



Disaster Research 2

A review of the activities and interests of the Disaster Research Unit.
University of Bradford, Bradford West Yorks BD7 1DP England. (0274 33466)

REFLECTION

The Disaster Research Unit has now been established for two years and therefore is now able to enjoy some retrospection in viewing its activities and achievements. If long term future continuity were possible, such self-indulgence might well be taken as a sign of relaxation, but this is by no means the case. With an initial programme of three years we are now entering the period when projections for the future are all-important and only begin by an interim assessment of achievements so far.

PUBLICATIONS

Perhaps the most obvious area of application has been the series of occasional papers which are listed at the end of this newsheet. There are now nine available papers in the series with three more in preparation which include numbers 4 and 5. The two most recent additions are number 10 'A Study in Predisaster Planning' and number 11 'Towards an Explanation and Reduction of Disaster Proneness'. 'A Study in Predisaster Planning' is the report of the assignment undertaken in the Bahama Islands in November and December 1974 for the League of Red Cross Societies with whom it is jointly published. The Study analyses the prevailing social and economic environment of the Bahama Islands and the "disaster context" of "man-made" disaster events which may be created within it which include epidemic, aviation accident, marine accident, fire, industrial explosion, toxic spillage and food shortage. The past incidence of these events and future likelihood is examined together with a similar examination and analysis of the effects of hurricane - natural phenomena. Current awareness of these hazards by Bahamians at large, with the results of a social questionnaire, and Government is then examined and the processes constituting pre-disaster planning in its short, medium and long term aspects and government and non-government responsibilities are defined. The Study goes as far as relating proposals for a programme of predisaster planning with existing government organisation and undertakings and includes recommendations for the improvement of precautions in the Bahamas. The methods and results of the Study are, however, seen as being applicable to many other countries of the world.

The Study deals with disaster events as isolated occurrences, and is microcosmic in its approach to the subject. Although it relates disasters to the physical and social context in which they are likely to occur, it does not attempt to analyse their long term effect or to analyse (with some exceptions) the effect of long term activity in economic development on a community's proneness to disaster events and therefore on possible exacerbation (or mitigation) of losses. In Occasional Paper No. 11, 'Towards an Explanation and Reduction of Disaster Proneness' by Phil O'Keefe, Ken Westgate and others, the authors explore the context in which individual disaster

events occur and examine proneness to losses as well as losses themselves. The paper is macro-cosmic in its approach to disasters and describes in fact how natural disasters are not entirely "natural" at all and points out how, if the context for disaster is not recognised the processes of development planning could become self-defeating. In a global situation of increasing disaster occurrence and increasing losses, the effectiveness of predisaster planning may be most easily demonstrated each time a disaster occurs. This paper sets out to show how the long term processes of predisaster planning, those associated with the products and by-products of development itself, must reduce proneness to disasters as the most important way of reducing losses. If that could be achieved, the effectiveness of predisaster planning, per disaster, would become more difficult to demonstrate - and that would be a signal of success.

In addition to our Occasional Papers there is, of course, a continual output of lectures, articles, reviews, critiques and reports and a total of fifty-two items have been produced so far, as well as interviews for radio and television and references in the national press.

PROJECTS

The Bahamas Study has been followed by a second assignment by James Lewis to search for ways of implementing recommendations of the Report. A months of detailed follow-up with enthusiastic representatives of the Bahamas Government and Bahamas Red Cross have produced some promising results.

With some early work by the Unit and the results of the Bahamas Study for its basis, a Manual of Predisaster Planning is in an advanced state of preparation and has now received some generous financial support from the League of Red Cross Societies.

It was thought necessary to undertake a more detailed economic study of the effects of disaster than information available in the Bahamas permitted. The Windward Islands, being multi-hazard including earthquake, volcano, hurricane, flood, drought, land-slide and soil erosion were an appropriate choice of location and the Ministry of Overseas Development agreed to proposals by the Disaster Research Unit for a reconnaissance trip undertaken in August 1975 by Phil O'Keefe with the help of Craig Conway, a student seconded from ODM. A Report titled 'Natural Hazard in the Windward Islands: A Survey of Available Information' was produced in September which contained the groundwork for detailed research proposals for a long study programme in the Windward Islands. This programme is designed to elicit the macro-economic impact of the effect of future disasters on the economies of the Windward Islands. More specifically it looks at the hazard vulnerability of the banana industry, the mainstay of the Windward Island economies. Preparations are being made for a return by Phil O'Keefe and Craig Conway to the Windward Islands to undertake the research programme, the field studies of which will last for up to five months and will be financed by ODM.

In April, an inquiry was received from the South Pacific Bureau for Economic Co-operation (SPEC) concerning the Unit's interest in advising on the establishment of a regional natural disaster insurance scheme for SPEC members which comprise Fiji, Cook Islands, Gilbert Islands, Nauru

Niue, Papua New Guinea, Solomon Islands, Tonga and Western Samoa. A proposal for a programme to be financed by the Commonwealth Fund for Technical Co-operation has been accepted by SPEC and a pilot visit will be undertaken by James Lewis in January and February 1976.

Following approaches made during the summer to Schools of Architecture, five architectural students were asked to collect information on "indigenous-technology" building forms in disaster prone countries to which they were travelling for other purposes. A grant towards their expenses has been made and destinations were Nepal, Bangladesh, Greece, Yugoslavia and Hong Kong. Results received so far are particularly encouraging.

CONFERENCES

Five international seminars and conferences have been attended since the formation of the Unit. The most recent of these was the Second Invitational Conference in Natural Hazards at Boulder, Colorado attended by James Lewis, as one of over a hundred participants representing interests of all kinds in natural hazards, principally from within the USA.

APPOINTMENTS

James Lewis has accepted an invitation to the editorial advisory board of a new journal concerned with emergencies and disasters called 'Mass Emergencies' and published by the Elsevier Scientific Publishing Company. Co-editors are Professors Jiri Nehnevajsa of the University of Pittsburgh and Enrico Quarantelli of the Disaster Research Center, Ohio State University. Information on the new publication is obtainable from these sources or the Disaster Research Unit.

Kenneth Westgate, who was a research student with the Unit has been appointed as Research Assistant having completed and submitted his Master's Thesis. The thesis is concerned with the scope of human response to disaster and especially with those hazards emanating from the natural environment. The study reaches the conclusion that the requirements for future research are first, to observe disaster as an extreme event within a series of normal events, referred to as the disaster environment; secondly, to concentrate these observations within the underdeveloped context. Underdeveloped populations are seen as resource users operating a resource complex within the constraints of what is ecologically possible, ethnologically adoptable, economically gainful and socially probable. Underdeveloped populations adjust and respond to the disaster environment within the constraints outlined. The resource complex will break down when values, technologies and general development strategies obtained from developed societies are superimposed. The underdeveloped populations are consequently left in a position whereby they are more prone to the disaster environment because the responses and adjustments contained within the initial resource complex are no longer successfully operative.

The study goes on to consider the implications of the nature of underdevelopment for the planning process which, it concludes, are concentrated on Western economic models alien to much of underdeveloped society, but are nevertheless superimposed. Predisaster planning, to be effective, must

avoid these difficulties by employing the value and resource systems of the indigenous population. It should concern itself with response to an actual disaster event (in the short-term), perception of and response to the disaster environment (in the medium-term), and with the socio-economic conditions of the population (in the long-term). Past case studies of disaster have concentrated on the short-term and medium-term aspects. Employing case studies from the Disaster Research Unit, the study explores the possibilities of effective application of comprehensive predisaster planning.

A temporary appointment as Research Assistant has also been arranged for Mr. Abdul Gaffur to conclude a computer programme commenced by Dr. Michael Gane, following his assignment in Fiji in 1970, which analyses the nature, behaviour and effect of tropical cyclones. The appointment is for three months and will involve the completion of the programme with data from Fiji and possible application to it of data from other parts of the world.

James Lewis is a member of the Postgraduate Board of Studies in Environmental Science and Phil O'Keefe a member of the Postgraduate Board of Studies in Science and Society within the University of Bradford.

As a result of a change of appointment within the Ministry of Overseas Development, Dr. Basil Cracknell's place on the Advisory Committee for the Unit has been taken by Mr. Julian Exeter.

It is with particular pleasure that this Newsheet is able to announce the appointment of the Advisory Committee's Chairman, Dr. David Edwards, as Director of the Project Planning Centre for Developing Countries, University of Bradford.

THE FUTURE

The volume of activity which has been described has naturally influenced our thinking with regard to the Unit's future, but it is interesting and at the same time somewhat gratifying to find that those changes which are proposed for the Unit's programme are the result of changes of emphasis and not of principle.

Four principal avenues for study have been redefined. Analysis of the processes within predisaster planning has produced comparable research areas as follows:

1. Predisaster Planning

- | | |
|-----------------------|--|
| PHYSICAL PRECAUTIONS: | land use zoning,
building construction controls,
civil engineering. |
| SOCIAL PRECAUTIONS: | preparation and promulgation of warnings,
response to warnings: a) results of 'Western'
research,
b) anthropological
studies,
training, education and public information. |

CONTINGENCY PLANNING: indigenous resources,
logistics,
emergency organisations,
sectoral plans.

Examination of the Disaster Context provides a second principal area for study, itself again sub-divided:

2. The Disaster Context

Vulnerability,
Proneness: a) social proneness,
 b) physical proneness,
Risk assessment,
Average return periods and probability.

Risk analysis itself has been seen, so far, as less of a numerical study and more of a socio-economic study of proneness and vulnerability of communities, rather than an initial examination of the occurrence of natural phenomena. A methodology has been formulated which links the history of disaster occurrence with possible future losses. This study has been accompanied by an examination of hazard distribution on a global basis with collections of data on disaster occurrence in the specific location in which projects have taken place. Detailed studies of global and national statistics of disaster occurrence have formed an important third aspect.

3. Studies in Economics and Statistics

Statistics of occurrence,
Statistics of losses,
Data on damage and losses,
Study of the effect of losses on national economy,
Study of the relationship of losses and development,
Data on the cost of relief,
Cost-effectiveness of precautions.

Finally, whilst the Unit is not set up to duplicate work in the physical sciences concerning the nature or the prevention of natural phenomena, it does have the need for strong relationships with scientific research and monitoring agencies, particularly in relation to the preparation and dissemination of warnings within predisaster planning. A fourth area for study is therefore:

4. Studies in Physical Sciences

Monitoring systems for natural phenomena,
Forecasting methods,
Relationship of monitoring and forecasting to warning systems.

The first three of these headings are appropriate areas of study for research fellows, the fourth heading of Studies in Physical Sciences is seen as very much an investigatory and support role but not one where there is a requirement for a contributory or innovative role by the Disaster Research Unit. This heading is seen as appropriate for the appointment of a Research Assistant.

A considerable amount of financial support will be required if the work of the Disaster Research Unit is to continue and to expand in the way that has been described.

The original programme for the Disaster Research Unit is two-thirds of the way towards its conclusion, with one more year to run. The work of the Unit, it is suggested, has only just begun, but its usefulness has been clearly demonstrated. The demands placed on the Disaster Research Unit during the first two years of its life are a clear demonstration of the need for expertise in this rapidly emerging area of world attention. Calls for the application of the Unit's expertise to date have included requests for comment and criticism of draft documents from United Nations, voluntary and academic organisations; and a total of 52 articles, critiques, reviews and papers have been produced with seven more in preparation. Thirteen lectures and seminars have been given and five Conferences have been attended. In addition, and moreover, four major assignments have been completed and negotiations for a fifth early next year are now complete. Expressions of interest in the work of the Unit arrive weekly and it is only realistic to assume that a few of these could be the forerunners of continuing involvements for the Unit's application.

All members of the Unit are very much aware that our undertakings so far have depended heavily upon the financial and moral support made available to us, and the Unit is deeply grateful for the assistance and support it has received. If the considerable generation of enthusiasm created by envisaged prospects is not to dwindle, continued and additional support will be required to enable the Unit to undertake its role of providing a major contribution towards the amelioration of continuing disaster events throughout the world.

Copies of 'Disaster Research 1' March 1975, in which the formation and motive of the Disaster Research Unit are described are available on request.

OCCASIONAL PAPERS PRICE INDEX

	Including domestic or overseas surface postage		Including airmail overseas postage		Student rate domestic/airmail surface	
	£	₹	£	₹		
1. Bibliography of Disaster Reference Material. (January 1975)	0.85	1.75	1.75	3.50	£0.60 \$1.25	£1.25 \$2.50
2. Disaster Management with Special Reference to Pre-disaster Planning. (January 1975)	0.60	1.25	1.00	2.00	£0.50 \$1.00	£0.75 \$1.50
3. Proposals for a Working Method of Indigenous Resource Co-ordination as a Part of a Pre-disaster Plan. (January 1975)	0.60	1.25	1.00	2.00	£0.50 \$1.00	£0.75 \$1.50
4. Definitions of Disaster		Forthcoming				
5. A Philosophy of Planning		Forthcoming				
6. Gakarara - A Study in the Development of Underdevelopment. (January 1975)	0.60	1.25	1.00	2.00	£0.50 \$1.00	£0.75 \$1.50
7. Flixborough - The Human Response. (January 1975)	0.60	1.25	1.00	2.00	£0.50 \$1.00	£0.75 \$1.50
8. African Drought - A Review. (January 1975)	0.60	1.25	1.00	2.00	£0.50 \$1.00	£0.75 \$1.50
9. Report of Mission to Assess the Hurricane Factor for Planning Purposes in Fiji. (January 1975)	0.60	1.25	1.00	2.00	£0.50 \$1.00	£0.75 \$1.50
*10. A Study in Pre-disaster Planning (June 1975)	3.80	7.60	6.00	12.00	£2.50 \$5.00	£5.00 \$10.00
11. Towards an Explanation and Reduction of Disaster Prone-ness. (August 1975)	0.60	1.25	1.00	2.00	£0.50 \$1.00	£0.75 \$1.50

P.T.O.

* Published jointly with the League of Red Cross Societies.

N.B. Please make cheques payable to 'University of Bradford' and send orders to: Disaster Research Unit, University of Bradford, Bradford BD7 1DP, West Yorkshire, England.

(Tele: Bradford (0274) 33466, Ext. 8.287.)

It is regretted that some increases in prices have been necessary due to increased postal charges.

December, 1975.