



International Strategy for
Disaster Reduction

act:onaid

Integrating Disaster Risk Reduction into the Millennium Development Goals:

Review of activities up to the present Commissioned by ActionAid and UN ISDR

Introduction

The Millennium Development Goals (MDGs) are the most widely supported comprehensive and focused poverty reduction targets that the world has established. Eight goals were signed up to by 191 nations in 2000. They now include 18 targets and 48 indicators for progress. Halving poverty by 2015 is a major MDG and Poverty Reduction Strategies supported and funded by World Bank and National Governments are critical instruments in attaining this goal

When the world community signed up to the Millennium Development Goals (MDGs) in 2000, disaster risk reduction was not included in strategies of their attainment. Although the Millennium Declaration did recognise that disasters can jeopardise development and included a commitment 'to intensify our collective efforts to reduce the number and effects of natural and man-made disasters'¹ in the General Assembly Resolution, disaster risk was not subsequently taken into account in formulation of the goals and indicators.

Since then, in January 2005, at the World Conference on Disaster Reduction, in Kobe, Japan, 168 Governments adopted a 10 year plan to make the world safer from disasters. The Hyogo Framework for Action, as it is called, has as its key goal the substantial reduction of disaster losses by 2015 in lives and the social, economic and environmental assets of communities and countries. The Framework offers guiding principles, priorities for action and practical means for achieving disaster resilience for vulnerable communities. It has become increasingly clear that disasters are one of the key factors holding back progress towards halving poverty and the other MDGs. As donor governments and the international community increasingly focus their work through the prism of attainment of the MDGs there is a need to pull together the various attempts which have been made to integrate disaster risk reduction into a common set of assessment guidelines which can be used by national governments when developing and monitoring PRSP and MDG plans to reach them.

¹ United Nations, 2000 United Nations Millennium Declaration, General Assembly Resolution, A/RES/55/2, 18th September 2000 p 6

Purpose of Study

The goal of this project is to promote the integration of disaster risk reduction (DRR) with the Millennium Development Goals. This requires that the Priorities for action in the Hyogo Framework for Action are properly understood in the context of the MDGs, so that the policy makers, institutions and specialists involved in the implementation of both are more fully aware of the need to integrate them.

The study is intended to identify the linkages that need to be established between the Hyogo Framework for Action and the Millennium Development Goals. Although there have been a number of initiatives aimed at examining how to integrate disaster risk reduction into the MDGs, these have not included a revision of the UN Millennium Project Needs Assessment guidelines in the light of the Hyogo Framework for Action (HFA). The aim of this review is to draw on existing initiatives to examine each of the eight MDGs in relation to the HFA. In fact, there is little in existing studies that specifically identifies the linkages with the HFA, and so the task in the matrix below is to focus as clearly as possible on these interconnections.

Links with previous studies

There are some other recent studies and guidelines that seek to identify the connections between the MDGs and DRR. One is the *Guidelines for integrating disaster risk reduction into CCA/UNDAF* (ISDR 2006). This is especially concerned with the Common Country Assessments and the UN Development Assistance Framework that have been adopted so that the UN system can “support national efforts to achieve sustainable development in the context of the MDGs.” In particular this document includes several annexes that are of value in this project, especially Annexe 3 (“Integrating DRR in MDG based UNDAFs”) and Annexe 4 (“Checklist for Evaluating the Incorporation of DRR into the CCA/UNDAF Process”).

Another relevant document is the DFID scoping study *Disaster Risk Reduction: a development concern* (DFID 2004). This contains a table (p.35) that identifies some of the activities that can reduce disaster risk in relation to each of the MDGs, and so suggests how DRR can actively help to achieve the MDGs through valuable synergies. DFID has also initiated an evaluation of the dangers of disasters in reducing the ability to achieve the MDGs, for instance in its 2006 Policy Paper. This includes a simple matrix that shows how disasters can undermine some of the basic goals of each of the main eight MDGs (DFID 2006, p.21-2).

Linking the HFA with the MDGs

This report uses a matrix that identifies the eight MDGs and their related Targets (total of eighteen), and to correlate each of these with the five Priorities for Action of the HFA and their subsidiary Key Activities. This gives rise to a matrix containing ninety cells, each of which then needs to be analysed according to the HFA Key Activities most relevant to that particular MDG. So in each cell, the question is asked:

“What needs to be done in order for this HFA Priority and its relevant Key Activities to be implemented in support of the achievement of this particular MDG Target?”

In this report only the first MDG Goal and Targets 1 and 2 (poverty and hunger reduction) have been covered. It is clear that the scope of the inter-relations between the two sets of Targets and Actions – with a total of 90 cells – is very large.

To be fully comprehensive in relation to the HFA, additional cells should be added at the end of the matrix to cover:

- MDG Add-ons for
 - *Transport*
 - *Energy*,

and

- Hyogo Cross-cutting Issues:
 - *Multi-hazard approach*;
 - *Gender perspective & cultural diversity*;
 - *Community & volunteer participation*;
 - *Capacity building & technology transfer*

Again, it has not been possible to do that within the scope of this draft. Comments are welcome on whether the addition of these issues should be included.

The Matrix will have hotlinks inserted into it so that a user can click on any particular cell and be taken to the analysis of how to implement that HFA priority in support of the related MDG target. Building on this the user is encouraged to contribute examples to show what happens when the required actions are not taken. These could also be presented with examples of good practice that show what can be achieved when appropriate DRR actions have been taken.

Poverty reduction and the HFA

Probably the most important MDG is that related to poverty reduction (Target 1). A key factor when considering DRR is that disasters are often responsible for increasing the number of poor people. The impact of most hazards will destroy assets that are essential to livelihoods, damage places of employment, or disrupt people's access to their normal livelihood and place of work. Many people who are not already classified as poor, and a good number of those who are close to the threshold, are likely to be pushed into poverty as a direct result of the disaster. And of course those who are already poor may have their situation made even worse.

This is precisely why it is imperative that the MDGs include DRR in their operation: it will be even more difficult to achieve progress in poverty reduction unless the impact of disasters is reduced. Conversely, there is no point engaging in poverty reduction strategies unless these also deal with the potential impact of disasters that may create new groups of poor people as victims of the hazard. Climate change (CC) is also especially relevant in this, through the negative impacts it is and will have on livelihoods and health.

So in regard to the first MDG Target of poverty reduction, it is essential to have a concept that captures the groups of people exposed to different hazards who are in danger of becoming poor as a result of disasters. In regard to MDG Target 1, the terms “**near-poor**” and “**likely to become poor**” (**LTBP**) are used in order to convey the significance of hazards creating higher levels of poverty. Many of the HFA priorities and activities must address poverty reduction by actions that *prevent* new groups from becoming poor as a result of disaster impacts.

Hyogo Framework for Action Millennium Development Goals	HFA 1 Ensure DRR is a national & local priority, with strong institutional basis for implementation	HFA 2 Identify, assess & monitor risks, & enhance early warnings	HFA 3 Use knowledge, innovation & education to build culture of safety & resilience	HFA 4 Reduce underlying risk factors	HFA 5 Strengthen disaster preparedness for effective response at all levels
Goal 1 Target 1 Poverty reduction: Reduce by half those living on less than \$1 per day	<i>See below</i>	<i>See below</i>	<i>See below</i>	<i>See below</i>	<i>See below</i>
Target 2 Hunger Reduce by 50% the number who suffer from hunger	<i>See below</i>	<i>See below</i>	<i>See below</i>	<i>See below</i>	<i>See below</i>
Goal 2 Target 3 Universal Primary education	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Goal 3 Target 4 Gender equality & empowering women (school enrolment)	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Goal 4 Target 5 Child mortality	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Goal 5 Target 6 Maternal health	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Goal 6 Target 7 HIV	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 8 Malaria & other major diseases	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Goal 7 Target 9 Environmental sustainability in country policies & reverse loss of NR	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 10 Safe drinking water	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 11 Slum improvements	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Goal 8 Global partnership	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>

Hyogo Framework for Action Millennium Development Goals	HFA 1 Ensure DRR is a national & local priority, with strong institutional basis for implementation	HFA 2 Identify, assess & monitor risks, & enhance early warnings	HFA 3 Use knowledge, innovation & education to build culture of safety & resilience	HFA 4 Reduce underlying risk factors	HFA 5 Strengthen disaster preparedness for effective response at all levels
Target 12 Open trading, rule-based, good governance, development and poverty reduction	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 13 Address special needs of Least Dev Countries	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 14 Address needs of landlocked and SIDS	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 15 Deal with debt problems	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 16 Decent, productive work for youth	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 17 Affordable essential drugs	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Target 18 Partnerships for new technologies especially ICT	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
MDG Needs Assessment Add-on: Transport	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
MDG Needs Assessment Add-on: Energy	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Hyogo Cross-cutting issues					
Multi-hazard approach	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Gender perspective & cultural diversity	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Community & volunteer participation	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>
Capacity building & technology transfer	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>	<i>Still to be done</i>

MDG Goal 1
Target 1 Poverty reduction
Reduce by 50% those living on less than \$1 per day

HFA 1
Ensure DRR is a national & local priority, with strong institutional basis for implementation

What needs to be done to implement HFA Priority 1 for this MDG Target?

Key Activities in HFA Priority 1
(those most relevant to poverty reduction are *italicised* and discussed below)

- *National institutional and legislative frameworks*
 - *DRR institutional mechanisms (national platforms)*
 - *Designated responsibilities*
 - *DRR as part of development policies and planning, sector-wise and multi-sector*
 - *Legislation to support DRR*
- *Resources*
 - *Decentralisation of responsibilities and resources*
 - *Foster political commitment*
- *Community participation*

National institutional and legislative frameworks
DRR institutional mechanisms (national platforms);
Designated responsibilities

The main goal suggested for this HFA task is the creation and strengthening of national integrated DRR mechanisms, including National Platforms. This is intended “to integrate risk reduction ... into development policies and planning at all levels of government, including poverty reduction strategies and sectors and multi sector policies and plans.” (ISDR 2005 p.6) Although the document does not specifically mention the MDGs (only the Millennium Declaration), it is clear that this priority action must include the institutions that are dealing with the MDGs, especially the National Development Strategies, Needs Assessments and associated Country Strategies.

This is the key area where proper integration of the HFA priorities must meet and confront those of the Millennium Declaration: unless disaster risk reduction is properly incorporated into the poverty reduction process, then both are severely constrained. In particular, unless DRR is taken into account in the MDGs, the number of poor people will increase every time a disaster happens and any progress is likely to be undermined.

Knowledge requirements (see also next heading)

Institutions can only function on the basis of diagnosis of problems, analysis of their causes and comprehension of possible remedies. Clear understanding is needed of the ways in which hazard shocks generate new groups that fall below the poverty line. DRR at national and local levels requires careful analysis of the way that poverty is likely to be increased by hazard impacts. This requires knowledge of the effects of anticipated risks (of different intensities and duration) on livelihoods (disrupting or wiping out of employment or self-employment), savings and stocks, buildings, infrastructure essential to the

maintenance of livelihoods). If this analysis is carried out, then priority can be given to the hazards and vulnerable groups that are most likely to create new groups of poor people.

DRR as part of development policies and planning, sector-wise and multi-sector

Also

Resources

Before a hazard impact:

DRR must protect existing livelihoods from hazard impacts in order to preserve incomes and subsistence and prevent a hazard from creating a new group of impoverished people.

Key needs are to:

- protect assets required for livelihoods;
- protect places of employment, supply chains, infrastructure (water, power, transport, ports) essential to the maintenance of those jobs

Examples of serious failures in achieving this that generated poverty:

- *Kobe port 1995 (major employer; check to see if wages were lost for many months during reconstruction)*
- *Sri Lanka and India fishing boats and nets in tsunami 2004*
- *Hurricane Katrina 2005*

After hazard impact:

- Ensure that assets and employment essential to livelihoods and therefore income are restored as quickly as possible
- Instigate programmes that reduce the transfer of assets to better-off people as a result of distress sales (e.g. of land, livestock, jewellery)
- Reduce the need for people to migrate or seek refuge away from sources of employment or livelihood if this will delay or disrupt the revival of those activities and increase dependency
- Ensure that emergency aid does not undermine livelihoods
- Ensure that recovery measures take assets for livelihoods and employment opportunities into account as a priority
- Ensure that emergency assistance and recovery measures take into account pre-existing development needs and are fully integrated with the development priorities of the people in the area
- Increase spending power of people affected by disaster (e.g. through cash for work, or cash handouts) in order to sustain other livelihoods through purchasing from local suppliers. May also be crucial to the reconstruction effort. Local multiplier effects likely to be very powerful in reconstruction.

Identify causes of poverty (declining income, reduced asset base) that are related to potential natural hazards –

- Livelihood impacts –
 - evacuation (voluntary, advised or forced) and loss of access to livelihood
 - disruption of infrastructure needed for livelihoods – electricity, water supply,
- Livelihood impacts – employment-based
 - employment that will be disrupted or removed by hazard impacts
 - self-employment and informal sector work that will be disrupted or removed by hazard impact
 - loss of key assets for self-employment or employment (e.g. boats, nets, water supply, tools and equipment, draught animals)
- Livelihood impacts – resource based

- disruption to farming, fishing, forest product and other livelihoods
- loss of land (e.g. river bank erosion), despoiling of land (e.g. saltwater intrusion)
- loss of contracts for or customary access to resources, e.g. land, water, grazing
- loss of key assets for self-employment or employment (e.g. boats, nets, water supply, tools and equipment, draught animals)
- Loss of savings and stocks
 - loss of cash, jewellery,
 - loss of livestock capital

Political commitment

The key part of this is for governments and donors to make a commitment to act *before* disasters happen: both for preparedness on what to do after a hazard has struck, but especially for vulnerability reduction, hazard mitigation and other forms of disaster prevention. These are closely related to the task of poverty reduction: political will (supported by the necessary knowledge and policies) is an essential component of poverty reduction, and can be connected with DRR because *poverty reduction targets are more likely to be met if disasters are prevented or reduced*: disasters both hurt the already poor and create new poverty among other groups.

Community participation

Successful vulnerability reduction needs to be carried out at the scale of households and communities. In most situations it is essential to improve livelihoods in order to achieve this, and so poverty reduction is a parallel outcome. In the past 15 years, many NGOs, INGOs, CBOs, Red Cross/ Red Crescent have worked with communities in a participatory manner to support DRR, using a range of Community Risk Assessment (CRA) methodologies (see ProVention website for a comprehensive survey of these). The use of participatory approaches to what is coming to be called “community based disaster preparedness” (CBDP) has helped to empower people locally, and has significantly increased the chance that local interventions can succeed.

In many cases the CRA process has also exposed the fact that this is difficult to achieve preparedness against natural hazards without taking into account everyday problems such as health, water, sanitation, livelihoods. It is these daily needs that are usually given the highest priority by the poorer people, even when they are at risk of flood, cyclone or earthquake. Governments will find that the most effective means of engaging with communities is likely to be in networks and partnerships with organisations that already have a great deal of experience in both risk reduction and grassroots development. It is also at this scale that synergies exist with poverty reduction programmes that deal with livelihoods through assets and employment. In effect, at the local and community level, the people themselves do not prioritise natural hazard risks, and so there needs to be a fusion of actions that link DRR with the “normal” issues of development, especially around livelihoods and poverty reduction.

MDG Goal 1 Target 1 Poverty reduction Reduce by 50% those living on less than \$1 per day	HFA 2 Identify, assess & monitor risks, & enhance early warning
<p style="text-align: center;"><i>What needs to be done to implement HFA Priority 2 for this MDG Target?</i></p> <p style="text-align: center;">Key Activities for HFA Priority 2</p>	

(those most relevant to poverty reduction *italicised* and analysed)

- *Risk assessments and maps, multi-risk: elaboration and dissemination*
- *Indicators on DRR and vulnerability*
- Data & statistical loss information
- *Early warning: people-centred; information systems; public policy*
- Scientific and technological development; data sharing, space-based earth observation, climate modelling and forecasting; early warning
- Regional and emerging risks

Risk identification, assessment and monitoring

Identify risks affecting country and assess their potential impact on livelihoods (especially assets used by poor people or those liable to become poor through the loss of assets, income generating activities or employment).

Risks must be identified and assessed in relation to their different levels of *intensity, duration, frequency, irregularity*. Special emphasis needs to be put on the problems of *multiple hazards* (e.g. floods that follow drought – as in much of Horn, Eastern and some of Southern Africa in late 2006, or drought that follows flood – as in parts of Mozambique after the cyclones and floods of 2001). In addition, special attention needs to be given to the likely changes in the intensity, duration, frequency and irregularity under conditions of climate change. Moreover, awareness of *new types of risks* must be assessed in relation to climate change, especially the impact of diseases and pests of people, livestock and crops that are crucial to the livelihoods of the poor and near-poor.

Enhancing early warning

Early Warning Systems (EWS) are mainly appropriate as a means of saving the lives (and avoiding injury) for people who are exposed to sudden onset hazards. What is their significance specifically in regard to poverty reduction?

There are some cases where early warnings enable people to evacuate to safety and that can incorporate measures that help to protect livelihoods and assets. For instance, in Bangladesh and Orissa (eastern India) cyclone shelters that protect people who respond to a warning may include provision to safeguard some livestock. In addition, Famine EWS (FEWS) may provide the basis for protecting some livelihoods (e.g. through livestock purchase schemes) in advance of the serious onset of a famine.

EWS are beginning to have relevance in helping to protect livelihoods. For some farming livelihoods, and assets of home-based entrepreneurs and informal sector a 1-2 week early warning of monsoon, flood and cyclone in Bangladesh and Eastern India can result in alternative paddy cultivation practices which can tolerate later or early flooding. Warnings can also result in evacuating home-based livelihood assets in time to avoid hazard impacts. Drought prediction in western India can help farmers avoid wasteful seed and inputs expenditures, and they can invest instead in home-based crafts and marketing as an alternative to a predicted bad farming year.

Some aspects of mortality, morbidity and injury resulting from hazard impacts are poverty-related, and so warnings can be valuable to livelihoods indirectly. For instance, if early warnings are able to reduce deaths and injuries, this may be significant in reducing the poverty that results from immediate loss of family labour for subsistence or employment. An added issue relates to gender: women who are widowed are likely to become impoverished as their identity and rights to income may be lost. This may include loss of

access to assets (especially land) should these be traditionally claimed by the husband's relatives.

One of the key issues is that higher rates of mortality may be suffered by the poor. This is because there is evidence that they are reluctant to respond to warnings that require them to evacuate, because of the risk of theft of their assets. If the warning proves to be a false alarm, the result of evacuating may be the 'disaster' of having assets stolen. In some cases, people are reluctant to move to safety until the last moment, and this may be when it is too late. There are also examples of EWS being unable to deliver warnings to people in time or in a way that can be properly understood and acted on (Thomalla & Schmuck 2004; COAST 2006).

MDG Goal 1
Target 1 Poverty reduction
Reduce by 50% those living on less than \$1 per day

HFA 3
Use knowledge, innovation & education to build culture of safety & resilience

What needs to be done to implement HFA Priority 3 for MDG Target 1?

Key activities for HFA Priority 3
(those most relevant to poverty reduction *italicised*)

- Information sharing and cooperation;
- Networks across disciplines and regions; dialogue
- Use of standard DRR terminology
- *Inclusion of DRR into school curricula, formal and informal education*
- *Training and learning on DRR: community level, local authorities, targeted sectors; equal access*
- *Research capacity: multi-risk; socioeconomic; application*
- *Public awareness and media*

Inclusion of DRR into school curricula, formal and informal education

Poverty reduction can be supported through DRR education that reduces fatalistic attitudes. Poor people (and likely to become poor) often have an apparent fatalistic attitude to hazards, but this is probably a way of rationalising the fact that they can have very little influence over their own lives. With education, they can be enabled to demand better social protection, become better organised and more assertive about their rights, and monitor the performance of the authorities.

Success in this area is dependent on achieving the increase in school enrolment (especially for girls) that is included in MDG Targets 3 and 4. These targets are in turn dependent on poverty reduction. School fees (and associated gender priorities) and costs of uniforms, plus the need for poor households to withhold children from school (to use their labour) are key factors in reducing the participation of children (especially girls) from poor families.

Education and training

Similar to the above, but extended to local government and relevant actors, training can enable poverty reduction through the integration of DRR with development initiatives and private sector activities. This should achieve better integration of risk reduction with other activities that might otherwise increase the vulnerability of the poor (and potential poor) to hazards. Such training can also lead to better integration of poverty reduction activities by

various actors (e.g. NGOs, CBOs, Red Cross/ Red Crescent) with DRR. Examples of this are growing in the spread of Community-Based Disaster Management/ Preparedness (CBDM/P) in many countries, especially among poor communities. Much of this work is related to “community vulnerability assessments” (CVA), carried out by many NGOs and CBOs, and the Red Cross/ Red Crescent through their Vulnerability and Capacity Assessment (VCA) approach. CVA methodologies are summarised on the ProVention website: <http://www.proventionconsortium.org/?pageid=32&projectid=13> This also connects with the HFA commitment to community and voluntary participation in its cross-cutting issues.

Research

One of the most crucial needs for research capacity in many poor countries is to identify linkages between hazards (using a multi-risk approach that also takes account of climate change) and the socio-economic factors that contribute to vulnerability. In most poorer countries, the emphasis in DRR is on *response* in emergencies, with very little risk reduction carried out in terms of the socio-economic causes of vulnerability. This is a major weakness, given that the majority of vulnerable people are already poor, or are likely to become poor if they are hit by a hazard. It is vital to have a strong research capacity that can advice on the specific needs to apply vulnerability reduction that targets the poor and those at risk of becoming poor. It must also be integrated with the *Training and learning on DRR* above, especially at community level, and this means that pro-poor DRR research will need to be participatory and integrated with community awareness and capacity building.

Public awareness and media

Increased public awareness of the need to link poverty issues with DRR is one of the most significant contributions that can be made using DRR knowledge and education. One key issue is to reduce the sense of fatalism that is often associated with natural hazards. Knowledge (especially on the potential to reduce socio-economic aspects of vulnerability) should influence the media and the public, and so increase the demand for effective interventions by government and donors. In particular, knowledge and education can affect awareness of risks generally, including climate change issues, and increase political pressure for national and global action. Public co-operation with (and support for) hazard mitigation and preparedness measures will also increase if knowledge is used to improve public and media awareness. All of this is directly and indirectly related to poverty reduction (and prevention of new impoverishment), since it is largely poor people who are at risk of most hazards.

The significance of the media in this process is crucial. It is probably one of the most important entry points for this HFA Priority, achieved through

- consciousness-raising for journalists and other staff,
- making DRR knowledge available to them and
- moving the media approach to disasters into the promotion of preparedness, mitigation and prevention, and away from the conventional media focus on coverage of disasters after they have happened.

<p>MDG Goal 1 Target 1 Poverty reduction Reduce by 50% those living on less than \$1 per day</p>	<p>HFA 4 Reduce underlying risk factors</p>
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What needs to be done to implement HFA Priority 4 for MDG Target 1?

**Hyogo Key Activities for Priority 4
(the main activities that relate to poverty reduction are *italicised*, and are discussed below)**

HFA documentation (e.g. ISDR 2005, p.10 para.19) indicates that this priority includes addressing disaster risks in post-disaster situations. Although this is rather at odds with most definitions of risk reduction, it is taken into account here in the interests of conformity

- *Sustainable ecosystems and environmental management*
- *DRR strategies integrated with climate change adaptation*
- Food security for resilience
- DRR integrated into health sector and safe hospitals
- Protection of critical public facilities
- *Recovery schemes and social safety-nets*
- *Vulnerability reduction with diversified income options*
- *Financial risk-sharing mechanisms*
- Public-private partnership
- *Land use planning and building codes*
- *Rural development plans and DRR*

Environmental and natural resource management

The inclusion of this activity is intended *to promote the protection of ecosystems and management of the environment, so as to mitigate hazards and reduce the factors that can worsen the severity or frequency of hazards*. Since environmental damage is such a crucial contributor to several types of hazard, it is an extremely important factor in reducing underlying risk.

Poverty is both a) an outcome of, and b) a contributory factor in, damage to the environment:

- a) Environmental damage often reduces people's access to natural assets that are vital to their livelihoods: it can therefore throw people into poverty.
- b) Conversely, poor people may be forced to behave in ways that are damaging to the environment in order to survive.

Environmental management (including hazard mitigation) is therefore a key linkage in relation to disaster risk reduction: damaged environments are a significant factor in increasing the frequency or strength of hazards.

Protecting ecosystems and the environment is consequently of crucial importance in reducing the risks faced by poor people. *Reducing poverty is unlikely to succeed without environmental protection, and environmental protection is less likely to work unless poverty is reduced.*

On the other hand, as people move out of poverty, there is the danger that their increased spending, changing patterns of consumption (including food), and greater use of energy and transport will contribute to more damaging impacts on the environment. A perverse outcome of poverty reduction may be a negative impact on the environment, and a consequent worsening of hazards that are linked to such damage. This process can have an effect 'at a distance' – increased consumption in one country can suck in natural resources from other countries, with resulting environmental damage that can worsen

natural hazards. Governments may find it difficult to manage their own ecosystems when international demand for natural resources under their control offers profits and foreign exchange earnings.

The people living in regions that become the target of natural resource extraction and who rely on those resources for their livelihoods may also become impoverished 'at a distance' as they are unable to continue with their normal livelihoods once that resource is damaged. They may also face increased risk of natural hazards as a result: for instance facing landslides as they move onto less stable hill slopes to farm for survival, or enduring drought when forests are cut and water catchments are damaged.

The impact of human activities on the environment, and their effect on ecosystems, are a crucial factor in worsening the impact of hazards. The most obvious and global of these is climate change driven by greenhouse gas emissions. The increase in frequency, intensity and variability of climatic hazards, combined with the increased geographical extent of some diseases (of humans, livestock and crops) are already having significant harmful effects on livelihoods and health. The extension of diseases is likely to increase the number of poor people, as their capacity for work is affected by their own illness, and their livelihood resources are damaged.

The potential positive outcomes of global warming (e.g. increased crop yields projected for some regions) may help some poor countries, but projections suggest that the main benefits will be in mid and high latitude regions that are often already relatively well-off.

There are also impacts from more local environmentally damaging human activities that worsen climate-related hazards. Deforestation has often been linked with increased downstream flooding (although there is evidence that the connection is not always simple or direct). De-vegetation of all types (including overgrazing) seems to have negative impacts on local climate, leading to reduced local precipitation, danger of drought and 'desertification'. In some countries, clearing slopes for farming increases the risk of landslides and silting of rivers, which in turn increases flood risks. Poor or likely-to-become-poor people are often a significant proportion of the potential victims, so there is a causal chain that connects harmful environmental behaviours with the worsening of hazards and increased levels of poverty.

In rural areas, the poor and near-poor tend to be much more reliant on 'natural capital', or livelihood assets that are derived directly from natural resources (especially arable and pasture land, fisheries, forests). Reducing the underlying risk factors from hazards therefore involves:

a) reducing the harmful activities by all actors who contribute to environmental damage and destruction of natural assets. This may involve higher-level actors that are damaging environmental assets not for livelihood needs but for financial gain (e.g. logging, fishing, mangrove destruction for shrimp farming or tourist development) and who in the process force others to behave in destructive ways (e.g. by displacing people and compelling them to farm marginal areas or to destroy forests for survival).

b) in other cases, poverty or near-poverty itself encourages people to engage in livelihood and survival or coping activities that damage the environment. This may enhance the risks from some natural hazards, especially flood, drought, and landslides. Poverty reduction strategies that focus on the reduction of such

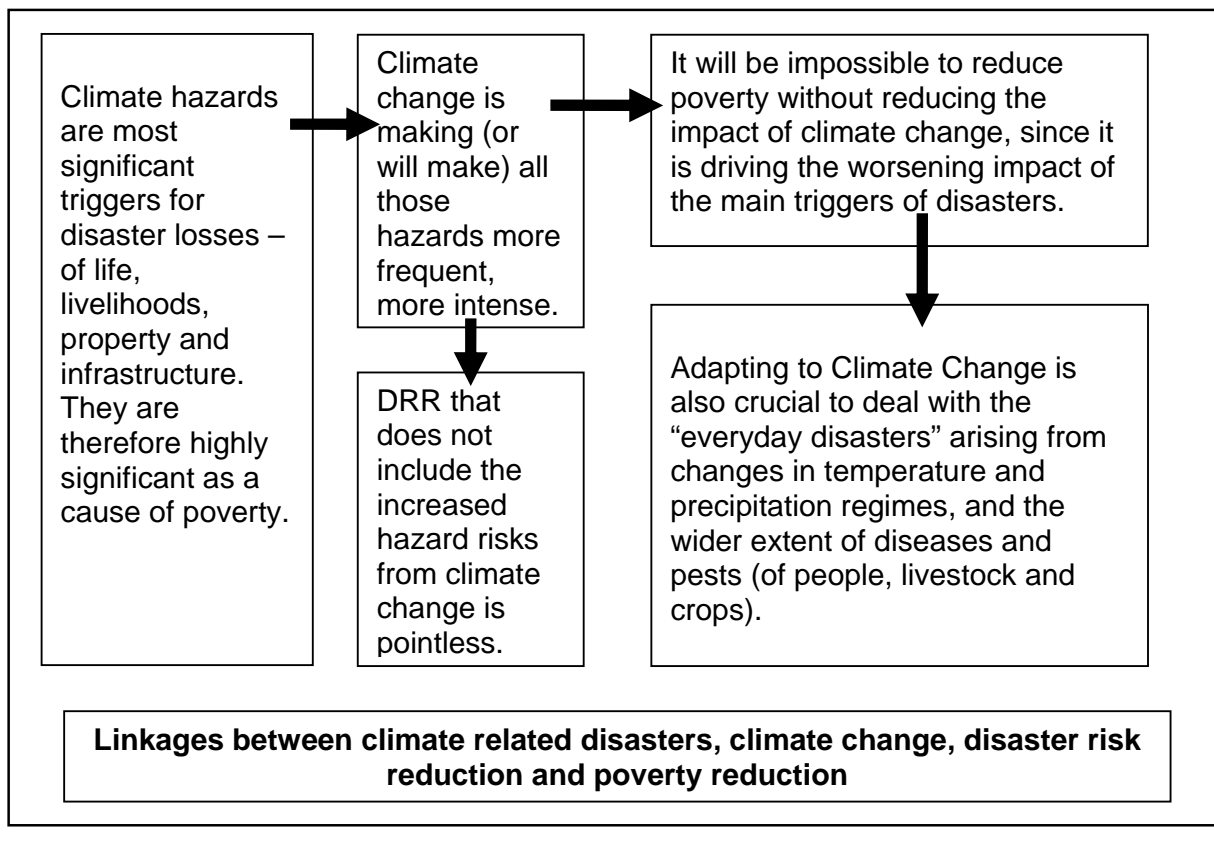
behaviour should decrease the intensification of these hazards.

c) ensuring that environmental services provided by ecosystems (e.g. wetlands, mangroves, watersheds and upland forests) are maintained and (where necessary) restored, so that hazards are not made worse through loss of their mitigating function.

d) in yet other cases, the impact of natural hazards reduces people's access to the natural assets that are essential for their livelihoods, and can create new groups of poor or deepen existing poverty. Examples include river bank erosion in floods (as in Bangladesh) that causes loss of land to smallholders, or saltwater intrusion from tropical cyclones and storm surges, and landslides that destroy farmland and water supplies.

DRR strategies integrated with climate change adaptation

If this HFA priority is to succeed in reducing underlying risk factors AND contribute to poverty reduction, it is absolutely crucial that it is integrated with climate change issues. Climate-related hazards, especially floods, severe storms, landslides, snow and severe cold (including *dzud* in Mongolia), drought and wildfires cause a high proportion of all damage (to livelihoods, property and infrastructure) and deaths due to disasters. (HFA: "Events of hydro-meteorological origin constitute the large majority of disasters", p.1). It follows that the most significant hazards that are implicated in causing or reinforcing poverty are related to climate. Therefore, since projections of climate change suggest that it will (and is already) intensify some hazards and increase their spatial extent, disaster risk reduction is only possible if it is in the context of dealing with the additional risks brought by climate change.



To support poverty reduction, linking DRR with adaptation to climate change is one of the most crucial components. Unfortunately, there is still a significant separation between work done in the disaster reduction community and that being done on adaptation to climate change (CC). The HFA makes several comments on climate change. It also supports a multi-hazard approach (as one of the cross-cutting issues), but CC is not specified as a part of this, nor is CC properly integrated with the wider framework of risk reduction.

To add to the difficulties, work on climate change is relatively weak in respect of community-level adaptation, which is precisely the scale at which effective work needs to be done in terms of both poverty reduction and CC adaptation. This weakness is being addressed by some in the CC research field (refer to Bangladesh workshops). Parallel with this, community-based work in DRR is a growing trend, supported by many INGOS, NGOs, CBOs, Red Cross/ Red Crescent, and some governments. However, although there are signs of improvement, this work often fails to include CC issues, and also tends to be disconnected from livelihood issues and poverty reduction, as if disaster risk reduction can be kept separate.

Recovery schemes and social safety-nets

Protecting poor people (and preventing increased poverty) will not always be possible through pre-emptive disaster risk reduction. Recovery and safety nets are therefore crucial to linking up with poverty reduction: measures must be in place to ensure that poor people who are vulnerable to anticipated hazards are protected through proper recovery systems; increased levels of poverty must be guarded against for those people who are in danger of being thrown into poverty in a disaster.

To support poor people and prevent new impoverishment, recovery must primarily be aimed at restoring livelihoods (through necessary asset repair and replacement), or enabling people to find replacement (alternative) livelihoods (temporary or permanent) in situations where previous assets and activities cannot be recovered. (An example of this comes from Aceh after the tsunami, where some women were provided with sewing machines in order to begin a new income generating activity quickly.)

Where recovery of assets and livelihoods is difficult or delayed, safety nets should be prepared as a back-up (the primary action should be restoration of assets and livelihoods). Pre-disaster evaluations should ideally have been made through community assessments (as part of national DRR activities) to prepare the most suitable forms of safety net interventions. Distribution of aid (including food, tools, cooking equipment, water storage, sanitary support) needs to be done in such a way that it supports the existing poor, and prevents new groups of poor being created. Thus the near-poor who are made destitute in a disaster should be prevented by safety nets from having to make distress sales that undermine their assets and livelihoods. In some cases, cash distribution may be the best approach. Otherwise, conventional activities to support subsistence or income through food- or cash-for-work may be essential in the short term. Planning for safety net activities must avoid the dangers shown in the tsunami relief (and other disasters), where aid agencies have duplicated and competed in their distribution.

It is also vital to help poor (and likely to become poor) people through medical support for illness, injury and psychological disturbance (something that is explicitly mentioned in the HFA under this topic). If physical or mental illness or injury affects peoples' ability to work and recover, then they are at risk of becoming poor or poorer. Health interventions need to be seen in the context of restoring people's livelihoods, and enabling them to recover physically and mentally from the trauma of disaster. A key factor is that safety nets must

reduce the need for the poor or near poor to borrow from moneylenders. Increasing debt seems to be associated with serious increases in stress and mental disorder in 'normal' situations (as demonstrated by problems of high suicide rates among indebted peasants in India). It is therefore possible that borrowing at high interest rates will worsen the mental health of people who are recovering in a disaster.

Recovery and safety net approaches must be planned so that they are appropriate to the expected hazard types, and for the likely impacts on assets and livelihoods of vulnerable people. Poverty reduction and avoidance should be an explicit part of the HFA in support of this MDG, and can only be achieved if there is awareness and preparedness for relevant actions to be implemented when a hazard strikes.

Important linkages need to be acknowledged and understood in advance. For instance, in house reconstruction, the link with livelihoods is often ignored or not understood. (In Thailand, some houses build after the tsunami incorporated a ground floor open structure that would enable the house to survive another tsunami impact. However, for many of the beneficiaries, this has proved too tempting and has been closed in to become storage or additional livelihood space, or extra room for living or renting to others.) In many parts of the world, both rural and urban, the house enables people to store assets or outputs that are crucial to their livelihoods. Building of housing that is inappropriate for these needs will harm recovery, livelihoods, and may have a harmful psychological impact.

Vulnerability reduction with diversified income options

This is another vital component of the HFA that is highly relevant to the MGD poverty reduction target. It is also probably very difficult to achieve, since in many cases it may require *de facto* an attempt to alter deeply embedded cultural patterns of livelihood activities. But is also difficult because any livelihood requires access to the assets that are necessary for its implementation. Poor people, or those at risk of becoming poor, generally do not have many options in terms of the assets to which they can gain access.

Rather than trying to alter an entire household's pattern of livelihoods, it may be better to enable particular members of the household to engage in a different activity. This would maintain cultural continuity while providing some diversification. An entry point may be through the education system, especially where this is being tuned in to disaster preparedness and the people can become aware of the importance of not being too dependent on vulnerable livelihoods. Simple interventions may also support existing livelihoods while bringing additional ones. An example is the use of 'sand dams' in drought prone areas of Kenya (especially in Kitui District, where there are more than five hundred) (Practical Action, n.d.; Brahic, 2006). These involve the capture of intermittent streams by the construction of small concrete dams, whose pond area is filled with sand so that an artificial aquifer is created. This can then be used to irrigate crops, making bricks to improve houses and build schools, and reducing time spent by women collecting drinking water so that they can engage in earning cash.

Financial risk-sharing mechanisms

There is growing interest in the potential for micro-insurance (including for crops, e.g. against floods, drought, pests) to improve the security of poor people who face known hazards. This remains contentious: although some international institutions are investigating micro-insurance, it seems invidious to expect already poor (or likely to become poor) people to give up consumption of essentials in order to pay premiums. There is little evidence that such payments can reduce their risk-taking, since by definition poor people are unable to do a great deal to modify their behaviour. When forced into

coping strategies, it is common for these to have negative impacts on the environment and future hazard exposure.

Land use planning and building codes

Poor people and those likely-to-become-poor often have no choice but to live in very poor quality housing, often also on unsafe sites. A large proportion of the urban poor are likely to live in informal, squatter or 'illegal' settlements, some of which may even breach existing land-use planning or zoning. The factors affecting house sites are themselves a function of poverty: having to live on land that is not owned or claimed by others, or on which rent can be afforded.

The urban poor often choose to live in bad housing that is near to where they can earn some income, and may refuse to move to superior housing that is too distant. Transport time and costs are a major disincentive to move to places that may well be safer but less convenient for income-earning. The most extreme examples of this are perhaps the many thousands of households that are located on or next to rubbish tips in many cities. So it is not helpful for land use planning to ignore the needs of the poor, and attempts to force compliance with zoning and plans are likely to fail or be resisted unless they are coupled with viable alternative livelihood opportunities. who are forced to maintain access to the income activities they can manage.

Land use planning that is aimed at risk reduction for hazards must therefore take account of the needs of the people that may take higher priority over disaster risk reduction. It is only by linking risk reduction with the wider context of access to livelihoods that urban planning and risk reduction can work.

(Although not so relevant to this MDG, we can note that similar constraints apply to the application of building codes. Poor people are not likely to be deterred from living in an unsafe building, and may indeed be put off by the higher rents that the owner may require to recover any additional costs in adhering to building codes. And yet proper construction of housing (to resist earthquakes, windstorms, floods) is probably the single most important factor in saving lives.)

Rural development plans and DRR

How can rural development planning affect risk reduction? Rural development is of crucial importance in affecting the asset portfolios, livelihood options and incomes of various groups involved in the rural economy. In the past fifty years, rural planning has had very significant impacts through changes in farming technology, rural infrastructure (especially electricity supply, irrigation, transport and roads), and subsidies to farmers or suppliers of farming inputs. Other aspects of rural planning have also been significant in some countries and regions, for instance in regard to tourism (e.g. coastal and 'safari' resorts). Here the discussion is concerned with *planning* – the deliberate attempt by government or associated authorities (which can sometimes be private) to achieve a predetermined goal in the rural sector. It is assumed that planning in general excludes the normal operation of market-driven processes, although indicative planning may try to incorporate such processes in its outlook. In other words, planning is trying to achieve something that would not otherwise happen if the economy was left to itself.

An obvious reason for planning therefore is for government to try to achieve welfare goals that are otherwise unlikely to happen. This is especially relevant for poverty reduction measures that influence the balance of income and asset inequalities between different rural classes and groups (e.g. on the basis of their land holdings), and between rural and

urban groups (e.g. through terms of trade for their products, through subsidies and technology transfers, infrastructure policies, electrification, feeder roads). Has rural development planning achieved that in the past? Has it contributed significantly to the reduction in rural (and/or urban?) poverty? If so, can it be expected to do more of that in the future? And what specifically might this achieve in regard to risk reduction? This can be linked with the livelihood discussions above.

The majority of poor people in the world are rural, and they are also predominantly reliant on agriculture (and therefore natural capital) for their livelihoods. Given that it is access to production assets and availability of employment with adequate wages that primarily determines the level of rural poverty, rural development is crucial. And since poverty and inadequate livelihoods are the main determinant of vulnerability to hazards, rural development is clearly crucial. Can rural development planning influence this? How can it help to reduce risks, and to what extent can this assist poor people? And what is the global context for such planning, and what is the potential for it to succeed when the predominant external policy environment is against planning? At the international level, the potential to engage in rural development planning has been undermined in recent decades by the retreat or the demise of the state, in conjunction with the predominance of neo-liberal agendas in international institutions and donor policies.

<p>MDG Goal 1 Target 1 Poverty reduction Reduce by 50% those living on less than \$1 per day</p>	<p>HFA 5 Strengthen disaster preparedness for effective response at all levels</p>
<p style="text-align: center;"><i>What needs to be done to implement HFA Priority 5 for this MDG Target?</i></p> <p style="text-align: center;">HFA Key Activities for Priority 5 (the most relevant ones <i>italicised</i> and dealt with here)</p> <ul style="list-style-type: none"> • <i>Disaster management capacities: policy, technical and institutional capacities</i> • <i>Dialogue, coordination & information exchange between disaster managers and development sectors</i> • Regional approaches to disaster response, with risk reduction focus • Review & conduct exercises for preparedness and contingency plans • <i>Emergency funds</i> • Voluntarism & participation <p><i>Disaster management capacities: policy, technical and institutional capacities</i></p> <p>In many countries, DM for responding to disasters is embodied in hierarchical structures of government, usually using civil defence and/or the military as its main implementation agencies. This is often a symptom of the way that disasters are understood: sudden onset and requiring a command and control approach. Signs that this can lead to inappropriate responses are often highlighted in evaluations, including inappropriate use of armed personnel in preventing looting, panic in the burial of bodies, mistrust in response to early (or sometimes late) warnings, and refusals to evacuate (especially by poorer groups) for fear of losses to theft and/or concern about being kept away from sources of livelihoods for too long afterwards.</p> <p>Many of these problems would be lessened if the management for response was more fully integrated in preparedness measures that seek to reduce vulnerability and reduce the</p>	

likely impact of known hazards. With greater participation by the people in preparing for hazards, including measures to reduce vulnerability, it is likely that the people's response after a hazard impact will be more positive. It is also crucial to highlight the emergency interventions that are needed for the most vulnerable people and places, so as to reduce the impact on the poor and reduce the risk of a hazard impact from creating new groups of poor people. This is entirely possible by using vulnerability analysis and risk mapping in advance. Many NGOs and the Red Cross/ Red Crescent are using vulnerability analysis at community level in many countries in order to develop disaster resistant communities. It should be possible to involve the civil defence organisations and the military in such preparedness work, so that when a hazard strikes it is both better understood and responded to, and potentially has been prepared for in a more realistic and participatory way.

Given the levels of poverty in many countries, it is inevitable that inappropriate responses will have a negative impact on the poor and the near poor. Therefore it is highly relevant for this MDG that DM policies, and the associated technologies and institutions, are organised to deal with people's needs. So the basis for the response capacity in policy and institutions must be structured so that it is fully integrated with all aspects of preparedness, so that the emergency response institutions are informed especially by the need to restore livelihoods, protect and recover assets and employment. Other key elements include measures to reduce the need for poor and near poor people to sell assets and/or become indebted in order to survive, and to reduce the need for people to be evacuated for long periods.

Dialogue, coordination & information exchange between disaster managers and development sectors

This is strongly linked to the section above, and involves a reconfiguring of disaster management so that it is seen to be integrated with the development process.

Emergency funds

How these are used in respect of different groups and in particular poor and near-poor people is crucially important. When such funds are set up and designed, their guidelines must give poverty a high priority – reducing it and preventing it – in line with the discussions above.

MDG Goal 1 Target 2 Hunger	HFA 1 Ensure DRR is a national & local priority, with strong institutional basis for implementation
<p style="text-align: center;"><i>What needs to be done to implement HFA 1 for this MDG Target?</i></p> <p style="text-align: center;">Key Activities in HFA Priority 1 (those most relevant to hunger reduction <i>italicised</i> and analysed here)</p> <ul style="list-style-type: none"> • <i>National institutional and legislative frameworks</i> <ul style="list-style-type: none"> ○ <i>DRR institutional mechanisms (national platforms)</i> ○ <i>Designated responsibilities</i> ○ <i>DRR as part of development policies and planning, sector-wise and multi-sector</i> ○ <i>Legislation to support DRR</i> • <i>Resources</i> <ul style="list-style-type: none"> ○ <i>Decentralisation of responsibilities and resources</i> 	

- *Foster political commitment*
- *Community participation*

National institutional and legislative frameworks

DRR institutional mechanisms (national platforms)

Designated responsibilities

DRR as part of development policies and planning, sector-wise and multi-sector

The analysis here is very similar to that for MDG Target 1 (Poverty Reduction).

DRR part of development policies and planning, sector-wise and multi-sector

Legislation to support DRR

Decentralisation of responsibilities and resources

Assessment of human resources and capacities

Foster political commitment

Community participation

MDG Goal 1
Target 2
Hunger

HFA 2
Identify, assess & monitor risks, & enhance
EW

Key Activities for HFA Priority 2 (the most relevant to hunger reduction *italicised*)

- *Risk assessments and maps, multi-risk: elaboration and dissemination*
- *Indicators on DRR and vulnerability*
- *Data & statistical loss information*
- *Early warning: people-centred; information systems; public policy*
- *Scientific and technological development; data sharing, space-based earth observation, climate modelling and forecasting; early warning*
- *Regional and emerging risks*

Headline issues

Risk assessments and maps, multi-risk: elaboration and dissemination

Indicators on DRR and vulnerability

Data & statistical loss information

Early warning: people-centred; information systems; public policy

Scientific and technological development; data sharing, space-based earth observation, climate modelling and forecasting; early warning

Regional and emerging risks

MDG Goal 1
Target 2
Hunger

HFA 3
Use knowledge, innovation & education to
build culture of safety & resilience

Key activities for HFA Priority 3 (those most relevant to hunger reduction *italicised*)

- Information sharing and cooperation;
- Networks across disciplines and regions; dialogue
- Use of standard DRR terminology
- *Inclusion of DRR into school curricula, formal and informal education*
- *Training and learning on DRR: community level, local authorities, targeted sectors; equal access*
- Research capacity: multi-risk; socioeconomic; application
- *Public awareness and media*

Headline issues

Information sharing and cooperation;
 Networks across disciplines and regions; dialogue
 Use of standard DRR terminology
Inclusion of DRR into school curricula, formal and informal education
Training and learning on DRR: community level, local authorities, targeted sectors; equal access
 Research capacity: multi-risk; socioeconomic; application
Public awareness and media

MDG Goal 1
Target 2
Hunger

HFA 4
Reduce underlying risk factors

Hyogo Key Activities for Priority 4
(the main activities that relate to hunger reduction are *italicised*)

HFA documentation (e.g. in the extract from the final report of the World Conference on Disaster Reduction published by UN ISDR, p.10 para. 19) indicates that this priority includes addressing disaster risks in post-disaster situations. Although this is rather at odds with most definitions of risk reduction, it is taken into account here in the interests of conformity

- *Sustainable ecosystems and environmental management*
- *DRR strategies integrated with climate change adaptation*
- *Food security for resilience*
- *DRR integrated into health sector and safe hospitals*
- Protection of critical public facilities
- *Recovery schemes and social safety-nets*
- *Vulnerability reduction with diversified income options*
- *Financial risk-sharing mechanisms*
- Public-private partnership
- Land use planning and building codes
- *Rural development plans and DRR*

Headline issues

Sustainable ecosystems and environmental management
DRR strategies integrated with climate change adaptation
Food security for resilience
DRR integrated into health sector and safe hospitals
 Protection of critical public facilities
Recovery schemes and social safety-nets
Vulnerability reduction with diversified income options
Financial risk-sharing mechanisms
 Public-private partnership
 Land use planning and building codes
Rural development plans and DRR

MDG Goal 1
Target 2
Hunger

HFA 5
Strengthen disaster preparedness for effective response at all levels

HFA Key Activities for Priority 5 (the most relevant ones *italicised*)

- *Disaster management capacities: policy, technical and institutional capacities*
- *Dialogue, coordination & information exchange between disaster managers and development sectors*
- Regional approaches to disaster response, with risk reduction focus
- Review & and exercise preparedness and contingency plans
- *Emergency funds*
- *Voluntarism & participation*

Headline issues

Disaster management capacities: policy, technical and institutional capacities
Dialogue, coordination & information exchange between disaster managers and development sectors
 Regional approaches to disaster response, with risk reduction focus
 Review & and exercise preparedness and contingency plans
Emergency funds
Voluntarism & participation

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