



Cyclone Damage to Educational Institutions in East Pakistan

with suggestions for their rehabilitation

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SUMMARY

The report gives details of the onset of the cyclone of 28/29 May 1963 and of the damage to educational institutions.

It suggests that as the skilled building force in East Pakistan is totally inadequate the best way to help build permanent schools would be to set up a prefabricated building industry. Prefabricated buildings could later be designed for community centres, farms and village houses all of which are both inadequate in numbers and so poorly constructed as to invite destruction by high winds and floods.

1. THE CYCLONE

28-29 May 1963

Warning was given on 26 May in the press and radio of a deep depression in the Bay of Bengal approaching the Chittagong area, but the radio warning of the impending onset of the cyclone was only given as the winds were rising at about 2200 on 28 May. The winds and driven rain continued until about 04.00 on 29 May and were accompanied by a 20 ft. (6 m.) wave which flooded about 650 square miles (1700 sq. km.) of the mainland and offshore islands.

The Aftermath

A few hot dry days followed the cyclone and whilst this enabled salvage operations to proceed, people and animals whose drinking water supplies had been polluted by the tidal wave suffered severely. The monsoon broke during the first week of June and the position was reversed, water being more than plentiful, rebuilding difficult.

Damage

It is estimated that about 10,000 people lost their lives, mainly drowned, during the storm and the tidal wave also affected crops. The high winds destroyed or damaged many kutchha (Bamboo and thatch) semi-kutchha (corrugated iron) and a few pukka (brick and concrete) buildings. Much glass was broken particularly in unsecured window lights and overhead wires (telephone and electrical power) were brought down.

Damage to educational institutions is listed in Table 'A'. It will be seen from this table that the major repair cost is in primary and secondary schools and this cost is almost exclusively rebuilding cost since these schools have a minimum of equipment. Unfortunately this is the cost of rebuilding the school as it was before, i.e. ready to be demolished the next cyclone.

2. UNITED NATIONS ASSISTANCE

Scope of the Investigation

The Unesco Chief Technical Adviser at the Chittagong Polytechnic Institute was in contact with much of the relief work as his flat was used as a centre by UN personnel who worked in Chittagong by agreement between the District Commissioner and the United Nations Technical Assistance Board. In addition to discussions with these Social Welfare and Food and Agriculture Organization Advisers he has also had discussions with the District Commissioner, the Additional District Commissioner, whose special responsibility is education, the Director of Public Instruction (East Pakistan) and the Deputy Director of Public Instruction (Chittagong Division), the Director of Technical Education for East Pakistan and the Inspector of Technical Education for the Province.

The Problem

The problem is to help the Pakistanis to rebuild their existing schools and to build the many new educational institutions which a literacy of less than 30% calls for with a form of construction which will withstand severe storms.

There is a very severe shortage of trained Civil Engineers, Architects and Builders and it is doubtful if the existing Technical Education programme will relieve this shortage for decades.

The Directorate of Public Instruction has standard designs for schools but the foreseeable rate of construction cannot match the size of the need.

Suggested UN Project

The most promising approach to the problem appears to be that of using largely prefabricated buildings which can be erected on site with a minimum of skilled labour.

There is no reason to suppose that prefabricated structures will be less attractive than brick buildings (witness the Nottinghamshire, England "Clasp" system) and the cost would be less than that of "traditional" building.

The proposal is therefore that the United Nations provide advisers and equipment to enable the Pakistan Government to set up a factory making large prefabricated sections of buildings with local materials which could be designed so as to make schools or village community centres, and later extended to farm buildings (which are sadly lacking) and even simple houses.

If reinforced concrete is to be used as the main material then the factory could well be sited in Sylhet which has an ample supply of aggregate which is not available in most of the province.

If wood is to be largely used then the Chittagong Hill Tracts may be a better location.

It may be necessary to supply some "ready mixed" concrete lorries to pour bases for these structures and the locations in which buildings can be erected will be limited initially by the poor road system although during the dry season it may be possible to move heavy loads off the main road. It may be necessary to supply some special vehicles with cranes to erect the buildings.

Conclusion

The suggestion of setting up a manufacturing unit to make prefabricated buildings has the support of all the persons consulted both Pakistanis and United Nations Advisers. The Principal of the Dacca Polytechnic Institute has offered to train the required technicians in his evening extension programme and in a few years such training could also be undertaken here at Chittagong.

CHITTAGONG DIVISION (EXCLUDING SYLHET) DISTRICT

Type of Institution	Number before Cyclone	Number damaged	Estimated Repair cost Rupees
Primary Schools : Private	7435	2263	8,668,021
Secondary Schools : Private Government	2135 4	735 4	2,620,261 141,000
Further Education : Private Government	21 4	6 4	321,000 291,000
		Total	12,041,282