RECENT NATURAL DISASTERS: WRATH OF GODS OR THE RESPONSIBILITY OF MAN?

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Sri Lanka has experienced a series of natural calamities in recent months and many areas are still recovering from their devastating impacts. First came the widespread droughts in the Dry Zone where at least a quarter million families were seriously affected. The agricultural produce, particularly paddy production, fell drastically, compelling the Government to import rice in large quantities (some 500,000 tons - SUN of 20th July). In addition to these massive rice imports; against a background of near self-sufficiency in recent years. it has also been reported that some 3.6 million tons of wheat will have to be imported. The Government was compelled to provide immediate relief to an estimated population of over a million people who suffered from serious food shortages, and to seek foreign assistance in order to supplement its own efforts. Although the exact extent of human suffering is hard quantify, the Red Cross to (Japanese) which made a rapid appraisal of the ground situation in March reported that, unless urgent remedial measures are taken the food situation in the affected areas can deteriorate to something like what has been experienced in some parts of Africa. It must be mentioned that if not for the Mahaweli waters the life in the Dry Zone should have plunged into an even much worse crisis.

While the country was passing through the adverse impacts of the drought in Dry Zone on top of the continuing civil unrest, the Wet Zone experienced one of the most devastating episodes of floods and landslides in recent history. The

national news media carried banner headlines with horror stories of hundreds of people getting buried alive, and thousands of others becoming homeless and destitute by these events. This was to occur rather ironically, on the 5th of June the much celebrated 'World Environment Day'! It has been reported that some 167 people were killed in one AGA Division alone (Galigamuwa) in the Kegalle District. The threat of floods was experienced even in the environs of Colombo in which low-lying areas were supposedly better protected against such catastrophes. A few days later the Prime Minister answering a question from the opposition in Parliament revealed that some 225,000 people in 10 districts were affected by floods and landslides which destroyed over 15,000 homes. Over 300 persons have died and 20,000 were still marooned by that time (Divayina June 8th). The amount of funds needed to rehabilitate the victims was estimated to be around 120 million rupees. The Government had to utilize all resources at its command in the affected districts to provide some immediate relief to the unfortunate victims - the large majority of whom were from the poorest segments of society.. Furthermore, both landslides and floods recurred in many areas within a few weeks while some of the earlier victims were still in temporary shelters.

It is needless to mention that natural disasters such as droughts, floods and landslides are not new catastrophes in Sri Lanka. It is the extent of their damage to life and property that has been on the increase over the years. The devastating floods of 1947 and 1957, the cyclones of 1978, droughts of the 1970s and early 1980s and the landslides of 1986 are still fresh in the minds of many people. In a study of the impact of the 1981 drought on the livelihood of peasant families in the Anuradhapura District, hardships experienced bv the affected persons were brought to light by the writer (Madduma Bandara, 1982). It was reported that among a sample of nearly 500 families interviewed, a little over 1% did not receive at least one rice meal per day, and nearly 36% had only one meal per day. Among the painful actions resorted to by such families were withdrawal of children from schools and sending them out of homes as domestic servants to towns: It is in such situations that one can discern some of the root causes of the present crisis which appears to be more entrenched in the countryside than in the cities. Further, it was noted that in most Kachcheries which handle drought relief work programmes, it is the set of instructions. laid down by A. T. Grandison as Director of Social Services in 1948, which are still being followed. The drought experienced this year is no exception and the general approach to drought relief is not fundamentally different from the old practice. An unfortunate feature of the State machinery in our country is the poor institutional memory of previous events, which results in the lack of long-term planning for sustainable development. There are many areas of the world which are drier and more drought prone than our so called Dry Zone. It is simply the failure to develop more drought enduring forms of agriculture which forms the underlying cause of such levels of human suffering than the mere vagaries of rainfall. If seasonal crops fail, a strategy of more drought resistant perenial crops should have been adopted, or at least grasslands may have been developed for livestock farming. But can such developments take the. place within existing

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techno-bureaucratic and socio-political setting? The recently concluded externally supported multi-million Dry Zone Agricultural Development Project at Anuradhapura amply demonstrates the failure of such attempts when considering the quantum of contribution it has made to the alleviation of poverty resulting from recurrent droughts in the area.

Soil Conservation

Landslides and floods caused mainly by excessive monsoonal rainfall are also not new phenomena in the Wet Zone of Sri Lanka. The Kotmale landslides of 1947 led to some positive thinking which culminated in the Soil Conservation Act of 1951. However, since then soil conservation has received only step-motherly. treatment from the agricultural development authorities who were entrusted with the task of implementing the Soil Conservation Act. It is on record that in the early 1960s the Minister in-charge of the subject wanted the soil conservation. regulations that had been tightened up two years earlier to be relaxed to encourage tobacco cultivation in the hill country. In 1986, landslides caused much death and destruction in the areas around Maturata where over 20 persons died and over 2500 families were made homeless. Itwas then learnt that the Soil Conservation Officer as far back as 1957 investigated those worst affected areas and recommended to the Government Agent that some of them be closed for residential purposes. If this advice was taken seriously, then much damage to life and property in the area could have been avoided. The landslides of 1986 which generated much public concern gave a fillip to lanslide research and for seeking ways and means to minimize their damage. Thus the scientific community had many seminars and conferences and the district administration had set up many committees to monitor landslides. Unfortunately when the fair weather returned, enthusiasm fizzled out and the unpleasant memories of the past were soon forgotten.

The problem of poor institutional memories is further exemplified by the recurrence of landslides in the Kegalle District. An analysis of the records of the Social Services Department clearly indicates that Kegalle has experienced more damaging landslides than any district in the Island. The writer brought this up at a seminar in 1986 and attributed it to the spread of rural settlements over the area to unstable slopes as a result of increasing population and the demand for land. The problems of landlessness in the Kegalle district were highlighted as far back as 1943 by the then Minister of Finance in no uncertain terms. Neverthless, it is common practice now that once the landslides occur a 'fire-brigade' approach is adopted by those responsible in providing immediate relief and they tend to be content with their own organizational skills at the end of the operations. Once the rains cease and the floods recede people gradually return to their homes on the same lands if they were not totally destroyed by the catastrophe. This year thanks to the Ministry of Plantation Industries alternative lands were provided for many affected families in several areas. However, even where this was possible in the past people were moved like furniture to tiny parcels of land as small as forty perches. The past experience shows that there were instances of such victims being moved from one earthslip prone area to another. An obvious question is why cannot this be done in a more systematic and organized With the available manner? technologies of aerial photography mapping combined with and detailed field investigations hazardous areas can be reasonably demarcated. Programmes can be formulated to relocate people' resident in such areas for their own benefit and to create more viable and planned settlements. In this regard it is perhaps time to probe how much progress has been made in that direction by some organizations which took up this challenge after the 1986 slides.

Land Degradation

The lack of progress in controlling land degradation in critical areas is often attributed to the multiplicity of institutions that characterize the State machinery. The multiplication of functions with hardly any attempt to rationalize these functions has been a common occurrence since Independence. It has been pointed out that there are over forty institutions and over 75 pieces of legislation which have some bearing on the environmental concerns under discussion. An effective coordination of functions among these institutions is almost non-existent and occasional attempts made to bring various organisations together at committees and seminars proved hardly anything more than 'talking shop'. Each agency appears to suffer from an inertia which resists change, however desirable it may be from an overall national point of view. As seen at a recent seminar on the Soil Conservaiton Act some soil scientists expressed the view that, in order to protect soils and arrest land degradation, 'we have enough institutions, enough laws and the existing provisions of the Soil Convervation Act are more than enough'. But then with all these we also have enough problems from soil erosion, and an ever increasing damage to life and property from landslides and floods. It appears as though such soil scientists who take a complacent attitude to this subject of great national concern are also part of the problem of soil conservation in Sri Lanka. Institutionally, what is urgently needed is an effective rationalization of functions and pooling of resources in which specific responsibilities must be assigned to each relevant institution depending on its specialization and competence. However bitter it may be, we have hardly any choice but to accept the fact that the existing institutions have failed to deliver the goods, whatever the reasons may have been. In this context if there are institutions which do not show enough progress, let them be closed down for good with due consider-

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ation being paid to the interests of the employees.

It may be noted that these were some of the sentiments that the Land Commission of 1985 strived to stress in its First Interim Report. Having recognized the gravity of the problem of land degradation, and the urgent need to embark on an effective strategy the Commission proposed the establishment of a Watershed Management Authority along similar lines suggested by the TAMS consultants a few years earlier. Although the Land Commission had gone to the extent of proposing necessary legislative guidelines for this purpose, the response of the bureaucracy at its highest rungs had been lukewarm at best. It is an unfortunate constellation of factors in this country that, even recommendations of Presidential Commissions arrived at after painstaking deliberations have to be eventually ratified by the bureaucracy if they are to be implemented at all. If the danger signals given by the Land Commission in 1985 were taken seriously, at least there would have been a strong institutional foundation to cope with the problems of landslides and floods and to minimize their damage to life and property. Further, the bureaucracy has the habit of activating itself, only when widespread damage is caused to life and property, for which no one is held responsible except the weather gods.

National Land Use Plan an Urgent Need

strangely, Rather like the bureaucrats, the old villagers in the Dry Zone also prefer to believe 'that this year the rain gods (vessa valahaka divyaputrayo) were not merciful. In the hill country too the elderly villagers often say that landslides and floods are caused by the wrath of gods (deva kopaya). Some social anthropologists (Sandell, 1988) of course attempt to rationalize the role of such beliefs and attitudes towards nature among the people who live so close to nature and directly earn their living

from it. Even in this age of advanced science and technology, it is true that the fury of certain natural forces cannot be controlled by man. Then he should develop the wisdom and learn to live outside their path of destruction or pay dearly for his lack of vigilance. It is the poor adjustment to nature's ways that leads to such magnitudes of damage to life and property in most tropical countries. With the increasing pressures of poverty and unemployment, it appears that not only the average man in the village, but also the planner and administrator has forgotten to remember the ways of nature; that flood plains are the domains of rivers; coastlines are the domains of waves and currents; and high slopes on unstable material are the force fields of nature. The geomorphologist and the hydrologist can study the behaviour of these natural forces and develop predictive models and advise on how to avoid their paths of destruction. The engineers and technologists can develop structures that can withstand some of these forces, but often at great economic cost. For a developing country like Sri Lanka however, adoption of a rational land policy and sound landuse practices may provide a less expensive but a sustainable option. In this context the formulation of a national landuse plan which incorporates these needs is long overdue and deserves high priority.

. It may also be mentioned that there is a popular belief that landuse solutions to the problem of floods and landslides is simple and straight forward. For some it is as simple as suggesting that the affected areas should be clothed with forests (Refer Editorial of Sun 12th June; Cartoon in the Island 5th June). There are certainly many strong reasons to arrest the rapid of deforestation and to rate enchance reforestation of at least the critical watersheds. But can the twin problems of floods and landslides be eliminated by forestry alone? The relationship between forestry and hydrology is an area where many imaginations have

(Madduma ··· Bandara wandered (Ed.) 1989). The current thinking is that restoring forests need not necessarily result in preventing flood catastrophes (Hamilton, For some time many 1988). believed that deforestation of Nepalese Mountains is to be blamed for floods in Bangladesh. Now it is thought that even if entire river basins had been in forest cover, monsoons of the magnitude that. occur in the South Asian region can still cause severe flooding. In our context many colonial provincial boundries which we still carry. cut across natural river basins most haphazardly, as in the case of the Sabaragamuwa Province. This is a different resource management problem that should deserve separate attention. But then can we say that peasant farmers in the Sabaragamuwa Province are to be blamed for floods in the populous low-lying areas of the Western Province. The scientific basis of such possible accusations do not appear to be strong in the light of the results of recent research. Hereagain the solution appears to lie more in a better landuse and land settlement policy than on an over-reliance on forestry.

Balancing Environmental Concerns and Economic Development

Natural hazard management and natural resource planning should necessarily form an essential component of an overall national development strategy. Planning in Sri Lanka at the national level, however, had until recently been synonymous with economic development planning only. This can be seen from almost all planning documents, since National. Independence. Any references to environmental concerns have only been incidential to the main theme of economic growth with hardly any anticipation of a possible environmental backlash. Even recently the document on 'Public Investment 1985-1989' issued by the Ministry of Finance and Planning reflected this position. It states that

"For a developing country like Sri Lanka, complete eradication of malnutrition poverty, and unemployment are more importnat than pollution abatement, protection of natural resources or the conservation of the ecosystems'. In this context bringing the Central Environmental Authority under the Ministry of Policy Planning and Implementation is certainly a welcome development in the right direction. It is perhaps time that an environmental or a natural resources unit is established within the Planning Division of the Ministry in order to pave the way to achieve a reasonable balance between environmental concerns and economic development."

Natural resource management and disaster preparedness need longer planning horizons than what is normally adopted for planning purposes in Sri Lanka. In view of the pressing social and economic problems of poverty, unemployment and slow economic growth, the basic thinking behind national planning today is biased in favour of objectives which are essentially present oriented and short-term and therefore tends to discount the future at too high a rate. This is reflected again in the more recent 'Public Investment 1986-1990' document issued by the planning authorities. This stresses that "a judicious combination of investments which optimizes economic, social and political gains have a greater chance of success than those which, though rational and effective from a long-term pespective, are not feasible from the short-term

view of political stability". Here one can identify one of the fundamental problems of planning for environment and natural resources management in contemporary Sri Lanka. In this context news of the establishment of a disaster relief fund is a positive sign of some long-term thinking. Nevertheless, if the Fund is used to provide immediate relief without investment on long-term strategies to cope with natural disasters, its usefulness will be inevitably limited.

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