

120255  
IDRC - Lib One of Several  
Studies funded  
under the Research  
Activities of the  
Post Hurricane Relief Grant  
3-7-88-0210

INTERIM REPORT

on the Project

RECOVERY FROM HURRICANE GILBERT IN RURAL  
JAMAICAN COMMUNITIES

by

Dr. Derek Gordon  
Principal Investigator

ARCHIV  
551.515(7292)  
G.6

Friday, 5th October, 1990

TO: Dr. Edward Greene  
Director, I.S.E.R

FROM: Dr. Derek Gordon  
Principal Investigator

RE: Interim Report on the project: Recovery From  
Hurricane Gilbert in Rural Jamaican Communities

---

This report summarizes the activities conducted during the IDRC supported panel study on the Recovery From Hurricane Gilbert in Rural Jamaican Communities which has been underway since February 1989 and is now in its final stages.

## 1. OBJECTIVES OF THE STUDY

The purpose of the study was to gain more knowledge about the processes of recovery by individuals and communities from natural disasters. By observing how people in rural Jamaican communities coped with the effects of Hurricane Gilbert we hoped to provide some assistance to those responsible for improving disaster planning and management.

We thought a focus on rural communities might prove particularly fruitful. About half the population of Jamaica is rural and quite remote from the emergency relief agencies in the towns. The capacity of these relief agencies to render rapid and sustained assistance to remote rural areas is limited. How do people, faced with modest assistance from outside, respond to their predicament? The reliance on agriculture and the relative poverty and fragility of physical assets would suggest that hurricanes and related natural disasters could have serious effects. On the other hand, the relative lack of modern infrastructure and the greater reliance on subsistence production and consumption might mean that natural disasters like hurricanes may have somewhat different disruptive effects from those in urban areas. Furthermore, these effects may differ for different strata of the rural communities. For some, the disaster may even bring greater employment, income and economic opportunities, while for others, the disaster may precipitate economic crises and hardship.

Our study attempted to assess in considerable detail

- a) The extent of the damage to household and community assets, infrastructure and agricultural production.
- b) The timing and extent of relief efforts by government and voluntary agencies, and the response of the community to them.
- c) The patterns of inter-household cooperation and assistance, community mobilization and leadership in dealing with the effects of the hurricane.
- d) The strategies used by individuals and households to cope with the effects of the hurricane over the long run: the rebuilding and replacement of assets, the obtaining of agricultural supplies, the planting of crops, engagement in economic activities.
- e) Actual changes in household welfare which the hurricane brought to different groups within these communities.

## II. RESEARCH DESIGN

The research design we adopted had two major components. First, the need to carry out an in depth study of community responses suggested the need to concentrate on a limited number of rural communities. We chose three communities, widely separated in geography and to some extent in economic context. All suffered from the effect of the hurricane, but to different degrees. The first, in the Spring Bank/Johnson Town area of St. Thomas, was close to the entry point of the hurricane. It received a major blow from the hurricane. The second, in communities adjoining Albert Town in Trelawny, was affected to a milder extent. The third, in and around Cascade in Hanover was close to the departing track of the hurricane in the Western part of the island, and was quite seriously affected.

The second major aspect of the design was its longitudinal nature. Two broad waves were decided upon: the first approximately six months after the hurricane, and the second one year after the hurricane. In the first wave, we would attempt to obtain information about pre-Gilbert conditions and the impact of the hurricane by detailed retrospective questions.

The original plan called for a first survey six months after the hurricane, in March, and a second survey six months after, in September of that year, with data processing completed within a year of the start of the project, and report completed by the summer of 1990.

### III. SCHEDULE OF ACTIVITIES

1. Organization of Study. The project was under the overall direction of the Principal Investigator, but three Field Directors with considerable experience in conducting field surveys in rural areas were recruited in February 1989 and given responsibility for each of the major sites. Interviewers were to be recruited from the respective areas to allow as much local participation and support as possible. Visits to the study sites to prepare for the survey were carried out by the Field Directors and the Principal Investigator in February and early March.

2. Questionnaire Design The Principal Investigator had major responsibility for the development of the survey instruments, but design was a collaborative effort, with team pre-testing and revision. During the design and pretesting phase in February and March, it became clear that the original conception of a single standard instrument administered at two time points was impractical.

The actual solution adopted for the first wave was the development of several instruments administered in a series of interviews with the household.

First of all, preliminary MAPPING AND LISTING of the households was carried out.

Secondly, MODULE ONE, a detailed household listing, was developed, which gave household size and composition at the time of the hurricane and at the time of the first survey.

Thirdly, MODULE TWO would be administered. This focussed mainly on the impact of the hurricane, on relief and self help efforts.

Fourthly, MODULE THREE would be administered. This questionnaire sought to gather detailed data on agricultural production, household welfare and economic activity.

Fifthly, the NUTRITION survey was conducted, in which heights and weights of children identified by previous surveys were obtained by trained nutritionists for all children under five.

First Wave Field Work Training of the seventeen interviewers for the first wave of field work took place in Kingston at the Caribbean Food and Nutrition Institute on March 3rd and 4th, 1989. Full scale field work, beginning with the mapping, started during March in all three communities, and continued through to the end of May, with approximately two weeks between each of the five visits. The week of March 12th was adopted as survey reference week for the whole phase of the first wave.

The response rate was uniformly high. The initial number of successful household interviews was 182 in St. Thomas, 243 in Trelawny and 230 in Hanover, according to preliminary data. The ability to maintain the cooperation of the these households through the five visits with very little attrition, was demonstrated, despite the tension which surrounded the relief assistance efforts of government and voluntary bodies.

Editing and Coding of the First Wave Manual editing and coding took place over the summer, from June to the end of August 1989. Computer data entry and creation of preliminary computer files for Modules One and Two was completed by October 1989 and preliminary computer runs of the data completed by the end of October.

Seminar Presentation of Preliminary Results On November 7th the Institute of Social and Economic Research and the Caribbean Food and Nutrition Institute jointly sponsored a seminar which brought together researchers and public officials responsible for disaster preparation. At this Seminar, myself and the three field directors, Mr. Peter Espeut, Dr. Ruddy Mitchell and Ms. Claudia Chambers, presented papers and reports on the study and its preliminary findings.

Second Wave Field Work The Second Wave of interviews conducted a year after the hurricane, and approximately six months after the first wave, involved a single questionnaire, MODULE FOUR, updating the information gathered in modules one, two and three, and a NUTRITION survey giving a second set of readings on child nutrition. The surveys were started in late September and continued to early December. The number of household interviews completed was 146 for St. Thomas, 218 for Trelawny and 212 for Hanover, indicating response rates of between 80 and 90 percent of the first wave.

Second Wave Coding and Editing Manual coding and editing was started before Christmas 1989 and continued through February 1990. Final collection of code sheets took place by Easter 1990.

Computer Data Entry: Modules 3 and 4 Modules 3 and 4 have been given out to the computer data entry firm. The final cleaned data files are expected to be ready by the end of October 1990.

#### IV. EVALUATION OF THE WORK AND PLAN FOR COMPLETION

The main field work stages kept very close to the original schedule. All field work was completed successfully within the planned time period. Most of the manual editing was completed within the first year of the project. This was done despite the late start to the project and the complexity of the field work task. Longitudinal surveys are comparatively rare in the Caribbean, and this study gave us the opportunity to develop valuable local experience and expertise in conducting them.

On the other hand, the data processing and analysis tasks also became much more complex, with the increased number of modules and the vast amount of information collected. There was an underestimation of the scope and complexity of the data management and analysis task. The time allocated for this task proved to be too short, when compared with the time allocated for field work. Although the field work involved three field directors, their time was estimated at one year. They were originally supposed to assist in the analysis and to prepare preliminary community data analyses. Through no fault of their own, they have not been able to do so to the extent envisaged. In addition, a number of difficult data management problems had to be solved and important measurement and analytical problems remain to be worked out. This is requiring about an equal length of time to that allocated to the field work.

The target for the full report on the project is now proposed to be January 1991, just under two years from the beginning of the project, and six months longer than originally projected. Even when this is completed, the data will have to be more fully mined. More specialist analyses should be undertaken, fully utilizing the rich data on nutrition and household welfare. We propose that the data set be made available to scholars through the ISER Documentation and Data Centre.

The major Questionnaire modules have been dispatched under separate cover.