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Final Evaluation - Building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction: 2012 - 2015

Final Report
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Submitted by:

Le Groupe-conseil baastel ltée

92 Montcalm Street, Gatineau (Québec) Canada, J8X 2L7

Requested by:

UNISDR

9-11 Rue de Varembé, CH1202 Geneva, Switzerland

www.baastel.com

Le Groupe-conseil baastel ltée
92 Montcalm Street
Gatineau (Québec) Canada, J8X 2L7
Tel: +(1) 819-595-1421
Fax: +(1) 819-595-8586
www.baastel.com
Contact: evan.green@baastel.com



Note to the reader: The findings of this evaluation are based on a sample of the total population of beneficiary countries and stakeholders, and according to stakeholder availability, which was severely limited in some regions. The reader should keep this in mind when reading the findings and conclusions.

EXECUTIVE SUMMARY

Introduction

This report presents the evaluation of Components 1 – 3 of the United Nations Office for Disaster Risk Reduction (UNISDR)-European Commission (EC) initiative “Building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction: 2012 – 2015.” The evaluation assessed the initiative’s process, capacity development effects, quality of loss and risk results, partnerships, and impact, drawing out lessons learned and offering recommendations for future work of this nature. The evaluation methodology involved document review, field visits, and remote interviews conducted over a four-month period in a sample of the beneficiary countries.

Process and Design

The initiative’s objectives were found to be relevant to the international disaster management community’s evolving approach to incorporating disaster risk considerations into development. The objectives were also relevant in the context of the Hyogo and Sendai Frameworks. In addition, the new indicators established for the Sendai Framework require reporting on data that could be captured in national loss databases using DesInventar methodology potentially making the reporting task of participating countries easier; this project tool is thus likely to become increasingly relevant, creating a further “pull factor” that encourages participating countries to fully implement it. A large majority of country representatives confirmed that they consider the initiative’s tools and activities – including capacity development and dialogue between disaster management agencies and other entities such as ministries of finance and planning – relevant and useful. This project has also filled a unique niche with its emphasis on the avoidance of the creation of new risk by engaging Ministries of Finance and Planning to influence budget allocations for Disaster Risk Reduction (DRR).

The design of the project was logical, with components complementing and built on one another. The design process, although taking into consideration country needs, took what may be described as a “top-down” approach, with some involvement of regional stakeholders in isolated cases.

The initiative was to be carried out in a variety of countries, including countries with lower capacity in this area, working primarily with Least Developed Countries and Small Island Developing States. As can often be the case, this created some challenges. Stakeholders have highlighted that the design could have been further adapted to the realities of LDCs. Considering its introduction of new or relatively new approaches, and its capacity development objectives, *the initiative’s scope, in terms of the number of countries involved and their vastly different levels of capacity, was found to be ambitious.*

Certain design elements had both advantages and disadvantages, while some posed challenges that would need to be considered in future initiatives of a similar nature. For example, the regional approach encouraged sharing of information within a region, but made it difficult to tailor activities to the wide range of country capacities in a single region. The project contained design elements to help overcome institutional silos by encouraging dialogue between Ministries of Finance and Planning and disaster risk departments. However, the project experienced challenges in integrating project components amongst institutions that do not normally work together, which

created barriers to knowledge transfer between different components of the project. A related policy design challenge was with respect to policy dialogue, which was crucial to achieving the objectives of the initiative but received relatively minor emphasis. Notwithstanding the creation of relevant information assets (national loss databases, risk profiles and risk maps etc.), the design was found to rely heavily on the assumption that capacity building at an individual level would lead to increased institutional capacity. While capacity building at the individual level is a worthy starting point of capacity building process in resource constrained contexts, further consideration could have been given to the transfer mechanism by which this could become transformed into institutional capacity.

Overall coordination of the project by the UNISDR Secretariat was carried out as planned with the concrete support of the regional UNISDR offices in Latin America and Asia. Other Regional Offices have participated in and were kept informed of the activities of the initiative in order to ensure coherence with the broader work of UNISDR in the various regions. The UNISDR team adapted implementation within countries and regions to the extent possible. Given the small size of the project team, it was not feasible to adapt all project components to every country context.

The United Nations Development Programme (UNDP) and other partners (such as the Indian Ocean Commission) played an important supportive role in terms of implementation of the project at country level in some regions, providing invaluable country knowledge and logistical support.

Financial issues related to new financial administrative systems, beyond the initiative's control, had a significant impact on the overall timeliness of project activities. During implementation of the project, two migrations to new financial administrative system within the UN system took place; 1) the migration of the United Nations Office at Geneva to the new enterprise resource planning system Umoja; and 2) a new Integrated Management Information System for the United Nations Office for Project Services. This made it impossible to disperse a large amount of UNISDR project funds for several months, and created severe limitations in terms of the capacity to carry out procurement, travel, and contracting.

Capacity Building Effects

Throughout the implementation of the initiatives, 67 workshops were conducted to strengthen the capacity of all beneficiary countries under the various components. In addition, 6 inception workshops including training elements were conducted (one in each region). Table A, below shows the number of trainings that took place in each region per component.

Table A. Number of workshops with trainings elements per region per component

Region	Component 1		Component 2		Component 3		Total
	National	Regional	Regional	National	Regional	National	
Indian Ocean	5	3	3	5	3	5	16
Latin America	-	-	3	7	3	7	11
Asia	6	3	1	5	3	5	15
West Africa	6	3	1	5	3	5	15

Pacific	1	-	-	-	1
Caribbean	7	-	1	2	10
Total	25	9	9	22	67

The countries covered had varying level of readiness to absorb the initiative's capacity building components. At one extreme, some were still struggling with emergency preparedness and response and had not yet considered disaster risk reduction in any tangible way; at the other extreme, some countries had already developed sophisticated systems to integrate disaster risk analysis into their public investment projects. Thus, the initiative faced the challenge of addressing the weaknesses of some countries with respect to human resources, baseline expertise, and capacity to absorb the kind of learning offered.

Through implementation, a wealth of information was generated on how to adapt capacity building to the realities of countries with low capacity. Discussion with the UNISDR team indicates that the *project team learned a great deal and has already applied this learning through various adjustments to its approach* during the implementation of the initiative itself and in the context of the implementation of subsequent initiatives.

A comprehensive analysis of the initiative's effect on capacity to operate the disaster loss database and/or to understand the background data and related analysis was not possible in the context of this evaluation. However, *a wide range of situations were identified among training participants met by the evaluation team¹, from those having virtually no awareness of the national database to participants making regular use of it. Stakeholders who reported using data from their national database mentioned a variety of purposes.* Data was used for reporting at the national or regional level, to inform national strategies for disaster risk reduction, to develop detailed national profiles for project proposals to financial and technical partners, and to prepare official statements or press releases on historical losses at the national level.

The majority of representatives from host institutions interviewed mentioned increased awareness of the critical importance of national loss data, directly attributable to their participation in initiative activities. At project closure, institutionalization of the loss database had not reached its full potential in most beneficiary countries reviewed. Nevertheless, the initiative's successful contributions to an enabling environment for institutionalizing the loss database and its use as a planning tool, and to raising the awareness of government representatives with planning responsibilities, constitute significant achievements. However, in the majority of beneficiary countries reviewed by the evaluation team, data collection was not sustained by the government once the historical data collection exercise had been completed. Host institutions cited limited staff and technical capacity as well as internal organizational challenges as reasons for this. With further support, it is possible that the process will resume for the next Hyogo/GAR/Sendai framework reporting cycles. In a minority of the countries reviewed data are being entered on a continuous basis up until the period during which the evaluation was conducted,

One key limitation on capacity building for data collection and data entry related to the low involvement of national host agencies in the majority of the beneficiary countries reviewed during the final evaluation. Despite the clear intentions of involving host institutions, the historical data collection/entry teams were predominantly led by national, regional, or international consultants in the countries reviewed by the evaluation team. A number of host institutions hoping to eventually operate the loss database were not as extensively involved in the processes

¹ Overall, only a minority of participants could be interviewed by the evaluation team. In the countries visited, the percentage of stakeholders interviewed is estimated at about 20% of the beneficiaries or an estimate of 5% of the total number of direct beneficiaries reached by the initiative. However, the participants interviewed were considered closest to the initiative (e.g. representatives from the host institutions, ministries of planning and/or finances, ministries of environment etc.) and were identified as more knowledgeable regarding the implementation and the results of the initiative.

possible. However, it is noted that the majority of beneficiary countries reviewed by the evaluation team had low baseline capacity (lack of human resources or technical knowledge within the host institutions combined with competing priorities) and might not have been able to complete the work within the expected timeframe, if at all. Hence, the consultants provided governments with the opportunity of carrying out this work and having initial information assets developed (e.g. information of historical economic losses by sector and hazard) that can now provide incentives for the population and for further use of the national database.

Most participants were exposed to probabilistic risk assessment for the first time during the workshops conducted under Component 2, and some of the concepts and methodologies were entirely new to them. The workshops introduced them to the advantages and methods for measuring risk retrospectively (empirical) and prospectively (probabilistic). The regional approach to implementation allowed more countries to be reached by the initiative as well as facilitating the exchange of experiences, successes, and challenges across countries. However, it also created a number of challenges, such as limited reach and reduced opportunities to tailor workshop delivery to each country's baseline capacities.

In most beneficiary countries reviewed, the workshops presented new methodologies relevant to the incorporation of climate change adaptation (CCA) and disaster risk reduction (DRR) into national public investment and development planning systems. To varying degrees, they were subsequently used to develop country studies and, to a lesser extent, were incorporated as DRR tools. In many cases, national stakeholders interviewed demonstrated interest and a basic level of awareness with respect to the results reported in the country studies, but many also highlighted concerns about the ownership of these results and about next steps. By contrast, the highly participatory implementation approach in Latin America made it possible to tailor capacity building to beneficiary country needs and interests, leading to strong stakeholder ownership and uptake of project results.

Some of the main direct outputs of the initiative are summarized in Table B.

Table B. Main direct outputs of the initiative per component for all beneficiary countries

Component	Main outputs
Component 1: Strengthening capacities for national loss accounting	At project closure, the initiative had supported the creation or update of loss databases in 49 countries (for a total of 27 databases; the Pacific database covers 22 countries).
Component 2: Development of National Probabilistic Risk Profiles	For all beneficiary countries of the initiative, national probabilistic risk profiles and relevant risk maps were developed.
Component 3: Introduction to tools of economic analysis	In 22 beneficiary countries, relevant new methodologies were introduced and subsequently used to develop country studies. A number of these country studies were packaged as country reports and case studies on the integration of CCA and DRR into the country's national public investment and development planning system.

Quality of Loss and Risk Results

The primary quality assurance mechanisms for the creation of the National loss database using DesInventar methodology were technical assistance and intensive feedback from the UNISDR team to the national data collection teams. Gap analyses provided practical recommendations on the quality of data entries and how to overcome identified gaps. The evaluation found that *data collection teams were responsive to these gap analyses; in most countries, the amount and quality of the data available were improved following this intervention*. It was also found that *both the initiative's quality assurance mechanisms and DesInventar's built-in characteristics were aligned with the principles of precision, comprehensiveness, comparability, and transparency*.

Because of the difficulty of collecting 20 to 30 years' worth of data in some regions, *database entries in the majority of the countries reviewed in the context of the evaluation had some gaps in historical coverage and quality*. In those countries, the availability and reliability of data was affected by several variables such as the quality and availability of the disaster loss archives and other data sources from which data was extracted, institutional factors including the coordination with the multiple entities that owns relevant data, the role played by host institutions and project partners in facilitating access to data from various sources, and to a lesser extent the skills and experience of the data collection teams. *However, a minority of countries have been maintaining the loss database over a significantly longer period of time resulting in higher coverage and quality of their databases*. Some of these countries had already started to use the loss database prior to the implementation of the initiative, highlighting the progressive, long term approach needed for the development of national loss database.

The evaluation found that *the majority of the national loss databases of the countries reviewed in the context of the evaluation have not reached their full potential in their current state*. However, they already have been used to support policy dialogue. With further work on enhancing quality and spatial and temporal coverage, their contribution to support government decision-making could potentially be enhanced significantly. *A number of beneficiary countries reviewed by the evaluation indicated genuine interest in pursuing improvements in data coverage and quality to permit the use of tools introduced by the initiative in order to increase investment in CCA and DRR*.

The quality of data and risk results has been, despite the challenges noted, sufficient to raise awareness of disaster risk and climate change impact and engender understanding of beneficiary country loss exposure. Moreover, the data has already been used by beneficiary countries and other stakeholders for a range of purposes. Overall in their current state, the national loss databases are perceived as a useful tool by the stakeholders of the initiative in comparison to existing databases in particular because it includes frequent but low magnitude events and related economic losses. Consequently, the national disaster loss database based on DesInventar methodology available online provides much more information and in some instance losses recorded are order of magnitude larger compared for instance with the data recorded under EM-DAT, one of the most used disaster loss databases. *Methodology and tools based on DesInventar are viewed as a best practice and international standard in the field of disaster loss databases*. It has the potential to contribute to filling gaps in existing databases through timely tracking of disasters and valuing losses at a disaggregated level (regional and sub-regional, and sector of economic activities). These are desirable outcomes which could contribute to informing investment planning for CCA and DRR at local and regional levels, thus increasing the efficiency of public spending on resilience to climate change.

Partnerships

UNISDR effectively used partnerships to complement their in-house human resources for delivering training, undertaking administrative tasks, and working on technical aspects of the initiative. UNISDR's partnerships with UNDP, a regional inter-governmental organization, the Indian Ocean Commission (IOC), and a bilateral organization, the German Development Agency (GIZ) ensured the timeliness and quality of project activities. Country and regional level support, particularly in regions as small and dispersed as the Indian Ocean, were critical to carrying out project activities effectively and efficiently. Partners' knowledge and connections were particularly important in securing stakeholder engagement. The expertise of technical partners such as the International Center for Numerical Methods in Engineering (CIMNE) and INGENIAR, the International Centre on Environmental Monitoring (CIMA Foundation) and CorpoOSSO was also important to ensuring the high quality of training, tools, and ultimately data outputs.

The evaluation found that *partnership coordination was successful although communication about the outcomes of trainings and other activities was an area of concern for most partners*. Follow-up in this regard might strengthen institutionalization.

These partnerships, some of which emerged only during implementation, *demonstrated UNISDR's openness and flexibility in taking advantage of some key opportunities* to integrate the initiative with others (such as in the case of the IOC and GIZ). Nevertheless, *some opportunities were missed* in all regions to engage at the design and implementation phase with other relevant institutions that might have provided regional and country-level knowledge needed improve the tailoring of activities.

Impact and Sustainability

It is too early to expect visible policy change results from the initiative – such as increased public investment in DRR or changes in development planning practices. However, *a significant overall result that is already evident is the increased awareness amongst key audiences of the importance of disaster risk reduction* and related tools that can provide an evidence base for increased investment. In countries with low DRR capacity, this is an important initial step towards the longer-term policy change goals and has created a more fertile ground for further intervention.

Moreover, the project directly reached 49 countries through the creation of national loss databases, with more than 850 individuals directly participating in project components. The indirect reach of the project was extended through dissemination of project-related documents, and the initiative has been integrated into the broader work of UNISDR through the Global Assessment Report on Disaster Risk Reduction (GAR). The project experience has fed into some key disaster management tools including indicators and targets for the Sendai Framework (and by extension, indicators for the Sustainable Development Goals) and country guidance for recording disaster loss data. While the evaluation found that activities carried out through the initiative were critical stepping stones towards policy change, *the sustainability of their results are challenged in many of the beneficiary countries* reviewed by the evaluation by low baseline capacity in DRR competing priorities resulting in limited national ownership and uptake of project activities, and the limited resources dedicated to ensure a committed, ongoing presence of key partners to continue to support efforts to progress at a country level. In these countries, stakeholders expressed concern over how to ensure further or continued implementation, follow up and expansion of learning and capacity built through the initiative. For countries with extensive human resource constraints, maintaining or utilizing even the simplest tool introduced for tracking disaster data may be problematic. Conversely, *in a number of the countries*

reviewed by the evaluation, the likelihood of sustainability of the project results is high, in particular in countries that have received support in this area for a longer period of time and where key partners have been in a position to support implementation and build on the achievement of the initiative.

Further progress towards policy change will require further capacity building and support. Indeed, country stakeholders have consistently expressed interest in receiving more training on the topics introduced by the initiative. Such efforts would require collaboration with a fully engaged partner or partners with a regional or country presence to support countries after the end of project implementation.

Lessons Learned and Recommendations

Lessons learned on designing and implementing capacity building initiatives

- **Capacity building is a long term process:** Project design is strengthened when it matches capacity building targets to project timeframes to ensure that capacity needs rather than time constraints drive implementation. Insufficient time to meet ambitious capacity building targets, especially in low-resource contexts, can limit results
- **Taking baseline capacity into account is key:** Capacity building activities are more likely to be effective if they are implemented incrementally and consider existing capacity. The experience of the initiative demonstrates that tailoring project tools and activities to make them more relevant to country stakeholders is likely to produce better results.
- **Integrating capacity building activities in the DRR context can showcase their relevance:** This initiative highlights the added value of implementing national disaster loss databases as part of broader work on DRR, as it enables stakeholders to gain greater understanding of the need for, and uses of, high quality historical loss data.
- **Relevant, on-the-ground partnerships facilitate effective activities:** For a smaller organization without regional or country presence like UNISDR, capacity building activities can be more effective if they are implemented in partnership with organizations that have a strong national presence and in-depth involvement in the subject matter, in order to facilitate enhancement, continuity and sustainability of results.
- **Dialogue with others can generate synergy benefits:** Timely dialogue with other institutional actors working on CCA and DRR in the beneficiary regions can contribute to greater coordination on activities, build on synergies, and avoid (or reduce) duplication. It can also create opportunities to identify and share best practices and lessons learned, as well as contribute to improved design and tailoring to country contexts.
- **Institutional silos undermine outcomes that depend on knowledge sharing and communication:** Institutional silos within countries pose a significant challenge to achieving outcomes related to policy dialogue, sharing information, disseminating results, implementing the use of tools, and raising awareness amongst diverse country institutions.

- **Planning for sustainability is crucial for maintaining buy-in and capacity:** However light or strong in intensity, capacity building activities create momentum for stakeholders, who gain awareness and understanding of issues. This can be leveraged to create still more capacity, but only if there is ongoing support to maintain buy-in. Discontinuity of support makes capacity building results more vulnerable to staff turnover and can lead to stakeholder disengagement and loss of capacity.
- **Institutionalization can be facilitated by partnerships extending beyond project timeframes:** Institutionalization of this type of initiative usually takes longer than the duration of the initiative. Partnerships that extend beyond the lifetime of the initiative with country or regional stakeholders that have both a country presence and experience working with local governments are essential to achieving institutionalization of initiative tools and approaches and sustainability of outcomes.

Recommendations on designing and implementing capacity building initiatives:

- **Tailor project components to the beneficiary:** Project design should be tailored to beneficiary countries: first, a more extensive consultation process should be undertaken prior to implementation; second, the implementation approach should be adjusted to allow for the increased time and support that most LDCs require to achieve the expected outcomes; and third, more resources should be allocated to tailoring the delivery of activities to specific country contexts. This could mean engaging with a smaller number of beneficiary countries, depending on the resources available, or strengthening partnership arrangements to support tailoring.
- **Consolidate partnership arrangements:** Deeper collaboration should be ensured between UNISDR and other partners that can play a significant role in terms of fostering ownership and supporting institutionalization before future activities are undertaken. This will be critical to increase the likelihood of the institutionalization of tools and approaches and thus the sustainability of the initiative.
- **Ensure the engagement of host institutions:** Expectations for involvement should be made clear from the outset to all entities – such as the host institutions – that are owners of key project outputs or deliverables, such as the database, risk results, and country studies on the integration of CCA and DRR in national public investment.
- **Further coordination with other organizations:** Consultation and engagement with other relevant organizations in each region should be pursued as part of both the design and implementation phases. This would permit greater coordination on activities, thus improving efficiency and effectiveness by building on synergies and reducing duplication. Such consultation can also improve the tailoring of activities to country contexts and capacity baselines.
- **Ensure that mechanisms for learning are built into design:** In order to increase communication and transparency with partners (including trainers) and other interested parties regarding progress towards and achievement of outputs and outcomes, ensure that learning feedback loops are incorporated into project design. This would enhance adaptive management, promote sharing of results and lessons, and improve future programming. Mechanisms to consider could include various forms of results dissemination, as well as formal and informal reporting and feedback to trainers and other service providers.

- **Take an integrated approach to implementing activities:** A more integrated approach to the implementation of Components 1 to 3 should be considered, including more consistent involvement of the same group of stakeholders, and methods to overcome the institutional silos that separate different sectoral and institutional settings within a country. This will likely entail a much stronger emphasis on policy dialogue.
- **Ensure that a feasible exit strategy is built into project design:** Clear exit strategies should be developed in order to leave in place a clear direction for next steps in continuing the progress made through project activities. This should include strategies that foster country ownership, a dissemination strategy at the national level for the key results as well as the identification of local partners that can build on and further capacity development in the area.

Recommendations on ensuring the quality of the loss data and risk results:

- **Strengthen quality assurance mechanisms:** In addition to the gap analyses, further quality assurance mechanisms should be put in place. In particular, data collection teams should be further trained in disaster terminology and in tools and methods they can use to cross check the comprehensiveness and accuracy of the data entered. Continuous support, building on the model currently adopted by UNISDR in the form of enhanced remote coaching of a small team responsible for data collection, could be efficient and effective.
- **Improve historical, sectoral, and geographic coverage of loss data:** In order to achieve more optimum historical, sectoral, and geographic coverage, the support and collaboration of different institutions should be pursued. Relevant institutions should be made aware of, and more firmly engaged in, national DRR initiatives.
- **Continue assistance based on country ownership of the database:** Where there is a clear level of ownership of the tool, further support should be provided for collecting higher resolution data in order to provide accurate information to drive subnational level decisions on DRR and CCA investments. In some cases, additional resources could be considered for the conduct of supplementary, on-site trainings for host institutions.
- **Ensure customization of the database:** Further customization of the database at the national level should be ensured, as this would contribute to fostering ownership of the database and to making the data and related risk analyses more relevant to country realities and government needs.
- **Improve the user- friendliness of the tools (DesInventar):** While providing more training to users would help address this challenge, in the short to medium term, steps should also be taken to improve the database's user interface to make it easier for users to learn how to make use of its various functions

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ACRONYMS

Acronym	Definition
ADPC	Asian Disaster Preparedness Centre
CAPRA	Comprehensive Approach for Probabilistic Risk Assessment
CATSIM	CATastropheSIMulation
CCA	Climate Change Adaptation
CDEMA	Caribbean Disaster Management Agency
CIMA	International Centre on Environmental Monitoring
CIMNE	International Center for Numerical Methods in Engineering
CorpoOSSO	Corporacion OSSO
DEVCO	European Commission Development and Cooperation
DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
EC	European Commission
EU	European Union
FAO	United Nations Food and Agriculture Organization
FLACSO	Latin American Faculty of Social Sciences
GAR	Global Assessment Report on Disaster Risk Reduction
GFDRR	Global Facility for Disaster Reduction and Recovery
GIZ	German Development Agency (Deutsche Gesellschaft für Internationale Zusammenarbeit)
HFA	Hyogo Framework for Action 2005-2015
IADB	Inter-American Development Bank
IIASA	International Institute for Applied Systems Analysis
INGENIAR	Ingeniería y Análisis de Riesgos
IOC	Indian Ocean Commission
IPACC	Public Investment and Adaptation to Climate Change
IRDR	Integrated Research on Disaster Risk
JRD	Joint Research Center of the European Union
LDC	Least Developed Countries
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
PDNA	Post Disaster Needs Assessment
RAC	Rapid Assessment of Capacity Development
SIDS	Small Island Developing States
SOPAC	Pacific Islands Applied Geoscience Commission
SWIORAFI	Southwest Indian Ocean Risk Assessment and Financing initiative
ToRs	Terms of Reference
UNAM	Universidad Autónoma de México
UNDP	United Nations Development Programme
UNISDR	United Nations Office for Disaster Risk Reduction

1. INTRODUCTION

This draft Final Evaluation Report provides an assessment of the United Nations Office for Disaster Risk Reduction (UNISDR)-European Commission (EC) initiative “Building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction: 2012 – 2015”, Components 1-3. This evaluation assesses the initiative’s process, capacity development effects, quality of loss and risk results, partnerships, and impact, and draws lessons learned and recommendations for future work of this nature. The report draws on document review, field visits, and remote interviews conducted over a four-month period in a sample of the beneficiary countries.

The report is structured as follows:

- Section 1 provides an introduction to the report
- Section 2 briefly describes the initiative under evaluation
- Section 3 describes the purpose, objectives and scope of the evaluation, including the methodology
- Section 4 describes the findings of the evaluation:
 - Section 4.1: Design and Process;
 - Section 4.2: Capacity Development Effects;
 - Section 4.3: Quality of Loss and Risk Results
 - Section 4.4: Partnership
 - Section 4.5: Impacts
 - Section 4.6: Sustainability
 - Section 4.7: Conclusions
- Section 5 notes lessons learned and recommendations
- Annex I: Evaluation Matrix
- Annex II: Objectives and Results Logframe
- Annex III: Key Documents Reviewed
- Annex IV: List of Stakeholders interviewed
- Annex V: Detailed evaluation implementation schedule
- Annex VI: Status of implementation by component and countries

2. DESCRIPTION OF THE INITIATIVE

In 2012, the UNISDR started a project called “Building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction: 2012-2015”, under the financial sponsorship of the EC Development and Cooperation (DEVCO) organization.

2.1. Objectives of the Initiative

The overall objective of the 3+1-year initiative was “to strengthen the capacities for unified climate change adaptation (CCA) and disaster risk reduction (DRR) through the vehicle of increased public investment and deeper understanding of risk”. This initiative aimed to cover approximately 40 countries from the Pacific Islands, Latin America, the Caribbean, West Africa, Asia, and the Indian Ocean region. The initiative was structured in four independent but closely linked components.

Table 1. Project components and objectives

Component and associated activities	Objective
<p>Component 1: Strengthening capacities for national loss accounting</p> <ul style="list-style-type: none"> • Historical disaster loss data collection • Training on DesInventar tools and methodology and population of database 	Build the capacity to properly account, value and analyze disaster losses through the development of national disaster loss databases.
<p>Component 2: Development of National Probabilistic Risk Profiles</p> <ul style="list-style-type: none"> • Training in probabilistic risk assessments • Development of national risk profiles using analysis of loss data from national loss database 	Build the capacity to assess and understand disaster risk through the actual development of probabilistic risk assessments for the countries.
<p>Component 3: Introduction to tools of economic analysis</p> <ul style="list-style-type: none"> • Risk sensitive budget review • Probabilistic cost-benefit analysis • Policy dialogue 	Build the capacity to incorporate CCA and DRR into the country’s national public investment and development planning system.
<p>Component 4: Share project experiences in 2013 and 2015 Global Assessment Reports on Disaster Risk Reduction</p> <p><i>Note: This component is not included in the mandate of this evaluation</i></p>	Make the experience available to the global community by disseminating results and enhancing global risk analysis in the 2013 and 2015 Global Assessment Reports on Disaster Risk Reduction

2.2. The Global Assessment Report on Disaster Risk Reduction and the Emergence of the Project Concept

The Global Assessment Report on Disaster Risk Reduction (GAR) is a biannual report produced by UNISDR since 2007 which presents risk patterns, trends, and progress in DRR. As noted in the table above, the final component of the project consists of sharing project experiences through the GAR, the flagship publication of the UNISDR. This

evaluation does not have the mandate to evaluate Component 4 of this initiative or the GAR reports (which have been evaluated by Oxford Policy Management in 2016). However, it is important to understand the recommendations of the 2011 GAR, on which the rationale of the project was based.

The 2011 GAR addressed the special theme of public investment in DRR and integrating risk into development. This theme emerged from the observation that despite improvements in disaster management around the world, global disaster loss and damage was trending upwards over the previous 40-year period. In response, the report called for “a new paradigm for risk governance...one that must address the disaster risk internalized in, and sometimes generated by, development processes.” Significantly, this was reflecting (and encouraging) a change in thinking in UNISDR and the broader disaster management community. This is the movement away from a primarily ‘corrective’ approach, in which the focus is on disasters as ‘exogenous and unforeseen shocks’ that must be prepared for and recovered from, towards a more ‘prospective’ approach in which the focus is on working with country sectors to build resilience into development and to avoid the construction of new risk.

Those recommendations posit that one of the reasons countries find it hard to justify increasing investment in disaster risk management (DRM) is that they have difficulty in assessing not just current risks and actual losses, but also in specifying the types and amounts of resources required to strengthen risk governance capacities. Once this is well understood, countries can justify more significant investments in DRM in their national budgets.

Sections 8.2.1-8.3.1 of the 2011 GAR reflect the three project components:

Account for disaster losses: The first step is the systematic recording of disaster losses and impacts (including physical damage, deaths, and economic impact), and the institutionalization of national disaster inventory systems. This enables countries to better understand historical losses, particularly for smaller, frequently recurring disasters. According to the GAR, 90% of countries reporting on the Hyogo Framework stated they did not have a functioning system for recording disaster loss.

Quantify the risks: The historic disaster loss data and the potential future losses estimated using probabilistic risk assessments can be used to provide evidence for the basis of policy decisions. However, few countries have traditionally used these tools, as the models that existed that could be applied at a country level were developed largely by the insurance industry to support their own needs. In an effort to provide an alternative, UNISDR, the World Bank and the Inter-American Development Bank (IADB) supported a case study in Colombia, Mexico, and Nepal (described in Chapter 5 of the 2011 GAR). This study applied a new probabilistic risk assessment model designed specifically for the needs and realities of countries, called ERN-CAPRA (Comprehensive Approach for Probabilistic Risk Assessment). The case study found that “the scale of recurrent losses may be far higher than most governments realize”, and that:

“These figures indicate that if decision-making were based on a realistic assessment of the social and economic costs and benefits, DRM should have a similar public policy importance as controlling inflation or resolving armed conflict. In other words, a larger share of the national budget should be allocated to reducing disaster risks. Making these costs visible is also a key step towards identifying the trade-offs in DRM investment.”

Use cost-benefit analysis to guide DRM investments: Cost-benefit analyses can then be used to assess economic costs and benefits of different risk management approaches. Cost-benefit analysis is a more familiar tool, with approximately half of the reporting countries to the 2009–2010 Hyogo Framework for Action (HFA) Progress Review using cost–benefit analyses to incorporate DRR measures into the planning of public investment.

Factor risk into public investments and development plans: The 2011 GAR notes that the greatest benefits of DRR can be achieved by factoring in disaster risk considerations into national planning and public investment decisions, and recognizing that the way those finances are used either reduces or generates disaster risk. In the HFA 2009-11 reports, very few countries reported having the required legislation and corresponding institutional arrangements in place to define the allocation of human and financial resources for implementing DRM.

UNISDR thus developed this program to support countries in the implementation of some of the recommendations of the 2011 GAR. This project concept follows the premise that this results in DRR being underfunded, and should countries understand the full extent of disaster loss and risks, they will be likely to prioritize targeted investment in this area. The European Union (EU) was asked to fund this new and somewhat experimental approach in 2012.

2.3. Implementation Approach

The project was coordinated and implemented by the UNISDR Secretariat in Geneva, in collaboration with regional and country-level partners (particularly the United Nations Development Program -UNDP) and technical partners.

Number of countries in which each component was implemented

The beneficiary countries were selected based on several criteria, including high levels of risk and/or historical damage, the current availability of data, demand and interest demonstrated, institutional capacity, and others. As described above, the project intended to reach approximately 40 countries. Overall, the number of beneficiary countries varied by component, and in the case of Component 3, not all activities were fully implemented.

Table 2. Number of beneficiary countries per component

Region	Component 1	Component 2	Component 3
Indian Ocean Commission (IOC)	5	5	5
Latin America			7
Asia	7	5	5
West Africa	6	5	5
Pacific	22		
Caribbean	7		7
Total	49	15	22 (+7)

Table 3 below shows the activities undertaken in each region for each component.

Table 3: Activities undertaken in each region for each component

Region	Component 1	Component 2	Component 3	
IOC	1 national workshop & Historical data collection	3 regional workshops	1 regional inception workshop & 2 regional workshops	1 national workshop & country study
Asia	1 national workshop & Historical data collection	3 regional workshops	1 regional workshop	1 national workshop & country study
West Africa	1 national workshop & Historical data collection	3 regional workshops	1 regional workshop	1 national workshop & country study
Pacific	1 regional workshop & Historical data collection	N/A		N/A
Latin America	N/A	N/A	1 regional inception workshop & 3 regional workshop	1 national workshop & country study (baseline analysis and case study)
Caribbean	1 national workshop & Historical data collection	N/A	1 regional workshop	1 national workshop (Saint Lucia and Antigua only)

3. PURPOSE, OBJECTIVES, AND SCOPE OF THE EVALUATION

The purpose of the evaluation of the initiative was to provide UNISDR and the EC with a third-party view of the results and potential impacts of the program with the aim of formulating recommendations for the way forward for the worth of both organizations in that field.

The specific objective of the evaluation was to provide an independent assessment of the initiative by examining some of its key strategic aspects as follows:

- *The Process*: Verify that the actions initially proposed by UNISDR in the original design of the Action, in terms of capacity building, data collection, and production of desired results, were effectively carried out avoiding as much as possible duplicating existing work done in the countries.
- *Capacity Development Effects (All components, i.e., 1, 2, and 3)*: Assess the quality and the impact that the project generated at individual and/or institutional level in terms of capacity development and/or strengthening. The assessment followed an adapted version of the Rapid Assessment of Capacity Development (RAC) methodology, suggested by the EC as part of their Technical Cooperation reform and the Aid Effectiveness agenda.
- *Quality of Loss and Risk Results (Components 1 and 2)*: Assess, up to what extent the main results of the data collection exercises were obtained and received by countries with the depth and reliability requested.

In particular, assess the disaster loss databases (*Component 1*) and Probabilistic Risk Profiles (*Component 2*) that were produced within countries thus contributing to the understanding of their risks.

- *Partnerships*: Assess the success of UNISDR in establishing partnerships and the additional effectiveness and sustainability brought to the Action in those regions where the activities were conducted with regional partners, with the particular focus on the partnerships with the IOC and the UNDP in West Africa and the Caribbean, and GIZ (German Development Agency -Deutsche Gesellschaft für Internationale Zusammenarbeit) and Corporacion OSSO (CorpoOSSO) in Latin America.
- *The Impact (Component 3)*: Assess the impact of the project, against the defined objectives, including the level of outreach of the results, its uptake by the governments and partners, and its integration into the broader work of UNISDR.
- *Lessons and Conclusions*: Draw key lessons and propose practical recommendations for follow-up and continued actions. The evaluation was to provide an independent assessment of the first three components of the Action, covering several aspects of its implementation.

Regarding scope, the evaluation looked at the performance and evolution of the first three components of the initiative from its inception to its closure. The evaluation was forward-looking focusing on findings that would inform the design and implementation of future work to be undertaken by UNISDR and the EC.

3.1. Methodology

Step 1. Inception phase

A. Documentation Identification & Document Review

The evaluation began with a preliminary review of documentation identified in partnership with the UNISDR coordinating team, and was followed by a more in-depth and ongoing review of documents, websites, and other sources relevant to the mandate as they were received or identified. The list of documents reviewed in the context of this evaluation can be found in Annex III: List of Documents Reviewed.

B. Briefings between the Evaluation Team and UNISDR Coordinating Team

These meetings took place in order to discuss methodology, framing questions, and expectations from this evaluation. It was also an opportunity to discuss the use of evaluation tools, dates for field missions, etc. These briefings helped the team to gather and collect key documents and discuss issues that could represent a potential source of risk for the project's outcome.

C. Refinement of the Methodology and Drafting of the Evaluation Matrix

On the basis of the document review and briefings, the Evaluation Team refined the methodology outlined in the terms of reference (ToRs).



An evaluation matrix highlighted the broad issues to be addressed as well as the specific evaluation questions and indicators to be considered by the Evaluation Team (see Annex I: Draft Evaluation Matrix). The evaluation matrix represents a standardized and harmonized tool for:

- Simple and transparent comparability of UNISDR capacity building actions by country and geographical area;
- Identification of country peculiarities in terms of what kind of interventions worked better, why and where; and,
- Identification of gaps at the country level that would need to be addressed by UNISDR in future exercises.

i) Assessment of the Process

The ToRs state that the Evaluation Team shall *"verify that the actions initially proposed by UNISDR in the original design of the Action, in terms of capacity building, data collection and production of desired results were effectively carried out avoiding as much as possible duplicating existing work done in the countries."*

The Evaluation Team addressed the project's effectiveness while analyzing the effects of the project in terms of i) capacity development, ii) the quality of the loss and risk results, and iii) impact. Therefore, the Evaluation Team assessed the following aspects of the Project:

- Relevance of the project objectives in view of country needs and UNISDR objectives;
- Quality of design in view of delivery of planned outputs and outcomes;
- Responsiveness of project management during implementation; and,
- Financial management plan and implementation.

ii) Rapid Assessment of Capacity Development

The ToRs state that the Evaluation Team shall: *"Assess the quality and the impact that the project generated at individual and/or institutional level in terms of capacity development and/or strengthening. The assessment will follow the Rapid Assessment of Capacity Development (RAC) methodology, suggested by the European Commission's as part of their Technical Cooperation reform and the Aid Effectiveness agenda"*.

Given the resource and time constraints faced in the context of this mandate, it was beyond the scope of the exercise to conduct full RAC procedures for each of the beneficiary country participating in the initiative. However, the Evaluation Team proposed to adapt the RAC methodology to the characteristic of the mandate. An *"adapted RAC"* approach was attempted. However the low intensity and limited reach of the capacity building activities did not provide the right context to implement a RAC approach where a critical mass of stakeholders needs to have a very good understanding of the initiatives and of its capacity building effects.

Nevertheless, as per the principles of the RAC, the assessment of the initiative's capacity development went beyond measurement of performance against the expected results described at project inception; it also aimed to assess capacity building effects along a continuum ranging from awareness raising at the individual level to broad and deep transformation at the institutional level. Consequently, the main focus was on changes in capacity at individual and institutional levels, taking into account the characteristics of the enabling environment in which capacity development interventions were undertaken.

iii) Assessment of the Quality of Loss and Risks Results

De Groeve et al.² claimed that proper disaster loss data recording should be based on the following principles:

- Precise – Indicator fields must have clear terminology and mutually exclusive definitions that are consistently applied.
- Comprehensive – The loss indicators should cover all loss/damage regarding spatial, sectorial, and loss ownership coverage in order to be an objective reflection of the extent of the disaster.
- Comparable – Loss data are event based and therefore accompanied with the event identifier number. Disaster effects should be comparable among the event of the same hazard types as well among the events of different hazard types, across countries, and sectors.
- Transparent – Loss values should be geo-referenced, accompanied with temporal information and an assessment of uncertainty.

The Evaluation Team undertook an analysis of the disaster loss recording based on their compliance with the above-mentioned principles.

Moreover, the Evaluation Team investigated the nature and adequacy of quality assurance mechanisms in place, including those that are intrinsic to the methodologies selected and those related to the implementation of the initiative with regards to the disaster loss databases (Component 1) and Probabilistic Risk Profiles (Component 2). The Evaluation Team also investigated whether the methodologies selected adequately included provision for assessing uncertainty at various levels.

Finally, the Evaluation Team gathered the views of relevant stakeholders – in particular, experts – in the field regarding the strength, weaknesses, and gaps in the approaches and tools used. Options to address potential gaps in a practical way were studied to inform the way forward for UNISDR.

iv) Assessment of the Partnerships

The assessment of the success of UNISDR in establishing partnerships and the additional effectiveness and sustainability brought to the initiative in those regions where the activities were conducted with regional partners, was undertaken with a particular focus on the partnerships with the IOC and the UNDP in West Africa and the Caribbean, and the GIZ and CorpoOSSO in Latin America.

The evaluation addressed:

1. Identification and description of the main partnership arrangements focusing on the partnerships highlighted above;
2. Mapping of complementary expertise, knowledge, and experience of the partners; and,
3. Identification and attribution of the benefits and/or shortcomings that accrue from the partnership arrangements in terms of:
 - Achieving project results;
 - The sustainability and or the scaling up of the outcomes of the initiatives;
 - The contribution of partners to the quality of the Loss and Risk results; and,
 - The contribution of partners to capacity development in the beneficiary countries.

² De Groeve Tom; Poljansek Karmen; Ehrlich Daniele; Corbane Christina, 2014. Current status and Best Practices for Disaster Loss Data recording in EU Member States: A comprehensive overview of current practice in the EU Member States. Publications Office of the European Union, EUR 26879.



v) *Assessment of the Impacts*

As from the ToRs, the methodology to “Assess the impact of the project, against the defined objectives, including the **level of outreach of the results, its uptake by the governments and partners, and its integration** into the broader work of UNISDR” was integrated into Component 3 as from the same ToRs, which focuses on “Building the capacity to incorporate climate change adaptation and DRR into the country’s national public investment and development planning system.”

The methodology used to assess the impact of the UNISDR work for this consultancy built on the Evaluation Team’s previous experience on climate risk and vulnerability assessment in some of the most climate change-exposed countries in the world, for instance the Caribbean, as well as on previous work on climate risk assessment and reporting for development banks and public bodies. It consisted of a list of **simple, clear, and country/policy relevant criteria** to allow for a transparent, timely, and proper evaluation of UN capacity building actions to beneficiary governments and partners. In doing so, the criteria covered the three key areas of interest for UNISDR:

1. The **level of outreach of the results** was considered against (i) the number of people involved and their initial level of knowledge of CCA and DRR, in particular in terms of hazards (recurrence, losses); (ii) the number of technical departments within governmental bodies that participated in the trainings and that are using the outputs of the initiative; (iii) the number of partners institutions that took part accounting for their relation with the government (i.e., role in policy decision making and policy network); (iv) the quality of the results obtained by their model’s run and simulation (dataset creation, risk projections); (v) challenges and obstacles identified by participants.
2. The **uptake by government and partners** was considered against (i) the introduction of climate risk and vulnerability information and data obtained by model’s simulation into national and sector programming documents, and in particular into climate adaptation programs; (ii) the introduction of climate risk and vulnerability information and data obtained by model’s simulation into governmental agencies and partners public reports on climate adaptation (e.g., the Caribsave risk maps in the Caribbean); (iii) the mainstreaming of climate risk and vulnerability assessment into government and partners’ day-by-day work (e.g., training provisions to new officers based on the capacity building experience, periodic updates of the skills obtained during the training); (iv) the introduction, implementation, or improvement of targeted climate adaptation measures and DRR investment plans at the country/regional level according to the results obtained by the modelling exercise.
3. The **level of integration** (if any) into the broader framework of UNISDR objectives analyzed the potential for cross-fertilization, identifying synergies and complementarities with other UNISDR actions to leverage value from UNISDR intervention and maximize the level of outreach and uptake by beneficiaries.

The evaluation team also assessed the likelihood of the sustainability of the project results. This aspect was investigated through the following evaluation questions:

- Were the achievements of the initiative maintained and expanded over time?
- What was learned from the initiative?
- Have any knowledge and lessons been used?
- Is there a high degree of national/local ownership of the initiative? Why or why not? How could national ownership be improved?
- What indications are there that the government or other partners will continue to support, or even upscale, this or similar initiatives?



Finally, the evaluation team assessed project results against the original project expected outcomes and original performance indicators. Section VI of Annex I: Draft Evaluation Matrix, includes a project logical framework constructed based on the original project document of the initiative.³

vi) *Identification of Lessons Learned*

As from the ToRs, the methodology to “Draw key lessons and propose practical recommendations for follow-up and continued actions” integrates Component 4 as from the same ToRs, which focuses on “Making the experience available to the global community by disseminating results and enhancing global risk analysis in the 2013 and 2015 Global Assessment Reports on Disaster Risk Reduction”.

This part took stock of the findings gathered by the Evaluation Team across the previous five objectives and three components to develop a toolbox for results dissemination that included the key take-home messages from the findings and analysis. The goal is to support UNISDR in the extension of its capacity building programs aimed to increase beneficiaries’ awareness and preparedness to build resilience to climate change risk.

The identification of lessons learned throughout the mandate focused on four key points:

- Highlighting the key issues at stake for building capacity on climate adaptation and DRR in the beneficiary countries in a cross-country comparative perspective;
- Leveraging value from current experience identifying opportunities to build synergies and exploit complementarities with other UNISDR climate adaptation and DRR actions;
- Informing future UNISDR funded programs, follow-up and continued actions in this field using a simple and accessible language to be easily understandable by practitioners and policy makers; and,

In order to do so, this section harmonized knowledge collected in Component 1 and 2 and builds on the results of the evaluation provided by Component 3 highlighting what kind of capacity building actions worked better, where and why. It also highlighted where main gaps emerged, how the trainers and beneficiaries dealt with that, and what were the main challenges and opportunities perceived by both.

Step 2. Data Collection

A. Desk Review

The in-depth document review allowed for the collection of some preliminary findings prior to the conduct of interviews with stakeholders. Documentation reviewed included the following:

- Reports of Workshops;
- Electronic copies of training materials;
- Copies of results documents and reports;
- Steering Committee reports and meeting minutes;
- Verification of online loss database and Risk Data and Profiles;
- Working Papers and other products of the project; and,
- Other relevant documents and websites from the field of DRR.

³ Annex I, Project Description, Building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction: 2012 – 2015.

The revised timeline of the mandate (see Annex V) meant that the desk review phase overlapped with the field missions and stakeholders' interviews.

B. Interviews with Stakeholders

As per the mandate ToRs, the Evaluation Team undertook independent field visits to three of the six regions covered by the initiative. Within each of these regions, two countries were visited by the Evaluation Team. This included West Africa (Mali and Senegal), Asia (Myanmar and Cambodia), and the Indian Ocean (Seychelles and Mauritius), with field missions being completed by early December 2016. Additional interviews were conducted with stakeholders from Niger and from Madagascar. In every beneficiary country selected for interviews, a list of key stakeholders to be interviewed were identified from:

- The central ministry responsible for public investment planning and decision making;
- Agencies responsible for disaster/emergency management, risk reduction;
- Specialized scientific and technical agencies and national statistical agencies;
- Relevant Line ministries; and,
- Implementing partners at the national and regional level.

The Evaluation Team provided a succinct report for each mission undertaken. These reports highlighted the process, challenges, and findings from the three regions visited.

The Evaluation Team also conducted a series of interviews by phone or Skype with key stakeholders from the other three regions (Latin America, the Caribbean, and the Pacific). The remote interviews were conducted with regional stakeholders, as well as stakeholders from one out of the six countries from the Latin America region and one out of seven countries from the Caribbean. Finally, stakeholders from the Secretariat of the Pacific were interviewed. The process to identify relevant stakeholders to be interviewed were the same as for the field visits. However, only three to six interviews were conducted for each country. The Evaluation Team discussed and agreed upon the countries to be covered via interviews with the client.

Further interviews took place with regional and global stakeholders of relevance between November 2016 and February 2017:

- Relevant staff of the UNISDR secretariat;
- Capacity building service providers (International Centre on Environmental Monitoring-CIMA, International Center for Numerical Methods in Engineering -CIMNE & INGENIAR); and,
- Stakeholders from other partner organizations (UNDP, IOC, World Bank, GIZ).

The support of the UNISDR staff was needed to organize interviews, simplify logistics for the remote interviews and in particular for the field visits.

Step 3. Analyzing and Reporting

The Evaluation Team analyzed data using the approach and tools presented above. The same tools were used to process all findings from the information and data collected. To the extent possible, data triangulation was achieved by analyzing information from multiple sources.

Data collection tools are included as an Annex to the final report. The link between evaluation questions, data collection, analysis, findings, and conclusions is set out in a transparent manner in the presentation of the review findings.



A brief interim and desk review report highlighting the progress made and activities conducted by mid-December was submitted for comment on December 15, 2016. This included brief preliminary findings of the review by that stage, as it was only possible to collect about half of the targeted volume of data/evidence. Comments on these preliminary findings were received by the evaluation team from UNISDR and were taken into account in the production of this final evaluation report, as well as being subject to the analysis of the additional data/evidence collected during the last phase of the evaluation.

The draft final evaluation report was submitted on February 24, 2017. In consultation with UNISDR stakeholders, the Evaluation Manager sent comments and recommendations to the Evaluation Team between March 17 and April 5, 2017.

A Final report reflecting comments received on the draft evaluation report was presented on April 13, 2017.

3.2. Main Constraints of the Evaluation

The array of evaluation tools and triangulation methods used during this evaluation helped to ensure the validity of the evaluation results. That being said, the depth of the evaluation's findings and conclusions was, to some extent, constrained due to the following factors:

- **Status of implementation:** Some of the components of the initiatives have only recently taken place or have not yet been completed. This created some challenges to the Evaluation Team in terms of early access to project reports and in terms of analyzing project impacts in the majority of the beneficiary countries reviewed.
- **Resource constraints:** It was not possible to undertake field visits and/or interviews to the majority of the countries involved in the project, even had the timeframe been longer. Evaluation findings are based on the information available to the evaluation team, and not all perspectives may be reflected.
- **Constrained timeframe:** The Evaluation Team hastened field visits in order to accommodate an Interim Report by December 15, 2016 but this created extensive challenges for data collection and analysis. Some stakeholders were not available for interviews on short notice.
- **Availability of stakeholders and willingness to share information:** As the evaluation took place over a short period of time, the Evaluation Team was only able to collect information and views from the stakeholders available during this time frame. Some stakeholders in the countries targeted for sampling did not make themselves available despite repeated attempts to reach them, leading to gaps in data collection.
- **The Evaluation Team experienced delays in receiving some pertinent project material, and in some cases did not receive full materials.** Up-to-date information on some aspects of the project were not available, such as a final project report, some national reports, and financial reports. In general, material documenting the evolution of the project design and implementation was sparse.



4. FINDINGS

4.1. Assessment of the Project Design and Process

Section 4.1 addresses the relevance of the project objectives, the appropriateness of project design, project management during implementation, and provides brief comments on financial management.

4.1.1. Relevance of the project objectives and design

Section 4.1.1 addresses the relevance of the project objectives and design, particularly the project's relevance to the Hyogo and Sendai Frameworks, the relevance of project objectives to national realities, and the involvement of national and regional partners in creating the project design.

4.1.1.1. Relevance to the Hyogo and Sendai Frameworks

Finding: There is a clear relationship between the project objectives and the Hyogo and Sendai Frameworks. New reporting requirements for the Sendai Framework made the tools introduced by the project even more relevant.

Hyogo Framework for Action, 2005-2015

When the project began, the HFA was the global blueprint for disaster reduction. It's first Strategic Goal to integrate DRR into policies and planning, and its second Priority for Action to identify, assess, and monitor disaster risks aligned well with the objectives of this initiative.

Project activities around disaster loss databases, probabilistic risk assessments, economic analyses, and policy discussions can be seen as partial building blocks or enablers for all three of the Strategic Goals of Hyogo. This is in terms of both providing an evidence base for countries to use for policy-making, attempting to contribute to changing the culture of both disaster management and finance/planning staff to value, track, and use data, and creating a shared understanding of the value of investment in DRR through analytical tools. There is a particularly clear relationship to the project through core indicator 3.3: "Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened". The countries participating in the initiative also aligned well with the focus of the Hyogo Framework of Least Developed Countries (LDCs), Small Island Developing States (SIDS), and Africa.

The Sendai Framework for Disaster Risk Reduction, 2015-2030

While the Hyogo Framework did place importance on DRR, an important evolution in focus from the Hyogo Framework to the Sendai Framework is the increased emphasis on the reduction of disaster risk in order to minimize the impact of disasters. This approach focuses on the social construction of disaster risk, driven by "globalized economic development, poverty and inequality, badly planned and managed urban development, environmental



degradation and climate change.”⁴ The four Priorities for Action of the Sendai Framework reflect the logical progression of building an understanding of disaster risk, strengthening disaster risk governance, and then investing in DRR.

Likewise, the three project components were built around these objectives and align with the priorities of the Sendai Framework:

Table 4: Alignment of project objectives with the Sendai Framework

Sendai Framework	Relationship with project	Comments
Priority 1: Understanding disaster risk	Components 1 and 2	Past and future risks can be better understood through use of national disaster loss databases and probabilistic risk analyses
Priority 2: Strengthening disaster risk governance	Component 3	Regional and national policy discussions based on project data intend to increase interaction of key stakeholders amongst and within countries and identify next steps
Priority 3: Investing in DRR	Component 3	Data from budget review and economic analyses provide guidance on the value of investing in DRR
Priority 4: Enhancing disaster preparedness and reconstruction	Indirect relationship to project	Data generated by the project could inform exercises such as land-use planning

Furthermore, there is a direct relationship through the implementation of national disaster loss databases and Target 7 of the Sendai Framework to “substantially increase the availability of and access to...disaster risk information”.

New reporting requirements under the Sendai Framework: An additional change from the Hyogo to Sendai Frameworks is the focus on small (intensive) as well as large (extensive) scale disasters. For countries to report on their obligations under the Sendai Framework, they will require national disaster loss data at the local level, for which DesInventar tools and methodology can be used and which the project has tried to encourage. Data entered into national disaster loss databases will become increasingly relevant as countries begin reporting on four of the seven Targets of the Framework. This includes indicators related to disaster mortality, affected people, disaster economic loss, and damage to infrastructure. These indicators were in fact suggested by the UNISDR team in their input to the working group on developing indicators for the Sendai Framework.

4.1.1.2. Relevance of objectives to national realities

Finding: The tools, activities and topics introduced by the project were relevant for participating countries.

As described in the Introduction about the emergence of the project concept, disaster losses continue to increase despite global improvements in how countries manage disasters. An evolving approach towards reducing disaster

⁴ GAR 2015, Section 1.4
(http://www.preventionweb.net/english/hyogo/gar/2015/en/home/GAR_2015/GAR_2015_35.html)

loss is to build resilience into new development, and thus minimize the creation of new risk. This is particularly relevant given the tight budgets of many countries and competing priorities.

Following the rationale for the initiative explained in the introductory section, the project intended to:

- a) Build the capacity to properly account and analyze disaster losses through development of national disaster loss databases and estimating each country's recurrent economic losses;
- b) Build the capacity to develop, understand and utilize analytical risk assessments and to estimate the full spectrum of risk the country faces; and
- c) Build the capacity to incorporate CCA and DRR into the country's national public investment and development planning system.⁵

A review of Hyogo Progress Reports and interviews with country and regional stakeholders confirms that these areas are typically weak in participating countries. Only 10% of countries had disaster loss databases at the start of the project, and about 50% were not using cost-benefit analysis to incorporate DRR measures into the planning of public investment, suggesting a gap in knowledge and practice of these types of tools. Country representatives interviewed for this evaluation consistently saw the relevance of building their capacity in these areas, as their technical knowledge in these areas is typically weak. Stakeholders also noted that political interest in DRR tends to have increased in countries where they have experienced large disasters in recent years, such as in the South Pacific Islands after the 2016 Tropical Cyclone Winston, in Myanmar after the 2008 Cyclone Nargis (the worst natural disaster in the recorded history of the country), or in Mauritius after the 2013 floods.

National and regional stakeholders consistently indicated that, in most cases, they found the tools, activities, and topics introduced by the project to be relevant to the needs of their country at this time. In particular:

Table 5: Relevance of project tools and activities

Project tool or activity	Comments
National disaster loss database	<p>Having a tool to track and use disaster risk data was recognized as highly relevant by country representatives interviewed, as was having a specific effort to initially populate the database with historical data from many in-country sources. Country representatives from all regions noted that this can help address the common circumstances of poorly maintained data which is widely dispersed, little sharing between government agencies, and poor quality data. For example, a lack of a centralization of data was mentioned in every country in all regions for which interviews were undertaken where this component took place.</p> <p>Of all the components of the project, <i>Strengthening capacities for national loss accounting</i> was the most easily understood and appreciated by interviewees, and they understood that the data could be used for multiple purposes. While the concept was easy to appreciate, at least half of stakeholders who commented on the methodology proposed by UNISDR (Desinventar) had some complaint about the tool, most commonly the non-user-friendly interface (this issue is further addressed in Section 4.4: Quality of Loss Data).</p> <p>As noted above, the new reporting requirements for the Sendai Framework, which can in part be fulfilled by a completed national disaster loss database, should serve as an increasing 'pull factor'</p>

⁵ The fourth objective to "make the experience available to the global community by disseminating results and enhancing global risk analysis in the 2013 and 2015 Global Assessment Reports on Disaster Risk Reduction" is outside the mandate of this evaluation.

which did not exist at the beginning of the project, making DesInventar databases an increasingly relevant tool.

Economic tools and analyses, including probabilistic analysis and CBA

Stakeholders also widely recognized, in principle, the value and relevance of tools and approaches such as probabilistic analysis and cost-benefit analysis. Disaster management agencies and planning and finance ministries appreciated learning about new tools which could provide evidence for the value of increasing investment in DRR, and assist them in advocating to decision-makers. Country stakeholders from virtually every country interviewed suggested that they would like more training on these topics, further suggesting they were found to be relevant.

Feedback from interviews across the regions also suggested that while the concept of the tools was usually appreciated, most workshop participants found the details too complex to understand in a short training. The CATastropheSIMulation (CATSIM) analysis, which was implemented in the Indian Ocean region, was particularly complex, and this was recognized by UNISDR and removed from subsequent workshops. In the Indian Ocean, Caribbean and West African regions, stakeholders specifically commented that few participants understood the analysis done with the CAPRA platform. The fact that some of these tools and approaches were not able to provide the level of detail needed for local planning, and that in a few cases, the scenarios used for modeling were not relevant for the region, such as earthquakes in the Indian Ocean⁶, made them of less relevance. For example, country stakeholders in Mauritius would have found CAPRA more relevant had the model addressed their major risk: floods.

Budget review

The concept of the budget review was easily understood (if not easy to implement) and for most countries the first attempt to track disaster reduction-related expenditures. Country representatives interviewed generally saw the relevance of the information that might be created through a budget review to advocate for further public investment, and they were required to collaborate with Ministries of Finance to complete this. In West Africa, budget reviews were a significant focus. In Mali, Senegal, and Niger, country stakeholders noted that the budget review was challenging but useful to understand how much was being allocated to prevention compared to reconstruction, and to compare the order of magnitude of annual average losses to annual investments in CCA and DRR. In the Caribbean and Asia regions, the budget reviews had either not begun or not yet been completed at the time of the field mission so comments on this process were limited.

Policy dialogue

Stakeholders from all countries and regions consistently agreed that the intent to bring together a range of government ministries for discussion about the topics addressed by the project was highly relevant in their country context, as those who work in Ministries of Finance, for example, do not normally interact with those working in disaster management agencies (as anticipated by the project). A government stakeholder in Mauritius, for example, noted that there was an absence of integration amongst government that is needed for managing disasters. Often there has been little shared terminology or understanding between these groups in terms of DRR or economic analyses, and DRM agencies felt they did not have the influence to advocate for increased investment levels in DRR. Even in the Latin American region which has the most advanced models of DRM, the public sector is relatively volatile, and country stakeholders here found policy dialogue still particularly relevant given frequent turnover.

Project niche

While other agencies and donors are working in the field of DRR, developing risk profiles, and promoting cost-benefit analysis, most have been more focused on the areas of reconstruction or the management of disasters that

⁶ The Working Paper Review of South-West Indian Ocean Region document notes that, although not a major risk in the region, earthquakes were selected for probabilistic risk assessment because of data availability and the short time frame of the initiative.



have already occurred. This project fills a somewhat unique niche in that its emphasis is ultimately on the avoidance of the creation of new risk by engaging Ministries of Finance and Planning to influence budget allocations for DRR. The development of national disaster loss databases also appears to be a relatively unique activity (UNISDR having supported some countries in this prior to this project). The implementation of the new hybrid risk model is also unique (having been previously piloted in 3 countries).

4.1.1.3. Involvement of national partners in project design

Finding: Initial project design was done internally by UNISDR staff based on gaps identified by countries, but without meaningful involvement of national entities. During implementation, there were some limited opportunities for national partners to have input on implementation, but in Latin America a highly consultative process was used.

As described in the previous section, the design for the project came from UNISDR staff seeking to develop programming to address the global gaps in country data collection, economic analysis, and consideration for risk reduction measures in public investment that were identified in GAR 11. This took into consideration the challenges identified by countries themselves in the Hyogo Progress Reports. This initial design process did not involve direct consultations with national governments who might be the beneficiaries of the project. In that sense, the design took a 'top-down' approach. As an initiative with global reach in a set of highly diverse countries and minimal staff, it would have been challenging to do extensive consultations. However, some consultations at a national or regional level as part of the design process might have led to more effective approaches to some aspects of the project, and better accommodated the needs of countries with particularly low capacity.

As the project was underway, there were some opportunities for countries to give feedback on project implementation, including regional inception meetings. This was at its best in Latin America, where a process of consultation was undertaken in 2014 prior to the initiative getting underway in the region. This enabled meaningful country consultation and resulted in a number of adaptations to project design.



Tailoring the project design to the Latin American context

In Latin America, disaster management is typically more advanced than in other regions where the project took place; most of the participating countries had already developed national disaster loss databases and probabilistic risk assessment profiles, and adaptations had to be made to the project approach. By consulting through a series of missions to the candidate countries, UNISDR determined the status of progress in the areas covered by the project and also worked to establish contacts with Ministries and Finance and Planning.

As a result of this round of consultations, a clear picture of the situation was documented in Integrating DRR into Public Investment: A comparison of six Latin American national experiences. Based on the outcomes of these consultations, an Inception Workshop was designed and then conducted in Mexico City. This workshop was deemed essential to understand the needs of the region and to tailor the initiative to the needs and demands from the Latin American governments. Specifically, the requests received related to the need:

- to scope training on how to incorporate disaster risk reduction and management criteria into the national systems of public investment as well as into the policy dialogue to be held across sectors and across countries;
- to deepen the analysis presented on the status of DRR in public investment systems;
- to take stock and systematize national experiences, providing data and analysis of the processes by which currently existing public investment projects incorporate risk analysis criteria, and
- to facilitate the regional dialog allowing the exchange of experiences and cross-learning among the participating countries.

The design and subsequently the implementation of Component 3 in Latin America closely followed these demands.

4.1.2. Appropriateness of design in view of delivery of planned outputs and outcomes

Section 4.1.2 examines the appropriateness of the design overall and in terms of specific project components. A review is also provided on the Operational Framework, as this was a key document on which the project was based. However, the rest of this sub-section also addresses aspects of design that evolved since, or are otherwise not reflected in, the initial project documents.

4.1.2.1. Appropriateness of design

Findings: The project design was a logical approach to the problem being addressed and incorporated some innovative tools for probabilistic analysis and budget review. Overall the design was most appropriate for middle income countries.

The project design and its three components were based on a logical set of steps reflecting the issues and conceptual approach identified in GAR 2011 (as described in the introductory chapter). The project components



built upon each other, each component supporting and informing the next. While this is not fully demonstrated in the Operational Framework, overall the basic components needed for the project were well conceived.

The design also included some innovative tools, particularly a recently developed method of conducting probabilistic analysis using the CAPRA platform, and a process of using Disaster Risk Management Markers to identify DRR spending (based on the OECD methodology for monitoring climate change budgets).

A number of issues with the project design also emerged during project implementation, which provides lessons for future initiatives of a similar nature. These relate first to the overall design and approach of the project, and secondly to some of the specific design elements. These are outlined in the sections below.

4.1.2.1.1. Appropriateness of the project design to national realities

Appropriateness of project design for beneficiary countries

The project was implemented in a diverse array of countries and regions around the world, from middle-income countries in Latin America to LDCs in Asia and Africa. As one of the conditions of the Contribution Agreement, the project focused on LDCs, and thus the majority of participating countries were LDCs or SIDS.

While this was in keeping with Hyogo Framework priorities, the project design by UNISDR was originally intended for a mix of countries. A pilot of risk modeling techniques conducted in Colombia in 2010 (a middle-income country with a sophisticated DRR environment) suggested that these methods could be successful in these circumstances.

However, LDCs and SIDS, by definition, do not share these circumstances, and typically experience the challenges of great vulnerability to economic shocks, weak institutions, and severely limited financial and human resource capacities. Not being specifically designed for those countries with the weakest capacity, the project design did not allow for:

- the extent of support required;
- the length of time needed for that support, or;
- enough emphasis on institutionalization given the weak institutional environments, including the assumption that individual capacity building would be transferred to the institution with, given resources constraints, limited plan or mechanism to do so.

Number of targeted countries

As a project which was experimenting with a new approach and new tools in weak capacity environments, it is surprising that such a large number of beneficiary countries (40) were included in the initial project scope. The original Project Description implicitly acknowledged that not all countries would successfully move along the continuum from the strengthening of capacities for national disaster loss accounting (target 40 countries) to probabilistic risk assessments (target 30 countries)⁷, but this was an unusually large number of target countries for a project which UNISDR staff have described as a test of a project concept or approach.

4.1.2.1.2. Appropriateness of specific design elements

The following section highlights some of the key design elements that either worked well, posed significant challenges, or should generally be kept in consideration for future initiatives depending on the circumstances of the individual country.

⁷ As described in Expected Result 1.1 and 2.1.

Regional approach: Organizing project activities by geographic/cultural/linguistic region had both advantages and disadvantages, though overall this was most likely the most feasible and efficient approach for such a large number of countries. Most stakeholders viewed it positively, noting that it enabled useful learning from examples and experiences of neighboring countries. This approach was less appropriate for the needs of countries in regions with considerable disparity. For example, Madagascar (population 23 million and a LDC) and Seychelles (population 89,000 and a high-middle-income country) have vastly different needs and abilities to absorb and potentially institutionalize the tools from the project. On the other hand, without a regional approach it would not have been financially feasible to include small countries in the Indian Ocean such as the Seychelles; the Caribbean islands (population of all participating countries is less than 300,000); and the South Pacific islands represented by the Secretariat of the Pacific (most of which have a population of less than 150,000).

Linkages with other interventions: The project contained some inherent linkages with other initiatives. As described in the section above, because of the genesis of the project, close linkages with the GAR were always part of the design of the project, and these were described in project Component 4. Similarly, although not specifically articulated, it can be understood that the project would be supporting country monitoring reports for the Hyogo (and later, Sendai) Frameworks. The project also incorporated elements that stemmed from other initiatives or collaborations, such as hazards definitions defined with the EU and others, and use of state of the art Hybrid Risk Models from methodologies developed jointly with the World Bank using the CAPRA free open source platform (which was itself developed in collaboration with the World Bank and the Inter-American Development Bank). The Project Description did not mention any specific initiatives that the project intended to link to over the course of the project globally or in specific regions, and did not make explicit attempts to link to other initiatives at country level. While not part of the original design, the project made an unexpected linkage with other inter-related initiatives in the Indian Ocean region and in Latin America. These fortuitous connections are further discussed in Section 4.4.

Concept of hosting agency: While a dedicated hosting agency for the project in each country was not always effective, it was a more appropriate approach compared to the use of a single individual Focal Point only. For example, in the Indian Ocean region, representatives of the IOC noted that having a specific unit in the government designated as the lead entity provided a way to ensure continuity and allocate a budget to support implementation, which could not be provided to an individual civil servant. That was in contrast to their previous approach with the ISLANDS project (described in Section 4.4) of using an individual Focal Point in government, which implied a more limited capacity compared to a host agency and did not allow for budget allocation to an individual civil servant for project activities. However, interviews with representatives of nearly all hosting agencies in most regions also suggest challenges with this approach, where the hosting agency does not take ownership of their role, where champions are lacking, or where human resource capacity is so constrained that taking on additional responsibilities are not feasible. For example, in the Caribbean some disaster management agencies have approximately five professional-level staff members, some of the South Pacific Islands have no resident disaster management agency staff, and Myanmar staff report a skeletal staff overloaded with tasks. At its best, the position of host agency can bring some leverage to the agency in terms of having other agencies share their data; one example of this was provided by the Madagascar host agency which has found that acting as anchor to the project supported the integration of the agency into the development policy of other ministerial departments.

Level of intervention: The project was designed to focus on a national level of government. In many countries, such as in the Caribbean, this is appropriate as this is the level of government that controls national investments. In other countries, public investment decisions are largely made through local or metropolitan levels of government, who were not normally included in workshops and meetings. One exception was in Peru, where local stakeholders who participated in the national workshop were subsequently targeted for further capacity building. In countries where local decision-makers hold decision-making authority on budgets, but were not a target of the workshops,



the project would be unlikely to result in an impact on public investment. A stakeholder from Mauritius, for example, noted that there was a large gap between national policies and decisions made locally, especially in terms of land use, planning, and disaster management. In Myanmar, representatives found that there is little inter-departmental cooperation for budgets due to the multiple levels of regional and local budgets in the country. UNISDR staff feel that given limited project resources, it would not have been feasible to conduct activities at a national and local level.

Level of integration of Components 1, 2, and 3: Although the project made efforts to break down silos between government departments and agencies, project components were, to a large extent, implemented relatively independently of one other. While there was some overlap, often participants in the regional and national workshops for different components were not the same. Consultants were usually only involved in one component (for example, national disaster loss database training only), and often had little knowledge of the other project activities. Participants were often also only involved in one or two components, so it was difficult for them to fully understand the relevance of each component and link them to the ultimate objective. In interviewing stakeholders for this evaluation, it was clear that many stakeholders of all kinds had little understanding of the project components they were not directly involved with. This resulted in a silo effect within the project, which made it difficult to build on synergies between components. This seems to have persisted despite efforts to discuss the previous components in subsequent workshops (such as reviewing national Disaster loss database, risk profiles, and other tools in Component 3).

Similarly, the project design did not adequately account for the institutional silos present between the different government agencies involved in the different project components. Attempts were made to engage a range of these agencies in the workshops, but there was often little knowledge transmission between these agencies and the different components. In the Indian Ocean region, for example, some government stakeholders (in Mauritius and Seychelles) indicated they have, up to now, not received the outputs (such as country reports) created by the project. Country stakeholders interviewed in West Africa, the Caribbean, and the Indian Ocean region frequently did not understand the overall project, and were not aware what had taken place in the other components in their country.

Policy dialogue: The new tools and techniques introduced by the project were intended to be steps along the path toward incorporating DRR into national public investment and development planning systems. The bridge between these tools and change in the public investment system was recognized by the project as policy dialogue, which was incorporated into Component 3 through bringing together a range of government ministries at a national meeting (and this may have taken place to some extent in other Components with the mixing of government ministries at workshops and meetings). However, the emphasis on policy dialogue within the project was relatively minimal compared to its important function in integrating project activities into the practice of national governments.

4.1.2.2. Quality of project operational framework

Finding: The project operational framework was largely coherent but did not clearly outline activities that would bridge the tools and analytical exercises into legislative or administrative mechanisms. It also did not reflect well the key awareness-raising element of the project.

The project Operational Framework was included in the Contribution Agreement and outlined, in a logical and systematic manner, the objectives, activities, expected results, and indicators to measure the expected results. It was largely coherent, providing some contextual information which adds to an understanding of the activities.

There were a few important areas where the framework's coherence could have been enhanced which related to project design issues, and the experience of implementation, which are elaborated on in other sections.

Framework Objective 3: Building capacity for national public investment

The least clear aspect of the framework was Objective 3, which aligned to project Component 3. The activities described here were vague, and mentioning the specific tools and exercises which the project intended to introduce (risk sensitive budget review using DRR markers, CATSIM analysis, and probabilistic cost-benefit analysis), would have provided more clarity and transparency.

Even with this added information there would still have been a gap in this section of the framework in terms of outlining activities to enable the leap from these analytical tools and exercises, to setting the stage for changes in national public investment. It was not clear how the capacity building actions would be translated into change at the individual and institutional level. This reflected a somewhat incomplete approach to the final stage of the project to 'set conditions for increased public investments through legislation or administrative mechanisms'. During implementation of the project, some policy discussions with workshop participants were facilitated (not reflected as an activity in the framework), which began to address this aspect, but, as noted elsewhere, it is not clear that these were sufficient to make significant headway towards this goal.

Project intent

The framework also does not appear to be completely representative of what UNISDR indicates, in retrospect, was their actual intent behind the project. While capacity-building was strongly emphasized in the framework, and this was an important element of the project, staff have indicated that with the more complex tools, the intention was not really to build workshop participants' ability to actually use these tools. Rather, it was to raise awareness about these types of analyses, to demonstrate how data collected in national disaster loss databases could be used for these analyses, and to raise awareness about the true costs of disasters and the rationale for more public investment. For example, the May 2014 Steering Committee meeting noted that Component 2 "is regarded as a way to raise awareness amongst the governments, pointing out the cost of inaction. This component allows to a certain extent...understanding and using the models by the national level institutions...however, for more specialized capacity (such as statistics and risk modeling) partnerships with universities should be used and developed." This awareness-raising aspect, and encouraging shifts in attitude, was perhaps one of the most key elements of the project, mentioned frequently by stakeholders and during Steering Committee meetings, but was not well reflected in the framework.

Climate Change Adaptation

A final overarching gap in the framework was the CCA element. While the project was mentioned consistently as pertaining to country adaptation to climate change, the framework did not explain the added value of this project for CCA in particular.

4.1.2.3. Monitoring and evaluation arrangements

Finding: Essential elements of indicators and reporting were in place, though overall monitoring and evaluation arrangements were not well defined.

Initial project documents gave some general indication of UNISDR's intentions for monitoring and evaluation (M&E) of the project, with the most specific information being:

- ongoing monitoring activities would be undertaken during implementation by Programme Officers responsible for delivery of specific results and activities;



- additional scrutiny would be given to the project through external evaluations at the mid-term and final stage; and
- all programme monitoring, reporting and evaluation activities were set within the context of the UNISDR secretariat M&E Framework (this framework has since been replaced by a 2015 version).

Indicators to measure achievement of project results were also developed, outlined in the Objectives and Results Logframe annexed to the Contribution Agreement.⁸ However, these two components of general expectations and specific indicators were not linked by a comprehensive M&E plan or Performance Monitoring Plan (as suggested by the current UNISDR M&E Framework). The EU funding agreement for the project did not include a requirement for such a plan, but it would have provided clarity on monitoring, data collection, reporting, and how and when evaluations were to take place.

The original project document referred to both a mid-term and final evaluation being intended, but due to severe cashflow restraints experienced by UNISDR in 2014-2015 funds were not available to carry out a mid-term evaluation.

4.1.2.3.1. *Tracking indicators and reporting on results*

Quality of indicators: The indicators were by and large specific, measurable, and relevant. Useful information was added to clarify indicators that might be open to interpretation (for example, that an 'operational' Disaster Loss Database is considered one which is on the GAR virtual disaster data platform). Beyond outputs, some indicators sought to measure project outcomes, such as national strategies which reflect the knowledge and evidence produced by the project. This is appropriate, but interim measures were missing, such as whether an individual in the host agency was appointed responsibility for updating DesInventar website (repository to host national disaster loss databases), or whether additional data was entered in the year following the creation of the database. Another gap was having indicators that would measure the capacity development of individuals beyond the fact of their participation in workshops. Without this, it is difficult to confirm whether challenges with results may be attributed to the effectiveness of training, or whether institutionalization does not follow from these activities.

Tracking indicators: While the Logframe provided detail on the sources of information for the indicators, there was no systematic process in place to track indicators. Rather, for each report this data had to be collected in an ad-hoc manner. While much of the data could be gleaned from various places in reports, no comprehensive summary or snapshot of the indicator data was available. Some basic snapshot data for the project were unclear, such as how many unique individuals participated in training. UNISDR has an online 'e-Tool' database to track project results, but it is minimally used, and staff did not necessarily find it to be a useful management tool.

Reporting on results: As required by the Contribution Agreement, UNISDR provided narrative reports to the Steering Committee that included information on the achievements and results using project indicators. The Interim Reports for the project as a whole contained most of the information on activity-based indicators, and a discussion of preliminary outcomes. However, these outcome sections tended to focus more on products generated, and neglected a more meaningful analysis of to what extent capacity was actually being generated, and what happened in participating countries after training and/or data collection was completed. Reports also consistently stated that project activities were on schedule, while in reality significant delays were experienced in the Caribbean and West Africa regions.

⁸ The Operational Framework contained an original set of 15 indicators (of which 12 related to Components 1-3), which were subsequently revised to 25 indicators in the Logframe (of which 21 relate to Components 1-3). As the evaluation team was provided first with the original set, these were used as the basis for the evaluation matrix.

Other types of errors or over-optimism in reporting added confusion for those following reports, such as the 2nd Steering Committee report, which stated that 'data sharing is being carried out in Mali with Civil Protection, which hosts and maintains the loss database', and that work is ongoing for day-to-day collection and registration of losses (according to Civil Protection Representatives, it does neither). This report also stated that after the delay in the internal processing of the contribution Agreement between the World Bank and UNDP Barbados, the agreement had been signed and 'the activities are unfolding normally'. As described elsewhere, this agreement was never carried out, and as a result the training workshops for Component 2 did not take place in the Caribbean.

Reporting on challenges: If we assume the intent of project reports is to present project achievements, but equally important to reflect on challenges so that others may learn from this capacity-building experience, then it would have been valuable to frame these challenges more clearly in project reports. Numerous kinds of challenges are indeed reported in Steering Committee minutes and Interim Reports. However, the September 2014 Interim report had only one page on Challenges. In the Working Paper series, which are public documents, challenges were framed somewhat indirectly. For example, rather than stating that data quality was a serious concern throughout the region, the conclusion of the Southwest Indian Ocean review noted that 'in some cases, [Ministry of Finance] identified mistakes in the records' (p 42). The report for West Africa related to Components 1 and 2 had a small section on limitations, challenges, and lessons learned, but it is unclear if the limitations were overcome or if the lessons learned referred to what was done or what should have been done.

Documenting project evolution: It should be further noted here that, as with most initiatives, changing were made to the Operational Framework as the project evolved. This often reflects learning and adaptation, which is particularly appropriate for an initiative testing new tools and approaches. However, these changes should be documented so all stakeholders can understand the direction in which the project is moving. While it may have been understood by donor representatives, actual documentation for the constantly evolving project design and intent was sparse and generally inadequate to follow how, when, and what decisions were made to change project activities, approaches, or objectives.

4.1.2.3.2. *Informal monitoring and use of findings*

Informal monitoring: In practice, monitoring arrangements were largely informal, and UNISDR staff felt these were adequate to monitor implementation. Indeed, UNISDR staff had a large hands-on presence in the project, such that opportunities to gather informal feedback from stakeholders or make observations were many: National Platform meetings, regional and national training workshops or meetings, virtual or in-person technical support, and frequent discussions with project consultants and UNDP staff and other partners. This enabled staff to keep tabs on how implementation was going in multiple regions and respond as feasible (examples of project adaptation can be found in Section 4.1.2: Responsiveness of project management during implementation).

There was, however, no formal follow-up mechanism for supporting or monitoring progress in countries after project components were completed, other than ad-hoc support provided by the UNISDR staff to countries that initiated contact. This did not enable UNISDR to stay in touch with realities on the ground, especially in less active countries, and this may help to explain why staff views and expectations of the project are notably more positive than those of country representatives.

4.1.3. Responsiveness of project management during implementation

During implementation, project staff attempted to adapt the intended project activities as feasible based on feedback from country participants. These examples are described below. This section introduces the intended model for overall project management and the key implementation challenges requiring adaptation of project implementation.

4.1.3.1. Planned and actual management structure and project implementation

Finding: Overall coordination of the project was carried out as intended by the UNISDR Secretariat.

As planned, overall project management has been carried out by the Knowledge Management Section at the UNISDR Secretariat in Geneva, providing coordination, oversight, and support, in addition to directly carrying out some of the trainings and facilitating meetings. The original Project Description suggested that the nearest UNISDR regional offices would also take on a coordination role, or do so jointly with UNDP Country Offices. In Latin America and Asia the Secretariat received significant support from the UNISDR regional office. Other regional offices have participated in and were kept informed of the activities of the initiative in order to ensure coherence with the broader work of UNISDR in the various regions. The Project Description described the staff complement for the project. This included some portion of time from 9 international staff and 1 local staff, with 4 having 100% of their time allocated, two at 50%, and the rest at 25%. This was inadequate for the planned scope of the project of 40 countries and the complexity of intended outcomes. By all accounts the UNISDR team stretched themselves as far as possible to fulfill their mandate and project activities took place in the majority of planned countries. However, human resource constraints limited potentially important activities like undertaking more in-depth analysis of individual national circumstances, and providing more follow-up activities or ongoing support. As it was, UNISDR staff undertook this to the extent possible given these limitations.

4.1.3.2. Adaptive measures taken in response to stakeholder feedback

Finding: While not feasible to tailor implementation to every country context, adaptations were made during implementation of project activities based on stakeholder feedback.

Given the large scope of the project, staff did not find it feasible to tailor the project activities to the circumstances of each country. However, within limited human resource and time constraints, project staff made a number of responsive adaptations to project activities during implementation in response to requests from country stakeholders:

- After training for the CATSIM methodology in the Indian Ocean region proved to be too advanced and not relevant for government officials to understand, this activity was removed from the training workshops for other regions
- Extra trainings were provided as requested to Madagascar on probabilistic cost-benefit analysis (one day)
- In Mali, workshops and training materials were adapted to focus on a gap analysis of the existing disaster loss database to highlight the main areas of improvement that should be made for improving existing data



- As described in Section 4.2, project activities were significantly changed based on the Latin American context, where disaster risk databases, cost-benefit analyses, and budget tracking are already in use in some countries

4.1.3.3. Financial issues affecting project implementation

Finding: Financial issues within the control of the project were minor and did not have a significant impact on implementation. Two financial issues out of the control of UNISDR had a significant impact on the implementation of the project.

Financial management, in terms of timely disbursement and other aspects appear to have been well managed within the project. However, there were two financial issues outside of the control of UNISDR, requiring adaptation by the project team, which ultimately had a significant impact on the timely and full implementation of the project:

- a) migrations in UN accounting systems; and the
- b) failure of the World Bank and UNDP to arrive at a timely co-financing agreement in the Caribbean.

Change in UN administrative systems: During implementation of the project, UNISDR was affected by two migrations to new financial administrative system within the UN system; 1) the migration of the United Nations Office at Geneva to the new enterprise resource planning system Umoja; and 2) a new Integrated Management Information System for the United Nations Office for Project Services. This caused over USD\$1 million in UNISDR funds to be held 'in limbo' for over three months, causing an inability to disperse funds for the project. These migrations also created severe limitations in terms of the capacity to carry out procurement, travel, and contracting. Prior to this change, UNISDR was able to use the effective and flexible 'financial authorization approach' to disburse project funds (for example, to enable UNDP to contract consultants locally or pay for travel). Afterwards, this approach was no longer allowed. Rather, UNISDR had to manage all transactions remotely, creating, in the view of project staff, numerous inefficiencies.

UNDP/World Bank Caribbean issue: The second issue was specific to the Caribbean region. At the initial stage of the project, UNISDR, UNDP, and the World Bank entered into negotiations with the World Bank to co-fund Components 2 and 3 of the project in the region, and in which the UNDP was to be funded to have a large role in implementation. An agreement in principle was reached, but the legal offices of both UNDP and the World Bank identified such disparities in corporate administrative requirements, that severe delays were incurred in signing the agreement. While a work-around was eventually reached, it was too late for implementation of the project and the agreement was not carried out.

While negotiations continued, project implementation in the Caribbean was delayed by two years. In order to proceed with the initiative in the region, UNISDR accessed EUR 200,000 from the internal UNISDR Trust Fund (where contributions from donors are deposited) to fund Component 1, while Component 3 (for which activities were much reduced) was co-funded by UNISDR and UNDP. Thus, only Component 1 (data collection and creation of DesInventar database) was implemented in all countries. UNISDR felt that of the project components, the workshops for Component 2 could be most easily removed since other World Bank/Caribbean Catastrophe Risk Insurance Facility initiatives in the region have provide some related capacity building, so these were not carried out. Instead, UNISDR proceeded to develop the probabilistic and multi-hazard risk assessments and public summaries that were also done in participating countries in other regions. The regional workshop associated with Component 3 went ahead in Barbados in October 2016. Only two Caribbean countries, St. Lucia and Antigua and Barbuda, requested to proceed with their national workshops associated with Component 3 (which took place in December 2016).



4.1.3.4. Overall timeliness of project activities and outputs

Finding: Setting aside significant delays caused by issues outside of the project's control, project activities were generally delivered in a timely manner. However, the timeline overall may have been too short for a capacity building project of this nature.

Annexes to the Contribution Agreement include a Gantt chart with main activities and when they were planned to occur from January 2013 up until the original intended end of the project in December 2015. It showed an intent to stagger the various regions over time, and demonstrated a logical sequencing of in-country/regional events.

Compared to the timeline planned for in this original Workplan, project activities and outputs were delayed overall by about one year (up to early 2016). A one-year no-cost extension was granted by the funder in order to allow project implementation to be finished.

The majority of the delay was related to financial issues (described above) and regional circumstances (Ebola outbreak and political instability) out of UNISDR's control. The former delayed project activities in general, but particularly in the Caribbean (by two years), and the latter in West Africa (over one year).

This also caused variations in the pattern of activity roll-out amongst different regions, which may have caused some momentum to be lost. While some regions proceeded from Component to Component over a one year period punctuated by regional and national meetings, in West Africa the first workshop of Component 3 was conducted one year after the last workshop of Component 2, as regional workshops for Component 3 were delayed from late 2015 to late 2016.

In some cases, delays caused later components to be rushed, such as Component 3 in West Africa, Asia and the Caribbean, which took place over a 4-6-month period. While not associated with a delay, the production of Working Papers in the Indian Ocean region was also rushed (being produced solely by consultants without a collaborative process with the countries in question), in order to be ready for the Sendai conference in 2015.

While stakeholders generally felt that the timeline of the sequencing of activities was sufficient, the overall length of project planned for a three-year period was likely too short for a comprehensive capacity building project of this nature. This is discussed further in Section 4.2: Capacity Building.

4.1.4. Financial management

This section provides a broad financial outline of the project.

4.1.4.1. Financing plan

As described in the Contribution Agreement between UNISDR and the EC, the cost of the project eligible for financing from the EC was EUR 10,860,122, of which EUR 7,000,000 would be provided by the EC. The document did not outline where the remaining EUR 3.86 million would be coming from, although in the early stage of the project it appeared that it would come from co-financing of activities by the World Bank in the Caribbean. Ultimately, it came from the UNISDR Trust Fund, as explained in the section below. It is also not clear from the project documents as to what the total expected costs were (that is, if there were non-eligible costs that were not described). The total cost was likely higher, however, as this amount did not reflect additional financial

contributions ultimately provided by UNDP regional or national partners in Asia, the Caribbean, and West Africa. As these were not tracked by UNISDR, their total amount has not been provided to the Evaluation Team. While it is likely that they were a small fraction of the project total, these funds were nonetheless essential and understanding their scope would be useful for future project planning.

Of the EUR 10.8 million budget, 73%, or EUR 7.9 million, was allocated to salaries and associated human resource costs of UNISDR staff and consultants (this includes Component 4, which is outside the mandate of this evaluation). By result area, between EUR 2.3 and 3 million was allocated each for Components 1-3 (updated information on expenditures by Component and region was not available):

Table 6: Total cost of project per result area

Result areas	Total Cost of the Action (EUR)
1. Component 1	2,305,716
2. Component 2	3,017,722
3. Component 3	2,980,935

A final financial report was not available at the time of this evaluation. The most recent financial report from June 2015 indicated that only about 50% of funds budgeted for consultants and technical support had been expended, reflecting the temporary halt in project activities due to external financial issues described below. At the same time, 90% of budgeted staff time had been expended, supporting the suggestion that human resources allocated were not sufficient for the overall project.

4.1.4.2. Cost-effectiveness

Finding: The project incorporated several design elements that contributed to cost-effectiveness.

Certain aspects of project design lent themselves to cost-effectiveness. Taking a regional approach in general was important from a cost-effectiveness viewpoint. The trainings were structured so that more technical components (such as Component 2) would be presented in a regional workshop rather than a series of national workshops, since the group of participants was smaller and more specialized. However, in regions where there were extreme differences in capacity amongst participating countries, a regional approach made it more difficult to tailor the project to specific countries, and thus may have resulted in a reduction of effectiveness (this is further discussed in Section 4.2: Capacity Building).

Providing remote support from the UNISDR Secretariat was another approach that did not add additional travel costs while being highly appreciated by stakeholders.

While not described in the initial Project Description, using local or regional consultants to undertake historical data collection in countries was likely a cost-effective measure in terms of advancing project activities where time or human resources capacity was particularly limited. However, cost-effectiveness was also achieved where the bulk of the data collection was undertaken by government staff, with some support from a consultant.

Likewise, the in-kind assistance of UNDP in logistical arrangements was an essential cost-effectiveness measure, given that UNISDR does not have the resources for an in-country presence.

4.1.5. Conclusion

Relevance: Given the evolving approach of the international disaster management community towards incorporating disaster risk considerations into development, the objectives of the project are relevant to beneficiary countries as well as in the context of the Hyogo and Sendai Frameworks. A large majority of country representatives confirmed that they view the tools and activities introduced by the project to be relevant and potentially useful, including the need for capacity building on these subjects, and dialogue between disaster management agencies and other entities such as Ministries of Finance and Planning. The new indicators established for the Sendai Framework, which require reporting on data that could be captured in national disaster loss r databases, suggest increasing relevance of this project tool which may create a further 'pull factor' for participating countries to begin fully implementing these tools.

Design: The design of the project came from within UNISDR in consideration of gaps and needs at country level expressed through Hyogo Progress Reports and other country experiences, but came across as a 'top-down' approach as it did not involve direct consultations with stakeholders with the exception of those in Latin America. The project design is based on a logical approach with components that would build on and complement one another. However, the project design would have benefitted from a stronger focus on the needs of countries with the weakest capacity – that is the LDCs and SIDS – which were the majority of beneficiary countries. For a project that was introducing new or relatively new approaches, the scope of countries was overly ambitious, and the timeline was too short for an ambitious capacity development initiative.

Certain design elements posed both advantages and disadvantages, while some posed particular challenges that would need to be considered for future initiatives of a similar nature. A design element that posed advantages and disadvantages was the use of a regional approach. This encouraged sharing of information within a region, but made it difficult to tailor activities to the wide range of country capacities in a single region. The project contained design elements to help overcome institutional silos by encouraging dialogue between Ministries of Finance and Planning and disaster risk departments, however, there was an ongoing challenge of integrating project components during implementation so that institutional silos become less of a barrier to knowledge transfer between different components of the project. A related challenge to project design included policy dialogue. While policy dialogue was an integral component of the project in terms of reaching the objectives, it had a relatively small emphasis in project activities. Notwithstanding the creation of relevant information assets (national loss databases, risk profiles and risk maps etc.), the design was found to rely heavily on the assumption that capacity building at an individual level would lead to increased institutional capacity. While capacity building at the individual level is a worthy starting point of capacity building process in resources constrained contexts. Further consideration could be given to the transfer mechanism by which this could become transformed into institutional capacity.

Project implementation: Overall coordination of the project was carried out as intended by the UNISDR Secretariat. The UNISDR team adapted implementation within countries and regions as possible given the small size of the project team. Participation of regional UNISDR offices was realized in Latin America and Asia. However, it was not feasible to adapt all project components to every country context.

UNDP and other partners carried out an important supportive role in project implementation.

Financial issues related to the migration to new financial administrative systems, which were out of the control of the project, had a large impact on the overall timeliness of project activities.



4.2. Capacity Development Effects

The Evaluation ToRs call for an assessment of the quality and impact of the initiative's capacity development and/or strengthening results at the individual or institutional level. The ToRs also state that the RAC approach suggested by the EC should be followed. Accordingly, this section provides an assessment of project performance against the expected project results in the area of capacity building, while presenting findings of the adapted RAC approach that was used.

The assessment highlights general progress towards expected project results,⁹ including early signs of results achieved (given that the project was just closing at the time the final evaluation was conducted). Detailed findings are presented for three components, corresponding to the initiative's three specific capacity development objectives, namely:

- Building the capacity to account, value, and analyze disaster loss through the development of disaster loss database.
- Building the capacity to assess and understand disaster risk through the actual development of probabilistic risk assessments for the countries, which will allow the construction of Hybrid Risk Models.
- Building capacity to incorporate CCA and DRR into the country's national public investment and development planning system.

The assessment of the initiative's capacity development goes beyond measurement of performance against the expected results described at project inception; it also aims to assess capacity building effects along a continuum ranging from awareness raising at the individual level to broad and deep transformation at the institutional level. Consequently, the main focus is on changes in capacity at individual and institutional levels, taking into account the characteristics of the enabling environment in which capacity development interventions were undertaken.

4.2.1. Building capacities to account, value, and analyze disaster loss through the development of disaster loss databases

Capturing the composition, spatial distribution, and impacts of disasters is at the heart of the UNISDR strategy to address disaster risks and find solutions to reduce populations' vulnerability. Disaster loss databases are considered the first step to generate the information necessary for accurate risk assessment and to inform public policy in CCA and DRR. Several global loss databases exist – both public and private – but national databases are particularly relevant for collecting data beyond the biggest disasters and insured assets. The cumulative impact of smaller disasters has devastating effects that become more tangible with proper data collection.

The expected results defined for Component 1 were as follows:

- Expected result 1.1. Creation and/or update of national disaster databases in 40 countries.

⁹ The Evaluation Team has used the expected results as formulated at project inception as a baseline. However, where relevant, the pertinence of the expected results as originally formulated is put into perspective. See section 4.1 above regarding the relevance of the expected results as originally formulated.

- Expected result 1.2. Capacity and infrastructure built in the country to operate and analyze or reinforcement of the process of institutionalization disaster loss databases in approximately 40 countries.

In order to build the capacity and infrastructure necessary to operate, analyze, and institutionalize disaster loss databases in the beneficiary countries, the initiative set out to implement a common set of activities: i) national training workshops, ii) historical data collection exercises, and iii) analysis of historical risk trends and patterns and estimation of recurrent economic losses.

The national training workshops were held in all the beneficiary countries reviewed and in a regional setting in the Pacific. They were organized and conducted in close collaboration with the implementing partners (UNDP, CorpoOSSO, CIMA, IOC, Asian Disaster Preparedness Centre (ADPC), Pacific Islands Applied Geoscience Commission (SOPAC), and convened three groups of participants:

- Staff members of the host institution (who were meant to operate the system in the future),
- Data collectors for the historical research phase (consultants or government staff)¹⁰, and
- National stakeholders - usually representatives of those institutions that either can make use of the information or can be information providers.

The historical data collection exercises were typically undertaken shortly after the initial national training workshop. Support or strategies adopted for institutionalization varied greatly across beneficiary countries. In some countries, virtually no institutionalization support or strategy as such could be identified, while in other countries the process was more clearly planned and implemented.

4.2.1.1. Creation and/or update of national disaster databases in 40 countries

A single indicator was identified to track the performance of the initiative at this level: the number of disaster loss databases built by the beneficiary countries. The initiative aimed to contribute to the creation and/or update of national disaster databases in 40 beneficiary countries. **At project closure, the initiative had supported the creation or update of loss databases in 49 countries** (for a total of 27 databases; the Pacific database covers 22 countries). Table 7 provides an overview of the beneficiary countries in which loss databases were updated or created. The extent to which the loss databases were built by the beneficiary countries reviewed during the evaluation is discussed below.

Table 7: Beneficiary countries where loss databases were updated or created through initiative support

Region	Countries
Indian Ocean	Comoros, Mauritius, Madagascar, Seychelles, Zanzibar
Caribbean	Antigua and Barbuda, Barbados, Dominica, Grenada, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines
Asia	Cambodia, Pakistan, Myanmar, Mongolia, Lao PDR, Bhutan

¹⁰ In the Caribbean, the consultants hired did not attend the workshops.

West Africa	Mali, Niger, Togo, Senegal, Sierra Leone, Burkina Faso
Latin America	Paraguay and Uruguay
Pacific	One regional database including : American Samoa, Cook Islands, East Timor, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna

TOTAL COUNTRIES: 49

4.2.1.2. Capacity and infrastructure built or reinforced in the country to operate and analyze disaster loss databases in approximately 40 countries or territories

The following indicators were identified to track performance against this result:

- Number of trained personnel who are able to operate disaster loss databases,
- Number of government staff who are able to use and analyze disaster loss databases information and software, and
- Number of hosting national agencies operating or in possession of a disaster database.

One national workshop took place in every beneficiary country except in the Pacific, where one regional workshop was conducted. The **number of personnel trained varied from one beneficiary country to the other. However, data collected by the Evaluation Team indicated that between 20 and 40 individuals were trained per country¹¹.**

The number of individuals who participated in the training workshops cannot be interpreted as the *number of personnel or government staff able to operate disaster loss database and/or able to use and analyse disaster loss database information and software*. The initiative did not have a mechanism in place to test whether the workshop participants did in fact acquire the capacity for data entry or analysis. Through project documentation review and numerous interviews with a wide range of project stakeholders, the Evaluation Team gathered the evidence presented below on i) capacity for data collection and data entry for the loss database, ii) capacity for using and analyzing loss database information, and iii) institutionalization of the disaster loss database within the national hosting agencies.

4.2.1.2.1. Capacity for data collection and data entry for the loss database

Finding: Overall, the remote support approach has proven to be effective and efficient both from a data quality perspective and a capacity building viewpoint.

¹¹ The number of participants from Pacific countries was much lower because the training was provided in a regional context. In several cases, the list of participants was not available.

The review of the training material and interviews with stakeholders provided evidence that the workshop delivered under Component 1 included minimal specific training on data collection and data entry into the DesInventar tools and methodology.¹²

In West Africa, Indian Ocean, Caribbean, Pacific, and Asian countries, remote support was provided by the UNISDR staff to the historical data collecting teams following the training workshops. This was to further strengthen the capacity of the national data collecting teams as well as to ensure the quality of the national loss database being developed. This remote support included i) responses to all questions or difficulties as they arose as well as ii) structured feedback, in the form of “gap analysis” on the quality and coverage of the data collected and entered in the loss database. The gap analysis approach by which the historical data collecting team was provided detailed and exhaustive feedback on the status of the database has proven to be a successful one. It included a well balanced mix of encouragement where good results were obtained and detailed guidance in areas needing improvement. In Senegal, Mali, and in the Caribbean and Indian Ocean region, members of the data collecting/entry teams interviewed have praised the support received by UNISDR in that regard and assert that it has significantly fostered their data entry capacities. Although important gaps remain, the historical data collecting teams’ response to the gap analyses has significantly improved the quality and number of entries in the loss databases (see further details on this in section 4.3 below).

Although the number and quality of entries vary significantly from one beneficiary country to another, the very existence of the loss database for each beneficiary country (region in the case of the Pacific) indicates that in a number of the beneficiary countries, a small data collecting/entry team acquired the capacity to collect data and perform historical data entry. However, for a majority of countries, either international consultants were recruited (Caribbean) to do the data collection work or capacity was primarily built at the regional level (Pacific). As a result, in these countries, government staff from the national host agencies did not end up gaining the relevant capacity.

Finding: One of the initiative's main challenges in capacity building for data collection and data entry relates to the very low involvement of the national host agency in this process in the majority of beneficiary countries reviewed.

In the great majority of beneficiary countries reviewed, such as in the Seychelles, Senegal, Mali, the Caribbean countries, and in the Pacific, the historical data collecting/entry team was predominantly led by national, regional or international consultants. In several instances host institution representatives have reported that they had not been specifically trained for data entry, that the relevant software had not been installed on any of the computers within the host institution, or that the host institution did not have access to the password protected administrative module, such as in Senegal, Mali and Saint Lucia. It should be highlighted here that change in capacity is highly vulnerable to the problem of staff turnover (in some cases, there was, understandably, a single participant from a given ministry). Staff could have been trained and software could have been installed within the host institution but the new staff might not have been briefed regarding the training or the tools available within the institution.

In addition, in many cases, the individuals that would in due course be responsible for data collection within the host institutions had not been identified before the training took place. This implies that a “learning by doing” opportunity was not taken advantage of by a number of the host institutions hoping to eventually operate the loss database. The majority of beneficiary countries had very low baseline capacity (lack of human resources or technical knowledge within the host institutions combined with competing priorities) and might not have been able

¹² Some data collecting teams met claimed to have been informally trained for data entry through an informal sessions that lasted about one hour.

to complete the work within the expected timeframe, if at all. In contrast, in a minority of countries, such as Madagascar, Niger and Cambodia, government staff have been taking on the responsibility of loss data collection and entry.

Finding: Recruitment of international consultants to undertake historical data collection and entry did not prove to be a rewarding strategy for creating data collection and data entry capacity in beneficiary countries reviewed during the lifespan of the initiative.

In countries where the consultants were recruited nationally, such as West Africa, Asia and Indian Ocean host institution support in identifying sources of data and facilitating access to various ministries was emphasized. In such cases, national structures were, at a minimum, involved in identifying data sources and thus facilitated, to some extent, the process of historical data collection. Where international consultants were hired to do the data collection without significant collaboration with national institutions, as in Saint Lucia, the result was challenges in getting access to data and ultimately an important gap in data collection.

4.2.1.2.2. Capacity for using and analyzing loss database content

A review of training material as well as discussions with stakeholders in all regions indicated that all workshop participants received training on how to access the DesInventar database and use the DesInventar tool and methodology to interpret/analyse the information found in this database. However, the actual number of participants who are able to use disaster loss databases and analyse its content is challenging to assess. The initiative did not have a mechanism in place to test whether the workshop participants did in fact acquire the capacity to operate the disaster loss database and/or to understand the background data and related analysis.

The fact that only a small percentage of workshop participants could reasonably be reached by the Evaluation Team precludes a very comprehensive analysis of effective capacity building in that regard¹³. At the time the evaluation was conducted, only a fraction of the workshop participants interviewed reported having had the opportunity or having the capacity to use and analyze loss database content. However, a wide range of situations was identified:

- Some of the participants were not yet aware that the loss database had actually been populated in their country,
- Some participants knew of the existence of the national database but did not know how to access it,
- Some participants knew of the existence of the national database, did not know how to access it, but knew who to ask to get information from the database (consultants or others within government),
- Some of the participants knew of the national database and knew theoretically how to access it, but had not yet used it,
- Some participants had been using the national database to extract information relevant to their work.

Stakeholders who reported using data from the national disaster loss database mentioned a variety of concrete purposes such as:

- For reporting purposes at the national or regional level (Mali, Pacific),
- To inform national strategy for DRR (Niger, Madagascar),

¹³ In the countries visited, the percentage of stakeholders interviewed is estimated at about 20% of the beneficiaries or an estimate of 5% of the total number of direct beneficiaries reached by the initiative. However, the participants interviewed were considered the closest to the initiative (e.g. representative from the host institutions, ministries of planning and/or finance, ministries of environment, etc.) and were identified as potentially more knowledgeable regarding the implementation and results of the initiative.

- To develop detailed national profiles in the context of project proposals discussed with financial and technical partners (Mali, Niger, and Madagascar), and
- To prepare official statement/press release on historical losses at the national level (Niger).

In the majority of cases, the workshops were conducted before the creation of a first version of the disaster loss accounting database at the national level. This implies that the majority of participants trained to use and analyze loss database content were not directly exposed to data and analysis directly relevant to the country. Subsequent workshops conducted in the context of the implementation of Component 2 and 3 did provide the opportunity to showcase analysis that could be done following the historical data collection phase, but these workshops did not include hands-on training sessions on the use of the database with nationally relevant content.

Institutionalization of the disaster loss database within the national hosting agencies

At project closure, institutionalization of the loss database had not reached its full potential in the vast majority of beneficiary countries reviewed by the evaluation. However, the institutionalization of disaster loss accounting has been considered by the management of the initiative as progress along a continuum, and it should be assessed as such. This institutionalization process may be seen as starting with an increased level of awareness regarding the necessity of better understanding disaster loss and damages at the national level and culminating when accurate risk assessments based on loss data are systematically used to inform public policy in CCA and DRR. At project closure, each beneficiary country was at a different point on this continuum.

Finding: The majority of representatives from host institutions interviewed mentioned an increased level of awareness regarding the critical importance of national loss data, directly attributable to their participation in the activities of the initiative.

Training regarding the loss database was not restricted to the workshops conducted under Component 1 of the project. Loss databases were also presented and discussed in the context of training and workshops conducted under components 2 and 3. Representatives from the planning agencies and finance ministries that were typically more involved in Component 3 of the project were also introduced to the loss database.

Finding: In terms supporting the creation of a suitable enabling environment for the institutionalization of the loss database and its use as a planning tool, raising the awareness of government representatives with planning responsibilities can be considered a significant achievement by the initiative.

Analysis of data entries in the DesInventar website, repository of national disaster loss databases provides insight on updates made to the database during the period following the historical data collection phase supported by the initiative. Table 8 below presents data on the period during which entries were made into the database for the countries reviewed for the final evaluation.

In the majority of beneficiary countries reviewed, data collection was limited to a relatively short period (a few months), corresponding to the period during which the historical data collection teams were under contract, and no data have been entered since. Host institutions mentioned their limited number of staff (Indian Ocean, West Africa, Caribbean), a lack of technical capacity to maintain the database (Comoros, Mali and Senegal), and internal organizational challenges (Niger).

Finding: A minority of host institutions within the beneficiary countries reviewed during the evaluation had institutionalized the data collection/data entry processes necessary to maintain the loss database.

Table 8: Maintenance of the DesInventar database in beneficiary countries reviewed during the final evaluation

Region/Country	Databases build or updated by initiative	Period of data entry dates	Period of data entry
Indian Ocean			
Madagascar	Yes (2242 entries)	11-10-2013 to 11-05-2015	1 year and 8 months
Mauritius	Yes (3631 entries)	29-10-2013 to 11-07-2014	9 months
Seychelles	Yes (664 entries)	27-11-2013 to 10-02-2014	4 months
Asia			
Cambodia	Updated (8851 entries)	29-10-2012 to 23-01-2017	4 years and 4 months
Myanmar	Yes (3508 entries)	13-11-2013 to 12-01-2017	3 years and 1 month
West Africa			
Mali	YES – UPDATED (3765 entries)	28-01-2011 to 03-10-2012 and 17-10-2014 to 15-02-2015	20 months and 4 months
Niger	Yes (3700 entries)	13-08-2014 to 30-11-2014	4 months
Senegal	Yes (7493 entries)	02-09-2014 to 14-01-2015	5 months
South Pacific			
22 countries	Yes (1938 entries)	05-08-2010 to 30-11-2015	5 years and 8 months
Latin America			
Mexico		N/A	
Peru		N/A	
Caribbean			
Antigua and Barbuda	yes (503 entries)	08-09-2014 to 09-11-2014	3 months
Saint Lucia	yes (223 entries)	27-08-2014 to 13-11-2014	4 months

However, Cambodia, Myanmar and the Pacific region have been maintaining the loss database over a significantly longer period. The Pacific region and Cambodia had already started to use the loss database prior to the implementation of the initiative, highlighting the progressive way in which capacities are being built. In these cases, the initiative supported consolidation of the institutionalization process through further targeted capacity development.

A number of host institutions in other beneficiary countries reviewed, such as Madagascar and Niger, reported that some capacity now exists as a result of the implementation of the initiative, and that they hope to resume data entry shortly. For example:

- Niger is currently working on the development of a decentralized approach to data collection and data entry. In fact data has been collected for the years 2014-2016 but has not yet been entered in the system.
- In Burkina Faso, more than 20,000 records have been collected and shared with the auditors (although not yet online in the national disaster loss database).
- In Madagascar, the update of the National Strategy for Risk Management and Disaster Risk Management has prompted DRR stakeholders to improve the organization of data collection, risk assessment and vertical (between administrative) and horizontal information (between sectors/thematic areas) exchange in order to facilitate decision-making at all levels.
- Saint Lucia is seeking additional financing/support to upgrade its historical loss data.

Finding: The initiative did not develop an explicit strategy with specific steps for fostering institutionalization of the loss database.

The ownership of the initiative within the host institutions and, more specifically, the process of capacity transfer between the consulting teams responsible for historical data gathering and the host agency that will ultimately be responsible for day to day collection was not detailed in any strategic way by the initiative. The consultants hired under Component 1 did not have mandates related to capacity transfer to the host institution. At the project design stage, it was expected that the process of institutionalization within host institutions would be, to a large extent, supported by UNISDR implementing partners working with host institutions in the field, namely UNDP. To a large extent this support did not materialize sufficiently. (See section 4.1.4.1, below, on this.)

4.2.2. **Building capacity to assess and understand disaster risk through the development of probabilistic risk assessments for the countries, which will allow the construction of hybrid risk models**

While historical losses can explain the past, in themselves they do not necessarily provide a clear and sufficient guide to the future. Probabilistic risk assessment simulates future disasters which, based on scientific evidence, are likely to occur to address the limits of historical data. Probabilistic models "complete" historical records by reproducing the physics of the phenomena and recreating the intensity of a large number of synthetic events.

Component 2 was designed to bridge the gap between loss data collection and the incorporation of CCA and DRR into national public investment and development planning systems. The expected results were as follows:

- Expected result 2.1 Development of comprehensive, multi-hazard, probabilistic risk assessments in approximately 75% (about 30) of the beneficiary countries/states.
- Expected result 2.2. Capacity built in the country to improve, operate and analyze probabilistic risk assessments.
- Expected result 2.3. Development or improvement of national probabilistic hybrid risk models and assessments, covering both extensive and intensive risks in 30 countries/states.

These main expected results were reformulated and presented in the third steering committee report, as follows:
i) to develop the capacity required in order to construct and/or improve in a participatory way a set of initial datasets

on exposure and vulnerability for the countries of each region, ii) to obtain a set of probabilistic risk profiles at the end of the exercise with the help of a specialized modelling organization (academic or commercial depending on the region), and most importantly iii) to leave the country a good understanding of the process of building a probabilistic risk assessment, what are the results of these risk assessment and how these results should be interpreted and applied in the design of risk management strategies.

It was clarified by the implementation team that the trainings themselves and the methodology used would not allow government representatives to become expert risk modellers or, to use models at the local level or to directly assess specific investments at this particular stage. Rather, this component was seen as a way to raise awareness amongst the governments by providing insight on the cost of inaction, developing a basic understanding of the process and of where such information could come from and finally to understand how and when to use existing disaster risk assessments.

This second component was structured as a regional effort, through a series of workshops. Three workshops took place in each beneficiary region (Indian Ocean, West Africa and Asia).

4.2.2.1. Capacity built in the country to understand the process of building a probabilistic risk assessment, to interpret the results and to apply them in the design of risk management strategies

The following indicators were initially identified to track the performance of the initiative at this level:

- Number of trained personnel who are able to produce a hazard-specific risk assessment
- Number of Government staff who are able to read and analyze risk maps and probabilistic risk measures

However, given the clarifications provided above, better indicators could be related to i) the number of Government staff who gained an understanding of the probabilistic risk assessment process and ii) the number of Government staff who gained an understanding of how and when to use probabilistic risk assessments.

Fifteen beneficiary countries (five in West Africa, five in Indian Ocean, five in Asia) benefited from the support of the initiative to build capacity in this area. Given the regional approach and given the specialized profile required from the participants, the number of workshop participants from each beneficiary country was limited to three or four.

Table 9: Beneficiary countries receiving training under Component 2

Region	Countries
Indian Ocean	Comoros, Mauritius, Madagascar, Seychelles, Zanzibar
Asia	Cambodia, Sri Lanka, Myanmar, Mongolia, Lao PDR
West Africa	Mali, Niger, Togo, Senegal, Burkina Faso
TOTAL COUNTRIES: 15	

During the trainings participants were familiarised with the concepts of loss and risk, methodologies for risk assessment, and understanding on the general steps for assessing risk, the use of DesInventar and the CAPRA platform, as well as with the importance of information, expertise and inter-institutional and multidisciplinary work. Overall the need and advantages of measuring risk retrospectively (with an empirical approach) and to measure risk prospectively (with a probabilistic approach) were explained.

Finding: The adoption of the regional approach for the implementation allowed more countries to be reached by the initiative and allowed countries to share experiences, successes and challenges. However, it also created a number of challenges in terms of limited reach, reduced relevance of the training to the participants and reduced opportunities to tailor the delivery of the workshop to the baseline capacities of each country.

- **Limited reach** in terms of the number of participants from each country (including a certain level of turnover among participants from one workshop to the other) with implications in terms of reducing capacity development effects.
- **Reduced relevance of the training for the participants** as the types of hazards that are relevant in a country may not be that relevant for another country in the same region. A minority of stakeholders interviewed noted that the fact that hazards not relevant to country were discussed reduced interest. Efforts were made to ensure that the content of the training would be relevant for all beneficiary countries within a region and that a least one relevant hazard for each country was explained and its hazard and risk assessment processes developed.
- **Reduced opportunities to tailor the delivery of the workshops based on baseline capacities of each country.** The disparities in terms of national baseline capacity within the regional groupings was important (e.g. Comoros had lower capacity than the rest of IO, in Niger the capacity of the host institution was significantly enhanced through the in-house support from UNDP and through the recruitment of a highly specialised consultant compared to the rest of West Africa). Trainers made efforts to adapt the level of the workshop to the participants but could understandably not adopt an optimal approach for each of the participating countries.

Finding: The hands-on approach was a unique model compared to the typical approach undertaken in this field.

Risk assessment work has oftentimes been undertaken without the participation of national stakeholders directly. The approach in this initiative was adopted in recognition of the fact that for this capacity building process to be effective and sustainable, and for the results to be understood, accepted and acted upon, countries have to be the drivers of risk assessment. The evaluation shed light on a few cases where the implementation of Component 2 demonstrated how this approach could be successful in generating the type of interest sought.

- In the Indian Ocean region, interest in the probabilistic hazard and risk assessment topics was so great that representatives from Seychelles found a way to fund and hold a one-week training course on the specific hazards relevant for the country. This was a clear continuation of the process started under the initiative and had institutional support from UNISDR. All participants were staff from DRDM Seychelles, thus enhancing institutional capacity. The participants felt that this training, tailored to their context and needs, was more relevant to them.
- Myanmar demonstrated a similar interest in sharing knowledge and results within the relevant national institutions. However, there was limited capacity to respond to this demand and consequently it is not clear how the learning and interest generated through Component 2 could be sustained.

- In Niger there is an interest to pursue the work done in other regions of the country and to perform risk assessment for other hazards (storm water & droughts in particular) than the ones explored in Component 2.

Nevertheless, a minority of stakeholders interviewed did not understand well the objectives of this component and perceived the exercise not as a capacity building effort but as a contribution to a UNISDR process, aimed at providing information in order to improve data on exposure based on the GAR. This minority felt that the activities had been implemented without ensuring their understanding of their direct relevance or concrete application in their context.

Finding: Although the trainers understood that capacity would differ across regions, countries and participants, they did not anticipate that the content of the training would be as challenging for the participants as it actually was.

The workshops were often not well adapted to participants' baseline capacity. For most of the participants, this was their first exposure to probabilistic risk assessment and some of the concepts and methodologies were totally new.¹⁴ A number of participants from West Africa candidly reported that although they understood some of the main concepts and messages, a number of aspects of the training were too complex for them. This was compounded by the fact that in West Africa and to some extent in the Indian Ocean, the training was not delivered in a language that could be understood by the participants (with less than adequate live translation according to the majority of stakeholders), or, as in the case of the Caribbean, participants had difficulty understanding the presenter's accent. During implementation, trainers made efforts to adapt the workshop content and pace to the participants' level (how they absorbed the information). The consultants' work also had to be adjusted by the trainers as they understood better the availability of the data in different countries.

4.2.2.2. Capacity developed in order to construct and/or improve in a participatory way a set of initial datasets on exposure and vulnerability for the countries of each region

Finding: At the national level, very little has been achieved in terms of capacity development for the construction or improvement of datasets on exposure and vulnerability.

For all beneficiary countries of the initiative, national probabilistic risk profiles and relevant risk maps were developed. In all cases, a low resolution was used to conduct risk assessment based on population indicators (proxy). Exposure information from GAR 13 (5 km x 5 km resolution) were used in the Indian Ocean and information from GAR15 (5 km x 5 km resolution) were used in Asia and Africa. In addition, in a number of countries, it was possible to collect and use new exposure datasets. In Indian Ocean and in Asia, subnational exposure information were also used.

Results of Component 2 were deemed good despite its low resolution information which cannot be used for local planning. However, trainers and technical partners involved in the implementation of this component have made

¹⁴ According to the trainers, there were some exceptions, mainly in Asia and the Caribbean. Although this component was not implemented in the Caribbean, the topic was lightly presented and discussed in the context of Component 3 in that region.

clear that most of the inputs from the national participants, including local consultants were not useful and, to a large extent, the external risk assessment team had to come up with proxies of exposure.

Table 10: Risk assessment and new exposure datasets in countries reviewed during the final evaluation

Region/Countries	Probabilistic risk assessments and maps built (by hazard)	New exposure datasets provided
Indian Ocean		
Madagascar	earthquakes and tropical cyclones	✓
Mauritius	earthquakes and tropical cyclones	✓
Seychelles	earthquakes and tropical cyclones	✓
Asia		
Cambodia	earthquakes, tropical cyclonic winds and riverine floods	✓
Myanmar	earthquakes, tropical cyclonic winds and riverine floods	✓
West Africa		
Mali	riverine floods	X
Niger	riverine floods	✓
Senegal	riverine floods	X

Modeling riverine flooding in West Africa

A highly relevant hazard to assess in the West African region is riverine flooding. Unfortunately, it was also among the most challenging of hazards to assess. This created difficulties in West Africa, where baseline capacity to undertake this type of work was the weakest. In Mali and Senegal, the consultants could not undertake the work as intended for Component 2. There was a lack of clarity in terms of what data should be collected or how to do it within the budget and timeframe. Workshop participants highlighted their disappointment upon realizing that the national consultants could not provide data to perform analysis with a higher level of resolution for their countries.

Meanwhile, excellent results were achieved elsewhere in the region. The national consultant in Niger provided data that permitted validation and verification of various aspects of the flood hazard model developed by CIMA Foundation, as well as a much more detailed local level probabilistic flood risk assessment. Two key success factors were noted in Niger: i) the strong capacity of the national consultant, who was an expert in the field and thus easily grasped what was required, and ii) the support from UNDP-Niger that co-financed the purchase and installation of material required to collect the necessary data.



4.2.3. Building capacity to incorporate CCA and DRR into the country's national public investment and development planning system

This component of the initiative was structured as a combination of i) national and regional workshops and ii) country studies conducted at the national level. The activities that were conducted in the different regions for this component are shown in Table 10. The expected results for Component 3 were as follows:

- Expected result 3.1. Support provided to beneficiary countries in the formulation and calculation of an optimal portfolio of DRR and CCA investments.
- Expected result 3.2. Capacity building to beneficiary countries to actually incorporate CCA and DRR into the country's national public investment and development planning system.
- Expected result 3.3. Public investment planning, land use, development, CCA and DRR plans in most of the target countries informed by evidence on recurrent losses, probable future risks and on the assessment of the costs and benefits of DRR
- Expected result 3.4. A measurable increase of National and sector-based public investment contributing to a medium term and sustainable reduction in disaster risk and to adaptation to climate change in the majority of target countries.

This section assesses the capacity building effects of Component 3 by examining project achievement related to expected results 3.1 and 3.2. Table 11 below describes how this component was implemented in each of the beneficiary regions.

Table 11: Activities conducted in each region under Component 3

Countries	Activities
Latin America	<ul style="list-style-type: none"> • 1 inception workshop, • 3 regional workshops (including one on the organization of the work) • 7 national workshops (one in each beneficiary countries) • 7 country studies (baseline analysis, & case studies)
Indian Ocean	<ul style="list-style-type: none"> • 1 inception workshop • 2 regional workshops • 5 national workshops (one in each countries) • 5 country studies (baseline analysis, risk sensitive budget review & CBA case studies)
West Africa & Asia	<ul style="list-style-type: none"> • 1 regional workshop, • 5 national workshops (one in each countries) • 5 country studies (mostly baseline analysis & risk sensitive budget review)
Caribbean	<ul style="list-style-type: none"> • 1 regional workshop • 2 national workshops (Saint Lucia and Antigua and Barbuda)



4.2.3.1. Capacity building to beneficiary countries to incorporate CCA and DRR into the country's national public investment and development planning system

A set of indicators was identified to track performance of the initiative at this level, including:

- number of regional and national workshops conducted of planning/public investment;
- number of ministries and countries attending these workshops;
- number of countries with a review of existing investment in adaptation and risk reduction; and
- number of agencies in target countries, having a reviewed investment portfolio informed by risk and loss analysis outputs.

22 beneficiary countries benefited from the support of the initiative to build capacity in this area (seven in Latin America, five in West Africa, five in Indian Ocean and five in Asia). In addition, a "light" version of Component 3 was implemented in the Caribbean, where seven of the beneficiary countries participated in a regional workshop and two countries received support to organize a national workshop.

The regional workshops were attended by a limited number of participants from each country, typically between one and four participants. However, the national workshops were typically attended by more than 30 participants, although participation was relatively low in a minority of countries.¹⁵

As for the components 1 and 2 of the initiative, capacity building activities implemented under Component 3 were conducted in the context of regional and national workshops. Although the national workshops were primarily designed to foster dialogue, they also had important capacity building objectives.

Finding: The initiative was successful in securing participation and raising awareness of representatives from beneficiary country ministries of finances or planning in the countries reviewed, as intended.

In most regions, a first step to ensure that some value would be derived from the implementation of Component 3 was to attempt to bridge the gap between ministries of finance or planning and the Disaster Risk Management community. In the majority of the beneficiary countries reviewed (with the important exceptions of Mexico and Peru), representatives from the finance or planning ministries had little involvement in DRR issues prior to the initiative. By design, all workshops conducted under Component 3 required the participation of focal points from these ministries, and the document review and interviews indicate that they participated as expected. This in itself can be considered an important achievement of the initiative.

In Asia, West Africa, Caribbean and Indian Ocean, implementation of this component provided an opportunity to further disseminate the results of the work undertaken under components 1 and 2, through the following approaches:

- Reviewing loss data accounting processes for participants, providing a new perspective related to Sendai Framework monitoring;
- Highlighting main findings of the loss data and risk assessment and analyses; and,
- Sharing basic concepts of probabilistic risk assessments with participants and showcasing the results of the UNISDR country profiles obtained.

¹⁵ In Senegal for instance, only 15 participants attended the national workshop.

Finding: The work conducted under Component 3 contributed to a more concrete understanding of the need to collect high quality and exhaustive data to populate the loss database.

In Seychelles, in response to the DRM agency’s strong request for further capacity building on loss database building, the initiative added one-day exercise on loss database refinement. The main reason for this request was that, it became evident during the implementation of cost benefit and macro-economic analysis insufficient quality of loss data produced undesirable results. Similarly, in Zanzibar, participants had intensive discussions about how to enhance loss data recording when the result of probabilistic cost benefit analysis were found to be negative (meaning DRR investment is inefficient) as a results of poor quality loss data.

Findings: In the majority of the beneficiary countries, new methodologies were presented that were relevant to the incorporation of CCA and DRR into the country’s national public investment and development planning systems.

In Asia, West Africa, the Caribbean and Indian Ocean, a “standard package” of new methodologies was introduced, including:

- Risk Sensitive Budget Review (to monitor DRM budgets to analyse the current state of public investment),
- Cost benefit analysis and probabilistic cost benefit analysis methodology,
- CATSIM analysis (to measure the impact of disasters on public finance and on the economy at the macro scale),¹⁶ (this was only introduced in the Indian Ocean region) and,
- Risk in public Investment and disaster risk financing mechanism (risk financing policies and Instruments).

Table 12: Methodologies introduced under Component 3 in the “standard package” for West Africa, Indian Ocean, Asia and Caribbean

Countries	Risk sensitive Budget review	CBA	Probabilistic CBA	CATSIM analysis	Risk in public Investment and disaster risk financing mechanism
Indian Ocean	✓	✓	✓	✓	✓
West Africa	✓	✓	x ¹⁷	x	✓
Asia	✓	✓	✓	x	✓
Caribbean	✓	✓	✓	x	✓

In Latin America, given that several countries had already adopted some of the tools included in the “standard” Component 3 package, such as CBA or budget tracking systems, or had legislation in place to include DRR in Public Investment, the regional workshops were designed as a combination of capacity building and discussion forum on the current status and potential development of tools and practices associated with risk management in public

¹⁶ After the experience in the Indian Ocean, this topic was dropped due its complexity.

¹⁷ This topic was included to the programme of the workshop but it was not actually covered during the workshop.

investment systems. Tools discussed included legal instruments, approaches to risk analysis, budget, information systems, etc. For example, Peru and Costa Rica shared their experiences in integrating DRR into public investment and in cost benefit analysis, while Mexico shared their innovative and highly technical approaches to risk transfer and financing.

In Latin America, Component 3 also supported the launch of the Latin American Network for Risk Management and Climate Change in Public Investment (*Red latinoamericana de gestión del riesgo y cambio climático en la inversión pública*). This network was conceived as a space for the exchange of knowledge and information related to the development of technical capacities for public investment processes with a systemic approach to risk management and adaptation to climate change. By implementing all of its activities in the region under the umbrella of the network, the initiative provided the network with resources to begin its work.

To various degrees, the methodologies introduced were subsequently used to develop country studies. For example, substantial support was provided in the Indian Ocean to explore the application of all these methodologies within the beneficiary country contexts and to share experiences at regional and international levels. In West Africa, the country studies were significantly reduced in scope, mostly limited to the risk sensitive budget review, and had unclear dissemination strategies. In the majority of the countries, consultants were responsible for developing the countries studies. As for Components 1 and 2, the work of the consultants was undertaken with relatively limited involvement by government personnel, who were mostly involved only in facilitating access to data.

A number of the country studies developed under Component 3 were packaged as country reports or more official publications. The idea was that these products could be used to disseminate knowledge and information to a wider audience, beyond the participants directly involved with the initiative. The potential for these reports and publications to expand the number of stakeholders reached varies greatly and reflects the varying levels of support provided in the various regions through Component 3.

- All work carried out through the initiative in Latin America has been published on the website of the Latin American Network for Risk Management and Climate Change in Public Investment. This permitted the dissemination of all Latin America initiative outputs, including national baseline analysis and cases studies, as well as reports from the various regional and national workshops¹⁸.
- In Peru, the baseline analysis presented was the result of a comprehensive review of existing instruments that are available to operators of the National Public Investment Fund to formulate and finance public investment projects with a risk management approach. With the support of the Public Investment and Adaptation to Climate Change (IPACC) project implemented by GIZ, the baseline analysis was published by the Directorate General of Public Investment of the Ministry of Economy and Finance¹⁹. The publication has been used to provide further training to government staff in Peru, supporting the dissemination of project results at the regional level in Peru.
- In the Indian Ocean, the results of the work undertaken under Component 3 were packaged into a series of UNISDR working papers, prepared using a standard format suggested by UNISDR. They contain details on results from components 1 and 2 as well as detailed information on the country baseline analysis, risk sensitive budget review, CATSIM analysis and case studies using cost-benefit analysis. These reports have been used to disseminate the results of the initiative in Sendai and other regions where the initiative has

¹⁸ All these documents can be accessed on this site: <http://www.red-gricciplac.org/>

¹⁹ Published as: Línea de base sobre la gestión del riesgo y la adaptación al cambio climático en la inversión pública, Perú. Available at :

https://www.mef.gob.pe/contenidos/inv_publica/docs/instrumentos_metod/Linea_de_base_sobre_GdR%20SNIP%209.pdf



subsequently been implemented. However, interviews conducted in the region indicate relatively low country ownership of these documents; interviewees were unable to describe how these documents were used or how they have helped strengthen capacity building in the region.

- In West Africa and Asia, the national workshops coincided with the closure of the initiative. At the time the Evaluation was conducted, informal national reports for Mali and Senegal had been completed and one for Niger was in the process of being prepared. The reports contained detailed baseline analyses and findings from the risk sensitive budget reviews, as well as recommendations on the way forward based on the discussions that had taken place during national workshops. At the time of the Evaluation mission, ownership of these reports was not clear; there were vague plans to proceed with their dissemination to the participants.

Finding: One of the main limitations of the initiative in terms building capacity for integrating CCA and DRR into national public investment and development planning systems is related to the limited intensity and timeframe of implementation for Component 3 in several regions.

Overall, in West Africa, Asia and in the Caribbean, Component 3 was implemented through a narrow and somehow incomplete set of activities and technical support for the development of the country studies was limited. Moreover, in these regions, as the initiative was approaching closure, Component 3 was implemented within a tighter time frame of under six months) than in Latin America and the Indian Ocean, where implementation lasted about a year). Opportunities for further consolidating and disseminating the learning from this component through regional workshop and through the packaging of the country studies as provided in Latin America and Indian Ocean have been missing in Asia, West Africa and the Caribbean where the implementation of this component was concluded with the conduct of the national workshops.

Nationals stakeholders interviewed have demonstrated interest and some level of awareness of the results presented in the country studies but many have highlighted concerns regarding the ownership of these results and the absence of a clear way forward. However, in Latin America, stakeholders mentioned that although the direct impact of the initiative in terms of individual and institutional capacity development was limited by the relatively light “training” element, it had significantly strengthen networking opportunities among relevant institutions, left the region with a more fertile context for further capacity development in this area and contributed to keeping stakeholders interested and up to date on the topic.

4.2.4. Conclusions

The countries covered by the initiative had various level of readiness to absorb the initiative’s capacity building components. At one extreme, some countries were still struggling with emergency preparedness and response and had not yet considered DRR in any tangible way; at the other extreme, some countries had already developed sophisticated systems to integrate disaster risk analysis into their public investment projects. An important challenge for the initiative was to adequately address the weaknesses of some countries in terms of human resources, baseline expertise, and capacity to absorb the kind of learning offered through the initiative.

One of the initiative's main limitations for capacity building for data collection and data entry related to the very low involvement of the national host agency in this process in the majority beneficiary countries reviewed. Despite the clear intentions of involving host institutions, the historical data collection/entry teams were predominantly led



by national, regional, or international consultants in the countries reviewed by the evaluation team. A number of host institutions hoping to eventually operate the loss database were not extensively involved in the process.

In the majority of the beneficiary countries, new methodologies that were relevant to the incorporation of CCA and DRR into the country's national public investment and development planning systems were presented. To various degrees, the methodologies introduced were subsequently used to develop country studies and to a lesser extent incorporated as DRR tools. The interest and some level of awareness of the results presented in the country studies are apparent, however in many countries there are concerns regarding the ownership of these results and what the next steps should be. Conversely, the implementation approach in Latin America has been especially participatory and consequently it was possible to tailor capacity building to the needs and interests of the beneficiary countries which resulted in strong ownership and uptake of the project results by the stakeholders.

Overall, the implementation of the initiative provided a wealth of information on how to adapt to the realities of capacity building work in countries with low capacity. Discussion with the UNISDR team indicates that the project team has learned from the implementation of the initiative, and has already applied this learning through various adjustments to its implementation approach during the implementation of the initiative itself and in the context of the implementation of subsequent initiatives.

4.3. Quality of Loss and Risk Data

This section provides an analysis of the outcomes of the initiative in terms of the quality of loss and risk results delivered through Components 1 and 2. It builds on (i) a series of interviews organized with stakeholders who took part in the initiative in West Africa, Indian Ocean, Asia, and the Caribbean, either as training participants, trainers, or organizers and managers of trainings (UNISDR and UNDP local staff); (ii) analysis of official documents shared by UNISDR (e.g., gap analyzes, training structure, and related material); (iii) analysis of the national loss disaster databases available on DesInventar website.; (iv) additional literature on quality of loss and risk data collected by the consultant for the areas analyzed.

The section provides an overview of:

- the initiative's quality assurance mechanisms;
- the coherence of the tools and quality assurance mechanisms with the principles of precision, comprehensiveness, comparability, and transparency;
- the quality of the data;
- the usability of the data; and
- the relevance of the methodologies selected.

4.3.1. Quality assurance mechanisms in place

Finding: Technical assistance and feedback from the UNISDR to national data collecting teams, as well as detailed gap analyses, were the main forms of data quality assurance for the national disaster loss database.

The quality assurance mechanism for the creation of the national disaster loss database primarily took the form of technical assistance and intensive feedback from the UNISDR team to the national data collecting teams. The

national data collecting teams confirmed that they were provided with clear and prompt guidance for the creation/update of the database and for troubleshooting.

In addition, detailed “gap analyses” were prepared to guide the consultants in their work. National data collecting teams were required to send their first dataset to UNISDR for review after a given period following the national training. UNISDR undertook a thorough analysis of the database and provided the teams with a detailed report, or “gap analysis,” which was the main quality assurance mechanism in place. In a few cases, this process was repeated more than once. The gap analysis provided an assessment of the data cards in terms of:

- Temporal distribution (overall and by hazard, highlighting years for which no data cards are available);
- Hazard distribution (highlighting hazards not covered);
- Geographic distribution;
- Analysis of human losses, agricultural losses, houses damaged or destroyed by hazard, and temporal and geographic distribution;
- Use of extensions (additional indicators);
- Identification of inconsistencies between the data cards available by hazard and the available evidence/literature;
- Reporting on sources of information; and,
- Comparing data entries with EM-DAT database.

The gap analyses also provided practical recommendations on how to overcome the identified gaps.

In theory, DesInventar tools and methodology also allows for the use of a data validation system. During data collection and entry, data may be duplicated or wrong information entered. Establishing various levels of review and quality control can be a good method for avoiding these problems. When entering a new data card in DesInventar's administration module, data cards can be labelled as “approved”, “draft”, in “review”, “rejected,” or needing “support” to facilitate their review and validation. Interviewees in Niger mentioned that this approach is likely to be used once a decentralized data collection/entry system has been established in the country.

4.3.2. Recording of loss data according to the principles of precision, comprehensiveness, comparability, and transparency

Finding: To a great extent, both the national disaster loss database's built-in characteristics and the initiative's quality assurance mechanisms took into account the principles of precision, comprehensiveness, comparability, and transparency.

In order to assess the initiative's disaster loss and risk data quality assurance principles, the evaluation team referred to Corbane et al.²⁰ who suggests that the data quality manager is responsible for ensuring that disaster damage and loss data is recorded according to the following four principles defined in De Groeve et al., 2014:²¹

²⁰ Corbane, C., De Groeve, T. and D. Ehrlich (2015) Guidance for Recording and Sharing Disaster Damage and Loss Data. European Commission Joint Research Center – Institute for the Protection and Security of the Citizen, ISPRA (IT).

²¹ De Groeve Tom; Poljansek Karmen; Ehrlich Daniele; Corbane Christina, 2014. Current status and Best Practices for Disaster Loss Data recording in EU Member States: A comprehensive overview of current practice in the EU Member States. Publications Office of the European Union, EUR 26879.



- Precision – indicator fields must have clear terminology and mutually exclusive definitions that are consistently applied;
- Comprehensiveness – the loss indicators should cover all loss/damage regarding spatial, sectorial and loss ownership coverage in order to be an objective reflection of the extent of the disaster;
- Comparability – loss data are event based and therefore accompanied with the event identifier number. Disaster effects should be comparable among the event of the same hazard types as well among the events of different hazard types, across countries and sectors; and
- Transparency – loss values should be georeferenced, accompanied with temporal information and an assessment of uncertainty.

National disaster data collection standards are in line with these principles, requiring the following:

- All inventories must use a basic, standard classification of events (UNISDR follows the Integrated Research on Disaster Risk (IRDR) classification) and must use standard variables to measure the effects. Beyond this standard set of hazards, countries are free to add as many other hazards as they want to;
- Information entered in national databases must be spatially disaggregated to show (and later analyze) disaster effects at the local level. For country level disaster inventories, it is recommended that disaggregation be provided at least to the equivalent of the municipal level – that is, usually, to one or two levels below that second administrative/political level (i.e., province/state/department, depending on the country);
- Information compiled and processed must be time-stamped and georeferenced.

Moreover, as mentioned above an important tool for quality assurance of the data collected was the gap analysis undertaken by the UNISDR team in the context of the initiative. The design of the gap analysis largely took these principles into account through a comprehensive analysis of the information contained in the data cards.

4.3.2.1. Precision (terminology and definitions)

The precision of the indicators provided by the DesInventar tools and methodology meets the requirements of the evaluation matrix in terms of (i) clarity of terminology (e.g., on hazard types) and (ii) mutually exclusive definitions of indicator fields (i.e., there is no overlap or repetition). The definition of hazard and impact (loss) indicators is consistent in terms of information on the type of disaster and impacts reported. In the DesInventar tools and methodology, loss data related to a specific hazard event are uniquely identified by year, country, and region, and basic summary statistics are provided. For each country, the database provides information on the time-period along which a range of disasters, and the related losses, are recorded.

The gap analysis attempted to ensure that the various indicator fields were interpreted and used correctly by the data collection teams. By way of illustration, the gap analysis exercise in Niger caught an issue regarding the interpretation of the “deaths” indicator fields. An unusually high number of deaths recorded for certain hazards raised suspicion that something was wrong. It was found that loss of cattle had been recorded as death (a category that should be understood as human death). As discussed below, several other cases of misinterpretation of terminology were evident in the current version of the database.

Despite significant efforts to overcome this challenge, definitions of risk and exposure used by UNISDR were not always consistent with those used by other international organizations working on CCA and DRR in the same countries. This point was also highlighted by some trainers and training participants who ended up being exposed to terminology and definitions that were not entirely consistent with those used by other CCA and DRR capacity building initiatives. For instance, UNDP’s Post Disaster Needs Assessment (PDNA) which was the subject of DRR trainings in the same regions covered by the initiative, used different definitions: “Economic loss” in DesInventar



methodology corresponded to what is considered "damage" in PDNA. Common definitions of key CCA and DRR terminology such as risk and exposure do not yet exist, potentially creating confusion for training participants who have already, or will in future, attend trainings provided by other international organizations working in this field.

4.3.2.2. **Comprehensiveness of the loss indicators (spatial, sectoral, and loss ownership)**

A key advantage of the DesInventar tools and methodology relative to others is its specification of sectors and assets exposed to hazards, and their value. DesInventar covers the natural hazards most likely to affect countries (including those related to climate change), as well as their related losses. A comparison with other well-known and frequently-used disaster and loss databases (such as EM-DAT) clearly indicates the superiority of DesInventar in terms of detail on disaster and loss. DesInventar tools and methodology permit reporting on losses by country/region caused by a variety of natural disasters, in terms of people affected, deaths, houses damaged, hectares and cattle lost, etc., by year. The definition of losses is comprehensive and includes the most relevant and recurrent losses experienced by low to medium-low income countries (according to the World Bank definition).

The system also provides comprehensive statistical tables, downloadable in excel, that cover the whole recorded disaster loss period, by country. They include: (i) type of disasters (e.g., flood, heatwave, or multi-hazard), (ii) spatial distribution (at the province level), and (iii) temporal behaviour, with graphical representation through georeferenced maps at the municipality level. In addition, data on disasters and losses can be visualized using maps, charts, and tables, customizable by the user. For each country, snapshot information can be displayed on the disasters that caused the most significant recorded housing damage and the highest mortality. However, the current degree of customization available does not adequately represent the heterogeneity of characteristics and value of facilities in different countries. For example, there are important differences in type and value between housing in residential districts in middle- or high-income country capital cities in (e.g. in Mexico) and housing in rural villages in Mali.

The gap analysis exercise provided some feedback to the data collection teams on loss indicators. In particular, it included an analysis of human losses, agricultural losses, and houses damaged or destroyed by hazard, temporal, and geographic distribution.

4.3.2.3. **Comparability of disaster effects (by hazard types across countries and sectors)**

The comparability of results in terms of exposure to risk and vulnerability to hazards and losses across countries and sectors is another key advantage of such a comprehensive database using the same tools and methodology, facilitating data quality control.

Work has been undertaken by UNISDR and developed in collaboration with several institutions to standardize the methodologies for data collection and analysis in order to ensure data quality, comparability, and consistency across the countries where the initiative was implemented. As regards loss data in particular, UNISDR has collaborated with the Joint Research Center of the European Union (JRC) on the development of a European Standard for Disaster Loss Databases. It has also worked with the IRDR DATA Group on defining hazards and families of hazards, and with SOPAC on consistency and alignment of hazard definitions.

4.3.2.4. Transparency (georeferencing, temporal information, and uncertainty)

According to the DesInventar methodology, data must be collected according to a set of standards. Specifically, the information compiled and processed must be time-stamped and georeferenced. The gap analysis highlighted cases where data cards did not provide time or geographical information or sources of information.

It is difficult to assess whether the approach and tool used are able to account for uncertainty – in particular in terms of data quality. Dealing with uncertainty in disaster loss databases is fundamental for ensuring that the disaster loss data collected comply with technical requirements that guarantee their policy relevance. Therefore, the introduction of a simple and consistent approach to measuring uncertainty in the collected data, in a cross-country comparative perspective, would help ensure data reliability and usability. A recent approach to an indicator for measuring uncertainty for disaster loss databases that could be used for DesInventar was proposed by Romão and Pauperio 2015.²² The development of this indicator could be considered in case the database will be expanded also to high-income countries where statistical offices would have the medium statistical skills required (that usually civil servants working in the statistical departments of ministries have or are supposed to have). Thus, this indicator could be introduced in the countries that supported the development of national disaster loss databases after a training session provided by UNISDR and targeted to the statistical office of a relevant ministry.

4.3.3. Quality of the data and results obtained

Finding: Following the gap analysis exercise, historical data collection teams at the national level significantly reviewed the databases. They were able to collect much more data and addressed a number of issues raised in the gap analysis.

Data collecting teams were generally responsive to the gap analysis provided by the UNISDR team. A review of database entries before and after the gap analysis shows that numbers of entries increased significantly and several gaps were addressed. Data collection teams mentioned that they found the gap analysis useful. For example, following the gap analysis, the data collecting team in Senegal was able to identify new sources of data and the number of entries in the database increased threefold within few weeks.

Finding: Data quality is not homogeneous across beneficiary countries reviewed and the majority are experiencing issues in terms of historical coverage and quality.

Despite the important role played by the gap analysis, the application of the quality assurance mechanism produced varied results across beneficiary countries reviewed and deserves further attention. A brief review of the entries in the databases highlighted a number of outstanding issues:

- **Historical coverage:** This was one of the most significant gaps across the databases. In particular, it has proven difficult to achieve uniform coverage over 20-30 years. In a majority of cases, more data are available for more recent years.

²² Romão, Xavier, and Esmeralda Pauperio. "A framework to assess quality and uncertainty in disaster loss data." *Natural Hazards* 83.2 (2016): 1077-1102.

- **Errors in data entries:** In several cases (such as Myanmar and Mali) hazards were recorded for dates in the future (e.g., thunder and lightning were recorded as having struck in the Bago region of Myanmar in May 2017 – a future date)
- **Incorrect interpretation of terminology:** In the Niger database, the number of sick animals during epizooty are recorded as victims, while this category is supposed to record the number of persons whose goods and/or individual or collective services suffered serious damage directly associated with the event.
- **Inconsistency among datasets:** Reports on losses may not be consistent with losses recorded under EM-DAT. While this may reflect different approaches to accounting in monetary losses, there is less room for variation when it comes to recording deaths.
 - Regarding a flood that affected Myanmar in 2016, DesInventar reports 18 deaths while EM-DAT reports 10.
 - Regarding a flood in Senegal in 2009, DesInventar reports no deaths while EM-DAT reports six.
 - For the same event in Senegal, the number of affected is higher in the DesInventar database (290,007) than in EM-DAT (247,000). The difference may result from differences in how the two databases define being affected by a disaster.

Overall, data quality and coverage is not uniform across beneficiary countries reviewed by the evaluation. UNISDR's quality assurance was somewhat limited by the fact that the reliability of the data gathered by countries – in terms of timing of events, type of hazard, area hit, etc., depends on a number of variables. For example:

- **Missing data:** The losses due to a hazard are sometimes not properly recorded due to a lack of data. One of the reasons is that in some countries, such as in Antigua and Barbuda, the national disaster management office was created only in 1995, so data on disasters and losses are missing before that time.
- **The poor quality of the archives of disaster loss databases from which data are extracted:** In some cases, disaster loss data made available by archives tend either to under or misreport data on events and impacts in order to minimize political responsibility for emergency management, or overreport damages in order to obtain more post-disaster resources for reconstruction.
- **Difficulties in accessing data in the absence of existing coordination mechanisms among the entities that own the data:** This situation was noted in the majority of beneficiary countries reviewed.

Other serious limitations included:

- **The effectiveness of the facilitation role played by host institutions and project partners in enabling access to data from various sources:** In some cases, data collection teams received strong support from host agencies or partners such as UNDP to make useful contact with the relevant data owning institutions. In others cases, consultants were left to do this work on their own. In the Caribbean, a consultant did a lot of newspaper archive, library, and internet research to find disaster events, but without adequate support from a host institution several sources of information could not be accessed.
- **Data-handling skills of the data collection team:** The quality of data depend in part on the capacity of the data entry team, which in turn reflects at least partly the intensity and quality of the training provided. As discussed in section 4.2 above, although the remote technical assistance was adequate, the actual hands-on training provided to data collecting team was minimal in many cases. Some data collection teams reported that they were self-trained to a large extent.
- **Interruption of the population of the database:** As discussed in section 4.2 above, there is evidence that data collection on hazards and losses or, at least, their entry in their national disaster loss databases, was not sustained once the training activities finished in the majority of the beneficiary countries reviewed.



4.3.4. Usability of the data

Finding: The quality of the data collected was sufficient to raise awareness of the potential exposure to disasters and climate change impacts and losses that beneficiary countries face.

One important objective of the training was to raise beneficiaries' awareness of the risk of disasters and climate change impacts and losses to which their countries are exposed, based on the historical data available. This goal was reached in all the trainings, and it also emerged in the participants' workshop evaluation questionnaires (where provided). In particular, participants who were not familiar with CCA and DRR, such as those from ministries of finance, infrastructure, and public investment, highlighted the benefits of the trainings. Understanding the order of magnitude of risk is considered a first step in leading country planners to understand the need for targeted investments in CCA and DRR.

In the context of the initiative, systematic accounting of disaster loss was useful for various kinds of analysis related to disasters (e.g. analysis of total economic cost, patterns, geographic distribution, sectors affected, type and recurrence of hazards, among many others).

As illustrated in Table 13 below, estimates of losses from national disaster loss databases are significantly higher than those based on other databases such as EM-DAT. Although it is understood that EM-DAT uses different criteria than DesInventar tools and methodology²³, it is notable that for Mali, for instance, previously no losses were visible at the international level, while the economic valuation based on physical impacts recorded in the national disaster loss database highlights 1.2 billion USD in losses.

Table 13: Variation in economic losses reported by EM-DAT and national disaster losses databases on DesInventar

	International (EM-DAT) Direct and indirect losses US\$	National (DesInventar) Direct losses only US\$
Cambodia	1,307,110,000	2,400,000,000
Myanmar	4,840,555,000	43,311,500,996
Mali	0	1,180,000,000
Niger	94,674,000	3,200,000,000
Senegal	71,885,000	420,000,000

Section 4.2, above, provides examples of how stakeholders in beneficiary countries reviewed have been using the data and risk analysis for a wide range of purposes.

Finding: In the majority of the beneficiary countries reviewed, further work would be needed on the national disaster loss databases to make it more suitable to retrospective risk measurement that governments could rely on for decision making.

²³ For example, only numbers of deaths above 10, or numbers affected above 100, are recorded in the database.

The quality and disaggregation of data included in the national disaster loss databases were key issues for its use in other components. Under Component 2, national disaster loss data was used to obtain estimates of empirical loss exceedance curve, while probabilistic risk assessments were used to obtain the analytical annual loss exceedance curve. These provide insight into the potential annual cost of covering all the losses from persistent disasters if the trend of economic loss continues on its current trajectory or worsens.

However, it was highlighted by the trainers and in the documents reviewed that reliable estimates of an empirical loss exceedance curve can only be obtained as long as data is available and complete. This requires at least 30 years of records on all possible effects of all disasters that have occurred within a country; otherwise, estimates of economic losses and their frequencies of exceedance may not reflect reality. However, it is important to clarify that results are based on proxies and are useful to reflect and provide an order of magnitude of the effects of small and frequent disasters.

The experience with the implementation of the initiative demonstrated that in general, the time window of available information on losses from historical events is still short for performing some analyses, such as those related to the empirical loss exceedance curve. The training team pointed out that exhaustiveness of data is needed for such analyses, requiring at least 30 years of loss registers.

As highlighted in section 4.2 above, a number of beneficiary countries, such as Niger, Zanzibar, and Seychelles have reflected on how the quality of the results obtained in the implementation of Component 1 could affect Component 2 when trying to build a hybrid loss exceedance curve (in contrast, the analytical loss exceedance curve does not use data on historical losses.. Another example comes from Saint Lucia, where significant recent data on disasters losses from the 1990s onward is missing. Completing the process of data collection before the database is used by decision makers is important to ensure data reliability.

In contrast, the World Bank considered the quality of information obtained from Component 1 in the Indian Ocean region good enough to be used in another project on CCA and DRR. Data from Component 1 collected in the Caribbean was also used for a community risk assessment project of the International Federation of the Red Cross (CCOPE – “Carib communities organized and prepared for emergencies,” sponsored by DIPECHO).

4.3.5. Relevance of the selected methodologies

4.3.5.1. DesInventar

Finding: DesInventar is considered as a best practice and international standard in the field of disaster loss databases.

DesInventar is perceived as a useful tool by the stakeholders of the initiative in comparison to existing databases because it focuses on:

- Recording of frequent but low magnitude events and related economic losses, with granularity of data at the sector level, which is important for policy assessment (e.g., when considering livestock losses suffered in Niger as a consequence of a three-year drought).

- Coverage at the community level, which contributes to estimating probability distributions of economic evaluations (reports of physical damage and economic value of losses estimates). Granular data are important for policy assessment at the sector level and for better targeting of interventions and use of resources because they allow decision makers to understand the relevance and characteristics of risk at the regional and sub-regional level, and to identify losses at the sector level.
- Day to day data collection for any kind of disaster (with even the loss of one house recorded), informing country risk profiles and providing countries with relevant information to guide investments in building resilience to climate change.

DesInventar represents a clear advance over existing databases in terms of breadth of information, as illustrated by a simple comparison with EM-DAT, one of the most used disaster and loss databases. The following tables compare search results on disasters in Seychelles in 2014. The EM-DAT results are reported in Table 14.

Table 14: Disasters in Seychelles in 2014 according to EM-DAT

Disaster type	iso	Country name	Occurrence	Total deaths	Injured	Affected	Homeless	Total affected	Total damage
Flood	SYC	Seychelles	1			4435		4435	

EM-DAT returns ten data fields that include information on:

- disaster type (in this case, flood);
- country iso;
- country name;
- occurrence (1);
- total deaths (none);
- injured (none);
- affected (4435 units);
- homeless (none);
- total affected (4435 units);
- total damage (none).

The national disaster loss database based on DesInventar methodology available online provides much more information on the same event. It reports three flooding events in Seychelles in 2014, providing information on the island and region in which floods occurred, and the number of houses damaged. In addition, the national database includes an economic valuation based on physical damages due to the disasters. The same search with the national database hosted on DesInventar website returns the results reported in Table 15.

Table 15: Disasters in Seychelles in 2014 according to their national database (DesInventar website)

Region	Island	District	Location	Deaths	Injured	Houses Destroyed	Houses Damaged	Victims	Affected	Relocated	Evacuated	Losses \$USD	Education centers	Hospitals	Damages in crops Ha.	Lost Cattle	Damages in roads Mts	Economic losses (infrastructure)	Economic losses (w/agriculture)
INNER ISLANDS	PRASLIN	Baie Ste Anne	Cote d'Or				1					0						4980.0397	4980.0397
INNER ISLANDS	PRASLIN	Baie Ste Anne					2					0				10		12692.0297	12692.0297
INNER ISLANDS	PRASLIN	Baie Ste Anne	Cote d'Or				1					0						4980.0397	4980.0397

Nevertheless, EM-DAT has a couple of interesting features that UNISDR supporting the DesInventar tools and methodology could consider introducing. On its homepage, EM-DAT reports the main natural disasters that have occurred over the last week, by country, and a section with several options for customizing the search, such as *advanced search* (which allows users to “create your database”) and *disaster trends* (which allows users to build an interactive graph).

DesInventar, the actual tool proposed by UNISDR, has some challenges with respect to user-friendliness, as it requires previous experience in managing and working with large databases. Trainers have recommended that more time be spent during the workshops on participants using the database under the trainers’ supervision. A key outcome of the training, to ensure the sustainability of capacity building, is familiarizing participants with the database in order to allow its regular use when the training is completed.

In addition, it should be highlighted that several versions of the database exist on different websites (DesInventar.org, DesInvetar.net and national databases) and these are not fully synchronized creating confusion: different values are recorded in some cases for the same hazard and same country, e.g., in the case of Mali and Senegal. UNISDR built and maintains DesInventar.net, which is the global hub, and the home of the Open Source initiative to download the full source needed to build national disaster loss databases. Other DesInventar sites exist, both public and private. Among them, DesInventar.org is the home of Latin American databases, and the site maintained by CorpoOSSO, where the initiative was born. These issues could affect the relevance, consistency, and reliability of the information provided by the DesInventar database itself, and may generate confusion for local authorities and institutions that are expected to use it.

4.3.5.2. Use of common standard methodological tools

The advantages of using a common standard tool across beneficiary countries are significant and include, among others:

- The development of a common knowledge base and acquisition of concepts in DRM and DRR,
- The introduction of common terminology on disasters and risk,
- The definition of a common standard to measure risk, based on robust and up to date techniques to ensure the quality of data,
- The provision of common risk metrics that allow beneficiaries to understand differences in resources needed to face high frequency events with low/medium consequences, vis a vis resources needed to face

low frequency but highly disruptive consequences, thus identifying the most suitable financial mechanisms to face losses.

The use of common methodological tools facilitates obtaining comparable results and risk assessment across countries, allowing users to run regional analyses and draw disaster risk impact maps at the regional and sector level (e.g., for agriculture in West Africa). It is useful to develop country risk profiles to compare countries and identify investment priorities. In addition, the database is beginning to gain recognition and use by other UN agencies, such as the UN Food and Agriculture Organization (FAO), who is interested in using UNISDR tools and methodology to report on disasters. In addition, in the Caribbean, data generated was shared with the Caribbean Disaster Emergency Management Agency (CDEMA) and has been used for other initiatives in the region. The main disadvantage is that if the quality and availability of data provided by the disaster loss database is low, the quality of information to support further analyses developed on the basis of the data and to inform the introduction of policy measures aimed at building resilience is affected. This could lead to underestimates or overestimates of risk linked to a specific hazard in a country, thus misinforming policy planning for investments in CCA and DRR. In implementing national disaster loss databases, therefore, consideration must be given to the fact that data collection on hazards and losses is itself time consuming and requires resources and skills that might not be available when they are needed in every country. Several beneficiary countries do not have an enabling environment that can secure the type of resources and competencies needed to collect and enter quality data in a comprehensive manner, at least in the short to medium term.

4.3.6. Conclusion

The quality assurance mechanism for the creation of the National disaster loss databases based on DesInventar tools and methodology primarily took the form of technical assistance and intensive feedback from UNISDR team to the national data collection teams. Gap analysis provided practical recommendations on a variety of aspects related to the quality of data entries and how to overcome identified gaps. Data collection teams were responsive to these gap analyses and, in most countries, the amount and quality of the data available were improved. The built-in characteristics of the DesInventar tools and methodology and the quality assurance mechanisms used by the initiative were aligned with the principles of precision, comprehensiveness, comparability, and transparency.

A brief examination of the entries available on the DesInventar website, the repository of the national databases, indicated that the majority of beneficiary countries reviewed are experiencing some gaps in terms of historical coverage and quality. In particular, it has proven difficult to attain uniform coverage over 20-30 years and to collect data in some regions. The reliability of data was affected by several variables such as the quality and availability of the disaster loss archives and other data sources from which data were extracted, institutional factors including the coordination with the multiple entities that own relevant data, the role played by host institutions and project partners in facilitating access to data from various sources, and to a lesser extent the skills and experience of the data collection team.

The analysis of the quality of loss data derived from these exercises showed that in its current structure and level of implementation, national loss databases have not reached their full potential. While they already have been used to support policy dialogue, in the majority of the beneficiary countries reviewed, further work would be needed to make it more suitable to support government decision-making. A number of beneficiary countries are conscious of this situation and have genuine interest in pursuing improvements in data coverage and quality in order to adequately use the tools introduced by the initiative in favour of increased investment in CCA and DRR.



Despite these challenges, the quality of the data collected and the risk results presented has been sufficient to raise awareness of the risk of disasters from specific hazards and climate change impact and to establish understanding of the losses that beneficiary countries are exposed to. Moreover, it has already been used by beneficiary countries reviewed and other stakeholders for a range of purposes.

Finally, DesInventar tools and methodology supported by UNISDR is seen as providing a best practice and international standard in the field of disaster loss databases. DesInventar has the potential to contribute to filling gaps in existing databases through timely tracking of disasters and valuing losses at a disaggregated level (regional and sub-regional, and sector of economic activities). These are desirable outcomes which could contribute to informing investment planning for CCA and DRR at local and regional levels, thus increasing the efficiency of public spending on resilience to climate change.

4.4. Partnership

This section presents the main evaluation findings on UNISDR's success in establishing fruitful partnerships for this initiative. It focuses on the additional effectiveness and sustainability brought to the initiative by the various implementing partners. As set out in the evaluation ToRs, it focuses on the partnerships with the IOC in the Indian Ocean region, UNDP in West Africa and the Caribbean, CIMA in the Caribbean, and GIZ and CorpoOSSO in Latin America. The relationship with the World Bank, although it was ultimately not a formal partner, is also addressed.

4.4.1. Types of partnerships established

UNISDR established several types of partnerships to assist with the initiative: administrative/logistical partnerships with organizations with a country or regional presence to assist with implementation in that locale; technical partnerships to design and facilitate training and to carry out the global risk analyses; and partnerships with other agencies working in the field of DRR to collaborate on the implementation of activities.

UNISDR had also envisioned a global partnership with UNDP at the early stages of the initiative. However, this agreement did not ultimately come to fruition as planned. However, UNDP did become a key partner in several regions. Additionally, an opportunity to collaborate with the World Bank as co-financier in the Caribbean arose in the initial stages of the project, but ultimately this did not occur either, and explained in Section 4.1.

UNISDR developed formal agreements in the form of contracts, memorandums of understanding, and grant agreements to establish clear roles and responsibilities for partner organizations. Interviews with staff of these organizations suggest that all were clear on their roles and responsibilities as a result of these agreements and through frequent communication with UNISDR staff.

Coordination between UNISDR staff and partner organizations went well overall, in the view of all parties interviewed. However, a majority of partners felt they did not have adequate information about the outcomes of the initiative. This was the case for specific activities (such as providing information to a trainer after the training) as well as after the completion of project activities in a region). Partners noted that they would have appreciated more communication and transparency on the outcomes to facilitate applying lessons learned to future activities.

Table 16: Global distribution of partners²⁴

Partners	Latin America	Caribbean	West Africa	Indian Ocean	Asia
UNDP		♦	♦		♦
GIZ	Informal only				
IOC				♦	
CorpoOSSO	♦	♦			
CIMNE&INGENIAR				♦	♦
CIMA		♦	♦		
IIASA				♦	
World Bank (informal)		Intended but not realized		Informal only	

4.4.1.1. Administrative/logistical partnerships with a country or regional presence

UNDP: Overall, UNDP was the primary administrative and logistical counterpart in West Africa, Asia, and the Caribbean, supporting the initiative through regional or country-by-country engagements negotiated with UNISDR. In these regions, UNDP supported the initiative by:

- hiring and overseeing local consultants who undertook data collection,
- managing, with governments, the process of selecting workshop participants,
- managing in-country logistical arrangements for training and meetings,
- participating in workshops as facilitators or participants, and (in a few cases)
- contributing financial support to workshops.

²⁴ Partners in the South Pacific region are not included in the evaluation mandate.

IOC: UNISDR was approached in 2012 by the IOC to bring the initiative to the region as a complement to the World Bank-funded ISLANDS Programme for Financial Protection against Climatic and Natural Disasters, which already underway. Specifically, while all components would be carried out in the region, Component 3 of the initiative was to be planned and implemented as part of the ISLANDS program.

Subsequently, the IOC became UNISDR's regional administrative coordinator and fulfilled the same functions as UNDP, described above. IOC was also responsible for overall monitoring of the programme's progress, general communication on the initiative, and the dissemination of information within each country, including creating awareness for the program amongst decision makers and obtaining their "buy-in."

Coordinating with a regional partner: the IOC example

Close coordination was evident between the IOC and UNISDR for project implementation. One of the primary coordination mechanisms was the existing Regional Platform for the ISLANDS program (composed of focal points from all participating countries and the World Bank). The platform met twice a year and was attended by UNISDR. Ongoing coordination between UNISDR and the IOC was achieved through additional twice-monthly meetings between the IOC Technical Liaison Officer and UNISDR staff in Geneva, supported by regular email exchange. The IOC Technical Liaison Officer participated in all the regional events and was closely involved in supporting data collectors.

4.4.1.2. Partnerships with other agencies working in the field of disaster risk reduction

GIZ (Latin America, informal partnership): When UNISDR initiated pre-implementation consultations in Latin America, the potential synergies between the UNISDR-DEVCO initiative and the project *Adapting Public Investment to Climate Change* (IPACC) quickly became obvious. An informal partnership was based on mutual recognition of the initiatives' shared objectives and potential complementarities. GIZ had a well-established network within the central ministries (planning and finance) of the region and facilitated UNISDR access to this network. GIZ worked in partnership with UNISDR to organize the regional workshops and provided leadership in the conduct of the country study in Peru.

World Bank (Indian Ocean, informal partnership): As described above, the World Bank was already funding the ISLANDS program in collaboration with the IOC, and was a key participant in meetings between the IOC and UNISDR to bring the initiative to the region. Although the World Bank did not contribute financially or substantively to the initiative, the World Bank considered it an integral component of the regional work they lead towards a regional risk transfer mechanism, the Southwest Indian Ocean Risk Assessment and Financing initiative (SWIORAFI). They used the data provided by the initiative for their own probabilistic risk modelling (which was more detailed than that undertaken by the initiative), as part of their project phase to assess the feasibility of the pool.

4.4.1.3. Partnerships for technical expertise

CIMA Foundation: The CIMA Foundation is a non-profit research organization providing training and research in the fields of civil protection and DRR, founded by the Italian Civil Protection Department. CIMA conducted five national DesInventar trainings in the Caribbean (in all countries except Barbados, where CorpoOSSO provided the training). As part of Component 2, CIMA collaborated as trainer on flood hazard during the three workshops implemented in West Africa. As part of Component 4, CIMA also worked on the flood hazard model, contributed to the global models, and prepared inputs required for countries based on a grant agreement with UNISDR.



CorpoOSSO: In Latin America and the Caribbean, a specialized technical organization, *Corporacion OSSO*, from Colombia, was mandated to oversee and support the updating and institutionalization of seventeen national disaster loss and damage databases in partnership with the UNISDR Regional Office for Latin America and the Caribbean, the Inter America Development Bank, and UNDP Country Offices. CorpoOSSO delivered the historical data collection/update for Latin American countries where the initiative was not institutionalized, and assisted with the work on extensive risk analysis. CorpoOSSO also provided training to Barbados and to Paraguay and Uruguay, two new databases in Latin America.

CIMNE & INGENIAR: The International Center for Numerical Methods in Engineering (CIMNE) at the Technical University of Catalonia specializes in research in computational techniques for advancing technology in engineering, and Ingenieria y Análisis de Riesgos (INGENIAR) is a consulting firm with expertise in disaster risk modeling and management which also helped to develop the CAPRA platform. These organizations were involved in Component 4. They were also involved in Component 2 in West Africa and Asia.

IIASA: The International Institute for Applied Systems Analysis (IIASA) in Austria contributed to Component 3 in the Indian Ocean Region through the implementation of macro-economic analysis and probabilistic cost benefit analyses which were shared with participants before the second regional workshop. IIASA was additionally invited to co-lecture on probabilistic cost benefit analysis in Madagascar.

Other technical partners: It should be noted that numerous organizations received grant agreements from UNISDR as part of Component 4 to work on risk assessment models, some of which were used within the initiative (these partnerships took place under Component 4 and are outside the mandate of this evaluation).

4.4.2. Level of Additional Resources Mobilized Through Partnerships

Finding: Significant in-kind resources from UNDP supported project implementation, in combination with a small number of financial resources.

While most of the partnerships were based on grant agreements to provide services, UNDP regional and national partners contributed their time as an in-kind resource. In some cases, they also provided financial support to activities, particularly:

- financial support for the participation of Zanzibar²⁵ in regional training in Indian Ocean region,
- co-funding of workshops in the Caribbean and in West Africa, and
- financing of instruments to collect exposure data under Component 2 in Niger.

As these amounts were not specifically tracked by UNISDR, these financial contributions have not been quantified, but they clearly enabled activities to take place that would not have been possible otherwise, or that would have reduced resources available for other aspects of the initiative.

²⁵ Zanzibar is a member of the IOC and did participate in the initiative, but is not eligible for EU funding, and therefore could not be funded by DEVCO. Data collection for Zanzibar was outside the mandate of this evaluation.



4.4.3. Influence of partners on Initiative outcomes

Finding: Partnerships established by the initiative contributed to improved technical training and tools, logistical and administrative effectiveness, and improved alignment with regional initiatives.

The partnerships established by the initiative allowed for additional human resources, specific kinds of expertise, and important regional and country knowledge and contacts needed for effective implementation and the achievement of intended outcomes.

4.4.3.1. Gaining knowledge of, and aligning initiative activities, with other initiatives

Involving partners (formally or informally) would be expected to have the effect of helping to ensure that initiative activities were not duplicating others in a region, in the design stage as well as during implementation. At its best, collaborations can result in complementary integration with other initiatives.

The partnerships carried out as part of this initiative did help to achieve this aim, and in two regions (Latin America and the Indian Ocean), the initiative was, at least in part, integrated with other initiatives:

IOC: As a partner with extensive knowledge of the region, the IOC was able to help ensure that the integration of the initiative into the existing ISLANDS program, and raise awareness if similar initiatives arose. For example, UNISDR became aware of a similar database project in Mauritius in the planning stages. Through their regular contact with the World Bank, they were able to help coordinate UNISDR and World Bank activities to avoid duplication of efforts.

GIZ: For GIZ, the DEVCO initiative provided an opportunity to welcome UNISDR as a strategic partner to jointly support the creation and initial phase of the Latin American Network for Risk Management and Climate Change In Public Investment (*Red Latinoamericana de Gestión del Riesgo y Cambio Climático en la Inversión Pública*). The alignment of the initiative with the work conducted in the region by GIZ, enable a high level of coherence with the needs of the beneficiary countries.

World Bank: The planning phase of the potential World Bank co-financing partnership contributed to building synergies with the World Bank's activities on disaster risk profiles in the Caribbean, and determined how the results of a UNISDR-UNDP-World Bank partnership could complement initiatives of the Global Assessment Report as well as the World Bank.

4.4.3.2. Administrative/logistical support

UNISDR does not have sufficient human resources to fully implement a project of this kind with only internal staff, nor does it have the essential country presence to handle day-to-day arrangements for workshops. Thus, logistical partnerships were essential for carrying out in-country activities in a timely manner. In every case, these partners also provided more intangible but equally important regional knowledge and connections, as described below.

4.4.3.3. Country and regional presence

Partners offering a country or regional presence brought important benefits to the implementation of the initiative: extensive knowledge of the stakeholders and political dynamics in the region, and of other issues. They helped identify and communicate with relevant stakeholders, and encouraged involvement and engagement with the initiative.



The two main organizations providing these benefits to the initiative were UNDP and the IOC. The specific benefits they brought to through their country and regional presence are described below:

UNDP: As the "coordination agency" for the UN family, UNDP tends to be well known by local authorities. In West Africa, Asia, and the Caribbean, UNDP's knowledge of the local context and connections with local stakeholders helped mitigate key challenges in terms of local authorities' engagement. However, in West Africa, it was made clear from the UNDP perspective that the partnership arrangement was not optimal. UNDP has strong expertise in promoting national ownership of initiatives as well as long term engagement in capacity building. With the exception of the situation in Niger, the ways that UNDP can add value were not fully tapped, as UNDP primarily took on a facilitation/logistical role. However, in some key countries such as in Cambodia, Myanmar and Niger, UNDP continues to play an active role in supporting governments with these tools and approaches.

IOC: As with the UNDP, partnering with the IOC provided knowledge and connections with local stakeholders to facilitate government engagement. IOC's familiarity with individuals in the region helped to ensure appropriate local consultants were hired, as well as helping to ensure that governments selected the appropriate individuals for training. In fact, it was the existing infrastructure of the IOC that enabled the implementation of the initiative in the region; it would not otherwise have been feasible to carry out the initiative in this set of dispersed and small islands. The project implementation benefitted from the IOC's existing institutional structures for the ISLANDS project (national focal points in each country, and the Regional Platform meetings in which all stakeholders were present).

World Bank: While the World Bank was not a formal partner, they are credited with using their relationships with ministries of finance in the Indian Ocean region to help engage them in the initiative.

GIZ: As a partner well established in this specific area of work, and in the Latin American region, GIZ shared expertise as well as connections with stakeholders to facilitate the engagement of central ministries. UNISDR activities conducted under the DEVCO initiative were informally but optimally integrated within the GIZ work plan in the area. This significantly contributed to the ownership of the project by beneficiary countries with important positive implications for the sustainability of the project results.

4.4.3.4. Technical expertise

As a project which introduced a varied set of technical tools and training, technical expertise was a critical aspect of the initiative. While UNISDR staff brought technical expertise, the level of effort associated with the initiative and the highly specialized knowledge required for some aspects required partner involvement. Technical partners contributed to the development of training materials (alongside UNISDR staff), facilitated training, and carried out technical analyses using project data. The quality of data produced by the initiative was also influenced by technical expertise, as well as other efforts by stakeholders noted below.

CIMA Foundation: CIMA has previously facilitated training on strengthening capacities for national loss accounting using the DesInventar tools and methodology and thus provided experience on this topic for the implementation of Component 1 in the Caribbean. As demonstrated by their involvement in Component 4 in the global flood hazard model, and their involvement in training on flood hazard under Component 2 in West Africa, staff have considerable technical knowledge in the field. However, the ToRs for trainers did not include involvement prior to or after the training, reducing the technical support they might otherwise have provided.

CIMNE and INGENIAR: These two organizations acted as consultants for Component 2, generating datasets from which project participants calculated country risk for expected losses due to earthquakes and tropical cyclones. These organizations were also involved in Component 4 as contributors to the GAR15 global risk assessment,

specifically for the earthquake hazard model at global scale, cyclone wind and storm surge hazard model at global scale, and the vulnerability model for each region.

IIASA: This scientific institute, drawing on scientists from around the world, developed the probabilistic cost benefit analysis and macro-economic model called CATSIM used in Component 3 in the Indian Ocean.

CorpoOSSO: CorpoOSSO is where the inception of the initiative took place. It has invested twenty years of effort in maintaining the database in Colombia and coordinating funding and updates in 16 countries in Latin America with national governments, other non-governmental organizations (NGOs), and academic institutions such as the Latin American Faculty of Social Sciences (FLACSO), Universidad Católica de Chile, and Universidad Nacional autónoma de México (UNAM).

Other technical partners and data quality: Partnerships with top institutions in the field to improve hazard modelling brought in a level of technical expertise that was not contained within UNISDR, and helped ensure that the data produced using these models would be of as high a quality as possible. Quality of data was also improved by the efforts of less technical partners, making initiative data more reliable and therefore potentially increasing use of this data. This occurred in two ways:

- Partners providing close collaboration, facilitation, and support to data collectors, whether consultants or government staff (provided both by UNDP and IOC); and
- In the case of the Caribbean, UNDP assisted with the improvement of data quality, for example by helping to fill data gaps on National disaster loss databases.

4.4.4. Level of consultation with partners

The extent of involvement of partners in consultation on the design and implementation is another key element of effective partnerships.

4.4.4.1. Input into design and implementation

In the Caribbean, partner organizations UNDP and the (potential partner) World Bank had input into the design of the initiative to adapt it for the circumstances of the region, during the original negotiations between UNISDR, UNDP, and the World Bank for co-funding.

However, in other regions, UNDP and other partners were not involved in project design. In fact, the preliminary discussions regarding the implementation of the initiative in West Africa were strained, mostly because UNDP was not involved and the design was perceived as "top-down." Involving partners such as UNDP, who have specific country knowledge and links with local authorities and institutions, could contribute to better targeting training activities and permit better support to data collection and database population and the general institutionalization of tools and processes fostered by the initiative.

Where regional project partners were not consulted, this may have had a negative effect on partners' buy-in.

4.4.5. Conclusion

UNISDR effectively used partnerships to complement their in-house human resources for project implementation, using a combination of partners and UNISDR staff to deliver training, undertake administrative tasks, and work on

technical aspects of the initiative. UNISDR's partnerships with another UN agency (UNDP), a regional inter-governmental organization (IOC), and a bilateral organization (GIZ) were important to ensure the timely and quality implementation of project activities. Without country and regional level support, particularly in regions as small and dispersed as the Indian Ocean, it would not have been feasible to carry out project activities in an effective or efficient manner, and the knowledge and connections brought by partners assisted greatly with the engagement of stakeholders. The expertise of technical partners such as the CIMA Foundation, IIASA, CIMNE & INGENIAR and CorpoOSSO was also important to ensure that the technical aspects of the initiative, particularly training, tools, and ultimately data outputs, were of higher quality.

By all accounts, the coordination of partnerships went well. However, one area of concern for the majority of partners was the lack of communication or transparency about the outcomes of trainings and initiative outcomes in general. These partners would have appreciated follow-up in this regard, and this might also have contributed to the institutionalization of the initiative.

These partnerships, some of which emerged only during implementation, demonstrated that UNISDR was open and flexible, and took advantage of some key opportunities to integrate the initiative with others when the opportunity presented itself (such as in the case of the IOC and GIZ).

4.5. Impacts and Sustainability

This section presents the main findings on progress towards its overall objective of developing capacities for unified CCA and DRR through increased public investment and deeper understanding of risk in beneficiary countries reviewed. It addresses the project impact in terms of level of outreach of results, achievement of ultimate project objectives, and integration of the initiative into the broader work of UNISDR. This section also discusses prospects for the sustainability of project outcomes.

4.5.1. Impacts

As this initiative was oriented to capacity building, most of its intended results relate to building individual or institutional capacity related to the tools and approaches introduced. The extent to which this has been achieved is addressed in the previous Section 4.2. This section takes a broader view of the achievement of results, including consideration of the policy change results not addressed in Section 4.2.

It should be noted that the initiative was still finalizing activities in some regions at the time this report was prepared, and that the first full set of project components in any region was completed in late 2014. The policy change sought by the initiative is likely to take place slowly over the course of many years. It is premature in most cases to assess the achievements of impacts; therefore, this section focuses on preliminary indications of impacts.

4.5.1.1. Level of outreach of results

Finding: The project directly reached 49 countries through the creation of national loss databases, with more than 850 individuals directly participating in project components. The indirect reach of the project was extended through dissemination of project-related documents.

4.5.1.1.1. *Direct reach*

The direct reach of the project can be considered to include the number of beneficiary countries, and the number of participants in capacity building workshops. The following table shows the number of beneficiary countries and individuals per component, and an estimate of the total number of participating individuals:

Table 17: Direct reach of Initiative activities

Component	Beneficiary countries	Number of participating individuals in each beneficiary country ²⁶	Estimated total number of participating individuals (highly approximated)
Component 1: Creation and/or update of national disaster databases	49	National workshops: 20-40	~850
Component 2: Probabilistic risk assessment	15	Regional workshops: 3-4	~60
Component 3:	24+5 (5 Caribbean countries participated in one regional workshop only)	National workshops: more than 30	~800

4.5.1.1.2. *Indirect reach*

The initiative also indirectly reached beyond the individuals participating in the capacity building workshops, through the dissemination of project-related materials. The initial project document did not articulate an information dissemination plan, but the strategy for disseminating information related to the project is effectively the fourth project component – the inclusion of project findings in the 2013 and 2015 Global GAR. This fourth component is outside the mandate of this evaluation; a separate evaluation of it was completed by Oxford Policy Management in 2016. However, since Component 4 functions as the information dissemination method for all other components, and increases the indirect reach of the initiative, it is briefly considered here.

The GAR

As noted in the introductory section of this report, the GAR is a biennial UNISDR report which, since 2007, has presented global risk patterns, trends, and progress in DRR, and provided guidance to government and non-government actors. The GARs do not simply compile existing research, but rather incorporate the findings of primary data and original research commissioned for that purpose. In that sense, the GARs are both a product and a process of evidence generation and policy engagement.

The current project was built upon (as described in the introductory section) the recommendations in GAR 2011, and its findings were always intended to form part of the research feeding back into the GAR. The results coming

²⁶ An exception to these figures was the small South Pacific Islands, from which there were not national stakeholders from each country present at a regional workshop.

from the loss databases, and the development of a fully probabilistic global risk model that provided the basis for Component 2, provided the risk metrics that, in UNISDR's view, were fundamental to the quality of the GAR13 and GAR15 reports.

Project-related documents

In addition to the GAR, several types of reports and summaries related to the initiative have been or will be made available to the public:

- a working paper series outlining the process and findings for Component 3; the initial set was presented at the Sendai conference in 2015 and available on PreventionWeb and the UNISDR website;
- 3-5 page summaries of disaster risk results by country using the global risk assessment datasets and country risk profiles;
- all outputs from the implementation of Component 3 in Latin America have been made public on a website created for the initiative as part of the Latin American Network for Risk Management and Climate Change in Public Investment (*Red latinoamericana de gestión del riesgo y cambio climático en la inversión pública*), and;
- more national working papers that are underway or planned for other regions, in collaboration with a consulting economist.

Although they are available to the public, the readership of these documents is unknown. It is not clear to what extent these products are reaching their intended audience even within country stakeholders, as stakeholders have mentioned that there was no evidence of a clear strategy for disseminating them among workshop participants or policy decision-makers.

4.5.2. Achievement of impacts in beneficiary countries

Finding: It is premature to assess impacts of the initiative in beneficiary countries. At this time,²⁷ the main success of the initiative has been to raise awareness of the importance of a disaster risk reduction approach amongst key audiences.

This section turns to the intended impact of Expected Results 3.3 and 3.4.:

- Expected result 3.3. Public investment planning, land use, development, CCA and DRR plans in most of the target countries informed by evidence on recurrent losses, probable future risks and on the assessment of the costs and benefits of DRR
- Expected result 3.4. A measurable increase of National and sector-based public investment contributing to a medium term and sustainable reduction in disaster risk and to adaptation to climate change in the majority of target countries.

Achieving the national policy changes described above is a long-term, multi-year prospect, unlikely to be achieved within the four-year lifespan of the initiative – particularly considering that project activities were only recently completed in several regions. It is to be anticipated that minimal change would be seen at this point in terms of tangible changes at the level of land use and development, or increased public investment in DRR.

Country stakeholders were nonetheless asked whether they could identify any concrete changes which might have resulted from, or been influenced by, the initiative at this early stage. In the vast majority of cases, stakeholders

²⁷ February 2017

were unaware of such changes. However, a majority of stakeholders from all regions noted that they felt the initiative had succeeded in raising awareness about the importance of a DRR approach and a set of related tools for data collection and analysis, which they saw as a crucial step towards long-term achievement of concrete changes. Stakeholders felt that awareness was raised not only amongst the disaster management stakeholders, but also national ministries of finance and planning, who ultimately wield authority over national budgets.

Three specific examples of actions related to or influenced by the initiative were provided:

Comoros: In Comoros, a law was adopted to allocate a certain percentage of the annual budget to DRR as a direct result of work under the ISLANDS/UNISDR risk financing and national workshop activities; consideration is being given to setting up a committee to better develop the insurance market for buildings.

Madagascar: In Madagascar, the Emergency Prevention and Management Unit reported that the initiative has contributed to changes in internal institutional procedures through the updated National Policy and Strategy for Risk and Disaster Management. In addition, a plan for implementing the National Strategy for Risk Management and Disaster Risk Management has been developed that reflects the impact of the initiative, especially with respect to data sharing. The updated documents have prompted GRC/DRR stakeholders to improve the organization of data collection, risk assessment, and vertical (between administrative) and horizontal information (between sectors/thematic areas) exchange in order to facilitate decision-making at all levels.

Niger: Niger has also been using the data and the risk analysis from the initiative to inform the update of its DRR strategy and related action plan.

4.5.3. Integration of the initiative into the broader work of UNISDR and others

Finding: The initiative has been integrated into the broader work of UNISDR, and the experience has fed into some key disaster management tools including the Sendai Framework and guidance for recording disaster loss data.

As a small agency, UNISDR's work is often highly collaborative, involving multiple other organizations of various types working in the field of disaster risk management. Collaborative work has ultimately fed into project elements, such as the development of new hybrid risk models noted in Section 4.1. This section, however, addresses the integration of the project knowledge, experience, and lessons learned into other initiatives within and outside UNISDR.

4.5.3.1. Within UNISDR

Within the project: Experiences of the Indian Ocean region and Mexico were shared during the Asia regional workshop through:

- a presentation on risk-sensitive budget reviews, based on case studies from the Indian Ocean region, and;
- a presentation on Mexico's experience with risk management, including their National Atlas of Risk, financial instruments to co-finance disaster prevention projects, and catastrophe bonds for infrequent events.

New programming in Sub-Saharan Africa: A specific example of use of knowledge and lessons learned can be found in UNISDR's changed approach to implementing the collection of historical disaster data within a more



recent project funded by the EU, “Building Disaster Resilience to Natural Hazards in Sub-Saharan African Regions, Countries and Communities Programme.”²⁸ Launched in 2015, this EUR 80 million project supports Sub-Saharan African countries in improving their disaster management. It is being implemented by UNISDR, the African Union Commission, the World Bank’s Global Facility for Disaster Reduction and Recovery (GFDRR), and the ClimDev arm of the African Development Bank. In implementing the component on historical disaster related data, UNISDR is using lessons learned from the initiative. Having seen challenges with fostering ownership and institutionalization of National disaster loss database when consultancies were used for data collection and population of the database, the model now provides training to two civil servants in each country, with the use of consultancies being optional. UNISDR staff feel this is already encouraging better results, with some countries such as Rwanda populating their database on a frequent basis.

GAR 2015: As described above, Initiative experiences were intended to contribute to the GAR. Work related to the project was incorporated into contributing papers and background papers for the GAR 2015, and the Initiative’s Working Papers series was added to the GAR 2015-related materials on the web version. This included, as part of the Initiative, the first mass application of a new global probabilistic multi-hazard global risk model. Prior to the Initiative, the model had only been applied to case studies of Colombia, Mexico, and Nepal.

4.5.3.2. External to UNISDR

Work from Components 1 and 2 of the Initiative has also been used in forums and initiatives outside of UNISDR (in addition to the variety of project-related documents noted elsewhere in this report):

Use of data at the regional level by the World Bank - Indian Ocean region: As noted elsewhere in this report, the World Bank applied historical data collected through the Initiative in the Indian Ocean region to their own probabilistic risk modelling activities, which form part of the feasibility studies towards the development of a regional risk sharing mechanism (SWIORAFI).

European guidance on recording disaster loss data: The 2015 EC “Guidance for Recording and Sharing Disaster Damage and Loss Data”²⁹ which provides guidance for European Union countries on establishing national disaster loss databases. While non-binding, the document seeks to help ensure that countries are recording disaster loss data consistently. It notes that while having a common framework for damage and loss data recording with comparable datasets would bring significant value to cross-border cooperation and systematic reporting on indicators for global DRR targets, there are few comparable disaster damage and loss datasets in the EU. UNISDR was included amongst the group of expert consultants and incorporated the experiences of the project to their input. The document does not recommend any particular database to be used, but it does mention that damage indicators should be compatible with DesInventar tools and methodology as a standard or good practice.

Contribution to the Sendai Framework: The data collected from the project (particularly Component 1) and the analytical work undertaken, has also fed into the negotiations that resulted in the Sendai Framework for Disaster Risk Reduction. During the Post-2015 Framework Consultations prior to Sendai, the results obtained from the loss databases available at the time were used to propose a number of targets, which were eventually adopted with relatively minor changes.

In the subsequent phase of the Open-ended Intergovernmental Expert Working Group, UNISDR was able to demonstrate the availability of data for specific indicators resulting from the large increase in national disaster loss databases through the project (with 48 of the total 82 coming from the project). These four indicators (as noted in

²⁸ <http://www.preventionweb.net/resilient-africa/programme>

²⁹ http://drr.jrc.ec.europa.eu/Portals/0/Loss/JRC_guidelines_loss_data_recording_v10.pdf



Section 4.1). were adopted by the UN General Assembly in February 2017 and ultimately incorporated into the Sustainable Development Goals.

Further, the emphasis of the Sendai Framework on the scope of 'small, medium and large disasters, frequent and infrequent, slow and sudden onset', as well as the addressing of many other hazards (such as biological) is also reflected in the loss databases established during the project, and data from the databases demonstrated the importance and extent of damage of these issues to countries.

4.5.4. Sustainability

This section examines prospects for sustainability of Initiative outcomes, through the level of uptake of the tools introduced and the level of national ownership. The role of an exit strategy and the importance of partnerships to sustainability are also discussed.

4.5.4.1. Uptake by governments

Finding: A few countries provide strong examples of project uptake and demonstrate the potential of the project where the right conditions are present. In a majority of countries reviewed by this evaluation, strong uptake of project tools was not apparent.

First, the section considers uptake by national governments of beneficiary countries, specifically evidence of the adoption and use of the tools of the project since the end of project activities. This provides an indication of the level of motivation and interest of governments in these tools, a key factor in longer-term sustainability.

4.5.4.1.1. Component 1: DesInventar

Evidence of access to the loss databases was collected through Google Analytics, which provides information on the number of visitors that have accessed the DesInventar.net database from any given country. It also provides data on the number of times specific country pages have been visited. It suggests potentially some, though not extensive, usage. These data show that access to the database has been particularly low in West African and Caribbean countries.

Although this provides some insight on access to the DesInventar loss databases, in practice there are other ways stakeholders might have accessed and used the database data offline. For example, in the Caribbean, the database was circulated by a consultant to CDEMA and host institutions.



Table 18: Data on access to the loss databases in countries reviewed during the final evaluation

Region/Country	Number of sessions on DesInventar.net initiated from the country (data available only since April 2016)	Number of times country page was accessed (data available only since April 2016)
Indian Ocean		
Madagascar	105	242
Mauritius	121	157
Seychelles	18	31
Asia		
Cambodia	159	112
Myanmar	79	Not available ¹
West Africa		
Mali	33	107
Niger	44	154
Senegal	53	134
South Pacific		
22 countries	118 ²	261
LAC		
Mexico	455	329
Peru	119	103
Caribbean		
Antigua and Barbuda	27	161
Saint Lucia	28	53

1. The live database is running on their national server.
2. This includes session initiated from Fiji, Papua New Guinea, Samoa, New Caledonia and Palau.

4.5.4.1.2. *Components 2 and 3*

Similarly, online mechanisms do not exist to test for usage of the tools introduced through the initiative through Components 2 and 3. However, interviews with country stakeholders consistently suggest that while awareness has been raised about these tools and approaches, they are in most cases not institutionalized in the sense of being in active use since their introduction. A majority of stakeholders interviewed could not provide examples of having put the tools and approaches into use since the end of project activities. As the Capacity Building section describes, there were no mechanisms in place to assess the level of skill-building for those who received training in probabilistic risk assessment, cost benefit analysis, or CATSIM (Indian Ocean region only), but all indications are that they are unlikely to be sufficient for country stakeholders to comfortably put these tools into use (with the exception of the risk sensitive budget review tool, which was much less complex).

However, a few examples have been noted of national stakeholders taking up the lessons of the initiative and expanding upon them in further activities:

Latin American Network for Risk Management and Climate Change in Public Investment: In Latin America, the creation of this network was supported by the initiative. It subsequently made a declaration of voluntary commitments³⁰ at Sendai to pursue capacity development work in the region with a clear set of targets. These include goals that are closely related to the objectives of the Initiative, such as encouraging the countries of the region to: adopt specific regulations to promote the incorporation of DRR in their national public investment systems; use classifiers of DRR expenditure; systematize case studies and cost benefit analysis in order to obtain empirical evidence to show the impact of the integration of disaster risk management in a context of climate change in public investment; and disseminate models for integrating disaster risk management measures into economic assessments, cost-benefit analysis, and investment decisions.

The activities of the Network have continued after the initiative had closed its activity in Latin America. For example, the network held a regional workshop (*Taller internacional sobre inversión pública con enfoque de reducción de riesgo a desastre y adaptación al cambio climático*) in Nicaragua in August 2015. The objective was to exchange international experiences through case studies of public investment projects that have incorporated DRR in a comprehensive manner in Latin American and Caribbean countries. The experiences were to be systematized, and feedback gathered on national processes and experiences pointing to a resilient public investment adapted to climate change. Although not being systematically recorded on the website of the Network, stakeholders in Latin America have mentioned that several activities involving capacity building and sharing of knowledge have taken place in the region since the closure of the initiative.

Application of data at the local level and sharing of results: Local authorities in Niger were able to use the data from the national consultant working on the initiative to conduct a much more detailed probabilistic flood risk assessment at the local level. The results were then presented in 2015 at the Understanding Risk and Financing Conference, the biannual conference of the global community of disaster risk experts.

Further training for government staff in Peru: In Peru, the baseline review of instruments available to operators of the National Public Investment Fund for risk management approaches to formulating and financing public investment projects was published by the Directorate General of Public Investment of the Ministry of Economy and Finance, in collaboration with public Investment and Climate Change Adaptation (IPAAC), a GIZ-funded project. The publication has been used to provide further training of government staff in Peru, thus disseminating project results at the regional level in Peru.

4.5.4.2. National ownership

Finding: While some countries have demonstrated strong national ownership of the initiative, a majority of beneficiary countries reviewed by this evaluation have not.

National ownership is another key factor in sustainability of project outcomes. The extent of uptake of project tools and activities, and even expansion of those activities, as in some of the examples described above, are indicators of national ownership.

Interviews suggest that the degree of national ownership varies considerably from one beneficiary country to another. Through strong engagement in project implementation, or by continuing activities since project closure, some countries – including Niger, Madagascar, Peru, and Cambodia – have demonstrated good ownership of project activities. Where project implementation has only just been completed, further ownership may yet be demonstrated.

³⁰ http://www.red-gricciplac.org/Compromiso_voluntario.html

In general, though, national ownership appears to be low in the majority of beneficiary countries reviewed by this evaluation. In these cases, there is no evidence of one or more of the following:

- a champion taking project activities forward;
- communication between departments on continuing project activities, sharing data, etc.; and/or
- clear responsibilities for particular project activities, either at the institutional or individual level (for example, responsibility assigned for populating DesInventar).

While representatives of participating countries interviewed for this evaluation viewed the relevance of the project objectives positively, this lack of robust ownership suggests that driving forces from within most of these countries are weak, and as a result these types of activities are not being prioritized. This is particularly acute in countries where human resources are most constrained, such as in the smaller Indian Ocean and Caribbean islands. While the initiative is attempting to create awareness and increase the emphasis on investment in DRR, the extent of activities and duration of the project has not been sufficient for most countries to achieve this.

4.5.4.3. Exit strategies and the role of partnership

Another element that may be critical to the sustainability of project outcomes must be addressed. For an initiative with a short duration within each region, it is particularly important to establish an “exit strategy” to try to ensure a clear direction for the continuation of project activities within the country, and support where needed, after the intervention is concluded.

In Latin America, the most advanced region in DRR, prospects for sustainability of project activities appears the highest. In addition to the existence of baseline capacity in the area, the integration of UNISDR activities conducted under the DEVCO initiative within the GIZ work plan in the same area significantly contributed to the ownership of the project by beneficiary countries with important positive implications for the sustainability of the project results.

However, while the evaluation found that activities carried out through the initiative were critical stepping stones, the *sustainability of their results are challenged* in other regions in the countries reviewed by the evaluation by low baseline capacity in DRR, competing priorities resulting in limited national ownership and uptake of project activities, and the limited resources dedicated to ensure a committed, ongoing presence of key partners to continue to support efforts to progress. In these countries, stakeholders expressed concern over how to ensure further or continued implementation, follow up and expansion of learning and capacity built through the initiative. For countries with extensive human resource constraints, maintaining or utilizing even the simplest tool introduced for tracking disaster data may be problematic.

Partners with a long-term country presence can play an important role in sustaining project outcomes after project end even in countries with low capacities and form part of a project exit strategy. An example from Niger demonstrates the potential of this model where UNDP staff are engaged and knowledgeable about this project:

Niger example: In Niger, UNDP has been closely supporting the host institution in the implementation of the initiative.³¹ A UNDP Disaster Reduction and Recovery Advisor has been attached to the host institution for several years and has offered ongoing direct support. This support has provided the host institution with the necessary ongoing technical capacity to participate actively in the implementation of all the components of the initiative and to gain ownership of the results, namely the loss database, the risk results, and to some extent the country studies on the integration of CCA and DRR in national public investment. Consequently, Niger is currently one of the few

³¹ Cellule de Coordination du Système d’Alerte Précoce (CC/SAP) du Dispositif National de Prévention et de Gestion des Catastrophes et Crises Alimentaires (DNPGCCA)



countries in which there appear to be a fair likelihood of seeing the institutionalisation of the loss database materialize as well as a fair understanding of the results obtained under Component 2 (including a desire to replicate the exercise in other regions and for other hazards.)

The likelihood of sustainability of the project results is high in several countries reviewed by the evaluation that have received support in this area for a longer period of time, and where key partners have been in a position to support implementation and build on the achievement of the initiative. However, in most countries reviewed in this evaluation, where UNDP was engaged in support of project implementation at the country level, the level of buy-in described in the Niger example was not present. It is not likely to be achieved without resources to ensure an ongoing presence of key partners to continue to support institutionalization of the project tools and approaches.

Two other gaps were also identified in relation to an exit strategy:

- a strategy for dissemination of project documents within a country or region was unclear, and;
- strategies for institutionalizing project tools were lacking (as discussed above in the Design and Capacity Building sections).

Without strong indications of how countries were to move from project activities into conditions of integrated public investments sensitive to DRR/CCA, the sustainability of project results was left to a large extent in the hands of the participants of the final workshop, without strong national ownership for carrying those forward.

Without having the extent of support and buy-in of an in-country partner in many of the countries reviewed, it is not surprising that prospects for sustainability of some project outcomes, without further activities and follow-up, at this time appear low.

4.5.5. Conclusion

While it is premature to expect visible policy change results from the initiative – such as increased public investment in DRR and changes in development and planning practices – the initiative has produced increased awareness amongst key audiences of the importance of disaster risk reduction and related tools which can provide an evidence base for increased investment. In countries with very low capacity for DRR, this is an important initial step towards the longer-term goals and has created more fertile ground for further intervention.

The project directly reached 49 countries through the creation of national loss databases, with more than 850 individuals directly participating in project components. The indirect reach of the project was extended through dissemination of project-related documents, and the initiative has been integrated into the broader work of UNISDR through the GAR. The project experience has fed into some key disaster management tools including indicators for the Sendai Framework and country guidance for recording disaster loss data.

The project activities can be seen as stepping stones towards these goals; however, in the sample of beneficiary countries reviewed, where there was a lack of long term resources to support the commitment and ongoing presence of partners they are unlikely to be sustainable given the challenging starting point of the DRR context, limited national ownership and limited uptake of project activities, and lack of long term resources to guarantee the commitment and ongoing presence of partners such as UNDP, IOC, GIZ, etc.. A frequent comment from country stakeholders was that their primary concern at the end of the initiative was sustainability: how to ensure that learning and capacity building are implemented or expanded upon. For the countries with severe human resource constraints, there was concern over how to maintain even the simplest tool introduced for tracking disaster data.



In order to make further progress towards policy change, further capacity building and support will be needed. Indeed, country stakeholders have consistently expressed interest in receiving more training on the topics introduced by the initiative. These efforts will need to be combined with a fully engaged partner or partners with a regional or country presence who can support countries in carrying these efforts forward after the end of the project.

4.6. Lessons Learned and Recommendations

Lessons learned on designing and implementing capacity building initiatives

- **Capacity building is a long term process:** Project design is strengthened when it matches capacity building targets to project timeframes to ensure that capacity needs rather than time constraints drive implementation. Insufficient time to meet ambitious capacity building targets, especially in low-resource contexts, can limit results
- **Taking baseline capacity into account is key:** Capacity building activities are more likely to be effective if they are implemented incrementally and consider existing capacity. The experience of the initiative demonstrates that tailoring project tools and activities to make them more relevant to country stakeholders is likely to produce better results.
- **Integrating capacity building activities in the DRR context can showcase their relevance:** This initiative highlights the added value of implementing national disaster loss databases as part of broader work on DRR, as it enables stakeholders to gain greater understanding of the need for, and uses of, high quality historical loss data.
- **Relevant, on-the-ground partnerships facilitate effective activities:** For a smaller organization without regional or country presence like UNISDR, capacity building activities can be more effective if they are implemented in partnership with organizations that have a strong national presence and in-depth involvement in the subject matter, in order to facilitate enhancement, continuity and sustainability of results.
- **Dialogue with others can generate synergy benefits:** Timely dialogue with other institutional actors working on CCA and DRR in the beneficiary regions can contribute to greater coordination on activities, build on synergies, and avoid (or reduce) duplication. It can also create opportunities to identify and share best practices and lessons learned, as well as contribute to improved design and tailoring to country contexts.
- **Institutional silos undermine outcomes that depend on knowledge sharing and communication:** Institutional silos within countries pose a significant challenge to achieving outcomes related to policy dialogue, sharing information, disseminating results, implementing the use of tools, and raising awareness amongst diverse country institutions.
- **Planning for sustainability is crucial for maintaining buy-in and capacity:** However light or strong in intensity, capacity building activities create momentum for stakeholders, who gain awareness and understanding of issues. This can be leveraged to create still more capacity, but only if there is ongoing



support to maintain buy-in. Discontinuity of support makes capacity building results more vulnerable to staff turnover and can lead to stakeholder disengagement and loss of capacity.

- **Institutionalization can be facilitated by partnerships extending beyond project timeframes:** Institutionalization of this type of initiative usually takes longer than the duration of the initiative. Partnerships that extend beyond the lifetime of the initiative with country or regional stakeholders that have both a country presence and experience working with local governments are essential to achieving institutionalization of initiative tools and approaches and sustainability of outcomes.

Recommendations on designing and implementing capacity building initiatives

- **Tailor project components to the beneficiary:** Project design should be tailored to beneficiary countries: first, a more extensive consultation process should be undertaken prior to implementation; second, the implementation approach should be adjusted to allow for the increased time and support that most LDCs require to achieve the expected outcomes; and third, more resources should be allocated to tailoring the delivery of activities to specific country contexts. This could mean engaging with a smaller number of beneficiary countries, depending on the resources available, or strengthening partnership arrangements to support tailoring.
- **Consolidate partnership arrangements:** Deeper collaboration should be ensured between UNISDR and other partners that can play a significant role in terms of fostering ownership and supporting institutionalization before future activities are undertaken. This will be critical to increase the likelihood of the institutionalization of tools and approaches and thus the sustainability of the initiative.
- **Ensure the engagement of host institutions:** Expectations for involvement should be made clear from the outset to all entities – such as the host institutions – that are owners of key project outputs or deliverables, such as the database, risk results, and country studies on the integration of CCA and DRR in national public investment.
- **Further coordination with other organizations:** Consultation and engagement with other relevant organizations in each region should be pursued as part of both the design and implementation phases. This would permit greater coordination on activities, thus improving efficiency and effectiveness by building on synergies and reducing duplication. Such consultation can also improve the tailoring of activities to country contexts and capacity baselines.
- **Ensure that mechanisms for learning are built into design:** In order to increase communication and transparency with partners (including trainers) and other interested parties regarding progress towards and achievement of outputs and outcomes, ensure that learning feedback loops are incorporated into project design. This would enhance adaptive management, promote sharing of results and lessons, and improve future programming. Mechanisms to consider could include various forms of results dissemination, as well as formal and informal reporting and feedback to trainers and other service providers.
- **Take an integrated approach to implementing activities:** A more integrated approach to the implementation of Components 1 to 3 should be considered, including more consistent involvement of the same group of stakeholders, and methods to overcome the institutional silos that separate different



sectoral and institutional settings within a country. This will likely entail a much stronger emphasis on policy dialogue.

- **Ensure that a feasible exit strategy is built into project design:** Clear exit strategies should be developed in order to leave in place a clear direction for next steps in continuing the progress made through project activities. This should include strategies that foster country ownership, a dissemination strategy at the national level for the key results as well as the identification of local partners that can built on and further capacity development in the area.

Recommendations on ensuring the quality of the loss data and risk results

- **Strengthen quality assurance mechanisms:** In addition to the gap analyses, further quality assurance mechanisms should be put in place. In particular, data collection teams should be further trained in disaster terminology and in tools and methods they can use to cross check the comprehensiveness and accuracy of the data entered. Continuous support, building on the model currently adopted by UNISDR in the form of enhanced remote coaching of a small team responsible for data collection, could be efficient and effective.
- **Improve historical, sectoral, and geographic coverage of loss data:** In order to achieve more optimum historical, sectoral, and geographic coverage, the support and collaboration of different institutions should be pursued. Relevant institutions should be made aware of, and more firmly engaged in, national DRR initiatives.
- **Continue assistance based on country ownership of the database:** Where there is a clear level of ownership of the tool, further support should be provided for collecting higher resolution data in order to provide accurate information to drive subnational level decisions on DRR and CCA investments. In some cases, additional resources could be considered for the conduct of supplementary, on-site trainings for host institutions.
- **Ensure customization of the database:** Further customization of the database at the national level should be ensured, as this would contribute to fostering ownership of the database and to making the data and related risk analyses more relevant to country realities and government needs.
- **Improve the user- friendliness of the tools (DesInventar):** While providing more training to users would help address this challenge, in the short to medium term, steps should also be taken to improve the database's user interface to make it easier for users to learn how to make use of its various functions.



ANNEX I: DRAFT EVALUATION MATRIX

Issues for evaluation	Examples of Sub-Questions/Comments	Examples of indicator(s) proposed
Sub-Matrix I. Assessment of the Project Design and Process		
A. Relevance of the project objectives and design in view of country needs and UNISDR objectives	<ul style="list-style-type: none"> ▪ Does the project adequately take into account the national realities, both in terms of institutional framework and other programmings, in the design and implementation of the project? ▪ To what extent were national partners involved in the design of the projects? ▪ How does the project support the implementation of the Hyogo and the Sendai Frameworks? 	<ul style="list-style-type: none"> ▪ Level of recipient country government commitment to this project in terms of amount of financial and in-kind support, percentage of local experts used, etc ▪ Number, type and level of effort of national stakeholders involved in the design of the project ▪ Existence of a clear relationship between the project objectives and the Hyogo and of the Sendai Frameworks.
B. Quality of design in view of delivery of planned outputs and outcomes	<ul style="list-style-type: none"> ▪ Does the project operational framework clearly show the link between the activities and the various levels of project's results? ▪ Does the project design include adequate M&E arrangements? ▪ Does the project design include an information dissemination plan? ▪ Are there formal or informal linkages with other projects and interventions? ▪ Are the main implementation arrangements for the implementation of this project clearly defined? 	<ul style="list-style-type: none"> ▪ Level of coherence of the project operational framework ▪ Extent of use of SMART indicators ▪ Level of adequacy project M&E plan in project document ▪ Level of clarity of the description of project information dissemination plan in the project document ▪ Number of references of linkages with other projects and interventions in project document ▪ Level of clarity of the description of project implementation arrangements (partners, resources, timeline, etc.) in the project document
C. Responsiveness of project management during implementation	<ul style="list-style-type: none"> ▪ Was there any discrepancy between actual and planned management structure and the role played by the various parties involved in the project management/ implementation? ▪ Was there any shortcoming regarding technical capacity/resources of the parties involved in the project management? ▪ What was the overall quality of information management and sharing? 	<ul style="list-style-type: none"> ▪ Number and importance of discrepancies between actual and planned management structure and the role(s) played by the various parties involved in the project management/implementation? ▪ Number and importance of shortcomings regarding technical capacity/resources of the parties involved in the project management? ▪ Quality of information recording formats and sharing processes

	<ul style="list-style-type: none"> ▪ What were the main issues or changing conditions, if any, that have affected implementation of this project and what adaptive measures were taken to manage those at all levels (UNISDR HQ and regional offices, National Counterparts)? ▪ Were the project findings from M&E activities used as a tool in support of adaptive management? ▪ Were the project activities and output delivered in a timely manner? 	<ul style="list-style-type: none"> ▪ Number and importance of issues or changing conditions that have affected implementation of the project ▪ Evidence of effectiveness of adaptive measures taken to manage arising issues during implementation ▪ Number and importance of discrepancies between actual and planned schedule of activities ▪ Evidence that findings from project M&E activities have been used to identify project implementation issues and to select appropriate corrective measures.
<p>D. Financial management</p>	<ul style="list-style-type: none"> ▪ Has the project's actual financing plan (including costing by activity, disbursement plan, expenditure pattern, co-financing commitments, and financing instruments) changed since project endorsement? ▪ Were there financial issues affecting project implementation (i.e. slow disbursement, low absorptive capacity, exchange rates, etc.)? ▪ Is the implementation of the project as cost-effective as originally proposed? 	<ul style="list-style-type: none"> ▪ Nature, number and magnitude of discrepancies between actual and planned cost ▪ Timeliness of disbursement ▪ Quality of financial reporting ▪ Quality of co-financing tracking
<p>Sub-Matrix II. Rapid Assessment of Capacity Development</p>		
<p>A. Assessment of the Opportunity framework</p>	<ul style="list-style-type: none"> ▪ To what extent was the context already fertile for the development of capacities at the time the initiative was launched? ▪ What are the contextual factors that have facilitated or limited the development of the capacities of the partners in the targeted institutions through the interventions of the initiative? ▪ To what extent does the support program under evaluation respond to the Quality Criteria established by the EC, including relevance to the context, ownership of targeted institution(s), strategic focus, harmonisation and appropriate delivery modalities? <i>(This quality criteria is covered Sub-Matrix I. Assessment of the Project Design and Process)</i> 	<ul style="list-style-type: none"> ▪ Existence and quality of baseline sectoral institutional capacity assessment ▪ Existence and quality of relevant Policy framework ▪ Existence and quality of CCA and DRM strategy at national level
<p>B. Assessment of capacity outputs (include both the expected and unexpected</p>	<ul style="list-style-type: none"> ▪ To what extent did the programme contribute to the production of objectively verifiable changes in staff 	<ul style="list-style-type: none"> ▪ Number/% of more and /or better-trained staff ▪ Number of new sectoral/ thematic competences

capacity outputs generated during the period under evaluation)	<p>competencies? How did external factors affect such changes?</p> <ul style="list-style-type: none"> ▪ To what extent did the programme contribute to the production of objectively verifiable changes in institutional procedures and functions? How did external factors affect such changes? ▪ To what extent did the programme contribute to the production of objectively verifiable changes in the organisational and internal functioning? How did external factors affect such changes? ▪ To what extent did the programme contribute to the production of objectively verifiable changes on individuals, institutions and initiatives, which were not targeted? How did external factors affect such changes? ▪ Did the initiative meet its original objectives/targets in terms of capacity outputs? (see sub matrix V below) 	<ul style="list-style-type: none"> ▪ Evidence of knowledge of and links with the experience of similar institutions in other countries ▪ Number of new or strengthened units or functions for data processing, policy and financing ▪ Level of consultation of stakeholders, e.g. surveys, consultation with civil society organisation, dialogue with political representatives and Parliament ▪ Number/type of other significant changes in organisation, procedures, functions ▪ any change in the decision-making process, such as improved evidence-based decisions
C. Assessment of capacity outcomes	<ul style="list-style-type: none"> ▪ Are the institutions better capable of: <ul style="list-style-type: none"> - producing relevant initiatives (plans, laws, operations) (initiatives)? - achieving performance in terms of development results (Results)? - being recognised and trusted by stakeholders and able to create good relationships with them (Networking)? - learning from experience and adapting to changes in the context (Adaptation)? - adapting the management structure to the institution's mission (Coherence)? ▪ Did the initiative meet its original objectives/targets in terms of capacity outcomes? (see sub matrix V below) 	<ul style="list-style-type: none"> ▪ Change within the targeted institutions in terms of : <ul style="list-style-type: none"> ○ Initiative ○ Performance/Results ○ Networking with relevant stakeholders ○ Adaptation to changing context ○ Coherence with institution mission
D. Assessment of the capacity outputs and capacity outcomes' correlation	<ul style="list-style-type: none"> ▪ To what extent have the institutional capacity outputs contributed to each of the above-mentioned capacity outcomes (Initiative, Results, Networking, Adaptation and Coherence). 	<ul style="list-style-type: none"> ▪ Evidence that clearly indicates that the advances mentioned (in terms of Initiative, Results, Networking, Adaptation and coherence) have a significant causal correlation with the consolidation and mainstreaming of specific capacity outputs ▪ Evidence that clearly indicates that the advances mentioned (in terms of Initiative, Results, Networking, Adaptation and

coherence) have a significant causal correlation with factors related to the Opportunity Framework.

Sub-Matrix III. Assessment of the Quality of Loss and Risk Result

<p>A. Quality of Loss and risk results – Principles and Quality assurance mechanisms</p>	<ul style="list-style-type: none"> ▪ Are Loss Data records in line with the following principles? <ul style="list-style-type: none"> ○ Precise (terminology and definitions) ○ comprehensive (spatial, sectoral and loss ownership) ○ Comparable (effects by hazard types across countries and sectors) ○ Transparent (geo-referencing, temporal information and assessment of uncertainty) ▪ What are the quality assurance mechanisms in place if any (intrinsic to the methodologies selected and/or related to the implementation of the initiative)? ▪ Did the methodologies selected and/or the initiative include provision for assessing uncertainty at the source? If so, how? 	<ul style="list-style-type: none"> ▪ Level of clarity of terminology of indicator fields and ▪ Evidence of mutually exclusive definitions of indicator fields ▪ Level of coverage of loss indicators (i.e. cover all loss/damage in terms of spatial, sectoral and loss ownership coverage) ▪ Level of comparability of disaster effects among events of the same hazard types as well among different hazard types, across countries and across sectors ▪ Evidence that loss values are geo-referenced, with temporal information ▪ Existence and nature of the uncertainty handling within the methodologies used ▪ Number and type of quality assurance mechanisms in place
<p>B. Quality of Loss and risk results – Perception of strength and weaknesses</p>	<ul style="list-style-type: none"> ▪ Were the methodologies selected to generate data (data collecting, data recording, and modeling work) appropriate for their purpose and considered as best practice in the field? ▪ What are the advantages and disadvantages of using a common standard (methodological tools) across beneficiary countries (DesInventar)? ▪ What are the perceived weaknesses and gaps of the approaches and tools used, what could be the options to address these in a practical way? ▪ What is the perception regarding the quality of results generated (among experts from: UNIDSR, IRDR, technical and implementing Partners, Beneficiaries, Others)? 	<ul style="list-style-type: none"> ▪ Level of coherence between the methodologies selected for generating loss and risk result and intended use of the results as well as with best practices ▪ Number and type of advantages/strengths in data collecting, data recording, modeling work across countries ▪ Number and type of disadvantages/challenges in data collecting, data recording, modeling work across countries ▪ Experts' perception of quality of the results

Sub-Matrix IV. Assessment of the Partnerships

<p>A. Establishment of Partnerships</p>	<ul style="list-style-type: none"> ▪ What kind of partnerships were established throughout the implementation of the initiative? 	<ul style="list-style-type: none"> ▪ Number of partnerships established during the initiatives ▪ Nature and diversity of partnerships ▪ Existence of clear responsibilities for each of the partners involved
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B. Additional effectiveness and sustainability brought to the implementation of the initiative in regions where activities were conducted with regional partners

- What would have happened if the initiative had not been delivered in partnerships?
- How did the partnerships combine complementary expertise, knowledge and experience?
- In what ways did the outcomes benefit from the partnerships?
 - How did the partnership arrangements foster the effectiveness of the initiative?
 - How did the partnership arrangements foster the sustainability of the project outcomes?
 - How did the partnership arrangements foster the scaling up of the project outcomes?
 - How did the partnership arrangements foster the quality of the Loss and Risk results?
 - How did the partnership arrangements foster the capacity development results?
- Level of additional resources mobilized through partnerships
- Level and nature of additional expertise brought in the initiative through partnership
- Evidence of the contribution of partners to the effectiveness of the initiative
- Evidence of the contribution of partners to the sustainability of the project outcomes
- Evidence of the contribution of partners to the scaling up of the project results
- Evidence of the contribution of partners to the quality of the Loss and Risk results
- Evidence of the contribution of partners to capacity development of the beneficiary countries

Sub-Matrix V. Assessment of Results and Impacts

A. Impact - Project contribution to the development of capacities for unified CCA and DRR through increased public investment and deeper understanding of risk in about 40 countries

- What has been the project impact in terms of level of outreach of the results?
- What has been the project impact in terms of its uptake by the governments and partners?
- What has been the project impact in terms of its integration into the broader work of UNISDR?
- Number of technical departments within governmental bodies aware of or using project results
- Number of partners institutions aware of or using project results accounting for their relation with the government (i.e., role in policy decision making and policy network)
- Evidence of the introduction of climate risk and vulnerability information and data obtained by model's simulation into national and sector programming documents, and in particular into climate adaptation programs
- Evidence of the introduction of climate risk and vulnerability information and data obtained by model's simulation into governmental agencies and partners public reports on climate adaptation
- Evidence of the mainstreaming of climate risk and vulnerability assessment into government and partners' day-by-day work (e.g.,



		<p>training provisions to new officers based on the capacity building experience, periodic updates of the skills obtained, etc.)</p> <ul style="list-style-type: none"> ▪ Evidence of the introduction, implementation or improvement of targeted climate adaptation measures and/or DRR investment plans at the country/regional level according to the results obtained by the modelling exercise ▪ Evidence of synergies and complementarities with other UNISDR actions
<p>B. Sustainability of the project outcomes</p>	<ul style="list-style-type: none"> ▪ Were the achievements of the initiative maintained and expanded over time? ▪ What was learned from the initiative? Have any knowledge and lessons been used? ▪ Is there a high degree of national/local ownership of the initiative? Why or why not? How could national ownership be improved? ▪ What indications are there that the government or other partners will continue to support, or even upscale, this or similar initiatives? 	<ul style="list-style-type: none"> ▪ Evidence of maintenance or expansion of achievements (capacity development at individual and intuitional levels, financing etc.) of the initiative ▪ Evidence that lessons learned during implementation are being used ▪ Evidence of national ownership of the results of the initiatives ▪ Evidence of continue or scaled up involvement in the field

Sub-Matrix VI. Project original logical framework³²

Specific objectives and expected results	Activities	Indicators
<p>Specific objective 1: Stronger capacities to account, valuate and analyze disaster loss through the development of disaster loss database</p>	<ul style="list-style-type: none"> ▪ Activity 1.1. Delivery of National workshop - Staff from government agencies, UN, and other partners are familiarized with the methodology and tools for building national disaster databases ▪ Activity 1.2. Data collection and entry - national teams collected historical disaster data covering 20-30 years and entered the data to build a fist version of a loss database. ▪ Activity 1.3. Analysis of historical risk trends and patterns and estimation of recurrent economic losses: Preliminary analysis of risk patterns and trends undertaken by national 	<ul style="list-style-type: none"> ▪ Number and quality of workshops conducted ▪ Number of relevant stakeholders participating in the regional and National workshop ▪ Number and quality of data collected and entered in the national loss database ▪ Number and quality of analysis of historical trends and patterns and estimation of recurrent economic losses conducted

³² Constructed based on the document: Annex I, Project Description, Building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction: 2012 – 2015.

	team and the estimation of recurrent economic losses using the collected disaster data	
Expected result 1.1 Creation and/or update of national disaster databases in 40 countries.	N/A	<ul style="list-style-type: none"> Number of disaster loss databases build by the beneficiary countries as a result of the initiative
Expected result 1.2 Capacity and infrastructure built in the country to operate and analyze or reinforcement of the process of institutionalization disaster loss databases in approximately 40 countries or territories.	N/A	<ul style="list-style-type: none"> Number of trained personnel who are able to operate disaster loss databases Number of Government staff who are able to use and analyse disaster loss databases information and software Number of Hosting National agencies operating or in possession of a disaster database
Specific objective 2: Build the capacity to assess and understand disaster risk through the actual development of probabilistic risk assessments for the countries, which will allow the construction of Hybrid Risk Models.	<ul style="list-style-type: none"> Activity 2.1 Estimations of hazards Activity 2.2. Quantification and characterization of the exposure and vulnerability of public assets at risk Activity 2.3. Probabilistic Risk Assessment Activity 2.4. Generation of Hybrid models 	<ul style="list-style-type: none"> Number of estimation of hazards undertaken Number of quantification and characterization of the exposure and vulnerability of public assets at risk Number of Probabilistic Risk assessments developed in the context of the initiative Number of Hybrid models generated developed in the context of the initiative
Expected result 2.1 Development of comprehensive, multi-hazard, probabilistic risk assessments in approximately 75% (about 30) of the beneficiary countries/states.		<ul style="list-style-type: none"> Number of probabilistic risk assessments (by hazard) built by the beneficiary countries Number of Risk Maps produced for different hazards on each beneficiary country
Expected result 2.2. Capacity built in the country to improve, operate and analyze probabilistic risk assessments.		<ul style="list-style-type: none"> Number of trained personnel who are able to produce a hazard-specific risk assessment Number of Government staff who are able to read and analyze risk maps and probabilistic risk measures
Expected result 2.3. Development or improvement of national probabilistic hybrid risk models and assessments, covering both extensive and		N/A

intensive risks in 30 countries/states.		
Specific objective 3: Capacity to incorporate CCA and DRR into the country's national public investment and development planning system.	<ul style="list-style-type: none"> ▪ Activity 3.1 . Reviewed portfolio of existing investments in CCA and DRR ▪ Activity 3.2. Characterization of an optimum risk management portfolio ▪ Activity 3.3 Governments are provided with a set of methods and procedures appropriate to the institutional architecture, mechanisms and administrative procedures of the country 	<ul style="list-style-type: none"> ▪ Number of reviewed portfolios of existing investments in CCA and DRR ▪ Evidence that the optimum risk management portfolio has been characterized ▪ Number of Governments provided with a set of methods and procedures appropriate to the institutional architecture, mechanisms and administrative procedures of the country
Expected result 3.1. Support provided to beneficiary countries in the formulation and calculation of an optimal portfolio of DRR and CCA investments.	N/A	N/A
Expected result 3.2. Capacity building to beneficiary countries to actually incorporate CCA and DRR into the country's national public investment and development planning system.	N/A	<ul style="list-style-type: none"> ▪ Number of National Consultants/Government staff trained to perform analysis of the financials and economics of risk.
Expected result 3.3. Public investment planning, land use, development, CCA and DRR plans in most of the target countries informed by evidence on recurrent losses, probable future risks and on the assessment of the costs and benefits of DRR	N/A	<ul style="list-style-type: none"> ▪ Number of DRR/CCA Agencies in target countries having a reviewed investment portfolio informed by risk and loss analysis outputs. ▪ Number of Governments in which conditions are set for increased/integrated public investments sensitive to DRR/CCA, by developing or proposing legislation and/or administrative mechanisms in this sense.
Expected result 3.4. A measurable increase of National and sector-based public investment contributing to a medium term and sustainable reduction in disaster risk and to adaptation to climate change in the majority of target countries.	N/A	<ul style="list-style-type: none"> ▪ Evidence of national and sector-based public investment contributing to a medium term and sustainable reduction in disaster risk and to adaptation to climate change

ANNEX II: OBJECTIVES AND RESULTS LOGFRAME

13 - Objectives and Results Log frame

Title of the Action	Building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction: 2012 - 2015			
Principal Objective	The improvement of unified climate change adaptation (CCA) and disaster risk reduction (DRR) in approximately 40 countries in Asia-Pacific, Africa, Latin America and the Caribbean through increased public investment and deeper understanding of risk.			
	Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Risks and Assumptions
Specific Objective 1	Building the capacity to properly account and analyze disaster losses through development of national disaster loss databases and estimating each country's recurrent economic losses.	Number of Regional Inception Workshops conducted	Workshop Reports	The key assumption for the Action is that political commitment to reducing disaster risk and adapting to climate change will remain constant or increase and that governments will continue to invest on both. Project assumes national inter-institutional collaboration and sharing of information, both at national and regional level. Potential legal, economic, financial, national security issues or political liabilities associated to this information preventing the wide use and dissemination, or the full adoption and ownership from local stakeholders.
		Number of countries requesting/agreeing national implementation.	Letter of Interest/MOU/Agreement with Hosting Agencies	
		Number of National Training workshops on Loss Data conducted, Number of National staff trained.	Workshop Reports	
		Number of countries with an economic valuation of recurrent disaster losses.	National Historical Disaster Profile Report.	
		Number of countries having national agencies with constructed and operational Disaster Loss Database.	National Historical Disaster Profile Report. Links to disaster loss databases in country's website or (when countries allow them to be in public domain) or to GAR virtual Disaster Data Platform. Copy of Database available to EC when possible.	
Specific Objective 2	Building the capacity to develop, understand and utilize analytical risk assessments and to estimate the full spectrum of risk the country faces	Number of National Training workshops on Risk Assessment conducted, Number of National staff trained.	Workshop Reports	
		Number of countries with developed and operational National Probabilistic Risk Assessments.	National Disaster Risk Profile Report produced. Links to Risk Assessment in country's website or (when countries allow them to	



			be in public domain) or to GAR virtual Disaster Data Platform. Copy of Risk Assessment datasets available to EC when possible.	
		Number of countries with a Hybrid Risk Model including Loss Exceedance Curves showing the full spectrum of risks.	National Disaster Risk Profile Report produced.	
		Number of Countries and regions with Disaster Risk Reduction and Climate Change Adaptation informed by evidence gathered by loss accounting and risk assessments.	National and Regional DRR and/or CCA Reports, Plans or Strategies which reflect and make use of the knowledge and evidence produced.	
Specific Objective 3	Building the capacity to incorporate climate change adaptation and disaster risk reduction into the country's national public investment and development planning system	Number of <u>Regional</u> workshops on Planning/Public investment, Number of Ministries/countries attending.	Regional workshops reports, list of Ministries and countries attending.	Risk that investments in building capacity do not translate into action
		Number of <u>National</u> workshops on Planning/Public investment, Number of National staff trained.	Reports of <u>Nationally</u> conducted workshops, lists of participants.	Risk that political commitment does not translate into increased investment, or is not sustained. Lack of adoption or ownership from local stakeholders.
		Number of countries with a review of existing investments in adaptation and risk reduction	Disaster Risk Reduction/ Climate Change Adaptation investment portfolio review documents. DRR/CCA finance tracking systems, when available.	Turnover of government officials and/or change of priorities Knowledge and information drain from public to private sector.
		Number of Reports of Economic Valuation and Risk Metrics (such as Annual Average Loss, Probable Maximum Loss, Hybrid Loss Exceedance Curves, etc.) Available to stakeholders.	Copies of Report Documents produced with the corresponding metrics and its relations to DRR and CCA strategy (Risk Reduction, Risk Transfer, Risk Retention, etc.)	Scarcity of technical resources
		Number of Planning, finance, environment and other ministries working in collaboration with 'Hosting Agencies' in target countries, operating with awareness and with the capacity to	List of ministries and number of Staff in involved ministries that has been trained in Risk and Loss accounting analysis, techniques for DRR/CCA Investment Portfolio review, DRR/CCA strategy, etc.	Pre-existing methodological practice that impedes the

		analyse Hybrid Risk Models and to mainstream its findings into Development plans, Adaptation, and Public Investment.		adoption of innovative risk models, assessment methodologies and the subsequent adoption of results and recommendations.
		Number of Governments in which conditions exist for increased/integrated public investments sensitive to DRR/CCA supported by enhanced legislation and/or administrative and budgetary mechanisms.	Directives and other administrative mechanisms and/or decrees and legislation produced or proposed. Budget allocations for DRR/CCA sensitive investment produced in public accounts.	Political factors that may prevent the adoption of recommendations and/or changing government priorities or general direction, including internal unrest and opposition.
Specific Objective 4	Making the experience available to the global community by disseminating results and enhancing global risk analysis in the 2013 and 2015 Global Assessment Reports on Disaster Risk Reduction	Number of Contributing papers to the GAR featuring experiences on Disaster Loss Data (including Extensive/Intensive Risk analysis), Hybrid Probabilistic Risk Models, Integration of DRR and CCA through risk-aware public investment and other	Contributing papers as published and referenced by both the online and printed editions of the GAR 13 and GAR 15.	
		Number of Disaster and Risk datasets available to stakeholders on nationally owned and operated websites and/or GAR Data Platforms	Links to websites or location of data access points on each country. Copies of datasets available to EC when possible.	
		GAR 13 and GAR 15 reports produced, published and disseminated with clear reporting on the findings at National and Global levels .	Printed and Electronic versions of the GAR13 and GAR15 in 4 languages will be on the public domain, containing the full set of contributing papers and results used to generate the report.	

<p>Results</p>	<ul style="list-style-type: none"> • Creation and/or update of National Disaster Inventories in approximately 40 countries or territories • Startup or reinforcement of the process of institutionalization of national disaster loss accounting systems in these countries • Probabilistic risk assessments and hybrid risk models, covering both extensive and intensive risks, with emphasis in climate related hazards conducted or improved in approximately 30 of the participating countries/states • Support to countries in the formulation and calculation of an optimal portfolio of disaster risk management and climate change investments in those countries where all the required elements are available (loss data, hybrid curves, etc.) 	<p>Number of target countries having constructed a Disaster Loss Database.</p> <p>Number of 'Hosting Agencies' in target countries operating and in capacity to analyse disaster loss data</p> <p>Number of target countries having developed and Probabilistic Risk Assessment and a Hybrid model of Risk</p> <p>Number of DRR/CCA Agencies in target countries having a reviewed investment portfolio informed by risk and loss analysis outputs.</p> <p>Number of Governments in which conditions exist for increased/integrated public investments sensitive to DRR/CCA supported by enhanced legislation and/or administrative and budgetary mechanisms.</p>	<p>The GAR virtual Disaster Data Platform.</p> <p>National Reports from countries and Empirical Loss Exceedance Curve available.</p> <p>Risk maps available to stakeholders on nationally owned and operated websites and/or GAR Risk Data Platform, National Risk Assessment Reports from countries and Loss Exceedance Curve available.</p> <p>Reports from agencies on Portfolio reviews on DRR available.</p> <p>Decrees, Directives and other administrative mechanisms or legislation produced or proposed. Budget allocations in which investment sensitiveness to DRR/CCA is clear. Possibly, DRR public investment tracking system operated in the country.</p> <p>Public investment planning, land use, CCA and DRR plans available or published on target countries.</p>	
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	<ul style="list-style-type: none"> • Process of advocacy for the incorporation of DRR into public investment planning and of tracking of investments in DRR and CCA in target countries • Public investment planning, land use, CCA and DRR plans in most of the target countries informed by evidence on recurrent losses, probable future risks and on the assessment of the costs and benefits of reducing disaster risk. • Enhanced global risk analysis presented in GAR13 and GAR15 	<p>Number of countries in which any of these policies contain clear references and regulations related to the evidence on losses and risk assessments.</p> <p>GAR 13 and GAR 15 reports produced, published and disseminated with clear reporting on the findings at National and Global levels.</p>	<p>GAR printed and electronic versions.</p>	
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<p>Activities</p>	<p>Global/Regional Activities:</p> <ul style="list-style-type: none"> • Determination of a list of extended candidate countries to be targeted in the initiative. • Convening of Regional Workshops that with join intergovernmental organizations with key government representatives from the initial list of countries. • Determination of a list of specific countries to be targeted in the initiative based on demand, need and other objective criteria. • Set up of regional centres of excellence that will be able to provide technical training and support on behalf of UNISDR • Negotiating and reaching agreements with selected countries on the scope, resolution, responsibilities, terms of reference of the implementation of the project on the interested countries. • Scheduling of the initiation and steps on each country. • Continuous monitoring of the progress on each country in order to detect issues and risks and to implement plausible solutions if required. • At the end on each Component, UNISDR will coordinate the next Component in terms of resource allocation, both financial and technical, and will organize following activities. • Consolidation of the information and components that will feed into GAR13 and GAR15, Regional Assessment Reports and national case studies. • Authors and contributors to the GARs will produce the main text of the report and its supporting papers. • Dissemination, when authorized by countries, information and data through its Global Disaster and Risk Information Platforms, and the electronic and interactive versions of the GARs. <p>Per Country Activities:</p> <ul style="list-style-type: none"> • Strengthening capacities for national loss accounting <ul style="list-style-type: none"> ○ Participation in Regional Inception workshop ○ National workshop ○ Data collection and entry ○ Data validation and cleaning ○ Analysis of risk trends and patterns and estimation of recurrent economic losses • Strengthening capacities for probabilistic risk assessment and risk management portfolio development <ul style="list-style-type: none"> ○ Training/Orientation workshops (Hazards and Exposure/Vulnerability) ○ Data Collection and Estimations of major hazards ○ Quantification and characterization of the exposure and vulnerability of public assets at risk. ○ Generation of hybrid loss exceedance curves • Incorporating risk management into public investment planning and decision making <ul style="list-style-type: none"> ○ Characterization of an optimum risk management portfolio ○ Regional training workshop ○ Identifying existing options for investments in disaster risk reduction ○ Incorporating methods and procedures for incorporating risk management into public investment planning and decision making. ○ National Workshop 	
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		Number of countries requesting/agreeing national implementation.	Letter of Interest/MOU/Agreement with Hosting Agencies	
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		Number of countries with an economic valuation of recurrent disaster losses.	National Historical Disaster Profile Report.	
		Number of countries having national agencies with constructed and operational Disaster Loss Database.	National Historical Disaster Profile Report. Links to disaster loss databases in country's website or (when countries allow them to be in public domain) or to GAR virtual Disaster Data Platform. Copy of Database available to EC when possible.	
Specific Objective 2	Building the capacity to develop, understand and utilize analytical risk assessments and to estimate the full spectrum of risk the country faces	Number of National Training workshops on Risk Assessment conducted, Number of National staff trained.	Workshop Reports	
		Number of countries with developed and operational National Probabilistic Risk Assessments.	National Disaster Risk Profile Report produced. Links to Risk Assessment in country's website or (when countries allow them to	

			be in public domain) or to GAR virtual Disaster Data Platform. Copy of Risk Assessment datasets available to EC when possible.	
		Number of countries with a Hybrid Risk Model including Loss Exceedance Curves showing the full spectrum of risks.	National Disaster Risk Profile Report produced.	
		Number of Countries and regions with Disaster Risk Reduction and Climate Change Adaptation informed by evidence gathered by loss accounting and risk assessments.	National and Regional DRR and/or CCA Reports, Plans or Strategies which reflect and make use of the knowledge and evidence produced.	
Specific Objective 3	Building the capacity to incorporate climate change adaptation and disaster risk reduction into the country's national public investment and development planning system	Number of <u>Regional</u> workshops on Planning/Public investment, Number of Ministries/countries attending.	Regional workshops reports, list of Ministries and countries attending.	Risk that investments in building capacity do not translate into action
		Number of <u>National</u> workshops on Planning/Public investment, Number of National staff trained.	Reports of <u>Nationally</u> conducted workshops, lists of participants.	Risk that political commitment does not translate into increased investment, or is not sustained. Lack of adoption or ownership from local stakeholders.
		Number of countries with a review of existing investments in adaptation and risk reduction	Disaster Risk Reduction/ Climate Change Adaptation investment portfolio review documents. DRR/CCA finance tracking systems, when available.	Turnover of government officials and/or change of priorities Knowledge and information drain from public to private sector.
		Number of Reports of Economic Valuation and Risk Metrics (such as Annual Average Loss, Probable Maximum Loss, Hybrid Loss Exceedance Curves, etc.) Available to stakeholders.	Copies of Report Documents produced with the corresponding metrics and its relations to DRR and CCA strategy (Risk Reduction, Risk Transfer, Risk Retention, etc.)	Scarcity of technical resources
		Number of Planning, finance, environment and other ministries working in collaboration with 'Hosting Agencies' in target countries, operating with awareness and with the capacity to	List of ministries and number of Staff in involved ministries that has been trained in Risk and Loss accounting analysis, techniques for DRR/CCA Investment Portfolio review, DRR/CCA strategy, etc.	Pre-existing methodological practice that impedes the

		analyse Hybrid Risk Models and to mainstream its findings into Development plans, Adaptation, and Public Investment.		adoption of innovative risk models, assessment methodologies and the subsequent adoption of results and recommendations. Political factors that may prevent the adoption of recommendations and/or changing government priorities or general direction, including internal unrest and opposition.
		Number of Governments in which conditions exist for increased/integrated public investments sensitive to DRR/CCA supported by enhanced legislation and/or administrative and budgetary mechanisms.	Directives and other administrative mechanisms and/or decrees and legislation produced or proposed. Budget allocations for DRR/CCA sensitive investment produced in public accounts.	
Specific Objective 4	Making the experience available to the global community by disseminating results and enhancing global risk analysis in the 2013 and 2015 Global Assessment Reports on Disaster Risk Reduction	Number of Contributing papers to the GAR featuring experiences on Disaster Loss Data (including Extensive/Intensive Risk analysis), Hybrid Probabilistic Risk Models, Integration of DRR and CCA through risk-aware public investment and other	Contributing papers as published and referenced by both the online and printed editions of the GAR 13 and GAR 15.	
		Number of Disaster and Risk datasets available to stakeholders on nationally owned and operated websites and/or GAR Data Platforms	Links to websites or location of data access points on each country. Copies of datasets available to EC when possible.	
		GAR 13 and GAR 15 reports produced, published and disseminated with clear reporting on the findings at National and Global levels .	Printed and Electronic versions of the GAR13 and GAR15 in 4 languages will be on the public domain, containing the full set of contributing papers and results used to generate the report.	

<p>Results</p>	<ul style="list-style-type: none"> • Creation and/or update of National Disaster Inventories in approximately 40 countries or territories • Startup or reinforcement of the process of institutionalization of national disaster loss accounting systems in these countries • Probabilistic risk assessments and hybrid risk models, covering both extensive and intensive risks, with emphasis in climate related hazards conducted or improved in approximately 30 of the participating countries/states • Support to countries in the formulation and calculation of an optimal portfolio of disaster risk management and climate change investments in those countries where all the required elements are available (loss data, hybrid curves, etc.) 	<p>Number of target countries having constructed a Disaster Loss Database.</p> <p>Number of 'Hosting Agencies' in target countries operating and in capacity to analyse disaster loss data</p> <p>Number of target countries having developed and Probabilistic Risk Assessment and a Hybrid model of Risk</p> <p>Number of DRR/CCA Agencies in target countries having a reviewed investment portfolio informed by risk and loss analysis outputs.</p> <p>Number of Governments in which conditions exist for increased/integrated public investments sensitive to DRR/CCA supported by enhanced legislation and/or administrative and budgetary mechanisms.</p>	<p>The GAR virtual Disaster Data Platform.</p> <p>National Reports from countries and Empirical Loss Exceedance Curve available.</p> <p>Risk maps available to stakeholders on nationally owned and operated websites and/or GAR Risk Data Platform, National Risk Assessment Reports from countries and Loss Exceedance Curve available.</p> <p>Reports from agencies on Portfolio reviews on DRR available.</p> <p>Decrees, Directives and other administrative mechanisms or legislation produced or proposed. Budget allocations in which investment sensitiveness to DRR/CCA is clear. Possibly, DRR public investment tracking system operated in the country.</p> <p>Public investment planning, land use, CCA and DRR plans available or published on target countries.</p>	
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	<ul style="list-style-type: none"> • Process of advocacy for the incorporation of DRR into public investment planning and of tracking of investments in DRR and CCA in target countries • Public investment planning, land use, CCA and DRR plans in most of the target countries informed by evidence on recurrent losses, probable future risks and on the assessment of the costs and benefits of reducing disaster risk. • Enhanced global risk analysis presented in GAR13 and GAR15 	<p>Number of countries in which any of these policies contain clear references and regulations related to the evidence on losses and risk assessments.</p> <p>GAR 13 and GAR 15 reports produced, published and disseminated with clear reporting on the findings at National and Global levels.</p>	<p>GAR printed and electronic versions.</p>	
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Activities	<p>Global/Regional Activities:</p> <ul style="list-style-type: none"> • Determination of a list of extended candidate countries to be targeted in the initiative. • Convening of Regional Workshops that with join intergovernmental organizations with key government representatives from the initial list of countries. • Determination of a list of specific countries to be targeted in the initiative based on demand, need and other objective criteria. • Set up of regional centres of excellence that will be able to provide technical training and support on behalf of UNISDR • Negotiating and reaching agreements with selected countries on the scope, resolution, responsibilities, terms of reference of the implementation of the project on the interested countries. • Scheduling of the initiation and steps on each country. • Continuous monitoring of the progress on each country in order to detect issues and risks and to implement plausible solutions if required. • At the end on each Component, UNISDR will coordinate the next Component in terms of resource allocation, both financial and technical, and will organize following activities. • Consolidation of the information and components that will feed into GAR13 and GAR15, Regional Assessment Reports and national case studies. • Authors and contributors to the GARs will produce the main text of the report and its supporting papers. • Dissemination, when authorized by countries, information and data through its Global Disaster and Risk Information Platforms, and the electronic and interactive versions of the GARs. <p>Per Country Activities:</p> <ul style="list-style-type: none"> • Strengthening capacities for national loss accounting <ul style="list-style-type: none"> ○ Participation in Regional Inception workshop ○ National workshop ○ Data collection and entry ○ Data validation and cleaning ○ Analysis of risk trends and patterns and estimation of recurrent economic losses • Strengthening capacities for probabilistic risk assessment and risk management portfolio development <ul style="list-style-type: none"> ○ Training/Orientation workshops (Hazards and Exposure/Vulnerability) ○ Data Collection and Estimations of major hazards ○ Quantification and characterization of the exposure and vulnerability of public assets at risk. ○ Generation of hybrid loss exceedance curves • Incorporating risk management into public investment planning and decision making <ul style="list-style-type: none"> ○ Characterization of an optimum risk management portfolio ○ Regional training workshop ○ Identifying existing options for investments in disaster risk reduction ○ Incorporating methods and procedures for incorporating risk management into public investment planning and decision making. ○ National Workshop 	
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ANNEX III: LIST OF DOCUMENTS REVIEWED

Type of document	Description or title of documents
Project Document	<p>Project Description: Building capacities for increased public investment in integrated climate change adaptation and disaster risk reduction: 2012 – 2015, Contract DCI-ENV/2012/296659</p> <p>European Union Contribution Agreement DCI-ENV/2012/310720 (21 Dec 2012)</p>
Project Financial documents	<p>Budget rev. 8</p> <p>GAR Global budget execution</p> <p>Financial Interim Report to DEVCO, June 2015</p>
Steering Committee Reports	<p>Reports from year 2013 & 2014</p> <p>Presentation from July 2013, May 2014 & May 2015</p> <p>Minutes of meetings from May 2014 & May 2015</p> <p>Component 1&2 Report from year 2013 & 2014 for IOC region</p>
Component 1. Loss database	<p>National Presentations</p> <p>National Gap Analysis: Senegal, Mali, Seychelles, Madagascar</p> <p>Report on results : West Africa, IO, Asia</p> <p>Presentation on Results: West Africa, Asia</p> <p>Consultant ToRs: Senegal</p> <p>National Disasters Inventory: Comoros, Madagascar, Mauritius, Seychelles, Zanzibar</p> <p>Workshop report from Loss Data Collection Training, Caribbean (CIMA Foundation)</p> <p>Online DesInventar databases for participating countries</p>
Component 2. Probabilistic risk assessment	<p>Presentation on results from: West Africa</p> <p>Reports on results: West Africa, IO, Asia</p> <p>Consultant ToRs: Senegal</p> <p>Risks profile from CIMNE&INGENIAR LTDA.: Comoros, Madagascar, Mauritius, Seychelles, Zanzibar</p> <p>Disaster risk results using the global risk assessment datasets from Comoros, Madagascar, Mauritius, Seychelles, Zanzibar</p> <p>IOC/UNISDR Final Substantive Report on Implementation of Risk Profiles and Risk Assessment Activities (16 April 2013)</p>



Component 3. Mainstreaming DRR in Public Investment and Financial Planning	<p>Workshop material: West Africa, Asia, Latin America, Seychelles June 2014</p> <p>Report on Results: Consultant report from Mali & Senegal</p> <p>Website of the Latin American Network for Risk Management and Climate Change in Public Investment including training materials material, workshop agenda, report on results such as the baselines analysis and the country cases studies.</p> <p>Presentation on Results: Consultants presentation to the 1st workshop – Mali and Senegal, Consultant presentation to the 2nd workshop - Mali</p> <p>UNISDR 2015 Working Papers on Public Investment Planning and Financing Strategy: Southwest Indian Ocean region, Mauritius, Madagascar, Seychelles, Comoros, Zanzibar</p> <p>IOC Synthesis Report, ISLANDS Project</p> <p>UNISDR/ISLANDS Joint Programme, Report of the Second Regional workshop (October 2014)</p> <p>PowerPoint presentation and accompanying notes of Philippe Boule, presented at European Development Days</p> <p>Implementation Guide Note Component 3: Multi-stakeholder dialogues on risk sensitive investment and financing strategies</p> <p>Rough Cost-Benefit Analysis, Mauritius and Madagascar</p>
Other UNISDR documents	UNISDR Monitoring and Evaluation Framework, 2015
Related Documents	<p>HFA progress reports for the IOC, West African and Caribbean participating countries</p> <p>The Hyogo Framework for Action 2005-2015</p> <p>Sendai Framework for DRR 2015-1030</p> <p>Disaster Risk Reduction Country Profiles for participating Caribbean countries</p> <p>GAR 2011 and 2015</p> <p>Probabilistic Modelling of Natural Risks at the Global Level: The Hybrid Loss Exceedance Curve, Development of Methodology and Implementation of Case Studies, Phase 1A: Colombia, Mexico and Nepal (ERN, Feb 2011)</p> <p>Evaluation of the Global Assessment Report on Disaster Risk Reduction Final Report, June 2016, Oxford Policy Management</p> <p>Southwest Indian Ocean Risk Assessment and Financing initiative (SWIORAFI) Brochure</p>



Romão, Xavier, and Esmeralda Paupério. "A framework to assess quality and uncertainty in disaster loss data." *Natural Hazards* 83.2 (2016): 1077-1102.

Corbane, C., De Groeve, T. and D. Ehlrich (2015) Guidance for Recording and Sharing Disaster Damage and Loss Data. European Commission Joint Research Center – Institute for the Protection and Security of the Citizen, ISPRA (IT).

De Groeve Tom; Poljansek Karmen; Ehrlich Daniele; Corbane Christina, 2014. Current status and Best Practices for Disaster Loss Data recording in EU Member States: A comprehensive overview of current practice in the EU Member States. Publications Office of the European Union, EUR 26879.

Battiston, S., Monasterolo, I. (2016). A typology of methods to assess financial investors' exposure to climate risk. Policy brief commissioned by WWF Sustainable Finance for its contribution to the G20 on climate finance risk disclosure.

Monasterolo, I., Battiston, S. (2016). Assessing projects' climate risk and vulnerability exposure: evidence from The Caribbean. Final deliverable Technical Assistance for Climate Action Support to the Caribbean Development Bank TA2013036 Ro IF2.

Emergency Disasters Database (EM-DAT) www.emdat.be

GAIN Index <http://index.gain.org/about>

ANNEX IV: LIST OF STAKEHOLDERS INTERVIEWED

Table 19. UNISDR staff interviewed

Name	Position	Organization
Geneva Secretariat		
Andrew Maskrey	Chief Risk Knowledge Section and Coordinator UN Global Assessment Report on Disaster Risk Reduction	UNISDR
Julio Serge		UNISDR
Sylvain Ponserre	Information Specialist	UNISDR
Vicente Anzellini	Consultant/Trainer	UNISDR
Mario Andres Salgado	Consultant/Trainer	UNISDR
Mabel Marulanda	Risk Assessment Specialist Consultant	UNISDR
Kazuko Ishigaki	Former UNISDR staff	Former UNISDR
Regional Offices		
Timothy Wilcox	Sub-Regional Coordinator (Pacific)	UNISDR

Table 20. Stakeholders interviewed for West Africa

Name	Position	Organization
Regional stakeholders		
Georgio Boni	Professor, University of Padova, and Trainer, Component 2	CIMA Foundation
Sophie Baranes	Former Regional Advisor DRR and Resilience	UNDP Africa Regional Center



Lucille Gingembre	Project Coordinator, Preparedness for Disaster Recovery	UNDP Africa Regional Center
Senegal Stakeholders		
Mava Ndiaye	Conseiller technique	Ministère de l'environnement - Direction de la Planification et de la Veille Environnementale (DPVE)
Moussa Habou	Chargé de Programme	UNDP Senegal
Ali Cissé	Adjoint au Directeur	Direction Général de la protection Civile
Amadou Djigo	Statisticien et analyste de projet	Ministère de l'Économie, des Finances et du Plan du Sénégal - Direction générale de la planification et des politiques économiques
Papa Baidy	Evaluateur	Ministère de l'Économie, des Finances et du Plan du Sénégal - Direction générale de la planification et des politiques économiques
Lamine Labou	Chef du bureau de suivi des programmes et politiques économiques	Ministère de l'Économie, des Finances et du Plan du Sénégal - Direction générale de la planification et des politiques économiques
Ibrahima Thiaw	Consultant Component 1	ISE
Nogoye Thiam	Consultant Component 3	
Gabriel Ndiaye	Chargé de programme climat	Ministry of Environment - DEEC
Mali Stakeholders		
Moustapha Diallo	Conseiller au Programme	UNDP Mali
Senogo	Consultant Component 1 and 2	
Sikoro Keita	Consultant Component 3	
Brehima Diabate	Planificateur	Direction Nationale de la Planification du Développement



Salimatou Traore Diallo	Conseillère	Direction Nationale de la Planification du Développement
Dr. Kone	Directeur	Direction Generale de la Protection Civile
Fatimatou Diarra Diallo	Conseillère	Direction Generale du Budget
Mery Diakite	Directeur Adjoint	Direction Generale de la Protection Civile
Aboubakar Cisse ¹	GIS assistant	OCHA
Stakeholders interviewed in Niger		
Diawoye Konte	Disaster Reduction and Recovery Advisor	UNDP Niger
Ousmane Seidou	Associate Professor Director, Hydraulics Lab Department of Civil Engineering	Ottawa University
Adamou Oumarou	Chef de Department	Cellule de Coordination du Système d'Alerte Précoce (CC/SAP) du Dispositif National de Prévention et de Gestion des Catastrophes et Crises Alimentaires (DNPGCCA)

1. *Communication through a brief email exchange.*

Table 21. Stakeholders interviewed for Indian Ocean Region

Name	Position	Organization
Regional Stakeholders		
Omar Dario Cardona	Professor, National University of Colombia, and CEO, INGENIAR	INGENIAR
Christophe Legrande	Former Programme Team Leader, ISLANDS Project	Formerly IOC
Philippe Boule	Former Technical Advisor, ISLANDS Project	Formerly IOC
Gina Bonne	Project Coordinator	IOC



Olivier Tyack	Project Coordinator, ISLANDS Project	IOC
Doekle Wielinga	Task Team Leader, SWIO RAFI Project	World Bank
Mauritius Stakeholders		
Venetia Bellers	Coordinator/consultant	Formerly Mauritius Government, now a consultant
Bhye Muslim Heetun	Focal Point for Data Collection	Meteorological Services Department
Raj Booneeady	Focal Point for Data Collection	NDRRMC
Raj Luximon	Focal Point for Data Collection	NDRRMC
Mr. Servansing	Director	NDRRMC
Mrs. Wazeefa Doomun	Senior Analyst, Planning and Economic Development	Ministry of Finance
Pamela Leste	National Consultant, Component 3	Consultant/Agribusiness Economist
Axel Pellegrin	Secretary General	Federation of Insurers
Stakeholders in Seychelles		
Davina Sabino	Project Officer	DRDM
Paul Labaleine	Deputy General	DRDM
Cliff Alissop	Project Coordinator	DRDM
William Zarine	Consultant and local expert for the risk sensitive investment project activities	Consultant
Noella Vinda	Finance Analyst	Ministry of Finance
Lambert Woodcock	General Manager	H. Savy Insurance Company Limited
James Chang-Tave	Director	Development Control, Seychelles Planning Authority
Erine Victor	Data collection under Component 2	Formerly DRDM, now MEECC



Begum Nageon	National Focal Point for IOC in MEECC	MEECC
Justin Prosper	Data collection and GIS under Component 2	MEECC- GIS
Stakeholders in Madagascar		
Nirina Razakanaivo	Secrétaire Exécutif de la CPGU	Madagascar Emergency Prevention and Management Unit (CPGU)

Table 22. Stakeholders interviewed for the Caribbean

Name	Position	Organization
Regional Stakeholders		
Danielle Evanson	Programme Manager, Climate Change and Disaster Risk Resilience and Energy and the Environment	UNDP Barbados
Nathalie Thomas	Programme Associate	UNDP Barbados
Ian King	Formerly Program Manager for Disaster Risk Reduction	UNDP
Laura Rosello	Trainer, Component 1	CIMA Foundation
Alexcia Cooke	Regional Liaison Officer	UNISDR/DIPECHO
Rossella della Monica	Disaster Risk Management Specialist	World Bank
Rashmin Gunasekera	Consultant	World Bank
Nicole Williams	Consultant, Data collection, Component 1	Consultant
Devon Kerrins	Consultant, Data collection, Component 1	Federal Emergency Management Agency
Stakeholders in St. Lucia		
Julian DuBois	Deputy Director General	National Emergency Management Organization



Andrew George	Disaster Risk Reduction Capacity Development Specialist	National Emergency Management Organization
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Table 23. Stakeholders interviewed for Latin America

Name	Position	Organization
Regional Stakeholders		
Jose Carlos Orihuela	Consultant	UNISDR
Alberto Aquino	Director de Proyecto	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
National Stakeholders - Peru		
Nancy Zapata Rondón	Coordinadora Área Técnica de Gestión de Riesgos y Cambio Climático	Dirección General de Inversión Pública Ministerio de Economía y Finanzas
Cristina Rodriguez	Consultant	UNISDR

Table 24. Stakeholders interviewed for the South Pacific region

Name	Position	Organization
Regional Stakeholders		
Jutta May	Programme Officer	Pacific Islands Applied Geoscience Commission
Paula Holland	Manager, Natural Resource Economics and Governance	Secretariat of the Pacific Community

Table 25. Stakeholders interviewed for Asia

Name	Position	Organization
Regional Stakeholders		



Jaiganesh Murugesan	Programme Specialist (DRR & CCA)	UNDP (Myanmar)
Rajesh Sharma	Programme Specialist	UNDP Bangkok Thailand Regional Hub
Sudhir Kumar	DRR Specialist	UNDP (Myanmar)
Sam Sophal	National Disaster Information Management Coordinator	UNDP (Cambodia)
Chhum Sovanny	Programmer/Analyst	UNDP (Cambodia)
Khine Thwe Wynn	Safeguards Officer	Asian Development Bank
Stakeholders in Myanmar		
Mr. Soe Aung	Director General, Disaster Risk Reduction Department	Ministry of Social Welfare, Relief and Resettlement
U Tin Myint	Deputy Director, Planning Dept	Ministry of National Planning and Economic Development
Myat Moe Thwe	Deputy Director, Coordination and Research Division, Relief and Resettlement Department	Ministry of Social Welfare, Relief and Resettlement
Nilar Htun	Deputy Director, Coordination and Research Division, Relief and Resettlement Department	Ministry of Social Welfare, Relief and Resettlement
Min Thein	Director	Ministry of Social Welfare, Relief and Resettlement
Nwet Yin Aye	Assistant Secretary/Director	Ministry of Social Welfare, Relief and Resettlement
Mr. Win	Consultant, Former Director, Disaster Risk Reduction	
Kyawt Kyawt	External Consultant	Consultant
Ei Ei Thein	Data Manager – Office of the UN RC/HC	MMU – UNDP Myanmar Information Management Unit
Stakeholders in Cambodia		
Putheany Chou	Deputy Secretary General, General Secretariat	National Science and Technology Council, Ministry of Planning



Dok Doma	Vice Director, Department of Research and Regulations	Ministry of Land Management, Urban Planning and Construction
Ma Norinth	Unknown	National Committee for Disaster Management (NCDM)
Ponn Narith	Advisor, NCDM	National Committee for Disaster Management (NCDM)



ANNEX V. SCHEDULE

The table below summarizes the timing of evaluation activities as they occurred.

Activity / timing	Tentative schedule
Inception report	Final week of November 2016
Desk Review	November-February 2016
Telephone, Skype and web interviews with regional and global stakeholders	November 2016 – February 2017
Field Missions	November – December 2016
Brief interim report and desk evaluation report	December 15, 2016
Draft Evaluation Report	Feb 24, 2017
Comments received on Draft Evaluation Report	March 17, 2017
Final Evaluation Report	March 24, 2017



ANNEX VI: STATUS OF IMPLEMENTATION BY COMPONENT FOR THE COUNTRIES REVIEWED DURING THE FINAL EVALUATION

Region/Countries	Component 1	Component 2	Component 3
Indian Ocean			
Madagascar	✓	✓	✓
Mauritius	✓	✓	✓
Seychelles	✓	✓	✓
Asia			
Cambodia	Updated	✓	✓
Myanmar	✓	✓	✓
West Africa			
Mali	Updated	✓	✓
Niger	✓	✓	✓
Senegal	✓	✓	✓
South Pacific			
22 countries	Updated	x	x
Latin America			
Mexico	x Updated by CorpoOsso)	x	✓
Peru	x (Updated CorpoOsso)	x	✓
Caribbean			
Antigua and Barbuda	✓	x	✓ (light version)
Saint-Lucia	✓	x	✓ (light version)





baastel

North American Office

Le Groupe-conseil Baastel ltée
92 Montcalm Street
Gatineau QC J8X 2L7
CANADA
Tel: + 1 819 595-1421
Fax: + 1 819 595-8586

European Office

Le Groupe-conseil baastel sprl
Boulevard Adolphe Max 55
B-1000 Brussels
BELGIUM
Tel: + 32 (0)2 893 0031
Fax: + 32 (0)2 503 3183

Representation North Africa

Olivier Beucher
53, ensemble Al Montazah, Illigh 80 000 Agadir
MOROCCO
Tel: +212 (0)6 96 61 80

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