

I. EXPOSURE TO DISASTERS

Asia is the most disaster-prone region in the world. It is frequently exposed to every type of natural disaster (tropical cyclones and storm surges, floods, earthquakes, tsunamis, landslides, volcanic eruptions and drought) and refugee influxes. Now - because of the phenomenal pace of industrialization and Man's impact on the environment - we are faced with environmental degradation and the increasing risk of technological disasters.

II. THE PACE OF DEVELOPMENT AND INDUSTRIALIZATION

Examples of GDP growth rates in the region during the period 1987 to 1991 are:

	<u>% per annum</u>
Hong Kong	6.0
India	5.1
Indonesia	6.3
Korea	9.3
Malaysia	8.3
Pakistan	6.2
Philippines	3.7
PRC	7.6
Singapore	8.9
Sri Lanka	3.8
Taiwan	7.9
Thailand	10.5

It has been estimated that by 2000 a.d. Asia will be on a par with Western Europe and North America in terms of GNP and its share of the world's economic output.

III. IMPACT OF DEVELOPMENT ON THE ENVIRONMENT

During the past twenty years the pace of development, industrialization and urbanization in Thailand has been dramatic. There are now major industrial development projects in almost every province. Bangkok is an incipient mega-city. Unfortunately the price paid in this rush for growth has been that profit has sometimes been put before safety or the environment. The effects are to be seen in:

- increased air and water pollution
- deforestation
- soil erosion
- illegal issuance of land titles
- illegal and legal factories that violate environmental protection laws
- environmental problems relating to mining

- weather and climatic changes due to deforestation and destruction of watersheds.

There has also been a marked change in the pattern of disaster - from the occasional event of manageable proportions to serious droughts, cyclones and floods with associated landslides, and recently a disturbing number of technological disasters, structural failures and transportation accidents. Vulnerabilities have increased and, as always, it is the underprivileged who are suffering the most.

IV. PROBLEMS

Over the years our system for disaster management has expanded in *ad hoc* responses to recent events and to meet the new requirements of a rapidly developing and industrializing country. Unfortunately, expansion has usually meant establishing a new body without at the same time taking the opportunity to rationalize the functions of the existing ones. In consequence the organization has become too complicated and unwieldy. A recent study of our national organization for disasters undertaken for the Government by UNDP identified no less than 34 laws, 9 ministries, 20 departments and 10 committees having some *direct* responsibility for some aspect of disaster management - and that is just the tip of the iceberg.

The growing demands of counter-disaster planning for technological hazards complicate matters still further. In a rapidly industrializing country like Thailand we cannot consider the risks of "natural" and "technological" hazards as separate issues. Not only do we have to assess the individual risks; we also have to alert to the possibility of a natural disaster impacting on an industrial complex. It is impractical to attempt to have different organizations and contingency plans for every conceivable risk. We need an overall master plan and a range of sub-plans.

The problems which now confront our country may be summarized as follows:

- outdated legislation and codes
- failure (or inability) to enforce regulations and codes
- an over-complicated national organizational structure which, even so, is still oriented primarily towards relief
- poor inter-departmental liaison
- jealously guarded interests and power
- overlap of responsibilities
- insufficient and poorly trained staff
- less than optimum utilisation of limited resources
- widespread lack of understanding of the importance of effective disaster management.

V. THE WAY AHEAD

Thailand's Seventh Five Year Plan, the current one, states that environmental protection of water and air quality, and control of solid waste, toxic and hazardous substances must take place in order for sustainable development to occur.

Looking ahead, the recent UNEP study made a wide range of recommendations to my Government (including risk assessment; technological hazards; legislation; organizational structures; planning; relief; the roles of the emergency services and the armed forces; building construction; developing a culture of safety; human resource development and international cooperation). These are now being studied. The report considers two actions to be crucial - rationalizing the disaster management organization and developing a culture of safety. The report reiterates the five pre-requisites identified by the Asian Development Bank in its book *Disaster Mitigation in Asia and the Pacific* viz: sustained awareness, political will, finance, human resource development and institution building. We have also taken note of the recommendations for promoting human settlement planning and management in disaster-prone areas adopted at the UN Conference on Environment and Development in Rio de Janeiro in 1992. Our Eighth Five Year Plan will include a chapter on disaster management.

If improvements are to succeed in Thailand they must be appropriate to our culture. Thailand has been described as being not a society of law but of relationships and patronage. We need therefore to develop a culture of greater social responsibility and self-regulation. Social sanctions must be developed and incentives devised. A culture of compliance will be more successful than enforcement dependent upon inadequate resources. Investors must be persuaded to include disaster mitigation measures in investment costs. In this process the responsible private sector is helping to set an example.

A model disaster action plan has been developed for Thailand's biggest industrial estate at Rayong, and the National Economic and Social Development Board (NESDB) will soon publish a journal¹ on the theme *Disaster and National Development* as an awareness raising exercise at the highest levels.

Thailand needs a more integrated, multi-sectoral, approach to disaster management, set in the context of policies and programmes for environmental conservation and economic development.

¹ NESDB journals are official Government documents designed to disseminate knowledge on socio-economic development and to propose new ideas and new trends in socio-economic development.