PHOTO FEATURE by AKM Mohsin

#### It's Flooding Every where ...



Kamrangirchar





Gulshan



# Ground Zero Within

Japan and Germany are the biggest contributors of

ANCTIONS are being imposed after the nuclear blasts in India. The Indian government is dismissive saying that bilateral loans and aid from foreign countries and development agencies account for slightly less than one per cent of India's gross domestic product (GDP) at affected. 1997-98 prices.

However, figures and statistics hide something important: the Indian government has been generally thin on expenditure in the social sector and the environment and much of the foreign aid goes into these areas. The fate of many projects in these areas hangs in balance. India's economic relations

with the US are expected to suffer a decline. This can have unpredictable consequences on trade volumes and financial inflows.

Japan and Germany are the biggest contributors of aid to India, accounting for more aid than that coming from all the other countries put together. Japan's aid to India is to the tune of US \$ one billion. It contributes more than 80 per cent of all bilateral loans and has provided more than Rs 2,500 crore (roughly US\$66 million) to sectors such as power transinission and generation, transport, water and afforestation These two countries are a major concern.

Japan is the biggest shareholder in the Asian Development Bank (ADB, a multilateral agency that has loaned Rs 1,300 crore). Germany has frozen aid to the tune of US\$171 million.

Denmark has decided not to increase its aid from US\$28 million to US\$53 million by 2002. Embassy officials in New

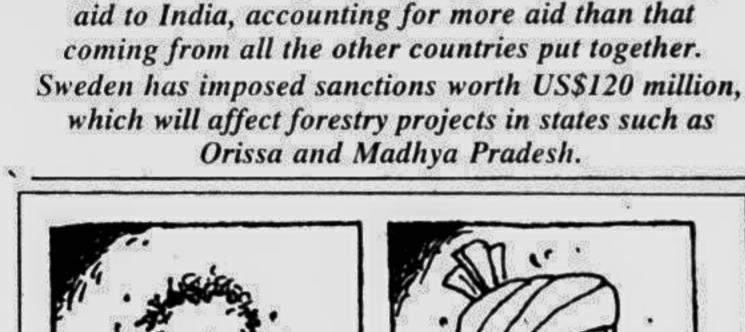
Delhi refused to divulge any details on the impact of sanctions. The government has only reacted to the tests, said an official. If the Danish parliament decides to impose the sanctions, all projects of the Danish In-ternational Agency in the pri mary education sector will be

Sweden has imposed sanctions worth US\$120 million. which will affect forestry projects in states such as Orissa and Madhya Pradesh. The impact on the states is bound to be serious. It has been seen in some states of India that the entire allocation of ministries and departments suffices only for the salaries of their staff. Development and welfare activities depend heavily on for-

Delhi's Rs 1,000-crore (roughly US\$27 million) WB loan for improving water supply and sewage disposal system would be affected, said a spokesperson of Delhi's finance department. The WB office refused to confirm or deny this, saying. "Till now the board has not taken up the issue and it is very difficult to say which project would be affected". Japanese aid for the Capital's metro railway project, worth Rs 5,000 crore, (roughly US\$132 million) also hangs in balance.

The Gujarat government on May 21 acknowledged that projects worth Rs 82 crore funded by the US and Japan, will be affected by the sanctions, while the projects funded by the WB and Asian Development Bank (ADB) will not be affected. The procurement of Japanese turbines for the Sardar Sarovar Dam on the river Narmada will

also be affected.





INDIA BEFORE THE NUCLEAR BLASTS



INDIA AFTER THE NUCLEAR BLASTS

Investments by Japan, the Netherlands, Germany and US in West Bengal to the tune of Rs 2.858 crore (roughly US\$ 75 million) are also at stake. The projects are in sectors such as

power, urban development and health. The state government was expecting Rs 916 crore (roughly US\$24 million) of

Japanese aid for the Bakreswar

thermal power plant. The

Japanese government is now non-committal.

Similarly, the Calcutta Metropolitan Development Authority, which was negotiating water supply and road schemes with the WB has been told to defer a meeting in mid-July.

Orissa's Rs 415-crore (roughly US\$11 million) WB health project, which was negotiated in April 1998, might be scrapped if the US and Japan use their vote against India in the WB board, according to officials of the state finance department. Spread over five years, the project was to take off from July 1998 and was to upgrade the health services in the

As far as investments from the US, Japan and Germany are concerned. Orissa is going to be badly hit. There are memorandums of understanding worth Rs 95,000 crore (roughly US \$2,500 million) in power and infrastructure sector with these countries. Sanctions would affect all of them as these projects are yet to be financed.

The social indicators are giving us estimates of the costs of nuclear weaponisation, its implications - economic and ethical - and what the future has in store for nuclear India. Though there was no notice-

able increase in real terms in the defence expenditure in finance minister Yashwant Sinha's budget for 1998-99, if the government goes in for significant weaponisation, funds will need to be diverted from other areas to meet this level of militarisation. Commodore C Uday

Bhaskar, deputy director of the New Delhi-based Institute of Defence Studies and Analysis. estimates that India would need about 100-150 nuclear war-

heads to have a credible deterrent force. He pegs the cost of the weaponisation programme at about Rs 40,000 crore (roughly US\$1.526 million) spread over 10-15 years.

"We are spending only about two to three per cent of our GDP (on defence) while China and Pakistan are spending about six to eight per cent. Our defence budget is quite modest if you compare it to them." Bhaskar

points out. J S Tendulkar is an economist at the Delhi School of Economics (DSE). "The defence budget is not ethical. But no one talks about the economics of defence, because the issues of national security... are deemed to be much more important. The basic issue is of survival," he says.

Shreekant Gupta is an envi-

ronmental economist at the DSE. "It is hard to estimate the cost of the weaponisation programme but it is certainly going to imply a significant increase in our defence spending. Part of it may be concealed in other parts of our budget under scientific research and therefore wil be hard to detect," he points

Abhijeet Roy, an interna-

tional financial expert, has another point to make. "A defence budget of 2.3 per cent is not much, especially when your neighbouring countries are spending so much. You cannot go against the past trends and reduce it now." But he offers a word of caution: "Over the longterm, there is a need to improve relationships with our neighbours so we can reduce our weapon strength. Obviously our diplomacy needs a lot to be desired."

#### Use of Solar Energy Increases

by Erika Slife writes from Washington

OR the 2,000 million people in the world who do not have access to power lines, solar power could offer them the difference between night and day.

Sales of solar energy increased more than 40 per cent of 1997, according to a recent report by the Worldwatch Institute, a non-profit environmental group. This makes solar power the world's second fastest growing energy source, with an average expansion of 16 per cent per year since 1990 - a growth rate similar to the Microsoft computer software com-

"Solar energy may now join computers and telecommunications as a leading growth industry in the 21st century," say the report's authors. Christopher Flavin and Molly O'Meara. Solar cells, invented in the

1950s, turn rays from the sun directly into electricity without the use of fuel, mechanical turbine, or a generator. These cells are made of silicon semiconductors, which resemble those found in computers. They are so closely related that much of the silicon used for these cells is made up of waste from the electronics industry. This solardriven market has included everything from water pumps to calculators and is now being noticed by governments for its full potential. In a news conference held by

Worldwatch July 16, Flavin and O'Meara explained how solar power has the potential to become a major contributor to the world's energy supply, including the fact that the system is CSE/Down To Earth Features "clean and safe" for the envi-

ronment. The most recent development integrates solar cells into roofing tiles and window glass, which turns buildings into their own electric generators. Batteries in the system store power during the day for nighttime use.

Both the United States and Europe have announced new solar power initiatives aimed at boosting the size of their domestic markets, with investments from private companies, Flavin and O'Meara said. Japan has been a leader in the support of home solar systems.

Japan uses a "net metering" system, which subtracts the solar powered rooftop's produc-tion from the consumer's use of power from the grid. At the end of the month, the user pays a utility bill that covers the "net" electricity used, while the electric companies buy back any spare electricity produced by these systems at the same price

they charge their customers. Because of this developing technology, prices in solar cells have been dropping since 1980. Recently, though, costs have steadied as business has increased. According to Flavin and O'Meara, in the Rocky Mountains, a solar powered home costs an additional \$20,000, but it costs \$50,000 to \$75,000 to extend power lines to a new home that it roughly one mile from the original grid.

The advantage of a solar power system is that it is located near the consumer and can "enhance the overall reliability of power supplies," according to Worldwatch.

USIA Feature

## Garfield ®





### Jim Davis YES, THEY'RE ALMOST RIPE







