ON THE LINE

AN OPEN LETTER IN RESPONSE TO *CONFRONTING NATURAL DISASTERS AN INTERNATIONAL DECADE FOR NATURAL HAZARD REDUCTION**

The aim of this letter is to elicit a comprehensive interpretation of natural hazard vulnerability, and to encourage a wider involvement in vulnerability reduction. I do not doubt the need for the application of resources to lessen the impact of disasters on social and built environments, but I do have some questions about interpretations of impact and need, and the consequent application of the aforementioned resources.

I wish to suggest that emphasis on disaster magnitude, global vulnerability, and rapid onset disasters inadvertently obscures some key issues:

1) Expression of disaster magnitude reflects a privileged comparative view which tends to exclude disasters of a lesser degree, even though locally they can represent catastrophic impact. Magnitude thus tends to obscure the concepts of local experience, understanding, and context.

2) Vulnerability is similarly and essentially a local condition, and its understanding invariably ensues out of local experience and analysis. Though vulnerability pervades in a global sense, its understanding is not assisted by generalised "globalisation."

3) "Rapid onset" natural disasters may usefully delimit an enormous task identified for the Decade; but it is surely academic and, in current conditions, it is artificial. How can an *International Decade* ignore famine conditions now affecting at least 15 countries in Africa with a total area half again that of the USA? Furthermore, what is happening in Africa now is likely to continue for a very long time; it is merely a portent of what is to come.

Inclusion of "slow onset" disasters, whilst enabling the Decade to be more realistic, would at the same time facilitate understanding of those local conditions which contribute—the accretive factors of local susceptibility to disaster which collectively cause a condition of vulnerability. All disasters are slow onset when realistically and locally related to conditions of susceptibility.

Local susceptibility relates to both initial damage and to needs for survival in the aftermath. Because slow onset disasters display less of a distinction between onset, impact, and aftermath, they relate not only to damage to physical structures, but also to capacity of institutional systems, infrastructures, and management to survive and be the source at local levels of the survival of others. Survival is the essential prerequisite of recovery.

The application of scientific and engineering knowledge is a partial response only to the pervasive, indigenous, and accretive conditions that constitute susceptibility—the root of vulnerability. Scientific knowledge must surely include a greater measure of those sciences of sociology, anthropology, and geography, for example, so eminently represented in North America and which have been internationally at the forefront of field analysis and understanding of natural disaster impacts.

Finally, in addition to the application of known scientific and engineering principles, where these are relevant and useful, there must surely be the readiness to analyse and more fully understand at local levels how contexts may have contributed to the damages that have ensued. Social and economic disruption caused by disasters cannot be adequately assessed or understood without knowledge of conditions that prevailed before the disaster impact. The same is true of indigenous systems for coping in disaster aftermath and survival.

There could, in fact, be danger in the application of science and technology for disaster mitigation. A focus on building construction, for example, may inadvertently exacerbate disasters by shifting the zone of effect or by ignoring a zone of greater influence. There are numerous instances where one hand is paying increasingly for preparedness against what the other hand is causing. Technology serves often to exclude by its applications: those who are not able to partake of it become successively more marginalised, more deprived, and thus even more vulnerable.

Many large, and small, disasters recur regularly in countries where the range of choices of what to do about them is severely limited. Choice made possible by international intervention can lead to only temporary and often superficial "solutions." Disasters are caused as much by prevailing social and economic conditions as by severe natural extremes. It is the prevailing social and economic contexts that thus must be the target for our resources, not only the rare or unique disasters of large magnitude.

Mitigation is best achieved from within and by support of indigenous knowledge, rather than by external applications. We should not so much be seeking to *confront* natural disasters, as to explore them on their own ground.

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*The Decade was first proposed in 1984 by Frank Press, President of the United States National Academy of Sciences (see the ***Observer***, Vol. XII, No. 2, p. 2). ***Confronting Natural Disasters*** is the report of the NAS/National Research Council's Advisory Committee on the International Decade.