot it beginning on last January 7.

The telemovie and its characters have become a household word, the hot topic among people of all walks of life. When an actor or actress of the movie appears in public, people rush to shake hands, shouting their role names. When the cast came for a visit to the Yanshan Petrochemical Complex in southwestern Beijing, one female worker disliked Wang Husheng so much that she tried to slap him in the face. To much of the public, the story has erased the line between fiction and reality. It is uncommon that a telemovie has aroused such a strong response from the audience.

Critics have pointed out that the success of the opera lay primarily in its strong portrayal of reality. With rich flavour of Beijing's local life, the language, styles and careers of the characters are close to life as possible as

in a TV serials is supposed to be. The audience can easily associate itself with the telemovie and find traces of the characters in their own relatives, friends, neighbours or colleagues. As a viewer aptly put it, "The story is taking place among us."

They also attributed the telemovie's success to its reflection of people's thirst for truth, virtue and beauty. Although tragic, the fortune of Liu Huifang moved the audience so much that they expected to encounter such a woman in their life and thus make the world better and more promising. Yang Yanyin, vice-president of the China Women's Development Foundation, said, "*Expectations* is a mirror of what the public expects of."

### A Great Novel on the Screen

The ten-episode TV serials *Fortress Besieged*, adapted from a novel of the same title by the noted Chinese writer Qian Zhongshu, has also attracted a large audience, particularly history buffs.

The story takes place in China in the 1930s. Fang Hongjian, the hero, returns to China after several years of study in Europe. The story tells of his love affairs with four girls, his career as a university teacher, his clashes with the president and colleagues which gives a vivid por-

trayal of Chinese intellectuals with different backgrounds and their complicated inter-personal relationships. It reminds the viewer of life in the 1930s and 1940s and highlights the author's theme that human life is like a besieged fortress—outsiders want to get in and those insiders want to get out.

With humorous and witty conversations, the novel has long been considered a Chinese literary masterpiece ever since its publication in 1947. However, the dialogue has made it difficult to present on television. "Only after three years of preparations did I finally decide to put it on the screen," said Huang Shuqin, a well-known filmmaker and director of the movie. Critics have pointed out that it was her technique that created a hit movie from a humorous and interesting novel.

Chen Daoming, a young actor who played Pu Yi in the Chinese TV serials *The Last Emperor*, successfully brings to life the character Fang Hongjian. Indifferent and cynical, Fang nonetheless has a lot of dreams and expectations, all of which result in disappointment and despair. Cowardly and passive, Fang, as one character in the opera relates, "is good for nothing." A gifted stage performer, Chen manages to portray Fang in a way that leads the audience, which is unsympathetic at first, to understand and sympathize

with him. From the thread of Fang's misfortune, one can see that people of his age were apathetic to the repressive life and could do nothing with it.

Lu Liping, an actress who starred the film *The Old Well*, plays the seemingly naive and snobbish Sun Roujia. Sun, who makes Fang her captive husband, becomes suspicious and envious after their marriage, which eventually falls apart. Lu demonstrates the psyche changes which her character undergoes, an indication of her theatrical maturity.

Even for the supporting roles, director Huang sought out the best actors and actresses. Ying Ruocheng, a well-known opera actor and former vice-minister of Culture, Wu Yigong, a renowned director whose films have won international prizes, Sa Yexin, a noted playwright and president of the Shanghai People's Art Troupe all have played a part in the movie.

### East Meets West

Oscar star Jane Wyman now has become the most popular foreign actress for Beijing audiences. Since 1989 the 86-part US telemovie *Falcon Crest*, in which she is the heroine, has been aired on various Chinese TV stations. The movie depicts a property dispute over a vineyard in southern United States. In Beijing it was aired twice a week at the prime TV time and, after a year, it is now on the screen again. A middle school woman teacher, showing her respect for the actress, says, "Her performance is excellent. Generally, an actress hesitates to play a bad character. But Wyman's portrayal of the treacherous and cunning old lady demonstrates her artistic ability."

Also the *Priceless Love*, a Taiwan telemovie, has won the ap-

plause of mainland viewers. Through love story of two young couples, it reveals the inner relations of a rich family.

A cartoon based on an American scientific fiction story has become a favorite of primary school students.

China now owns more than 480 TV stations which beam to an audience of 600 million. There are more than 160 million TV sets in the country. Some 46 percent of

TV programmes are for entertainment, of which telemovie make up the bulk.

China has witnessed a rapid development in telemovie production in recent years. In 1980 the number was 100, increasing to 1,000 in 1985 and 3,000 in 1989. In the first 11 months of 1990, according to Yuan Ruolin, deputy director of the China TV Art Committee, CCTV aired 385 newly produced movies totalling 1,090 episodes. This was a small decrease compared with the number in 1989 but the general

quality of the programmes was greatly improved. In addition to *Expectations* and *Fortress Besieged*, she also mentioned the 27-part *King Gasar*, a hero of the Tibetan people.

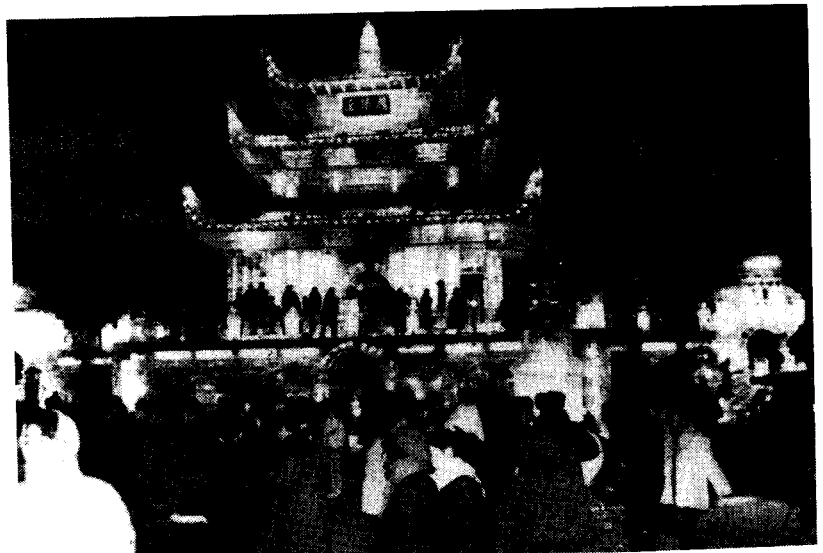
To celebrate the 70th Anniversary of the founding of the Communist Party of China, Yuan said, more than ten programmes on the great Chinese revolution are in the making. Among them, *Boat Tracker on the Yellow River* depicts the life of the late Premier Zhou Enlai and *A Special Company* and *Red Army's Eastern Expedition* relate the famous Long March.

In addition, the large TV series *Romance of Three Kingdoms* about the political and military rivalry of the third century is expected to be finished in three years. Two other series, *The Emperor Xuangzhang of Tang Dynasty* and *Romance of Mirror* will be on the screen this year.

by Wei Liming and Cui Lili

### Harbin Snow and Ice Festival

The yearly Harbin Snow and Ice Festival is being held in Harbin, capital of Heilongjiang Province, from January 5 to the end of February. The festival consists of various activities including ice-lantern show, international ice sculpture competition, wedding ceremony and winter swimming. The picture shows an ice sculpture of the Yueyang Tower, one of the most magnificent traditional Chinese architectures in southern China.





A Girl Wearing a Goat Cap.



Three Goats Grazing.

## Papercuts for the Year of the Sheep

According to the Chinese Lunar Calendar, 1991 welcomed in the Year of the Sheep, a symbol of good luck and fortune. These folk papercuts for the Year of the Sheep are works of Shen Peinong, who was born in Inner Mongolia in 1936.

### ART PAGE



A Boy Riding a Sheep.



A Goat Figure Symbolizing Life.

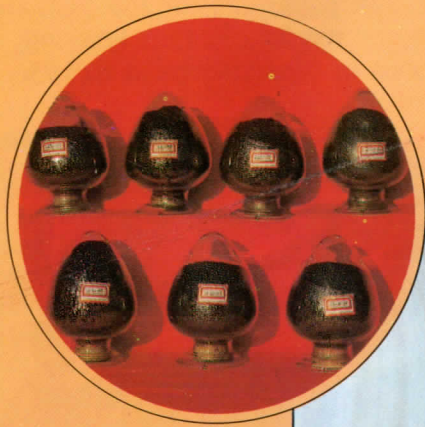
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The Yunshan Graphite Factory in Pingdu, Shandong Province, situated in the suburbs of Qingdao, is China's chief supplier of high-quality graphite material. Our products which have won the title of provincial excellent goods are sold worldwide to over 30 countries and regions

Our factory owns five large graphite mines and has built medium, conductive and high-carbon processing factories to manufacture a series of graphite products. We also provide various types of excellent raw graphite for the iron and steel, metallurgical, machine-building, chemical, electronics, aviation and space industries. Domestic and international enquiries and orders are welcome.

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