DECISION MAKING AND RISK MANAGEMENT *

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ABSTRACT

Risk management comprises four discrete (but related) types of concern:

"compensatory" and "prospective" anticipatory management, preparedness and

disaster response activities. Preparedness and response strategies are still

generally dominant concerns for disaster organizations. Anticipatory risk

reduction is far from being generalized and has low social and political saliency.

In the present paper we argue that this low level of saliency relates to the way

the disaster problem is conceptualized, the overemphasis on large disasters or

catastrophes, the low economic, social and political priority assigned to

"anticipatory" management, and the weakness of risk management proponents

within governmental disaster and development related institutions. Risk

management will only be achieved if these variables are radically transformed.

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SETTING THE SCENE: SOME BASIC CONCEPTS

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The current International Decade for Natural Disaster Reduction (IDNDR), as it's name suggests, places emphasis on the reduction of disaster impacts. More precisely, the idea should of course be the reduction of risk of disaster and, consequently, the level of losses incurred. "Reducing" disasters evokes the idea of reducing weight. That is to say, reducing something that <u>already</u> exists. In this case, a disaster. If we place the emphasis on "disaster reduction" we are basically concerned with ameliorating secondary negative aspects which may occur following initial disaster impact, whether this be in the early response, rehabilitation or reconstruction phases. On the other hand, if we look at the problem from the perspective of risk reduction or risk management, the emphasis should be placed on the amelioration of determined social (vulnerability) and physical (hazard) conditions which make a society propitious to suffer disaster. These activities are commonly referred to as prevention and mitigation, and are generally thought of as activities undertaken prior to disaster occurrence.

However, if we widen our concept and approaches, risk management can best be seen as a type of activity which cuts across the distinct disaster phases or stages ("before", "during" and "after" a disaster, to use a rather precarious and imprecise notion). (Lavell, 1996). Risk reduction prior to impact will comprise activities which search to reduce existing, prevailing and common hazards and vulnerabilities. This also comprehends postdisaster rehabilitation and reconstruction schemes which should be conceived as development processes which reduce possible future disaster impacts.

But, risk reduction is also a basis of disaster preparedness schemes, and an important aspect of emergency or disaster response. In these two contexts at the same time that there is an "acceptance" of existing "primary" risk factors¹, which will determine "primary" disaster impacts², actions are taken which reduce the possibility that "secondary" risk factors appear following impact. Here we refer to such contexts as the possible proliferation of disease vectors, lack of access to food and potable water, the lack of adequate shelter, looting and

violence etc. That is to say, new risk factors that arise as a consequence of disaster impact, and which can be anticipated through adequate preparedness and response activities.

In summary, <u>risk management</u> can be seen to include a series of differentiated activities. Prevention and mitigation <u>per se</u> we reserve for those activities that attempt to reduce the probability of primary disaster impacts. Whilst, preparedness and response strategies search to reduce "secondary" disaster impacts, given the presence of prexisting hazards and vulnerabilities which have not been reduced by prevention and mitigation activities.

Weaving the argument a little finer, we can go so for as to assert that prevention and mitigation of <u>disasters</u> comprise, <u>sensus estrictus</u>, "compensatory" mechanisms or reactions to existing unacceptable risk conditions built into society due to inadequate development processes. Thus, prevention and mitigation activities are one type of risk management, geared up to resolve or ameliorate <u>existing</u> problems. That is why we call them <u>compensatory</u> mechanisms. These signify a necessary and, at times, high economic cost to society. This, of course, does not signify that the cost is not worthwhile paying if we compare it to what disaster suffering, relief and reconstruction cost in the affected areas. But, in the end, it is a compensatory cost to be payed for "errors" (voluntary and involuntary) in our processes of adaptation to our environment.

On the other hand, when we plan for new population, productive and infrastructural developments, and we insist that "risk" should be a major consideration in the planning and execution of these schemes we are, infact, dealing with the essence of what risk management should be all about. That is to say, we are not employing risk management as a compensatory mechanism, but, rather, as a forward looking mechanism that will guarantee an adequate relationship with our environment (natural and built), such that the idea of future disaster is less probable, or not even a concern. This is a very different ball game to disaster prevention and mitigation activities seen as compensatory

mechanisms. Both in terms of temporal perspectives (look forward, not back) and, also, economic and political costs (lower and not higher). This "prospective" approach clearly brings us very close to the modern dominant development concerns for environmental management and sustainability.

Let us now return to the IDNDR and its objective of "disaster reduction". In principle, obviating the clear conceptual confusion this term evokes, disaster reduction could be conceived of in terms of all or any of the facets of risk management we have introduced above: compensatory prevention and mitigation; forward looking environmentally sound risk management; preparedness and response activities; and sound development based, risk reduction, rehabilitation and reconstruction schemes. All of these could contemplate engineering, logistical, behavioural or nonstructural measures. Moreover, the schemes could be promoted at a centralized (national) or descentralized (local or regional level) or through a mix of these approaches.

However, if we take the term "disaster reduction" <u>literally</u> (it is not the same as saying reduction of the risk of disaster, or reduction in the numbers of disasters, for example) then only preparedness and response activities would enter the formula as in order to reduce something it has to already exist. Here, in fact, despite the clear intention of the Decade to promote the other anticipatory components of risk management, the reality is that a good part of the efforts promoted by different social actors during the last ten years have concentrated on supporting or improving these preparedness and response activities.

Prevention and mitigation activities related to the reduction or amelioration of existing hazards and vulnerability, or risk management procedures introduced into development planning and projects still remain, in general, the 'orphan' of the Decade, succesfully promoted by few local, national or international organizations. The number of convincing academic and technical arguments in favour of these activities, and in favour of a more balanced approach to risk management, far exceed what has been achieved on the ground. Anticipatory

risk management (whether it be "compensatory" or "prospective") is still, in general, clearly "off" the social and political agenda. Why this is so and what can be done to change the situation are the topics we attempt to deal with in the rest of this document.

SOME FACTORS WORKING AGAINST "COMPENSATORY" AND "PROSPECTIVE" ANTICIPATORY RISK MANAGEMENT

Compensatory and prospective risk management invoke different economic, social, environmental, institutional, and political contexts and parameters. These differences must be taken into account in any search to explain the low level of social and political saliency and commitment to one or another of these risk strategies. And, in order to identify strategies for increasing saliency and commitment.

From the outset, we should recognize that the promotion of risk management is essentially a social and political, as opposed to a technical problem. Here, it is clear that from a technical and planning perspective sufficient, well founded knowledge (and options) exist to substantiate successful risk management schemes in many parts of the world. This knowledge ranges from compendiums of information on hazard occurence and parameters, through vulnerability analysis to concrete structural and non structural policy instruments. (See Tobin and Montz, 1997 and Smith, 1996 for excellent bibliographical coverages of these topics).

Important amounts of finance have been dedicated over the last three decades to the analysis of hazards, less so to the analysis of vulnerability and literally hundreds of texts have been written on risk management principles and options. These latter include considerations which range from the use of technological "solutions", through land use and territorial planning schemes, legal norms and development planning principles related to vulnerability reduction and the alleviance of poverty. We certainly do not lack sufficient technical and scientific knowledge in order to make serious inroads into resolving the problem. But, it

should be clear that science and technical expertise are necessary but not sufficient conditions for promoting and implementing anticipatory risk management, particularly in the developing countries. Such activities, to the extent they require the assignation of scarce resources, are an economic problem. To the extent they require a decision to be taken, and that decision establishes competition with other critical areas of social concern, the problem also becomes social and political by nature.

Recent history, in particular, is replete with problems for society that have had to await their moment such as to be transformed into real "social" problems. That is to say, problems constructed socially and politically in such a way that they demand a solution and are the object of clearcut policy dictates (at an individual, community, private or state level).

In the case of anticipatory risk management, it is clear that in the majority of developing countries this has not achieved the status of a "totally constructed social problem" (see Stallings, 1994). No one would deny that a widescale problem of risk and disaster exists, but this has not been assumed in any meaningful, widespread way be governments, or society in general.

Here of course it should be clear that technological and other anthopogenic, hazards (the Bhopals, Chernobyls, smoking induced illness, pesticide misuse, transportation accidents, etc) have been far more susceptible to policy dictates and political concern, than has been the case with the, at times, inappropriately termed "natural hazards" and "disasters". Why this is so is not hard to discern. But this is beyond the scope of the present discussion.

This overall context exists at a moment when, symbolically, we are making the transition to the next millenium. And, according to Niklas Luhman (1992), in his now classic text on the **Sociology of Risk**, the next century may well be referred to as the "**Century of Risk**". One of the primary social dilemmas to be faced will be how and against whom risk is distributed.

Let us now succintly debate some of the major factors we believe work against a more permanent and widespread commitment to anticipatory risk management and, conversely, in favour of the still dominant emphasis on preparedness and response activities.

Disaster as a product or a process

Despite the fact that disaster specialists are more and more aware that disasters represent an actualization of preexisting risk conditions in society, and that they should be looked at as a process, rather than as a product, for the average politician or lay person this is not the case. Or, if it should be the case, it is more "convenient" in general to ignore the fact and continue to see disasters as disrupting and destructive ocassions that can be explained by the presence of extreme physical events, and that demand a humanitarian response from governments, international agencies and other organized groups. Disaster as a product is far more compelling than disaster seen as a process, where the essential problem is the social mechanism by which risk is constructed, particularly as regards the increase in human vulnerability. Disaster is real, palpable and visible and for ethical, moral, social and political reasons demands an immediate response. Risk is latent, accumulative, obscure and, in many ways, unpredictable in terms of when it will be "actualized" and transformed into a real disaster context. As such, risk reduction is, in many cases, postponable or simply ignored as an option. This is particularly so with what we have termed "compensatory" risk reduction or management.

From a governmental perspective, where we are dealing with periods in office which, in general, run from 4-6 years, the tangible and visible social and political benefits of dealing with disasters once they occur far outweigh the intangible or invisible benefits accruing to anticipatory risk reduction. Seen from this perspective, it is politically convenient for disasters to still be portrayed popularly as sudden, uncontrollable and unpredictable events, essentially caused by the forces of nature, or divine acts. On the other hand, compensatory risk

management, apart from being seen to be expensive and not to offer a very favourable opportunity cost equation when other more politically visible uses for scare funds are considered, also requires the recognition that risk reduction is intimately linked to poverty reduction and development (see Varley, 1993).

Once the myth that disasters are unilaterally caused by physical events has been dispelled, and the role of human vulnerability is emphasized, then the problem of risk reduction automatically becomes a political, as opposed to a technical problem. It requires dramatic changes in access to income, resourses and power which undoubtedly challenge the status quo and make it somewhat politically unsavoury. Even such obvious risk reduction strategies as land use planning and controls, environmental management, the strengthening of local community based organizations and empowerment of local groups are politically delicate matters in many contexts. Not surprisingly, where risk management is promoted much of it still involves high cost technological solutions, or comes in the politically delicate period following a major catastrophe, when a "window of opportunity" is opened for its promotion. Lower cost, nonstructural, permanent measures tend to be politically more costly than the sporadic high cost technological solutions.

Disaster seen as a process requires that these be considered as "unresolved development problems". (Wijkman and Timberlake, 1984). Disasters seen as products, facts, situations or contexts allow us to "forget" the essential causal factors and concentrate on resolving the disruption and destruction associated with them. The fact that investment in response is basically unproductive and investment in risk reduction, productive, is of little concern to governments. Political and economic opportunity cost considerations are likely to carry far more weight than well elaborated cost-benefit equations. Governments clearly do not take decisions using the same criteria as the private sector or the public in general. Their decision making horizon runs from 4-6 years and their concept of costs and benefits is subject to criteria which do not materialize over periods

of 20-50 years. (See Lavell, 1994, for a consideration of some decision making processes in disaster prevention).

If we drop down the scale of social analysis to the community or individual level other considerations emerge which help explain why not much social pressure is exerted here to stimulate a change from disaster response to risk reduction.

Most of those that live in the riskiest conditions are poor, verypoor, or destitute. Vulnerability and poverty are linked, although not the same thing conceptually. For the poor the decision making time horizon is extremely short - hours, days or weeks. Risk of disaster is in general a low priority concern, although risk perception may be very high. Disaster may occur tomorrow or within five years, or, if lucky, never. On the other hand, the daily risks associated with unemployment, lack of income, violence, drug abuse, sanitary and living conditions are far more pervasive, absorbing the energies and attention of the population. Pessimism and resignation as regards disaster risk is the result of the need to choose between resolving daily problems of existence or paying attention to a latent, future problem of disaster. (see Maskrey, 1989). The acceptance of disaster risk has been confirmed in the many documented cases of high risk communities that refuse to be relocalized to safer areas. From the community perspective such a move would dramatically alter their social, economic and cultural mileu, distancing then from existing employment opportunities, and destroying their existing community and social relations. Moreover, for many poor people a type of rationality has been found whereby disasters are in fact "opportunities", as in their aftermath they receive financial or material support otherwise not available.

Large, medium and small scale disasters: an inadequate balance

Kenneth Hewitt (1983), in his now classic criticism of technocratic approaches to disasters, commented that large scale catastrophes had come to typify or epitomize the problem of disaster. Although one certainly can not ignore the

large scale, tragic events that occur with surprising frequency at a global level, these have most certainly distorted or distracted from the essential problem of risk in society. Neocatastrophism has revived the interest in cataclysmic events.

However, today there is more and more evidence that the regular and more pervasive small and medium scale events, which rarely make news headlines or get reported on CNN, have as great an accumulated impact on people and development, as do the large scale, once in a while events. Moreover, these are the events that have increased dramatically in numbers over the last decades, and many are probably precursors of larger future disaster occurences, given the rapid increase of population and vulnerability near to hazard focii. To get an idea of the proportions involved, the DESINVENTAR data base on the ocurrence of damaging events, constructed by the Latin America Network for the Social Study of Disaster (LA RED), for eight Latin American countries to date, has shown that for every large scale disaster (lets say over 100 deaths), there are literally hundreds not to say thousands of small and medium scale events.

Just one country example will help to illustrate this point. In Costa Rica, between 1988 and 1998, only three medium scale disasters have occurred, associated with the hurricanes Joan (1988) and Cesar (1996) and the Limon earthquake (1991). None of these events had a death roll above fifty persons, nor direct economic losses exceeding 250 million dollars. On the other hand, the DESINVENTAR data base registers over 1800 damaging events, of all sizes, occurring during the same period. The death roll associated with the sum of these smaller events approximates that associated with the three more well known disasters. The economic costs and impact of these smaller events has never been calculated however.

What is the relevance of the "disproportionate" attention given to large scale events, as regards the disaster response versus anticipatory risk management balance?

Here, we would argue that very large scale events highlight humanitarian needs, tend to reinforce the idea that disasters are caused by large scale, intense, uncontrollable physical phenomena, and, in consequence, hide or relegate human vulnerability as a major contributing factor. A corollary of this is that when faced with extreme physical events (particularly earthquakes, hurricanes and volcanic activity) there is probably a tendency to think that prevention and mitigation is almost impossible and that prediction, preparation and response are the only real alternatives. So, if disaster is "inevitable" why invest in trying to do something to avoid it?

Of course, if we are conjuring up in our minds the idea of 8.5-9R earthquakes, eruptions of the magnitude of Vesuvius or Krakatoa, Pinatubo or Mr. St Helens, or scale 5 hurricanes or tornadoes there is probably something to support the argument given present levels of acceptable risk protection. But, we well know that although this type of event is what conjures up the idea of disaster or catastrophe, they are far from being the norm or typical as far as disasters go. In general, disasters are far more "banal" events. Or, many relatively large disasters are associated more with human vulnerability than with large scale physical phenomena as such. Perhaps one of the more pervasive modern day characteristics of disasters is that they are more and more associated with relatively small scale or low inensity events. Risk, and the levels it attains is clearly a function of the interplay of hazard and vulnerability. In the event of relatively low scale hazards, very high vulnerability levels can cause major disasters, and viceversa.

An over emphasis on large scale disasters does little to help promote risk management. Infact, it helps to assure that "disaster" as such dominate the discussion, relegating risk to a secondary position in the conceptual debate and in terms of the practical conclusions that derive from this.

"Compensatory" and "prospective" risk management

Earlier in our paper we have drawn a distintion between risk strategies and instruments which attempt to deal with existing problems, built up over the last years, decades, or ever centuries (compensatory risk management), and those that look to the future, related to new societal developments, programmes and projects (prospective risk management). The former is probably what in any real sense, disaster prevention and mitigation refers to. The latter can best be conceived of as a rational way of promoting adequate relations and adjustments to our environment. As such, rather then seeing it as "disaster" risk management, it is probably more correct to see it is a dimension of environmental planning or management, intimately related to the dominant development concern for sustainability. Unfortunately, to date, compensatory risk management has dominated the vision of scientists, politicians and the public in general. Such a "compensatory" approach is really only the equivalent of a doctor treating a patient with early or advanced signs of cancer, ephysema or any other disease which, if untreated, will probably end up with the patients death - a personal and family "disaster".

Curative (or compensatory) prevention and mitigation of disasters should, of course, be promoted. But, we should also accept that given the wideranging level of existing risk in society (particularly in Third World societies), any serious inroads into the problem is extremely difficult, costly and, as we have argued earlier, of low political and social saliency, especially if it is directed in favour of poorer, "low productivity", and politically disempowered groups.

On the other hand, although it is clear that "prospective" risk management is the subject of a good deal of debate, it has taken a backseat as compared to compensatory management strategies and instruments. If we consider here that during the next 35 years population numbers and infrastructural investment will double in Latin America and the Caribbean, the over concentration on compensatory mechanisms is a clear error. Prospective risk control is obviously a clear priority if we are to avoid creating the same conditions of vulnerability for the new population and infrastructure, as already exists at present. From an

economic and political perspective, prospective management is a completely different ball game to compensatory management, and certainly a more attractive proposition economically and politically.

The institutional and interest group status quo

Compensatory and prospective risk management, as we have defined these in this document, are clearly different, and to a great extent involve different social actors and expertise, as compared to those risk management components relating to disaster preparedness and response. A major problem with the promotion of the former aspects relates to the lack of institutional, normative and legislative structures which serve to promote these activities in an integral manner. This lack merely reflects the secondary status of such activities in the mentality or problem agenda of policy entrepreneurs, not to say politicians.

A quick review of existing disaster related governmental institutions in Latin America and the Caribbean, clearly shows the dominance of those whose major mandate is disaster response (and more and more, disaster preparedness). Many of these institutions are updated, "modernized" versions of institutions created some 20-30 years ago in the region. (Lavell and Franco, 1996). The legistative support for these institutions may have changed or been updated, but it has not been radically transformed in a way which is consonant with the changing conceptual and paradigmatic base of disaster and risk analysis. (See Buckle, 1990).

In general, today, we have a group of institutions, essentially created to deal with disaster response which, under the pressures to move into the prevention and mitigation areas, and in the absence of other more appropriate structures, search to "add" these tasks on to their functional role, in a syncretic fashion.

A caricuture of what has happened can be described in the following way. Many institutions open up "Prevention and Mitigation" departments in order to keep in

tune with current trends and concerns. But, in the end they find they are economically, potitically and legislatively incompetent to take on the task of promoting and instrumenting risk reduction strategies. Little legislation exists which establishes "prevention and mitigation" as a national norm or policy dictate. The risk reduction strategies and activities that are promoted fall outside the competence of the national disaster institutions. These are generally undertaken by numerous private and public sector actors, but with a lack of general norms or national policy statements on the matter.

Given this situation, the national disaster institutions have "found" an interesting way out. As they are in general incapable of really promoting anticipatory risk reduction, they now tend to use the words prevention and mitigation to describe their activities in the area of disaster preparedness. So, the essence of prevention and mitigation is transformed for pragmatic reasons into preparedness activities (early, warning systems, emergency plans, etc.).

The reasons for the existing situation as regards "disaster institutions" are probably not difficult to identify. Status quo factors, dominant professional interests and the defense of established functions, and the low political saliency of prevention and mitigation can probably be included in the list. Established and dominant "disaster actors" do not in general work together as a common front, but rather propound and defend partial views on the problem. Disaster reponse, preparedness, and structural prevention mechanisms are backed by for more influential political caucuses than are risk reduction strategists who support and argue for fundamental social and political transformations, and a greater emphasis on nonstructural solutions. (See Blaikie et al, 1994; Hewitt, 1997).

Despite the increasingly convincing arguments that risk reduction is essentially a problem of styles of development and intimately related to environmental, sustainability, and territorial management and planning concerns, prevention and mitigation is still dominantly expounded as if it were independent of these

concerns. Few environmental or sustainability experts, and the political caucuses they represent or support, see disasters or disaster risk as a problem they can relate to. The dominant view is still that disasters are products, that demand a response, and not processes that demand anticipatory intervention. Given this it is not surprising that influential and potentially powerful political or technical allies are not found for prevention and mitigation. Politicians, environmentalists, sustainability proponents, development experts and others, probably continue, in general, to consider disasters to be somebodyelses problem - generally those who respond to these once they occur.

GETTING RISK MANAGEMENT INTO THE DEVELOPMENT DEBATE AND ON THE SOCIAL AND POLITICAL AGENDA

The four contexts we have outlined in our previous section militate against a more concerted and generalized effort in the risk management field. The contexts discussed comprise conceptual, technical, social, economic, political and institutional issues. None are easily rosolved. And, no easy path can be envisaged as regards the promotion of a radical transformation in management paradigms. But, we believe, certain changes, new arguments and approaches must be stimulated if we are to start the ball rolling in the future. Let us now briefly examine some of the major requisites for change which derive from the four interrelated contexts we have discussed previously.

Conceptualizing the problem correctly

A first major requisite is the promotion of a significant change in the way disasters are conceptualised and problematised amongst policy entrepreneurs, politicians, environmental management and sustainable development experts. Here, it is not sufficient that the "disaster specialist" community manage an adequate conceptualization at the problem. Disaster specialists rarely take fundamental decisions. They basically discuss, devise and propose solutions.

Getting these on the political agenda requires allies. And, these allies must be political, in the broadest sense of the term.

The essence of this conceptual transition is already well know to many students of the problem.

<u>Firstly</u>, we need to make "risk" the centre of our analysis and discourse, and not "disaster" as such. Disaster, as cancer, is the end of a process, not the beginning. Treating cancer and disaster is obviously necessary, but certainly wont get us very far in avoiding it occuring in the first place. Placing the emphasis on "risk" will help to highlight ongoing social processes which transform natural or technological phenomena into hazards and create and increase human vulnerability. Finally, it may get through to decision makers that ongoing processes are creating more and greater risks, and that responding to disasters is going to be a growing and never ending task if no concerted attempt is made to interrupt the process.

<u>Secondly</u>, we must ensure that risk and disaster are not portrayed as problems that are separate from normal life, or created by autonomous mechanisms outside of the regular functioning of society. Risk (and disaster) must be projected as a "derived" problem, the product of ongoing social processes, and, thus, intimately related to ongoing development schemes. Moreover, disaster must be conceived as the culminating point, the final crisis, which results from an inadequate relationship with our environment. As such, it has to be constructed conceptually, socially and politically as an environmental problem, a clear challenge to sustainable development. (Lavell, 1996 a).

In sum, we must assure that the problem of risk and disaster is not seen to be a specialised problem for "disasterologists", but rather as a problem for environmental and development experts and other more potent academic and political caucuses in todays world. We need to "despecialize" and search for holistic approaches to looking at and portraying the problem. This will inevitably

require more collaboration and less competition among different disciplinary based "disaster specialists", and more linking to other development oriented specialisations.

<u>Thirdly</u>, we should attempt to promote a vision of disaster which does not place a good part of the emphasis on magnum disasters or catastrophes. This emphasis has obviously derived from the predominant historical interest in disaster response as a topic of academic enquiry and institutional concern. Catastrophism and neocatastrophism, as opposed to uniformitarianism as scientific concerns, have also helped place the emphasis on large scale, cataclysmic natural events.

Risk exists on a widespread basis, and at very differing levels. When this is "actualized" we are faced with a very wide range of damaging events. Some catastrophic, far more disastrous, and infinately more of a small scale, with very localised impacts. But, all are part of the same process, and have the same basic ingredients - the prior presence of hazards and vulnerability.

If it is true, as we have asserted above, that concentration on large scale events tends to draw attention to the need for prediction, early warning, response, and hazard magnitude, whilst distracting from human vulnerability concerns, we would also assert that a more widespread and balanced concern for the full range of damaging events would go a long way to highlighting risk management concerns and options.

Small to medium scale events are obviously far more recurrent and spatially dispersed then large scale disasters or catastrophes. Many are suffered at a local or community level, and attract very little attention from national authorities and rarely any from international disaster organizations, whose <u>raison d'etre</u> is large scale humanitarian crises. But, the thousands of small scale incidents are what most affect the different zones and population groups of a country or region in any one year. Morever, many recur in the same areas. These events

have a series of salient characteristics which make them propitious to risk management practices, and which serve to reveal how disaster is constructed.

Firstly, the role of human vulnerability in the configuration of risk is very obvious. Secondly, in many of these incidents it is clear that the hazards involved are not in any real sense <u>natural</u>. Rather, many derive from inadequate environmental practices-deforestation, destruction of waterbasins, agricultural malpractice, slope mining, inadequate urban infrastructure, etc. as well as inadequate controls on industrial production and the distribution of goods and persons. These hazards are "socionatural" and "anthropogenic", rather than natural, as are those in the case of the majority of large scale disasters (here we are obviously excluding a consideration of war or other forms of social strife). (Lavell, 1996 a).

With limited observational training, it is not difficult to perceive that a good number of these small scale events are the product of human vulnerability and environmental mal practice. They are also more clearly apt for anticipatory risk management practices than are potential large scale disasters, given the level of economic and human resources required.

The promotion of a greater interest and concern for this type of event could reap dividends in the short and medium term, stimulating local and community participation, as opposed to the normally highly centralized, national level action required to face the risk associated with future large scale events. Clearly, in order for such a change to take place, descentralization, strengthening of local level government, and empowering of communities are necessary prerequisites.

Changing the balance between "compensatory" and "prospective" risk management

Allthough we cerainly would not argue for the ingnoring of "compensatory" risk management practices, we do believe that more dividends can probably be made by increasing the attention given to the promotion of "prospective" management.

In the former case, our attention should be concentrated on strictly established priorities avoiding the unproductive dispersion of promotional effects. Blaikie et al (1994) have suggested, for instance, that attention should be focussed on the most vulnerable groups in society and on strategic social and productive infraestructure. Moreover, maximum efforts should be made to take advantage of the "windows of oportunity" that fleetingly open up following disasters, in the promotion of risk management.

But, in general, we should be giving more attention to the future, and to what is going to happen with the doubling of population and infrastructure that will occur over the next 35 years in the region. Much of this growth will occur in rapidly growing small to medium scale cities which may well be more susceptible to risk management initiatives than are the large cities and metropolis which concentrate a good part of societal risk today and which are very difficult to get to grips with.

In order for prospective risk management to catch on it is clear that disaster risk as a concern cannot be an object of specialized disciplinary or institutional structures. The problem must be assumed by a broad range of social or institutional actors in their project planning or development activity cycles. Urban, regional and sectorial development authorities, environmental planners, private sector groupings, community level organisations and many others must be convinced that risk analysis and control are a productive and necessary development concern and priority. Risk and disaster must cease to be seen as a special and specialised problem dealt with by "disaster experts". A concern for risk must be built into all ongoing development practices, and must be seen to be an essential component of sustainability and environmental management in the future.

Institutional change and new policy entrepreneurs

Changes in, or the creation of new institutional structures for promoting policy and strategy instruments relating to anticipatory risk management will obviously not occur prior to the achievement of a radical change in the concept and the priority assigned to these aspects by governments and other relevant social actors.

However, some very interesting developments have taken place recently, particularly among international organizations and agencies concerned with risk and disaster. These have augered greater commitment to prevention and mitigation, and a clear tendency for these aspects to be considered as part of the development and environmental problematics. Typical of these changes are the developments within UNDP; the International Federation of Red Cross Societies, GTZ, ECHO, DIFID-UK and OAS. Unfortunately, to date, a cursory look at developments within national disaster organizatons in Latin America and the Caribbean, would suggest little change that is not promoted by internationally financed projects. That is to say, little firm or growing national political commitment to the topic.

It would seen clear that the arguments favouring the promotion of anticipatory risk management principally circulate in the inner circles of the disaster community as such. Here, some are convinced of the need, and others not. The latter being more inclined to maintain the status quo and the emphasis on prediction, preparedness and response.

On the other hand, there is not much evidence to suggest that the risk reduction message has got through in any convincing manner to policy entrepreneurs linked to sectorial, territorial and environmental development at a national, regional or local level. Far more needs to be done to get through to these sectors with convincing arguments as regards the economic, social and political benefits accruing to risk reduction. And, as regards the links to and relevance

for sustainable development. In essence, it is probably true that a good part of the discussion and writings on the topic are a type of "preaching to the converted", but not to those capable of taking decisions and changing policy directives. Little has been done to work politically on the theme as compared to the emphasis on scientifically and technically sound, but politically spurious arguments. We are still not getting very many politicians, environmental or developments experts attending disaster seminars or conferences, studying on academic programmes related to risk, or reading disaster texts.

If the idea of risk reduction were to "take-off", following a concerted effort at consciousness raising and problem building among policy entrepreneurs, the institutional structures we will require are very different to the centralized, sectorialized disaster organizations we have today. It is clear that we cannot build into existing institutions, new functions in a syncretic fashion. The institutions we need to work on anticipatory risk reduction are basically different to existing disaster institutions. A new intersectorial, territorially descentralized structure will be required, supported by national policy dictates and norms, and participative of governmental, private sector, local and community level organizations. A system and not on institution. Risk is the product of the intersection and interplay of numerous processes related to existing development principles and models.

Perhaps in Latin America, the closest we have come to innovating in terms of institutional structures has been the case of Colombia, particularly between 1988 and 1995. (Ramirez and Cardona, 1996). But, the Colombian National System for Disaster Prevention and Response also serves to show the need for paradigmatic consistency and permanent political commitment, factors which have clearly changed over the last three years with a consequent negative impact on the existing structure.

NOTES

¹ Here we refer to existing social vulnerabilities and hazards the product of prevailing natural and social conditions and processes.

² Inmediate or direct impacts that occur with disaster onset (deaths, injured, destruction of buildings, ect.)