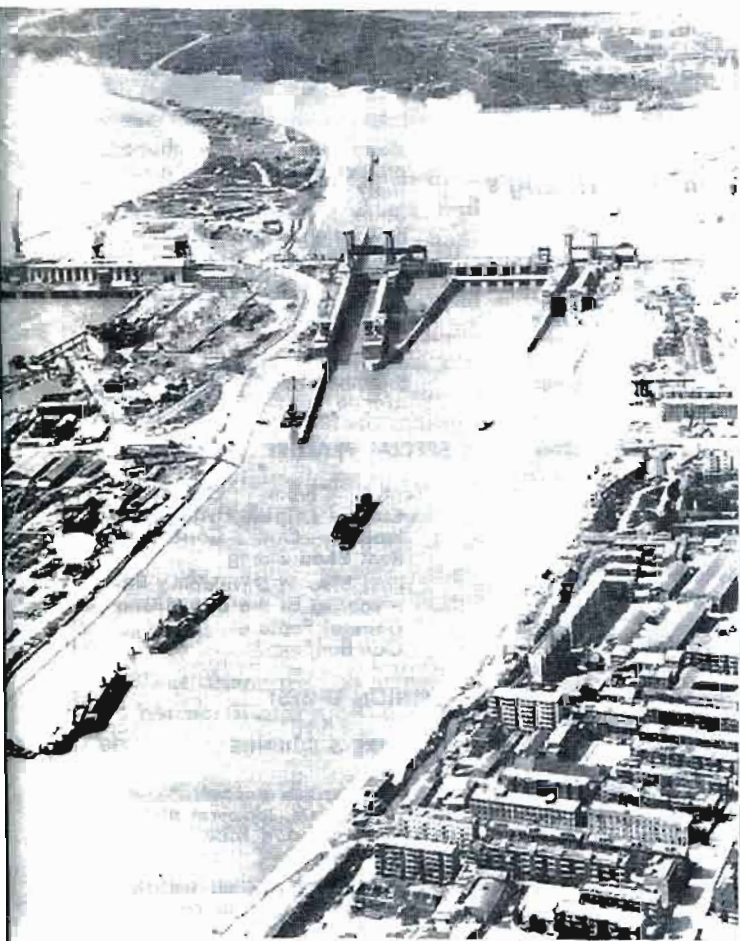


No. 35 August 31, 1981

# BEIJING REVIEW

北京周報

A CHINESE WEEKLY  
OF  
NEWS AND VIEWS



Report on the Gezhouba  
Project



Malian President Traore's  
Visit to China



Recent Finds in the Qin Shi  
Huang Mausoleum



## HIGHLIGHTS OF THE WEEK

### Malian President's Visit

Malian President Traore's fruitful visit has deepened the friendship between the two countries.

Premier Zhao Ziyang stresses that China will never weaken its friendly ties with the third world countries, African countries included (p. 8).

### The Gezhouba Project

A special feature by our correspondent on the Gezhouba project, an engineering feat on the middle reaches of the Changjiang River. Topics dealt with in interviews with the builders include characteristics in the design of the huge dam, its ecological effects and the difficulties that had to be overcome (p. 20).

### Servants of the People

A national model worker and now deputy secretary of the Harbin city Party committee has been commended for carry-

ing forward the Party's fine tradition of maintaining close ties with the people (p. 5).

### Soviet Slander Refuted

Soviet attack on China concerning the US decision to produce neutron bombs was refuted by the head of the Chinese delegation at a meeting of the Geneva Disarmament Committee. China is consistently against a nuclear arms race and holds that the two superpowers should take the lead in carrying out nuclear disarmament (p. 10).

### UN Conference on Energy

A Chinese representative explained China's policy and experience in developing new and renewable energy sources and called for worldwide cooperation to solve the energy problem (p. 10).

### Emperor Qin Shi Huang's Mausoleum

Recent excavations have revealed fascinating new facts

about this mausoleum built over 2,000 years ago. The excavation of the entire tomb complex may take one or two generations to complete (p. 30).



Part of the Gezhouba project viewed from the air (left). Ships passing through navigation lock No. 2 at night (right).  
Photos by Hua Ai and Xu Shenggang

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## More on Literary Criticism

It is rumoured that there will be another campaign to criticize literary works. Is this true?

A large number of good or fairly good works have appeared in the past few years. It is inevitable that there are also works with defects or mistakes which the readers find unacceptable. Apart from encouraging and commending writers for their good works, the national and local newspapers have published literary comments criticizing works with mistakes as well as analytical articles with entirely different views on the same works.

Normal literary criticism should not be confused with criticism campaigns. Such malpractices as wanton attack and unjustified criticism, as happened during the "cultural revolution," should not be allowed to occur again. There will be no more mass political campaigns. Normal literary criticism is different from "bludgeoning." The latter is excessive and ruthless struggle which seriously hurts the feelings of the writers, while criticism is to help them recognize and correct their mistakes so as to produce better works.

What, then, are the principles of normal literary criticism? I think they should include:

- While criticizing works with mistakes, the method should be: present the facts, reason things out and make proper analyses to convince those who have made the mistakes;

- Different views should be allowed;

- A distinction should be made between criticism of a work and criticism of the writer himself.

Literary criticism is a must in implementing the principle of "letting a hundred flowers blossom and a hundred schools of thought contend." It is also an important and effective means to exercise Party leadership in art and literature. Only when there is correct literary criticism can our literature and art flourish and develop along the socialist road.

Practising criticism and self-criticism is a fine tradition of the Chinese Communist Party.

At present, efforts are being made to revive and carry forward this fine tradition.

The spirit of criticism and self-criticism found full expression at the recent Sixth Plenary Session of the 11th Party Central Committee and in the resolution it adopted. The Party has carried forward its fine tradition by making a public self-criticism regarding several historical problems. In the future, this spirit will be upheld not only in the literary and art circles but in all other fields as well so that the great cause of socialism will continuously advance.

—Literary Editor Xin Xiangrong

## China and Africa

**What's China's stand on African affairs? Does China have trade relations with South Africa?**

China firmly stands on the side of the African people and supports the African countries in their struggles to safeguard national independence and state sovereignty, develop their economies and oppose hegemonism, colonialism and racism. China supports the national-liberation movement in southern Africa, whether it's Zimbabwe's independence, the early solution of the Namibian question or the fight against South Africa's apartheid. China has always taken a positive attitude. We have never wavered in taking economic sanctions against South Africa. China has no direct or indirect political, economic and trade relations with South Africa. But Moscow's propaganda machine chooses to

falsely charge that China has trade relations with South Africa and that Chinese officials are meeting in secret with their South African counterparts. These are nothing but slanders aimed at smearing China's reputation and sowing discord between China and African countries.

Moscow has another ulterior motive in attacking China in such a blatant manner, and that is to cover up its own wild ambitions towards Africa. In order to push its global strategy and dominate Africa which is rich in strategic resources and occupies a position of strategic importance, the Soviet Union has intensified its contention with the United States on the African continent. The Soviet Union often takes advantage of the contradictions between African countries or within a certain country to meddle in their affairs.

# LETTERS

## Sixth Plenary Session

I would like to take this opportunity to express my congratulations to the successful Sixth Plenary Session of the 11th Central Committee of the CPC. I am studying the documents of this session, which I think constitute a major step forward for the Chinese people in their current task of carrying out the "four modernizations." I support this important task.

Finally, I would like to express my thanks to you for the tremendous efforts you have made and inform you that the Colombian people are developing a great interest in the Chinese people with every passing day. This is due not only to the role China plays in the world, but also to the high prestige of your magazine.

**Adolfo Leon Tigreros Domínguez**  
Puerto Tejada, Colombia

I subscribed to *Beijing Review* recently and received the first four issues. The information about the proceedings of the Sixth Plenum and Chairman Hu Yaobang's address are most valuable.

**W.R. Bidner**  
Los Angeles, California, USA

## 60th Anniversary of the Party

I've just received issues Nos. 25, 26 and 27 of your magazine. I

found the issue commemorating the 60th anniversary of the founding of the CPC particularly interesting. For this, I express my congratulations to you.

But what commands my greatest admiration is your openness to the readers, which you have adopted to improve your magazine and has become a simple and nice way to make us closer to China.

**Miguel Ramon Bauset**  
Valencia, Spain

## Symbol of China

I think both Mao Zedong and Zhou Enlai are symbols of China. Their spiritual guidance, yesterday, today and for ever, should not be forgotten by their country. They are, and will continue to be, an example for this beautiful and populous nation.

**G. A. N.**  
San Felipe, Chile

## Soviet and US Hegemonism

The globe we are living on should be a paradise for mankind. But there is more misery than happiness. The reason for this is the hegemonism practised by the Soviet Union and the United States. Your magazine has exposed forthrightly the unlawful acts of the Soviet Union to the strong-willed people of the world. To this I express my admiration. And I hope you will continue this struggle.

**Masao Nishimura**  
Ashikaga, Japan

## Geographical and Economic Reports

Your magazine has improved a lot in the last few years. As a teacher, I am very glad that you carry more detailed reports about your geography and economy, for these factual accounts are very helpful to my teaching.

**Helge Hussung**  
Petersberg, West Germany

## Spiritual Civilization

The article "Building Socialist Spiritual Civilization" carried in issue No. 10 helps those who have been worried that China was becoming "capitalist" in the economic exchange with the United States and Japan to have a clearer understanding of China's socialist stand.

**Masakazu Hatano**  
Yokohama, Japan

## Smiling Faces

As a member of the Swiss-China friendship movement, I'd like to frankly say: Whenever I show your magazine to my friends or people I know, they smile and say that they don't quite believe the "smiling faces" of the Chinese women and men as presented in your pictures. What the Westerners expect and appreciate is a realistic way of presentation which is natural and doesn't need much explanation.

**Halter Raphael**  
Frauenfeld, Switzerland

## More About Culture and Science

Your magazine has changed a lot. It has become more vivid, interesting and lively. The column "Humour in China" is superb.

I wish your column "Special Feature" would feature China's scientific achievements and scientific development. It is very significant to tell the readers more about the culture of the Chinese people and the social development in your country. Here, we find the Chinese, who are special and different from other peoples, mysterious.

**Miguel Angel Prieto**  
Honda-Tolima, Colombia

Flaunting the banners of "socialism," "support for the national-liberation movement" and "the natural ally of the third world," the Soviet Union is most deceptive.

China supports African unity. We are glad to see that the African countries have strengthened their unity in struggle, consulting with one another and working in co-operation for their common cause. This was fully borne out at the 18th Summit Conference of the Organiza-

tion of African Unity held in Nairobi last June. Speeches delivered and resolutions taken at the conference gave expression to their firm determination to safeguard national independence and win the complete liberation of the African continent. Decisions taken by OAU countries and their summit conference are always respected by China.

—International Editor  
Mu Youlin



## POLITICAL

## Cadres Are Servants Of the People

Wang Chonglun, deputy secretary of the city Party committee of Harbin in northeast China, recently made three suggestions on improving the relations between the cadres and the people:

— The practice of leading cadres making friends with ordinary people should be advocated:

— The system of cadres taking part in physical labour should be restored:

— All cadres of the Party should be urged to make strict demands on themselves in whatever they do and regard themselves as ordinary citizens.

Wang Chonglun said that since he took up work in Harbin, he felt strongly that the present relations between the cadres and the masses are not as harmonious as before and that there is estrangement between

the cadres, particularly leading cadres, and the masses in some units.

"The reasons are many-sided," he said. "An important one is that some cadres indulge in privilege-seeking and are bureaucratic in their work." Though the majority of the cadres work selflessly for the benefit of the public, the harmful effects resulting from the actions of a few should not be underestimated.

Cadres taking part in physical labour has long been a fine tradition of the Chinese Communist Party. It helps them maintain the fine qualities of the labouring people, establish close ties with the masses, know in time what the people feel and think and, through personal participation, they can examine their own work. During the "cultural revolution," due to the sabotage of Lin Biao and the gang of four and the influence of "Left" mistakes, the system of cadres taking part in physical labour was regarded as the sole criterion in judging whether a cadre practised Marxism or not. This was of course

wrong. But there are a few cadres who are unwilling to go to the grass-roots level to supervise work; they divorce themselves from physical labour and the masses and fail to see that they are merely servants of the people. It is necessary, therefore, to restore the system of cadres taking part in physical labour.

Fifty-four-year-old Wang Chonglun is a worker-cadre trained after the founding of the People's Republic. In the early 50s when he was a young worker in Anshan, an important heavy industrial base in northeast China, he became a model worker of nationwide fame. Now he is Vice-President of the All-China Federation of Trade Unions. Since he was appointed deputy secretary of the city Party committee of Harbin in August last year, he has visited 312 families of barbers, sanitation workers, shop assistants, peasants, teachers and office workers. These visits have enabled him to know better the difficulties and needs of the people and solve some of their problems in time. (See the article "Deeds Rather Than Words" in issue No. 26.)

## ECONOMIC

## Rich Summer Harvest

Despite a decrease of 1.33 million hectares sown to summer crops as compared with last year, total output this summer topped 60 million tons, an increase of 3 million tons over that of last year. The summer crops, mainly wheat, account for about one-fifth of the country's total grain output.

The rich harvest is the result of the implementation



Wang Chonglun selling vegetables.

of the system of "more work, more gain," which has aroused the peasants' enthusiasm in farming. Output in Anhui, Henan, Shandong and Shaanxi Provinces and in Beijing increased by a big margin. Compared with 1980, output in Beijing's outskirts and Shaanxi Province was 30 per cent higher, while that of most other areas was the same or slightly higher. Output in Jiangsu, Gansu and Ningxia decreased either because of severe drought or because too many acres were sown to other crops.

According to the Ministry of Agriculture, the yield of rapeseed this year was 3.4 million tons, a 50 per cent increase over last year's.

## Energy Industry: New Progress

Three medium-sized and large coal mines with a combined annual capacity of 1.95 million tons were built and put into production in the first half of this year. It is planned that another nine mines with a combined annual capacity of 6.74 million tons will be commissioned before the end of the year.

In the oil industry, total oil extraction capacity in the first six months of this year increased by 1,326,000 tons, and another one million tons is expected to be added to the extraction capacity in the third quarter.

Newly installed power generating sets in the first six months have a total capacity of 465,500 kw. It is estimated that a total capacity of 1,830,000 kw will be added for the whole year.

The energy industry is one of the major sectors earmarked for expansion during the current economic readjustment.



Tunnelling in a coal mine in Anhui Province.

Although investments in capital construction have in general been reduced, the proportion of investments in the energy industry has been increased.

The construction and expansion of coal bases, in particular, is stressed. Priority is given to the expansion of the Huainan and Huaibei coal mines in east China's Anhui Province. Eight pairs of large and medium-sized coal shafts, with a total designed capacity of 15 million tons of coal a year, are now under construction. At the same time, coal washing and machine repairing plants, a railway line, a hospital and other facilities for the mining areas are being built. A bridge, 3,400 metres long, has been built across the Huai River and can be used for both road and railway transport. According to the construction plan, from this year until the completion of the coal base along the Huai River, a pair of new shafts will be built and put into production every year.

According to the State Capital Construction Commission, when the shafts now being built are completed, there will be an in-

crease of 76 million tons of coal a year.

**SOCIAL**

## More People Enjoy Summer Holiday

Four Tibetan herdsmen came to Beijing on a sightseeing tour at their own expense. They kept in their pockets 30 cards on which were written words in both the Tibetan and Han (Chinese) languages asking for information or help such as "Comrade, we want to buy four train tickets to Beijing." "Please help us find a hotel." and so forth.

More people have taken trips to places of historical interest or famous resorts to spend their summer holiday this year. This is an indication of the improvement in the people's material and cultural life. Since the focus of the nation's work was shifted on to socialist modernization in 1979, the social productive forces have increased by a big margin and due attention has been attached to improving



the general well-being of the people, which is the aim of socialist production.

**Summer Camps.** To respond to the Party Central Committee's call to show greater concern for the younger generation, educational departments in various places have organized various kinds of holiday activities for primary and middle school students on a larger scale this summer than in any previous year. The society of geology, for instance, has been entrusted with the task of organizing summer camps that help youngsters in 22 provinces, municipalities and autonomous regions gain more knowledge in the geological science. Three thousand have taken part in these activities, attending lectures on basic geological knowledge, collecting specimens of rocks and ores and visiting famous places. There are various other summer camps where the participants acquire knowledge in biology, meteorology, aeronautics and navigation.

A summer camp for youngsters of minority nationalities has been organized for the first time in Beijing this year.

Taking part in it are 215 youngsters from 54 minority nationalities. A responsible member of the camp said that the aim was to help those young people broaden their visions and imbue them with more scientific knowledge.

**Tour on Bicycle.** University students in 13 provinces and municipalities toured the country on bicycle this summer. Some journeyed as far as 1,000 kilometres, visiting places and carrying out social investigations. A group of Beijing University students went on a tour by bicycle and covered 360 kilometres in six days. When they arrived in Tangshan on their way, they made an investigation of the effects of the 1976 strong earthquake and the work done to restore and develop industrial and agricultural production there.

**Summer Vacation.** This year not only the professors and teachers enjoyed a summer vacation, those who work in the government offices, factories and scientific and technical departments also went to summer resorts by the sea or in the mountains in groups. All ex-

penses except food are paid by the state.

**Peasants Go on Tours.** Peasants who have for centuries been tied down to their land have also begun to travel around.

Thirty-one peasants in Nanfeng County of east China's Jiangxi Province took 20 days off to visit Beijing by train. They paid tribute to Chairman Mao's remains, visited the Palace Museum and other places and had their pictures taken in front of Tian An Men. They also enjoyed eating Beijing roast duck — a famous dish.

In northeast China's Liaoning Province, more and more peasants go to Shenyang, the provincial capital, on a sightseeing tour, with special transport and programmes arranged for them. Tian Guangwen, a peasant, and his wife and two children saw an acrobatic show in Shenyang, and for each ticket he paid 0.40 yuan which was equal to a day's earning from participation in collective labour several years ago. Now they could afford it. For last year Tian got about 800 yuan from the collective and over 200 yuan from household sideline occupations. "We can see films in our village now," he said. "But we want to see something new. That is why we have come to the city."

In the past the peasants had no week-end holidays and had only about 20 days off during the Spring Festival. With the implementation of the Party's new policies, which encourage the development of both collective production and domestic sidelines, and the principle of distribution according to the work done, the peasants now have more money in their hands. This is why they are able to go



Xu Guoxiang (middle), an engineer of the Ningxia Geological Bureau, giving a talk on geological and geographical knowledge to youngsters of a summer camp.

visiting places, which is a new phenomenon.

## FOREIGN RELATIONS

### China-Mali

General Moussa Traore, President of the Republic of Mali and General Secretary of the Malian People's Democratic Union, left Beijing on August 25 after a 6-day official visit to China. The President's visit was short but fruitful and contributed to the further development of friendly relations between China and Mali.

Chairman Hu Yaobang and Vice-Chairman Deng Xiaoping met with President Traore on separate occasions.

Hu Yaobang and Traore exchanged views on the development of friendly relations and co-operation between the two Parties and governments. He said: "China and Mali have developed their friendly relations for more than 20 years. Now, relations have been established between our two Parties." He expressed the belief that the two Parties will learn from and support each other. He added: "The Chinese Communist Party has summed up

the experience gained over several decades. The most important point for a ruling Party is to maintain close ties with the masses and not divorce itself from them."

During his meeting with the Malian President, Deng Xiaoping said that the Third Plenary Session of the 11th Party Central Committee was a turning point in China's political situation. The true features of Mao Zedong Thought were restored and the goal of working with one mind for the four modernizations was laid down. He added that efforts are being made to put Party and state affairs on the right track, including people's thinking, mental outlook and social ethics. "We are confident," Deng said, "that as long as we firmly carry out the Party's line and principles, there is great promise for our cause."

Premier Zhao Ziyang held talks with President Traore in a sincere and friendly atmosphere. The President briefly described the external policies of the Malian Party and Government and his views on some current international issues and the situation in Africa. Premier Zhao explained China's foreign policy and also gave an account of the political and economic

situation in China. Both agreed that China and Mali had a wide convergence of views on current international issues and the situation in Africa.

**International Situation.** Zhao Ziyang pointed out that contention between hegemonists was the cause of tension and turbulence in the world today. China firmly follows the foreign policy of opposing hegemonism and safeguarding world peace. Like other countries, he said, China needs a peaceful environment. As long as countries which oppose hegemonism unite to oppose the policies of expansion and aggression, a comparatively long period of peace is possible.

**Third World Countries.** The Chinese side considered that the struggle of the third world countries for economic independence after gaining political independence has become an irresistible trend of the times. To thoroughly change the old and unfair international economic order is an outstanding and important political issue in the present-day world.

The third world countries should have a say in making decisions on international economic affairs. The developed countries should negotiate with the developing countries on an equal footing so as to enable North-South relations to develop in the direction of fairness, reasonableness, equality and mutual benefit. This will not only help stabilize and develop the world economy, but also contribute to the lofty cause of the struggle against hegemonism and safeguarding world peace.

China is a developing socialist country and belongs to the third world. China unswervingly adheres to the foreign policy formulated by the late Chairman Mao Zedong and Premier

Malian President Traore, accompanied by Premier Zhao, reviews a guard of honour composed of the three services of the Chinese People's Liberation Army.





Zhou Enlai and works for the strengthening of friendly co-operation with other third world countries including countries in Africa. China is carrying out a policy of opening to the world and strengthening its economic relations with the advanced countries. But, Premier Zhao said, China will never weaken its friendly relations and co-operation with the other third world countries.

### Canadian Foreign Secretary Visits China

Canadian Secretary of State for External Affairs Mark MacGuigan paid a visit to China recently. He met with Vice-Chairman Li Xiannian and Premier Zhao Ziyang on separate occasions. At the visitor's request, Li Xiannian spoke about the present situation in China. Premier Zhao Ziyang praised Prime Minister Pierre Trudeau for his contributions in promoting the relations between the two countries. Referring to China's economic construction, the Premier said that while great efforts are being made to develop agriculture, the stress will be placed on developing energy resources and communications and transport as well as on the technical transformation of existing enterprises. He expressed the hope that the two countries would jointly find ways of co-operation in these fields. Dr. MacGuigan expressed Canada's willingness to co-operate in these areas.

Vice-Premier and Foreign Minister Huang Hua held talks with Foreign Secretary Mark MacGuigan. They had a wide-ranging discussion on the world

situation, the Afghan and Kampuchean problems in particular. They reviewed bilateral relations and expressed satisfaction at the smooth development of political and trade relations, economic and technical co-operation as well as scientific and cultural exchanges since the establishment of diplomatic relations 11 years ago. They explored ways and means to further expand bilateral relations, particularly trade and economic and technical co-operation. They agreed that the prospects of friendly co-operation are very bright. Both sides shared identical or similar views on many important international issues.

The talks helped deepen mutual understanding, and the two countries agreed that in order to achieve success in the common cause of opposing aggression and defending world peace, they should increase their consultations and co-ordinate their actions. They also agreed that periodic discussions would be held between senior officials of both sides.

On August 20 Huang Hua and MacGuigan signed on behalf of their respective governments an agreement on the settlement of private property claims.

### News in Brief

**Commercial Representative's Office in Singapore.** Xi Yesheng, China's first commercial representative to Singapore, left Beijing on August 20 to take up his post there.

An agreement to exchange commercial representatives between China and Singapore was signed in Beijing in June last year to promote trade and co-operation in industry, tech-

nology and other economic fields. The representative's office is also authorized to handle all matters related to visas.

The commercial representative's office is so far the only official Chinese organization in Singapore.

**Release of Captured Soldiers.** Zhang Dewei, deputy director of the First Asian Affairs Department of the Chinese Foreign Ministry, met counsellor of the Vietnamese Embassy to China Tran Viet Ha by appointment on August 20 and notified him that the Chinese Government, out of the humanitarianism, had decided to release Hoang Nam Cao and 11 other Vietnamese soldiers on August 29 prior to the National Day of Viet Nam, so that they could reunite with their families.

Zhang Dewei pointed out that Hoang Nam Cao and the other 11 Vietnamese soldiers had been captured by Chinese frontier guards and militiamen when they intruded into Chinese territory to carry out reconnaissance and sabotage activities inside China. They all confessed that they had violated China's territorial integrity.

In addition, Zhang Dewei informed the Vietnamese side that a Vietnamese girl, Duong Thi Nai, who was seriously wounded and rescued by the Chinese frontier guards during the self-defence counterattack against the Vietnamese aggressors in February 1979, had fully recovered after careful medical treatment by the Chinese side for more than two years. In accordance with her own wish to return to Viet Nam, she would be handed over to the Vietnamese side together with the 12 Vietnamese soldiers.

## Neutron Bombs and Soviet Slander

**The Soviet Union's attack on China concerning the US neutron bomb decision is quite uncalled for. China has always been against a nuclear arms race and holds that the two superpowers should take the lead in carrying out nuclear disarmament.**

**A**T a meeting of the Geneva Disarmament Committee on the question of the US decision to produce neutron bombs, the Soviet delegation distributed a working paper containing a TASS statement of August 13 groundlessly attacking China.

At the plenary session on August 20, head of the Chinese delegation to the meeting Yu Peiwen refuted the unwarranted Soviet attack on China concerning the US neutron bomb decision. The Chinese media have objectively reported the views of other countries on the US decision to produce neutron bombs, he said, and the reasons behind Moscow's ire are:

— Production of neutron bombs by the United States will affect the nuclear balance between the Soviet Union and the United States.

— Production of neutron bombs by the United States will offset the "tank advantage" enjoyed by the Soviet Union in the European theatre, as the neutron bomb is an effective anti-tank weapon.

— The US decision to produce neutron bombs was made at a time when the United States is preparing to conduct negotiations with the Soviet Union on theatre nuclear weapons. This shows that the United States is trying to strengthen its military capabilities so that it may stand in a relatively favourable position in future disarmament ne-

gotiations, i.e., from a position of strength.

In the final analysis, Yu said, production of the neutron bomb

### UN Conference on Energy Sources

## Speech by the Head of the Chinese Delegation

*Wu Heng, the head of the Chinese delegation to the UN conference on new and renewable sources of energy held in Nairobi, addressed the plenary meeting on August 12. He called for friendly co-operation between various countries in developing new and renewable sources of energy. Following are highlights of his speech:*

**A**T present, the energy problem is of universal concern. Most countries, both developed and developing, face the problem of changing the present situation of energy shortage to a situation with a more sustainable and heterogeneous energy structure. Taking the world as a whole, this energy transition is not only a universal issue but is also inevitable.

### Unfair and Unjust

It should be pointed out in particular, however, that the energy consumption of the developed countries, whose population is less than one-

is in fact a product of the nuclear arms race between the two superpowers, the United States and the Soviet Union. China has always been against a nuclear arms race and holds that the two superpowers should take the lead in carrying out nuclear disarmament. The Soviet Union's malicious attack on China's clear stand is groundless and quite uncalled for.

fourth of the world's total, is more than three-fourths of the world's total energy consumption, while the energy consumption of the developing countries, whose population makes up over two-thirds of the world's population, is less than one-fifth of the world's total. This is most unfair.

The energy problem is a global problem, which cannot very well be solved by the efforts of any single country. What is needed are the common efforts and concerted actions of the international community.

It is necessary to have a better understanding of the significance of the transition of energy and of the development and utilization of new and renewable sources of energy, a shift away from the current excessive reliance on hydrocarbons towards a more diversified mix of energy sources and a more efficient and rational use of available resources. There should be an extensive exchange of experience and tech-



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**T**HE 11-day UN conference on new and renewable sources of energy attended by some 4,000 delegates and observers from 150 UN member states and hundreds of UN specialized agencies and non-governmental organizations concluded on August 21, in Nairobi, Kenya.

The programme of action for the development and utilization of new and renewable sources of energy pointed out the gravity of the world energy problem and the necessity and inevitability of changing the present international economy based primarily on hydrocarbons for energy to one based on new and renewable sources of energy. If the transition process is based on equality and co-operation, it could provide new opportunities spurring the socio-economic development of the developing countries, and reduce their economic and technical dependence on the developed countries. The conference called on the industrially developed countries, international monetary organizations and other institutions to provide more funds to help open up new and renewable sources of energy in developing countries.

The decision to hold this conference was made in 1978 by the 33rd UN General Assembly and is one of the more important international conferences on energy sources held since the worldwide energy crisis of 1973.

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nologies among various countries, and regional co-operation. Whatever economical systems they have, the developed countries are duty bound to aid the developing countries in their efforts to study, develop and utilize new and renewable sources of energy.

### **China's Policies**

China is rich in energy sources, but because of unsatisfactory development and utilization, its energy supply is still short of demand. In China's rural areas the energy problem is particularly pressing. As 80 per cent of the Chinese population live in the rural areas, solving the rural energy shortage in China means satisfying the energy needs in daily life and production for the bulk of the Chinese population. This is of strategic significance for a developing country like China.

The emphasis in our recent development of these resources is: Grow more trees in a big way so as to provide enough fuelwood for rural needs; energetically develop

biogas production; popularize the use of stoves that use less wood and coal; make the fullest use of hydropower resources; and popularize solar cookers and heaters and develop other energy resources step by step.

### **Practical Experience**

China's experience in developing new and renewable sources of energy achieved in recent years includes:

1. The development of these energy sources should be strictly based on the specific conditions prevailing in the country. After careful ascertainment of the resources, we do what we can in accordance with our

socio-economic and technical conditions and in accordance with popular customs and habits and their level of understanding.

2. As to our more successful techniques in building small hydropower stations (see *Beijing Review*, 1981, No. 32, p. 22), the use of biogas and wood-saving and coal-saving stoves, etc., the crucial thing is to train technical personnel, improve management, and solve problems as they arise in the course of popularization. This is the only way to effectively popularize them. We will have to do more research work on other new and renewable sources of energy not yet fully developed and popularized.

3. Formulate appropriate and suitable policies, bring into full play the enthusiasm of the localities, collectives and the people. This is an important factor in speeding up the development of these energy sources.

4. Improve the exchange of information and education in popular science, and improve the level of understanding on the part of the leaders at all levels and the people. These are all important in the popularization and improvement of new technologies and in the speeding up of development.

5. The government should provide funds and technical assistance.

## **New Proposal for Reunification Of Korea**

**E**ARLIER this month 23 Korean political parties and public organizations, including the Workers' Party of Korea, issued a joint statement in Pyongyang calling all patriotic Korean personages to hold a

conference for the promotion of national reunification as quickly as possible. The conference should be attended by representatives of political parties and organizations in the north and south and the representatives

of compatriots overseas, said the statement, to discuss matters concerning the peaceful reunification of Korea and to promote co-operation and exchanges between the two parts.

The joint statement said that such a conference for the promotion of national reunification at this juncture would be "a most realistic national consultative organization for a thorough debate on the reunification question and promote its solution." This conference would freely debate on the proposal for the establishment of a Democratic Confederal Republic of Koryo and other proposals on reunification. It would also discuss the problem of realizing co-operation and interchanges in all fields, political, economic, cultural and military, between the north and south. In such a dialogue, the statement said, the north is ready to meet anybody from the south or abroad, except the Chun Du Hwan clique. The statement suggested convening the conference in Pyongyang, Seoul, or Panmunjom.

After the joint statement was issued, the Revolutionary Party for Reunification in south Korea also issued a statement in Seoul, expressing willingness to send representatives to attend this conference for promoting the reunification of Korea.

The present divisive and disruptive activities of the Chun Du Hwan clique have brought the dialogue between the north and the south to a deadlock. While paying lip service to "peaceful reunification" and resumption of the "dialogue" between the north and the south, the south Korean rulers are persistently plotting for "two

Koreas," persisting in their stand for north Korea and south Korea joining the United Nations at the same time, or south Korea "singly joining the UN."

This clique in south Korea is stepping up its fascist suppression of patriotic students throughout south Korea and the policies it pursues not only violate the principle of the joint statement issued by the north and the south on July 4, 1972, but also go against the aspira-

tions of the people in south Korea for democratic rights and national reunification.

The Democratic People's Republic of Korea is making another great effort to bring about the establishment of a Democratic Confederal Republic of Koryo. Divided Korea will ultimately achieve reunification, because this is what the 50 million Korean people want.

— Ren Yan

## Problems of the Least Developed Countries

**The success of the September Paris conference on problems of the least developed countries will depend much on the developed countries, which are too busy coping with their own economic difficulties to be able to give them much support. The least developed countries must rely on themselves to get rid of their poverty.**

**I**N the next few days, the United Nations will be calling a "conference on problems of the least developed countries" in Paris to discuss the grave socio-economic problems confronting the least developed countries.

This concept of "least developed countries" was first put forward in the early 60s. In 1964, the United Nations Conference on Trade and Development (UNCTAD) called for special measures to aid the least developed countries. In November 1971, the UN General Assembly classified 25 developing countries as the least developed countries according to the following criteria: 1) a per-capita GNP of less than 100 US dollars; 2) manufacturing industries make up less than 10 per cent of the GNP; and 3) ill-

literacy prevails among more than 80 per cent of the country's total population.

### Great Disparity

These criteria have been lowered slightly, to include 31 countries: nine Asian and Pacific countries (Afghanistan, Bangladesh, Bhutan, People's Democratic Republic of Yemen, Laos, Maldives, Nepal, Arab Republic of Yemen and Western Samoa), 21 African countries (Benin, Botswana, Burundi, Cape Verde, Central African Republic, Chad, Comoros, Ethiopia, Gambia, Guinea, Guinea (Bissau), Lesotho, Malawi, Mali, Niger, Rwanda, Somalia, Sudan, Uganda, Tanzania and Upper Volta) and one Latin-American country, Haiti.

Their combined population is approximately 270 million, (7.5



per cent of the world's total) of whom 82 per cent are engaged in agriculture. From 1960 to 1979, their per-capita GNP increased only 0.5 per cent every year. In 1978, their average per-capita GNP was 201 US dollars, while in the developed countries it was 7,922 US dollars, which is 39 times higher. In these least developed countries there are only 5.9 doctors for every 100,000 people, while in the developed countries there are 159.7 doctors, 27 times more than the former. Only 12 per cent of all children of middle school age are studying while the figure is 86 per cent in the developed countries. These figures clearly show how huge the disparity between the least developed and the developed countries is.

### Six Problems

The economic problems the least developed countries face are also extremely serious. First of all, they do not produce enough food-grain to feed themselves, though agriculture is their main industry. The reasons for this are low productivity, rather primitive cultivation techniques, inadequate irrigation facilities, lack of trained personnel, seeds, machinery and fertilizers and a lack of agricultural back-up services.

Second, their manufacturing industries are poorly developed. There are few industrial enterprises in the least developed countries and what they have are mostly handicraft workshops and a few small and medium-sized enterprises. Their output value from manufacturing industries is estimated to add up to no more than 9 per cent of their GNP.

Third, their import-export trade is very small, marked by large deficits and foreign debts. Their low level of production

limits their exports and severely restricts their imports. A 1977 study showed that the least developed countries' total import value was 87,900 million US dollars, while their total export value was 49,100 million US dollars, leaving a deficit of 38,800 million US dollars. Foodstuff accounts for 52.2 per cent of their total exports, with farm produce and raw materials accounting for 21.6 per cent, fuel 6.1 per cent, minerals 8.1 per cent, manufactured goods 10.9 per cent and others 1.1 per cent. Foodstuff makes up 21 per cent of their total imports, farm produce and raw materials 1.7 per cent, fuel 13.5 per cent, minerals 4.2 per cent, manufactured goods 57 per cent and others 2.6 per cent. These figures give a clear idea why these countries rack up trade deficits.

Fourth, worsening international trade terms and conditions, reduction of foreign exchange purchasing power and particularly inflation in recent years have had an extremely unfavourable impact on the least developed countries. Their 1970 per-capita export value was 26 US dollars, falling to 20.9 US dollars in 1977 and down to 15.9 US dollars in 1979.

Fifth, the lack of funds and expertise has held back their industrial and agricultural growth.

Sixth, management and their infrastructure are weak. Communications, transport and housing, too, are pitifully inadequate.

For these reasons, the people of the least developed countries lack food, clothing, housing, medical treatment and means of transport. Infant mortality is very high, running at 142.8 per thousand, and average life expectancy is a low 45 years.

Most people in these countries are leading a marginal existence, said a UN document.

### Causes of Underdevelopment

The causes behind the undeveloped conditions of these least developed countries are many. Historically, all these countries, without exception, were once colonies of imperialist powers. The present unreasonable international economic order, too, works against the third world countries, especially the least developed countries. Therefore, assisting the least developed countries is important in establishing a new international economic order and in the north-south dialogue.

On June 3, 1979, UNCTAD adopted the "Substantial New Programme for Action" in the 1980s for the least developed countries at its Manila meeting. In December the same year, the 35th UN General Assembly passed a resolution backing the programme and it also decided to call a conference in Paris this September to study the problems of the least developed countries. Preparatory to the conference, from April to June, UNCTAD called four regional meetings of Asian-Pacific, East African, Central and West African, Southern African and Latin American areas to examine the least developed countries' development programmes for the 80s. At the June 29-July 10 third preparatory meeting in Geneva, UNCTAD decided that after the Paris conference, a series of follow-up activities will take place to oversee the conference's resolutions.

But what the Paris conference can accomplish depends to a great degree upon the attitude of the developed industrial countries, which are themselves doing what they can to cope

with their crisis-ridden economies. The assistance they can afford to offer is expected to be very limited. For the least developed countries to get rid

of their poverty, they will have to rely mainly on themselves.

—Guo Xianzhi and Yang Zhenlun

## Bolivia

### Coup After Coup

ANOTHER uprising broke out on August 3 in Bolivia, the fourth military coup d'état within three months. Two divisions stationed about Santa Cruz under ex-President Alberto Natusch Busch demanded that President Luis Garcia Meza step down. Civil war was just averted after coup leaders and the ruling military junta reached an agreement. Although the present crisis has been defused, the situation inside the country is still very volatile. The armed forces are split and pitted against each other and the various political factions are rent by bitter quarrels.

This uprising which took place as Bolivia celebrated its 156th independence anniversary is said to have confronted the country with one of its most serious crises. Nearly 200 coups have tormented Bolivia since its independence on August 6, 1825. No other country in Latin America can match this record.

#### The Military Rules

The armed forces in Bolivia determine the political situation. Three-quarters of the time since its independence Bolivia has been ruled by military dictators. Bolivia has a population of about 5 million, with some 20,000 men under arms. The army is the largest and most powerful of the three services. The military is deeply divided over policies. Some military

men want the establishment of a legislative system; others want a military dictatorship to rule. But whoever got into the saddle always declared that they were committed to establishing a democratic order, developing the national economy and improving the living standards of the people. However, promises remained promises.

#### Economy Deteriorating

After the former Commander of the Army Luis Garcia Meza seized power in July last year, he announced that he was going to pull the country out of the anarchist mess it was in. Now a year later, the country is in a bigger mess and life is much more miserable. Under his rule the political situation grew more unstable, the economy deteriorated and there was much less law and order. This year, Bolivia was hit by the most serious economic crisis in twenty years and its foreign debts soared to 3,600 million US dollars. The national coffer is empty and inflation has climbed sharply. Not long after the coup, he had begun losing his few supporters, whom he antagonized. He was opposed for his arbitrariness and his refusal to tolerate any dissent. He also cracked down hard on all opposition. In May, even the Socialist Phalange which had said it would work with the government came out against Garcia

Meza and asked for his resignation. Then in June 27, a military coup was attempted, led by Army Commander Humberto Cayoja, who was an appointee of Garcia Meza himself. The dictator found himself very much out on his own when the August 3 coup forced him to hand over power.

#### Situation Still Unstable

After Garcia Meza resigned, leaders of the August coup held talks with the ruling three-man junta and the two sides reached an agreement. Under the agreement, the coup forces accepted the authority of the junta and agreed to return to their barracks. In exchange, the junta agreed to reinstate all expelled military officers, allow dozens of exiled military officers to return to the country and to call a meeting of the nation's military commanders to choose a new president. On August 11, the junta appointed a new cabinet. Accepting a post in the new cabinet, Air Force Commander Waldo Bernal declared that the country had been having a difficult time and was now "forced to find new political tactics." Earlier, the air commander had announced that the government headed by the three-man junta was "continuing the process of the Garcia Meza government and pushing it further."

But already numerous facts show that the three-man junta and the coup leaders interpret their agreement differently. The contents of the agreement issued by the two sides are at variance. The fact is that Bolivia is now ruled by the two parallel military juntas, which is not a sign of stability.

— Yao Chuntuo



Reports From Rural Anhui (II)

# Now the Peasants Can Decide

by Our Correspondent Tian Yun

**A**T Tingyuan County's Honggang brigade in northern Chuxian Prefecture, a brigade cadre told me with pride: "In 1976 it cost 7.26 fen (cents) to produce a half kilo of rice, not counting labour costs, but last year it only cost 2.27 fen." Why have they been able to effect this change?

## "A High-Yield Model"

The history of Honggang shows that when peasants do not have the right to make their own decisions about production, unfortunate results occur. In 1970 a leader in Anhui Province, influenced by the ultra-Left ideas which were in vogue then, decided to turn Honggang into a model for growing high-yield paddy-rice even though only one-sixth of the land in this brigade was suitable for this crop. He ordered that at least half of Honggang's 413 hectares be planted with wet rice. Moreover, the brigade was instructed to grow three rice crops a year. When Ji Mingyue, one of Honggang's team leaders, was told that his team should plant four hectares of hilly land with high-yielding wet rice, he argued: "We don't have enough water." He was immediately criticized by a provincial work team. Another production team in Honggang decided to grow peanuts instead of rice on its arid land, but then it was forced to pull up the plants just when they were budding.

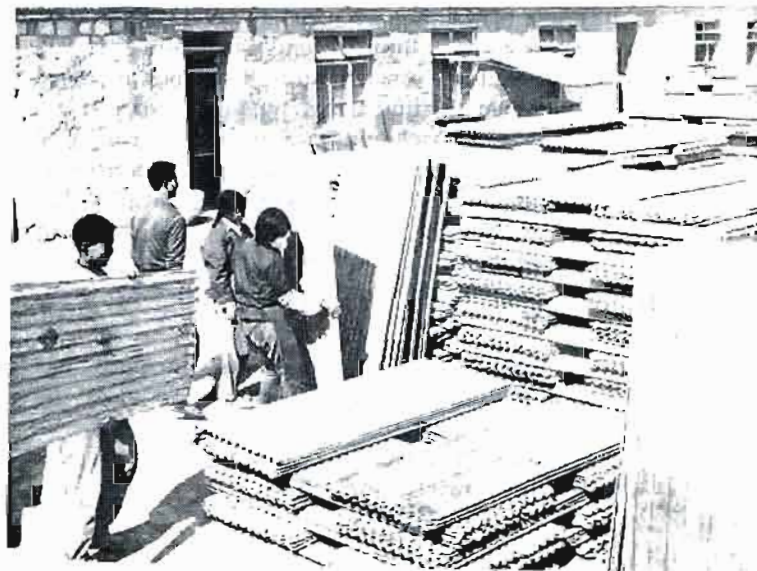
Since the area was not suited for the cultivation of rice, peasants had to expend tremendous amounts of money, time and effort to grow it. The cost for pumping in enough water from a river 50 kilometres away was prohibitive. Because of low temperatures, it became necessary to use more seeds, chemical fertilizers and plastic sheets. Thus, even though the rice crop was fairly good, it was reaped at an extremely high price and to the detriment of other crops. To plant three rice crops, the peasants had to work hard the entire year but saw no increase in their incomes. The accountant's book for 1976, a year when grain output and peasant incomes were the highest, showed that the cost

of production accounted for 62.2 per cent of the brigade's total income, while the peasants got only 33.2 per cent.

This "Left" practice of trampling on the rights of a production team to make its own decisions was stopped at the end of 1978. Government agencies at all levels no longer prescribe targets with regard to the growing of crops or fix the amount of output, rather they can only make suggestions. The teams now can farm their land in a scientific way according to the local conditions. Thus by respecting the production teams' right to self-determination, the needs of the state and the grass-roots units are brought into line.

Now the peasants in Honggang make their own plans. Dry crops are grown on dry land and wet crops on wet land. The days are gone when water has to be pumped up the hills from faraway rivers or huge numbers of plastic sheets have to be used to nurse seedlings. Peasants have time to rest after busy periods, output has increased and the cost of production has dropped. With the development of a diversified economy and sideline occupations, peasant incomes have increased. In team leader Ji Ming-

Roofing sheets made at a brigade-run factory in Kaoheng People's Commune.



## Change of Acreage Sown to Different Crops in Honggang Production Brigade

unit: mu

Year	paddy-rice	wheat	sweet potato	maize	sorghum	bean	cotton	peanut	rape-seed	sesame
1976	8,400	2,568	5	10	3	207	495	40	285	1
1980	4,000	3,300	120	480	320	500	590	800	216	0

### Honggang Peasants' Income (from the collective)

Year	food grain per capita	average per-capita income
1976	341 kg.	122.6 yuan
1980	573 kg.	258 yuan

yue's family of nine, the per-capita income in 1980 was five times higher than it was in 1976.

### Enterprises at the Grass Roots

More emphasis has been laid on the need to increase peasant incomes. To this end, it is essential to develop collective industries and sideline occupations.

Li Jinlan, secretary of the Kaocheng commune in Fengyang County, showed me some commune and brigade-run industries. In a village near the railway, we saw dozens of commune members pounding on stones. The piles of crushed stones and big rocks were to be shipped to other places.

Li Jinlan said: "Work efficiency in the fields has gone up in the last two years, with the implementation of the system of responsibility in the countryside. Even some non-able-bodied members are willing to lend a hand in weeding or harvesting. As a result, 3,000 out of 8,000 able-bodied members had no farm work to do. As there are two quarries near the commune which can supply stone for laying railway tracks and building houses, we organized a large workforce to exploit it. The total output value of these quarries last year was three times higher than that of all the enterprises in this commune."

"The increase in peasants' incomes has stimulated the housing industry. To meet the need of constructing new peasant homes, we have set up six factories producing cement pre-fabs, lime, bricks and tiles."

Lin Jinlan went on to say: "Last year 4,000 tons of chemical fertilizers were needed, but the state could only supply 1,000 tons. We therefore built a small phosphate fertilizer plant using the left-

over raw materials of large industrial plants.

"We also do processing work for city factories, using our own machines, premises and manpower. A factory run by Quanxin Production Brigade produces nylon socks and underwear for a factory in Huainan city, which supplies raw materials and purchases the products.

"The funds for the commune- and brigade-run enterprises come from three sources — the collective's accumulation funds and the profit of its enterprises, state loans (80,000 yuan was used in the last two years, which will be repaid by the end of 1981) and investments by commune members."

With the growth of commune- and brigade-run enterprises, the collective economy has become stronger, thereby providing more funds for farm production. In 1979, some 9,300 yuan, which came from the profits of commune- and brigade-run enterprises, were used to buy chemical fertilizers and pumps. Last year, another 106,000 yuan of the profits were used to buy chemical fertilizers, pesticides and farm machinery.

### Development of Commune- And Brigade-Run Enterprises In Kaocheng People's Commune

Year	No. of enterprises	total output value (unit: yuan)	net profit (unit: yuan)
1978	2	150,000	47,000
1979	10	617,000	183,000
1980	21	1,380,000	320,000

The effect of such growth of commune enterprises on the lives of ordinary commune members is quite pronounced. Ma Youdao, a member of Wangweidong production team, has a family of seven. Five are able-bodied labourers: One works in the brigade-run phosphate fertilizer plant and three are farmers who also work in quarries during the slack farming season. Their combined income from working in industry surpassed their income from farming in the past two years, they bought a sewing



machine, a radio and two watches and built a brick house with eight rooms. Ma Youdao even got together with another commune member, Zhuang Jiaqin, and purchased a tractor which is a big help during the busy season, and is used for transport during the slack season.

### Rabbit Raising

For years Xu Guosheng and his wife Li Wanying, two members of the fairly poor No. 2 Xunan production team in Kaocheng commune, could not make ends meet. They were getting on in life and only two of their family of nine were labourers. So Xu began to raise rabbits to help out the family finances. But then during the "cultural revolution," the raising of large numbers of rabbits was forbidden under the rationale that it was important to "cut the tails of capitalism."

Now all this has changed. Commune members are no longer forbidden to raise poultry and rabbits but are instead encouraged through the accessibility of government loans to engage in such sideline occupations. The major benefactors are those large families with few strong workers. With the new system of fixing output quotas based on the households, old people and children can cut grass to feed their own rabbits or do light farm work.

Xu Guosheng and his wife, now nearly 70, have a large number of rabbits, 104 large ones and 120 small ones to be exact. In addition they own two cows, 15 hens and 60 chickens. Last year they earned 1,400 yuan from their rabbits. Their total income came to 7,640 yuan, 74.3 per cent of which came from their raising of poultry and other sources of diversified farming. In fact they produced 6,800 kg of grain, 325 kg of oil-bearing crops and 150 kg of tobacco.



Li Wanying tending her rabbits.

The Xu family courtyard is now filled with timber and stones which will be used for their new tiled-roof house. The rabbits are also going to move to a new home.

Xu Guosheng is not the only peasant to have prospered in his village. Half the families in his production team now are each raising around 50 rabbits. Family involvement in sideline occupations is generally quite developed in this prefecture. The increase in chickens, ducks, pigs and sheep is immediately evident to anyone passing through. Peasant incomes in many production teams in that prefecture increased by around 25 per cent last year due to sideline occupations. Fengyang County is outstanding in this regard, with 44.8 per cent of

### Increase in Fengyang's Animal Husbandry

Year	big animals		pigs		sheep	
	head	increase over the previous year	head	increase over the previous year	head	increase over the previous year
1979	44,600	1,100	220,100	10,500	27,400	10,000
1980	51,600	7,000	240,700	20,600	31,100	3,700

its total agricultural income from commune- or brigade-run enterprises or from household sidelines.

In the space of a few years, Ma Youdao and Xu Guosheng of Kaocheng commune were able to increase their family incomes dramatically. Within the framework of a collective economy, they were able to create more social wealth than others by relying on their own hard

work. At present 10.5 per cent of the families in Fengyang have had similar experiences.

By encouraging a portion of the peasantry to prosper quickly, the government hopes to shorten the process of enriching the entire peasantry. The handful of peasants who first become well-off will serve as a model for others, and in this way will pave a broader road to a common prosperity □

## “I’ve Come Home!”

—A Kuomintang major crosses over to the mainland

AS he stepped on to the soil of the mainland, Huang Zhicheng, a Kuomintang major who flew from Taiwan to the mainland, said excitedly to an official at Fuzhou Airport: “I’ve come home. I’ve come home at last!”

Huang Zhicheng’s crossing over was not prompted by an impulse: it was an action taken after careful consideration. A few months ago, he quietly began making preparations for flying to the mainland: he consulted maps, decided on the air route, calculated his fuel consumption and selected some mainland airfields.

On August 8, he was instructed to give a new pilot on instrument flying test, which provided him with an opportunity to realize his dream. He took off with co-pilot Xu Qiulin in an F-5F fighter from Taoyuan Airport. When the plane flew over the Taiwan Straits, he disconnected his radio and flew directly to the mainland according to the air route he had selected beforehand. When Xu discovered their location, he was very surprised and said that he did not want to go to the mainland. Concerned that Xu might make it difficult for him to land and with due consideration to his wishes, Huang decided to return to Dong Yin Island and allow Xu to bail out. Huang then piloted his fighter back to Fuzhou Airport and landed smoothly.

Huang was warmly welcomed by people on the mainland for his patriotic and just action. He was given an award of 650,000

yuan (US \$360,000), admitted into the PLA Air Force and appointed vice-president of an aviation school of the Air Force.

Huang Zhicheng said: “I did not come for money, nor did I come for an official post. I’ve come to work in the service of the Air Force of my motherland.”

Huang was born in Taiwan in 1952. His father who was a pilot died when he was still a child. His mother, two elder brothers (one of them is a pilot) and one elder sister are still in Taiwan. He had served in the Taiwan air force for 12 years. Although Huang was worried that his relatives and friends in Taiwan might be implicated, he determinedly chose to cross over. Taiwan lacks resources and funds and has to depend on foreign investments for everything. Prices are skyrocketing and

Huang Zhicheng at a press conference.





AT a press conference held on August 20 at the Great Hall of the People in Beijing, Huang Zhicheng expressed his views on the following points:

**On Taiwan Authorities' Propaganda About His Flying Across the Straits:**

Huang said the Taiwan authorities had alleged that the radio of his plane "was out of order," and "I drifted off course and as a result landed on the mainland." This allegation is a lie. He added, "I was a qualified Kuomintang flight instructor with a record of eight years of service at Taoyuan Airport, and so I was fully familiar with its topography. Even if the radio were malfunctioning, I would still have been able to fly back to Taoyuan Airport."

**On the Peaceful Reunification of the Motherland:**

Taiwan has always been part of China's territory, he said. Realizing the reunification of the motherland is only a matter of time. If reunification of the motherland is achieved, the mainland and Taiwan can complement each other. This is of paramount importance to the prosperity and greatness of China.

**On His Impressions After Joining the PLA Air Force:**

When his admission into the Air Force of the Chinese People's Liberation Army was announced, he said he was very excited and felt that a heavy load had been placed on his shoulders. He pledged: "I will work to the best of my ability and make contributions to the PLA Air Force and the motherland."

In an interview given to our correspondent, Huang expressed the hope to declare to the world's people through *Beijing Review*: His crossover by plane has nothing to do with his relatives, colleagues and schoolmates, and the Taiwan authorities should not implicate them in this matter. He also wants to assure his relatives that everything is going very well for him on the mainland.

economic prospects are bleak. Taiwan society is decadent and social morals are corrupt. Many young people are perplexed and demoralized.

At a welcome meeting held in Beijing by the Air Force, Huang said: "Since returning to the mainland, I've met many high-ranking officers, contacted a number of fellow-countrymen, and visited places of historical interest. I have benefited a great deal from these experiences. On my way to Beijing, I passed through seven provinces and municipalities. Everywhere I went in northern China and south

of the Changjiang (Yangtze) River, life is bustling. The simplicity of popular styles has broadened my horizons and presented a completely new world to me. I feel my beloved motherland is really great and I have learnt for the first time that there is a world of differences between the two societies. The road I have chosen is perfectly correct."

Now instead of feeling demoralized, Huang Zhicheng has begun a rich and joyful spiritual life. As he commented at a press conference: Although our motherland is still comparatively backward and people's lives are still rather hard, "I'm fully confident that our motherland has a great potential for development and a bright future ahead of it." □

**Book News**

**English and Japanese Editions of  
Selected Works of Zhou Enlai  
(Volume I)**



The English and Japanese editions of the *Selected Works of Zhou Enlai*, Volume I, have now been published by the Foreign Languages Press, Beijing. The English edition, 152 X 222 mm, is available in paper and clothbound covers and the Japanese edition, 130 X 184 mm, only in clothbound covers. Distributed at home and abroad by Guoji Shudian (China Publications Centre), both are on sale at Waiwen Shudian (Foreign Languages Bookstores) in China's major cities.

The French, Spanish and Russian editions will be published before the end of this year.

The Foreign Languages Press also plans to put out German, Korean and Arabic editions of the *Selected Writings of Zhou Enlai*, Volume I, which consists of articles and speeches from the *Selected Works*.

# China's Largest Hydropower Project

by Our Correspondent  
Zhou Zheng



The Gezhouba work-site at night.

*At Gezhouba in central China, the nation's largest hydroelectric project has been constructed on China's longest river, the Changjiang (Yangtze). The main channel of the river was blocked in early January this year. Once the man-made navigation waterway was completed at the end of June, this section of the river was reopened to ships. Electricity began to be generated. Within a few weeks of this opening, the dam was severely tested. On the morning of July 19, it withstood the biggest flood peak since 1877. Following are our correspondent's reports. — Ed*

## First Step in Developing Resources Of the Changjiang

**T**HIS correspondent talked with Wei Tingcheng, deputy director of the planning office of the Changjiang River basin and one of the leading designers of Gezhouba. A student at Qinghua University before 1949, he has more than 30 years of experience in water conservancy work behind him.

**Question:** How will Gezhouba serve to utilize the resources of the Changjiang River?

**Answer:** China has more water power resources than any other country in the world, but it has only exploited 3 per cent of this potential. Building a large dam on the Changjiang River makes



Wei Tingcheng (left)

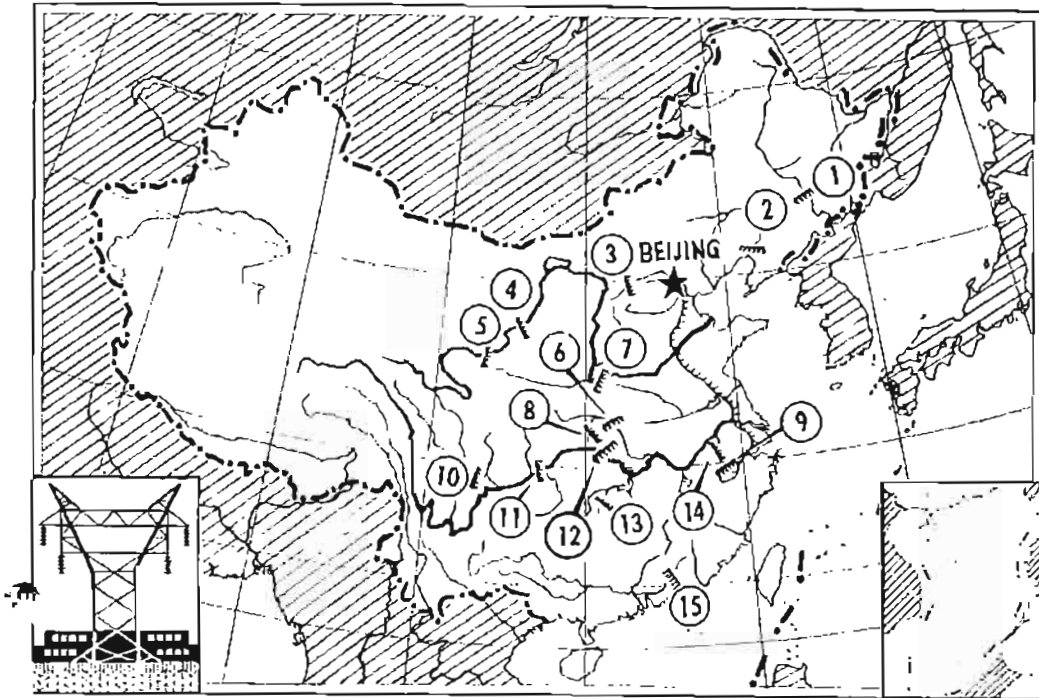
sense as the river contains 40 per cent of the country's water

power resources and is the longest river in China.\* In fact, the Changjiang has a potential of 260 million kw power, which is equivalent to building 10 big coal mines, each with an annual output of 60 million tons, or 10 big oilfields, each with an annual output of 25 million tons.

Changjiang constituted a constant menace to the Chinese people, although the river has provided the facilities of navigation and irrigation. From around 200 B.C. to the beginning of this century, the river overflowed 214 times, an average of once every 10 years. And the frequency became higher in later years. There were seven floods between 1911, the year the feudal Qing Dynasty was overthrown, and 1949, the year New China was founded. Wuhan, a large city on the middle reaches, was inundated in 1931. The flood that year took a toll of 145,000 lives. More than 3 million hectares of farmland were flooded and 28.55 million people victimized.

\* Surveys in the late 70s revealed that the Changjiang River is 6,300 kilometres long, not the commonly believed 5,800 kilometres, making it the third longest river in the world.





### Large Hydropower Stations:

- 1) Fengman
- 2) Huanren
- 3) Hengshan
- 4) Qingtongxia
- 5) Liujiaxia
- 6) Danjiangkou
- 7) Three Gorges
- 8) Huanglongtan
- 9) Xinanjiang
- 10) Gongzui
- 11) Shizitan
- 12) Gezhouba
- 13) Zhexi
- 14) Chencun
- 15) Xinfengjiang

After the founding of New China, the People's Government rebuilt and fortified the dyke along the river, constructed flood storage and diversion projects, built hundreds of big reservoirs and thousands of small and medium-sized reservoirs and numerous pumping stations on the tributaries along the upper and middle reaches. All this alleviated the danger of flooding.

Because the flood waters of the Changjiang come mainly from upward of Yichang, and because more than 80 per cent of the river's water resources are concentrated in the upper reaches, building a dam on the Three Gorges, that is, at the end of the upper reaches, can serve to control floods and utilize the water resources. The need to do so was recognized long ago. As early as the beginning of this century, Dr. Sun Yat-sen — the revolutionary forerunner — proposed exploring the Three Gorges in his outline for building the country. During the 40s, the Kuomintang govern-

ment invited the noted American engineer Savage to come to China to survey a site for a dam. But these efforts came to naught.

With the establishment of the People's Government, exploration of the Changjiang's water resources began in earnest. A planning office for the Changjiang River basin was set up and the Party Central Committee discussed the question of building a key water conservancy project on the Three Gorges during several of its important meetings. The survey of the gorges, the designing of the project and related scientific research work were carried on in the 50s and 60s. It was only because of the three difficult years (1959-61) in our national economy and the following economic policy of consolidation and readjustment and the 10 tumultuous years of the "cultural revolution" (1966-76) in its wake that the main part of the Three Gorges project was not started.

Part of the Three Gorges

scheme, Gezhouba will provide invaluable experience for the completion of the project. The generating capacity of the Three Gorges project will be 10 times that of Gezhouba. It will help control floods, provide irrigation and facilitate navigation.

The Gezhouba project was started at the end of 1970. The building was interrupted for two years because of the chaotic domestic situation and the need to resolve some major technical problems. Seventy per cent of the work on Gezhouba was done in the last four years.

**Q:** Will the dam have any unfavourable effects on the ecology of the area?

**A:** To my knowledge, the ecosystem along a river generally improves with the building of a dam as long as the builders pay attention to this problem. It seems that the building of the Gezhouba dam has not changed the ecological equilibrium.

The spawning grounds of black carp, grass carp, silver

## SPECIAL FEATURE/GEZHOUBA PROJECT

carp and bighead carp are mostly located in scattered sections of the middle and lower reaches of the river, that is, downstream of the construction site. In addition, artificial breeding has developed in most areas. Investigations by the Institute of Hydrobiology of the Chinese Academy of Sciences into a key water conservancy project in Danjiangkou in Hubei Province showed that new spawning grounds for domesticated fish have appeared in the area around the reservoir, and fish output has increased.

The important question at hand is how to protect rare species like the Chinese sturgeon. My personal view is that we should emphasize artificial breeding. Some foreign countries have already had successful experiences and China too gained some initial success in this field. As to whether a

passageway for aquatic forms of life should be built on the dam, no consensus has been reached.

**Q:** What are the major characteristics in the design of Gezhouba? Does it represent a technological breakthrough in any respect?

**A:** The design of the project is quite rational. The spillway is in the centre, which is favourable to discharging flood waters and silt. There are two separate man-made navigation waterways on the main and third channels by both sides of the spillway. Dykes have been built up the man-made waterways to prevent silt sedimentation. Between the spillway and navigation waterways are two power stations. This design caters to the flow of the water in the river.

The question of silt is a big one in water conservancy work. Comparatively speaking, the Changjiang River does not have a big amount of silt. Yet, because of its large volume, the annual quantity of sediment carried by the river at this point is 520 million tons. We built dykes to check silt and adopted the method of "carrying away silt by rushing water" to help solve the question of silt sedimentation.

The geological foundation of the dam is not good. There are some weak layers under the bedrock. Dams have not been built in such places abroad. To solve this, we did a large amount of research to study how these weak layers will change under long-term pressure. Will they deteriorate? How can this be prevented? Rewarding results in this research have been obtained.

The design of the large shiplocks of Gezhouba are among the advanced in the

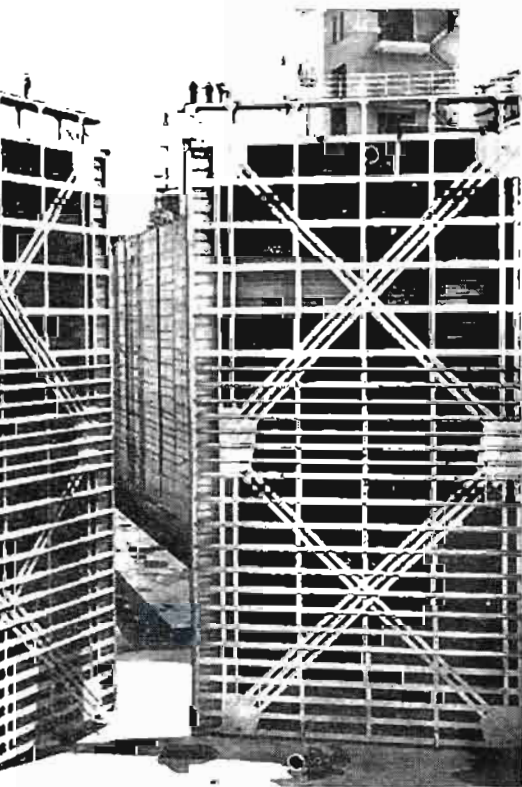
world, as we have absorbed the advanced experiences at home and abroad in the light of the local conditions.

The flood-discharging capacity and the handling of the complex geological basis under the sluice-gate on the second channel are also quite advanced.

Compared with the turbo-generators of the same type in other parts of the world, the diameter of the penstocks (11.3 metres) and the generating capacity (170,000 kw) of those used at Gezhouba are the biggest. Of course, this is the first time that China has produced this type of generating sets and we need to wait and see how they will work.

**Q:** How did you solve the difficulties and problems which cropped up in the building of the dam?

**A:** During the designing and building of Gezhouba, contradictions between different branches of the national economy appeared, mostly between those people engaged in power generating, navigation, flood and silt discharge, and breeding of aquatic products. To resolve these problems, the State Council formed the Gezhouba Engineering and Technological Commission which consisted of decision-making members of the State Planning Commission, the State Capital Construction Commission, the Ministry of Water Conservancy, the Ministry of Power Industry, the Ministry of Communications and the First Ministry of Machine-Building. The commission listened to the opinions of various departments concerned, held democratic discussions, sponsored full consultations and weighed gains and losses so as to achieve a satisfactory solution to these contradictions.



Huge gates of the No. 2 shiplock, each weighing 600 tons. There are only a few lock gates of this size in the world.



In building Gezhouba, the government provided powerful support technically and financially. The planning office of the Changjiang River basin was responsible for the surveys and designs, but they received help and co-operation from many departments.

valves and equipment for the actual construction work. Thus, it can be said that the Gezhouba project shows China's industrial level in some way.

**Q:** Are there foreigners taking part in the designing of the project? Do you welcome foreign co-operation in opening up the resources of the Changjiang River in the future?

**A:** Gezhouba was entirely designed by Chinese engineers and technicians. To avoid unnecessary delays, we have sent people abroad on tours of inspection. Besides, our colleagues abroad came to the construction site to pay visits, discuss and offer advice and swap experiences with us.

To solve some difficult or complex technical problems and to prevent any possible defects in designing, the commission often invited professors or experts from all over the country to study and discuss the draft of every item or the results of scientific experiments. In the design, we took into full consideration the domestic technical level of machine building and construction.

**Q:** Was the equipment for the project made in China or imported?

**A:** Except for some heavy-duty trucks, bulldozers and excavators which were imported, all the other equipment was made in China. More than 100 factories produced the large turbo-generating sets, sluice-gates for large shiplocks, switch

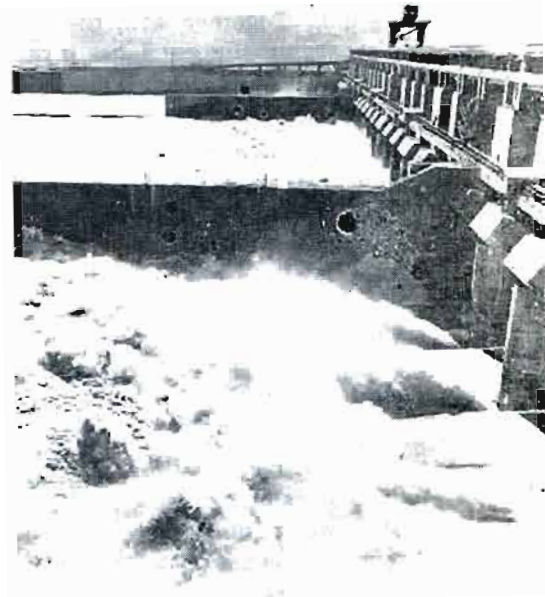
Our consistent policy has been to rely mainly on our own efforts and regard foreign aid as subsidiary. We do not depend on others, nor do we adopt a closed-door policy. Under conditions favourable to both sides, we welcome voluntary foreign co-operation in developing the resources of the Changjiang River.

## General Features

**A**FTER passing through the magnificent Three Gorges, the eastward flowing Changjiang River turns south at a 90-degree angle. The river-bed rises from 40 metres below sea level to 30 metres above sea level, and the river expands from 300 metres to 2,200 metres wide. The Gezhouba project is situated near Yichang, which is 2.3 kilometres downstream of the mouth of the gorges. There are two islands there which divide the river into three channels — the main or grand channel and the second and the third

channels. The last two are dry during low-water periods. The big dam, which is named after one of the islands, spans the three channels and two islands.

The dam is being built in two stages. The work on the first stage includes the closing off of the river and construction on the second and third channels; the main work of the second stage centres on the main channel. Now the work of the first stage is being concluded and that of the second stage has begun.



Sluice-gates.

The 2,561-metre-long and average 40-metre-high dam consists of a spillway, three shiplocks, two power stations and two silt discharging sluice-gates. The top of the dam serves both as a railway and a highway bridge over the Changjiang River.

The first and second locks can accommodate 10,000-ton-class vessels and the third lock serves passenger ships and freighters below 3,000 tons. Locks 2 and 3 are already operating.

The 21 generators in the two power stations have a total generating capacity of 2,715 million kw. The average annual power output is 14,100 million kwh, more than three times the country's total power output on the eve of the founding of New China. The workshop of the power station on the second channel has been completed. Its equipment is being installed. Construction of the workshop of the power station on the main channel has started.

## SPECIAL FEATURE/GEZHOUBA PROJECT

The 27-bay spillway on the second channel can discharge 83,900 cubic metres of water per second. Together with the silt discharging sluices, it has a ca-

capacity of 110,000 cubic metres per second. The spillway and the silt discharging sluice on the third channel are now working.

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### Facts About the Dam

Area upstream of the dam	one million square kilometres
Average annual flow	14,000 cubic metres per second
Designed flood flow	86,000 cubic metres per second
Total storage volume	1,580 million cubic metres
Installed generating capacity	2,715 million kilowatts
Average annual power output	14,100 million kwh
Type of dam	concrete
Height of dam	70 metres above sea level
Length of dam	2,561 metres
Base of dam	psammite and sand pebbles
Main way of discharging flood water	spillway
Total excavation and filling work	90 million cubic metres
Total concrete work	10 million cubic metres
Metal structure constructed and installed	60,000 tons

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Liu Shutian (centre), who directed the damming of the river, at the work-site.

### Our Builders

**N**EARLY 50,000 builders converged at the Gezhouba project

They came from all over the country. Some are veterans who had worked on many hydropower projects and some are new to the job. They have different experiences — some once fought at the battlefield during times of war; some are old intellectuals; some belong to the new generation of hydropower experts trained after liberation; and the rest are young people who had their education interrupted during the "cultural revolution."

#### Vice-Minister at the Work-Site

Liu Shutian, Vice-Minister of Water Conservancy and concurrently Party committee secretary of the Gezhouba project bureau, has lived year-round at

the work-site since 1973 though he is over 60 years of age. Early this year, he directed the work of damming the river. It was expected to take 13 days, but actually only took 36 hours. The work was done well and efficiently. For three days and nights Liu did not sleep.

We met him in his office which was furnished with a desk and some cane chairs. The various sketch maps and progress charts around the office immediately caught our eyes. Our talk was frequently interrupted by telephone calls, as it is his habit to listen to reports directly without the help of a secretary.

Liu was a veteran in the War of Resistance Against Japan. He started to work in water conservancy and hydropower as early as 1956 and has been to

the projects of the hydropower stations at Sanmen and Liujia Gorges on the Huanghe (Yellow) River and the Gongzui hydropower station on the Dadu River. All this has enriched his experience as an organizer and turned him into an expert. Whenever he recalls his own experiences in the past 25 years, he is full of pride about China's achievements in hydropower construction.

When the Sanmen Gorge key water control project (with a planned generating capacity of one million kw) was built in the 50s, the newly founded People's Republic lacked both technical skills and funds, and the project was built with the help of the Soviet Union. Soviet technical personnel participated in such activities as the designing of the project, and the training of people to operate the power shovels and the necessary equipment. Due to inadequate investigation,



the problem of silt was not solved. Several years later, the reservoir was silted up and it was only after reconstruction that the project could function again.

Liu Shutian said: "As you see, the Gezhouba project was designed and constructed by our own efforts and all the main equipment was made in China. Many sub-projects here are first-rate according to national or world standards."

He continued: "I had the chance to visit some other countries. Our technical level is not inferior to theirs. With the superiority of our socialist system, we have been able to build dams of any size by our own efforts."

### A Place to Develop One's Talent

Deputy chief engineer Cao Lean of the planning office of the Changjiang River basin is one of the designers of the project. He also lives at the work-site all the year round.

The 67-year-old Cao is a Qinghua University graduate who later went to study in Britain. After his return to China, he taught in the department of hydraulics at Hunan University. Before liberation, the corrupt and incompetent Kuomintang government neglected

the construction of water conservancy projects, and experts like Cao were unable to apply what they had learnt.

As Cao recalled, in 1934 foreigners from five countries were involved in the construction of a 40-metre-long three-gate sluice on a tributary of the Changjiang. They included an American chief engineer, a British designer, an Austrian foreman, and a Dutch man who was an adviser to the Kuomintang government checked the design. The construction directions and contracts were copied from those of the naval engineering units of the Philippines.

The first big project Cao took part in after liberation was the Jingjiang flood-diversion project for reducing flooding in the middle reaches of the Changjiang. He was asked to design the sluice gates. Lacking practical experience, he was afraid of making mistakes and showed his designs to many others to ask for their opinion. He corrected his designs again and again, and later many people said the gates he designed were as strong as warships. "At that time, to design a small sluice gate, I, a university professor, had to consult people everywhere. Now the water conservancy and hydropower bureau at the county level can take up this kind of work," he laughed

heartily. He also said that China's hydropower stations have a combined generating capacity of nearly 20 million kw. According to world standards, big dams are those with a height at or above 15 metres. Now China has 80,000 such big dams, which is the total number of such dams that exist in other countries of the world

Cao will never have to worry that he has no place to develop his ability. I was told that he has contributed to the solving of every major technical problem of the Gezhouba project, and he formed his own view on how to construct the foundation of the dam.

To clarify the geological structure of the weak layers in between the rocks at the site of the dam, 70 one-metre-diameter and 40-metre-deep wells were drilled. Cao went down the wells to get samples, sometimes working over a dozen hours in the well. In addition, 2,000 kinds of monitoring instruments were installed to record various data.

### Shiplocks and Welders

After navigation was restored on the Changjiang, many people sailing on ships were amazed by the huge steel gates of the shiplocks.

Each of the two gates of the No. 2 shiplock is 34 metres high, 19.7 metres wide and 2.7 metres thick. It weighs 600 tons and withstands a water pressure of 9,850 tons. There are no rubber devices to stop water in between the two gates. When closed, the seam between the two gates is less than the thickness of two hairs.

The gates were produced at several shipyards in Shanghai. Because of the country's transport ability, each gate was di-



Cao Lean (right) and Zhang Guangdou (2nd from left, front) China's noted hydraulic expert, at the work-site.





Shen Nan (right) and Shen Yong (left), two of the designers for the automatically controlled lock gates.

vided into 10 pieces, which were welded together after they had been shipped to the work-site. Thirty workers were picked to do this job after strict training and examinations. Most of them were young workers, seven being women.

Strict demands were set for this work. The design called for a tolerance of less than 5 mm, but was reset at 2.5 mm by the welders. The welding of the 18 seams of the two gates took 21 days and was finished nine days ahead of schedule. Can you imagine? Two tons of welding rods were used! A thorough examination of the quality of the work with X-ray machines revealed that all the seams except one 30-cm-long seam were perfect. The defective one was later reinforced.

### Make Up for Lost Time

The opening and closing of the shiplock is automatically

controlled. Interestingly, the automatic control unit was not made by a noted research institute but by the Qidong County Electronic Research Institute of Jiangsu Province. Only one person at this institute has received a higher education; most are young people who grew up during the tumultuous 10 years of the "cultural revolution." I met the Shen brothers who played a major role in the development of this automatic control unit. Shen Yong, the younger one, aged 27, is a senior middle school graduate and Shen Nan, his elder brother, aged 29, only received a junior middle school education.

Since his childhood, Shen Yong enjoyed playing with transistor radios. He became a repair worker of electrical appliances in a commune after graduation from a senior middle school. Later in 1974, he joined an electronic research group which had been formed in the county and his elder brother joined it in 1975.

When engineer Xi Jinzhu, who was in charge of designing an automatic control unit for the shiplock of Gezhouba, heard that this group had developed an automatic control unit for a small shiplock in Qidong County, he approached the two brothers. With Xi's help, they learnt how to read and draw sketch maps and studied on their own all the necessary university courses. Along with others in a designing institute, they experimented on three shiplocks in Nantong, Yangzhou and the suburbs of Shanghai. Then they started to work on China's largest shiplock at Gezhouba.

The 10 years of chaos inflicted heavy losses on the young generation and many lost the chance to receive further education. But most have decided to make

up for the lost time by studying diligently on their own. The Shen brothers are representatives of such people.

### Turning Ideals Into Reality

Of the numerous technical personnel at Gezhouba, the 47-year-old woman engineer, Xu Mingqin, was one of the most impressive. She majored in hydropower generation in the department of electrical engineering at Qinghua University and obtained excellent grades. She was also a promising gymnast. It would have been easy for her to stay at Qinghua to teach or to work at a designing institute in her hometown of Shanghai. But she insisted on going to a hydropower station work-site. Before graduation, she practised at a hydropower project work-site and realized the conditions there were hard, but she refused to be deterred, always keeping in mind that China's abundant hydropower resources needed to be developed.

Over the last 20 years she has been to many hydropower project work-sites. The completion of each new hydropower station means that she has to move



Woman engineer Xu Mingqin.

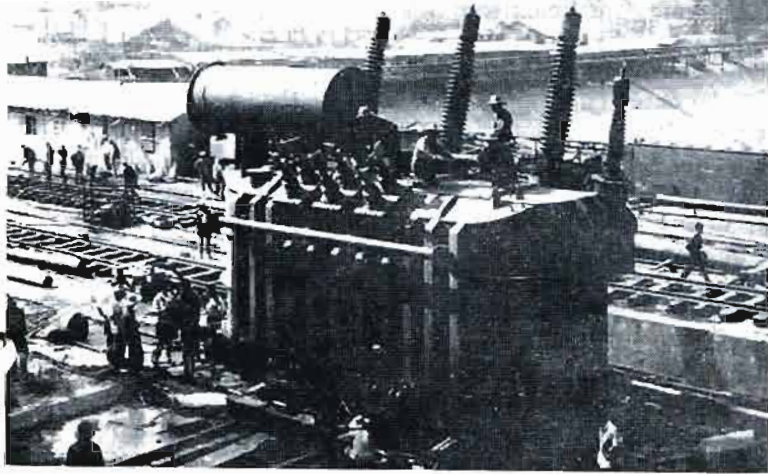
comers. On-the-job and spare-time training were stressed.

The chief lecturer was Wan Xiaowu, nicknamed dynamite master. He is a seventh grade worker\* with over 30 years of experience in demolition. He lectured on the rules of operation in technical and safety demolition, the basic theory of demolition and various kinds of dynamite techniques. Over the years, he has also been invited to lecture in other units and colleges.

Actually, this dynamite master had only two years of schooling. He achieved this success mainly by intensive study. After each blast, when all the others had left, he would linger at the work-site and jot down what had happened. Later he bought a camera and developing and enlarging equipment to record the dynamite work he was doing. Now the 47-year-old dynamiter is using his spare time to write a book.

The Party committee of the Gezhouba project engineering bureau put forward this far-sighted slogan: "To build the dam and train people in a decade." The people we have mentioned do not represent a handful but are typical of many, many people. With such selfless, courageous and capable people, is there any difficulty that cannot be overcome? □

\* There are eight technical grades for Chinese workers, grade eight being the highest.



Assembling transformers for the power station — one of the first-stage projects at Gezhouba.

on. Her husband does the same kind of work and their children were brought up at the work-site. They lead a very simple life so that they can focus all their efforts on their work. On holidays, either she or her husband will go to a bookshop and bring back the newly published books in their speciality.

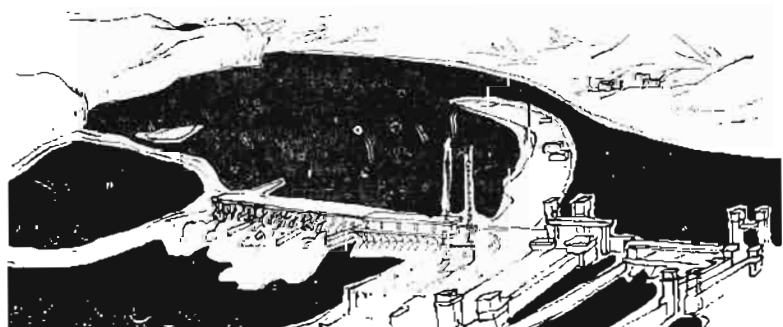
Her barely furnished room is filled with books. One young correspondent asked her: "Don't you feel any regret about choosing this line of work?" She frankly said: "I've already taken part in the construction of several hydropower stations and worked hard for my country. I'm happy that I haven't wasted my time. Working at a work-site is naturally harder than at a university or scientific institute. But all the fatigue and hardships are overshadowed by my enjoyment of this kind of work. It will be my greatest happiness if I can join the construction of the future Three Gorges dam."

### A Training Ground

Demolition is a necessary part of building modern big dams. The digging and clearing of the foundation for the dams and other structures and the changing of the courses of rivers all cannot be done without boring holes and blasting.

When the dynamite team of the excavating branch bureau was formed, 60 per cent of its members were new to this work which is hard, dangerous and very technical.

Four training courses, each lasting three months, were organized to train all the new-





## The Urban Housing Shortage

THE shortage of housing in China's urban areas is a serious problem. New housing built since liberation (670 million square metres) has failed to meet the needs of the growing population. This situation has been compounded by the fact that much housing has fallen into disrepair. As a result, per-capita residential floor space in urban areas is less than in 1952.

In recent years the government has made herculean efforts to solve this problem. In the three years 1978-80, a total of 177 million square metres of new residential housing was built, more than one quarter of the total built since the founding of New China. The housing shortage has been somewhat alleviated, but the problem is still not solved.

Fundamentally speaking, the shortage of urban housing is a result of our past one-sided emphasis on the production-oriented construction. Shortcomings in the management and distribution of housing have aggravated this situation.

Rents in China are low, many people see this as a sign of the superiority of the socialist system. As wages are also low in China, the low-rent system helps secure a stable livelihood for the urban dwellers. However, in a socialist society housing is still a commodity and the government cannot manage it without considering the cost accounting. Excessively low rent violates the principle of exchange of equal values and thus gives rise to a host of problems such as:

**Poor Management.** Surveys have shown that for each

square metre of housing run by the government, annual costs are 2.1 yuan for maintenance and 0.5 yuan for management, but the annual rent per square metre is only 1.2 yuan. Last year, new high-rise apartment buildings in Beijing collected 500,000 yuan in rent but 750,000 yuan were spent on the operation and maintenance of the elevators alone. Because the rent is far less than what is required for maintenance, the housing departments are reluctant to manage more residences. This also explains why many houses are maintained poorly and some even fall into total disrepair.

**Few Investors.** Housing projects are attractive investments in other countries; in China they are the last thing enterprises want to spend money on. Reasons for this are many but at the bottom of the whole matter is the law of value. Quick

returns on investments can be obtained when funds are used to build or expand factories, but if they are spent on housing construction, it means a continual drain on funds. Due to the low-rent system, the more residences built, the heavier the financial burden. Because the rent is so low, individuals think it not worthwhile to privately build or buy residences.

**Irrational Distribution.** As rents are excessively low, they can hardly play their role as an economic curb on the desire of certain people to get more housing by taking advantage of their position and power. If the rent was further reduced, which is seemingly in the interests of the people, it would be harder to solve the housing shortage.

The housing problem can only be solved when it is tackled together with the reform of the wage system.

(Excerpts from "Renmin Ribao," May 8, 1981.)

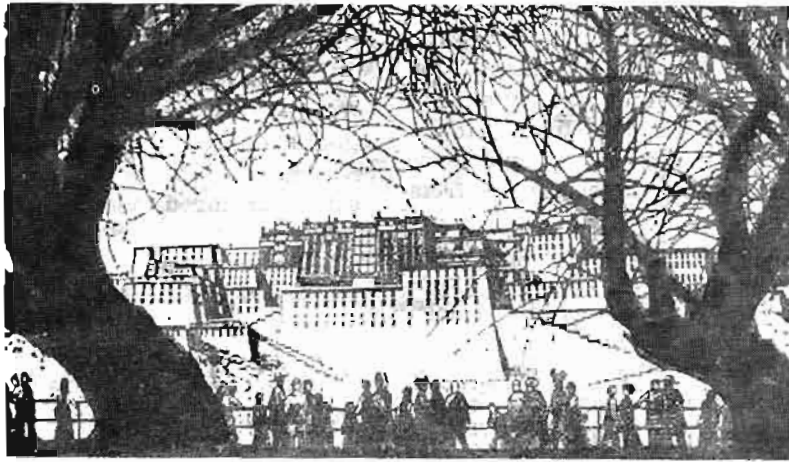
## The World of "Divine Spirits"

IN 1980, a few young Tibetan writers, plying their pens on religious affairs, authored some excellent short stories that reflect life in the Tibet Autonomous Region. For example, "Favour" From Buddha (which was published in *Xizang Ribao* [Tibet Daily]) by Danzeng depicts the cruel rule of the monasteries over the people before the peaceful liberation of Tibet in 1951. *Turning the Prayer Wheel* by Deji Cuomu tells how Muola and her little grandson persisted in their beliefs.

The old woman died in fear of punishment after death but subsequently her grandson transformed his life by joining the revolution. Zhaxi Dawa's *Pilgrimage* portrays a young girl who grew up in the new society. In 1980 she made a pilgrimage to Lhasa in which her belief in Buddha was shaken. The last two short stories were published in the bimonthly *Xizang Wenyi* (Tibetan Literature).

Beginning from the 13th century, Lamaism achieved absolute predominance in Tibetan





Potala Palace in Lhasa.

people in the past 30 years and more. They not only vividly portray the people's worship of divine spirits, but also lay bare the falsehood of their existence. They give both the historical and the present-day reasons why religion could deceive people. These stories make it clear to those who have put their hope in divine spirits that historically the upper-class lamas and aristocrats combined religious and political rule in the name of god to cruelly exploit the people. They also reveal that poverty and ignorance leave loopholes for so-called "divine spirits" to take advantage of. It was largely due to our past "Left" mistakes that poverty and ignorance have not been eradicated in Tibet. The authors do not lash out at religious believers, rather, they make efforts to demonstrate the changes in the thinking of those people, who now see tangible results from the Party's new policies and have hope for the future. This reflects the confidence of the authors as well in the future of Tibet.

(Excerpts from "Xizang Ribao" [Tibet Daily], June 18, 1981)

society. It promised its disciples happiness in "the life to come." For people who lived in ignorance and poverty, this served as a consolation. But it was just a deception. To explain the reasons why religions have emerged and expose their fraudulent nature is a responsibility of an artist. That these young Tibetan writers have begun to write stories about religious affairs shows the concern of the younger generation for the fate of their nationality, their earnest deliberation over social problems and their desire for a new Tibet.

These Tibetan writers understand the position Lamaism occupies in the hearts of their kinsmen and the influence it has produced in the development of their nationality. They are the most qualified to unravel the religious puzzle of Tibetan society.

Before its peaceful liberation, Tibet was a land under the absolute domination of "divine spirits." The labouring people were only miserable slaves. Even during the period between 1951 and the democratic reform in 1959, Tibet was still ruled in

the name of god. But the feudal serfdom began to totter and the supremacy of the divine power was challenged. From 1959 to 1980, Tibet traversed a tortuous course. After the democratic reform, the people received domestic animals as well as pastures and farmland. As their lives improved, fewer people made pilgrimages. However, during the 10 chaotic years of the "cultural revolution," the people's standard of living declined and people became uncertain about their fate, so they turned again to supernatural beings for help.

These three short stories reflect the real life of Tibetan

### Ancient Chinese Technology Exported to the West

Inventions	Approximate Period Appeared in China	Appeared in Europe
Metallurgical Blowers	2nd century	1200
Piston Bellows	2nd century	1500
Catapults	B.C.	1100
Drilling Techniques	1st century	1126
Iron Casting	2nd to 4th century	1300
Stone Arch Bridges	7th century	1345
Stern Rudders	8th century	1180
Porcelain	6th to 8th century	1800

(Excerpts from "Jiefang Ribao," April 27, 1981.)

## ARCHAEOLOGY

*The First Emperor's Mausoleum*

Excavating the tomb of China's first emperor, Qin Shi Huang, is proving to be one of the most important archaeological projects of recent times. One of the outstanding figures in Chinese history, the emperor is best known for building the Great Wall and establishing the first Chinese empire by conquering six feuding states. In death, as in life, he shrouded himself in grandeur: an immense royal tomb was built by 700,000 conscripted labourers near Xian in northwest China. The tomb was filled with his ministers, family members, slaves and horses, and was guarded by silent legions of terracotta soldiers.

Today the mound of Qin Shi Huang's tomb stands 76 metres high, resting against the northern foothills of Mount Li in the eastern part of Lintong County, Shaanxi Province. Historical records describe the tomb as a magnificent underground city with inner and outer walls. Recent surveys have shown that it is indeed mammoth: the entire mausoleum is sprawled over an area of 56.25 square kilometres and the tomb itself covers almost two square kilometres.

The accidental discovery of an underground vault of Qin Dynasty terracotta figures of warriors and horses in 1974 by local peasants, who were sinking wells, stimulated great interest in excavating this site. Another two vaults of terracotta figures and wooden chariots were excavated in 1976 and 1977.

More recently, 17 satellite tombs have been discovered near Shangjiao Village 350 metres east of the outer city wall of Qin Shi Huang's tomb. Eight of these tombs, which are arranged in a straight line from south to north, have been excavated, and their contents have been quite revealing. They contained the remains of five men and two women aged between 20 and 30 who had been cut into several segments before burial. Some parts of their corpses have also been buried outside the coffins.

Bronze arrowheads were found embedded behind the ears of some, revealing the manner of their death. In others, the upper and lower jaws were dislocated, showing that they had been hanged. Judging by the age of the deceased, the inner and outer coffins and abundant funerary objects (including two bronze seals inscribed with names), archaeologists estimated that princes and princesses (sons and daughters of Emperor Qin Shi Huang) and ministers were killed simultaneously and buried beside the emperor's tomb.

These finds are in accord with information provided in the *Historical Records* written about one century after the emperor's death by the famous historian Sima Qian (Ssuma Chien). He reported that the second emperor sentenced the princes and princesses and a number of ministers of Qin Shi Huang to death to strengthen his rule in the spring of the year following his ascension to the throne. Further evidence from the excavations conforms to the time of the year when the tomb was built as mentioned in the *Historical Records*. The ashes of

charcoal fire lit by the tomb builders testify that the weather was rather cold.

In the vicinity of these 17 satellite tombs, prospecting has revealed the presence of 93 neatly arranged stable pits between the emperor's tomb and the vaults of terracotta warriors and horses. In addition to horses buried there, some pits also contained fodder, millet and farm tools. A terracotta seated figurine of a groom was found in one pit, and some pottery jars were inscribed with the names of stables.

On the western side of the huge mausoleum, 70 tombs of conscripts have been discovered. Located near a village 1,600 metres west of Emperor Qin Shi Huang's tomb, 30 have already been excavated. Most of the deceased were young men who had died in their prime. They were buried without inner or outer coffins and had no burial accessories. Most lay with their limbs bent: some showed signs of having put up a struggle and others had been injured. Eighteen tile shards dug up at the burial place were inscribed with the name of native places, names, crimes and prison sentences of the deceased, indicating that they were criminals and slaves who had been recruited from the six other states as conscripts.

The discovery is important to an understanding of the penal code of the Qing Dynasty and the system of prefectures and counties set up by the dynasty. The inscriptions on the tiles are the earliest group of epitaphs so far found in China.

Also located on the western side of the tomb complex be-



tween the inner and outer city walls are 17 pottery urns filled with rare birds and animals. Nearby, inside the western inner wall, excavations of a satellite burial pit have revealed two sets of bronze chariots, horses and drivers.

These recent finds near Xian have drawn world attention and are a stimulus to further excavations on the rest of mausoleum. Of key interest are the emperor's rooms which are thought to be on the north side of the inner wall. Experts expect future discoveries to unearth more treasures and valuable information for the study of Qin politics, military affairs, economics and culture, a key period in the establishment and consolidation of Chinese feudal society. But they warn that it may require the efforts of one or two generations to excavate the entire tomb complex of Qin Shi Huang.

## SPORTS

### Weightlifting Records

The Chinese weightlifters won the team title at the 13th Asian Weightlifting Championships recently held in Nagoya, Japan. China scored 321 points to lead the 12 teams. In the 30 events



Wu Shude.

Chinese weightlifters won 18 gold, 10 silver and one bronze medals. They established one world and three Asian records.

South Korea placed second with 236 points; Japan, third with 224 points.

China's 20-year-old Wu Shude, competing in the 56-kilogramme division, broke the world snatch record of 126 kilogrammes held by Daniel Nunez of Cuba when he snatched 126.5 in his fourth attempt. Earlier he had improved his own Asian record of 121 kilogrammes in his third attempt with 121.5 kilogrammes.

Two other Chinese weightlifters improved their own Asian records. Yao Jingyuan jerked 176 kilogrammes in the 67.5-kilogramme division; Ma Wenguang, 193.5 kilogrammes in the 90-kilogramme division.

### Four Gold Medals In Badminton

China won four of the five events in the 10-day Badminton Tournament of the First World Games for Non-Olympic Sports in Santa Clara, California. This was the first time for the Chinese badminton players to take part in such an international tournament.

The tournament drew first-rate players from Indonesia, Denmark, England, Japan and other countries.

In the men's singles finals, 23-year-old Chen Changjie of China won the title by defeating Denmark's Frost Hansen 2:1 (9-15, 15-7, 15-12). Frost eliminated world-famous Liem Swie King of Indonesia 2:1 to qualify for the finals.

Chen Changjie was victorious over Prakash Padukone of India 2:1 and then proceeded to battle the Dane in the finals. Liem Swie King and Prakash Padukone shared third place.

The men's doubles title was won by the Chinese pair of Sun Zhian and Yao Ximing who triumphed over Sweden's Thomas Kihlstrom/Stefan Karlsson 2:1 (12-15, 15-4, 15-6). The Chinese proceeded to the finals by defeating two pairs of noted Indonesian players. Third place was shared by Kartono/Hadiyanto (Indonesia) and William Gilliland Daniel Travers (England).

China's Zhang Ailing took the women's singles by downing Hwang Sun Ae of south Korea 2:1 (7-11, 11-9, 12-9). Japan's Fumiko Tohkairin and Lene Koppen of Denmark shared third place.

Zhang Ailing and Liu Xia won the women's doubles by defeating the renowned English duo of Nora Perry and Jane Webster.

The mixed doubles title was won by the mixed pair of Sweden's Thomas Kihlstrom and England's Gillian Gilks.







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