



The need for new approaches to disaster management; the 1989 floods in Lusaka, Zambia

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1. Disaster preparedness may be described as "...action designed to minimize loss of life and damage and to organize and facilitate timely and effective rescue, relief and rehabilitation in cases of disaster." Drawn from UNDRO (1986), *Social and Sociological Aspects, Disaster Prevention and Mitigation*, Vol. 12, United Nations Disaster Relief Organization, New York, page viii.

I. INTRODUCTION

THIS PAPER DESCRIBES the inadequacies in the official response to floods in Zambia in 1989, especially for those living in squatter settlements in Lusaka, and the failure to take action prior to the floods to mitigate their impact. It also describes how relief operations generally fail to address the most pressing needs of those most affected by disasters and to involve these people in deciding what should be done. Section III describes a more effective and participatory approach to environmental upgrading while Section IV describes how effective disaster preparedness⁽¹⁾ implies the integration of mitigation and reconstruction activities into development programmes.

Over the past 20 years, natural disasters have claimed more than 2.8 million lives worldwide, adversely affected 280 million people, and caused over US\$ 100 billion in direct property damage. The 1989 floods in Zambia caused damage to infrastructure, houses, public buildings, property and crops equivalent to more than K1 billion (around US\$ 25 million in this year). They also left two dead and more than 50,000 homeless in the capital Lusaka. A lack of official sensitivity and national mechanisms for disaster prevention and mitigation increases vulnerability to disasters. It is generally the poorer groups in urban and rural areas who suffer most. There is a need to formulate disaster policy and create institutional arrangements for its interpretation and application.

There are clear linkages between disasters, development, and environmental degradation and resulting economic problems and poverty. Thus, any strategy to tackle the problem of disasters must also address poverty and its underlying causes. But a country's ability to cope with a disaster is dependent on accessibility to resources and know-how. In Zambia, the lack of development is therefore an obstacle to effective implementation of disaster prevention and mitigation measures.

At independence in 1964, Zambia was one of the most highly urbanized countries south of the equator with 23 per cent of its

population living in urban areas in 1965. By mid-1989, its population was 7.8 million with 49 per cent living in urban areas. The capital city of Lusaka contained 24 per cent of the urban population and 12 per cent of the national population. But the local authorities lack the technical, financial and managerial capabilities to take on the increased demand for infrastructure and services despite enormous deficiencies in urban infrastructure. Local authorities are starved of revenue, autonomy, and technical capacity. Housing is in crisis and the whole idea of local government is in disrepute. Yet the populations of the towns and cities continue to grow not only through migration but also through natural increase.

With no mechanisms to promote adequate livelihoods and service provision for people in the rural areas and with investment concentrated in urban areas, the steady flow to the urban centres will continue as rural dwellers make a claim to better standards of living and better opportunities for their children. But for most people, the cities will offer only continuing poverty.

This paper describes the 1989 floods that devastated Zambia, and their impact on squatter settlements in urban areas. It suggests that, contrary to the image of "overwhelmed" communities, victims of disasters are often adaptable and likely to take rational action as the situation warrants. Furthermore, in spite of the evidence that disaster programmes unsupported by those affected by the disaster are unsuccessful, intervening agencies continue to operate independently of the victims. This results in a widening gap between the agencies and the communities affected. This gap cannot be narrowed unless intervening agencies work with and become more accountable to the communities. The role of outside help should be to help establish self-reliant communities to reduce their vulnerability, not only to natural disasters but also to poverty. It is worth noting that this redefinition of the role of external interveners is already taking place, as illustrated in the discussions below.

II. A VISITATION FROM THE GODS?

HEAVY RAINS ARE not uncommon in Zambia. They have frequently resulted in the damage or destruction of crops, property and structures, especially in squatter settlements, because of their hazardous locations and poor building materials and construction techniques. But the 1989 floods were unprecedented. They caused widespread destruction and damage throughout Zambia, leaving 50,000 people homeless in Lusaka alone.⁽²⁾

An early warning was signalled on 1st February, when 50 houses collapsed and several others were submerged in floods in three squatter settlements and site and service compounds in Ndola, the provincial capital of the Copperbelt. Many families whose houses collapsed sought refuge with friends and relatives but those without such an alternative continued to occupy their flooded homes. A survey showed that some of the structures that collapsed were erected on muddy ground which had been flooded. Some houses covered with cardboard boxes, plastic materials and tin plates had their roofs ripped off by the weather.

Disaster struck Lusaka three days later when, after a heavy downpour, more than 300 houses in and around the city collapsed, leaving 3,000 people homeless. Kanyama settlement, which had been

2. Mulwanda, P.M. (1989), "Squatters nightmare: the political economy of disasters and disaster response in Zambia", *Disasters*, Vol. 13, No. 4, pages 345-350.

3. Mulwanda, P.M. (1991), "Disaster response in Zambia", *Habitat International*, Vol. 15, No. 3, pages 43-50.

4. Mulwanda, P.M. (1992), "Active participants or passive observers?", *Urban Studies*, Vol. 29, No. 1, pages 89-97.

5. NCDP/10/1/4 (April 1991), "Flood damage data", National Commission for Development Planning, Lusaka; and CABINET OFFICE/CO.101/8/20 (1989), "Flood damage data", Cabinet Office, Lusaka.

most affected by the flood disaster of 1977, was flooded again and this time was completely cut off from the rest of the city after the road was washed away. In Chilanga, on the outskirts of Lusaka, 60 houses fell down and more collapsed as some homeless families tried to rebuild their structures in heavy rains. In George settlement, 100 houses collapsed leaving 300 people homeless, while in Garden compound more than ten houses were reported to be close to collapse.

At this stage, an estimated 6,000 Lusaka residents were left homeless by the downpour and emergency measures were set in motion to temporarily house them. An increasing number of townships in the city became seriously affected as houses collapsed after long periods of heavy rain. In Bauleni 280 houses collapsed and in Lusaka West families had their houses and toilets swept away. Some families slept under trees while others sought refuge with neighbours or went to the nearby church as the rains got heavier. On 6th February, Lusaka Province authorities finally sought central government help as the number of homeless reached 20,000 and the number of collapsed houses reached 5,000. By 15th February, 50,000 Lusaka residents were homeless.⁽³⁾

In the confusion, every group sought to blame other groups for the problems. However, all the arguments essentially added up to the need for the government to develop a policy on flood hazard management.⁽⁴⁾ Effective disaster management should focus on preparedness, prevention, and mitigation. It also requires national strategies and mechanisms for disaster management. Most importantly, it should involve the local people in national development and disaster management activities and provide public information and education programmes. Because of the linkages between disasters, poverty, and the environment, a coordinated approach must seek to resolve these issues within the context of national development.

a. Aftermath: Counting the Losses

Five months later, on 28th August, a National Disaster Committee chaired by the Prime Minister held a meeting at which all provinces were asked to submit damage assessment reports to the Cabinet Office. The National Commission for Development Planning had earlier asked for the same reports. However, there was no coordination and some provinces sent reports only to Cabinet Office while others sent theirs only to the National Commission. One province sent no report at all.⁽⁵⁾ Even the reports that were sent were either not comprehensive or incomplete. For example, no data was compiled on damage in squatter settlements although this is where most of the damage to residential structures occurred.

Lusaka Province, which came closest to presenting a report on damage in squatter settlements, identified the causes of the collapse of structures in these areas. The report explained that the Lusaka Urban District Council had acquired a piece of land south of Kamanga compound on which 167 plots had been created as an overspill for the displaced families. Those to be allocated plots were families whose structures were likely to collapse during the rains, and those who were to be displaced due to upgrading of roads in the area and the provision of water reticulation. The report went on to say that the Lusaka Urban District Council intended constructing concrete slab and core houses for sale to families. These are one-room houses to which families can add as and when they have the funds and time to do so, or as their family expands. Other areas where property had

6. LUSP/52/1/5 Conf. (September 1989), "Damage caused by floods", Lusaka Urban District Council, Lusaka.

7. See reference 2.

8. Davis, Ian (1984), "Prevention is better than cure", *Bulletin 18*, Reading Development Communications, Reading.

been created were Kanyama (250), Chunga (2000), Kamwala/Kabwata (400), and Kamwala (150). These were yet to be serviced.⁽⁶⁾ However, no funds had been set aside for reconstruction and rehabilitation.

Although the data on flood damage was incomplete, the scale of the devastation was evident. Thousands of houses, public buildings, schools, clinics, bridges, dams and other infrastructure had been destroyed or damaged and thousands of kilometres of roads were damaged. Evidently, all districts lacked the financial, technical and human resources they needed to cope with the disaster. The lack of national mechanisms for disaster prevention and mitigation exacerbated the situation. It is difficult to analyze the economic impact of the disaster because of the scarcity of data on its nature, extent and effects. The National Commission for Development Planning was the first to recognize this and attributed this to the failure of provincial planning units to provide the information requested.

It is also doubtful whether the central government had the capability to cope with the disaster. In June 1990 there were food riots; in September 1991 Zambia defaulted on a World Bank arrears payment and the international financial institutions and donor nations suspended aid and credit. With US\$ 6.5 billion foreign debt, Zambia was essentially bankrupt and the state could not respond efficiently and effectively to peoples' needs.

b. Picking up the Pieces

After the unprecedented rains, a relief machinery was hastily assembled to coordinate the relief efforts. The central government released some funds to "help" the flood victims. Other organizations, NGOs and donor countries contributed in different ways.⁽⁷⁾ However, there were no funds for rehabilitation and reconstruction. The Permanent Secretary for Lusaka Province, for instance, stated categorically that immediate attention would be paid to the desperate cases and ruled out the possibility of helping the homeless put up new structures, saying the money would be used to transport people to safer places and to provide food and other immediate requirements. However, most of the people did not want to move for fear of losing their plots while others did not want to move because of the effects such a move would have on them. Instead, they braved the heavy rains to rebuild their houses using whatever materials they could obtain. Others sought shelter with friends and relatives and waited for the floods to recede before starting the process of rebuilding their homes and lives.

The Lusaka experience has shown that local communities can provide homes through their own means even under the very difficult circumstances immediately following a disaster. Policies must therefore be formulated that take account of this ability for self-help and self-reliance. The experience has also shown that communities resist relocation, even on a temporary basis. It would seem that the question of land must be addressed in both short-term (emergency) and long-term shelter strategies.

The main objective of disaster mitigation is to reduce risk to a given community by protecting life and property. The protection of life involves not only preserving the physical well-being of the population, but also reducing the risk of social, psychological and economic deprivation that frequently follows disasters.⁽⁸⁾ An important component that is almost always forgotten or ignored in mitigation efforts is the need for community participation in the decision-making process.

9. Davis, Ian (1979), "The modification of unsafe houses following disasters", *Architectural Design*, Vol. 7.

10. UNDRO (1986), see reference 1.

11. GRZ (1971), Second National Development Plan (1972-1976), National Commission for Development Planning, Lusaka.

Following an analysis of past failures and successes, Ian Davis concluded that all projects should be undertaken with the active involvement of the local community both in the decision-making process and in the provision of personnel and materials. This activity, he argues, is of therapeutic value in the important process of rehabilitation as a community struggles to return to normality.⁽⁹⁾

Self-reliance requires the introduction of training and disaster awareness programmes so that the population in hazard-prone environments is aware of the risks that they face. It is only when they are conscious of the risks that they can institute the measures necessary to protect themselves. According to the United Nations Disaster Relief Organization, the lack of attention to prevention issues continues to be a major shortcoming, the implementation of which would ensure effective ways of protecting people and goods. This would in turn eliminate the need for some of the relief, and reduce substantially the losses and hardships.⁽¹⁰⁾

However, such a lack of policy response stems from the fact that, as most of these settlements are considered illegal and therefore outside the jurisdiction of the authorities, planning agencies do not feel obliged to provide the much needed infrastructure. In Zambia, for instance, the tendency has been to demolish the "offending" settlements or alternatively to ignore their existence, thus exposing the affected communities to health and other related problems arising from the lack of safe water, inadequate drainage and sewage systems, a lack of refuse collection and inadequate roads.

However, by the early 1970s, it had become obvious that the unauthorized settlements constituted not so much a problem as an asset, both in the physical sense of housing and self-help community facilities and in the social sense of being organized communities. The Second National Development Plan accepted the principle of squatter upgrading, although on a limited scale.⁽¹¹⁾ But for those settlements that were yet to be legalized, living conditions continued to deteriorate due to population pressure and inadequate infrastructure. Unsanitary conditions resulted in annual outbreaks of cholera, other water-borne diseases and malaria. Improvements in infrastructure, especially in sanitation, were urgently required. An organization that has responded to such a need is the World Food Programme, which initiated an environmental upgrading programme in Lusaka and included within this programme some illegal settlements which had not previously been included in official programmes.

III. ENVIRONMENTAL UPGRADING IN POOR URBAN COMMUNITIES: THE CASE OF PROJECT URBAN SELF-HELP

IN 1989, ZAMBIA launched a structural adjustment programme. Structural reforms were made to liberalize the economy and remove impediments to diversification and sustained growth. The programme removed price controls and subsidies on many basic foods and this resulted in large price increases. The unemployed, single-parent families and other vulnerable groups in squatter compounds found it increasingly difficult to feed their families adequately. Around half the population of Lusaka lives in illegal or informal settlements. Of these, one-third of the working age group are unemployed; a higher number of households are female headed. About 60 per cent of the

12. WFP (1990), "Project Zambia", 4343/Q, World Food Programme, Rome.

13. WPF (1992), "Project urban self-help", World Food Programme, Lusaka.

children suffer from malnutrition and the proportion was bound to increase with the removal of government subsidies and price controls.⁽¹²⁾ The World Food Programme embarked on a project in Lusaka to help cushion the effects of the economic reforms on the poorest people. The project offered food, tools and technical assistance as an incentive to community organizations in the illegal or informal compounds to develop self-help projects to improve their physical environment.⁽¹³⁾ Box 1 lists the settlements in Lusaka where the project was carried out. These 15 settlements have a total population of some 382,000 inhabitants and vary in status from those which come under the Lusaka Urban District Council to others which are recognized and others which are illegal.

Table 1a: The settlements in Lusaka where Project Urban Self-Help was implemented

Settlement	Status	Population	Workdays	Workforce
Kamanga	Recognised	12,000	83,600	220
Bauleni	Recognised	14,000	94,875	220
Kanyama	Part recognised	40,000	160,500	400
Ngombe	Illegal	12,000	33,500	110
Chainda	Illegal	16,000	46,000	150
Chibolya	Illegal	-	-	-
Kalikiliki	Illegal	16,000	39,500	130
John Laing	Illegal	-	-	-
Kasisi	Illegal	28,000	23,400	150
Chawama/JH	Legal and upgraded	80,000	129,250	400
Kalingalinga	Legal and upgraded	15,000	14,750	100
Garden	Legal and upgraded	14,000	38,750	120
Chaisa	Legal and upgraded	15,000	35,750	110
George	Legal and upgraded	90,000	126,750	400
Chipata	Legal and upgraded	30,000	38,350	120
Lusaka rural			80,000	260
Total		382,000	949,975	2,890

14. See reference 13.

15. See reference 13.

The Project Urban Self-Help (PUSH) was not intended to be sustainable in the long-term in its current form. By offering food, rather than money, it aimed to be highly selective, targeting the most needy and providing a safety net during structural adjustment.⁽¹⁴⁾ The increase in employment brought about by economic reforms should, in theory, reduce the need for this safety net. As such, PUSH was considered an important element in the process of making the Zambian economy self-sustaining in the longer-term.⁽¹⁵⁾

The project was initially recommended by a special emergency mission sent to Zambia by the United Nations Secretary-General in July 1989, following the floods. It recognized the need to ensure that whatever support was identified for the poorest did not constitute a hand-out that could be open ended and run counter to the objectives of structural adjustment. With this as a starting point, a structural engineer was commissioned by the World Food Programme to identify food assisted, labour intensive works that could significantly improve the living conditions in some of the squatter settlements, in particular in the areas of sanitation and the provision of access roads. Food as payment was acknowledged as the best means of targeting the

poorest members of the community, and of reaching women who, it was said, make up the majority of the workforce in community development activities. The project had the following objectives:

- * Infrastructure improvement (roads, drainage, sanitation, safe water, latrine construction, rubbish collection);
- * Medium-term employment for the poorest members of the communities, particularly women;
- * Improved nutrition for the poorest families; and
- * Improvement of environmental health to reduce the incidence of cholera, malaria and other water-borne or water related diseases in the compounds by helping the residents to carry out the improvements mentioned above.

In addition, the project had a secondary objective of empowering the residents, particularly women, to sustain the improvements achieved in the longer-term. This was to be done by developing their skills and self-confidence and by providing the necessary tools and equipment.⁽¹⁶⁾ The project had no quotas or disincentives to male participants but providing food is seen as a woman's role. For this reason 80 per cent of the participants of Project Urban Self-Help (PUSH) were women.

Another aim of the project was to provide the opportunity for some of the unemployed or underemployed to work for their own benefit and for that of their immediate communities, and also receive food aid assistance. The project had food resources, donated through the World Food Programme, to support 950,000 workdays for a period of 18 months starting October 1990; it employed 3,000 workers and provided food for a total of 15,000 people, including dependent children and old people. The project was to provide long-term benefits in terms of improving the living conditions of the people living in the 16 settlements.⁽¹⁷⁾ The table below gives details for individual settlement.

16. See reference 13.

17. See reference 13.

Table 1b: The different components of Project Urban Self-Help: the distribution of workdays between different activities

Settlement	Percentage share of total workdays for each settlement									
	Storm Drain	Rocky Drain	Water Supply	Dirt Road	Paths	Latrine Units	Cleaning	House Move Units	Laterite Collections	Agriculture Production
Kamanga	8.8	6.8	3.9	27.1	13.6	16.7	1.2	5.6	16.3	-
Bauleni	7.4	8.4	7.4	29.7	14.7	18.4	0.5	2.6	10.5	0.4
Kanyama	3.7	20.0	1.5	29.8	18.7	6.2	1.6	1.6	7.5	9.4
Hnombe	-	29.9	-	35.7	17.9	7.5	6.0	-	3.0	-
Chainda	-	26.1	-	34.7	17.4	8.1	3.3	-	2.2	8.2
Kalikilliki	11.4	15.2	5.1	30.3	5.1	6.3	3.8	1.3	2.5	19.0
John Laing	-	-	-	-	-	-	-	-	-	-
Kasisi	-	34.2	-	17.1	-	32.0	1.7	-	4.3	10.7
Chawama/JH	3.1	23.2	-	31.0	11.6	15.5	0.7	-	6.2	8.7
Kalingalinga	10.2	-	-	-	61.4	25.4	3.0	-	-	-
Garden	-	31.0	-	25.8	20.6	9.0	1.3	-	2.6	9.7
Chaisa	11.2	11.2	-	22.4	33.5	5.6	1.4	-	11.2	3.5
George	5.9	17.4	-	25.2	15.8	17.7	1.0	-	7.1	9.9
Chipata	15.6	10.4	-	26.2	15.6	19.6	0.5	-	2.3	9.8
Lusaka Rural	-	-	-	75.0	-	-	-	-	25.0	-

The scope and priorities for the work were decided by the participants themselves. This was expected to ensure that the work improved only community assets. Project coordination was the responsibility of a local NGO, Human Settlements of Zambia (HUZA) which had considerable experience with community participation projects. This NGO employed the project administrative staff and coordinated the many community based organizations which carried out the project on the ground.

a. Pit Latrines

The major cause of cholera, dysentery and similar diseases in the compounds is the contamination of surface water by sewage. In general, only 20-30 per cent of households had their own pit latrine.⁽¹⁸⁾ In rocky areas, these are often built above ground level allowing seepage into surface water. The project therefore planned to support the construction of 5,000 pit latrines. Unlike roads and drainage, which directly benefit entire communities, latrines are a private asset. Rather than make an outright gift, the project supplemented a family's efforts to construct a pit latrine in the following ways: technical advice on the design of the latrine, and the loan of tools and block moulds; a food ration for 25 days as compensation for earning time lost during construction; and the sale of cement and pre-formed slabs at cost price. The family had to raise the money for the materials, often the best part of a month's income, and carry out the construction of the pit and superstructure before the food was handed over.

A great deal of research has been carried out on pit latrine design. With the guidance of an external consultant, PUSH followed the WEDC design for a Ventilated Improved Pit (VIP) latrine. This uses a six cubic metre pit, circular concrete slab, vent pipe and fly trap. As the ground in Lusaka is hard (often too hard) and requires rock-breaking, latrines do not need to be fully lined. Normally, the top metre of the pit is lined with curved cement stabilized latrine blocks, ensuring the slab is properly supported. Homemade latrine slabs are often 50mm - 80mm thick. This requires two or three bags of cement.⁽¹⁹⁾ To get the project started, many pre-cast slabs were purchased from a local company manufacturing concrete pipes and roofing sheets. By using a vibrating table and strict quality control, the company was able to reduce the slab thickness to 15mm. The slabs were sold at cost price. The project also hoped to encourage the small-scale manufacture of slabs and blocks in the compounds themselves, thus creating employment and keeping money circulating in the community.

b. Impact of the Project

Given the nature of the project, there was direct environmental impact on the selected settlements and on the immediate surrounding townships. By upgrading the basic infrastructure, the project contributed significantly to improved sanitary conditions in the area. It provided direct long-term benefits in terms of improving the living conditions of 382,000 people living in the settlements. In addition, improved drainage and infrastructure in these settlements benefited the neighbouring housing areas that had suffered the overflow of waste water and sewage from the settlements. Project support for the construction of around 5,000 pit latrines has benefited 30,000-40,000 people, as the average household has six to eight members. At

18. See reference 13.

19. See reference 13.

the same time, the project is expected to have a catalytic effect on encouraging self-help activities so that in the future they can maintain their own improved living conditions without outside assistance. The most direct project output was the provision of a basic food ration to around 3,000 families, 15,000 individuals, who would otherwise have had an inadequate diet. As a result of the project, the food security of the households, and the nutritional status of the children, was enhanced. By giving women training and encouraging them to organize work for themselves, PUSH hoped to foster the self-confidence required to organize further community initiatives outside the project. It was expected that skills learnt through employment in the project would be useful to them in the future. Most importantly, the project proved to be very cost-effective, both at delivering food to families without the ability to support themselves and in constructing drainage and sanitation improvements. The project could therefore be replicated successfully in urban areas of many other countries.

IV. CONCLUSION

THE ABOVE PROJECT has shown the willingness of squatter communities to work in collaboration with outside agencies to improve their environment. However, the politicians and planning bodies tend to view urban development as their domain and are reluctant to share responsibility with the affected communities. The Zambian government has neither formulated hazard management policies nor set up the institutional frameworks for their interpretation and implementation. Zambia also lacks a national housing policy. The approach to the low-income housing problem has been an example of "reactive planning." The country was constantly involved in reacting to crisis situations with disjointed programmes whose methods and results are forgotten until the next crisis. This attitude of disjointed incrementalism in national planning is said to be symptomatic of a lack of a national urban policy, without which no systematic national housing policy can be formulated.

World trends suggest an increase in the loss of life, the destruction of physical property and the disruption of the social environment as a result of natural disasters. Most of the damage occurs on the urban margins because of the temporary nature of the structures and their location in hazardous areas. One key question then, is why does disaster mitigation remain low on the international development agenda and why are more resources devoted to disaster relief than to preparing for, and reducing the impact of, disasters. The reasons are said to be political.

At the simplest level, it is easier to generate public sympathy - and raise cash - for the victims of a disaster than it is to arouse interest in a mitigation programme. A number of development agencies rely on sympathy for disaster victims as their main means of raising funds, while governments in countries where disasters are common receive large amounts of aid for disaster relief.

At a more complex level, disaster mitigation has implications that are quite different - and more far-reaching - than those of disaster relief. First, relief by its very nature creates a relationship of dependence between the donor and the recipient. By contrast, mitigation aims to increase the self-reliance of people in hazard-prone environments - to prove that they have the resources and organization to withstand the worst effects of the hazards to which they are

20. *Bulletin 18* (1984), Reading Development Communications, Reading.

21. Cuny, C.F. (1983), *Disasters and Development*, Oxford University Press, Oxford.

22. Pantilec, J. (1990), "The link between reconstruction and development", World Bank, Washington D.C.

23. Kramer, A. (1980), "Low-income housing under normal and post-disaster situations: some basic continuities", in reference 22.

24. See reference 8.

vulnerable. In other words, disaster mitigation - in contrast to dependence-creating relief - is empowering. Second, any meaningful programme of relief or mitigation must address the needs of the poorest people. Throughout the world it is the poor who have the least resources on which they can call to rebuild a shattered house or buy food in a drought year; it is they who are at highest risk when disasters strike. A relief programme has to identify the groups and individuals in most urgent need of relief and direct its efforts towards meeting those needs, but a mitigation programme must raise the issue of why the poor are vulnerable - whether, for example, they live in hazard-prone localities because they cannot afford houses or land in more favoured, safer, areas.⁽²⁰⁾

If governments and donor agencies were serious about helping the victims rebuild their lives, houses and communities, could this be achieved with food, medicines, blankets and tents - the conventional package? Fortunately, there is some rethinking at least in some donor circles. According to Cuny, it was not until recently that the connection between disasters and development was recognized.⁽²¹⁾ Disasters were not seen as providing an opportunity to aid development, and development organizations often tried to avoid becoming involved. The basic problem was the conceptual failure by aid organizations to link disasters to development. Relief agencies tended to view disasters solely as emergencies. This meant that the best way to respond was to provide emergency medical assistance, basic goods (especially personal articles such as clothes and blankets) and temporary emergency shelter, usually tents. But the question is: can such aid address the root causes of the problem - poverty and lack of development? In the mind of Cuny, recognizing poverty as the primary root of vulnerability and disasters in the Third World is the first step towards developing an understanding of the need for change in current disaster response practices.

Few cities or provinces in the Third World can mount the same level of response as in Europe or North America. In such situations the central government takes operational responsibility. This was demonstrated in Zambia during the 1989 floods when all the districts looked to the provincial headquarters and the provinces looked to the central government for support. Yet, because of the weak economy, the centre could not respond effectively. The government, for instance, could not help the victims absorb economic losses and rebuild. This is where development agencies have a role; foreign reconstruction assistance can play a crucial role in disaster recovery.

The notion of a link between reconstruction and development has been gaining ground, replacing the old notion of competition for resources - in which recovery was seen as diverting funds from development efforts. Reconstruction after a disaster is viewed today as a process that can effectively unify development and recovery goals by improving the disaster resistance of physical structures, improving the standards of living, generating new jobs and creating new skills, and integrating them within the communities' social and cultural values and resources.⁽²²⁾ However, increasing the size and quality of dwelling units alone will not improve the occupants' standards of living, if done at the expense of more vital necessities. Kramer shows that access to jobs and services is more important to low-income populations than the quality of the structures they occupy.⁽²³⁾ And, according to Davis, mitigation planning should also have as an aim the protection and preservation of income - since, when this is threatened or eliminated, life itself is clearly at risk.⁽²⁴⁾

25. Martin, R. (1974), "The architecture of underdevelopment or route to self-determination in design?", *Architectural Design*, October, pages 626-634.

Physical structures identify neighbourhoods, embody a way of life, and express the cultural values of the community.⁽²⁵⁾ Thus, one important measure of a reconstruction programme's success is the extent to which a community can preserve its cultural identity and lifestyle. Urban ambience, historical heritage and traditional architectural values are frequently destroyed by disasters. But often, reconstruction programmes sacrifice these values too, damaging the social fabric of the community. Efforts should therefore be made to maintain as much as possible the cultural identity of communities recovering from disasters. And, most importantly, outside assistance, while welcome, should not take a leading role. According to Davis, there is a role for outside help but this is essentially one of support. If helpers cannot operate in this manner, he says, it is better for them to keep out. And rightly so. Indeed, why should the Zambian authorities, for instance, have insisted on ferrying victims to "safer" places when victims resisted the move? And why offer them food when the need was safe housing?