Operational Framework for Integrating Risk Reduction for Aid Organisations Working in Human Settlement Development

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Operational Framework for Integrating Risk Reduction and Climate Change Adaptation into Urban Development

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Contents

Executive summary

Climate change and disasters are among today's most pressing issues. The damage caused by the worldwide increase in disasters is staggering, with the urban poor being most at risk. Disasters make their already precarious living conditions worse, creating a vicious circle of poverty. More and more attention has thus been given to the need to address changing climatic conditions and disaster risk through development work, in order to bring about sustainable poverty reduction. Despite related efforts, aid organisations (including donor and implementing organisations), as well as national and municipal authorities still struggle to effectively reduce risk in the course of their everyday work. This is, not least, due to a lack of related operational tools.

Based on more than six years of research in the field of disaster risk reduction (RR) and climate change adaptation (CCA), this Operational Framework has been designed with the objective of counteracting the situation described, and thus assisting in sustainably integrating RR&CCA into the work of development organisations. It offers a comprehensive set of potential integration strategies and complementary programme measures to tackle risk (to be considered within each of the integration strategies), thus providing a comprehensive extension of existing RR and CCA models and concepts. Elaborated for both operational and management staff, it illustrates how development organisations can, step by step, initiate and pursue the integration of RR&CCA into their development programming in order to adopt a more proactive approach towards RR&CCA. To be more specific, the framework supports organisations with concrete tools and guidance in:

- Evaluating the relevance of integrating RR&CCA within their organisation,
- Identifying and prioritising the various possible strategies for integrating RR&CCA into their work,
- Formulating activities and measures to take in the implementation of the selected strategies,
- Evaluating the possibilities of financing these, and
- Defining a step-by-step implementation plan.

In respect of the formulation of the activities and measures required for the integration of RR&CCA, the framework provides matrixes, which include:

- Input and process indicators to get the integration process started,
- Input and process indicators in the form of benchmarks (i.e. the operational state that an organisation should seek to achieve), and
- Output indicators.

Furthermore, it offers a list of sector-specific reference activities and recommendations for organisations working in urban development. During the course of the research, additional analytical, conceptual and strategic frameworks were also developed, all of which complement this Operational Framework and assist in a better interfacing of development planning and RR&CCA. Related literature sources are notated in the annexes.

Importantly, the Operational Framework at hand is applicable to a variety of cultural and geographic contexts, as well as to all types of 'natural' hazards and disasters (both climate-related and non-climate related). Although originally developed for urban development actors, it can be applied within all types of development sectors, and also within the context of relief, rehabilitation and reconstruction programmes (i.e. in both the pre- and post-disaster context).

1 Background: context and development of the framework

Climate change and disasters are among today's most pressing development issues. Over the past decades, the frequency of so-called 'natural' disasters has grown significantly worldwide. In fact, their number has quadrupled during the last 30 years, resulting in the escalation of human and economic losses. In this context, it is the developing countries that bear the greatest burden in terms of the loss of human lives and the proportion of gross domestic product lost as a result of disasters. With increasing urbanisation, cities in the developing world are augmenting both in population and size. At least a billion people worldwide live in slums. They are forced to accept dangerous and inhuman living conditions, in which any climate-related event, such as a flood, landslide, windstorm, wild fire, water surge, and drought, is likely to become a disaster. Increasing attention has thus been given to the need to reduce climate and disaster risk through development work, so as to bring about sustainable poverty reduction. However, little work has been undertaken to identify how this could be achieved in practice and, on an even more negative note, international, national and municipal organisations still accord low priority to the concepts of risk reduction (RR) and climate change adaptation (CCA) and to issues related to urban development. Urban development actors in particular (including donor and implementing organisations), still struggle to effectively tackle climate and disaster risk through their everyday work, and this is, not least, due to the lack of related operational tools.

The Operational Framework presented here was elaborated with the objective of counteracting the situation just described. Based on research undertaken between 2003 and 2009, it provides general guidance for development organisations for the integration of RR&CCA[1] into their 'normal' everyday work[2]. In parts, the framework is also applicable in the context of relief, rehabilitation and reconstruction programmes, and thus in both the pre- and post-disaster context. It is usable within a variety of cultural and geographical contexts and it is relevant to all types of natural hazards and/or disasters. In addition, the framework offers more specific and detailed guidance for those organisations engaging in urban developmen by providing sector-specific guidelines and reference activities.[3]

The preceding version of this framework was published in 2006 and drew from research initiated in 2003, which was based on studies at international level, as well as national and municipal levels in the countries of El Salvador, the Philippines and Colombia. Amongst others, around 130 interviews were conducted with programme managers, operational officers and academic staff, and a range of research-related models and tools were critically assessed to analyse their scope, target group, structure, format, indicators and applicability. These included frameworks for: (a) assessing progress in disaster RR; (b) mainstreaming HIV/AIDS in sector development planning; (c) designing appropriate humanitarian aid or development programmes (related to urban development planning and/or disaster risk management); and (d) adapting to the impact of climate change.

The framework was then tested and validated at the local household and related institutional levels and, on this basis, further developed during 2006–2007, resulting in a second edition published in 2007. In order to assess whether or not the framework adequately reflects and matches the needs of both the communities at risk and the professionals servicing them the following steps were undertaken during 2006–2007: (a) case studies of programmes implemented in 15 disaster-prone slum areas were carried out, including interviews with 62 households at risk, (b) questionnaires were distributed to operational staff and programme managers in a variety of aid organisations, (c) its content was compared and complemented with existing literature, and, (d) several international workshops were held in El Salvador, Costa Rica and Sweden. Throughout these workshops, the participants who were representatives from development organisations in Africa, Asia and Latin America, carried out practical exercises to apply the Operational Framework. The participants were then asked to evaluate whether the tool was comprehensible, comprehensive/complete, relevant and applicable/useful. On average, the rating for all four aspects ranged between four and five (on a scale of one to five, five being the best). Finally, measures to overcome potential financial, political and institutional barriers to the implementation of the tool were discussed.

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[1] The term 'integrating' RR&CCA or 'integration' of RR&CCA is used as an umbrella term, which also includes the process of 'mainstreaming'. The different strategies of building in/integrating RR&CCA in development organisations, including mainstreaming, are presented in *Chapter 5 (see also Annex II: Terminology)*.

[2] The terms 'everyday work, 'core work, 'normal' work' and 'sector-specific work' are used as synonyyms and refer to the typical project/programme activities of an organisation in a specific sector, i.e. health, social housing, or eduction.

[3] These organisations are also refered to here as social housing organisations or urban development actors (see also *Annex II*: Terminology).

Furthermore, the framework has been used in 'real-life' by different organisations in their programme implementation. Such 'hands-on' practice was carried out in Central America by the Salvadoran non-governmental organisations, viz., CEPRODE, FUNDASAL and FUSAI, as well as by UN-HABITAT, and by Plan International in the Philippines. The RR&CCA integration strategies, described in this framework are also being used by other organisations, such as CARE and the Red Cross, within their on-going mainstreaming processes. Moreover, some organisations have already used the Operational Framework as a basis for developing organisation-specific, operational tools, adapting and then applying it to their own specific institutional settings and objectives. One example of this is the German Agro-Action organisation (Deutsche Welthungerhilfe).

During 2008–2009, the Operational Framework was then revised in the light of recent advances in the field of CCA, a desk-top analysis of the differences between RR and CC, and workshops with planning students held in Manchester, UK. Finally, on the basis of a case study of recent floods in Heywood in Manchester, UK, its usefulness was reconfirmed within a European context.[4]

In sum, the working paper presented here stems from academic research undertaken between 2003 and 2009, and has the purpose to translate the associated research outcomes into an operational tool, which was elaborated for a specific target group. In fact, this Operational Framework is designed to support the operational and management staff of development (and relief) organisations to define and implement those changes and actions required for the integration of RR&CCA in their particular organisation.[5]

2 Introduction: how to use the framework

In order to ensure that the utilisation of this framework is as uncomplicated and simple as possible, *Boxes 1* and *2* provide detailed guidance on how to read and handle the framework.

Box 1 is a general guide to the chapters, and the related content, of this framework. For each chapter, the respective aim, input and tools offered are listed. This general guide is complemented with *Box 2*, a flow-chart, which shows in detail the necessary steps required to go through the different chapters and related tools, with the aim of establishing and implementing a sustainable RR integration strategy. As illustrated in *Box 2*, there are three main steps:

1) Getting started (*Chapters 1–4* and related Annexes),

2) Designing a RR&CCA integration strategy (*Chapters 5–7* and related Annexes),

3) Implementing and supporting RR&CCA integration (*Chapters 8–9* and related Annexes).

As indicated in the flowchart in *Box 2*, depending on the particular knowledge and needs of the reader of this framework, only specific chapters will be relevant and only specific tools offered will be important for each individual organisation's application. Importantly, *Box 2* also indicates how the Annexes of this framework, especially the matrixes of *Annex I*, should be used in combination with the various chapters which cover the framework's concepts, strategies and tools.

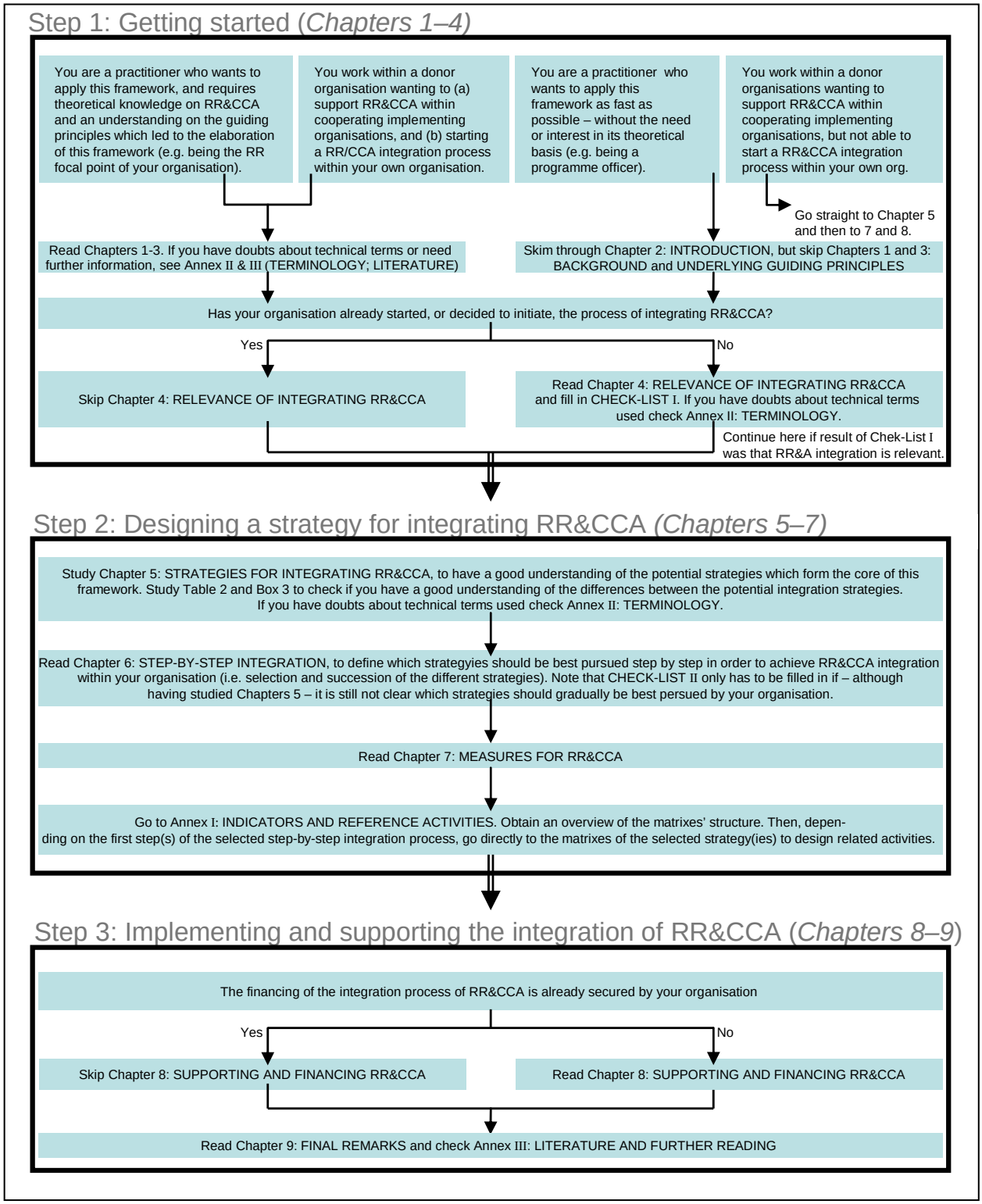
4 Despite the described steps taken to validate and test out the framework, this third version of the Operational Framework should also be considered as a work in progress, which will require further improvement over time. The iterative progression of implementation and refinement is an ever-developing process, and, is, therefore, always, 'a work in progress'. In respect of this, during 2009–2010 the matrixes included in *Annex I* will be revised and extended (as they were only in part updated for this third edition).

5 Note that the way this Operationl Framework is framed and worded would have to be adapted for more locally based agencies, such as local authorities in developing countries.

Box 1: Guide to the chapters/the contents of this framework. RR = Risk Reduction, CCA = Climate Change Adaptation.

Chapters	Title/input and tools offered by the framework	Aim: providing answers to the following questions
Chapter 1	**BACKGROUND** - Context of framework - Methodological development of framework	 - For what, for whom, and why this framework? - How was the framework elaborated?
Chapter 2	**INTRODUCTION** - Basic introductory information - Flow chart on how to use this framework (*Box 2*)	 - How to use this framework?
Chapter 3	**UNDERLYING GUIDING PRINCIPLES** - List of lessons learned and consequential principles which guided the development of this framework - *Figure 1*: Placement of the framework within the context of other existing tools - *Figure 2*: Overview of existing types of indicators	 - On what premises is the framework based? (thus situating it within and differentiating it from other existing tools)
Chapter 4	**RELEVANCE OF INTEGRATING RR&CCA** - Rapid Assessment Check List I (*Table 1*)	 - Is RR&CCA integration relevant for your programmes/your organisation?
Chapter 5	**STRATEGIES FOR INTEGRATING RR&CCA** - Definitions of the potential strategies for integrating RR&CCA - *Table 3*: Overview of the strategies' differences - *Box 3*: Illustrative description of the strategies	 - What are the possible ways of integrating RR&CCA within programmes/organisations?
Chapter 6	**STEP-BY-STEP INTEGRATION** - Rapid Assessment Check List II (*Table 4*)	 - What is the most suitable step-by-step process of integrating RR&CCA for your organisation (i.e. succession of selected RR&CCA integration strategies)?
Chapter 7	**MEASURES OF RR&CCA** - Explanation of the matrixes included in *Annex I* providing indicators for the implementation of concrete measures required for integrating RR&CCA - *Figure 2* (Chapter 2) also contains related information - Definition of the potential measures to reduce risk	 - How can concrete actions and measures be designed and/or adapted to achieve RR&CCA integration within programmes/your organisation?
Chapter 8	**SUPPORTING & FINANCING RR&CCA** - List of potential financing options for donor and implementing organisations to support the integration of RR&CCA - *Table 3* (Chapter 5) also contains related information	 - How can the integration of RR&CCA be financially and otherwise supported by organisations?
Chapter 9	**FINAL REMARKS** - List of challenges and limitations for the integration of RR&CCA	 - What kind of challenges and/or barriers are likely to be faced by your organisation by entering the process of integrating RR&CCA? - How can the framework itself help in this regard?
Annex I	**INDICATORS AND REFERENCE ACTIVITIES** - Matrixes: Indicators and reference activities which help guiding the design of measures for integrating RR&CCA (⇒ see also *Chapter 7*)	 - How can concrete actions and measures be designed and/or adapted to achieve the integration of RR&CCA within programmes/your org.?
Annex II	**TERMINOLOGY** - Glossary of key terms	- What do terms such as 'risk', 'vulnerability', 'risk reduction', etc. stand for?
Annex III	**LITERATURE AND FURTHER READING**	- What literature provides additional information and complementary tools regarding this framework?
Annex IV	**LIST OF BOXES, FIGURES AND TABLES** - Overview of boxes, figures and tables included in this framework	- What types of figures and tables are provided to guide the process of integrating RR&CCA?

Box 2: Flowchart – How to use the Operational Framework?



3 Underlying guiding principles

As previously stated, this Operational Framework is based on research undertaken between 2003 and 2009, which included the analysis of past RR&CCA activities and the experiences of a range of organisations engaged in climate-sensitive and disaster-prone programme areas. The resultant lessons learned and the subsequent principles listed below have guided the elaboration of the framework. They characterise, and thus form the basis of, its present form.

Lesson N° 1: Climate and disaster risk is a complex and long-term development problem (since climate and disaster risk is a product of past and current failures in development and development programming).

⇒ ***Guiding Principle N° 1:*** There are no universally valid and easy 'ready-made' solutions to reduce climate and disaster risk, and thus the answer cannot be based on a rigid, pre-determined 'menu' of successive RR&CCA measures, which are equally applicable to every context and programme framework.

*

Lesson N° 2: Currently, most of the active response to climate and disaster risk is in the form of RR&CCA programming (i.e. explicit and direct RR/CCA). For instance, after Hurricane Mitch in 1998 in Central America—and with the support of international agencies—pilot programmes (or specific programme components) on RR started to 'spring up like mushrooms'. The same occurred worldwide during the same period after similar large-scale disasters.[6] However, usually neither the new programmes nor the new programme components were (and currently, are often still not) in any way connected to the core activities, but are stand-alone adds-on (for example in the form of early warning systems, emergency committees or RR&CCA awareness training). In fact, organisations interested in RR&CCA usually tend to only identify ways in which they can *directly* address the problem of existing climate and disaster risk. Consequently, the following problems can occur: (1) since many development aid organisations and their staff are not well suited and experienced in doing RR&CCA work per se, it may be ineffective or even result in non-desirable/negative outcomes; (2) taking on RR&CCA programming may cause their core work to suffer if they do not have sufficient capacity to perform both tasks; (3) even if the RR&CCA programming is carried out effectively, increased competition with other organisations and duplication of efforts is very likely to occur. Thus, whether or not organisations opt to ignore increasing disaster risks or to carry out RR&CCA programming (i.e. direct RR&CCA work), they fail to consider the basic strategy of responding indirectly, that is, through their core work. The outcome, therefore, is that the core tasks of the organisations involved do not address the problem—a fact, which can be harmful, or, at best, represent a missed opportunity to contribute to RR&CCA.

⇒ ***Guiding Principle N° 2:*** To achieve efficient and effective RR&CCA, development organisations need, in the first instance, guidance in terms of adopting the indirect approach of *mainstreaming RR&CCA in their programme activities* (as opposed to RR&CCA programming itself, as an independent aspect of their work), which should be the basic and initial strategy for integrating RR&CCA into their work.

*

Lesson N° 3: The afore-mentioned add-on and stand-alone programmes or programme components are not integrated in the core work of implementing organisations. Consequently, they are, generally, not supported and backed up by organisational or institutional mechanisms and structures. Thus, once the RR&CCA programmes/components are completed, the work in RR&CCA cannot be continued (if no further funds for RR&CCA can be accessed).

⇒ ***Guiding Principle N° 3:*** If development organisations are to become more of a solution then a cause of climate and disaster risk, than every organisation has not only the responsibility to mainstream RR&CCA in their core activities, but also to internalise and ultimately, 'institutionalise' RR&CCA.

*

[6] Between 1997 and 2001 there were major floods, for instance, in East Africa, Latin America, the Caribbean and South and Southeast Asia; Hurricane Georges in Central America and the Caribbean; mudslides and debris flows in Venezuela; a cyclone in India (Orissa); and earthquakes in Turkey, El Salvador and India (Gujarat).

Lessons N° 4 and 5: So far development organisations, and especially urban development organisations, have little existing practical experience in RR&CCA to draw upon, learn from, and possibly emulate. Whilst they hold the key to increase the resilience of settlements, many programmes result in actually increasing climate and disaster risk. This also relates to the fact (=lesson 5) that, compared to other cross-cutting issues such as gender or HIV/Aids, the idea of mainstreaming RR&CCA is widely underdeveloped and/or misunderstood. In fact, related tools and ongoing discussions often serve to confuse and, hence, do not differentiate between the terms and concepts of 'mainstreaming' and 'integrating' RR&CCA.[7] Consequently, development (and relief) organisations often consider only two strategies for RR&CCA integration, and two measures to sustainably tackle disaster risk. Furthermore, urban development organisations give little importance to related non-physical/non-structural and small-scale measures.

⇒ ***Guiding Principle N° 4/5:*** There is not only one or two, but seven identified and complementary strategies for the integration of RR&CCA into development organisations, as well as five ascertained and complementary measures to reduce climate and disaster risk within each of these integration strategies. As will be shown in Chapters 5 and 7, the integration strategies include, (1) implementing direct stand-alone RR&CCA, (2) implementing direct integrated RR&CCA, (3) programmatic mainstreaming of RR&CCA, (4) organisational mainstreaming of RR&CCA, (5) internal mainstreaming of RR&CCA, (6) the creation of synergies for RR&CCA (integration), and (7) educational mainstreaming of RR&CCA. The measures to reduce risk include: (a) prevention (or hazard reduction), (b) mitigation, (c) preparedness, (d) risk 'financing', and (e) stand-by for recovery (or preparedness for recovery). These must take into consideration the physical, socio-economic, environmental and institutional/organisational aspects of risk and RR&CCA integration in order to avoid increasing risk through the core work of organisations.

*

Lesson N° 6: There has been a rapid increase in the obscure bulk of tools for monitoring and evaluating the progress in RR&CCA, mostly developed as a result of a top-down process created by national and international organisations. These address (mostly implicitly) different working levels and different stakeholders, and further confound the indicators used for assessing programme activities, outputs and impacts (see *Figures 1* and *2*). Paradoxically, whilst such tools for assessing progress in RR&CCA are increasingly being created, there is still not sufficient knowledge on the ground as to how climate and disaster risk can be reduced in concrete, practical terms, and how a sustainable process of integrating RR&CCA can be achieved.

⇒ ***Guiding Principle N° 6:*** Suitable tools for achieving progress in RR&CCA need to be generated in close co-operation with practitioners, in order to complement and fit with the work that they are doing and the things that they are trying to achieve. With this in mind, operational tools, which are based on praxis-oriented process indicators and related experience, are needed, and have to be developed to initiate—in the following—a 'bottom-up' development, which, in turn, can nourish the elaboration of adequate monitoring and evaluation tools at both national and international levels (see *Figure 1*).

[7] Whilst this differentiation is not common within the context of the RR&CCA field, it is partly used by experts working in the field of integrating and mainstreaming other cross-cutting topics in development organisations, such as HIV/Aids. An example is the outstanding work of Sue Holden: 'Mainstreaming HIV/AIDS in Development and Humanitarian Programmes', from which the currently described Operational Framework has greatly benefited. .See http://publications.oxfam.org.uk/oxfam/display.asp?isb=0855985305. Whilst there are broad similarities between RR&CCA and the programmes aimed at the reduction of HIV/Aids, there are also fundamental differences, which made the adaptation and extension of the different concepts for integration necessary. Integration of RR&CCA is, in fact, more complex since, in comparison to HIV/Aids, one can tackle RR&CCA directly and indirectly within the same type of project work. This is due to the fact that climate and disaster risk is already a complex concept comprised of a combination of natural hazards, vulnerability and capacity factors.

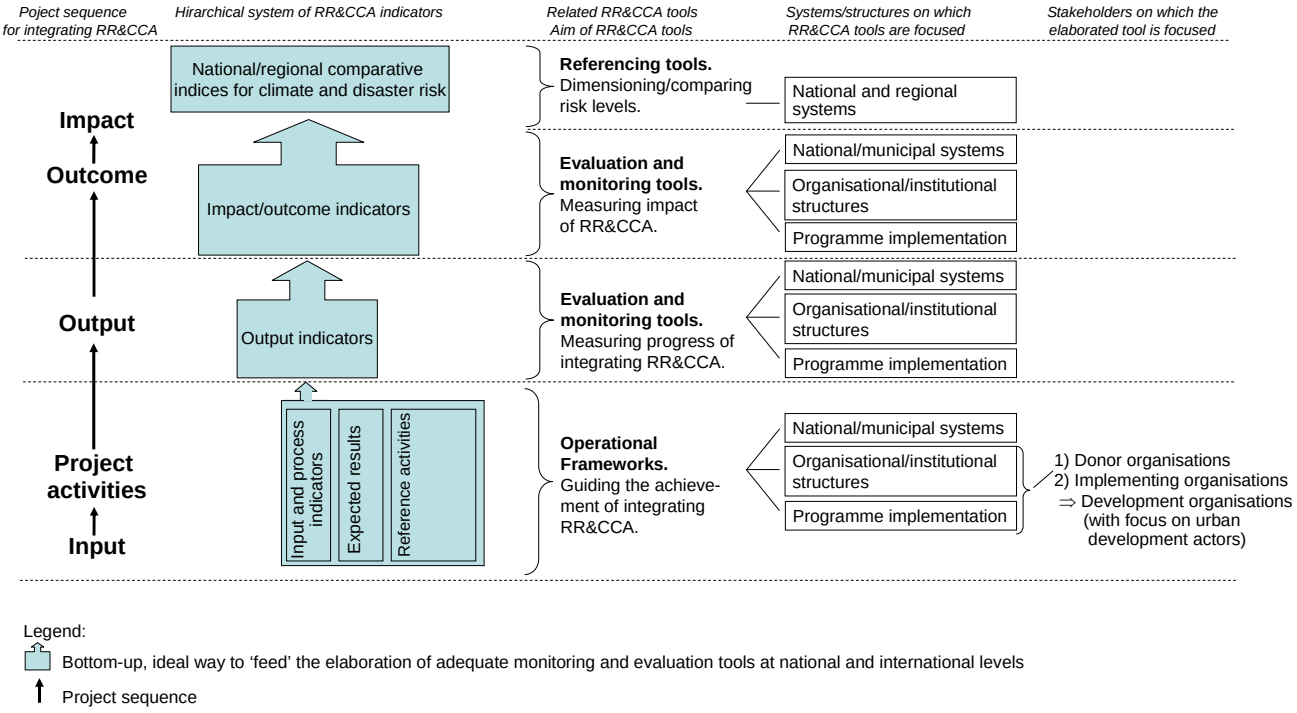


Figure 1: Placement of the present operational tool for integrating RR&CCA into the fast increasing and obscure bulk of tools offered for monitoring and evaluating RR&CCA

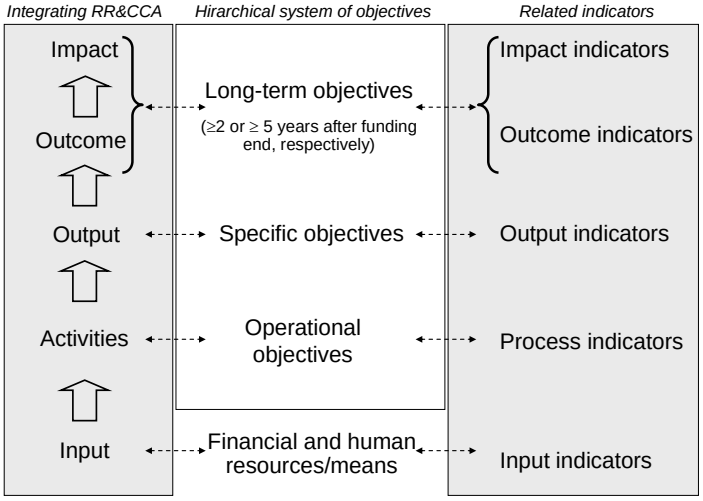


Figure 2: Overview of existing types of indicators. Note that the presented tool is mainly based on input and process indicators

4 Relevance of integrating risk reduction and adaptation

If your organisation is still in two minds about starting the process of integrating RR&CCA into its work, the *Rapid Assessment Check List I* (see *Table 1*) provides a useful tool to assess this. In fact, if the listed questions are properly and thoroughly answered, it can assist in pre-assessing the relevance of RR&CCA for a specific development organisation. However, it has to be noted that—compared to RR&CCA programming—RR&CCA mainstreaming (including programmatic and related organisational and internal mainstreaming) is absolutely necessary for *all* development organisations working in disaster-prone countries (cf. *Table 3*).[8]

Table 1: Rapid Assessment Check List I to assess the relevance of RR&CCA for development organisations

Objective	Questions to be answered	Answers
Assessment of general importance/relevance of integrating RR&CCA into the organisation	Are your programme areas prone to natural hazards/disaster and other climate-related impacts?	Yes ☐ Partially ☐ No ☐
	⇒ from flooding?	Yes ☐ Partially ☐ No ☐
	⇒ from earthquakes?	Yes ☐ Partially ☐ No ☐
	⇒ from volcanic eruptions?	Yes ☐ Partially ☐ No ☐
	⇒ from landslides?	Yes ☐ Partially ☐ No ☐
	⇒ from hurricanes?	Yes ☐ Partially ☐ No ☐
	⇒ from droughts?	Yes ☐ Partially ☐ No ☐
	⇒ from other climate-related impacts such as food, water and energy shortage? Please note: _____	Yes ☐ Partially ☐ No ☐
	Do natural hazards/disasters or other climate-related impacts affect your programme beneficiaries?	Yes ☐ Partially ☐ No ☐
	⇒ affecting their assets generally and thus obstructing their efforts to 'escape' from poverty	Yes ☐ Partially ☐ No ☐
	⇒ affecting their income generation?	Yes ☐ Partially ☐ No ☐
	⇒ affecting their natural environment?	Yes ☐ Partially ☐ No ☐
	⇒ affecting their health?	Yes ☐ Partially ☐ No ☐
	⇒ damaging their houses and community infrastructure?	Yes ☐ Partially ☐ No ☐
	⇒ affecting other aspects? Please note: _____	
	Do your programme beneficiaries live in spontaneous, precarious, informal, illegal and/or auto-constructed settlements?	Yes ☐ Partially ☐ No ☐
	Do your programme beneficiaries live in settlements, which lack vital, formal services/structures in the case of emergencies? (E.g. information, communication, infrastructure support, etc.)?	Yes ☐ Partially ☐ No ☐
	Do settlements/communities within your programme areas negatively affect their natural environment? (E.g. causing environmental degradation through erosion, deforestation, water, air and/or soil pollution, or other changes, which create new hazards/risk). Please note some of these effects: _____	Yes ☐ Partially ☐ No ☐
	Have past disasters or other climate-related impacts negatively affected your organisation's work hindering its assistance (i.e. its work on improving the living standard and quality of life of the programme beneficiaries), thus ultimately obstructing your organisation's efforts to reduce poverty?	Yes ☐ Partially ☐ No ☐
	Is there a lack of transparency, lack of accountability, and/or corruption in sectors related to your organisation's core work, which may negatively influence the vulnerability of programme beneficiaries to climate-related and non-climate-related hazards/disasters? (E.g. corruption in the formal and/or informal construction sector, which can, for instance, negatively influence the work of social housing organisations.)	Yes ☐ Partially ☐ No ☐
	Do national or municipal codes, leys or programmes exist which are based on adequate risk assessments, and which sufficiently protect your programme areas from disasters and climate-related impacts?	Yes ☐ Partially ☐ No ☐
	Is there a need to improve or advance the knowledge and education of your organisation's personnel about potential, alternative and compatible ways of (integrating) RR&CCA?	Yes ☐ Partially ☐ No ☐
	Is there a need to improve or advance the knowledge and education of the programme beneficiaries about potential, alternative and compatible ways of RR&CCA?	Yes ☐ Partially ☐ No ☐

[8] Where there is a relatively low level of climate and disaster risk, the process can be scaled down or focused on a few relevant specific issues.

Preferably, the *Rapid Assessment Check List I* should be completed by the organisation's operational programme leaders and then discussed together with other operational and management staff before being summarised in *Table 2*. If the organisation's answers to this first check-list are mostly 'yes' or 'partially', the integration of RR&CCA should be seriously considered by the organisation's management.

Table 2: Summary of the answers to Check-list I (*Table 1*)

	Yes	Partially	No
TOTAL of all 10 questions			

5 Strategies for integrating risk reduction and adaptation

There are a total of seven strategies which, when combined adequately to a specific programmatic and institutional setting, can achieve a comprehensive and sustainable integration of RR&CCA within an organisation. The first three strategies (*Strategies I–III*) relate to the integration of RR&CCA into programme implementation at local household level, the following two (*Strategies IV–V*) to the integration of RR&CCA at the institutional level of the implementing and/or donor organisations, and the remaining two (*Strategies VI–VII*) to the promotion of sustainable RR&CCA in the work of other related implementing and training institutions. All strategies are presented in the following text and summarised in *Table 3*. Note that it is not always necessary for an organisation to implement all strategies in order to successfully reduce risk in the course of their work. This depends on the specific type of organisation, i.e. their core work, programme areas and institutional environment.

Strategy I: **direct stand-alone RR&CCA.** This is the implementation of specific programmes for RR&CCA that are explicitly and directly aimed at reducing climate and disaster risk. These stand-alone programmes are distinct, and they are implemented separately from other existing work carried out by the implementing development actors. Examples of these would be programmes of social housing organisations aiming to: (a) establish early-warning systems or organisational structures for RR&CCA (e.g. specialised disaster risk management committees); (b) construct mitigation structures (e.g. levees and embankments to reduce floods); or (c) offer independent disaster insurance (i.e. insurance policies not included in housing financing schemes being offered to the poor).

Strategy II: **direct integrated RR&CCA.** This is the implementation of specific RR&CCA activities/components alongside, and as part of, other sector-specific programme work. The only difference from *Strategy I* is that this work is carried out in conjunction with other programme components. An example would be the establishment of a local disaster risk management committee, or the offer of capacity building for adaptation within the framework of a self-help housing project. Another example would be the implementation of climate and disaster awareness campaigns and simulations alongside a slum upgrading programme.

Strategy III: **programmatic mainstreaming of RR&CCA.**[9] This is the modification of sector-specific programme work, so that the likelihood of any programme measures actually increasing risk is reduced and also that the programme's potential to reduce risk is maximised. Hence, the objective of programmatic mainstreaming is to ensure that the ongoing core work is relevant to the challenges presented by climate change and 'natural' disasters. In contrast to the two strategies described above, in this case the programme's main objective is not RR or CCA as such (but related to the general focus and specific sector of the organisation). The modifications and/or the modified activities can be of a physical/structural, environmental, institutional and organisational nature. An example of this strategy could be a slum upgrading programme that adjusts its loan system to meet the specific needs of vulnerable households at risk (e.g. offering smaller housing credits with more lenient conditions attached to them or offering integrated risk insurance that takes into account the beneficiaries' limited capacity to pay). Programmatic mainstreaming can also result in the elaboration of new activities within the organisation's working field that

[9] Generally, 'mainstreaming' signifies the modification of a specific working field (within, for instance, development or relief work) so as to take a new aspect/topic into account and to act indirectly upon it. Thus, the term 'mainstreaming' does not mean to change an organisation's core functions and responsibilities, but instead to view them from a different perspective and to carry out any necessary alterations, as appropriate (see *Annex II*: Terminology).

are required so that existing risk can be taken into account. An example of this would be a social housing organisation becoming engaged in land use planning and local urban governance programming in order to promote RR&CCA, or the offer of risk- and loss-financing schemes through their existing housing financing mechanisms.

Strategy IV: **organisational mainstreaming of RR&CCA.** This means the modification of the organisational management, policy, working structures and tools for programme implementation in order to back up and sustain RR&CCA programming and/or mainstreaming (i.e. direct and/or indirect RR&CCA) at the programme level and to further institutionalise it. In fact, if integrating RR&CCA into programme work is to become a standard part of what an organisation does, then organisational systems and procedures need to be adjusted. The objective is to ensure that the implementing and donor bodies are organised, managed and structured to guarantee that RR&CCA is sustainably integrated within their core programme work. This includes, for instance, the adaptation of institutional objectives as well as programme planning tools.[10] Moreover, organisational mainstreaming also means that new tools must be adopted to properly integrate RR&CCA into development programming. Examples could be risk mapping or causal loop diagrams for analysing the key variables, and their causal relations, underlying the complex system of climate and disaster risk.

Strategy V: **internal mainstreaming of RR&CCA.** This means modification of an organisation's way of functioning/operating and of its internal policies, so that it can reduce and transfer or share its own risk in terms of impacts created by climate change and disasters. The focus is on the occurrence of disasters and other climate-related impacts and their effect on the organisation itself, including the staff, head office and field offices. The objective is to ensure that an organisation can continue to operate effectively both during and after a hazard/disaster takes place. In practice, internal mainstreaming has two elements: (a) direct RR&CCA activities both for staff and for the physical aspects of the organisation's offices, for instance, the establishment of emergency plans and retrofitting; and (b) indirect RR&CCA to modify how an organisation is managed internally, for example, in terms of personnel planning and budgeting.

Strategy VI: **synergy creation for RR&CCA.** This is the promotion of 'harmonised' RR&CCA within the management and functioning of different (implementing) organisations, including both relief, development, and environment organisations. The idea is to create synergy as opposed to competition among these organisations, by fostering the co-ordination between and the complementation of each other's work. The co-ordination of the work of different organisations could be achieved by: (a) working with unified implementation structures (e.g. municipal committees for local development or environment along with political and operational focal points for programme implementation), (b) the standardisation and unification of methods, scales and contents for the development of specific maps and plans, (c) the standardisation or flexible adjustment of the concept of RR&CCA within the different organisations, and (d) the co-ordinated inclusion of activities for capacity building and socio-economic development in terms of RR&CCA. Complementation and compatibility can be achieved by: (a) working through different municipal/local commissions (e.g. for relief, RR&CCA, or programme implementation), (b) the development of compatible products and services, such as maps and plans with different contents and scales, and (c) the implementation of additional sector-specific activities (that take climate and disaster risk indirectly into account).

Strategy VII: **educational mainstreaming of RR&CCA.** This means support for a conceptual shift in the philosophy/understanding that drives related development work towards non-conventional development planning, in order to allow RR&CCA to be incorporated into the organisation's sector-specific sphere of activity. Such a change also assists in bringing together development actors and RR&CCA professionals by helping them to move towards an understanding of the risk faced by slum dwellers. Donor organisations could promote this conceptual shift directly by supporting, for instance, universities or ministries of education as their counterparts. A more 'bottom-up' approach would be the involvement of universities and training institutions in local programme implementation.

Table 3 provides an overview of the described strategies. Note that whilst existing RR&CCA activities may not always be easy to categorise and might belong to different strategies, the above-described cate-

10 Examples are logical and results-based frameworks or vulnerability and capacity analyses. To date, urban development organisations are using capacity analysis during programme preparation; however, this tool is applied only in respect of peoples' existing capacities for housing financing and construction and not for coping with climate and disaster risk and associated impacts.

gorisation is essential for the efficient and effective planning and design of *new* programme activities and related organisational changes. The following *Box 3* illustrates through a hypothetical example, how an organisation might be triggered to apply these strategies, step by step, to its work.

Finally note that this Operational Framework—and hence related descriptions and tools presented in the following Chapters and Annexes—is focused on *Strategies I–V*. For complementary information on *Strategies VI* and *VII*, please see annexed list of further literature.

Table 3: Complementary strategies of integrating RR&CCA

Integration strategies	Methodological approach		Aim	Area of concern	Possible ways to implement the strategies	Main questions to be answered to identify relevant and adequate RR&CCA measures
I) Direct stand-alone RR&CCA II) Direct integrated RR&CCA	Direct RR&CCA (RR&CCA programming)	'External' integration of RR&CCA, i.e. integration of RR&CCA into the organisation's projects/ programmes	RR&CCA programming, that is, direct reduction of climate and disaster risk through RR&CCA programming or adding RR&CCA programming elements to core activities.	Specific programme work for RR&CCA to tackle the problem of climate and disaster risk in programme area(s).	Partial engagement in measures of direct RR&CCA, or full engagement in direct RR&CCA. Independent engagement (i.e. without forming co-operation/partnerships with other implementing organisations), or complementary financial and/or technical partnerships with more specialised RR&CCA experts/organisations.	How do disasters and other climate-related impacts affect poor communities? More specifically, how do they hinder the communities' efforts to reduce/fight poverty? ⇒ What dedicated programmes or programme measures can be implemented additionally to the organisation's core work to specifically address climate and disaster risk and associated impacts?
III) Programmatic mainstreaming of RR&CCA	Indirect RR&CCA (RR&CCA mainstreaming)		RR&CCA mainstreaming in programme activities, that is, adapting core work in order to ensure that it is relevant to the challenges presented by natural disasters, by firstly, not increasing risk as a result of programme activities and, secondly, if possible, maximise its positive effects on reducing risk.	The organisation's core programme work of tackling the problem of climate and disaster risk in programme area(s), as well as the concern regarding the potential impacts of the organisation's core work on increasing risk.	Independent engagement (i.e. without forming co-operation/partnerships with other implementing organisations) or complementary financial and/or technical partnerships with more specialised RR&CCA experts/organisations. Co-ordination with other organisations to share expertise and information. Support through the employment of external consultants for monitoring and assisting the process of integration.	How do disasters and other climate-related impacts hinder the organisation's efforts to reduce/fight the poverty of their programme beneficiaries? How does the current work of the organisation make programme beneficiaries less resistant to disasters and other climate-related impacts? ⇒ What can be done within the core work of the organisation to reduce risk and increase the coping capacities of programme beneficiaries in respect of risk and associated impacts? (Or, at least, to ensure that risk is not increased and capacities not reduced).
IV) Organisational mainstreaming of RR&CCA		'Internal' integration of RR&CCA, i.e. integration of RR&CCA in the organisation's management and functioning	Ensuring sustainable integration of RR&CCA in core work and institutionalisation of RR&CCA mainstreaming and programming.	Organisational management, policy, and working structures of the organisation to sustain programmatic mainstreaming activities and/or direct RR&CCA (both stand-alone and integrated).		What can be done to sustain and back up RR&CCA mainstreaming (and programming) so that RR&CCA becomes fully institutionalised?
V) Internal mainstreaming of RR&CCA	Direct and indirect RR&CCA		Reducing the organisation's own risk to natural hazards, disasters and other climate-related impacts.	The organisation and its staff concerning the security of the organisation itself.		How do climate change and disasters affect the organisation and its ability to work effectively? ⇒ What measures can be taken so that the organisation (i.e. its offices and staff) becomes more resilient?
VI) Synergy creation for RR&CCA	Direct and indirect RR&CCA	Co-ordination for improved RR&CCA (integration)	Co-ordination and complementation for improved RR&CCA integration.	Sustainable integration of RR&CCA by avoiding increased competition between and duplication of the efforts of different organisations.	Co-ordination with other organisations, eventually with the support of employing external consultants for assisting and complementing the process of integration.	How can RR&CCA mainstreaming (and programming) activities of the organisation be co-ordinated with, and be complementary to, the work of other (implementing) organisations?
VII) Educational mainstreaming for RR&CCA	Direct and indirect RR&CCA	Influence of the organisation's sector-specific sphere of activity	Shift towards non-conventional development planning to integrate RR&CCA into the organisation's sector-specific sphere of activity.	Sustainable integration of RR&CCA through sector-specific changes, thus achieving long-term changes.	Specific support of universities or ministries of education as programme counterparts, or involvement of universities and training institutions in local programme implementation.	What has to be done so that universities and other training institutions (decide to) facilitate the sustainable integration of RR&CCA into the sector-specific sphere of activity of the organisation?

Box 3: Example to illustrate the seven different ways of integrating RR&CCA within one organisation. Hypothetical example.

After a recent disaster, and in response to the increased funding for disaster management and climate change being offered by international donors, UNAGI employs a new staff member with expertise in risk reduction and adaptation, who designs and implements a pilot programme on disaster RR&CCA. The pilot programme aims to raise community awareness in respect of climate and disaster risk through the distribution of leaflets and the establishment of local RR committees. Thus, UNAGI becomes engaged in the **stand-alone direct RR&CCA strategy**.

With the experience gained from the pilot programme, UNAGI then starts to include RR&CCA activities in its ongoing housing programmes. For instance, it begins to raise risk awareness, introduces climate-resistent crops, and promotes community emergency funds alongside its community training for self-help housing. Thus, it becomes involved in the **direct integrated RR&CCA strategy**.

One year later, UNAGI's managers decide that all programmes should take greater account of climate change and disasters and seek to maximise their positive effects on reducing risk. Accordingly, UNAGI carries out research, analysing the links between its social housing activities and climate and disaster risk. In one programme area, it finds that offering housing credits based on income capacity makes it impossible for those people, who are most vulnerable to qualify for UNAGI programmes. Without doing any direct RR&CCA work, UNAGI responds to this finding by offering them partial housing subsidies and smaller housing credits for physical adaptation measures in existing houses. In another area, community research provides evidence that beneficiaries are vulnerable to climate-related impacts because of their dependency on informal vegetable trading and that past housing programmes had increased their socio-economic vulnerabilities by resettling them far from their income-generating activities. It is also discovered that these housing programmes used very expensive roof tiles that were not durable and carbon-intensive. Acting on these findings, UNAGI sets up a local workshop to produce concrete roofing tiles in order to provide a more disaster-resistant, cheaper, and non-carbon-intensive construction material. At the same time, the workshop provides some households with the opportunity to diversify away from vegetable trading. In addition, in both programme areas, advice on climate-resistant construction techniques is disseminated, risk maps elaborated, disaster insurance mechanisms included in the housing credits and neighbourhood and women's associations established, which campaign for greater transparency in the government and grass-roots participation in urban development and related decision-making. Thus, they increasingly build up a stake in municipal development planning (e.g. as regards land legalisation). In this way, UNAGI becomes involved in the **programmatic mainstreaming of RR&CCA**.

To reduce competition with other implementing organisations and to complement each other's RR&CCA work, UNAGI initiates—in cooperation with the national Housing Ministry—a process of standardisation and unification of methods, scales and contents for the development of risk maps and related land use plans. It thus starts the process of **synergy creation for RR&CCA**. In addition, UNAGI decides to increasingly involve universities and other training institutions working in urban development in the implementation of their local programmes, for instance, with the aim of improving the development of climate-resistant construction techniques and the elaboration of risk maps, thus also pushing forward the **educational mainstreaming of RR&CCA**, which constitutes a conceptual shift in the philosophy that drives urban development work towards non-conventional settlement development planning.

Over time, UNAGI realises that despite its various efforts in the field of RR&CCA programming and mainstreaming, the integration of RR&CCA into their programmes is not sustainable in the long term because it is not institutionalised and/or anchored within the organisation's general management and programme planning cycle. It thus starts to engage in **the organisational mainstreaming of RR&CCA**. As an initial step, the organisation revises its policy to formalise its commitment to integrating RR&CCA, and develops a financial strategy to sustain this integration. In addition, risk assessments and capacity analyses (including the analysis of local coping strategies) become routine tasks in the planning phase of all social housing programmes.

Several months later, there is a major flooding followed by severe landslides, in Mexico. Unexpectedly, UNAGI is affected: its head office is damaged, four staff members are severely injured and there are problems communicating with field offices. This forces the organisation to engage in the final strategy: **internal mainstreaming of RR&CCA**. A team is formed to predict the likely impacts of future disasters and other climate-related impacts on the organisation's finances and human resources, analysing potential direct and indirect losses (e.g. costs related to damaged buildings, vehicles, reduced reputation, staff absences and sick leave). Based on this work, UNAGI acquires an organisational insurance policy and improves its working structure by installing an enhanced communications system, introducing better processes for information sharing, and revising its workplace policy. In addition, the head office is retrofitted to become more climate-resistant.

6 Step-by-step integration

The implementation of this Operational Framework is an iterative process, not a single event. To initiate the process of integrating RR&CCA, each organisation has first to (a) select those integration strategies presented in Chapter 5 that are most relevant to and appropriate for its programmatic, institutional and organisational setting, and (b) define the combination and succession of the selected integration strategies. The *Rapid Assessment Check List II* (see *Table 4*) was designed to assist in this process. If the listed questions of *Check List II* are answered properly by the operational and management staff of an organisation, this can actually help to analyse the relevance and prioritisation of the potential integration strategies. To do so, an external specialised consultant may eventually need to be hired to assist the operational and management staff in analysing the listed questions.

Each of the four sections of *Table 4* (namely 'Implementing direct RR&CCA'; 'Programmatic mainstreaming of RR&CCA'; 'Organisational mainstreaming of RR&CCA'; and 'Internal mainstreaming of RR&CCA') are comprised of four main questions, the answers to which are written in bold type and with a grey background. The sub-questions should be used in order to cross-check the correct answer to the main question, that is, if the answers to the sub-questions are in the category 'partially/partially true' or 'no/not true', the answer to the main question cannot be 'yes'. The subsequent *Table 5* can be used to summarise the answers to *Table 4*. Based on the number of negative answers for each section, including 'no/not true' and 'partially/partially true', an organisation can immediately obtain an indication of which integration strategies would probably be the most relevant ones for it to apply.

Table 4: Rapid Assessment Check List II to analyse the relevance and prioritisation of the potential strategies to integrate RR&CCA into an organisation

Implementing direct RR&CCA (i.e. RR&CCA programming, stand-alone and integrated) _____ Strategy I & II	Despite existing climate and disaster risk in your programme areas, the vulnerability of the inhabitants, and/or their incapacity to cope, there is no extreme or acute need to carry out specific measures to explicitly and directly reduce risk?	True □ Partially true □ Not true □
	Are experienced organisations already carrying out direct RR&CCA in your programme areas?	Yes □ Partially □ No □
	There are (a) insufficient human resources and knowledge available, or (b) no possibilities to form complementary partnerships to enable your organisation to engage in direct RR&CCA without negatively influencing its core work?	True □ Partially true □ Not true □
	Your organisation has no access to existing specialised funds for RR&CCA or other financial sources designed for RR&CCA programming so that it could engage in RR&CCA programming without negatively influencing its core work?	True □ Partially true □ Not true □
Programmatic mainstreaming of RR&CCA _____ Strategy III	Have thorough assessments been recently carried out on how your organisation's core work relates to climate and disaster risk (inter-connection/reciprocal influences), and also analyses of how past programme activities have helped/hindered the beneficiaries to reduce their vulnerabilities in respect of disasters and climate-related impacts, and to improve their coping capacities? (In the case that the answer to this question is positive: Was the result of the assessment that the organisation's work does not relate to risk and does not hinder the beneficiaries from reducing their vulnerability or from improving their coping capacities?)	Yes □ Partially □ No □
	Climate change and past disasters have so far not negatively affected your programme activities and, consequently, they have not negatively affected the effectiveness of your programmes?	True □ Partially true □ Not true □
	⇒ The efforts of your developing programming to reduce poverty were not 'set back' by climate change and the occurrence of natural hazards/disasters?	True □ Partially true □ Not true □
	⇒ Physical programme measures (e.g. assisted programme housing) carried out within the framework of your programmes were not destroyed/damaged by hazards/disasters?	True □ Partially true □ Not true □
	Your programme activities did not negatively affect existing climate and disaster risk through the creation of additional/increased vulnerabilities, hazards and/or a lack of coping strategies/capacities? E.g. decreased income opportunities, increased erosion and deforestation, or others. Please note:_____	True □ Partially true □ Not true □ Not known□
	Do programme activities actively take into account existing climate and disaster risk of the implementing areas?	Yes □ Partially □ No □
	⇒ through own analyses of existing hazards? (carried out by experts and in combination with participative analyses with beneficiaries and other stakeholders)	Yes □ Partially □ No □

	⇒ through the analysis of physical, socio-economic, environmental, and institutional/organisational vulnerabilities?	Yes □ Partially □ No □
	⇒ through the consideration of existing national/municipal/local risk analyses?	Yes □ Partially □ No □
	⇒ through the elaboration of inventories to identify/classify the physical vulnerability of residential and public constructions (services, infrastructure, and equipments)?	Yes □ Partially □ No □
	⇒ through the analysis of existing institutional and local coping capacities/strategies?	Yes □ Partially □ No □
	⇒ through other means? Please note: _____	
Organisational mainstreaming of RR&CCA _____ Strategy IV	Did your organisation carry out an estimation/calculation of past climate and disaster-related losses within its programme activities including direct and indirect losses (e.g. repairs of assisted programme houses, loss of reputation, etc.)? (In case that the answer to this question is positive: Was the result of the estimation/calculation that there are no significant losses?)	Yes □ Partially □ No □
	Is the integration of RR&CCA in programme planning, implementation and evaluation a standard procedure and part of the everyday work of your organisation?	Yes □ Partially □ No □
	⇒ Does your organisation dispose criteria and tools to analyse risk in programme areas and to integrate RR&CCA within the organisation's core work and makes use of them?	Yes □ Partially □ No □
	Are there organisational/institutional structures and mechanisms to sustain and backup your programme work in RR&CCA (RR&CCA programming and/or mainstreaming)?	Yes □ Partially □ No □
	⇒ Are there sufficient human resources (a) to support the integration of RR&CCA in programme planning and implementation, and (b) to control its quality?	Yes □ Partially □ No □
	⇒ Has the organisation a financial mechanism to finance RR&CCA (integration)?	Yes □ Partially □ No □
	Has your organisation a formalised organisational strategy and policy to back up its programme work in RR&CCA?	Yes □ Partially □ No □
	⇒ Is RR&CCA and the integration of RR&CCA included in your organisations values, aims, working descriptions, etc.?	Yes □ Partially □ No □
Internal mainstreaming of RR&CCA _____ Strategy V	Have climate change and past disasters affected your organisation itself, i.e. its staff and/or its functioning, and thus its ability to continue working effectively?	Yes □ Partially □ No □
	⇒ directly, as a result of damages to head or field offices, or other capital infrastructure?	Yes □ Partially □ No □
	⇒ indirectly, through staff sick leave and/or reduced personnel?	Yes □ Partially □ No □
	⇒ through organisational problems or any other aspects? Please note: _____	Yes □ Partially □ No □
	Did your organisation carry out an assessment on how climate change impacts affect its functioning, which includes an estimation/calculation of potential disaster losses (incorporating direct and indirect losses)? (In case that the answer to this question is positive: Was the result of the assessment that there are no significant losses?)	Yes □ Partially □ No □
	Has your organisation a financial system and strategy capable of covering eventual costs through direct and indirect losses caused by climate change and disasters?	Yes □ Partially □ No □
	Has your organisation a formalised organisational strategy/policy for protecting their staff from the impact of climate change and disasters? (E.g. adequate workplace policies and working structures)	Yes □ Partially □ No □

Table 5: Summary of the answers to Check-list II (*Table 4*)

TOTAL	Implementing direct RR&CCA (stand-alone and integrated)	Yes/True=	Partially/Partially true=	No/Not true=
	Programmatic mainstreaming	Yes/True=	Partially/Partially true=	No/Not true=
	Organisational mainstreaming	Yes/True=	Partially/Partially true=	No/Not true=
	Internal mainstreaming of RR&CCA	Yes/True=	Partially/Partially true=	No/Not true=

Note that the *Rapid Assessment Check List II* should only be completed by those organisations that—despite having thoroughly read Chapter 5—are still unsure about which strategies would be best pursued in their particular case (cf. *Box 2*). In general, whilst all strategies of integrating RR&CCA complement each other, development organisations working in climate-sensitive and disaster-prone countries should first engage in programmatic mainstreaming, that is, adapt and/or improve their core work, rather than starting with RR&CCA programming.[11] This is important so as to ensure that the organisation does not increase the risk of the poor, to avoid competition with other organisations engaged in RR&CCA, and not to place undue strain on the capacities of the organisation (cf. Chapter 3). To achieve this in practice, *Strategies III, IV* and *V* could be gradually implemented, with programmatic mainstreaming (*Strategy III*) being initiated by implementing a related pilot programme. Another possibility would be to start working in parallel with *Strategies III–IV*. Whilst all three mainstreaming strategies could be carried out independently, i.e. only by the organisation's own staff, complementary partnerships are absolutely vital (see *Table 3*). In addition, mainstreaming RR&CCA is likely to require the services of external specialised consultants to guide the integration process, for instance, in respect of carrying out training or feasibility studies on particular programme modifications, predicting future climate and disaster impacts, advising on sector-specific aspects related to RR&CCA, or establishing outcome indicators for monitoring the process of mainstreaming (see *Table 3*).

In the case that the organisation (also) gets engaged in RR&CCA programming (*Strategies I* and *II*), it should—as far as possible—always be carried out through the utilisation of complementary partnerships with specialised RR&CCA (or relief and/or environment) organisations or experts. Both *Strategy I* and *Strategy II* (i.e. RR&CCA programming including direct stand-alone RR&CCA and direct integrated RR&CCA) can consider a partial engagement in a few, selected elements of RR&CCA, or a fuller and more extensive engagement (see *Table 3*).

Table 3 indicates the alternative and complementary implementation strategies depending on the type of RR&CCA integration pursued by the organisation. In line with *Strategy VI*, a development organisation should—if possible—always link together with specialised RR&CCA (or relief and/or environment) organisations to prevent competition, create synergies, and thus become more effective. Related complementary partnerships for both RR&CCA mainstreaming and RR&CCA programming can encompass the purely technical co-operation of different organisations with different funding sources, or a purely financial co-operation with one main implementing organisation and a subcontracted one. However, in practice, specialised organisations may not exist, or, if they do, they may not cover all aspects of RR&CCA, or they may be unable to extend themselves to form meaningful partnerships. Within the organisations, 'champions' are vital to introduce and promote the process of integration. 'Champions' are staff members interested in RR&CCA, who are starting to learn about the concept and the underlying processes, who promote RR&CCA and who inspire and encourage others. Once the idea of integration is formalised, specially trained staff and/or focal points can further promote the process from within the organisation itself.

7 Measures of risk reduction and adaptation

Once the appropriate strategies are selected and prioritised by an organisation, the related changes required for the sustainable integration of RR&CCA need to be defined. To do so, the last column of *Table 3* includes questions that can help to guide this selection process. On this basis, the Operational Framework offers matrixes for the formulation of concrete measures to be taken. *Annex I* provides these matrixes for each of the five RR&CCA integration strategies that are divided into various sub-sections, which present the steps to be taken. For an overview please see page 24. The overview shows that, whichever strategy is considered the most appropriate for a particular organisation to start with, each one initially requires capacity building and research to be carried out in order to identify the existing climate and disaster risk and its relation to the core programme work and functioning of the organisation. The steps within each integration strategy, which follow such capacity building and risk identification, can then be carried out concurrently. For each step, the matrixes include:

a) input and process indicators,

[11] The process can be scaled down or focused on a few specific issues, where there is a relatively low level of disaster risk.

b) output indicators, and

c) general recommendations and reference activities.

The first column on the left provides *input and process indicators* to get the RR&CCA integration process started. The second column indicates *input and process indicators* in the form of benchmarks, i.e. the operational state, which an organisation should seek to achieve with the integration of RR&CCA. *Input indicators* refer to the necessary human and financial resources needed to integrate RR&CCA, whilst *process indicators* indicate related operational aspects (cf. *Figure 2*).[12] All the listed indicators within one matrix should be considered simultaneously, not consecutively.

The third column from the right contains some guidelines in the form of general recommendations and reference activities as regards the practical implementation of the listed benchmarks. These are particularly aimed at providing guidance for implementing organisations working in urban development. However, they can also be used for other types of development (or relief) organisations, since the general advice and illustrative set of practical ideas given, can also be partially applied or extrapolated by these organisations. At present, urban development organisations have not experimented with the idea of integrating RR&CCA long enough to have developed a solid body of practice. Thus, with increasing experience, training and education in the practical application of the different integration strategies and the gradual 'institutionalisation' of RR&CCA into these organisations, the reference activities will require updating.

In the second row of the matrixes, some indicators are included to specify the *output* at which the implementation of the input and process indicators is aimed (cf. *Figure 2*). These *output indicators* can form an initial basis for monitoring and evaluating the progress in the process of RR&CCA integration.[13] The means of verification would have to be defined for each organisation and its sector-specific work. On this basis, a complementary component to this framework could be developed in order to provide the means of monitoring and evaluating the progress of integrating RR&CCA.

The correct application of the matrixes and the related indicators by the operational and management staff of an organisation requires an in-depth understanding of the potential measures for reducing risk that each organisation could—and should—apply, to achieve a holistic and, therefore, sustainable integration of RR&CCA. All these potential RR&CCA measures, need to be considered within a development context and be combined and within each of the selected integration strategies. They include:[14]

1) **Prevention (or hazard reduction)**: measures to avoid or reduce the potential intensity and frequency of existing or likely future hazards that threaten households, communities and/or institutions,

2) **Mitigation**: measures to minimise the existing or likely future vulnerability of households, communities, and/or institutions to potential hazards/disasters,

3) **Preparedness**: measures to establish effective response mechanisms and structures for households, communities, and/or institutions so that they can react effectively during and in the immediate aftermath of potential future hazards/disasters,

4) **Risk 'financing'**: measures to transfer or share risk, so as to establish a 'security system' (safeguard) for households, communities, and/or institutions that comes into force after potential hazard/disaster impacts, and helps obtaining 'readily available' compensation.

5) **Stand-by for recovery**: measures to establish appropriate recovery mechanisms and structures for households, communities and/or institutions that are accessible after a potential hazard/disaster. This includes mechanisms and structures for both rehabilitation and reconstruction.

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[12] Note that input and process indicators do not indicate programme outputs, outcomes or impacts.

[13] Monitoring and evaluation tools for controlling the integration of RR&CCA are important since, despite the testing of the framework and analysis of related challenges for its implementation, the Operational Framework may lead to the development of policies and good ideas, which may then be ignored or misapplied. Also, proposed programme measures and related methods may not always lead to the expected outcomes, and, therefore, may need to be revised.

[14] More detailed definitions are given in *Annex II*. Note that during 2009/2010, the matrixes of *Annex I* will be revised to explicitly categorise the examples listed within the reference activities, as well as expanded where no examples are given for all the five RR&CCA measures. Further note that *Annex III* includes literature recommendations that include examples of the five RR&CCA measures described.

8 Supporting and financing risk reduction and adaptation

The present Operational Framework provides technical input needed by development organisations for integrating RR&CCA. In order to achieve its implementation, further questions require to be answered:

- How can international organisations support and encourage the implementation of this framework through their local partner organisations?
- How can national implementing organisations financially sustain the application of this framework?

With reference to the first question, there are essentially three possible approaches that international donor organisations can pursue in support of the integration of RR&CCA. Within each of the three approaches, there are again three alternatives included, giving a total of nine options:

Approach 1: Offering partner organisations technical support, links to specialists and/or funding for:

a) RR&CCA programming,

b) RR&CCA mainstreaming, or

c) Comprehensive RR&CCA integration (i.e. a and b combined), but leave the partner organisations to decide whether, how, and to what extent to engage in RR&CCA.

However, note that full external funding of direct RR&CCA might detract from or discourage a sense of ownership among staff.

Approach 2: Imposing funding conditions to enforce the implementation of:

a) RR&CCA programming,

b) RR&CCA mainstreaming, or

c) The comprehensive integration of RR&CCA (i.e. a and b combined).

However, note that conditionality on of the part of international donor agencies has to be considered carefully so as not to hinder the development of successful partnerships for poverty reduction.

Approach 3: Offering programmes for which interested NGO's can apply, which include technical assistance and seed grants, for the purpose of guiding and accompanying the process of:

a) Integrating RR&CCA programming,

b) RR&CCA mainstreaming, or

c) The comprehensive integration of RR&CCA (i.e. a and b combined).

Unfortunately, to date, the first choice of international organisations seems to be 1a), that of offering partner organisations funding for RR&CCA programming. This leads to unsustainable RR&CCA: once donor funding ceases, RR&CCA activities end. International funding organisations urgently need to recognise the importance of mainstreaming, and must be willing to support it financially. Consequently, the strategy of mainstreaming RR&CCA should become an integrated and vital part of all their funding and related evaluation processes. In this context, donors also have to recognise that their partners may need more technical support in programmatic mainstreaming than in RR&CCA programming, particularly in terms of understanding the indirect links between their core work and RR&CCA, and in terms of devising comprehensive and appropriate modifications of their organisation and programmes. Thus, donor organisations should provide support beyond funding, such as capacity building and assisting partners in their community research and in their process of defining and experimenting with various programme modifications and alterations. Unfortunately, the few organisations, which already provide funding for RR&CCA mainstreaming, in the majority of cases, solely look at the programme work of organisations, that is, they support only programmatic mainstreaming of their partner organisations. However, without the allocation of funding for organisational and internal mainstreaming, the donor money provided will deflagrate without any positive long-term effects.

The third approach is illustrated in *Figure 3*. Here, the idea is that the international donor organisation accompanies the whole RR&CCA integration process of selected partner organisations, starting with capacity building, from offering the possibility of applying for seed grants for the integration of RR&CCA, to mentoring and following-up its implementation. Such approach has already been successfully tested in respect of the integration of other cross-cutting topics, such as HIV/Aids.[15]

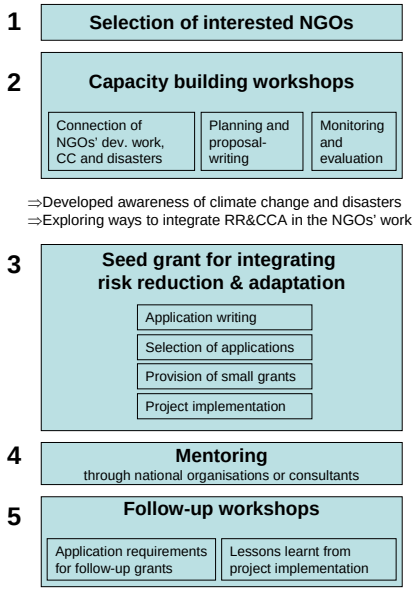

Figure 3: Programmes for guiding the process of integrating RR&CCA

It is important to emphasise that those international organisations that wish to promote—in whatever way—the integration of RR&CCA through their partner organisations, must, themselves, be committed to RR&CCA and its integration if they are to prove effective in supporting their partners to do the same. In fact, they may use the Operational Framework at hand, not only to assess the viability of proposed programmes and promote RR&CCA integration, but also to assess themselves.

Once the process of integration into an implementing organisation is initiated, personnel training undertaken, the required structures in place, and the necessary tools adapted or developed, only little additional operational costs should remain. In fact, related research and other available data suggest that RR&CCA integration could possibly be achieved at relatively little additional cost, while significantly increasing levels of achievement and success. Nevertheless, answers are needed on how national implementing organisations can financially sustain the implementation of the presented framework—both, in terms of initiating it without donor funding and sustaining it in the longer term. The following options exist:

- To counterbalance higher operational costs that are generated through the integration of RR&CCA with reduced disaster and climate-related losses, associated improved reputation, and access to additional funding sources from international donor organisations which support RR&CCA.
- To convince governmental agencies within the organisation's country to allocate additional subsidies for organisations, which offer programmatic mainstreaming of RR&CCA, by arguing the point in relation to post-disaster costs, which often have to be covered by the state, and which, hereby, could be reduced considerably.
- To convince governmental agencies within the organisation's country that all subsidies offered for programme implementation should include the criterion/condition that the programmes in question must not create additional climate and disaster risk, and that they maximise the positive effects on reducing risk.
- To form complementary partnerships for programme implementation with specialised RR&CCA (or relief and/or environment) organisations and sector-specific training institutions.

[15] One example comes from South Africa, see http://www.policyproject.com/pubs/NGOBooklet/SA_NGO_Booklet.pdf

- To expand existing sector-specific financing mechanisms of the organisation (e.g. for social housing) to finance RR&CCA (and its integration).
- If programme activities include the offer of credits for social housing or other issues, the additional core costs for sustaining the integration of RR&CCA could—in some cases—partially be included in the credit payments of the beneficiaries.
- To expand the organisation's portfolio of programme measures so as to include risk 'financing' and stand-by for recovery measures, thus also reducing potential future losses of the organisation (for instance by stimulating household/community saving systems as part of the organisation's programme activities).

Ideally, the different options should be combined so that the additional operational costs can be distributed between international donor organisations, the state government, the implementing organisation and the beneficiaries. Matching funds could be used to support such distribution. *Annex III* provides literature that presents further options and concrete examples of how specific options may look in practice.

9 Final remarks

The Operational Framework presented here provides a comprehensive basis for the sustainable integration of RR&CCA within the work of development (and relief) organisations. It is a significant step towards reducing the risk faced by the poor, providing an extension of existing RR&CCA models and concepts. It includes and integrates both RR&CCA programming and RR&CCA mainstreaming, differentiates between different, complementary levels of mainstreaming and tackles physical, socio-economic, environmental and institutional aspects at both the programme and organisational level. However, organisations engaging in the integration of RR&CCA need to be aware of the following aspects that may act as obstacles or barriers to the implementation of the presented Operational Framework:

a) The advocacy and funding of RR&CCA (both through RR&CCA programming and the mainstreaming of RR&CCA) is challenging since the outcomes or results are not, by the very nature of the work, very visible. In addition, there is still a lack of experience in RR&CCA, and thus an absence of hard evidence that promoters of RR&CCA integration can offer to support their arguments.

b) RR&CCA is generally not a high priority for donors, mainly because it does not fall within the categories of existing budget lines designed for either development or emergency assistance.

c) Mainstreaming RR&CCA is a difficult concept to promote, particularly when compared to the task of advocating for RR&CCA programming (i.e. direct RR&CCA work). To begin with, mainstreaming is not an obvious strategy; it requires people to think in a new way, and the arguments behind it are rather complex.[16] Thus, donors are more willing to support RR& CCA programming (*Strategies I* and *II*) rather than the complementary strategies for mainstreaming RR&CCA (*Strategies II–IV*).

d) Donor-dependent implementing organisations may similarly prioritise RR&CCA programming and other immediate issues, simply being forced to obtain another grant very quickly for their own survival—at the expense of long-term planning. This is because only a few donor agencies are willing to commit their resources to long-term partnerships.

e) Donors may wrongly ascribe higher operational costs of implementing organisations, which result from these organisations' work on integrating/mainstreaming RR&CCA, to bad management, and may, therefore, choose to support other development organisations that appear to offer programmes with 'better value'.

The listed barriers show that the development of appropriate frameworks is not, in itself, sufficient to stimulate the integration of RR&CCA into sector-specific development work. In fact, the general conditions required for the implementation of such technical policy instruments are: (a) scientific input and (b) political will/commitment. Nevertheless, the framework itself (i.e. the proposed conceptual strategies and resulting activities) could help, in the following respects, to overcome this constraint:

[16] This can be confirmed by the fact that the mainstreaming of other cross-cutting topics, such as HIV-AIDS and gender, was also difficult initially.

- There are many competing demands on the resources of international and national development organisations and national and municipal governments, which can negatively influence political commitment regarding RR&CCA. However, the framework supports the perception of RR&CCA as a working field and cross-cutting topic that should—as a matter of good practice—be incorporated into development planning and programming; it is not viewed as an additional area of investment that is directly competing for funding.
- The successful implementation of the framework would directly lead to a number of policy strategies and instruments—at national and municipal levels, and at the institutional levels of development organisations—to promote the integration of RR&CCA into development programming, without duplicating efforts and resources. Ideally, it would also lead to agreements on the principles of good practice in development programming, which include RR&CCA objectives, thus further pushing for a political commitment to this issue.

Finally, it has to be noted that awareness-raising on the existence and training in the use of the framework is crucial in respect of influencing political will. Such training needs to address not only operational but also management staff (i.e. executive managers and the chief officers of municipalities). In this context, workshops on this framework, combined with practical exercises in the field and conducted in both English and Spanish, have been regularly held since 2006.

Annex I: Indicators and reference activities

Overview

Strategies I and *II*: Implementing Direct RR&CCA (= RR&CCA programming)

Strategy III: Programmatic Mainstreaming of RR&CCA

Strategy IV: Organisational mainstreaming of RR&CCA

Strategy V: Internal Mainstreaming of RR&CCA

Strategies I and *II*: Implementing direct RR&CCA (= RR&CCA programming)

STRATEGIES I/II: IMPLEMENTING DIRECT RR&CCA
1.1 Human resources and capacity building

Input and process indicators for integrating RR&CCA

First Steps ***—Getting started —***	***Benchmarks*** ***—Where to go —***
The organisation's management does not show resentment towards the concept of RR&CCA, is open for new ideas, and supports staff members interested in the idea of RR&CCA integration who are starting to learn about this concept and its underlying processes, and who inspire others. First awareness raising and basic training on risk and RR&CCA for personnel. Analysis of the organisation's capacity to carry out direct RR&CCA (in respect of human resources). Note that direct RR&CCA includes RR&CCA programming in form of implementing specific, stand-alone RR&CCA programmes or specific, integrated RR&CCA programme components.	Selection, designation and eventually employment of employees with adequate skills to formally take the responsibility for integrating direct RR&CCA (i.e. RR&CCA programming). The organisation provides the selected staff with time, resources and some level of influence/authority to do this work. Regular training for personnel on risk, the concept of RR&CCA, and the different existing strategies of integrating RR&CCA in development organisations (with special focus on direct RR&CCA).

⇒Expected results (output indicators)

⇒ Sufficient person power and existing knowledge for carrying out direct RR&CCA (i.e. RR&CCA programming).

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

1.1.1 As RR&CCA programming is not directly related to the organisation's core work, it may be important to employ additional staff for implementing and effecting the new field of work. However, if possible, it is recommended that the RR&CCA programming is carried out by means of co-operative partnerships, without getting the organisation itself directly involved in direct RR&CCA. See also Matrix 1.3.

STRAGEGIES I/II: IMPLEMENTING DIRECT RR&CCA
1.2 Risk identification and community research

Input and process indicators for integrating RR

First Steps — Getting started —	Benchmarks — Where to go —
Preparation and initiation of research in selected risk areas (areas of ongoing or potential programme work) with the aim to: a) understand how climate change and disasters affect specific communities; b) identify existing risk factors (i.e. hazards, vulnerabilities, and lack of capacities); c) understand existing variables underlying the complex system of climate change, risk and disaster occurrence; d) identify the communities assets/ capacities to resist climate-related impacts and disasters; and e) find measures to directly reduce existing risk (through prevention, mitigation, preparedness, risk 'financing', and/or stand-by for recovery). Analysis of existing local needs in order to analyse the relevance of carrying out RR&CCA programming in form of direct integrated or direct stand-alone RR&CCA. Compilation and analysis of existing data bases on hazards and vulnerabilities at international, national, municipal and local levels. Compilation and analysis of relevant tools for risk identification and risk presentation at international, national, municipal and local levels (e.g. use of risk indices).	In selected programme areas: - Elaboration of participative and easy to understand local and/or municipal risk maps (including hazard maps, vulnerability maps and capacity maps) to summarise the research outcomes. Regular updating. - Elaboration of technical inventories for RR&CCA (e.g. vulnerability analyses of public and residential buildings). Regular updating. - Ongoing participative process with communities/municipalities to discuss research outcomes. Systematic collection and monitoring regarding the following aspects: a) climate and disaster risk in programme areas, and b) capacities and risk perceptions of local communities, municipalities and other programme stakeholders. (Note that if related mechanisms or tools are established for the systematic collection and monitoring of all RR&CCA programmes, this activity forms part of organisational mainstreaming.)

⇒Expected results (output indicators)

⇒ Good understanding of personnel (involved in direct RR) as to how disasters affect communities/municipalities by hindering their efforts to reduce risk.
⇒ Highly vulnerable and hazard-prone groups, settlements and facilities are identified within the programme areas.
⇒ Existing risk database for programmes to follow-up relevance and efficiency of direct RR work (if applied to all programmes, this is part of organisational mainstreaming).
⇒ Local governments/communities have access to adequate risk information (which is easy to understand and –in the case of maps– portrayed in the appropriate scale).

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

1.2.1 Vulnerability and hazard maps are here mainly used as a tool for:
a) risk awareness;
b) establishing committees for emergency and/or RR&CCA; and
c) the identification of measures for direct RR&CCA work.
Please see also Matrix 2.2 on 'programmatic mainstreaming', section 'risk identification and community research', notes 2.2.1 – 2.2.6.

/II: IMPLEMENTING DIRECT RR&A
1.3 Programme components (general)

Input and process indicators for integrating RR&CCA	
First Steps **— Getting started —**	**Benchmarks** **— Where to go —**
Analysis of information obtained through the community research and capacity building (see Matrixes 1.1 and 1.2) to discuss and develop in a participatory way programmes and/or programme components for direct RR&CCA.	Design and implementation of RR&CCA programming in form of stand-alone programmes or integrated programme components to directly reduce disaster risk. Establishment of cooperation (i.e. cooperative partnerships) with more specialised RR&CCA organisations for the cooperative implementation of RR&CCA programming.

⇒Expected results (output indicators)

⇒ Implemented programmes directly and explicitly reduce risk.
⇒ Established cooperation partnerships for the implementation of RR&CCA programming.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

1.3.1 The aim of programmes, which include direct RR&CCA work, is generally reflected explicitly in their stated aims, objectives and/or purposes.
1.3.2 Both integrated and stand-alone programmes of direct RR&CCA should –if possible– be undertaken by means of cooperative partnerships together with more specialised RR&CCA (or relief and/or environment) organisations. See also under 1.1.1.

1.3.3 All direct RR&CCA activities could be carried out in an integrated way (i.e. along with other sector-specific activities), or in combination with other direct RR&CCA activities (i.e. as stand-alone RR&CCA programmes). They can only be justified in a situation where an area faces immense existing risk and at the same time an absence of organisations specialised in RR&CCA programming.

STRATEGIES I/II: IMPLEMENTING DIRECT RR&CCA; 1.4 Physical programme components

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Analysis of existing physical vulnerabilities and physical protective assets (and related capacities).* Adherence of all physical programme activities to relevant legal documents (e.g. building and territorial land use codes). Capacity building of personnel on adequate physical RR&CCA measures (e.g. disaster-resistant construction designs and techniques). Public promotion and training in programme areas on appropriate physical RR&CCA measures.	Implementation of physical RR&CCA measures. Quality control of the physical RR&CCA measures and their implementation (including aspects such as adequate structures, technical tools used, specialised personnel and participation). (Note that if related mechanisms are established and implemented for all programmes, this activity forms part of organisational mainstreaming).

⇒Expected results (output indicators)

⇒ Municipalities/community leaders provide their members with adequate information to help direct appropriate (i.e. resilient) urban development.

⇒ Decreasing physical risk, for instance, decreasing housing in climate-sensitive and hazard-prone areas and/or improved building use in programme area.

Notes and reference activities for practical implementation (with particular focus on on urban development organisations)

1.4.1 Physical/structural measures of mitigation or prevention are, for instance, watergates or protective barriers (embankments) for flood control; securement of slopes and retaining walls against landslides; resettlement of people living in high-risk zones; and physical improvement of constructions and infrastructure to become disaster-resistant. Special attention has to be given to schools and hospitals.

1.4.2 Physical/structural measures of preparedness are, for instance, the construction of emergency accommodations or the construction of floating schools.

1.4.3 Physical non-structural RR measures include for instance:

- Support of legal control systems which influence future physical developments (i.e. laws and codes for constructions and land use);

- Elaboration of digitalised risk, hazard or vulnerability maps for RR&CCA;

- Territorial land use planning for RR&CCA;

- Integration of RR&CCA in development plans; and

- Actions to reduce migration to disaster prone urban areas.

Note: 1) if the mentioned RR&CCA measures were included in programmes to protect and/or sustain the core programme activities (i.e. not be part of RR&CCA programming), they would be classified as a programmatic mainstreaming activity. 2) Please check also the measures listed under 'physical programme components' in section 'programmatic mainstreaming'. See Matrix 2.4.

*Note that the data collection and analyses should be (partly) already conducted within the framework of the 'risk identification and community research' (see above under *Matrix 1.2*).

STRATEGIES I/II: IMPLEMENTING DIRECT RR&CCA
1.5 Socio-economic programme components

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Analysis of existing socio-economic vulnerabilities and socio-economic protective assets/capacities (e.g. personal or community safety nets for RR&CCA.)* Analysis of potential socio-economic measures for direct RR&CCA. Dissemination of RR information. Carrying out of risk awareness activities, and training on disaster risk and RR&CCA for programme beneficiaries (e.g. selected local groups, and/or municipalities).	Implementation of measures to support households' and communities' socio-economic protective assets/capacities. Development of new socio-economic systems/structures for RR&CCA. Regular dissemination and training of beneficiaries on how to reduce existing risk.

⇒Expected results (output indicators)

⇒ Local groups and municipal staff are trained to identify local hazards, vulnerabilities, and lacking local coping capacities.
⇒ Easy available risk information.
⇒ Population of programme area is aware of existing local climate and disaster risk.
⇒ The programme beneficiaries are clear about the fact that physical improvements alone do not solve their risk situation (i.e. level of risk).

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

1.5.1 Possible direct RR&CCA measures include for instance risk 'financing' and stand-by for recovery, such as:
- establishment of formal and/or informal climate-sensitive insurance mechanisms for households or communities;
- establishment of specific household or community saving schemes for RR&CCA;
- support for the establishment of community contingency funds;
- offer of specific credits for future RR&CCA, recovery or reconstruction; and
- creation of economic incentives for RR&CCA.
1.5.2 Other measures of RR&CCA, such as preparedness and mitigation can include:
- disaster simulations and risk awareness campaigns in appropriate media and accessible language; and
- community organisation training for RR&CCA.

*Note that the data collection and analyses should be (partly) already conducted within the framework of the 'risk identification and community research' (see above under *Matrix 1.2*).

STRATEGIES I/II: IMPLEMENTING DIRECT RR&CCA
1.6 Environmental programme components

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Analysis of existing environmental vulnerabilities, hazards, as well as the communities' natural protective assets (and related capacities).* Analysis of potential environmental protection measures for direct RR&CCA. Compliance with environmental standards (e.g. tree cover preservation, land use, and agricultural and water quality standards, etc.). Dissemination of information and training on how to reduce environmental risk.	Implementation of measures to reduce environmental risk and to foster natural protective assets/capacities. Regular training on how to reduce environmental risk.

⇒Expected results (output indicators)

⇒ Decreasing environmental risk.
⇒ The programme beneficiaries are clear about the inter-connection between risk and environmental deterioration.
⇒ Local groups are trained to identify and protect environmental systems that stabilise hazards or buffer potential hazard effects.
⇒ Local groups understand the role of environmental management practices in the increase of vulnerability and risk, and know how to assess the causes of environmental decline (soil erosion, deforestation, beach erosion, loss of mangroves, etc.).

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

1.6.1 Environmental measures of mitigation and prevention aim, for instance, at conserving eco-systems (e.g. forests and coral reefs) to reduce or buffer the impacts of climate-induced disasters. Examples of such measures are:
- proper watershed management to minimise landslides and floods;
- mangrove protection to reduce flooding;
- forestation for landslide and flood control; and
- soil treatment, securing of slopes and planting for erosion and landslide control.

*Note that the data collection and analyses should be (partly) already conducted within the framework of the 'risk identification and community research' (see above under *Matrix 1.2*).

STRATEGIES I/II: IMPLEMENTING DIRECT RR&CCA
1.7 Institutional and organisational programme components

Input and process indicators for integrating RR&CCA		Notes and reference activities for practical implementation (with particular focus on urban development organisations)
First Steps ***—Getting started —***	***Benchmarks*** ***—Where to go —***	
Analysis of the existence of other organisations carrying out direct RR&CCA (i.e. RR&CCA programming) in the (potential) programme areas. Search for possible cooperation and co-ordination partners at national, municipal and local levels (including governmental and non-governmental agencies). Analysis in programme area of: a) existing institutional and organisational vulnerabilities; b) peoples' and communities' institutional and protective protective assets/capacities; and c) institutional implementing structures of other organisations working in RR&CCA.* Analysis of potential institutional measures for direct RR&CCA. Dissemination of information and training on how to reduce institutional vulnerabilities.	Establishment of specific institutional and organisational structures for RR&CCA programming at different levels. Establishment and work through a co-ordinated RR&CCA implementing structure. Implementation of measures to reduce peoples' and communities' institutional and organisational vulnerabilities and to foster their protective assets/capacities (including related educative activities).	*1.7.1 Examples of institutional/organisational RR&CCA measures are for instance:* *- establishment of local and municipal committees for RR&CCA;* *- decentralisation of control, co-ordination and information structures for RR&CCA;* *- institutional capacity building for RR&CCA;* *- support for the creation of legal structures for RR&CCA (e.g. related laws and directives);* *- support of a municipal/national policy for RR&CCA;* *- support of municipal development plans for RR&CCA;* *- establishment of inter-institutional early warning systems;* *- improvement of disaster risk communication systems (e.g. improved information flow between national-regional-local levels);* *- support for the establishment of organisations specialised in aspects related with RR&CC (e.g. organisations for monitoring and modelling hazard and vulnerability development).*

⇒Expected results (output indicators)

⇒ Beneficiaries and municipal technical staff are aware of the inter-connection between the risk of communities and the functioning/existence of institutional and organisational structures, and therefore assume their related responsibilities.
⇒ Existing and active local committees for RR&CCA with adequate knowledge, as well as access to risk maps at local/municipal level and technical skills to identify risk and plan related measures for RR&CCA.
⇒ Local risk information is shared and transmitted upwards to municipal and national institutions.

*Note: The data collection and analyses should be already (partly) conducted during the 'risk identification – community research' (see above under *Matrix 1.2*).

Strategy III: Programmatic Mainstreaming of RR&CCA

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.1 Human resources and capacity building

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	Benchmarks — Where to go —
The organisation's management does not show resentment towards the concept of RR&CCA, is open for new ideas, and supports staff members interested in the idea of RR&CCA who are starting to learn about this concept and its underlying processes, and who inspire others. Recognition by the organisation's management that their programme work should take RR&CCA into account. First awareness raising and basic training on risk and RR&CCA for personnel. Initial awareness raising and specific training for programme leaders (being the responsibles for programmes which pursue programmatic mainstreaming) on risk, RR&CCA and the links between development, poverty, low-income settlements, climate change, and disasters.	Selection and designation of one or more employees with adequate skills to formally take the responsibility for mainstreaming RR&CCA in the organisation's core programme work. The organisation provides the selected staff with time, resources and some level of influence/authority to do this work. Regular training for personnel on risk, the concept of RR&CCA, and the different existing strategies of RR&CCA integration in development organisations (with special focus on programmatic mainstreaming).

⇒Expected results (output indicators)

⇒ Sufficient person power for mainstreaming RR&CCA in selected programme work.
⇒ Adequate knowledge and understanding of personnel (involved in programmatic mainstreaming) about the links between their work, climate change, and disasters.
⇒ Motivation of personnel (involved in programmatic mainstreaming) to address climate-related impacts and disasters indirectly through modifying and permanently revising their core programme work.
⇒ Understanding and awareness of personnel (involved in programmatic mainstreaming) as regards the importance of including urban/territorial planning in social housing programmes (as a consequence of programmatic mainstreaming).

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

2.1.1 With the increasing interest in RR&CCA, many organisations have started to provide seminars/workshops to their staff on related subjects. However, these seminars are generally only one-off events focusing on the topic of direct RR&CCA (i.e. RR&CCA programming). Thus, the organisation must ensure that attention is given to regular RR&CCA training with a focus on a more integral approach. The most basic awareness training workshops should present the facts and misunderstandings regarding climate change, the occurrence of disasters, disaster statistics, and RR&CCA measures used to prevent or minimise climate-related impacts (i.e. measures of prevention, mitigation, preparedness, risk 'financing', and stand-by for recovery). These have to be repeated and completed with regular capacity building on the different strategies for RR&CCA integration in the organisation (i.e. programmatic mainstreaming, organisational mainstreaming, internal mainstreaming, and implementing direct RR&CCA (integrated or stand-alone)).
2.1.2 It is important to assess the knowledge and attitudes of the seminars' participants before and after their training (e.g. through the use of questionnaires) in order to adapt the seminars' content to the participants' knowledge/ability and further to monitor the impact of the capacity building on effective and efficient RR&CCA.
2.1.3 Capacity building can be carried out in two different ways: 1) internally through the training of personnel by external consultants or especially skilled staff members, or 2) staff members can participate in RR&CCA courses offered by other organisations. The latter is suitable for general RR&CCA awareness training and knowledge building. However, the RR&CCA approach promoted by other organisations must be checked carefully in order to be sure that it includes programmatic mainstreaming of RR&CCA. When it comes to the specific work on analysing the interplay between the organisation's core work and RR&CCA, and –on this basis– the analysis of different strategies and measures of integrating RR&CCA, then external consultants will probably have to be hired.
2.1.4 For the RR&CCA seminars/workshops, the use of active and participatory methods is probably more appropriate than common lecturing. Programme visits could be carried out to explore the difference between direct and indirect RR&CCA (i.e. RR&CCA programming and mainstreaming). Case studies could be carried out in some of the programme areas, in order to reveal the complex causes of risk and their interplay with: a) low-income settlements, and b) the organisation's programme work. Thus, the combination of capacity building of the personnel with community research is recommended (see next Matrix 2.2).

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.2 Risk identification and community research

Input and process indicators for integrating RR&CCA

First Steps — **Getting started** —	**Benchmarks** — **Where to go** —
Preparation and initiation of research in areas of ongoing or potential programme work with the aim to: a) understand how climate change and disasters affect the specific communities involved; b) identify existing risk factors (i.e. hazards, vulnerabilities, and lack of coping capacities); c) understand existing variables underlying the complex system of risk and associated impacts; d) identify the communities capacities to resist climate-related & and disasters; e) increase knowledge on how the programme work is/will be helping or hindering the beneficiaries from reducing their risk; and f) find measures to indirectly reduce existing risk (through prevention, mitigation, preparedness, risk 'financing', and stand-by for recovery). Compilation and analysis of data bases on hazards and vulnerabilities at national, municipal and local levels. Compilation and analysis of relevant tools for risk identification and risk presentation at international, national, municipal and local levels).	Elaboration of participative and easy to understand hazard, vulnerability, capacity and risk maps at programme level to summarise the research outcomes. Regular updating. Elaboration of technical inventories for RR&CCA. E.g. vulnerability analyses of public and residential buildings. Regular updating. Regular participative process with communities/municipalities in programme areas to discuss research outcomes. Based on ongoing community research, permanent evaluation/monitoring of the programme activities as regards their impact on the existing level of risk. Systematic collection and monitoring of: a) climate and disaster risk in programme areas, and b) capacities and risk perceptions of local communities, municipalities and other project stakeholders. (Note that if related mechanisms or tools are established for the systematic collection and monitoring of all core programmes, this forms part of organisational mainstreaming.)

⇒Expected results (output indicators)

⇒ Good understanding of personnel (involved in programmatic mainstreaming) as to how climate change and disasters affect the communities/municipalities of the programme areas, and as to how their consideration is relevant to the design of the core programme activities in order to help and not hinder the reduction of risk.

⇒ Highly vulnerable and hazard-prone groups, settlements and facilities within selected programme areas are identified.

⇒ Existing risk database for programmes to follow-up relevance/efficiency of programme modifications (if applied to all core programmes, this is part of organisational mainstreaming).

⇒ Local governments/communities in the selected programme areas have access to adequate risk information (i.e. easy to understand and in appropriate scale).

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

2.2.1 There is a range of different tools for risk identification. Therefore, to analyse in an appropriate way the relevant local risk factors in the programme areas and to allow a co-ordinated information exchange between stakeholders at international, regional, national, municipal and local levels, it is important to check the status of the ongoing discussions and the most common tools used. In general, the most basic data which has to be selected over a certain period of time (also retrospective and anticipatory) in order to quantify and qualify risk levels and existing RR&CCA activities are: the impact of climate change and disasters on the communities, trends in the impacts, households affected, changes in attitudes towards RR&CCA, ways of responding to impacts so far, household coping behaviour and strategies, existing beliefs about the causes of climate change and disasters, and existing RR&CCA measures. Eventually, external consultants are needed for the identification and systematisation of risk and the calculation of risk indices.

2.2.2 For the data collection, participative, qualitative and quantitative methods have to be used. Guided discussions and single interviews are crucial, as well as the work with peer groups (e.g. forming separate groups of younger and older people, or of men and women). In fact, discussions focusing on the question if the programme reduces or increases risk should be conducted separately for different peer groups. 'Walk-through' analysis with the communities are recommended to identify in a participative way existing risk.

2.2.3 Collected empirical data can be used not only for adapting programme measures and comparing the level of climate and disaster risk of different programme areas, but also for advocating RR&CCA integration.

2.2.4 The identified risk level of different settlements could be publically displayed with 'risk traffic lights'. This can help to increase awareness, commitment and public comparability between communities.

2.2.5 Community research and risk identification are important capacity building tools. In fact, they can be best carried out in parallel or immediately following the capacity building activities for personnel (see Matrix 2.1).

2.2.6 The organisation should use existing standards for hazard, vulnerability and risk mapping as regards scales, content and methods for their elaboration. If such standards are not existent, efforts should be made to informally co-ordinate these aspects with other stakeholders and to promote their standardisation.

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.3 Programme components (general aspects)

Input and process indicators for integrating RR&CCA

First Steps **— Getting started —**	**Benchmarks** **— Where to go —**
Analysis of information obtained through community research and capacity building (see Matrixes 2.1 and 2.2) to discuss and develop, in a participatory way, the required modifications to improve the organisation's core programme work.	Modification of the programme work in such a way as to: a) reduce the likelihood of increasing risk; and b) maximise the core work's positive effects on reducing risk. Eventually, establishment of cooperation (i.e. cooperative partnerships) with other sector-specific organisations and/or more specialised RR&CCA organisations for the cooperative implementation of the modified programme components/ programmes.

⇒Expected results (output indicators)

⇒ All implemented programmes take climate and disaster risk actively into account, thus do not increase risk and –where possible– have positive effects on reducing risk.

⇒ Eventually, established cooperation partnerships for the implementation of RR&CCA mainstreaming.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

2.3.1 In order to reduce the likelihood of increasing risk and to maximise positive effects on reducing risk, the programme activities should support protective assets and related capacities, that is:
- only make use of physical/structural programme measures which are climate-resilient;
- strengthen beneficiaries' pre-emptive coping strategies (i.e. coping strategies for risk reduction and self-insurance) through sector-specific measures of prevention, mitigation, preparedness, and risk 'financing';
- strengthen beneficiaries' reactive coping strategies(i.e. coping strategies for recovery) through sector-specific measures of stand-by for recovery;
- build up new protective and sector-specific assets/capacities;
- improve the programme activities' accessibility so that the most vulnerable households are reached,
- replace assets which are lost or destroyed through the programme activities by other compensating assets/capacities,
- include additional measures to protect/secure the programme's activities from natural hazards, and/or
- support legal control of future resilient developments in programme areas.
2.3.2 The aim of the programmes will not change through the process of programmatic mainstreaming. If the aim is, for instance, 'improved living conditions (quality of life) and sustainable livelihoods through social housing and settlement planning', it will stay the same. Eventually, minor aspects can be re-formulated (e.g. 'improved living conditions and sustainable livelihoods through climate-resilient social housing and settlement planning').
2.3.3 The design of new programme proposals/modifications, being based on the outcomes of the community research, could probably be best done through a programme group (comprised of personnel, stakeholders and community leaders), and with consultation and revision at community level, in order to make sure that the existing risk is adequately taken into account.

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.4 Physical programme components (structural and non-structural)

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Analysis of: a) the existing physical vulnerabilities; b) protective physical assets (and related capacities) of the programme beneficiaries and their communities; and c) the influence of ongoing or planned physical programme measures on the existing risk level.*	Modification of the core programme work in such a way as to ensure that the physical programme activities (structural and non-structural) are climate-resilient and do not destroy (but rather build up) protective assets/capacities.
Technical revision of the physical programme elements as regards their resilience and safety (e.g. programme houses, infrastructure and basic services).	Active use of additional physical measures to protect the programme against climate-related impacts and hazards.
Adherence of all physical programme activities to relevant legal documents (e.g. building and territorial land use codes).	Support of information availability and legal control systems which influence future physical and climate-resilient developments in the programme areas.
Capacity building of personnel on adequate physical RR&CCA measures (e.g. disaster-resistant construction designs and techniques).	Quality control of all physical programme measures (including related structures, technical tools used, specialised personnel implementation strategies, etc). (If related quality control mechanisms are established and implemented for all programmes, this forms part of organisational mainstreaming).
Public promotion and training in programme areas on appropriate, programme-related physical RR&CCA measures.	

⇒Expected results (output indicators)

⇒ Physical programme measures (i.e. constructions) are of higher resistance.
⇒ Technical personnel are familiar with and observe the laws of construction and land use, and use additional complementary mechanisms for quality control (i.e. adequate structures and tools).
⇒ Municipalities/community leaders provide their members with adequate information to help direct appropriate, i.e. resilient, urbandevelopment.
⇒ Programme beneficiaries and/or municipalities analyse critically the proposed standards and measures of new construction and upgrading programmes.
⇒ Decreasing physical risk, for instance, decreasing settlement developments *in hazard-prone areas and/or improved building use in programme area.*

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

PHYSICAL/STRUCTURAL ACTIVITIES

2.4.1 Use of climate-resilient construction materials, construction techniques and building procedures which also do not progress environmental deterioration. For example avoidance of the use of non-adequate wood trusses leading to deforestation; or the use of non-adequate latrines leading to erosion and contamination of the ground water.

2.4.2 Selection of appropriate locations, design and structure of housing and infrastructure, based on elaborated local and/or municipal risk assessments, vulnerability, capacity and hazard mapping, and codes and land use plans.

2.4.3 Inclusion of urban/territorial planning in programme design in order to reduce physical risk and promote future resilient developments.

2.4.4 Inclusion of physical structures to protect programme activities (e.g. contention walls to protect programme houses from destruction as a result of landslides).

2.4.5 Special attention given to the resilience capacity of hospitals and school in the programme areas.

2.4.6 Elaboration of technical inventories of physically vulnerable facilities (i.e. buildings, infrastructure and basic services).

PHYSICAL/NON-STRUCTURAL ACTIVITIES: KNOWLEDGE AND INFORMATION

2.4.7 Conduction of awareness campaigns to demonstrate construction code and land use plan benefits (e.g. effected by the distribution of layman summaries of code requirements).

2.4.8 Provision of information (e.g. public displays, flyers) and training of beneficiaries on: a) building code and land use plan compliance; b) disaster-resistant construction designs/techniques.

2.4.9 Provision of information and further educational training courses for manual workers and municipal technical staff on: a) building code and land use plan compliance; b) climate-resilient construction designs/techniques, and/or c) elaboration of hazard, vulnerability and risk maps and its relation to land use planning.

2.4.10 Development of links to educational, research and private bodies, which are specialised in engineering or in disaster-resistant construction, in order to assess constructive aspects, enhance knowledge and capability of personnel, manual workers, municipal technical staff, and the programme beneficiaries, as well as to build up sustainable structures for RR (Note that this is also related to the RR Integration Strategy VII (cf. Chapter 5).

*Note that the data collection and analyses should be (partly) already conducted within the framework of the 'risk identification and community research' (see above under *Matrix 2.2*).

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.4 Physical programme components (structural and non-structural)

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
CONTINUATION See above	CONTINUATION See above

⇒Expected results (output indicators)

CONTINUATION
See above

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

2.4.11 Establishment of construction advisory services to provide information on materials and techniques which protect from climate-related impacts and disasters.

PHYSICAL/NON-STRUCTURAL ACTIVITIES: CONTROL MECHANISMS
2.4.12 Support of municipal policies and laws in the fields of construction, relocation and urban territorial (land use) planning (e.g. support of related design, procedures, documentation, dissemination and/or implementation).
2.4.13 If no adequate national standards/codes are existent, the organisation has to develop its own quality standards and related control mechanisms.
1.4.14 Institutional support of municipalities to create a 'control department/group' with appropriate knowledge, capacity and powers to review and control housing and other construction programmes.
2.4.15 Support of construction firms to improve the quality (i.e. disaster/climate-resilience) of the materials produced and production techniques used.
2.4.16 In terms of disaster impact and risk creation, one of the main problems in housing programmes is the potential for corruption. To tackle this problem, awareness raising, and the increased involvement of beneficiaries are important (e.g. vigilance of the construction process with appropriate incentives to compensate their time). In addition, the use of appropriate mechanisms for reporting and dealing with complaints is crucial.
2.4.17 Legalisation of properties and/or land which is important to motivate beneficiaries to work on reducing the risk they face.
2.4.18 Support actions to reduce displacement to urban climate-sensistive and disaster-prone areas (e.g. through the promotion of the development of middle-size cities).
2.4.19 Signposting of high-risk areas to prevent the construction of new residential housing in risk areas.

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.5 Socio-economic programme components

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Analysis of: a) the existing socio-economic vulnerabilities; b) protective socio-economic assets/capacities of the programme beneficiaries and their communities; c) the influence of ongoing or planned socio-economic programme measures on the existing risk level; and d) the programme beneficiaries' possibilities to have access to the programme activities.* Training of beneficiaries on the relation between the programme activities and RR&CCA.	Modification of the programme work in such a way as not to diminish (but rather foster) protective socio-economic assets/capacities. Modification of the programme activities so that they are accessible to the most vulnerable. Inclusion of the programme activities so as to replace/compensate socio-economic assets, which were lost or destroyed through the programme activities. Inclusion of socio-economic measures required for the sustainable implementation of the programme's physical measures/activities.

⇒Expected results (output indicators)

⇒ The programme activities take programme-related socio-economic aspects, which influence beneficiaries' risk, actively into account.
⇒ Programme activities are accessible to vulnerable households/communities.
⇒ The programme beneficiaries are clear about the fact that risk is mainly a social construct and, hence, physical improvements alone do not solve their risk situation.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

PERSONAL SEFETY NETS

2.5.1 Support of the maintenance and/or improvement of income through:

- the creation of economic activities or employment opportunities as a result of the way in which the programme activities are designed and/or carried out. The choice of a more labour intensive way of construction can, for example, help to reduce (at least temporarily) socio-economic vulnerabilities. A more sustainable approach would be to use local materials for the construction of assisted programme houses and to build up local and permanent material production centres. Another possibility is, for example, to provide the manual workers, who construct the programme houses, with some practical and theoretical training, which is formally recognised and thus can be certified. In turn, such certified training would support them to become better qualified, raise their confidence, productiveness and quality of work, and thus, enabling them to find easier and/or a better work in the longer term.

- the diversification of existing economic activities; e.g. training of laymen/other professionals (e.g. informal vendors) to also become (certified) manual workers.

- securing economic programme-related activities. Examples are the support for the development of co-operatives for manual workers.

- the adoption of low-risk income-generating activities. An example could be the training of inhabitants to become professional manual workers (working outside the own settlement, i.e. in an area with less/different risk).

2.5.2 Improvement in the organisational coherence of the beneficiaries' community. This training could be included in the organisational training of the beneficiaries on self-help housing.

2.5.3 Inclusion of insurance schemes for programme houses (taking into account standards and independent reviews of compliance).

KNOWLEDGE – INFORMATION

2.5.4 Capacity building of programme beneficiaries in order to ensure that they understand the complex concept of risk and are clear about the fact that: a) risk is mainly a social construct, and hence b) physical improvements alone do not solve their risk situation (level of risk).

*Note that the data collection and analyses should be (partly) already conducted within the framework of the 'risk identification and community research' (see above under *Matrix 2.2*).

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.5 Socio-economic programme components

Input and process indicators for integrating RR&CCA

First Steps **— Getting started —**	**Benchmarks** **— Where to go —**
CONTINUATION See above	CONTINUATION See above

⇒Expected results (output indicators)

CONTINUATION
See above

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

REPLACING LOST ASSETS

2.5.5 If socio-economic assets are reduced through the programme activities, they should be replaced as far as possible (e.g. resettlement programmes could include the development of socio-economic activities at the new location where not all the inhabitants can continue their former work).

REACHING THE MOST VULNERABLE

2.5.6 Improved access to the programmes' activities/services through the offer of smaller housing credits/partial loans so that also the most vulnerable can access them to reduce their vulnerabilities through, for example, house repairs or small-scale physical mitigation structures such as roof repairs or the construction of necessary contention walls.

2.5.7 Improved access to the programmes' activities/services through adequate rules/criteria for accessing credits (e.g. rules as regards repayment, house location), etc.

2.5.8 Support of community saving schemes (e.g. of a simple community bank) so that people who are excluded from the housing credit schemes –because they are too economically vulnerable– can save money and, in time, gain access to them.

SUSTAINABLE PHYSICAL MEASURES

2.5.9 Involvement of national training institutions in capacity building of beneficiaries. This permits the certification of capacity building and also the continuation of training courses when programmes come to an end.

2.5.10 Training of beneficiaries on maintenance and community responsibility for infrastructure to guarantee its proper functioning (e.g. organised regular maintenance and cleaning of sanitation systems for flood mitigation).

2.5.11 Establishment of local material production centres to guarantee the sustainable availability of appropriate building materials and the sustainable use of disaster/climate-resilient construction materials.

2.5.12 House ownership contracts which guarantee that owners do not run the risk of increased socio-economic vulnerability, for instance, due to the house's utility bills such as extra charges for electricity etc., or the loss of the woman's ownership if the male head of the family and house owner deceases. Regarding the latter: introducing rules to protect house ownership and/or related savings of married female members.

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.6 Environmental programme components

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Analysis of: a) the existing environmental vulnerabilities; b) protective environmental assets (and related capacities) of the programme beneficiaries and their communities; and c) the influence of ongoing or planned environmental programme measures on the existing risk level.* Compliance with environmental standards (e.g. tree cover preservation, land use, and agricultural and water quality standards). Analysis of the potential impacts of the environment on the programme activities (e.g. impact of the occurrence of disasters on programme activities).	Modification of the programme work in such a way as not to diminish (but rather foster) protective environmental assets (and related capacities), and to actively use such assets to protect the programme activities against hazards. Inclusion of programme activities to replace environmental assets (and related capacities) which were lost or destroyed through the programme activities. Inclusion of environmental activities/measures needed for the sustainable implementation of the physical programme activities.

⇒Expected results (output indicators)

⇒ The programme activities take programme-related environmental aspects, which influence beneficiaries' risk, actively into account.
⇒ The programme beneficiaries are clear about the inter-connection between their risk and environmental deterioration.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

KNOWLEDGE – INFORMATION
2.6.1 Inclusion of environmental aspects in capacity building of programme beneficiaries, manual workers, and municipal technical staff to demonstrate, for instance, the inter-connection between their vulnerability/risk and environmental deterioration.

SUSTAINABLE PHYSICAL MEASURES
2.6.2 An example would be the combination of the construction of basic sanitation with training on environmental practice (e.g. prevention of garbage dumping in gullies, etc.) and the implementation of an improved waste management system.
2.6.3 Another example could be the conversion of a re-settled high-risk area to an eco-park, enabled by the vigilance and maintenance provided by the inhabitants of the neighbouring areas.
2.6.4 Vegetation is a natural asset which can be actively used as a wind break, and to prevent soil erosion and landslides. Such measures can improve and even protect other programme activities.
2.6.5 The destruction of protective natural assets through the programme activities has to be avoided through careful programme design, community research and environmental impact assessment (EIA). EIA is an instrument which can help to forecast negative impacts of the programme activities on the environment. An example of the destruction of protective natural assets could be environmental deterioration through deforestation due to the use of local wood as construction material, the non-adequate use of latrines, etc. This may even lead to additional hazards (e.g. to erosion and landslides). (In these examples, vegetation and compact/stable soil are the environmental assets.)

REPLACING LOST ASSETS
2.6.6 If, for example, trees have to be cut and/or water sources are contaminated as a result of programme activities, measures such as reforestation and appropriate water management should be implemented to reduce the harm done.

PROTECTING PROGRAMME ACTIVITIES
2.6.7 Hazard assessments can be used to assess the impact of the natural environment (natural hazards) on the programme. This is important to complement EIAs, which are only one-way analyses, i.e. analyses of the impact of the programme activities on the environment, but not vice versa.

*Note that the data collection and analyses should be (partly) already conducted within the framework of the 'risk identification and community research' (see above under *Matrix 2.2*).

STRATEGY III: PROGRAMMATIC MAINSTREAMING of RR&CCA
2.7 Institutional and organisational project components

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	Benchmarks — Where to go —
Analysis of: a) the existing institutional and organisational vulnerabilities; b) protective institutional/organisational assets/capacities of the programme beneficiaries and their communities; and c) the influence of ongoing or planned institutional/organisational programme measures on the existing risk level; and d) organisational implementing structures of other organisations working in social housing, urban planning and/or RR&CCA.*	Modification of the programme work in such a way as to not diminish (but rather foster) protective institutional and organisational assets/capacities.
Search for possible cooperation and co-ordination partners at international, regional, national, municipal and/or local levels (including governmental and non-governmental agencies).	Inclusion of institutional and organisational measures needed for the sustainable implementation of the physical programme activities.
Where possible, creation of alliances with the municipalities as implementation partners.	Establishment and work through a co-ordinated implementing structure.
	Support of institutional/organisational structures needed to control or influence future resilient settlement developments.

⇒Expected results (output indicators)

⇒ The programme activities take programme-related institutional and organisational aspects, which influence beneficiaries' risk, actively into account.
⇒ The programme's implementing structure positively influences RR&CCA.
⇒ Beneficiaries and municipal technical staff are aware of the inter-connection between the risk of communities and institutional/organisational structures, and assume their related responsibilities.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

2.7.1 Stakeholder analysis can be a useful tool to help identify all programme-relevant stakeholders.

SUSTAINABLE PHYSICAL MEASURES

2.7.2 Promotion of an improved linkage between local, municipal and national stakeholders. For example, the work with the beneficiaries in community organisation can result in their representation in the district board of their municipality, involving them in: the discussion of the city's problems, the legalisation of their individual tenure, and development of new infrastructure programmes.

2.7.3 Revision and amendment of municipal ordinances/laws/codes/standards for settlement planning and construction in order to include RR&CCA as a cross-cutting aspect.

2.7.4 Establishment of institutional partnerships with organisations working in RR&CCA and other social housing NGOs at national, municipal and local levels, in order to reduce institutional vulnerabilities and potentialise efforts of the various organisations (as regards programme implementation and information exchange (e.g. risk data bases)).

2.7.5 Building up of cooperatives of manual workers or creation of partnerships with universities and capacity building institutions to sustain the programme activities.

2.7.6 Co-operation with the private/academic sector to advance:

- *insurance premium reductions available for the use of hazard-resistant building and retrofitting techniques,*
- *the inclusion of RR aspects in university curricula and technical training institutions curricula, and*
- *building code compliance of construction industry.*

KNOWLEDGE – INFORMATION

2.7.7 Institutional capacity building is crucial to reduce existing risk. Important topics for the training of municipal technical staff are: programme management and budgeting for housing and settlement planning to include RR&A.

IMPLEMENTING STRUCTURE

2.7.8 Co-ordination of the modified core work, for instance, with the municipal committees for local development planning and –if existing– their sub-committees for RR&CCA. The work could then be carried out through sub-committees for programme implementation.

*Note that the data collection and analyses should be (partly) already conducted within the framework of the 'risk identification and community research' (see above under *Table 1.2*).

Strategy IV: Organisational Mainstreaming of RR&CCA

STRATEGY IV: ORGANISATIONAL MAINSTREAMING of RR&CCA
3.1 Human resources and capacity building

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
The organisation's management does not show resentment towards the concept of RR&CCA, is open for new ideas, and supports staff members interested in the idea of RR&CCA who are starting to learn about this concept and its underlying processes, and who inspire others. Recognition by the organisation's management for the need to adapt their organisational management system, policy and working structures to back up, formalise and make sustainable the process of integrating RR&CCA in their programme work. Active involvement of the personnel in the discussions on and planning of the process of 'organisational mainstreaming' of RR&CCA. Initial awareness raising and basic training on risk and RR&CCA for *all* programme personnel.	Selection and designation of one or a number of employees with adequate skills to formally take the responsibility for encouraging and supporting the process of integrating/mainstreaming RR&CCA into the organisational management system, policy, and working structures. The organisation is providing the selected staff with time, resources and some level of influence/authority to do their work. Modification of all relevant job descriptions, terms and conditions of employment, and related appraisal mechanisms to include the responsibility of the personnel to consider the issue of risk and RR&CCA within the context of their everyday work. Regular training for personnel on disaster risk, the concept of RR&CCA, and the different existing strategies of RR&CCA integration in development organisations (with special focus on programmatic and organisational mainstreaming).

⇒Expected results (output indicators)

⇒ Sufficient person power for integrating/mainstreaming RR&CCA in the organisational management system, policy, and working structures.
⇒ Adequate knowledge and understanding of personnel in respect of the links between climate change, disasters and the organisation's core work, organisational management, policy and working structures.
⇒ All staff members consider disaster risk and RR&CCA within the framework of their everyday work.
⇒ Among senior and influential staff, there is commitment and 'political will' –which is based on adequate knowledge– to promote and actively advance the comprehensive integration/mainstreaming of RR&CCA.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

3.1.1 In the job descriptions, the responsibility of the personnel to consider risk and RR&CCA within the framework of their everyday work could be formulated as: '… have to be alert to, and act upon, the ways in which the programme activities can increase or decrease climate and disaster risk.'
See further notes under 2.1.1 – 2.1.4

IV: ORGANISATIONAL M. of RR&CCA
3.2 Risk identification

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Revision of information obtained through the 'risk identification' undertaken as part of direct RR&CCA, programmatic RR&CCA and/or internal mainstreaming of RR&CCA (see *Matrixes 1.2, 2.2* and *4.2*).	Complementation of existing data bases and research to obtain information needed for the process of organisational mainstreaming. Establishment of mechanisms and tools for systematic collection of experiences in organisational mainstreaming. Establishment of mechanisms and tools for systematic collection and monitoring of: a) climate and disaster risk in programme areas, and b) capacities and risk perceptions of local communities, municipalities and other programme stakeholders.

⇒Expected results (output indicators)

⇒ Existing systematic risk identification procedures and structures, as well as related risk databases for all programmes to follow-up relevance/efficiency of the RR&CCA integration.

⇒ Data and information on 'organisational mainstreaming' is gathered by the organisation and used to adequately modify their own organisational management, policy, and working structures.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

3.2.1 Apart from the gained knowledge of the 'risk identification' undertaken as part of direct RR&CCA, programmatic RR&CCA and/or internal mainstreaming of RR&CCA, it would be useful to compile information on the existing needs of programme staff to back up their work, as well as on the experiences of other organisations that have already begun the process of organisational mainstreaming of RR&CCA. In the case that no such experience exists, related concepts, theory and experiences of organisations with the organisational mainstreaming of other cross-cutting topics such as gender, environment, etc., could be analysed.

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Recognition by the organisation's management of the need to consider and reduce climate and disaster risk within every step and aspect of the programme cycle management (as opposed to ad hoc decision-making). Selection of staff members to revise the organisation's working structures and procedures for carrying out programmes (including their planning, implementation, monitoring and evaluation) and the related technical tools in order to assess their relevance for: a) protecting programmes from climate-related impacts and disasters; b) ensuring that the programmes do not augment risk; and c) fostering the positive effects of programmes on reducing risk.	Development and/or adaptation and use of standards and tools related to RR in respect of: a) hazard, vulnerability, capacity and risk analyses (e.g. assessments and mapping); b) disaster-resistant construction (standards for construction techniques and building materials, etc.); c) appropriate programme planning for reducing risk (i.e. planning tools such as logical framework approach (LFA), etc.); d) monitoring of the process of integrating RR&CCA within specific programmes; e) monitoring of the process of organisational mainstreaming. In the case that direct RR&CCA work is carried out: linking of RR&CCA programming to the organisation's core development programmes.

⇒Expected results (output indicators)

⇒ Routine consideration of RR&CCA in all steps of the programme cycle (with the help of adequate tools).

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

PROGRAMME CYCLE

3.3.1 Inclusion of 'risk assessments' within the organisation's 'needs assessments', 'capacity assessments' and/or 'feasibility studies' carried out for programme planning, thereby considering current and likely future climate-related impacts and associated risk.

3.3.2 For feasibility studies, use of environmental impact assessments (EIAs) that include special attention to natural hazards.

2.3.3 Whilst designing programme activities, exploration of possible effects and outcomes of the planned activities in a participative way, in order to anticipate and prevent problems which might increase risk of programme beneficiaries.

3.3.4 The programme's operational objectives should refer to features of the design which are intended, amongst other things, to enhance the way in which the programme works to reduce risk.

3.3.5 Development and/or adaptation of adequate programme monitoring and evaluation measures which take RR&CCA into account. As there is little experience with integrating RR&CCA, monitoring and evaluation are crucial. Recommendations arising from monitoring and evaluation inform programme cycle processes and are valuable for advocating RR&CCA.

3.3.6 Apart from monitoring/evaluating programme work (including programmatic mainstreaming of RR&CCA and RR&CCA programming), the integration process of RR&CCA in the organisation should be assessed. An adequate monitoring/evaluation system should thus be set up.

3.3.7 Control of risk augmentation or reduction as a standard procedure for programmes' reporting, monitoring and evaluation processes.

3.3.8 Important programme outcomes/products are often municipal development and land use plans, related municipal laws and policies, local maps/analyses of hazards, vulnerabilities and risk, and maps/analyses for land use of the respective programme areas. It is crucial that their elaboration is co-ordinated with other organisations, is based on the standardisation of the concept of risk and RR&CCA, and makes use of specified and standardised methods, scales and contents. Note that this is also related to the RR&CCA Integration Strategy VI (cf. Chapter 5). This is important to coordinate existing efforts and to achieve that the different plans, laws and maps are compatible and complementary. Therefore, already existing plans, laws and maps have to be considered. The enactment of municipal legal frameworks based on local/municipal development and land use plans/maps is of special importance to achieve sustainability of the programmes.

STRATEGY IV: ORGANISATIONAL M. of RR&CCA
3.3 Working structure and procedures

Input and process indicators for integrating RR&CCA	
First Steps **— Getting started —**	**Benchmarks** **— Where to go —**
CONTINUATION See above	CONTINUATION See above

⇒Expected results (output indicators)

CONTINUATION
See above

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

3.3.9 The developed and adapted tools have to be sufficiently flexible to recognise that local hazard conditions, cultural norms and administration patterns are variable, requiring localised adaptations.
3.3.10 All gained experiences in RR&CCA, whether through the implementation of RR&CCA programming or the mainstreaming of RR&CCA should be used to learn from (e.g. through an internal system of lessons learnt).
STRUCUTRES/CONSTRUCTION QUALITY CONTROL
3.3.11 Establishment of a specialised department/group for construction quality control.
3.3.12 During the absence of adequate building codes, the organisation should elaborate their own check-lists and/or 'safer building seal of approvals'.
3.3.13 A formal organisational working structure of the organisation is needed (reflected in the organigramme) in order to ensure that RR&CCA can become a standard procedure of what the organisation is doing (e.g. focal points to promote and monitor RR&CCA integration in the organisation).

STRATEGY IV: ORGANISATIONAL MAINSTREAMING of RR&CCA
3.4 Policy and strategy

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Recognition by the organisation's management of the need to adapt their organisational policy and strategy to back up, formalise and make sustainable their RR&CCA integration process (as opposed to ad hoc decision-making). Selection of staff members to revise the organisation's strategy and policy in order to assess their relevance for: a) protecting programmes from climate-related impacts and disasters; b) ensuring that the programmes do not augment climate and disaster risk; and c) fostering the positive effects of programmes on reducing risk.	Inclusion of the commitment to respond to climate and disaster risk as a programmatic mainstream issue (and eventually also as an issue requiring RR/CCA programming) in key documents, outlining the organisation's policy, vision, mission, purpose, approach, values and priorities. Development and implementation of a participative strategy with realistic and achievable goals for RR&CCA integration.

⇒Expected results (output indicators)

⇒ Formalised commitment of the organisation to integrate RR&CCA in a sustainable way in their core programme work.
⇒ The 'public face' of the organisation reflects its engagement in RR&CCA.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

3.4.1 Based on the new organisational strategy reflected in the organisation's policy and strategy, a system for its monitoring should be set up (cf. Matrix 3.3)
3.4.2 During the last years, a range of organisations included RR&CCA in their mission statements or extended mandates of certain departments. However, as this process was often carried out in a top-down manner, and seen more as a strategic than a required change, in practice little has changed. Thus, changes as regards the organisation's policies and strategies have to be developed in a participatory way and require an adequate knowledge base in RR&CCA.

STRATEGY IV: ORGANISATIONAL MAINSTREAMING of RR&CCA
3.5 Financial management

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Search for donor organisations which fund activities related to RR&CCA (RR&CCA mainstreaming and RR&CCA programming). Selection of staff members to revise the organisation's financial management in order to: a) assess costs related to: protecting programmes from climate-related impacts and disasters, ensuring that the programmes do not increase risk, and fostering the programmes' positive effects on reducing risks; b) assess if the organisation's current financial management or the organisation's funding sources impede work in RR&CCA (e.g. through their budget lines, earmarking, etc.); and c) identify additional funding means within the organisation.	Design and implementation of a financial strategy for the RR&CCA integration process. Regular training of staff for proposal writing and fund acquisition for programme work and organisational changes related to RR&CCA. Establishment of linkages and cooperation with funding agencies at international, national and local levels which support RR&CCA.

⇒Expected results (output indicators)

⇒ The organisation/personnel has the capacity to make funding for RR&CCA available (internally and externally).
⇒ Sufficient financial resources/budget available for proper and sustainable integration of RR&CCA.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

3.5.1 The financial strategy aims to cover additional operational costs, which arise from integrating RR&CCA and finding solutions to reduce barriers to implementing RR&CCA. Resultant measures could include, for instance, increased/additional budgeting for RR&CCA through additional financial programme partners or the alteration of internal budget lines.
3.5.2 To search for complementary financial partnerships, a stakeholder analysis is a useful tool for identifying collaborating bodies (e.g. other agencies, NGOs, the private sector and academic bodies).
3.5.3 In order to identify an adequate financial management system, extensive financial analyses need to be conducted. Please also see the analyses mentioned under 'financial management' of the 'internal mainstreaming' strategy (see Matrix 4.5).

STRATEGY IV: ORGANISATIONAL MAINSTREAMING. of RR&CCA
3.6 Partnerships and external relations

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Recognition of the organisation's management that it cannot act alone to reduce effectively climate and disaster risk. Search for other organisations working in the same sector which also want to engage (or are already engaging) in integrating RR&CCA. Search for complementary partnerships for RR&CCA with organisations/ experts which are specialised in RR&CCA.	Establishment of linkages and cooperation with key stakeholders at international, national, municipal and local levels, as well as relevant regional coordinating or networking bodies, in order to develop cooperative RR&CCA work, to exchange related information and lessons learnt, and eventually to develop shared strategies for RR&CCA.

⇒Expected results (output indicators)

⇒ Complementary partnerships are established to improve the organisation's work in RR&CCA, creating synergies, and thus prevent competition with other organisations. (Note that this is also related to the RR&CCA Integration Strategy VI (cf. Chapter 5)).

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

3.6.1 In order to search for complementary technical partnerships, a stakeholder analysis is a useful tool, identifying implementing partners and collaborating bodies (e.g. other agencies, NGOs, private sectors and academic bodies).
3.6.2 Consultation with experts is indispensable, especially when it comes to mainstreaming RR&CCA within an organisation's core work and functioning.

Strategy V: Internal Mainstreaming of RR&CCA

STRATEGY V: INTERNAL MAINSTREAMING. of RR&CCA
4.1 Human resources and capacity building

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
The organisation's management does not show resentment towards the concept of RR&CCA, is open for new ideas, and supports staff members interested in the idea of RR&CCA who are starting to learn about this concept and its underlying processes, and who inspire others. Recognition by the organisation's management that they have to protect their own organisation (i.e. offices and staff) from the impact of climate change and disasters in order to be able to guarantee both sustainable programme work and RR&CCA. Initiation of training/workshops for the employees to discuss how climate change and disasters relate to them personally, that is, their private and professional life. Assessment of further needed capacity building for reducing the organisation's own vulnerability/risk.	Based on the outcomes of the 'risk identification and staff research' (see following *Matrix 4.2*), regular information and training on personnel safety. The selected personnel for supporting the process of integrating RR&CCA (selected within the strategies of RR&CCA programming, programmatic mainstreaming of RR&CCA and/or organisational mainstreaming of RR&CCA) also includes internal mainstreaming in their fields of duty (cf. 'human resources and capacity building', *Matrixes 1.1, 2.1. and 3.1*).

⇒Expected results (output indicators)

⇒ Sufficient person power and knowledge to support internal mainstreaming of RR&CCA.
⇒ All personnel is aware of the internal mainstreaming activities and makes use of them.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

4.1.1 Training modules on personnel safety should include: general RR&CCA awareness, simulations of disaster situations in head and field offices and other preparedness measures (e.g. improvement of emergency communication and other procedures and structures to be followed during climate-related impacts and disasters), etc.

V: INTERNAL MAINSTREAMING. of RR&CCA
4.2 Risk identification and staff research

Input and process indicators for integrating RR&CCA	
First Steps **— Getting started —**	**Benchmarks** **— Where to go —**
Initiation of research to analyse how climate change and disasters are directly affecting the organisation, and how they are likely to affect the organisation in the future. Analysis of risk which the personnel faces through the work at the organisation (e.g. by working in different climate-sensitive and disaster-prone areas; existing risk on the way to project areas, stay at vulnerable areas/places within the office buildings, etc.) See also under 'financial management' (*Matrix 4.5*).	Establishment and permanent updating of a data base to track and analyse over time climate-related impacts, disasters, and risk faced by the organisation and its staff.

⇒Expected results (output indicators)

⇒ The organisation has adequate information for advocating internal RR&CCA.
⇒ The current/future impacts of climate change and disasters on the organisation are assessed/predicted.
⇒ A monitoring system is in place to follow up changes of the impacts climate change and disasters have on the organisation. Where problems exist, ways of addressing them are researched.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

4.2.1 To assess the current impact of climate change and disasters on the organisation, firstly the following has to be considered:
- existing personnel data (e.g. sick leave, work interruptions, treatments for injured/affected employees, etc.),
- technical stability/performance of the organisation's office buildings.
Secondly, interviews with personnel should be carried out, especially in respect of their views of and attitudes towards risk faced over recent years.
4.2.2 External expertise is eventually required to predict future climate-related impacts and disastes.
Note: please see also Matrix 4.5 under section 'financial management'.

STRATEGY V: INTERNAL M. of RR/CCA
4.3 Working structures and procedures

Input and process indicators for integrating RR&CCA	
First Steps **— Getting started —**	**Benchmarks** **— Where to go —**
Designation of personnel to analyse the existing working structure and procedures as regards their relation to the vulnerability of the organisation itself, i.e. its internal functioning, offices and staff.	Participative development or adaptation of working structures and procedures so that the organisation itself, i.e. its internal functioning and staff, becomes less vulnerable and is better prepared for potential climate-related impacts and disasters.

⇒Expected results (output indicators)

⇒ Reduced impact of climate change and disasters on staff.
⇒ Sufficient person power for carrying out the organisation's programme work, also after the impact of major disasters.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

4.3.1 In order to reduce the risk of staff, the following measures could be carried out:
- improvement of communication/information structures and equipment (e.g. walky-talkies) to improve the ability of personnel to continue working effectively in the case of a disaster;
- improvement of information and procedures on how to behave and respond effectively in the case of a disaster (e.g. signposting of emergency exits). See also under 'human resources', Matrix 4.1.1;
- in high-risk areas: work in teams (as opposed to working alone in the field);

4.3.2 In order to reduce the vulnerability of the organisations functioning, the following could be done:
- improved share of RR responsibilities (e.g. have at least two people as RR&CCA focal point);
- improved share of RR&CCA knowledge (e.g. knowledge on RR&CCA not only held by programme leader, careful documentation of and access to information on RR&CCA activities, etc.).

STRATEGY V: INTERNAL MAINSTREAMING. of RR&CCA
4.4 Policy and strategy

Input and process indicators for integrating RR&CCA

First Steps **— Getting started —**	**Benchmarks** **— Where to go —**
Designation of personnel to analyse the existing internal policies and strategies as regards their relation to the vulnerability of the organisation itself, i.e. its internal functioning, offices and staff.	Participative development or adaptation of internal policies and strategies to reduce the vulnerability of the organisation itself, i.e. its internal functioning, offices and staff: - Development or adaptation of workplace policies; - Inclusion of the commitment to respond to climate and disaster risk as an internal mainstream issue in key documents, outlining the organisation's internal policy, approach, values and priorities; - Etc.

⇒Expected results (output indicators)

⇒ Formalised commitment of the organisation to internally integrate RR&CCA.
⇒ Workplace policies have –amongst other things– the explicit objective to reduce the risk faced by the personnel.
⇒ The organisation's management and employees know the contents of the adapted or created policies and strategies and –when needed– utilise them.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

4.4.1 Workplace policies have to be adapted to:
a) formalise the organisation's responsibilities to its employees in case of climate-related impacts and disasters (e.g. post-disaster benefits and treatments for injured/affected employees); and
b) reduce the risk of personnel by defining RR&CCA actions (e.g. secure workplace and equipment, etc.).

STRATEGY V: INTERNAL MAINSTREAMING. of RR&CCA
4.5 Financial management

Input and process indicators for integrating RR&CCA

First Steps — Getting started —	**Benchmarks — Where to go —**
Designation of personnel or employment of external consultants in order to estimate and analyse the organisation's costs of past and likely future climate-related impacts and disasters (e.g. for repairs, lost material (vehicles, etc.), reduced reputation, sick leave, work interruptions, etc.). Initiation of research to identify potential risk transfer and/or loss sharing schemes.	Development and implementation of a financial strategy which: a) prevents or 'buffers' financial loss incurred by the organisation and its staff, which is evoked by climate change and/or the occurrence of disasters; b) provides a financial back-up system for the inevitable limitations of programme activities and the accepted risk levels.

⇒Expected results (output indicators)

⇒ The organisation has the capacity to deal with (increasing) financial impacts of climate change and disasters on the organisation and its staff.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

4.5.1 The financial strategy can include different risk transfer and loss sharing mechanisms (cf. Chapter 7 for information on risk 'financing' and stand-by for recovery). Examples are:
- health insurance for personnel;
- disaster insurances for the organisation itself;
- disaster insurances for specific programme activities/constructions;
- inclusion of disaster insurance within the offered social housing credits schemes;
- increased organisational budget for RR (through additional funding sources, as well as change of internal budgets);
- development of a special fund for coping with disaster impacts (e.g. allocation of contingency disaster funds in the organisation's annual budget, based on actuarial probabilities);
- support of legislation mandating insurance for properties valued above certain thresholds –which cover low-income households free of charge when achieving a certain coverage of the inhabitants.
4.5.2 To assess the financial impact of climate change and disasters on the organisation, firstly the following has to be considered:
- existing personnel data,
- technical stability/performance of the organisation's office buildings.
4.5.3 External expertise is eventually required to predict further financial impacts of climate change and disasters, such as health costs (e.g. sick leave, treatments for injuries), indirect costs to the organisation (e.g. absence from work, loss of reputation, quality of work), etc.

STRATEGY V: INTERNAL MAINSTREAMING. of RR&CCA
4.6 Direct RR measures

Input and process indicators for integrating RR&CCA	
First Steps **— Getting started —**	**Benchmarks** **— Where to go —**
Analysis of the data obtained through the research carried out (cf. *Matrix 4.2*) in order to assess potential measures of directly reducing the organisation's vulnerability/risk (i.e. offices and staff).	Implementation of RR&CCA measures to directly reduce the organisation's vulnerability/risk (i.e. RR&CCA programming for offices and staff).

⇒Expected results (output indicators)

⇒ The organisation can continue to operate effectively, despite existing (increasing) impacts caused by climate change and disasters.
⇒ The risk faced by the personnel is considerably reduced.

Notes and reference activities for practical implementation (with particular focus on urban development organisations)

4.6.1 Internal mainstreaming has two elements: a) direct RR&CCA activities for staff and the physical location of the organisation's offices; and b) indirect RR&CCA by modifying the ways in which the organisation is managed internally, for example, in terms of personnel planning and budgeting. The latter was demonstrated in the foregoing sections. In respect of the former, the following could be put in place:
a) setting up emergency plans (signposting) (see also under 'human resources', Matrix 4.1.1);
b) carrying out simulations;
c) improving communication and information structures;
c) retrofitting/upgrading of head and field offices.

Annex II: Terminology

The following definitions are drawn from different sources. However, most were expanded, adapted and/or newly elaborated by the author of this framework to, first, reflect related research outcomes and, second, match the needs of the framework's target group/readership.

Adaptation (climate change adaptation [CAA])	Modification of a system with the aim of increasing its ability to respond and adjust to actual or anticipated impacts of changing climatic conditions (including climatic extremes and variability, such as everyday small-scale and large-scale disasters), and thus reduce harm and exploit beneficial opportunities. See also below under 'climate change', 'climatic extremes and variability'.
(Coping) capacity	The means by which households, communities or organisations use available resources and abilities to deal with climate and disaster risk and tackle adverse effects that could lead to (and are caused by) a disaster. While the term usually refers only to the (coping) capacity to respond to disasters, climatic extremes and variability, and hence to related preparedness measures, it also includes the (coping) capacity to recover from hazards/disasters. Note that in contrast to response, recovery includes more long-term activities related to reconstruction and rehabilitation. (Coping) capacity can further refer to: - (Coping) capacity to resist climate-related impacts and disasters, which is related to vulnerability of households, communities or institutions, and hence to the mitigation measures that they take; and - (Coping) capacity to reduce or avoid hazards, and hence is related to measures of prevention.
Climate change	Any change in climate, whether due to natural variability or as a result of human activity, which can be identified by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. See also below under 'climatic extremes and variability'.
Climatic extremes and variability	Climatic extremes and variability refer to the distributions of climatic quantities such as temperature (e.g. heat waves, cold waves), precipitation (e.g. droughts, floods), and winds (e.g. storms, hurricanes, tornadoes).
Coping strategies (of people living at risk)	Constantly changing and adapting cognitive and behavioural efforts to manage climate and disaster risk or associated impacts on the part of households and communities at risk. These efforts influence the key variables, and their causal relations, underlying the complex system of risk and associated impacts in specific (slum) areas, and can be carried out deliberately or automatically/instinctively.
Development programmes/ programming	Development programmes are initiatives in developing countries supported and/or implemented by so-called development organisations with the aim of alleviating poverty and achieving sustainable development through different sector support. Development programming is the act of supporting and implementing such sector-specific programmes (or programme components). Their focus is, as such, on the developmental context (i.e. not relief, rehabilitation or reconstruction). Note that in this study the terms 'programme' and 'project' are used as synonyms.
Disaster ('natural')	Serious disruption triggered, amongst other things, by a natural hazard causing substantial damage, disruption and possible casualties, and leaving the affected communities unable to function normally without outside assistance. It includes climate-related and non-climate related everyday and large-scale disasters. A disaster occurs when hazards strike in vulnerable areas where inhabitants have little coping capacity. Disaster management literature commonly distinguishes rapid-onset disasters, such as water surges or earthquakes, which cause immediate loss and disruption, and slow-onset events, notably drought.
Disaster risk reduction (RR), also called disaster risk management	Range of activities/programmes to minimise the likelihood, intensity or frequency of a disastrous occurrence, preferably carried out before potential disasters take place. RR is thus the generic term for measures of: (1) prevention (or hazard reduction), (2) mitigation, (3) preparedness, (4) risk 'financing' and (5) stand-by for recovery. Risk assessment is not listed separately as it is understood as an inherent part of all five measures that is needed for identifying and planning related activities. Disaster risk reduction can be implemented and is essential before, during and after disasters.
Disaster RR programmes/ programming	Programme or programme components that aim to improve existing management of disaster risk. Disaster RR programming is hence the act of supporting and implementing such dedicated sector-specific programmes (or programme components). The integration of disaster RR programming into sector-specific programmes includes 'direct stand-alone RR and 'direct integrated RR, which to become sustainable should be complemented by organisational, internal and educational mainstreaming, as well

	as synergy creation for RR (see *Table 3*). Note that in this study the terms 'programme' and 'project' are used as synonyms.
Hazard (natural)	A natural hazard may cause a 'natural' disaster (of both small or large scale). It is a geological, atmospheric, or hydrological event (e.g. earthquake, landslide, volcanic eruption, windstorm, wild fire, drought, flood, and water surge) that has the potential to cause harm or loss (e.g. death or injury, property damage, social and economic disruption, environmental degradation). Natural hazards are not necessarily caused by purely natural forces. In fact, human activity can also contribute to their creation. A landslide caused by environmental degradation is one example of such a 'human-induced hazard' as are the increase in climate-related hazards though human-induced climate change.
Integrating/integration of disaster RR	Integration of disaster RR aspects into the work of organisations, here, with a focus on development organisations. This includes RR mainstreaming as well as RR programming (see *Table 3*).
Mainstreaming of disaster RR	Generally, the term 'mainstreaming' signifies the modification of a specific type of core work of an organisation (e.g. modification of the social housing activities of a specialised development organisations) in order to take into account a new aspect (e.g. disaster RR) and to act indirectly upon it. Thus, 'mainstreaming' does not mean to completely change an organisation's core functions and responsibilities, but instead to view them from a different perspective and to make any necessary modifications/amendments, as appropriate. Thus, the integration of completely new sector-strange programmes or programme components is not part of mainstreaming (cf. RR programming). There are different complementary strategies for mainstreaming: programmatic, organisational, internal and educational mainstreaming, as well as synergy creation for RR (see *Table 3*).
Mitigation	Measures to (increase the capacity to) minimise the existing or likely future vulnerability of households, communities and/or institutions to potential hazards/disasters, thus reducing existing climate and disaster risk. Mitigation is part of RR and CCA (see above).
Preparedness	Measures to (increase the capacity to) establish effective response mechanisms and structures of households, communities and/or institutions so that they can react effectively during and in the immediate aftermath of potential future hazards/disasters, thus reducing existing climate and disaster risk. Preparedness is part of RR and CCA (see above).
Prevention	Measures to (increase the capacity to) avoid hazards or reduce the potential intensity and frequency of likely future hazards that threaten households, communities and/or institutions, thus reducing existing climate and disaster risk. The potential intensity can refer to both time span and magnitude of hazards. Prevention is part of disaster RR and CCA (see above).
Resilience	Capacity of a community, system, or society to withstand/resist climate-related and non-climate-related hazards and/or disasters, and thus maintain an acceptable functional and structural standard—even in the case of a hazardous/disastrous occurrence—by 'bouncing back' rapidly, as well as adapting so as to be able to deal adequately with future threats. To put it simply, resilience is the opposite/antithesis of vulnerability. More precisely, it reflects a functioning RR&CCA system that works before, during and after disasters. The idea of resilience suggests a proactive stance towards risk.
Risk	The probability of harmful consequences or losses (e.g. deaths, injuries, property damages, social and economic disruption, environmental degradation) resulting from interactions between climate-related and non-climate-related hazards, vulnerable conditions, and the lack of capacity of households/communities/institutions to respond to and recover from disasters. Note that in this study the terms 'risk' and 'disaster risk' are used as synonyms.
Risk financing (risk transfer/sharing)	Financial instruments of disaster risk management which aim to assure readily available post-disaster funds (e.g. through formal insurance systems). These instruments are conventionally called 'risk transfer' or 'risk sharing' as risk of individuals or organisations is partly 'transferred to' or 'shared with' other parties.
Risk 'financing'	Measures to (increase the capacity to) transfer or share risk so as to establish a 'security system' (safeguard) for households, communities and/or institutions that comes into force after potential hazard/disaster impacts and helps them to obtain 'readily available' compensation. The aim is to recover from hazard or disaster impacts, that is, to 'bounce back' quickly and to a reasonable level. In contrast to the conventionally used term 'risk financing' (see above), this measure includes formal *and* informal, and monetary *and* non-monetary mechanisms. Examples are formal and informal disaster insurance systems. Risk 'financing' measures are part of RR and CCA (see above).

Social housing organisation	Organisations that work in settlement development planning and whose core work is related to social housing and/or settlement planning, and which are thus a specialised subgroup of urban development actors/organisations (see below). They include both governmental and non-governmental organisations. Note that in this study the terms 'organisation' and 'institution' are used as synonyms.
Stand-by for recovery	Measures to (increase the capacity to) establish appropriate recovery mechanisms and structures for households, communities and institutions that are accessible after a potential hazard/disaster. The aim is to recover from hazard or disaster impacts, that is, to 'bounce back' quickly and to a reasonable level through appropriate recovery mechanisms and structures. These mechanisms and structures relate to the rehabilitation and reconstruction of damaged, destroyed or lost belongings, assets, structures and systems. Stand-by-for-recovery measures are part of RR and CCA (see above).
Urban development actors/ organisations	Umbrella term for stakeholders/organisations that work at the international, national, municipal and local household level in the field of settlement development planning and/or programming (without necessarily specialising in this sector). Social housing organisations are a more specific subgroup (see above). Note that in this study the terms 'organisation' and 'institution' are used as synonyms.
Vulnerability	Degree to which systems (i.e. households, communities and/or organisations) are susceptible to loss, damage, suffering and death in the event of a climate-related or non-climate-related hazard/disaster. It thus describes the existing condition and setting of an area exposed to hazards, where a vulnerable area is understood to being incapable of resisting their impacts. Both vulnerability and its opposite/antithesis, resilience, are determined by physical, social, economic, environmental, organisational and institutional factors that are the result of human conduct. An example of physical vulnerability is the susceptibility to hazards of the built environment (including technical and social infrastructure). Examples of social vulnerability are influenced by the levels of literacy and education, compliance with laws, systems of good governance, access to basic human rights, existence of peace and security, and the existing traditional values and ideological beliefs. Economic vulnerability characterises, for instance, a local economy with high levels of corruption and lacking a diverse productive base, as well as less privileged people who suffer proportionally larger losses. 'Less privileged' relates to class or caste, ethnic minorities, the very young and old, the disadvantaged, and are often women who are primarily responsible for providing essential shelter and basic needs for their families. Environmental vulnerability refers to the extent of natural resource degradation (e.g. contaminated air, water and soil caused by inadequate sanitation). Examples of organisational and institutional vulnerability are the lack of institutions, related organisational structures, laws and regulations for disaster risk management or secure social housing provision, as well as the lack of inter-institutional cooperation and learning.

Annex III: Literature and further reading

Note that most publications listed below (both by the author of this study and others) include analytical, concepts and strategic frameworks that complement this Operational Framework.

Benson, C. and Twigg, J. (2004) 'Measuring mitigation': methodologies for assessing natural hazard risks and the net benefits of mitigation, a scoping study, ProVention Consortium, Geneva.

Benson, C. and Twigg, J. (2006) 'Tools for analysing disaster risk in designing and evaluating projects', Open House International (OHI) 31(1):133–140, special issue on 'Managing urban disasters'.

Benson, C. and Twigg, J. (2007) Tools for mainstreaming disaster risk reduction: guidance notes for development organisations, ProVention Consortium, Geneva.

Holden, S. (2004) Mainstreaming HIV/AIDS in development and humanitarian programmes, Oxfam, Oxford.

IDB (Inter-American Development Bank) (2004a) Checklist para incluir gestión de riesgo de desastres en las operaciones del Banco [Checklist to include disaster risk management in the Bank's operations], unpublished draft, including a checklist on 'housing', IDB, Washington DC.

IDEA/IDB (2005) Indicators of disaster risk and disaster risk management: main technical report, IDEA/IDB (Instituto de Estudios Ambientales, Universidad Nacional de Colombia and Inter-American Development Bank), Manizales. Available at http://idea.manizales.unal.edu.co/ProyectosEspeciales/adminIDEA/CentroDocumentacion/DocDigitales/documentos/Main%20technical%20report%20IDEA.pdf

Mitchell, T. (2003) An operational framework for mainstreaming disaster risk reduction, Disaster Studies Working Paper 8, November 2003, Benfield Hazard Research Centre, London. Available at www.benfieldhrc.org/disaster_studies/working_papers/pdfs/workingpaper8.pdf

Rossetto, T. (2006) 'Reducing disaster risk through construction design, building standards and land-use planning', TRIALOG 91(4):9–14, special issue on 'Building on disasters'.

Tearfund (2005) Mainstreaming disaster risk reduction: a tool for development organisations, by La Trobe, S. and Davis, I., Tearfund, Teddington.

UNISDR (2005a) Hyogo Framework for Action 2005–2015: building the resilience of nations and communities to disasters. Available at www.unisdr.org/wcdr/intergover/official-doc/L-docs/Hyogo-framework-for-action-english.pdf.

UNISDR (2005b) Example of indicators to measure the implementation of the HFA (Hyogo Framework for Action), draft working document, ISDR secretariat, Geneva. Available at www.unisdr.org/eng/task%20force/tf-meetigns/11th-TF-mtg/IATF_DR_11_SE_ indicators background.doc

UNISDR (2006) Disaster statistics 1991–2005. Available at www.unisdr.org/disaster-statistics/introduction.htm; www.unisdr.org/disaster-statistics/pdf/2005-disaster-in-numbers.pdf

UNISDR (n.d) Terminology: basic terms of disaster risk reduction. Available at www.unisdr.org/eng/library/lib-terminology-eng%20home.htm

Wamsler (2006) 'Mainstreaming risk reduction in urban planning and housing: a challenge for international aid organisations', Disasters (Journal of Disaster Studies, Policy and Management) 30(2):151–77.

Wamsler (2006) 'Integrating risk reduction, urban planning and housing: lessons from El Salvador', Open House International (OHI) 31(1):71–83, special issue on 'Managing urban disasters'.

Wamsler (2007) 'Bridging the gaps: stakeholder-based strategies for risk reduction and financing for the urban poor', Environment and Urbanization 19(1):115–142, special issue on 'Reducing risks to cities from climate change and disasters'.

Wamsler (2008) 'Planning ahead – adapting settlements before disasters strike', book chapter 16 in: Hazards and the built environment: attaining built-in resilience, Lee Bosher (ed.), Taylor and Francis Publications.

Wamsler (2008) Wamsler, C. (2008) 'Achieving urban resilience: understanding and tackling disasters from a local perspective', Urban Design and Planning 161(DP4):163-171.

Wamsler (2009) Urban risk reduction and adaptation: how to promote resilient communities and adapt to inceasing disasters and changing climatic conditions?, VDM Publishing.

Annex IV: List of boxes, figures and tables

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