

Annex 4

GVR

Global Assessment Report on Disaster Risk Reduction

2015

FUTURE CHALLENGES OF DISASTER RISK MANAGEMENT

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I. Background

An apparent disconnect exists between stated progress in international, national and local efforts in disaster risk reduction on the one hand and continuously rising disaster risk on the other. While loss trends from disasters associated with physical hazards such as floods, earthquakes, droughts and cyclones have been clearly significantly and continuously on the rise – at least in economic terms – even more worryingly, the risk of loss of life and of assets in the future is growing far more rapidly. In recognising this disconnect we recognise a challenge for disaster risk management and reduction: if the inputs and even outputs are, as we claim, increasing in quantity and quality, why is the outcome and impact of our efforts not perceivable in terms of a reduction in overall risk and disaster losses?

This question was explored in a meeting in spring 2013, held in San Jose, Costa Rica, that convened around 20 known and experienced practitioners, academics and managers in the field of disaster risk management from around the world.

The resulting analysis offered one central explanation of the identified contradiction- the existence of a clear imbalance between certain achievements with the reduction of existing risk (corrective practice) and a clear lack of prevention of new risk due to increases in the location of people and assets in hazardous locations and associated societal vulnerability (prospective practice). The propositions that derived from this central explanation and discussed at the meeting were:

- The need for a significant re-conceptualisation and reframing of disaster risk and disaster and the ensuing disaster risk management practice.
- The identification of incentives that may constitute tipping points for behavioural change and risk-sensitive choices at a significant scale (increasing the political, social and economic saliency of DRM).
- The notion of transformative development and the positive externalities it signifies for risk reduction and control and increased resilience.
- The implications of the findings from the above three concerns for governance: structural institutional arrangements and agency within and between different social actors.

These propositions were then further taken up in more detail in four meetings held during the first semester of 2014, each hosted by a different partnering institution, renowned for its ability to contribute new and relevant perspectives in social, political and economic analysis and management practices. Taking these critical themes as a starting point, four meetings were arranged between March and April 2014 with the presence of up to 20 invited experts at each meeting. The first meeting on concepts was held at the Indian Institute for Human Settlements in Bangalore, India; the second on saliency at FLACSO in Costa Rica; a third on governance at the Lee Kuan Yew School of Public Policy, Singapore; and the fourth thematic session was held on transformation at the University of Ghana, Accra in coordination with the Peri Peri disaster study network. A fifth summary, closing meeting was held under the auspices of the Florida International University, Miami.

A fifth meeting, hosted by Florida International University, was held in May 2014, to bring together a selected group from the meeting series and consolidate the main findings and recommendations. The series of meetings was co-financed and sponsored by the United

Nations Development Programme in partnership with UNISDR. The outcomes of this series constituted a major input into the 2015 Global Assessment Report.

The meetings were organised in an as informal and yet structured manner as possible to allow a free flow of ideas, challenges and critique. Discussions were held under the 'Chatham House rules', i.e. ensuring confidentiality with regard to individual statements and in any related documentation. Contributions made by participants were neither quoted in association with their affiliated institutions nor without prior consent. These principles were suggested to ensure an open and unhindered exchange of experience and thoughts.

Participants were invited on the basis of their expertise (rather than their institutional affiliation), be it through their practical engagement in development sectors or business or due to their extensive academic and/or policy experience in disaster risk management and related areas (such as economic and social development, environmental management, trade and business development, political and institutional economy). An adequate mix was sought of senior, mid-level and younger professionals who have made a clear contribution to advances in the understanding and debate of the central issues. In addition, an adequate regional balance was also sought and an adequate representation of persons from the academic, private and practitioner sectors.

In the run up to each meeting, participants had to commit to engage with the questions at hand through short (2 page maximum) written reflections and statements. The material collected in this manner informed the debate at the meetings and allowed for the group to focus on the key challenges identified in the preparatory phase. Further inputs were provided in the form of literature reviews and selected case studies tailored to the respective themes of the meetings.

Beyond the substantive discussion and the advance this was to signify in conceptualization and framing of the problems, meeting attendees were expected to offer clear exemplifications and cases of successful advance and practice that could illustrate the principles posited in the meetings.

Each meetings lasted 2-3 days with each participant having the opportunity to actively participate in the open discussion facilitated by experienced moderators. In order to imbue the meetings with a sense of continuity each meeting was conducted with the presence of some of the persons present in the original 2013 meeting.¹

¹ The following summaries are topline reflections from the discussions. For full notes of the meetings, including agendas and participant lists, please contact Bina Desai at desaib@un.org.

II. Critical concepts and notions for better understanding disaster risk and disaster risk management

1. Prologue

In April 2013 the Latin American Social Science Faculty (FLACSO) and the UN Office for Disaster Risk Reduction (UNISDR) organized a two-day open format, *Chatham House*-rules dialogue amongst 22 disaster risk specialists in San José, Costa Rica. The objective of the dialogue was to consider the historical development of disaster risk concepts, notions and management and reflect on their possible future.²

Following on from the San José meeting a series of follow up meetings to the April 2013 San José discussions was planned. The series of four meetings would take up in detail on four critical themes identified during the San Jose meeting. These and their rationale were:

- **The conceptual underpinnings for understanding disaster risk and subsequent disaster risk management practice.** Meeting participants (starting from the premise that good practice can only be based on adequate concepts and that inadequate concepts lead to inadequate practice), considered the need for a detailed reconsideration, recovery or even reworking of the concepts and notions that have been developed historically and inform (or when distorted, misinform) an understanding of disaster, disaster risk and its management.
- **The political saliency and social demand for disaster risk management.** Interpreted as being of both low social demand and political saliency and under the understanding that both factors are critical for the future uptake of DRM principles and practice, a thorough discussion of the factors explaining such a situation and of the ways of overcoming them was seen to be imperative.
- **Risk governance, accountability and transparency:** The process of taking decisions on risk and risk reduction, the associated support processes and institutional and legal frameworks are critical for DRM. Faced with the relative novelty of the topic and the rapid development of notions on DRM, discussion of governance was seen to be a critical area of concern, debate and discussion.
- **Transformative DRM and development:** The obvious negative “externalities” of existing and past development or economic growth models or paradigms, including the construction of disaster risk, encourages a close consideration of the contribution that DRM could make to achieving more sustainable and just development and the premises that should inform such development.

The four themes highlight critical topics in a global discussion and debate on the theme of the future of disaster risk management and are self-sufficient to a certain extent. However, it is also clear that the four are mutually dependent and interrelated. Therefore, the series

²² The results of this dialogue were summarized and interpreted in an essay written by Lavell and Maskrey and subsequently published in edited form in the journal *Environmental Hazards* under the title *The Future of Disaster Risk Management*.

of four meetings was considered a continuum, a flow of interrelated components, whereby an effort was made to constantly feed in information and knowledge from one to the other.

The objective of the present document is to identify and lay out a series of conceptual strands that were present in the discussion of the diverse themes and which, we believe, allow a unified projection of ideas as to the structure and goals of future disaster risk management. This approach is based on the premise that concepts are the building blocks for understanding reality and planning change. Whether projected in terms of concepts, notions, imaginaries, viewpoints, approaches or structures for understanding, what is in play is how disaster risk is conceived in process terms and how this determines or qualifies the approaches and content of disaster risk management as a practice.

2. Dominant Conceptual Strands and their Significance for DRM.

2.1 Disaster risk: exogenous or endogenous:

Probably the most persistent discussion has been on the need to reinforce and further develop the notion of disaster risk understood as a condition that is endogenous to the development process as such. That is to say, disaster risk is essentially socially constructed, the product of the ways different development paradigms or models work out in reality. This is especially important where we consider that risk which is effectively “manageable”, socially modifiable.

The social construction of risk paradigm provides a convincing argument to counter the “physicalist” view that disaster risk and disaster is exogenously determined through the potential direct and indirect impacts and effects of external events such as earthquakes, floods, hurricanes and others, on society. Such hazard-based interpretations have been succinctly captured in the notion of “natural” disasters. Despite multiple arguments against such deterministic interpretations, they still persist in many quarters, expressed in different ways, including the indiscriminate use today of the notion of “extreme events (as compared to the idea of extreme effects which may or may not be associated with extreme events).

Physicalist views tend to concentrate attention on the more intense and higher magnitude events and their associated risk, whilst a consideration of the social construction of risk invites greater consideration of exposure and vulnerability aspects and invites a greater consideration of disaster associated with smaller scale physical phenomenon (see section 2.3 for further discussion of this point).

An endogenous interpretation of disaster risk, a view that sees risk as a product of development, as opposed to autonomously affecting development once materialized in disaster, has profound consequences for the understanding of risk and its management. Summarizing the principle considerations broached in the series of meetings, the following aspects would seem to be of greatest relevance.

- Understanding and interpreting, analyzing and evaluating disaster risk in any given context, in order to inform decision making, requires a profound understanding of the underlying social processes, the social and political motivations, the costs and benefits and the social distribution which accrues to risk as and when it is constructed. Comprehending why disaster risk has consistently increased and is

projected to increase in the future can only be achieved where broad, holistic, multidisciplinary frameworks of analysis are employed.

- The endogenous nature of risk construction automatically signifies human complicity. Physicalist interpretations remit to nature as culprit. Revealing the differential roles of diverse social groups or stakeholders in risk construction, and understanding these from the perspective of the type of gain and disadvantage they imply (see next section for a wider discussion of this aspect) and to whom these accrue, is a fundamental step in achieving transparency and instituting mechanisms for accountability. The complexity of the issue as regards costs and benefits, gains and losses and the overall balance of negative and positive elements associated with the process of risk construction underlies the complexity of the process of accountability and allocation of responsibility. This is true as regards both the process of understanding risk and monitoring the transparency and accountability elements involved and the process of achieving these through different institutional and organizational processes.
- The fundamental task of advancing down the road of disaster risk reduction and control (as opposed to disaster management, seen as immediate pre and post impact activities) requires a reconsideration of the relationship between disaster risk reduction and the development planning and development process as such. This involves a questioning of the very notion of “mainstreaming” as it has been developed and employed over the last 10 years in particular. It also requires a re-laboration of ideas as to the means and ways for development agencies and organizations to relate to the disaster risk topic and challenge and, thus, their position and role in the DRR process viz a viz the role of more traditional and long standing disaster and disaster risk actors. Here we cannot ignore the impact of climate change induced risk scenarios, their causal pathways and their institutional and organizational requirements and how these relate to DRR concerns.

The principle conclusion is that if manageable disaster risk is generated primarily within the development process itself, then mainstreaming DRR into development actions and instruments is the equivalent of attempting to protect development from itself. It assumes that development can occur with high levels of disaster risk and that DRR efforts are efforts to improve as opposed to define and delimit development. A more appropriate approach should be to understand avoidance of undue levels of disaster as being a defining variable of development, an aspect that comprises a substantive component in the definition of development or, as is now discussed, transformational development. Under such circumstances, DRR and control would be considered routine and necessary components of development enterprise and automatically part of the agenda of development agencies. As opposed to mainstreaming, we would be faced with the calibrating or design of development with risk control considerations.

Mainstreaming, seen as an external DRM function, would be replaced by programming principles established and persistently adhered to by development agencies themselves. The endogenous view of disaster risk clearly challenges the practice of constructing sector-based ideas of disaster risk reduction and the creation of institutional structures separate from but in some way coordinated with the system for development planning. This of

course does not challenge the need for DRM organizations as such given specific needs associated with disaster response and preparedness in particular. However, it does mean recognizing that DRR and risk control are rather more defined by development needs and processes than by disaster related issues per se. This then means a reconsideration of the efficacy and efficiency of the integrated DRM system approach promoted over the last 20 years in particular whilst not questioning the need for integrative and coordinated approaches. One novel facet of a reorganized concept and approach would be for DRR and risk control considerations and practice to be more closely integrated with other generic types of risk control-health, public security, technological, etc. This idea is developed further in the following section.

Finally, an endogenous view of disaster risk leads to the consideration that disaster, beyond its obvious humanitarian social and economic connotations, is an indicator of mal, skewed, incomplete, unsustainable, “development”. Seen as an “indicator” disaster, once analyzed “forensically”, allows an understanding of the workings of the social construction of risk and the role of inadequate development processes in this process-land use decisions, environmental mismanagement, poverty implications, investment planning procedures, etc. Such analysis of disaster then allows prospective action that can promote a greater development-disaster risk prevention link, operating through established development methods and instruments (land use and urban planning, environmental management, poverty reduction strategies, cost-benefit analysis for investment decisions, social protection networks, etc.). This road can lead to transformational values and results for disaster risk management.

2.2 Categories and characteristics of risk and more integral and associative views of risk and risk management

“Disaster risk” has been traditionally associated with loss and damage and understood as a specific and separate expression of the more generic notion of risk with its diverse specific forms (financial, economic, health, security etc.). Both characteristics have tended to isolate the theme from considerations of risk and risk management in general and have served to create the image of a “separate” reality, an area of concern that is sector based and autonomous, rotating on an axis defined by the problem of loss and damage and disaster itself.

With regard to loss and damage it was considered appropriate to frame an understanding of disaster risk in wider terms, considering that much disaster risk is in fact the result of the conscious search for gain, profit or opportunity. Three major expressions of this were discussed.

Firstly, disaster risk as often the socially contradictory result of the deliberate search for gain, advantage and profit with diverse types of economic activity or such things as housing location. When this relates to organized, modern economic activity reference to “sociopathic arbitrage” was made depicting the wide scale process by which such enterprise ignores the risk it creates in the interest of profit and growth. There is a clear dissonance between the goals of economic enterprise and wider goals of social justice, equality, security and sustainability.

Secondly, advantage and gain are the result of the payoff in decision making of potential and probable loss against the site advantages for poorer groups of hazard prone locations. Such advantages are rationalized in terms of cost, access to land, proximity to employment, social cohesion on site etc. Where such location decisions are made or obliged and government formalizes such decisions by providing services to communities, risk is institutionalized and consolidated.

Thirdly, much economic and social activity is located in hazard prone areas because of the resource value of such locations- on river flood plains, on volcanic slopes, by the seashore etc. This is true both with areas affected by large-scale non-recurrent and small-scale recurrent events.

As the level of hazard magnitude increases, the role of hazard in the equation of risk also generally increases. At very high magnitudes and intensities, the role of society in avoiding damage and loss or compensating this is more and more dependent on the reduction of exposure (including the use of early warning and evacuation) and through measures that increase resilience. However, with reduction of exposure it is fully recognized that society rarely considers this when dealing with very low occurrence, high intensity events. Given the resource base that many such locations offer and the long period of return of such events, the demand for and productivity of resource locations very often dominates hazard considerations. Here we may hypothesize that the lower the income levels of different social groups, the more likely they are to ignore this hazard side of the hazard-resource equation.

With regard to the delimitation of a separate category of risk denominated “disaster risk”, consideration was given to the fact that such risk is many times the result of the play off or interaction with other different expressions of risk. Amongst the more prevalent or important relations the links between poverty and the risks it signifies or captures (every day or chronic risk) was highlighted. This refers to bad health, unemployment, social and family violence, drug addiction and alcoholism amongst others (this does not mean that more well off families do not also suffer such chronic risk factors at times). The impact of economic and financial risk considerations on disaster risk is also of interest.

The significance of wider, more holistic and integrative interpretations of disaster risk for DRR practice include:

- A confirmation of the endogenous construction of risk and the need for far greater integration of DRM with development planning, economic and financial calculations and planning, poverty reduction plans, urban planning and the processes for dealing with informal development in cities and countryside, amongst others. Through such wider integration and concern, objectives of transformation are more easily accessible.
- A confirmation of the need for more integral risk analyses and evaluations linked to development decisions, and which consider both loss and gain, the stakeholders and decision processes involved and the relations between different risk contexts and processes.

- Support for the notion that disaster risk reduction and control are best promoted as processes that derive from and are linked to existing or planned sector and territory based social and economic concerns and activities. By such means disaster risk may be better considered as one component of a more integral and comprehensive understanding of need, gain and loss, opportunity and challenge. Moreover, the saliency and social demand for DRM practice is potentially increased given the wider problem base with which it is related, much associated with every day, ongoing social concerns and needs. Competition between independently constructed goals and needs is thus avoided.
- Support for the notion that “governance of disaster risk” is a more appropriate stance, terminology and objective than the idea of “disaster risk governance” as such, especially when dealing with disaster risk reduction and control concerns. In addition, an understanding that what is really in play is the strengthening of development governance as such with the need for consideration of disaster risk in a more integrative and integral form.
- Impacts on governance, accountability and transparency considerations and solutions. The complex process by which much disaster risk is constructed, taking into consideration linked social, economic, spatial and temporal processes and the play off between gain and loss, belies any simple solution with the design of transparency mechanisms and the allocation of responsibility. This also applies with the design of appropriate institutional and organizational structures (including cross border structures where risk is seen to be constructed internationally) and with the managing of risk construction processes by macro authorities such as risk ombudsman, amongst others.

2.3. Risk layering and the intensive-extensive divide and continuum

In the redefining or the wider elaboration of notions of disaster risk, attention has been increasingly paid to the delimitation of two separate but continuum related “types” or expressions of such risk: intensive and extensive. The acceptance of this dual expression is the result of many years of reflection and discussion, which has included:

- A discussion of risk seen as a continuum, associated with varying levels of potential loss and damage, from catastrophic to small scale. This has been accompanied by considerations that disaster seen as a severe interruption of the routine functioning of a society allows for the notion of small, community or even family based disaster, as well as local, regional or national disaster.
- A discussion of the need to measure impact, loss and damage on continuous time scales and at the smallest possible scale of analysis. Here, improved loss data bases have shown that accumulated small scale loss over long periods can be as significant socially and economically as one off large scale losses during longer period of return events;
- A consideration of the presence of similar risk factors whether dealing with large or small-scale disaster, intensive or extensive risk, but where relevance, complexity,

concatenation, and scale are different. Discussion has also considered the ways small-scale disaster or intensive risk patterns may and many times do evolve into large-scale intensive patterns.

The specific significance of extensive and intensive risk concerns and their importance for DRR and DRM can be summed up in the following considerations.

- The impacts of intervention and control in extensive risk scenarios is highly significant given the importance of the accumulated losses and damage associated with them over long periods. Consideration of such risk patterns and processes supports the analysis and concern now widely established for intensive risk and its disaster consequences. It also provides an integral view of the risk and disaster problematic, allowing a multivariate, layered approach to disaster risk reduction and control, which promotes different strategic and instrumental approaches, a differentiated consideration of possible interventions and different balances between corrective, prospective and compensatory risk management practices (see next section).
- A consideration of extensive risk promotes greater concern and understanding for exposure and vulnerability factors than does intensive risk where, due to the magnitude of many events, hazard is many times dominant in the proffered explanation of loss, even if exposure and vulnerability are alluded to in the explanation. Extensive risk also highlights the ways many of the smaller scale hazards associated with it are socially constructed through environmental mismanagement, bad urban planning, and inadequate land use practices, amongst others.
- When considering large-scale disaster, the complexity of the interacting social processes that make up the prior risk construction process are many times difficult to discern and dimension analytically. Scale and complexity are many times related. Extensive risk and disaster probably more easily reveal the processes leading to exposure and vulnerability and the stakeholders involved, whereas positive intervention in such circumstances is also probably more feasible and the importance of local level processes and actors increases commensurately. The sum of these factors plus the notion that “a stitch in time saves nine” makes the extensive risk scene a learning laboratory for more complex intensive risk scenarios.
- The knowledge that vulnerability associated with every day risk patterns and livelihood weaknesses, and hazard associated with social processes, are key in understanding extensive risk, can promote greater intervention in pro of risk control and reduction given the more manageable dimensions of such risk.
- Extensive risk is by definition local as are the hazards that are associated with it. Hydro-meteorological and climatic events are most common in extensive risk scenarios. The clearly identifiable links of extensive risk to every day and livelihood risk and, many times, to clearly identifiable local or sub-regional social processes and contexts facilitates a local understanding of the risk construction process. Such considerations suggest that promotion of risk reduction and control can be facilitated by a consideration of such extensive risk. Risk can be seen to be

“manageable”. The actors of risk are more easily identifiable and transparency and accountability more easily determined and exposed. Disaster risk can be more closely and easily linked to the existence and solution of every day risk problems and development challenges at the local level in general, and, consequently, the saliency and social demand may be increased and pressure on local authorities and national government more easily activated. Risk reduction as an element of progressive transformation of development impacts and even goals is proximate to the average person and local governments.

2.4 A differentiated conception of DRM practice.

Historically, work in the disaster field has been dominated by preparedness and response concerns and post impact recovery and reconstruction. Disaster prevention as it was called previously has in general been dominated by concerns for resolving existing problems in reactive fashion-relocation of communities, retrofitting of infrastructure and buildings; recovery of natural areas etc. Where forward-looking prospective ideas were advanced (building codes, land use planning; education) these were generally classified under the disaster prevention and mitigation moments of the so called “disaster cycle”, hardly ever operative and hardly ever supported by the relevant government or social institutions. Conceived in terms of disaster and its prevention, the notion of risk and its prevention was not present and such activities were clearly seen to be part of disaster activities and led by disaster organizations.

Over the last two decades and over the last ten years in particular the disaster cycle notion has ceded in many places to the idea of a risk continuum where disaster is a moment in that continuum, the moment when risk is actualized or materialized. The development of this notion has also been accompanied by the advent of the Disaster Risk Management terminology and conception. DRM has been seen to include prevention and mitigation of disaster risk, disaster preparedness activities, response, recovery and reconstruction. A basic distinction has been made between what is known as disaster risk reduction-DRR and Disaster Management-DM.

This type of change in the conceptual structure given to risk and disaster related activities is also reflected in the increasing use of a denomination code first developed in Latin America and now common currency in many national laws in that region and in ISDR and GAR writings. This refers to the notions of corrective, prospective and compensatory or reactive disaster risk management.

Corrective practice corresponds to what was known as disaster mitigation previously and relates to the search to reduce already existing risk-badly built buildings, badly located communities, degraded environments etc. Compensatory or reactive management works within the confines of existing and “accepted” risk, searching to reduce immediate disaster related impacts and facilitate post impact recovery and reconstruction, including the strengthening of community and social resilience in general. Prospective practice (which is clearly a part of compensatory recovery activity if adequately conceived) is directed to avoid or limit the construction of future risk so as not to increase the pool of risk that already exists.

Although this classification is to some extent a re-elaboration of prior classifications and understandings its intention is clear as is its didactic role.

It points to three very different disaster risk management functions, associated with a differentiated variety of social actors and stakeholders, with very different economic and political consequences and motivations and associated economic costs for implementation. It distinguishes between very different types of activities with the need for different support and promotion mechanisms. These have however been historically lumped together under the same disaster defined umbrella, where very different humanitarian response and development concerns are present but made indistinguishable or invisible due to the dominance of single institutional basis (whether a single entity or a system), thus impeding a clear understanding of their very different nature.

The take up on the corrective to compensatory terminology and concept has important implications for thinking the future of DRM and promoting its advance.

- Increased emphasis on prospective management reinforces the need to place greater emphasis on Hyogo priority 4 and pulls the disaster risk topic closer to sustainable development planning, including closer relations with planned adaptation ideas. At the same time, it increases the probability that DRM can play an important supportive role in promoting more transformational development goals, especially if its premises are seen to be defining values in the definition of development and not as a mainstreamed, outside support mechanism that merely “improves” development. Acceptance of the development basis of prospective management should also be accompanied by greater financial and economic support from development funds for such activity. Such a move will be promoted if increased levels of linkage between new sustainable development goals, climate change decisions and DRM are promoted and achieved.
- Recognition of the three different if supportive approaches and their different social support and financing needs and mechanisms could lead to a more adequate design of DRM systems, where the differences are reflected in an adequate institutional allocation of functions and overall, more appropriate governance schemes.
- Recognition of the clear distinction between the different approaches must also be accompanied by a recognition of the existing variance in saliency and social demand for one or another approach. By clearly identifying each generic type, one may avoid competition between them for scarce resources and recognition can be made of the fact that they are very different and should have noncompetitive, independent financial and support mechanisms.
- Notions of transparency, accountability and responsibility, due diligence and co-responsibility, and the governance structures to guarantee these will vary widely between each. There is a clear difference in the ways these work out in disaster preparedness and response as compared to anticipating new risk; or as regards financial protection through insurance when compared to provision of mechanisms for increasing the social resilience of populations. While it may be justified to speak of disaster management or disaster risk governance when dealing with

preparedness and response, in moving to reduction and prevention, recovery and reconstruction it is probably more consequent to speak of risk sensitive development governance or governance of risk.

2.5. Amplifying and specifying the objectives of DRM

A last notion of significance in defining DRM in the future relates to the way the objectives of DRM are formulated. This relates thematically to the overall definition of what DRM is, how it is structured, how its overall objectives may vary according to the approaches taken. This consideration of objectives cannot be separated from the internal distinction between corrective, prospective and compensatory management modes as discussed in the previous section.

Traditionally the objective has been couched in terms of reduced loss and damage, more recently accompanied by diverse and many times imprecise calls for the increased resilience of communities, production, infrastructure, cities, regions and countries. This was relevant in the framework of a traditional vision of DRM where corrective disaster prevention and compensatory preparedness and response dominated, with reconstruction as an inevitable corollary.

As the focus of concern has widened and both prospective work and compensatory approaches to financial security and protection and towards strengthening resilience have taken hold, objectives that emphasize reduced loss and damage seem to be somewhat short on content and maybe unduly negative in approach.

Under these circumstances, it has been proposed that objectives should capture more positive development attributes of DRM functions. These could highlight the contribution to sustainable and secure livelihoods, infrastructure, cities etc. and overall prosperity and flourishing. This in some ways is reflected in the call for resilient societies but in emphasizing sustainability and security one is going further along an integral track where pre impact conditions are called into effect as well as post impact recovery and advance. Such a definition of objectives would be consequent with the introduction of greater prospective risk avoidance and control goals, as opposed to corrective and at times more conservative reduction objectives.

III. SUMMARY OF INDIVIDUAL MEETING DISCUSSIONS



1. Concepts and understandings of disaster, risk and risk reduction

That a disaster is not natural seems to be an accepted premise by many. However, to date, hazard and disaster are often seen as synonyms and “physicalist” interpretations of disaster have re-emerged in public and professional discourse. This distracts attention – political, social and economic – away from the processes of the social construction of risk to the perceived physical hazard and to the disaster event itself.

The challenge for the meeting participants was to reflect on the distorting conceptions or expressions of disaster risk that have direct consequences for the choice of disaster risk management approaches; and to propose an alternative framing – or re-imagining – of the problem and its significance for social practice and human agency. The aim of the meeting, hosted by the Indian Institute for Human Settlements (IIHS) in Bangalore, India, was to:

- a) Propose this in a language that can be understood by scientists, development practitioners, policy makers, and the interested layperson in general, and
- b) Offer insights into how this alternative paradigm can be disseminated and applied in the future.

1.1. The need to reframe and reaffirm concepts

The meeting sought to reflect on the need to re-conceptualise disaster risk and disaster risk management in light of several decades of experience and findings from research and practice. However, rather than a complete reframing or re-conceptualisation a fresh, consistently articulated examination and organisation of central concepts may be what is required most. This fresh articulation is needed due to the distortion, partial understanding, ignorance or selective use of concepts developed over the last 40 years on the one hand, and the tendency amongst practitioners and specialists to revert to hazard-based, physicalist interpretations of disaster and disaster risk on the other. Both have resulted in an overt emphasis on disasters as an exogenous phenomenon rather than as a manifestation of the continuous social construction of risk.

Further, over the last decade, a more sophisticated analysis of different risk typologies and scales of risk, including the differentiation between extensive and intensive risk, has taken root and needs to be reflected in concepts and terminology. Finally, the emergence of the climate change agenda and the re-emergence of sustainable development as a central goal for the international community mean that disaster risk management experience needs to be framed in relation to these two areas that receive increasing political and financial attention.

It is now important to reaffirm conceptual progress made over the last 40 years, based on theoretical writings, empirical research and findings from policy and practice. Conceptual progress that has resulted in a better understanding of the relationship between development and environmental processes and the construction of risk. As concepts are the building blocks of theory, and, importantly, of understanding, they also determine the approaches that will be chosen to deal with problems as they are perceived. This includes concrete policy instruments and strategies as well as the institutional arrangements that underpin them – all shaped wholly or to a large extent by the underlying concepts and assumptions. As such, an inadequate concept will inevitably lead to an inadequate “solution”.

According to the debate undertaken in San Jose in 2013, despite clear progress in the implementation of aspects laid out in the HFA, disaster risk is growing far faster than it is being reduced or controlled. Corrective mechanisms for existing risk are more common, if insufficient, but are not generally complemented with prospective measures aimed at avoiding new risk in the future. The endogenous nature of disaster risk and the processes that lead to its construction are not fully taken into account. As such, the ways disaster risk links to development processes are still not sufficiently well understood and taken into account. This demands a clarification of the concepts currently in place to explain disaster risk and, possibly, a radical reformulation or amplification of existing notions. Such a process will also help with the discussions to be held in future meetings on saliency, governance and transformative development.

The question of how disaster risk management and its concepts and practice can gain traction among development actors is closely linked to the concept of mainstreaming. Throughout the last decades, the “integration” and “mainstreaming” of disaster risk reduction into development has been propagated, possibly to the detriment of its profile and effectiveness. The concept and practice of mainstreaming itself may have unintentionally led to a marginalisation of disaster risk management (“Is mainstreaming the enemy of mainstreaming?”). While disaster risk management needs to explicitly make the link to the sustainable development and climate change agendas, there may be value in maintaining and projecting its integrity as an area of concrete action and multi-dimensional concern. By distinguishing this concern into three areas of practice, direct links to both sustainable development and climate change adaptation can be made.

1.2. Disaster risk management policy and practice and its contribution to sustainable development and climate change

Disaster risk management policy and practice can be understood as addressing three areas of concern: first, *avoiding the accumulating of new/future risks* by making risk-sensitive development choices; second, *mitigating or reducing existing risks* by investing in corrective measures and preparedness; and third, assuming existing, residual risk that cannot be mitigated effectively and taking measures to support the absorptive capacities of individuals and societies against shocks, i.e. by *strengthening resilience* during and immediately after disaster events.

Each of these three areas is distinguished further by different actors and stakeholders involved, signifying differences in governance arrangements and ways of integrating social actors. The complex nature of actor involvement and interaction within and across these areas of risk management practice, calls for *networking and synergy promotion* as essential elements of any future framework agreement on disaster risk management.

By dividing disaster risk management into these three areas of practice, direct links to both sustainable development and climate change adaptation can be made and the concrete contributions of a comprehensive risk management approach to a sustainable future becomes apparent:

	Prospective	Corrective	Compensatory
Disaster risk management	<i>Risk avoidance</i>	<i>Risk mitigation/reduction</i>	<i>Strengthening resilience to disasters (both financial and social resilience)</i>
Climate change	<i>Climate change mitigation</i>	<i>Climate change adaptation</i>	<i>Strengthening resilience to extreme events associated with climate change</i>
Sustainable development	<i>Contributing to future sustainable development</i>	<i>Increase the sustainability of existing development conditions</i>	<i>Strengthening resilience of vulnerable to every-day risks and shocks</i>

Changing terminology: points to consider

The exact terminology to be used for these three areas is a matter of debate. Whereas “prospective, corrective and compensatory” are used in the Latin American context, in other contexts, “corrective” in particular may be construed as too prescriptive and negligent of the fact that informed choices may have determined existing risk. “Prospective” may be superior to “prevention” as the latter implies the potential for complete removal of risk. “Compensatory” is often equated with financial compensation and a claims/recourse process, which does not capture the wider dimensions of strengthening resilience.

Changing terminology to enhance clarity of concepts and understanding is welcome and yet, can have legal implications. Current global legal processes (under the Law Commission) use as a reference point the established concepts and terms of “prevention, mitigation and preparedness”, developed in the context of traditional disaster management where the

disaster event rather than risk was at the centre of attention. The much needed shift in focus will need to be clearly articulated to allow for an update of these legal reference points.

1.3. Reframing disaster risk and disaster risk management: concept and terminology

It may seem as if there is much disagreement among academics, practitioners and policy makers dealing with disaster risk management, climate change adaptation and sustainable development on the central concept of disaster risk and therefore of what disaster risk management constitutes. Different conceptual formulations reflect different understandings of the process of risk generation, presented, for example, as relationships between hazard, exposure and vulnerability; as disaster cycles; or as disaster management, disaster risk reduction and risk management continuums. Discrepancies will not cease to exist as these are part of the nature of scientific discourse and practice, however there is rather *more agreement than discrepancy*.

It is now widely (if still not commonly) accepted that disaster risk is a derivative of the interaction of physical events with social processes, structures and conditions. It is *socially constructed* and the social processes involved are directly related to past and existing development or economic growth paradigms. These *paradigms combine with collective and individual perceptions* and reactions to hazard and risk contexts. Therefore, while disaster risk is clearly identifiable as a distinct type of risk, it must be considered in connection with other types of risk within development processes in general. Risk in this sense becomes an *integral part of human action* and development, including every-day or chronic risk (such as illness, addiction, unemployment and social conflict), and becomes both a potential disadvantage as well as an opportunity.

Only by understanding the *positive and negative aspects of risk* – and therefore the potential trade-offs involved in risk management – can we position disaster risk and disaster risk management as part of a social, political and economic process, i.e. development, determining how to meet impelling demands and needs. And only by positioning disaster risk and its management within the wider context of development, can we hope to advance towards its objectives. What these objectives are precisely also needs clear articulation. They include contributing to a positive development outcome, or more plainly speaking to prosperity and *flourishing*, meeting the aspirations of people and societies.

1.4. A constructive and positive approach to managing risk

Informed risk management is dependent on the capacity to make informed choices. As the capacity to make informed choices is constrained, risk management options are also constrained. Thus the business of disaster risk management is essentially about enhancing opportunities and informed choices. A more positive framing of the expected outcomes of successful disaster risk management is required and for this a move away from a focus on loss and damage is necessary. Disaster risk management and reduction have normally been depicted as means for reducing loss and damage, that is, reducing the negative consequences for society of adverse physical events. Serious arguments have been put forward for a change in this approach and understanding, suggesting a need to highlight the positive development benefits of disaster risk management and its contribution to social well-being and flourishing of individuals and communities.

The enhancement of life and sustainability of development are also based on a more holistic and inclusive view of risk. Beyond the obvious negative connotations of disaster risk, which dominate thought on the topic, living at risk also involves opportunities and benefits, at least in specific locations and time periods. Managing risk does not necessarily mean reducing it or avoiding it but rather taking decisions according to a well-understood damage-benefit equation. Where the benefits outweigh the perceived or real costs during determined time periods, accepting disaster risk can be seen to be rational. However, the benefits and costs have to be assessed across all those potentially affected, something that is not usually done. For example, a principle concern must be for the avoidance of irreversible loss, such as the loss of life. Therefore, rather than talk about acceptable risk, when weighing up options, the question of what is unacceptable risk should be at the forefront, what is it we cannot ever afford to lose.

In doing so, the focus moves clearly away from attempting to reduce disaster risk (at any cost, under any circumstance) to managing disaster risk. The management of disaster risk needs to be done within a broader framework of risk management that includes a range of risks associated with development, economic growth, social process and progress, and individual well-being. A more positive way of expressing this new framing of disaster risk management may be by replacing the current triple-negative of the expected outcome of the Hyogo Framework for Action – “The substantial *reduction of disaster losses*, in lives and in the social, economic and environmental assets of communities and countries” – with more positive language around increasing safety, prosperity and well-being. Similarly, to move beyond the existing tagline of “*Building the resilience of Nations and Communities to Disasters*” to a more comprehensive, forward-looking approach that aims at improved development outcomes such as “*Managing risks for enhanced lives and sustainable development*”.

2. Political Saliency and Incentives for Disaster Risk Management

2.1. Introduction to the Meeting on Political Saliency and Incentives for Disaster Risk Management

In the social sciences, it is common to examine and understand policy and government strategy through the lens of the so-called social or political construction of a problem. This means that a problem exists and demands solutions only once it is established in the collective image and the political landscape as a real problem that must be resolved. As long as a problem is only perceived as such by specific groups or individuals or is seen as encompassing problematic aspects in a wider context or situation that do not mobilize social and political support for intervention, it is not a problem for society *per se*. Along an associated line of argument, policy prescriptions and legal precepts many times are put in place as an ideological construct or a way of camouflaging non-action within a broader social or economic context (see Edelman).

Seen from this viewpoint, the political saliency of disaster risk reduction can be analyzed from the perspective of the extent to which disaster risk and disaster itself are constructed as social and economic problems or not and whether this analysis transcends the sphere of economy and society and enters the realms of politics and polity. This should be preceded by a consideration of the social saliency of politics today, i.e. of what the role and saliency itself of politics really is for the major economic and social actors. As such, political saliency

refers to the extent to which a problem is constructed socially, economically or culturally; and the extent to which it enters the sphere of the political and requires real action in terms of policy, strategy and instrumentation for change.

Evidence suggests that disaster risk in particular has a very low political saliency in general, even where increasing evidence points to its economic, social, cultural and general relevance. A recent study relating to the sustainable development goals placed disasters and disaster risk in 19th place³ amongst critical issues in need of solution thru government policy and action. Why, if disaster and disaster risk specialists, many development experts and the existence of the HFA suggest disaster losses and impacts are significant and that mal-development contributes significantly to their increase, does the topic not have greater overall political saliency?

This was the core question for the meeting hosted by FLACSO. Further, the question was put forward as to whether the social, economic and political saliency of disaster risk management still has to be argued more clearly or whether there are other factors at play that prevent DRM from moving up the political agenda of governments and corporate boards. And, consequently, whether and how DRM must be promoted, marketed and “sold” more successfully in the context of a plethora of other pressing economic and political priorities.

2.2 Diagnosis

A number of gaps and challenges keep disaster risk management at the margins of political, economic and social development discourse.

2.2.1 Saliency at the margins

Disaster Risk Management and Reduction are still relatively marginal topics to mainstream development and economic growth agendas. As one meeting attendee commented, very rarely does one witness the topic of disaster risk and development dealt with at development conferences as opposed to disaster conferences. However, increasingly, disaster risk is coming to be understood as a critical factor in impeding sustainable growth – this due mainly to high-impact events during the last years with heavy tolls on lives and, importantly, on investments and business operations. Yet, disaster risk is still neither seen as an integral component of social and economic development nor as part of a wider risk landscape that needs to be managed within a comprehensive framework of risk management. As such, the lack of a regulatory framework that gives clear guidance on how to integrate, mainstream or link disaster risk management into key development processes, from planning to budgeting, implementation and monitoring, is one central challenge.

This may be based on a more fundamental lack of clarity or common understanding as DRM, as a concept or notion, is interpreted diversely. A clear understanding of its component parts is fundamental in order to discuss political saliency, relevance and incentives for DRM. This is fundamental given that the different components and approaches are assigned different levels of acceptance and importance by different public and private sector actors and consequently in different public and private sector policies and strategies.

³ ADD REFERENCE.

ISDR and IPCC have a current conceptual definition of DRM that encompasses dealing with residual risk and disaster (reactive or compensatory management, including preparedness, disaster response, recovery and risk transfer), existing risk and its reduction (corrective practice), and actions that seek to anticipate and prevent future risk (prospective or anticipatory management). The social, economic and political saliency of each of these components varies immensely, with reactive practice still the dominant concern and much less importance given to explicit prospective practice. A simple explanation for this may be found in the visibility of response activities and results, particularly for political actors and those interested in public relations. However, the saliency of the different components also varies according to the level of social and political organization, according to the administrative levels and mandates within organizations, and according to individual preferences and perceptions.

The wide range of private sector actors obviously accord very different levels of saliency to DRM, but what unites them across scale and geographic and sectoral scope is that the HFA is mostly irrelevant to them. Furthermore, the HFA is mostly unknown outside of the DRR community. Any attempt to explain this must be cognizant of the particular ways in which disaster risk and disaster risk imageries are constructed socially and politically; and what the notions and concepts are that support them. Additionally, it is important to recognize the changes in the ways in which DRM has been prioritized in the context of different emerging “crises” or “risk concerns”. This refers not only to crises related to physical hazard but also related to war, conflict, terrorism or pandemics that can also be seen as part of DRM, particularly where disaster risk becomes subsumed under the management of national and territorial interests.

In this regard, emphasis was placed in the meeting on how exogenous explanations for disaster risk as opposed to endogenous, risk construction-based arguments are still widespread. Similarly, hazard-based paradigms tend to be reinforced by an emphasis on extreme events, intensive risk and climate change- induced hazard processes. This bias distracts from explanations of disaster risk as based on socially constructed exposure and vulnerability. It was considered problematic that disaster risk itself has been technified as opposed to politicized, with the result that risk is not understood to be a product of human construction that is manageable and controllable where information is available and offers a basis for decisions. Participants emphasized the need to reaffirm and deepen our analysis of risk construction processes linked to existing and new forms of economic organization, including new dimensions of capitalism and globalization, and disseminate the results more widely and convincingly.

2.2.2 Impunity, corruption and systemic sociopathic arbitrage

The term “sociopathic arbitrage” was used to depict the forms of capitalism and private sector endeavor that is ignorant of and indifferent to the risk it constructs. Given that volatility and uncertainty are key building blocks for profit and growth in an economic sense, the inadequate pricing of risk and of broader externalities to economic activity leads to a continuous construction of risk, whilst guaranteeing profit. Investments made by large-fund managers, banks, businesses and insurers, and increasingly in cooperation with local and national governments, generate risks that may be global or local but always translate into local vulnerabilities that are not covered by any accountability system.

In fact, in many ways, investment managers, asset owners and bankers are incentivized to disconnect from the outcomes of the actions they take. Incentives exist to mis-price risk as the entire investment banking sector is based on volatility, while stability and security makes it hard to make money. As such, new forms of capitalism become the source of systematic mal-development, which in turn becomes the source of risk. When one understands the construction of risk in this way, *disasters are episodic (some more recurrent than others), but the accumulation of risk is systemic*. Therefore, instead of focusing on disasters, the focus should shift towards also understanding what is wrong with the system, i.e. our societal set-up and economic paradigm.

The fact that risk is both opportunity and gain at the same time as loss and disadvantage clearly offers a bimodal entrance to analysis and the need to rationalize the balance between loss and gain when coming to decision making. While the losses and gains need to be assessed together, the question of who gains and who loses takes centre-stage. There is a big difference between those that voluntarily take on risk and those that are being forced into configurations of risk.

Currently, the persistence of impunity in the face of neglectful or even malicious risk generation, whereby consequences are removed from decisions and lack of attribution creates perverse incentives for continued risk generating behaviour, is prevalent. The current measures of success both for private actors and governments may not be compatible with the goals of equity, sustainable development and disaster risk management. The result is a complete lack of ownership of risk more generally, including disaster risk, where the question of who assesses risk, based on whose methodologies and assumptions, isn't asked.

Finally, the notion of private investment and the private sector is currently too broad as it encompasses small and medium enterprises, farmers, informal traders and labourers, households and individuals, national business and large international corporations, investment banks and asset managers, insurers, and a vast range of service providers to all of these groups. To understand who takes risk, who benefits, who pays and thus who owns risk in what way, the international and national frameworks of the future need to differentiate clearly between different levels, scales and groups within the "private realm" (as it probably needs to do more thoroughly within the public and civil society domains).

2.2.3 Evidence and the price and perception of risk

The lack of common guiding frameworks (outside of the HFA and those that support the HFA) is perpetuated by the lack of existing counterfactual evidence. At present, the business, economic, political and social case for disaster risk management still has to rely in good part on anecdotal substantiation and proxy indicators to prove the benefits of investment in disaster risk management for economic growth, human and social welfare and sustainable development.

As a result, risk continues to be mispriced at all levels, making disaster risk potentially one of the largest externalities and creating toxic assets without these being taken into account unless and until these externalities manifest themselves as realised intensive disaster risk during a major event.

There is further the need to continue to differentiate between the risk of “catastrophic collapse” and small-scale events or every-day risk. The political and social saliency of different types, scales and layers of risk is different and not well understood. What is understood is that the every-day concerns continue to outweigh future risk considerations and therefore result in a massive discounting of all future risk, including disaster risk. This is true for small business owners, poor households and local governments as well as for large corporations, high-income communities and national governments.

Thus, the lack of evidence for the differentiated types of loss, damage and impact associated with extensive and intensive risk respectively is a major gap in arguing the case for disaster risk management in different contexts and at different scales. The current distortion of attention towards intensive risk is directly linked to the limited availability of empirical data of extensive risk at a national and global scale. As a result, a narrow vision of development and its relationship with risk continues to dominate and means that the status quo of quasi-militarized responses to extreme events are virtually the same as 20 years ago. The emphasis of mainstream disaster research, policy and practice is not on underlying risk drivers and extensive risk.

Finally, there is a need to translate the economic data provided on disaster impacts into more persuasive and understandable information for the public and decision makers in general. This can be seen, for example, in the relevance such actors can assign to the notion that a disaster halts GDP growth by .75 or 1.2% annually for example. Such percentage figures fail to project the real significance of the data and maybe should be transmitted in more accessible terms such as impact on employment, income and income distribution, public debt etc.

2.2.4 Failures within the DRM “community”

The meeting also discussed a series of other important factors that contribute to the relegation of systematic political consideration of disaster risk reduction in many country and business contexts. These include:

- The construction of the disaster risk problem and its resolution as a separate sector of concern, competing with more salient themes and challenges on the political agenda.
- The attempt to promote mainstreaming of DRR concerns into sector and territorial planning as a means of improving development, but not as a means of redefining and transforming such development and its sustainability.
- The failure to contextualize and frame DRR and DRM more holistically in the context of more prevalent and imposing risk conditions.
- The failure to link DRR adequately to ongoing and therefore more prevalent social and economic concerns at all levels, expressed in every-day or quotidian risk and manifest in the occurrence of regular small and medium scale disasters.
- The failure to convincingly project DRR as the result of processes of social construction with clear responsibilities for its existence and rights to protection for those affected.
- The failure to talk to the decision makers and constructors of risk in their own languages-private sector, politicians, local government, population etc.

- The failure to learn from other processes of increasing political saliency of relevant aspects of development and social advance such as gender and environment and even climate change.
- The failure to project the role of DRM in more positive sustainability terms as opposed to reducing loss and protecting society against exogenous risk

Therefore, in this context, the question remains how to make DRM more relevant? Conceptually and practically, prospective DRM may be in a pre-paradigmatic state of DRM; therefore, how do we push it over the edge to becoming paradigmatic or influence the existing paradigm to such an extent that they transform for the better?

2.2.5 Therapy

First, we must accept that the means of guaranteeing implementation and normative behavior is not the same as having political saliency. Wrong implementation measures or enabling factors for implementation can render real political saliency useless. Political saliency and the construction of a real economic and social problem requires adequate evidence transformed into politically important messages at an international, national and local level.

This means transforming useful information and data into knowledge and understanding; and clearly this has not been achieved overall to date. It also means talking to the stakeholders in their language and in accord with the topics and aspects of their main interests where DRR is complementary to their substantive concerns and goals.

But beyond packaging knowledge and information based on good science in a way that will reflect the real importance of risk and DRM, the interlinked issues of appropriate implementation and accountability are critical. In crude terms, it could be understood as a two-pronged approach of knowledge generation and application on the one hand, and a system of checks and balances on the other hand. Or, as one participant put it, as “dashboards for decision-makers and pitchforks for the people”.

2.2.5.1 Accountability

When considering accountability for disaster risk generation and management, a preceding question looms large: what is it that we want somebody (individuals, organisations, governments) to be accountable for? It is only when we are able to answer this question that we can begin to think about ways to measure whether the individuals, organisation or governments are indeed measuring up to our expectations and their promises.

The answer to the question of “what is it we want to account for and make people accountable for” will have to be based on some kind of common value. For example, in order to hold its government accountable for disaster risk reduction of vulnerable communities, a society would have to move from valuing a high standard of living for some to valuing sustainable development and incomes for all. Participants proposed a re-thinking on questions of intergenerational justice, responsibility and rights-based approaches that are linked to clear sanctions and mechanisms to counter the current situation of near-blanket impunity.

In addition to a common value framework, clear language is needed as well as evidence on what drives the creation of risk at different levels.

In terms of language, there is a need for either getting rid of the notion of mainstreaming DRM altogether or to move it clearly towards DRM becoming a constitutive part of development planning. The difference between common concepts of mainstreaming is the responsibility this signifies for a wide range of actors, in particular for development actors within governments and for business leaders and risk managers. It means that opposed to there being independent specialist risk managers supporting development planning, disaster risk reduction would be firmly placed within the daily business of government departments regardless of the sector or geographical scope, of company strategists and business risk managers.

At the same time, while DRM would thus become an integral part of the development agenda, care should be taken for it not be “mainstreamed out of existence”. This means there is a place for sector and territory based incorporation of DRR as part of normal activity but also there is a place for DRM specialization and units to keep the movement going. There is a need to reaffirm and demonstrate the process of social construction of risk as the more significant aspect without losing the impetus and positioning that interest in disaster as such brings to the table.

The need to realize that risk is seen as a dimension of development both causally and impact wise, means that DRM does and cannot achieve a one off rapid transformation of risk and disaster loss. Rather, DRM as a sequence and series of small to medium scale adjustments will accumulatively lead to important increases in human security and lowering of sequential and accumulative loss. Proponents of DRM must learn to present its achievements not as one-off efforts and successes but rather as a continuous and incremental addition to security which when accumulated is of massive significance. And, when taken with such aspects as gender equality and environmental security increase sustainability in an important collective or accumulative fashion.

Currently, severe asymmetries in the generation and availability of risk information prevents accountability at all levels. The potential for social media and other new and “disruptive” technologies and communication tools needs to be explored in order to build “evidence tools” that can drive incremental change as well as social demand that can drive transformative change.

2.2.5.2 Social demand

To increase the political saliency of disaster risk management, it may be that the social saliency of politics and governments itself has first to be increased in our current world of failing confidence. A lack of confidence and trust in political processes and elites in many countries, exacerbated by the political crisis ensued in the aftermath of the financial crises starting in 2008, means that significant change within government departments will not translate automatically into significant change within communities and the perception of progress amongst the population.

Social demand for disaster risk management may not follow from political demand or administrative implementation. Instead, proactive efforts by community leaders (within business communities, academia, civil society, municipalities, village councils etc.) as well as national governments, will need to be made to create transparent mechanisms of decision-making, delivery and monitoring and to create complaints and recourse mechanisms that are accessible to all.

The new framework for disaster risk reduction could be set out in a way that seizes the opportunity now to create demand for DRM from below as opposed to it being supply-driven. Social demand and accountability go hand-in-hand: without some level of bottom-up demand, even high levels of political saliency may not create the type of accountability mechanisms required to significantly reduce distorting factors such as corruption or the search for short-term gain over long-term sustainability.

The fact that large scale disaster risks still attract much more attention than every-day risks and small events, means that development concerns that are directly related to disaster risk are not on the radar of specialists and most stakeholders involved in the current DRM policy and practice remit. As one participant put it: “The people that live with risk need to be empowered, not the technicians that specialize in the topic.” And to empower those concerned, the messaging may need to change: for example, stopping smoking can be expressed as a desire to not die, or as a way of increasing quality of life while alive. If we can transmit a message of disaster risk management and reduction that conveys aspects of flourishing, prosperity, choice and quality of life rather than notions of avoided deaths, vulnerability reduction and cost saving only, it may be possible to link it to substantive social desires and needs.

Equally, by expanding our understanding of the generation of disaster risk to encompass chronic social risk, extensive risk patterns can be shown to be built from conditions of every-day concern, including fragile employment markets and livelihoods options, limited access to health care and education. In doing so, there is a potential opportunity to reaffirm and demonstrate the process of social construction of risk as the most important (because it is the most “manageable”) aspect of risk creation.

3. Disaster Risk Governance

3.1 Introduction to the Governance meeting

As a point of reference for the debate, we offer below two (of many) more comprehensive definitions of disaster risk governance (DRG) as they exist in pertinent literature.

UNDP, a co-organizer of the meeting series, defines DRG as “the way in which the public authorities, civil servants, media, private sector and civil society coordinate at community, national and regional levels in order to manage and reduce disaster risks. This means ensuring that sufficient levels of capacity and resources are made available to prevent, prepare for, manage and recover from disasters. It also entails mechanisms, institutions and processes for citizens to articulate their interests, exercise their legal rights and obligations, and mediate their differences”. This definition includes formal arrangements such as laws and regulations as well as informal arrangements such as coercion and trust and other mechanisms that encourage and deter collective action at multiple scales. Jonatan Lassa, one of the attendees at the meeting, provides a definition that talks of “the way society as a whole [...] manages the full array of its disaster risks⁴. It promotes the notion that there are many overlapping arenas or centers of authority for decision-making and responsibility for disaster risk reduction [...] the arenas may emerge as networks [...]. Risk governance encompasses a broader spectrum of politics, policies, and polity [...] at different scales and levels from global to local. It recognizes the polycentric nature of Disaster Risk Reduction [...]. Disaster risk governance provides the framework within which disaster risk management is to be implemented”⁵.

The 2011 Global Assessment Report on Disaster Risk Reduction uses a more generic working definition of risk governance that describes “how national or local governments, civil society and other actors organize DRM, for example through institutional arrangements, legislation and decentralization, and mechanisms for participation and accountability”⁶.

In essence we are dealing with the ways decisions are taken on DRM actions where decision move beyond government to incorporate stakeholders and social actors from civil society, private sector and other relevant groupings of society. Moreover, such decision-making refers to a diverse array of different risk reduction goals (see below) which demand different stakeholder participation and inputs from a diverse range of actors.

The meeting hosted by the Lee Kuan Yew School of Public Policy, University of Singapore considered disaster risk governance in the light of the logic of the debate and conclusions on concepts and saliency derived from previous meetings.

⁴ Author’s note: as related to a range of different types of hazards.

⁵ Lassa, J., 2010: Institutional Vulnerability and Governance of Disaster Risk Reduction: Macro, Meso and Micro Scale Assessment. PhD Thesis, University of Bonn: <http://hss.ulb.uni-bonn.de/2011/2451/2451.pdf>.

⁶ UNISDR, 2011: Revealing Risk, Redefining Development. Global Assessment Report on Disaster Risk Reduction. Geneva: United Nations.

3.2 Starting points

The schizophrenia of having two sets of value systems and governance approaches manifests itself dramatically in the event of disasters. The pursuit of economic growth and the corresponding institutional arrangements on the one hand and the management of disaster risk with its specific institutional set up and policies on the other, are more often than not misaligned at best and in direct contradiction at worst. Further, there are parallels to the disaster risk management narrative in how economists view the need for anticipation of and reaction to financial risks. And there are clear links between the development of major economic indicators and the consequences of disaster risk. Therefore, we need to transform how we organise ourselves to effectively address the accumulation of new risks and the reduction of existing disaster risks.

The move from thinking about disasters and managing disasters, to thinking about risk and managing risk, has important consequences for the way we organise ourselves. A disaster may strike any time and not repeat itself, but the risk is there all the time and 24/7 throughout the year. This shift in understanding means that we move from a focus on disaster as an event to risk as the conditions that underlie the risk of the events that is there all the time. It means that we move from setting up governance arrangements to manage events to organising the whole of society to understand, anticipate and manage risk – from every-day risk to the risk of extreme events.

The complexity of emerging risks and the fact that current understanding of the science of disaster risk creation is still comparably nascent both call for a more detailed look at the frames we currently use to manage risk. Questions were raised as to the required boundaries of the disaster risk remit and its link to other risk contexts, including terrorism, as the implications for how risk is governed may be rather similar.

Current institutional patterns and structures for disaster risk management remain dominated by response paradigms. Progress in preparedness, prevention and risk reduction is usually made despite not because of existing governance arrangements with more holistic approaches added onto existing “disaster mentalities” and response organisations. This raises the question of whether what is needed today is to continue this process of iterative modifications as it may be best suited to effect longer-term change or to instigate radical transformation of governance arrangements for disaster risk management.

Finally, disaster risk governance is not a priority on national agendas. The question then of reforming institutional arrangements to more effectively address disaster risk becomes a question of the saliency of disaster risk management, the focus of a previous meeting in this series. On the question of political saliency, however, while we may blame politicians and government officials what we need to do is to understand how political will is being generated.

3.3 Governance, government institutions and the locus of responsibility – the accountability question

Evidence of three GARs and numerous publications shows that the question of where the locus of responsibility for disaster risk management within government should sit remains unresolved. This is partly due to the no-size-fits-all issue common to all governance questions and partly due to the fact that there remains limited understanding of the way that the distance and power-sharing dynamics between different tiers of government and the co-responsibility mechanisms across departments play out in specific contexts.

A common concern however, remains as to how to hold individuals and bodies accountable – to what and to what extent – when the paradigm to date is focused on disaster management. The normative frameworks that could provide the basis for accountability mechanisms, are currently mostly about the management of crisis situations. Adding a preventive angle through risk management and risk avoidance may prove challenging, particular with regard to who would be responsible to set targets and determine roles and responsibility. The different powers within a state will have different roles to play: while the executive may have the ability to set goals and targets oversight bodies in the form of a parliamentary committee, the whole parliament or an ombudsman are options that are currently experimented with across several countries.

At the core of the issue of accountability is the question “accountable for what?”. Should accountability for disaster losses be measured according to *what was known* in any given situation (that should have been acted on) or would corresponding responsibilities be better judged based on *what could and should have been known*? The latter is an understanding of accountability based on the *due diligence principle* and it has important implications for the role of risk assessments in public and private investment planning. If we apply the principle of due diligence, these risk assessments become not only a tool for evaluating the costs and benefits of investing and managing your risks, but have the potential to be a form of indemnity in the case of disasters. The principle of due diligence may have the potential to support a new framework for the rights of humans (and businesses) to protection against disaster loss (risk).

However, globally speaking, due diligence in such a new framework may be a sensitive issue as it touches on national sovereignty and begs the question of who is responsible for its implementation within domestic boundaries. The ownership of accountability mechanisms related to disaster risk management at the global scale, has not been tackled to date. Voluntary paradigms, such as the HFA, may provide a way around this question and yet, it seems that current international instruments are not sufficient to counter the upward trend of disaster risk. Implicitly, each state is responsible to protect its citizens from external shocks, but there is little detail available on how this responsibility plays out. More importantly, the responsibility for the creation of risk of such shocks (i.e. in recognition of the fact that they are rarely external) is not articulated. A future framework, in order to guide future governance arrangements, will have to inspire enough confidence by clearly articulating responsibilities for reducing disaster risk and stop doing harm to allow for a certain level of “anarchy” or unruliness that creates the space for accountability mechanisms to grow according to context.

The notion of co-responsibility for risks and losses is another way of approaching the subject of accountability and to allow for both vertical as well as horizontal accountability mechanisms to be contemplated. However, though it may be appealing and convey an appropriate message of sharing the risk burden, the danger is that frameworks of co-responsibility can more easily result in a dissolution of responsibility. Currently, the fact that disasters are still seen as exogenous shocks rather than as manifestations of “home-grown” risk configurations, means that the attribution of responsibility for losses and impacts is on the physical hazard rather than the drivers and those that generate and perpetuate the drivers. Once the events are attributed more to the drivers of risk, responsibility for the losses and impacts becomes societal and can become subject for social discourse and negotiation.

3.4 Understanding progress: monitoring, reporting and standards

Any functioning accountability mechanism is dependent on some form of monitoring, evaluation, reporting as well as benchmarking and standard-setting. The HFA Monitor and the systematic self-assessment process undertaken by governments every two years since 2005, show both the opportunities and challenges in existing reporting mechanisms.

The fact that in practice (if not in theory) the process involved mainly governments and was a self-reporting mechanism, limited its usefulness for accountability and transparency purposes. On the other hand, it provided a good space for intra-governmental engagement across departments and sectors, where done in the manner originally conceived. Were such a process to be complemented or substituted by reporting mechanisms that present non-state actor views and provide room for peer reviews and independent evaluations, it could become a powerful tool for sharing of risk information and for improved accountability.

However, the limitations of such processes are clear: where there is neither an oversight body with a link to the electoral process (in democratic societies at least) nor a national jurisdiction that will tie monitoring of DRM progress to internal audit functions, very little accountability can be achieved. Two potential avenues for the future were suggested: a) the development of legislation combined with the enforcement of sanctions, and b) naming and shaming based on clear indicators as part of the ongoing monitoring and reporting process.

Moreover, current approaches to monitoring progress in DRM do not align well with local and national data collection processes and reporting requirements. The use of existing data sets such as census data, household and health surveys etc., which are regularly updated, could become a useful tool to enrich risk information and knowledge as well as link DRM efforts more closely to development concerns. The fact that disaster risk today is so complex that it spills into issues far beyond disaster events themselves, such as land rights, means that disaster risk governance has to become part and parcel of governance at a larger/wider scale.

3.5 A synaptic future?

Growing complexities of existing, new and newly emerging risks clearly call for new and strong approaches to managing these risks. Business as usual is not an option. They may even call for a radical rethinking of how we conceptualise and organise our societies vis-à-

vis addressing the underlying drivers of risk and strengthening resilience. We may have to resist our impulse to have a master plan and a clear concept of where we are going to instead rely on a “synaptic system” that employs different styles, including anarchic approaches to risk governance and the governance of risks. This includes in particular a more nimble and flexible way of working with informal sectors of societies: the recognition that there remain two spheres of development, one with formal partners regulated by formal institutions and one with informal partners applying a variety of approaches to working through and around existing regulations, has not resulted in more effective ways of working with the latter.

The potential role of technology, in particular communication technology, in the future of disaster risk governance is yet to be well understood. New forms of collaboration, including increased use of social media, will grow in the future to an extent that may herald a new approach of “collaborative governance” beyond currently conceivable forms of institutional arrangements.

In addition, the scale of governance has to match the scale of the problem. Disaster risk often crosses territorial and institutional boundaries to an extent that there may be a need for “meta-governance” elements that allow for societies (rather than governments) to weigh up options, costs and benefits across different pillars of disaster risk management and across interest groups. For example, even at the municipal level, it is not necessarily clear who is in charge of urban development and who can control the growth dynamics of cityscapes. Can there be a role of a Chief Risk Officer or Risk Board in an environment where economic policy and resulting growth in the built environment is not under the control of any one body?

Finally, disaster risk governance arrangements will have to be able to govern development risk, i.e. the risk generated by development decision-making and therefore development processes itself. Thus the differentiation between risk governance and development governance is a false one and only leads to a continuation of the current situation where externalities, including disaster risk, remain hidden and are nowhere accounted for, resulting in almost blanket impunity or all actors involved.

If there was a way by which key performance indicators of those in key management and government positions were imbued with risk reduction deliverables, there may be a way to come to a better understanding at least of the risk-related consequences of everyday decision-making. By pulling disaster risk management out of specialised units and stopping to call it thus, we may be able to end the culture of impunity that characterises current risk governance in both public and private spheres.

4. Transformation through disaster risk management

4.1 Introduction to the discussion on transformative disaster risk management and the transformation of development

In the last quarter of a century, as the global economy has doubled in size, increases in consumption have caused the degradation of an estimated 60% of the world's ecosystems. The benefits of growth have been distributed unevenly, with a fifth of the world's population sharing just 2% of global income. Even in developed countries, huge gaps in wealth and well-being remain between rich and poor. These processes and their consequences lie at the heart of current upward trends in disaster risk.

If we accept the premise that our notions of development growth have failed, as evidenced amongst other things by increasing disaster risk, then we must question the very concept of economic growth that underlies it. Pragmatically, this means that we must identify those types of development investments and practices that create positive externalities or co-benefits; in economic terms, consider the positive social and economic externalities arising from effectively managing risk. A shift in focus from risk reduction to risk control and resilience and prosperity and from risk management to sustainable development allows the focus to shift onto the immediate and long-term co-benefits of disaster risk management.

The aim of the meeting was to propose a set of principles of risk-sensitive planning, policy and practice that can lead to the generation of various positive social and economic consequences.

The following questions guided pre-meeting and meeting reflections and discussions:

- What are the practices and approaches of DRM that have led to measurable progress in development or concrete social, environmental, economic and political benefits?
- How can development practice be transformed by including a risk-sensitive perspective into planning and implementation?
- What are the levers (political, social, and economic) that create incentives for either incremental or transformational change?
- What are examples of incremental change that has accumulated over time into true transformation (of practice, policy etc.)?
- Conceptually, can “transformation” be understood as a counterpart or complementary to “resilience”?
- If transformation – as defined in the SREX – is the altering of fundamental attributes of a system, which are the attributes in our current economic and social systems that we would like to shift and change? How can DRM contribute to this shift?
- What are current factors and trajectories of transformation in relevant development sectors, such as agriculture and rural development, urban planning, transport and utilities, communications etc.?

4.2 Terminology

The term and concept of transformation has been used – much as “resilience” – to convey a range of different meanings and agendas. More recent definitions focus on the aspirational aspects of the concept, where a change in value systems and a resulting change in existing power structures is at the core.

The IPCC’s SREX calls transformation “the altering of fundamental attributes of a system (including value systems, regulatory, legislative or bureaucratic regimes, financial institutions, and technological or biological systems)”.⁷ Their latest publication, the 5th Assessment Report, specifies that “transformation could reflect strengthened, altered or aligned paradigms, goals, or values towards promoting adaptation for sustainable development, including poverty reduction.”⁸

Transformation can be alternately ascribed to disaster risk management (DRM) and to development, whereby the former would comprise transformative DRM practices leading to positive development outcomes and co-benefits and the latter would describe transformative development approaches resulting in effective reduction of risk and losses. In both instances, the concept, though potentially powerful and in itself “transformative” of existing thinking, lacks clarity and indicators for measuring it. In this, it is similar to the broader use of terms such as resilience, vulnerability and sustainability, running the risk of becoming overly defined or left in its state of vagueness to suit different contexts. In any case, transformation has to be understood as having the potential to also mean negative change (for some or all) and as such should not necessarily be seen as a complement of resilience.

DRM itself can be understood as a transformative instrument to affect change in and positive outcomes from development processes. As such, the onus is on the practice of DRM to provide positive input to development as a social process and contribute to its continuous transformation on the ground. According to UNDP, transformational change is the process whereby positive development results are achieved and sustained *over time* by institutionalizing policies, programmes and projects within national strategies. It should be noted that this embodies the concept of institutionally sustained results and of consistency of achievement over time and therefore does not include short-term, transitory impact.⁹

4.3 Transformation through DRM?

Development as experienced to date – regardless of whether we understand it as progress in human and social well-being or as economic growth – is sown with multiple pitfalls and unsustainable qualities. Concentration of income, poverty, exclusion, marginalization, every day risks, including health problems and other factors typify models that are inequitable in their distribution of development benefits. Among the non-sustainable

⁷ IPCC, 2012: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, UK, and New York, NY, USA.

⁸ IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Working Group II Report to AR5.

⁹ UNDP, 2011: Supporting Transformational Change. Case studies of sustained and successful development cooperation. New York: UNDP.

aspects of many expressions of development, the insecurity of investments and livelihoods when faced with physical hazards, including those associated with climate change, is of increasing concern and impact. An increase in security, resilience and resistance of investments in infrastructure, production and services, and in livelihoods in general, as is repeatedly argued by DRM proponents, must therefore be a primary objective of sustainable development. Consequently, DRM should be seen as a key development strategy and instrument.

The indicators we may use to measure increases in security, sustainability and resilience can include the following:

- decreased rates of death and injury/illness under disaster conditions;
- decreased losses in infrastructure, production and livelihoods in general, associated with low recurrence high intensity (intensive) and high recurrence low intensity (extensive) events and the maintenance or increase in the levels of productivity and welfare of communities and localities;
- maintenance of the protection that natural environments provide for society and livelihoods; and
- decrease in or controls over the proportion of societal resources located in high hazard prone areas.

The ability for DRM, seen as a strategy or approach, to achieve such sustainability goals, is dependent on the use of existing development management approaches or schemes such as land use planning, environmental management, urban planning, poverty reduction strategies, social protection mechanisms. In this sense, DRM is a process by which available, modified or new development planning mechanisms are directed explicitly towards risk control and reduction, to an increase in quality of investment and in its location. Such tools are more effective and less costly when applied ex ante in a prospective manner as opposed to correctively or in compensatory fashion.

In this sense, transformative DRM and its contribution to the achievement of transformative development may be most easily, efficiently and economically achieved through prospective practice. Corrective and compensatory practice, such as social protection schemes and disaster relief, although increasing welfare, resistance, and resilience, do not however change the rules of the game. Rather, they generally take a status quo situation and rationalise it to eliminate immediate contradictions and inequities, thereby reinforcing existing social structures and power dynamics. This does not of course mean that corrective and reactive practice could not be progressive and incorporate elements of transformation and change in the interest of more sustainable practice and process.

Overall, DRM is one contribution amongst many others to the achievement of sustainable development, in this case, through the reduction or control of risk factors. But the fact that it deals with risk based on and defined by the presence of physical events while the risk construction process as such is fundamentally socially induced and controlled, means that it is seen as being significantly distinct from other risk management processes. It may also mean that the transformative or transformational role that DRM can play for development may be significantly different and important in that it is directly concerned with indicators of resistance, resilience, exposure and vulnerability and the factors that affect their

behaviour – all of which have the potential to effect change in development processes and/or outcomes.

Here we must remember that one of the most salient and important aspects of disaster risk (beyond its obvious importance when manifested as a disaster event) is its critical role as an indicator of multiple dimensions of development malpractice and as a harbinger of future loss and damage. In other words, more than its existence as an indicator of potential loss and damage in the future (the disaster), the importance of risk may be appreciated in the fact that it announces existing and past malpractice and can be used as an indicator of needed change. It can point to transformational principles to be incorporated in development practice that will include not just quantitative values, but qualitative indicators of fundamental changes in ethics, morality, equity, efficiency, participation and accountability.

4.4 How to affect transformational change – any answers?

Transformative DRM and development must be exercised primarily at a local and community level, talking the language of communities and enacting actions that are compatible with and complimentary to ongoing more prevalent and permanent every day social needs. Yet there is no real mechanism available to date for integrating global and local efforts, while indigenous knowledge and participation are not as yet commonly fostered. Despite much talk of the need to support locally grown, rooted and connected efforts, existing DRM (and development) strategies and programmes remain more vertically oriented than horizontal or integrative. Where localities are assigned greater apparent power and increased roles, this usually goes hand in hand with insufficient resources and capacities.¹⁰

In this context, incremental change through DRM and its potential role in building resilience and affecting incremental progress in social well-being should not be ignored. Instead, incremental changes can also contribute to and form a route towards transformation itself. As always, context and locality matter. And, consequently, the way that DRM is approached and worked into local contexts and development processes also matters. For example, in much of sub-Saharan Africa, DRM has developed in a unique way due to prevailing risk conditions and concerns. In many African contexts, disaster risk is linked more closely to prevalent ongoing social concerns such as poverty, hunger, conflict and HIV/AIDS to name just a few. This has meant that the “development core” of DRM is more readily understood and acted upon, increasing the potential for transformative elements of DRM to come to the fore. While there has been rather limited deliberate investment in Disaster Risk Management by African governments, this can also present an opportunity to integrate risk considerations into the broader developmental architecture.

¹⁰ A prerequisite, so it seems, for transformative DRM approaches are individuals and institutions that are cogniscent of local context. Examples on how to breed such individuals and institutions exist, for example in the health sector in Kenya, where the medical training programme integrates public health and community services. Students need to spend at least 6 months living in local communities so that by the time they become qualified, they are familiar with the issues on the ground.

The example of health is illustrative of both such challenges and opportunities. In dealing, for example, with cholera, one deals with cholera epidemics as disasters (and the risk thereof), cholera epidemics in disasters, and with epidemics that are a compounding factor driving disasters. At the same time, the health sector today, while also concerned with emergency response and critical care, has a strong culture of prevention. This was not always the case and the fact that today's public health messaging focuses largely on how people can change their risk profile in order to avoid expensive operations and treatments later on in life, is nothing less than a transformational change compared to the curative approaches up to the mid-20th century.

The risk context also clearly defines the way that development priorities are set. In Southern Africa, extensive social protection programmes have been rolled out since the devastating famines of the early 1980s and the spread of the HIV/AIDS epidemic. Since then, the region's risk profile has changed and there have not been any serious famines. Whether this was largely due to the introduction of DRM into development conversations or an effect of other changes in the social, environmental and political landscapes cannot be ascertained, but it has certainly contributed to recognition of the fact that bringing risk management, resilience-building and long-term development concerns more closely together has the potential to make a real difference in development outcomes.

It is easier to shape existing priorities and structures to serve the twin-purposes of risk reduction and sustainable development than to create something that does not fit into a countries' existing priorities and processes. Likewise, it is easier to work through existing institutional infrastructure than to build a new one. The process may take longer but it may be more appropriate to affect the desired outcomes and in the long-term the resulting incremental changes may be more sustainable.

Does this mean that the grand narrative of transformation is unlikely to be achieved or even useful as a concept? Not necessarily. It probably depends on a number of factors, including scale. At the global scale, transformational change may be a long-term process that can be sped up only by massive shocks to the system that ripple across a significant number of countries and interest groups. The 2008 financial crisis and political fall-out in the years since may be such a shock, whereby the longer term transformational effects are yet to be seen.

However, at the local scale – either geographically or institutionally – the concept may be immediately useful and applicable. One of the values of the concept of transformation is that it provides a way of evaluating and determining the best cost-benefit ratio for different options. Applying the filter of (positive) transformation to decisions that seek to affect social and economic progress, may enable the identification of “the biggest bang for the buck” over seemingly more attractive low-hanging fruit (as transformational change won't – more often than not – show immediate results). The challenge that remains is the highly subjective and value-driven nature of indicators for transformation. What are the units of transformation? How do we identify why we need it and is it the system that needs to be transformed or is it the tools that we use that need to radically change? How do we measure both incremental and transformational change?

Governments and public institutions remain the key actors in affecting transformational change. Indeed, transformational change may be instigated by non-state or private

individuals and entities, but by definition can only be fully achieved by public actors. On the one hand this is because the political will of governments at all scales will be required to plan for change and to allocate resources and on the other hand because it will depend on transformational change also of the very institutions that seek new pathways for development.

However, for transformations to be sustainable and pervasive, they must embrace wider society, including community-based and non-profit organizations and businesses.¹¹ This is particularly true in contexts where politically and socially contentious issues, such as land rights or engrained corruption, need to be tackled in order to achieve transformation. The role of national actors also becomes less relevant where administrative boundaries are artificial and people are moving across boundaries and risk profiles and their livelihoods are affected by an impact on a number of risk drivers that are trans-boundary in nature. In many African contexts, with new players entering the economic and social landscapes, the notion of the nation state and the focus on state infrastructure as the main role-player in delivering essential services and regulating markets may increasingly lose relevance.

4.5 Examples of transformational change and transformative DRM in development sectors

In the agricultural and food security sector, a paradigm shift is required, where the focus from food production moves to agriculture as an opportunity on the one hand and food insecurity as an access issue on the other. There are potential unintended consequences of transformation of this kind: a concerted investment in changing the paradigm around food production may result, for example, in a reduction of existing subsidies and support services and increased vulnerability of farmers to market shocks. It may create new and perpetuated inequalities of income and assets, particularly of land.

There are examples in which programmes conceived as dedicated disaster risk reduction measures evolved into truly developmental and transformative instruments. The community-based initiative Operation Mworio (=relief) in a food aid-dependant community in Kenya is such an example: farmers in the community pooled their resources to incrementally build water pans to collect rain and irrigation water and enable subsistence vegetable farming in order to exit the annual seasonal dependency of the community on external food aid. The initiative was so successful that the community was able to market vegetables in Nairobi, which in turn attracted additional support that saw the building of water reservoirs and further agricultural expansion. In this way, risk reduction measures aimed at supporting subsistence farming snowballed incrementally into what was a developmental transformation for the community towards commercial farming.

The health sector undergoes continuous change and planners are seeking to look ahead for decades rather than a few years. The dual healthcare system with an emphasis on private sector provision and public-private partnerships has direct implications for assumptions about and manifestations of vulnerability as well as, possibly to a lesser extent, exposure. Disaster contexts provide the potential to develop the capacity of local systems beyond the

¹¹ See also UNDP, 2011 (as cited above).

emergency, such as capabilities in disease detection and long-term treatment, but these opportunities are often squandered. In urban development, there are already a range of well-established and proven tools for managing risks, such as building codes, land use planning, densification, slum upgrading etc. Where they are applied and enforced in a risk-informed manner, development begins to equal disaster risk management.

The area of poverty reduction is possibly the one most in need of transformative approaches. One may even say that sustainable reduction of poverty and inequality is itself transformative and is a result of major transformations in society. Recent and historical evidence suggests that to reduce inequality and poverty in the long-term, nothing short of a revolution is required in many countries, i.e. transformational changes in the form of effective and accountable institutions, improved transparency and management, increased access by the public to information, open challenging of corruption, and a strengthened media and civil society to provide a counter-narrative to state accounts. Incidentally, all these are required too to effectively reduce disaster risk.

DRM can contribute to incremental changes by presenting models of adaptive social welfare instruments and services, including social protection, nutrition support and early warning; inclusive and participatory risk identification, decision-making and monitoring tools (as community risk management can become a catalyst also for participatory solutions to more divisive areas of social interaction). However, partners in delivering services, both state and non-state actors, can become overly powerful and turn into agents of exclusion and coercion. Further, faced with larger trends of demographic change and environmental degradation such approaches may become merely incremental in their success towards longer-term change. More radical and transformative approaches may include using DRM and risk reduction as entry points to address structural inequality. Property rights and land tenure are at the core of much of risk creation, particularly in low-income countries.

Finally, the most important factor for transformational change may be education. Risk information and a process of agreeing how to communicate and use it can become a catalyst for reflection on how knowledge is shared, what value learning is being given and who has access to which information. Dramatic imbalances in access to formal education across the globe mean that in sub-Saharan Africa, only 7% of the population completes tertiary education versus an average of around 30% globally and of 70% in Asia. As a result, much of the more complex, data-heavy and technology intense analysis within disaster risk management lies in the hands of a few and truly transformative DRM approaches need to find ways of getting risk information into informal education channels.

4.6 Conclusion

In conclusion, transformative or transformational DRM is the identification of risk and implementation of risk management or control that contributes to “better development”, which permits the attainment of economic growth whilst not impeding human well-being and social prosperity and achieved in a just and equitable manner. The aspect of DRM as a concept and practice that corresponds most closely with this understanding of transformative DRM, is that of anticipatory or prospective risk management that seeks to avoid the creation of new risk by hard-wiring disaster risk into the daily practice of

individuals, development actors, analysts, businesses and the whole of society. In this regard, neither the term prospective or transformative DRM is just another way of saying “mainstreaming”. Instead, they point to the need to elaborate new parameters, principles and tools that transform existing thought and practice from within. Maybe most importantly, where DRM provides an avenue for laying on the table and questioning the existing value and power systems (by highlighting the way underlying values and institutional arrangements shape decisions that may contribute to risk generation) it can become a truly transformational force.

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