

Timetable for Catastrophe-II

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Near the Port of Santos Southeast of the Sao Paulo, Brazil's continental plateau crests in the Serra do Mar before dropping sharply to the sea. In one of the remnants of Brazil's fabled Atlantic Forest lies Cubatao once loved as terrestrial paradise, now famous as the Valley of Death, the most polluted place on Earth, where babies are born without brains, breathing difficult, most of its 1,20,000 people unemployed and live a miserable existence.

From the early 1970s in response to Brazil's state-led development, the valley's location made it irresistible to industrial planners. Near the port of Santos, it was a perfect place for industries like steel, petroleum, fertilizer and chemicals to turn imported heavy raw materials into finished products before shipping them to Sao Paulo via the long uphill. The river provided a source of water as well as a convenient place to dump wastes. Led by huge state corporations COSIPA (steel) and PETRO-BRAS (oil), the Cubatao valley mushroomed into an industrial complex so large that it accounted for 3 percent of Brazil's GDP by 1985. Employment boomed for immigrants from Brazil's poor regions. And the future looked bright - except for two unfortunate lapses by nature. The small, quiet-flowing river Cubatao was no match for the torrent of industrial waste water, and the valley was a natural trap for air pollution. Undeterred by local regulators, state-owned mills and their private counterparts spewed thousands tons of pollutants into the air everyday. In the early 1980s the city recorded the highest infant mortality rate in Brazil, and one-third of the residents suffered from pneumonia, tuberculosis, emphysema and other respiratory sicknesses. By 1984 the Cubatao River was basically dead from organic pollution. Down stream of Cubatao, tons of heavy metals accumulated in bottom sediments and washed into the sea near Santos. Above the valley, fallout from air pollution began killing the Atlantic Forest and denuding the mountain sides.

Finally in January 1985 the crisis became a catastrophe, as 15 inches of rain poured into the bare hill sides in 48 hours. Hundreds of mudslides cascaded into the valley, and broke a large ammonia pipeline in Vila Parisi, releasing gas that injured many residents and forced a mass evacuation. Official denial ended as the governor of Sao Paulo State declared an emergency and mandated forceful action by CETESB, the state's pollution control agency. Now recovery and restorative actions are being undertaken. But the moot point is : what nature achieved and built up through hundreds and thousands of years of evolution, the selfish greedy unwise man spoilt within one and a half decade. An wise popular saying: A jackass can kick down a barn, but it needs a carpenter to build one. Destruction is easy, creation not.

Cubatao is an eloquent monument to Brazil's drive to become an industrial power. Most of the plants for making steel, fertilizer, plastics and cement were built in the 1970s, when the government pushed for growth at any cost and Brazil was offering profit rates that were among the world's highest, along with low salaries, pro-business labor laws and stable right-wing military rule. Cubatao's 111 plants, which are owned by 23 foreign and Brazilian companies, today (1985) account for 16 percent of the national income.

CHINA'S PATH OUR PATH?

West Bengal Chief Minister and his colleagues in the party and in the government have found a role-model in China. They are holding out a rosy picture about China's spectacular progress with chemical hubs, petrochemical industries in particular, urging upon all people to take up the Chinese path as the model path. The history of developed countries indicates that each country must chalk out its own path of development. Globalization has led to a phenomenal growth of service industries in India and manufacturing industries in China. Usually industrial pollution, adverse impact on human health and on environment was not taken into account in cost-benefit computations. Now competent-economists and other experts are trying to estimate "the value of the world's ecosystem services and natural capital" which are no longer negligible as "externalities". From the abstract of that article (Nature : Vol. 387, 15 May, 1997; Science, 16 May, 1997) a few lines are quoted :

"The services of ecological systems and the natural capital stocks that produce them are critical to the functioning of the earth's life support system. They contribute to human welfare, both directly and indirectly, and therefore represent part of the total economic value of the planet. We have estimated the current economic value of 17 ecosystem services for 16 biomes, based on published studies and a few original calculations. For the entire biosphere, the value (most of which is outside the market) is estimated to be in the range of US \$ 16-54 trillion (1012) per year, with an average of US \$ 33 trillion per year. Because of the nature of the uncertainties, this must be considered a minimum estimate. Global gross national product (for 194 nations) is around US \$ 18 trillion per year" (1996).

The estimated earning from the chemical hubs and the loss of the ecosystem services from an wide area around the chemical hub whose soil, water, and ecosystem productivities will be severely damaged such that the net cost-benefit balance will be a big negative one. Moreover, generated wealth does not necessarily percolate down to raise the standard of living of the weaker sections of the society. A country's standard of living depends on its level of consumption, not on its level of export. India at present has a huge stock of foreign exchange, which is not utilized and this imparts an inflationary pressure on prices along with overvaluation of rupee.

CHINESE FARMERS FIGHT IN THE NANDIGRAM WAY

In an environmental risk survey on 7,555 plants, the State Environmental Protection Administration (SEPA) said (7 Feb. 2006) that 81 percent of the plants are located along the rivers and lakes or in densely populated areas. Previous government reports said that more than 70 per cent of China's rivers and lakes are polluted, while underground water in 90 per cent of Chinese cities is polluted. Chinese villagers and farmers feel that "They are making poisons for foreigners that the foreigners don't dare produce in their own countries". Thousands of Chinese protesters regularly fight the police sent to restore order so that chemical or pharmaceutical plants can continue or resume operations after being closed by rioting villagers. Villagers in China's Zhejiang province, south of Shanghai were protesting (April, 2005) against pollution from recently built chemical plants. Thousands of residents of Huaxi, near the city of Dongyang fought off police sent to break up the demonstration who remained in control of that town (24 March, 2005). The protest turned

violent on April 10, when hundreds of police officers sent to remove the road block started clubbing elderly protesters. About 80 officers were injured, according to Xinhua News Agency. Villagers complained that local officers abused their power by allowing the construction of 13 chemical plants on rural land since 2001. They claimed that the plants have polluted the area, and there have been nine cases of stillbirths and deformed babies in the past year (2004) alone. Xinhua reported that hundreds of residents were evacuated after chemical facility leaked chlorine in the city of Wuxi in Jiangsu province.

Tensions in the Chinese countryside are on the rise : farmers shutdown polluting pharmaceutical plants. Farmers from the nearby villages got together and attacked Jinxing Pharmaceutical on July 4 in Xinchang, a town about 200 km south of Shanghai, forcing it to shutdown. Hundreds of farmers were involved because of pollution and industrial waste. Villagers pushed down a boundary wall and attacked a building. Pollution, unjust land grabs and rampant corruption are the main causes of popular resentment. The issue has reached the top echelons of the communist party. The party has been increasingly concerned by rural protests. President Hu Jintao and the Prime Minister Wen Jiabao said that the "Problems of rural areas are the government's most important modernization task". Li Jingtian, deputy director of the party's Organization Department said many rural cadres are more likely to cause problems than solve them. Zhou Yongkang, National Security Minister and State Councillor said in this connection that the Chinese farmers know how to protect their rights and interests and hailed their willingness to speak up against injustice. They are the tip of the iceberg.

Thousands of Chinese protesters battled police for hours on Sunday night in an effort to stop the Xinchang polluting plant from resuming operations. The plant produced pesticide and its emissions ruined crops, poisoned local river, and made villagers sick. Jinxing plant was closed after an explosion, which killed a worker in early July. Thousands of people travelled via mountain paths and rice fields to protest by throwing rocks and overturning police cars. Police bussed in reinforcements and closed off all roads to the facility. A similar successful people's movement in the nearby city of Dongyang kept the protesters inspired.

Protests in China rose from 10,000 in 1994 to 74,000 in 2004. Some 3.67 million people took active part.

THE JILIN DISASTER : A NORMAL ACCIDENT

A major pollution of the Songhua river was caused by an explosion in the nitration unit of the aniline plant in Jilin city of the Jilin province of north-east China on 13 Nov, 2005, for which about 100 tons of benzene + nitrobenzene got released and polluted the Songhua river, where it formed a 80 km long slick that gradually drifted downstream and the pollutants were delivered to the Amur River which flows along the Chinese-Russian border finally to end up in the Gulf of Okhotsk and the Japan Sea via the Strait of Tartary. This pollution resulted in great losses to public health, social stability, economic growth and even heated up diplomatic relations with Russia.

The Jilin explosions killed six, injured dozens and caused the evacuation of tens of thousands of residents. The slick reached Harbin, one of China's biggest cities (population over three million) around Nov. 23 where the city government announced that water supplies would be shut off from the noon of

Nov 22. Panic, chaos caused havoc in Harbin, that lasted for days. Appearance of dead fishes aggravated fears, schools were closed. From Nov 23 residents began to receive water from fire trucks and began voluntary evacuation. Water supply was resumed on Nov. 27. The slick created great problems in most of the towns on its banks and reached Amur river on Dec. 16 and arrived at the Russian city of Khabarovsk on Dec. 21. Xie Zhenhua, China's Minister of State Environment Protection Administration (SEPA) resigned. The Vice-mayor of Jilin was found dead in his house. The Jilin Petrochemicals which runs the plants initially denied that the explosion could have leaked any pollutants into the Songhua River, saying that it produced only water and carbon-dioxide.

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SOUTH BENGAL : THE YEAR TWO THOUSAND TWENTY

From the very brief overview of petrochemical industries in time and space the portents for South Bengal with a chemical hub cannot be missed. Science demands not only an understanding of the present but also anticipation of the future, may be with uncertainty. Even in the absence of catastrophic accidents which is "Normal" for the N-power and Petrochemical Industries, the inevitable Low-Level Pollution from non-biodegradable xenobiotic chemicals will spoil the soil ecosystems, through first of all, killing the soil microorganisms and its algae, fungi and other flora and fauna, which will spoil the soil ecosystems with gradual loss of fertility and food production around a wider zone of the chemical hub.

Phytoplankton and zooplanktons in aquatic ecosystems will perish leading to the deaths of rivers, lakes and ponds with loss of fish products. The mangrove forest will be gone. Hilsa fish, Sankhachils, Royal Bengal Tigers will then be pictures only.

Villagers and peasants will lose their lives and livelihoods and migrate to the footpaths and slums of Kolkata and other towns. Around the year 2020 the big capital and foreign multinationals will close down their activities and move out leaving black barren spots on this tiny beautiful State of West Bengal which will remain in this condition for centuries as monument to the arrogance and folly of unwise marxists in the government and in the ruling party establishment.

Since most of the petrochemicals are inimical to all forms of life and are non-biodegradable so as to fail to be put back into the Biogeo-chemical Cycle of Nature, their large scale production using non-renewable fossil fuels and massive use need to be stopped for preservation of life in South Bengal before it is too late. The necessary fuels and selected petrochemical types of substances which are absolutely essential so as not to compromise with the quality of life as has been achieved by now, may be produced through biorefineries based on biomass and agro-products, which now have crossed the pilot plant stage and may be made available for small-scale production also, which incidentally will also prevent further escalation of climate changing Green House Effect, that is now threatening the economies and lives of all people of all countries whether developed or developing.

DEVELOPMENT OR DESTRUCTION?

Real development is human development and development of the environment. Environment with its ecosystem services is the most valuable natural capital on which a sustainable improved economy can be built up

which can ensure a higher standard of living for all. Environment must not only be preserved in good health, but must also be improved. All august international environmental bodies agree that there can be development without destruction. Healthy citizens with good education, knowledge, acquired skills, culture and experience of participation in constructive works is the most valuable wealth of any country, of any human group.

Look at the West European countries and Japan : Germany, France, England, the Scandinavian countries are highly developed in every way because of their beautifully developed human resources. Switzerland had no colonies, no natural wealth worth the name. But it is one of the richest, powerful and prosperous nations of the world. So is Israel. Even after so much of devastations and Allied bombings during World War II, that almost exterminated the German and Japanese youth and the devastations of buildings, factories, roads, bridges and the like, those two War devastated countries rose like sphinx and quickly rebuilt their countries within only a few years and rose again to occupy the top rank in the world. They had such well developed national character, culture, fine tradition and ethics of team work and these remained almost intact even after war devastations, with which quickly they could make resurrection. Allied bombings destroyed only the visible tip of the social iceberg while the invisible major part of the German-Japan's submerged portion of the social iceberg remained intact, undestroyed, that quickly regenerated its lost human resources and made quick reconstruction. Real development in this real sense is invisible and indestructible.

Government and party leaders in India, including those in West Bengal, neither understand development, nor understand environment, which is intimately linked up with the economy, politics and technology. West Bengal could develop in its own way consistent with its geography, climate, history and culture, as have been done in many other parts of the World. Trade & Commerce ensures that everything cannot, need not be produced in every country. Bengal was really golden, at least during the Mughul period, suffered the first blow in the 19th century when the Britishers imposed their way of development : colonial rule, railway lines, and policies that destroyed native industrial and commercial activities. Now globalization and economic imperialism is causing the remaining destruction through the plunder of India's remaining natural wealth and shifting their capital to produce "dirty" industrial goods, which are no longer allowed in their developed countries. Budhadeb Bhatta-charya, Biman Bose, Nirupam Sen and their colleagues' unintelligent and irresponsible decisions and actions find eloquent expression in a passage from Zygmunt Bauman's "Globalization : The Human Consequences" (Polity, 2000).

"In the cabaret of globalization, the state goes through a strip-tease and by the end of the performance it is left with the bare necessities only : its powers of repression. With its material basis destroyed, its sovereignty and independence annulled, its political class effaced, the nation-state becomes a simple security service for the mega companies... The new masters of the world have no need to govern directly. National governments are charged with the task of administering affairs on their behalf."

But the resistance against such economic imperialism is also growing as people see in Nandigram, Venezuela, parts of China and other places. Protests

in China rose from 10,000 in 1994 to 74,000 in 2004 and these involved 3.67 million people. In China communist cadres in rural areas are siding with the fighting farmers and these are matters of grave concern for the top leaders of the Chinese Communist Party.

Suggested Reading

1. The Robbery of the Soil : Rabindranath Tagore, 1922, [Bengali translation : Sandip Bandyopadhyay],
2. "Small is Beautiful : A Study of Economics as if People Mattered" by E.F. Schumacher, 1973.
3. Laying Waste : by Michael H. Brown, Pantheon, New York, 1979.
4. Biorefineries : Industrial Processes and Products : Status Quo and Future Directions : Vol. I & II (2006) : (Eds) Birgit Kamm, Patrick R. Gruber and Michael Kamm : Wiley - VCH Verlag GmbH & Co., KgaA.
5. Making Peace with the Planet : Barry Commoner, New York, New Press, 1992.

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