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Evaluation of UNESCO's contribution to Strategic Programme Objective 5: Disaster Preparedness and Mitigation

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EXECUTIVE SUMMARY

The SPO 5 evaluation aimed to assist UNESCO's Governing Bodies, Senior Management and the Programme Sectors by providing results based on the five DAC Criteria and making evidence-based recommendations on key evaluation questions. SPO 5 is set under the second overarching objective (along with SPO 3 and 4), which aims to contribute to disaster preparedness and mitigation. The expected outcomes for SPO 5 as given in the 34 C/4 are as follows:

- Tsunami early-warning systems established and operational in Africa, the South Pacific, the Mediterranean Sea, the North-East Atlantic and the Caribbean
- Vulnerable and weakened communities prepared to cope with disasters through access and use of information and knowledge and to mitigate their impact
- Governments advised and assisted in the design of policies mitigating disaster risks and impact
- Contributions made to the development of national strategies for natural and human-induced disaster prevention and vulnerability reduction and included in United Nations system common country programming efforts

UNESCO's activities in mitigation and preparedness have been **relevant** to the expected outcomes of SPO 5, as well as the expected results of MLA 3 and the HFA priorities and globally a reflection of international DRR thematic concerns. However, while UNESCO's activities have shown relevance in the response to the 2004 tsunami with a majority of the work in Asia-Pacific, this has been at the expense of other geographic areas, most notably Africa (a MTS priority) and Latin America and the Caribbean which have had very limited visibility from UNESCO. UNESCO has clearly demonstrated its comparative advantage and its relevance in the establishment of the tsunami early warning systems and its work in the scientific and educational fields in particular, while potential exists to broaden its work in the culture and the communication and information sectors as well as in mainstreaming gender equality in DRR.

The general impact of UNESCO's work in disaster mitigation and preparedness has been mixed depending on the area and sectors of work. The evaluation has shown that thus far, UNESCO has been able to show **effective results** in attaining the first two expected outcomes. Although some work has been done towards the two other expected outcomes, it is still quite early in the MTS to see results in regards to national strategies and policies. UNESCO has a vital role in the preservation of Cultural Heritage, and mainstreaming DRR is a good opportunity for UNESCO to achieve visible results. With respect to the intersectoral platforms, UNESCO still has work to do to clearly link them with its DRR activities; such mainstreaming would greatly enhance the relevance of UNESCO's activities at a global scale.

Although UNESCO has shown some significant results achievement, it faces challenges in terms of the **efficiency** with which it can deliver these results. Issues that have arisen relate for instance to the challenges in terms of timely project delivery and complex administrative modalities, adequate coordination with partners and insertion of its interventions into the broader DRR community at the country level. The lack of human resources and funding opportunities or access to flexible funding modalities for DRR activities in the field was noted as well as the need to move towards more programmatic approaches to DRR to face these challenges.

Given the relative novelty of UNESCO's disaster mitigation and preparedness activities, the **impact** of UNESCO's work in DRR is still quite limited. More time is required to see such impact materialize. There are indications that the work done by the IOC, in education (through both the Science and the Education sectors) as well as by the Culture sector has provided input

on policy changes, however determining UNESCO comparative advantage based on an analysis of its impacts at this point remains difficult. This is also amplified by UNESCO's lack of visibility from its activities, which often go unnoticed by stakeholders in the region as well as other donors working in the field. The question whether or not UNESCO should reduce the number of sectors it works through in DRR remains open for discussion, partly because DRR is deemed to be an intersectoral issue by its very nature. UNESCO projects are generally small, limiting the scope of their direct impacts, however the case studies done within the framework of this evaluation support the view that UNESCO is moving towards achieving impacts, while recognizing that a number of intermediary steps are required after project end to see these impacts materialize.

The **sustainability** of results is varied and contingent on a variety of factors. Thus far positive signs have been noted at this level but it is still quite early to conclude on this aspect of programme/project performance.

RECOMMENDATIONS

In light of analysis and findings provided in this report, the evaluation team makes the following recommendations:

- Taking into account the increasing vulnerability of Member States to natural hazards, UNESCO should consider consolidating and supporting further resources it devotes for its contribution to disaster mitigation and preparedness.
- UNESCO should consider defining links between its work in DRR, and contribution to SPO 5, with certain intersectoral platforms (PCPD, SIDS, climate change and Sustainable education in particular) with the provision of adequate resources to materialize these links by the promotion of demo/pilot activities, in addition to using them as a mechanism for information exchange and coordination involving senior management. This may go a long way towards further mainstreaming the issues being promoted, especially when it comes to gender and adaptation to climate change. With respect to this last issue, UNESCO would gain from more closely linking disaster preparedness and adaptation concerns, while recognizing that DRR is of course broader than climate change. This might also bring in focus the particular DRR challenges that Africa, a priority region for UNESCO, is also facing with respect to disaster preparedness and mitigation. When promoting intersectorality, UNESCO should also formalize and strengthen its coordination mechanism on DRR. Such a coordination function should be promoted at a decision-making level within UNESCO that would ensure the adequate commitment and participation of all sectors concerned in the process.
- Within the spirit of strengthening intersectoral collaboration at a decentralized level, special care should be taken, by the platform leaders, to systematically develop the reach of the relevant intersectoral platforms at the regional level, to ensure their experience is fed and connected to on-the-ground experiences.
- On gender equality, beyond general consideration, special efforts should be made to ensure that gender-responsive project and programme specific results and indicators of performance find their ways into DRR project/programme logical frameworks that go for approval. Reporting should be done on those performance indicators during project implementation by those in charge of project supervision. This should help bring into focus this dimension in the DRR work. This gender dimension, along with other critical issues, could be the subject of a review process by the intersectoral coordination mechanism on DRR, to ensure that gender concerns are integrated upstream, not just in

the projects and programs, but also in the future strategic thinking of UNESCO on DRR. In that respect, adequate background information on the relationship between DRR and gender equality should be made available to project proponents by UNESCO. UNESCO gender specialists, including Gender Focal Points in both Headquarters and Field Offices, should be involved in this process.

- If it is serious about efficiently addressing disaster preparedness and mitigation, UNESCO must devote focused program resources to that task in selected countries/regions, while not losing sight of its focus on upstream work. In that respect, it should focus its limited resources on those countries (rather than a region as whole) where it has already developed extensive expertise and a track record. Its focus should remain on natural disasters and not be expanded to other types of disasters given the limited resources available. UNESCO must have an ambition commensurate with its means in that respect.
- With a view to nourishing UNESCO's mandate and working on upstream issues, some of those resources should be devoted to testing and promoting innovative pilot actions on the ground, while ensuring adequate capacity of the field offices to manage and supervise such pilot projects in a timely fashion. Such resources could go a long way in proving to UNESCO's donors and national partners that it can deliver the goods, on time and within budget, paving the way towards further leveraging of greater and longer-term extra-budgetary resources for work in its developed DRR niches, and in accordance with UNESCO's role as one of the main partners in the ISDR System. Staff dedicated to UNESCO's DRR activities, both at HQ and on the ground in the countries where UNESCO already has a track record such as Indonesia, can also provide an opportunity to maintain and build further relationships at the local, national, and international levels to support UNESCO action in disaster preparedness and mitigation.
- UNESCO must put an adequate focus and commitment in its DRR work on supporting and accompanying capacity development processes with its local and national partners in disaster preparedness and mitigation and must help ensure the sustainability of its achievements in this way. As a first operational step in this process, UNESCO should take stock of international best practices in capacity development and develop a roadmap for its own officers on the key aspects to be taken on board in projects and programmes to ensure that such capacities are adequately catered to and nurtured. Such a roadmap could be developed within the framework of the strengthened DRR coordination mechanism referred to in the first recommendation above.
- UNESCO as a whole, as well as its regional offices, should be encouraged to move to a more programmatic approach. This would lengthen the duration of their strategic interventions and provide them with the required flexibility in terms of mutually reinforcing interventions on a given issue at the global level and on the ground. It would also act as a means to nurture partnerships with international and local partners working in DRR, and ensuring intersectoral coordination. Such partnerships are key to ensure the scaling up and replication of the pilot approaches and methodologies developed with UNESCO support. The new biennium programme and medium-term strategy should be an opportunity to structure and promote such a programmatic approach to DRR within UNESCO as a whole (from the global to the local level). In that respect, the strengthened intersectoral coordination mechanism on DRR referred to above could be the platform through which this programmatic approach is shaped in the next 12 months. As part of this process, two issues that should be tackled within that discussion are: (a) whether it is appropriate to maintain the separation between SPO 5 and SPO 14 within UNESCO, given that they are different stages of the same continuum, recognizing that, while SPO 5 deals essentially with natural hazards, the scope of SPO 14 goes beyond "natural" disasters to cover responses to conflicts and other crisis situations

as well; and, (b) the need to substantially simplify the UNESCO intervention logic in DRR, which at present, is constituted of varying levels of results, across SPOs, MLAs and IPs, making it extremely diffuse and combersome. This could be a first step towards streamlining UNESCO's interventions.

- The IOC would benefit from stronger partnerships with national and local partners, building in particular on the experience and track record of the Education Sector in DRR at the community level, in order to transmit their risk data, information and knowledge in a more user-friendly way to benefit vulnerable populations, especially women.
- In order to avoid any duplication of activities in the field, especially when it comes to training, education and awareness raising activities, UNESCO should assess what other organizations are doing prior to undertaking its activities, and ensure that its projects and programmes are complementary and provide synergies with other organizations in the field, like what has been done by the IHP within the IFI programme. Here again, the intersectoral coordination mechanism on DRR has a role to play.
- While its global flagship programmes already get their fair share of publicity, UNESCO should work on ensuring its work on the ground on demo projects also gets adequate visibility. This is a critical element in ensuring the sustainability of the organization's work on DRR globally and its uptake by others. In that respect, efforts should be made to develop simple promotional material on some of the successful pilots supported by UNESCO on the ground in its 5 sectors of interventions. While this should be done by the respective sectors in coordination with the regional offices, the output from this process should be facilitated by the UNESCO DRR coordination mechanism. This promotional material should then be the subject of a mail-out campaign at the global and regional level, targeting UNESCO's DRR partners, making use of the information offices of UNESCO and their expertise.

ACRONYMS

AEIC	ASEAN Earthquake Information Centre
ASEAN	Association of Southeast Asian Nations
BMKG	Meteorological Climatology and Geophysical Agency
BRR	Agency for Reconstruction and Rehabilitation
BSP	Bureau of Strategic Planning
CARICOM	Caribbean Community
CBDP	Community-Based Disaster Preparedness
CBDRM	Community Based Disaster Risk Management
CBO	Community Based Organization
CC	Climate Change
CDEMA	Caribbean Disaster and Emergency Management Agency
CEPREDENAC	Centro de Coordinación para la Prevención de los Desastres Naturales en América Central
CEODE	Centre for Earth Observations and Digital Earth
CIDA	Canadian International Development Agency
CPPS	Permanent Commission for South East Pacific
CRS	Catholic Relief Services
CSS	Children Science Support
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DoE	Department of Education
EFA	Education for All
EGM	Expert Group Meeting
ERRA	Earthquake Reconstruction and Rehabilitation Authority
ESCAP	UN Economic and Social Commission for Asia Pacific
EXB	Extra Budgetary Funds
FORSIGANA	Forum of Student Disaster Preparedness
FRIEND	Flow Regimes from International Experimental and Network Data
GADR	Global Alliance for Disaster Reduction
GDIN	Global Disaster Information Network
GLOSS	Global Sea Level Observing System
HFA	Hyogo Framework for Action
HQ	Headquarters
ICCROM	International Centre for the Study of the Preservation and Restoration of Cultural Property
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ICHARM	International Centre for Water Hazard and Risk Management
ICL	International Consortium on Landslides
ICOMOS	International Council on Monuments and Sites
ICT	Information and Communication Technology
ICZM	Integrated Coastal Zone Management
IDRC	IDRC
IFI	International Flood Initiative
IGCP	International Geoscience Programme
IHP	International Hydrological Programme

Ina TEWS	Indonesian Tsunami Early Warning System
INGO	International non-governmental organization
IOCSC	Intergovernmental Oceanographic Commission
IPDC	International Programme for the Development of Communication
IPL	International Programme on Landslides
IOC	Intergovernmental Oceanographic Commission
IOC	Indian Ocean Consortium
IOTWS	Indian Ocean Tsunami Warning & Mitigation System
IOS	Internal Oversight Service
IOWAVE09	Indian Ocean Wave Exercise 2009
IP	Intersectoral Platforms
IPRED	International Platform for Reducing Earthquake Disasters
ISDR	International Strategy for Disaster Reduction
JICA	Japanese International Cooperation Agency
JMA	Japan Meteorological Agency
JST	Japan Science and Technology Agency
JTIC	Jakarta Tsunami Information Centre
KAB	Attitude, Behavior, Knowledge Survey
KOERI	Kandilli Observatory and Earthquake Research Institute
KPMB	Kelompok Pemberdayaan Masyarakat BAntaran
LDC	Least Developed Country
LIPI	National Institute of Science
MLA	Main Lines of Action
MoCT	Ministry of Culture and Tourism
MoPW	Ministry of Public Works
MPBI	Indonesian Society for Disaster Management
MTS	Medium-term Strategy
NAD	Nanggroe Aceh Darussalam
NAVTEC	National Vocational and Technical Education Commission
NGO	Non-governmental organization
NPO	National Programme Officer
OECD DAC	Organization of Economic Cooperation and Development, Development Assistance Committee
PAK	Pakistan-Administered State of Azad Jammu and Kashmir
PASTI	Preparedness Assessment Tools for Indonesia
PTWC	Pacific Tsunami Warning Center
PCPD	Post-conflict Post-disaster
RELEMR	Reducing Earthquake Losses in the Eastern Mediterranean Region
RELSAR	Reducing Earthquake Losses in South Asia Region
RP	Regular Programme Funds
SIDS	Small Island Developing States
SMC	School Management Committee
SOP	Standard Operating Procedure
SPO	Strategic Programme Objective
TDMRC	Tsunami and Disaster Mitigation Research Center
TEVTA	Technical Education and Vocational Training Authority
TEVT	Technical and Vocational Education and Training
TEWS	Tsunami Early Warning System

TIC	Tsunami Information Centre
TOC	Theory of Change
TORs	Terms of Reference
UNCT	United Nations Country Team
UNDESD	UN Decade on Education for Sustainable Development
UNICEF	United Nations Children's Fund
UNISDR	United Nations International Strategy for Disaster Reduction
UNITWIN	university twinning and networking scheme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USGS	United States Geological Survey
WCDR	World Conference on Disaster Reduction
WHC	World Heritage Centre
WMO	World Meteorological Agency

UNESCO AND DISASTER RISK MANAGEMENT

The impacts of natural disasters are increasingly felt by vulnerable populations. Over the past 45 years UNESCO has expanded into many areas as it pursues multidisciplinary actions to study natural hazards and mitigate their effect. Within the context of the Hyogo Declaration and Framework for Action, UNESCO provides support in disaster risk mitigation and preparedness, as well as post-disaster assistance, to its Member States.

UNESCO's work in disaster reduction aims at mitigation and preparedness through such approaches as capacity-building in vulnerable nations, support for research on natural hazards, coordination of early warning systems, the promotion of education and public awareness, and the integration of disaster reduction into development and anti-poverty programmes. UNESCO mainstreams disaster mitigation and preparedness through its broad mandate and expertise in the natural and social sciences, education, culture and communication sectors, to provide essential scientific and practical advice in disaster reduction.

UNESCO's work in DRR is part of a network of UN agencies, inter-governmental groups, and non-governmental or civil society organizations that are teamed together as part of the International Strategy for Disaster Reduction (ISDR). Through its networks, UNESCO has contributed to the facilitation, the development, and strengthening of disaster management institutions at a regional and international level for its Member States. UNESCO has played an important role in several international and intergovernmental scientific programmes that provide the framework for its current and future strategies, including:

- The Intergovernmental Oceanographic Commission
- The International Hydrological Programme
- Man and the Biosphere Programme
- The International Geoscience Programme
- Management of Social Transformations Programme
- International Flood Initiative
- International Consortium on Landslides
- G-WADI Network
- UN Decade on Education for Sustainable Development
- UN World Water Assessment Programme
- World Network of Biosphere Reserves
- Knowledge and Education for Disaster Reduction Programme¹

PURPOSE OF THE EVALUATION

The purpose of all SPO evaluations is to assess progress towards achieving the expected outcomes as given in document 34 C/4 and to examine how progress might be enhanced through improving programme policy, design and delivery.

The SPO 5 evaluation aims to assist UNESCO's Governing Bodies, Senior Management and the Programme Sectors by making evidence-based recommendations, covering the following issues:

¹ UNESCO, Disaster Preparedness and Mitigation, UNESCO's Role. 2007

- Whether the current level of funding and staffing is adequate for the programmes that contribute to SPO 5; if possible, the evaluation will give indications as to whether funding and staffing should be increased or decreased for any projects or programmes or terminated on the basis of lack of relevance, ineffectiveness or inefficiency
- Whether the current geographical spread of programmes and activities is addressing global and/or national priorities
- Whether new programme delivery mechanisms or modalities need to be developed or existing ones diminished
- Which capacities need to be built in order to more effectively meet the expected outcomes of SPO 5
- Whether changes need to be made to internal structures and organizational policies/procedures to more effectively meet the expected outcomes of SPO 5
- Which relationships, both inside and outside UNESCO and the UN, need to be strengthened to meet the expected outcomes of SPO 5
- Where UNESCO's comparative advantages currently lie and where they potentially lie, in particular UNESCO's ability to respond effectively to complex contemporary problems through intersectoral and interdisciplinary action
- Evolving areas of strategic importance to which UNESCO may need to pay more attention
- The extent to which the two global programme priorities of Africa and gender equality have been addressed through SPO 5²

Structured around the DAC evaluation criteria, namely, relevance, efficiency, effectiveness, impact and sustainability, the evaluation reached findings, conclusions and provides lessons learnt on progress made towards achieving the expected outcomes of SPO 5, the relevant activities in the 34/C5 programme, the two global priorities of Africa and gender equality, as well as the three relevant intersectoral platforms.

SCOPE OF WORK

Strategic and Sectoral Coverage

The Medium-Term Strategy (34 C/4) is the second Medium-Term Strategy³ put forth by the Bureau of Strategic Planning (BSP), and it sets out the strategic vision and programmatic framework for UNESCO's action over the years 2008 to 2013 in all its domains at the global, regional and country levels. The 34 C/4 is structured around five programme-driven overarching objectives for the entire Organization, as follows:

1. Attaining quality education for all and lifelong learning
2. Mobilizing science knowledge and policy for sustainable development
3. Addressing emerging social and ethical challenges
4. Fostering cultural diversity, intercultural dialogue and culture of peace
5. Building inclusive knowledge societies through information and communication

Fourteen Strategic Programme Objectives (SPOs) then translate how the overarching objectives will be pursued in a thematic manner and through sectoral and / or intersectoral action (see figure 1). Each SPO is accompanied by expected outcomes. The evolution of UNESCO's work in DRR over the past three decades has culminated with the inclusion of a specific SPO, SPO 5, which is set under the second

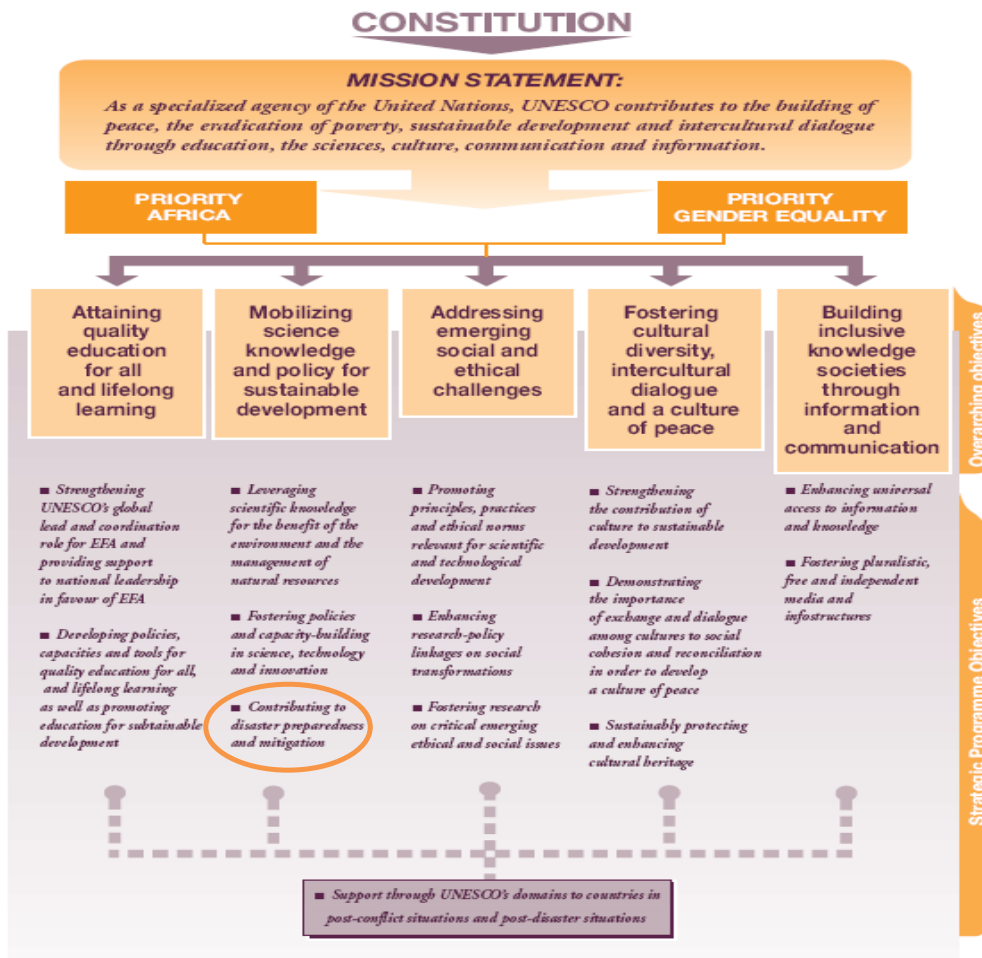
² UNESCO, Terms of Reference, Evaluation of UNESCO's contribution to Strategic Programme Objective (SPO) 5: 'Disaster Preparedness and Mitigation'. 2010

³ The first is Medium-Term Strategy 2002 – 2007 (33 C/4)

overarching objective (along with SPO 3 and 4), which aims to contribute to disaster preparedness and mitigation. The expected outcomes for SPO 5 as given in the 34 C/4 are as follows:

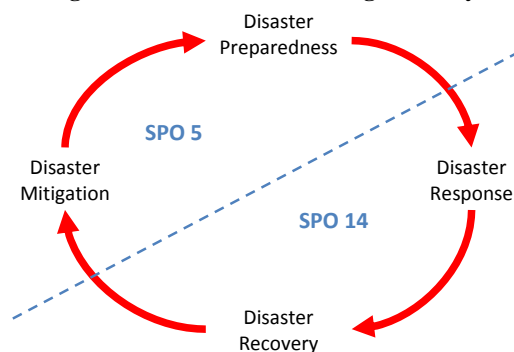
- Tsunami early-warning systems established and operational in Africa, the South Pacific, the Mediterranean Sea, the North-East Atlantic and the Caribbean
- Vulnerable and weakened communities prepared to cope with disasters through access and use of information and knowledge and to mitigate their impact
- Governments advised and assisted in the design of policies mitigating disaster risks and impact
- Contributions made to the development of national strategies for natural and human-induced disaster prevention and vulnerability reduction and included in United Nations system common country programming efforts

Figure 1: Strategic Objectives 34/C4 and the location of SPO 5



In order to clearly distinguish UNESCO's achievement between SPO 5 and SPO 14, the evaluation team will use the United Nations International Strategy for Disaster Reduction (UNISDR) terminology in order to clearly define preparedness and mitigation which are the focus of SPO 5. These are indeed quite distinctive to the two other phases of the DRM cycle, namely, response and recovery which are the focus of SPO 14 (see Figure 2) which also covers responses to conflicts and other disasters of unnatural origin. This is an important step in order to clearly assess UNESCO's contribution to preparedness and mitigation at the global and national levels through its varied implementation mechanisms.

Figure 2: Disaster Risk Management Cycle



Within Medium-Term Strategy (2008 – 2013) UNESCO has set forth two main priorities, a *priority to Africa*, and a priority to *gender equality* through out the duration of the strategy. In addition, the strategy has identified priority groups, namely, youth, least developed countries (LDCs), and small island developing States (SIDS).

The implementation of the six-year Medium Term Strategy is established with three consecutive biennial Programme and Budget documents, starting with the 2008-2009 period (document 34 C/5). UNESCO's biennial programme and budget (C/5) documents lay out the programme of work for each of the five Programme Sectors⁴ and 12 Intersectoral Platforms (IPs). Each sector has several biennial sectoral priorities, implemented by Main Lines of Action (MLAs). All MLAs and IPs have expected results for the end of the biennium.

The evaluation focuses on programmatic activities planned for the biennium in which the evaluation is taking place 35 C/5 (2010-2011) and on programme activities implemented in the previous two biennia 34 C/5 (2008– 2009) and 33 C/5 (2006 – 2007). The evaluation will assess all Sectors' contributions (Natural Sciences including that of the Intergovernmental Oceanographic Commission (IOC), Social and Human Sciences, Information and Communication, Education, and Culture). to SPO 5

Within the five UNESCO sectors, out of two biennial sectoral priorities included in the 34 C/5 Approved, the Natural Science Sector has a specific biennial sectoral priority regarding disaster mitigation and preparedness that is presented as follows: **Biennial sectoral priority 1: Promoting research and technical capacity-building for the sound management of natural resources and for disaster preparedness and mitigation.**

Within that priority of the Natural Science Sector, **MLA 3: Promoting science, knowledge and education for disaster preparedness and mitigation, and enhancing national and regional coping capacities, including through support for the development of risk reduction networks and monitoring and assessment measures, such as tsunami early warning systems** has been identified as having a logical contribution to SPO 5.

The culture, education, communication and information sectors of UNESCO have also contributed to the disaster risk reduction. These were also reviewed within the context of the evaluation.

Intersectoral platforms are an operational mode of programme delivery, established in the 2008 – 2009 biennium programming, intended to implement a plan of action that supports intersectorality in action. The IPs have expected results approved by the General Conference aimed at enhancing the quality, coherence and relevance of UNESCO's programme delivery. During this biennium, UNESCO will implement 12 intersectoral platforms that focus on key global challenges requiring an interdisciplinary approach through the combined action of its five major programmes. The contributions of the three relevant Intersectoral Platforms and their relevant results will be integrated within the evaluation of SPO

⁴ Education, Natural Sciences, Social and Human Sciences, Culture, and Communication and Information

5. It is noted, that for the IP on climate change, although it is not always explicit in SPO 5 activities, adaptation and mitigation efforts are intimately related to disaster preparedness and mitigation.

Gender equality

To conclude, the evaluation also has to take into account that the programme on disaster prevention was meant to emphasize the needs and roles of women in building a culture of disaster resilience, notably within the United Nations Cluster on Knowledge and Education for Disaster Reduction facilitated by UNESCO. The importance of integrating a gender equality perspective as well as of engaging women in the design and implementation of all phases of disaster management was to be highlighted through the Biennium. In particular, gender-responsive and socio-culturally relevant approaches incorporating local and indigenous practices for risk reduction were to be promoted as integral components of education and training for disaster risk reduction. Effectiveness of decentralized, community-based disaster response mechanisms, benefiting from the mobilizing role of women and children, were to be investigated and exemplified under the actions for the Biennium covered by this evaluation.

To complement the descriptions above, the various sectors' relevant intended contributions to SPO5 are outlined through a simplified and summarized reconstituted intervention logic presented for SPO5 under Figure 2 in this report.

Evaluation criteria

The evaluation will be structured around the DAC evaluation criteria, namely, relevance, efficiency, effectiveness, impact and sustainability, as defined below:

Relevance relating whether programme objectives have been addressing identified needs of the Member States; how the needs changed over the period of the programme; consistency of programme activities with the C/5, and the International agreed Development Goals, including the Millennium Development Goals and the Hyogo Declaration and Framework for Action.

Effectiveness in terms of progress made towards achievement of the expected outcomes; reasons for the achievement or non-achievement; unexpected outcomes; beneficiaries' satisfaction with the results; cost-effectiveness of the programme; UNESCO's comparative advantage in designing and implementing the programmes; and existence of effective monitoring mechanisms for programmes.

Efficiency in terms of measures taken to ensure efficient use of resources; timely delivery of outputs; whether the activities and outputs could have been delivered with fewer resources without reducing their quality and quantity, or more activities and outputs have been delivered with the same resources; and whether UNESCO's organizational structure, managerial support and coordination mechanisms have effectively supported delivery.

Programme ***impacts*** in terms of intended/unintended, positive/negative, and long term effects; the identified changes brought about as result of the programme;

Sustainability in terms of the likelihood of programme benefits being maintained when external support ceases; local institutional support and ownership of the programme with integration into local economic and socio-cultural conditions.

The realm of the intervention being evaluated

The scope will include programmes and projects implemented by UNESCO Headquarters or by National, Regional or Cluster Offices, funded both through Regular Programme and extrabudgetary funding. During the 2008-2009 biennium the budget allocated to programmatic activities contributing to MLA 3 of the Natural Sciences sector was \$5.1 Million (of which \$3,848,600 in extrabudgerary funds and

\$1,251,400 in regular programme funds).⁵ Additional resources allocated to sectoral or intersectoral programmes which contribute to SPO 5 will be identified during the desk study of this evaluation.

EVALUATION METHODOLOGY

The following are the data collection methods the evaluation team undertook for the evaluation.

Formal Inception mission to Paris and finalization of Inception Report

The evaluation team leader participated in an informal start-up meeting in Paris with the Evaluation officer in charge of this assessment on February 16nd to establish an initial contact and the expectations of UNESCO regarding the scope and the ToRs for the evaluation. This was also an opportunity to carry on advance scheduling for the various missions planned under this mandate. This was followed by a formal mission to Paris March - 8 to 11, to interview UNESCO staff and Reference Group members. This was instrumental to discuss the scope of the evaluation and the methodology proposed in this draft version of the inception report with key stakeholders within the organization.

In-depth documentation review

The evaluation team initiated the mandate with a preliminary review of documentation provided by UNESCO. Followed by an in-depth analysis of UNESCO's documentation including: strategic planning documents (34 C/4, 35 C/5, 34 C/5, 33 C/5), monitoring documents, project and programs documents, UNESCO evaluation reports, evaluation reports from UN agencies and Development Banks, budget documents, and UNESCO publications. See Annex G for the list of documents reviewed.

Evaluation Matrix and Evaluation Questions

In order to assess all the information from the documentation, surveys, questionnaires and interviews, the evaluation team used as main organizing framework an evaluation matrix. The evaluation matrix includes all of the questions found in Annex 1 of the TORs, as well as some additional questions. The evaluation team established indicators, proposed data collection methods, and identified the source of information in order to provide UNESCO an evidence-based approach to the evaluation.

The evaluation matrix is the key tool used for the data collection. It guided the evaluation team in ensuring that all information is gathered in a centralized manner. It also ensures that the evaluation follows the outlined methodology established in the inception report.

Surveys, and follow-up Interviews

An online survey (using Survey Monkey) was conducted with key stakeholders established by the Reference Group and the evaluation team. The total number of respondents to the survey was 17, the majority from the Natural Sciences Sector, but also some universities, research centres, UNESCO Field Offices, category I and II Natural Science Sector, government ministries and national commissions. The number of issues and questions to be addressed was limited in order to optimize participation.

Telephone and face-to-face interviews were also conducted with headquarters (see list in Annex F). Interviews lasted about one hour and aim to get insight on the key evaluation questions.

Field Visits to the Jakarta, Indonesia, Office and to the Kingston, Jamaica, Office

The evaluation team travelled to UNESCO's Jakarta, Indonesia office during the week of March 28th, and to the Kingston, Jamaica Office during the week of April 26th, in order to meet with UNESCO staff, project and programme beneficiaries, and stakeholders. The evaluation team concentrated on the main

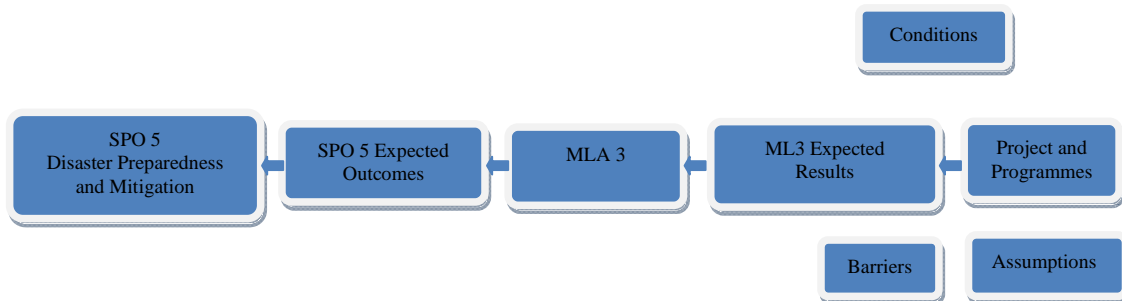
⁵ 34 C/5 Approved Programme and Budget, p 68.

evaluation questions, and the collection of data related to the evaluation of project and programme results and impacts. The field visits enabled the evaluation team to obtain qualitative information on UNESCO's contribution to SPO 5 and its expected outcomes.

Programme/project case study

The evaluation also undertook five short desk case studies of selected projects and programmes in order to allow the evaluation team to complement with more specific quantitative data regarding UNESCO's contribution to SPO 5. The case studies will look at the relevance, effectiveness, efficiency, impacts and sustainability of the projects and programmes (see Annexes A, B, C, D, E). A portfolio review was done in order to provide a sample the case studies based on the following criteria: completion date, geography, sectors, mixed extra and internationally budgetary, SPO 5 expected outcomes and availability of evaluation reports, as relevant. The selection was sent to UNESCO and approved by the Reference Group.

The evaluation team applied a Theory of Change (TOC) approach at the project and programme level in order to gain more insight on the achievement of MLA 3 expected results and ultimately how they feed into the expected outcomes of SPO 5. Using TOC, the evaluation team established a reverse mapping of the chain results from UNESCO's Medium Term Strategy SPO 5 expected outcomes to the MLA 3 expected results and establish barriers, challenges, current assumptions, and conditions for achieving results, as presented in the figure below.



EVALUATION FINDINGS

This section of the report presents the analysis and main findings from the evaluation process building on the methodology just presented. The analysis is structured around each DAC criteria, namely relevance, effectiveness, efficiency, impact and sustainability. The section regarding effectiveness is structured according to the SPO 5 expected outcomes.

RELEVANCE

The relevance section will aim to provide insight on the pertinent questions outlined in the ToRs. In addition, the evaluation will seek to gain insight on the consistency of programme activities with the internationally agreed development goals, including the Millennium Development Goals and the Hyogo Declaration and Framework for Action. The main questions outlined in the ToRs that are pertinent to the relevance criteria, are the following:

- Whether the current geographical spread of programmes and activities is addressing global and/or national priorities
- Where UNESCO's comparative advantages currently lie and where they potentially lie, in particular UNESCO's ability to respond effectively to complex contemporary problems through intersectoral and interdisciplinary action
- Evolving areas of strategic importance to which UNESCO may need to pay more attention

Geographic and thematic relevance:

The projects and programmes in disaster risk reduction through the five UNESCO sectors have generally been relevant to the four expected outcomes of SPO 5. The IOC's work in establishing and maintaining early warning systems, especially its establishment of tsunami early warning systems in the Indian Ocean, Asia-Pacific, as well as in the North Eastern Atlantic and Mediterranean region are relevant to the expected outcome regarding the establishment of TEWS. Furthermore, the projects and programmes have proven relevant to the expected outcome regarding vulnerable communities through projects and programmes in community-based preparedness and mitigation, as well as education for disaster preparedness in schools like the Myanmar Education Recovery Programme (MERP). Governments have also been assisted through projects that focused on building capacity for disaster risk reduction. UNESCO's work in DRR is also relevant to national priorities. In the case of Indonesia, disaster management is underlined by the Government's Plan of Work for 2007, as well as the Presidential Regulation No. 19 of 2006, as well as the Disaster Management Bill. In addition, disaster management has become one of the nine priorities for national mid term development plan.⁶

The relevance to the SPO 5 outcomes, easily translates to relevance to the C/5 Programme and Budget expected results that focus on early warning systems and preparedness and mitigation issues, as well as providing policy advice, strengthening networks, and building capacity for monitoring, assessment, knowledge dissemination, and education. The majority of UNESCO's work in DRR stems from the Natural Sciences Programmes, such as the IOC, the IHP, and IGCP, and their networks of collaborating scientists that contribute to a better understanding of natural hazards, especially in a geological and a earth systems context. The IOC's work in establishing TEWS is clearly coherent and relevant to the expected results of MLA 3. While the capacity building activities in training journalists for better dispersion of information, or such networks as UNITWIN and ICHARM, in addition to the work undertaken to mainstream DRR in education programmes, have clearly been relevant and coherent with the second expected result for MLA 3.

Overall, UNESCO's work in disaster preparedness and mitigation is highly relevant to the HFA Priorities for Action. More particularly, its work in establishing and maintaining early warning systems (EWS) and tsunami early warning systems (TEWS) through the IOC directly contributes to the *HFA priority: Identify, assess and monitor disaster risks and enhance early warning*. In addition, UNESCO's work in applying DRR in its Education for All programme, also greatly contributes to the HFA priority: *Use knowledge, innovation and education to build a culture of safety and resilience at all levels*. UNESCO's work with a variety of stakeholders has also proved relevant to the HFA priority: *Strengthen disaster preparedness for effective response at all levels*. Moreover, UNESCO's work with community-based capacity building for DRR has also proven relevant to the HFA priority: *Ensure that DRR is a national and a local priority with a strong institutional basis for implementation*. And finally, UNESCO-IHP's work through the International Flood Initiative is very relevant to knowledge production development of practical tools for integrated flood management and IWRM that supports the HFA priority: *Reduce the underlying risk factors*.⁷

In terms of thematic priority, an analysis of the overall investment from regular program and extra budgetary (see Figure 3), reveals when it comes to hazard specific interventions, that UNESCO focuses on the following: tsunami risks (19% of projects/programs); floods and droughts/hydro and water related hazards (17% of projects/programs); climate change related hazards (7% of projects/programs); and, earthquakes (6 % of projects/programs). However, the largest share of the portfolio focussed on multi-hazards projects and programmes – in average more than four different types of hazards with sometime no earmarked specific but loosely termed as disaster risks – representing 44% of the total program/projects. Thereby suggesting that UNESCO tackles a wide variety of disasters, which is in line with the diversity of issues faced in DRR globally and by its member states.

⁶ UNESCO, Indonesia-UNESCO Country Programming Document 2008 – 2011.

⁷ Hyogo Framework for Action, <http://www.unisdr.org/eng/hfa/docs/Hyogo-framework-for-action-english.pdf>, 2005

Figure 3: Types of hazard / risk coded from 114 SPO-5 projects lists

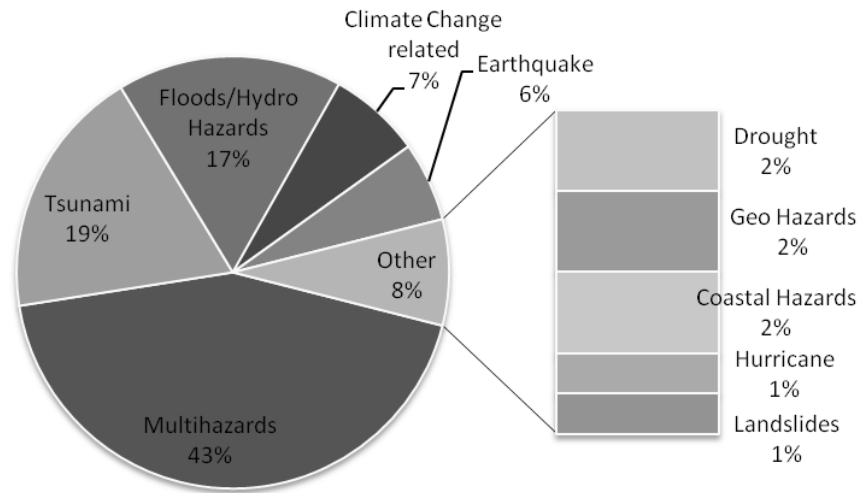
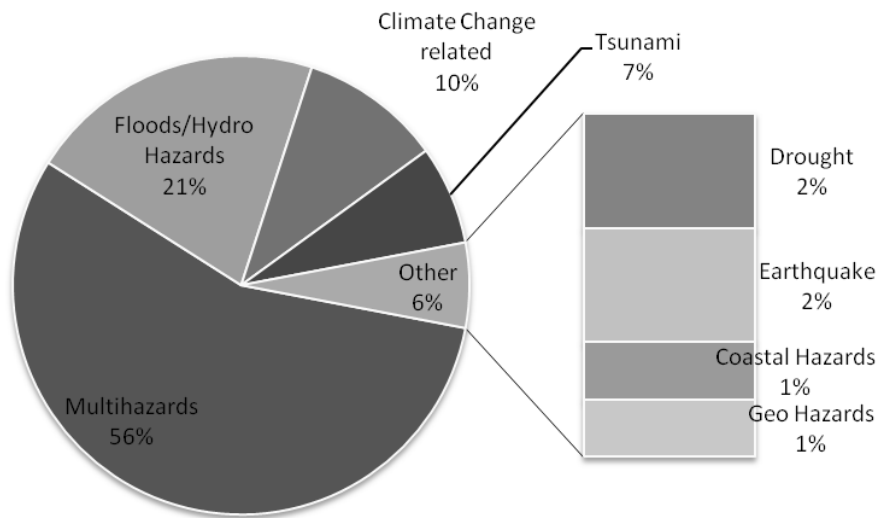


Figure 4 demonstrates the use of regular program budget where it is clear that in most cases, UNESCO tends to favour multi hazard approaches. However, floods and hydro hazards are still sharing a significant portion of the investment in SPO5 as well as emerging climate change related activities and tsunami under IOC (7%) – this strengthens the view that most of the TEWS have been supported from extra budgetary following the Indian Ocean tsunami of 26 December 2004.

Figure 4: Types of hazard / risk coded from 69 Regular Program Budget for SPO-5 projects lists



In terms of geographic focus, according to the portfolio review the majority of the work in DRR is in the Asia-Pacific region, mainly as a response to the 2004 Tsunami. UNESCO has had limited presence in undertaking projects and programmes in Africa which is one of the priorities of the MTS. At the national level, the geographic spread has been more or less coherent depending on the area; interviews in Indonesia have confirmed that the regional office work is also now geographically and thematically relevant to UNESCO’s priorities, with programs running in all five sectors, in the five countries covered by the regional Jakarta office. However, the mission to Jamaica has shown that UNESCO has provided little geographic coverage at the national or regional levels in the Caribbean, therefore adding little value so far in that region on DRR issues. With the dominant presence of a regional agency, with national partners, for disaster management in the Caribbean (CDEMA), relevance of any UNESCO projects now

and in the future would need to be closely linked to integration into interventions from this CARICOM backed agency. The geographic spread of the IOC DRR programmes and the work of CEPREDENAC seem currently sound and relevant to national and global priorities.⁸ The work by IOC as advisers to the tsunami early warning system in the Caribbean, lead by CDEMA and funded by USAID, is also very relevant and opens paths for future collaboration⁹.

UNESCO's comparative advantage:

UNESCO's focus on sciences rather than integrated development cooperation is viewed as a comparative advantage of its projects and programmes. With regard to sciences and DRR, there is no other development or donor agency that has a specific mandate to invest this field; thus, the IOC's work has been valuable but also the work with the ICL, ICHARM, IFI and FRIEND. The same could be said for education and DRR: while UNESCO is not the only player in the field undertaking such initiatives, its work along UNICEF's has been shown to be relevant and one of UNESCO's comparative advantages especially in regards to curriculum development/policy advice at the community level.¹⁰ In addition, UNESCO is the only organization that has a clear mandate to safeguard cultural heritage, providing an important opportunity for DRR work within the Sector.¹¹

One of the comparative advantages of UNESCO, according to various partners, lies in its access to a knowledge network worldwide, which they can tap into when associated with UNESCO. In this sense, UNESCO can play a role as a facilitator, by linking expertise with partners in the countries where it works.¹² The same can be said with respect to the credibility vis-à-vis the government or other players, that the UNESCO partnership can bring to civil society actors in their work on DRR. This is seen as a major contribution of UNESCO to the partnership.

Given that UNESCO is a member based organization, and through its global scientific network, it is viewed as a key player that can use its social capital to make change in DRR, especially within the government organizations like the Ministry of Education in regards to education for DRR and supporting policies.¹³

The Communication and Information Sector has a potential comparative advantage in channelling DRR knowledge (Hyogo Framework Priority 3) as it works closely with the global network of public service broadcasting. Given the fact that in countries such as in Bangladesh where at least 50 Community Radio used to deal with Cyclone warning, this kind of media can act as a powerful risk knowledge transmission tools. Even though the CI Sector has already helped the International Broadcasting Union to develop low-cost mobile broadcasting systems which can be set up easily in the aftermaths of any devastating disasters such as in Haiti, there still remains the possibility that such work can be expanded under SPO5 activities. Closer coordination with the other units should be encouraged to help ensure better uptake of such communication technology into UNESCO's DRR work.

However, the relevance of UNESCO's projects and programmes is limited by the size and budget of its projects and programmes. Some interviewees suggest that UNESCO's niche will remain in pilot projects such as those focussed on methodology development to be replicated by others who have the capacity for full implementation. This of course, requires putting adequate resources, especially human, into nurturing the relationship and networks with those other players to ensure this take up. There are however indications from the interviews conducted in the field with various UNESCO partners that this is an area which would require UNESCO putting more effort into.¹⁴ In Jamaica, potential partners, such as the Office of Disaster Preparedness and Management and the University of the West Indies (UWI)'s Disaster

⁸ List of projects provided by UNESCO

⁹ Interview with CDEMA adviser

¹⁰ Interviews in Indonesia

¹¹ Interviews in Indonesia and in Jamaica

¹² Interviews in Indonesia and in Jamaica

¹³ Interviews in Indonesia

¹⁴ Interviews in Indonesia and in Jamaica

Risk Reduction Research Centre, had little knowledge of UNESCO's projects in this sector, which may indicate weak visibility easily fixed by low-cost production of general material, especially in electronic format.

Potential areas for the future:

Although UNESCO's work in disaster preparedness and mitigation is extensive and relevant to current disaster realities, areas of strategic importance that would render its work more relevant would be further integration of climate change adaptation within its activities. On climate change, the strategies developed by the Intersectoral Platform on Climate Change (CC) may play as an inspiration for the development of national UNESCO strategies on the link between DRR and CC. In particular, partners in the field have highlighted the potential for UNESCO to get involved in reducing vulnerability in communities, focussing more on livelihoods and education for instance as entry points, which would be a natural bridge across these two issues of DRR and CC.¹⁵ This would also be a valuable opportunity to integrate the work done on gender equality and climate change into UNESCO's DRR activities.

UNESCO's work of the PCPD unit in the education sector in the area of DRR has been viewed as valuable and relevant and should thus continue. It has been stated in an interview that UNESCO would have a clear contribution in the curriculum and education policy development. This has clearly been shown in Indonesia, where there is a potential for UNESCO to play a further role in helping mainstream DRR in the education sector. In the Caribbean region, the topic of great interest, and would be a perfect opportunity for a partnerships at all levels (regional and national) between UNESCO and CDEMA. UNESCO, for instance, could help develop a national policy for mainstreaming DRR in school curricula.¹⁶

In regards to the culture sector UNESCO has a large potential to contribute to DRR of World Heritage Sites. As the only institution that carries this mandate, World Heritage Sites can be viewed as being part of DRR plans and strategies to reduce the number of casualties during a disaster.¹⁷ UNESCO's work in mainstreaming DRR in World Heritage Sites could shift the view that these sites are liabilities but real contributors to DRR, as such they would be relevant to national policies and strategies.

To conclude, the Social and Human sector did not have any completed or on-going activities in DRR at the time of this evaluation. This is not to say that social and human sciences support does not have a place in DRR work, but rather that this has not been an area of comparative strength for UNESCO in DRR.

Overall, UNESCO's activities in mitigation and preparedness are relevant to the expected outcomes of SPO 5, as well as the expected results of MLA 3 and the HFA priorities and globally a reflection of international DRR thematic priorities. However, while UNESCO's activities have shown relevance in the response to the 2004 tsunami with a majority of the work in Asia-Pacific, this has been at the expense of other geographic areas, most notably Africa (a MTS priority) and Latin America and the Caribbean which have had very limited visibility from UNESCO. UNESCO has clearly demonstrated its comparative advantage and its relevance in the establishment of the tsunami early warning systems and its work in the scientific and educational fields is in high regards too. However, given its unique role in maintaining world heritage sites, more work in DRR would provide UNESCO with a unique opportunity to mainstream DRR within the culture sector. With respect to the intersectoral platforms, UNESCO still has work to do to clearly link them with its activities; such mainstreaming would greatly enhance the relevance of UNESCO's activities at a global scale.

¹⁵ Ibid.

¹⁶ Interviews in Indonesia and in Jamaica

¹⁷ Interview with HQ WHC

EFFECTIVENESS

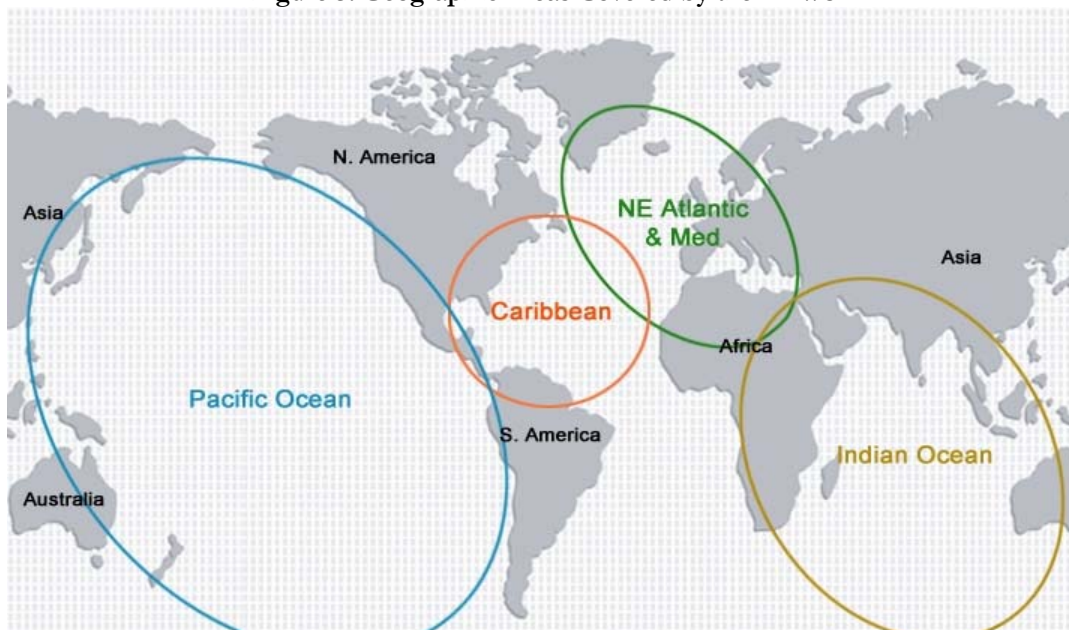
The effectiveness section will aim to provide insight on the pertinent questions outlined in the ToRs. In addition, the evaluation will seek to gain insight on the results achieved. The main questions outlined in the ToRs that are pertinent to the effectiveness criteria, are the following:

- Which capacities need to be built in order to more effectively meet the expected outcomes of SPO 5
- Whether changes need to be made to internal structures and organizational policies/procedures to more effectively meet the expected outcomes of SPO 5
- The extent to which the two global programme priorities of Africa and gender equality have been addressed through SPO 5¹⁸

SPO 5 Expected Outcome 1: *Tsunami early-warning systems established and operational in the selected sea basin*

The IOC has been able to achieve this outcome with the establishment and operation of the tsunami early warning systems in Africa, the South Pacific, the North-East Atlantic and the Caribbean.¹⁹ The map in Figure 3, presents the geographic areas that are now covered by the TEWS.

Figure 5: Geographic Areas Covered by the TEWS



Source: IOC website: <http://www.ioc-tsunami.org/content/view/full/31/36/>

Since the establishment of the TEWS, partnerships have been forged to ensure that early warning systems eventually cover all ocean hazards in other ocean basins.

Development indicators were produced for integrated coastal management and substantive progress has been noted in most areas of mapping, research programme coordination, networking and capacity-building.²⁰

¹⁸ UNESCO, Terms of Reference, Evaluation of UNESCO's contribution to Strategic Programme Objective (SPO) 5: 'Disaster Preparedness and Mitigation', 2010

¹⁹ IOC, Annual Report. 2009

The literature review, corroborated by interviews, has revealed that the TEWS have also stimulated activities at the regional and national levels. Regional Tsunami Watch Providers were launched by Australia, India and Indonesia in the framework of the Indian Ocean Tsunami Warning and Mitigation System (IOTWS). In addition, a project to strengthen the tsunami warning system, formulated in close collaboration with UNESCO/IOC, is expected to enhance disaster preparedness capacity of its member states.²¹

In addition, the establishment of the Tsunami Information Centre in Jakarta is expected to serve as an information resource from which the government agencies, donor countries, public and private stakeholders, NGOs and INGOs, and the general public can draw valuable advice, information and help in implementing tsunami safety measures to saving life and property.²² The center has also enhanced capacities for action and planning by public authorities in the countries affected and improved public confidence and security.

The IOC has contributed towards MLA 3 Expected Result 1, as the IOTWS now has 26 out of the possible 28 operating national tsunami warning centres, capable of receiving and distributing tsunami advisories around the clock, with over 70 real-time seismic stations and 70 real-time sea level stations. Sea-level gauges are presently transmitting real-time data through geostationary satellites which are immediately retransmitted over the World Meteorological Organization's Global Telecommunications System to the Pacific Tsunami Warning Center (PTWC) and the Japan Meteorological Agency (JMA) and all National Meteorological Service providers.

Although the establishment of the TEWS has been a success, one of the weaknesses that has been expressed is the need for better communication and tsunami warning information that can be timely accessed by the vulnerable communities to make early response to the produced warnings. Currently, the information remains very technical and geared towards experts. The effectiveness of TEWS is judged not on whether tsunami warnings are issued per se but rather on whether the warnings facilitate appropriate and timely decision-making by those at risk. The IOC has recognized this challenge and is looking into finding ways to communicate their information in a more timely and comprehensive manner to the affected communities (especially coastal communities).²³

SPO 5 Expected Outcome 2: *Vulnerability reduction through access & use of information / knowledge to mitigate their impact*

UNESCO's work in the field in terms of reaching vulnerable communities²⁴ has been generally successful. UNESCO activities provided a forum for the exchange of information on vulnerable communities. For instance, in Indonesia, the discussions carried out in developing the disaster preparedness assessment framework during the Expert Group Meetings provided a platform for disaster experts and practitioner to share and debate their experiences and develop a common point of view to measure community

Box 1: Regional workshop on hurricane press coverage in the Caribbean

A workshop in the Caribbean trained 60 journalists from eight Caribbean countries providing each participant with a multimedia storage device and a publication. Although the results of such an activity on access to information are challenging to obtain in the context of this evaluation, it can be assumed that such an activity would contribute to the achievement of SPO 5 expected outcome 2 (see Annex E).

²⁰ UNESCO, Report of the Director-General on the Activities of the Organization in 2004 - 2005 – 34 C/

²¹ UNESCO, Report by the Director-General on the Execution of the Programme adopted by the General Conference 180 EX/4, March 2009. Paris.

²³ Interview HQ

²⁴The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. (2009 UNISDR Terminology on Disaster Reduction)

preparedness.²⁵

One of the areas in which UNESCO has been quite successful has been its work in education where the activities have mainstreamed disaster preparedness and mitigation within the school curricula. Field visits have confirmed that UNESCO received a very good response from local government and local communities regarding the appropriateness of the materials in the case of school preparedness programmes and community-based tsunami preparedness activities. In Padang, Indonesia, the local government also embraced and approved of the idea to add disaster risk reduction to the standard school curriculum.²⁶ Additionally, the ONE UN programme in Pakistan following the earthquake has also been successful in supporting disaster preparedness and mitigation within the school system through the establishment of policies, and training modules for the teachers (see case study in Annex D). However, in regards to disaster education and development of educational materials, there is clear indication of duplication in terms of types of DRR activities carried out by partners in comparison with the other parties. This is specifically the case with UNESCO education activities, like teacher training, where UNICEF, UNDP and many NGOs are already active in the field.²⁷ UNESCO would be more effective if they were targeted and better took into account what other donors are doing. A proper implementation of the ONE UN approach around such activities could help limit duplication.

UNESCO has also been successful in including local indigenous knowledge within information which has been key in transmitting DRR information at the local levels. For instance, national and international stakeholders recognized the importance of the research conducted on local and indigenous knowledge in Simeulue, and expressed their appreciation regarding the scientific multi-sector approach using both anthropological and earth sciences. The study was the first of its kind and helped to draw a realistic picture of what really occurred in Simeulue during the Tsunami 2004 as it helped people understand why almost all survived on the Island using indigenous knowledge. Many stories and even media coverage stated that indigenous knowledge was the key factor for the limited amount of human casualties during the 2004 Tsunami.²⁸ It is unclear however from the evaluation sources available, if there was any gender differentiation taken into account in the collection and use of this indigenous knowledge.

UNESCO has also supported the development of some disaster preparedness and mitigation tools. In Indonesia, UNESCO has supported the development of the disaster preparedness assessment framework, prepared by LIPI, for measuring community preparedness to face natural disasters. The framework constitutes a first for the country and to a certain extent for the region, where no outlined methodologies existed to measure the level of disaster preparedness of a given community, whether it is a village, middle-sized city or a big city.²⁹ Another valuable tool is the development of standard operational procedures (SOPs) on tsunami preparedness and response at community level which are a valuable tool for disaster mitigation and preparedness.³⁰

The use of local partners and organizations represents an important channel for disseminating flood related information to other neighborhoods and ensuring improved flood preparedness and reactivity of a whole community, as in the case of the pilot project in Jakarta: *Strengthening community-based flood resilience in Bidara Cina, East Jakarta, Indonesia*. The important role that these organizations play for community-based flood preparedness and mitigation has been acknowledged beyond the borders of the city sub-district Bidara Cina. Members of the community organization in RW 06 (Kelompok Pemberdayaan Masyarakat Bantaran, KPMB RW06) have been actively involved in disaster preparedness activities of other organizations and the government. However, the capacity of local partners is quite varied and must be taken into consideration in regards to the effectiveness of results. In Padang, West Sumatra, the newly created local government agency charged with disaster preparedness is apparently not mature enough yet to liaise and support adequately the local partners. This translates, for instance, in a lack of logistical

²⁵ Interviews in Indonesia

²⁶ Ibid.

²⁷ Survey results

²⁸ UNESCO, JTIC, 2009

²⁹ Interviews in Indonesia

³⁰ UNESCO, Strengthening Community-Based Preparedness in Indonesia, Final Report. 2007

support to give their full effectiveness to tsunami related actions on the ground, and the lack of legal recognition from the local government, which is required to optimize the role of the local partners in the field and their prospects for further development. This thus means that for now, sustained support for disaster preparedness in those communities, is dependent on continued liaison with the NGO operating the project for UNESCO at the time, KOGAMI, – however excellent the apparent changes in perception of the community on tsunami risks. This is compounded by the fact that KOGAMI is now thinking of expanding its area of work to other sub-districts, at a time when local communities (and the local government) in the regions already covered are highly dependent on KOGAMI’s facilitation function.³¹

Overall, there is evidence of increased knowledge to mitigate impacts of disaster for vulnerable communities and thus a decreased level of vulnerability. In Elang Laut community in Padang, the changing perception on tsunami risk and earthquake risks through the school-based preparedness program, prior to the Padang earthquake, have dramatically increased their knowledge of the tsunami risk, as a result school children as well as the teachers are now recognized as knowledgeable sources on disaster risks.³² The Children Science Support (CSS) activities aimed to educate children to have a better knowledge on earthquake, tsunami, and other hazards in schools; and to have a better disaster preparedness involving teachers. The CSS in Mukomuko and North Bengkulu reached 6398 students (3136 male students and 3262 female students) of high schools, junior high schools and elementary schools.³³

A key component to ensuring the effectiveness of the development of DRR data collection tools at a community level is establishing a common DRR approach and by using appropriate terminology understood by all. This is especially valuable in terms of producing and disseminating training manuals. In the case of one project, the ISDR disaster terminology was used to assist in achieving a DRR framework.

SPO 5 Expected Outcome 3: *Governments advised and assisted in the design of policies mitigating disaster risks and impact*

Although UNESCO’s role is not necessarily to work directly with governments, there is evidence that some of its work has advised or assisted in the design of policies for mitigating disaster risks and impacts. UNESCO played a major role in advancing the UNCT joint priorities which are focused on disaster risk management, the development of a national development information database, and the formulation of sector-wide strategies for key intervention areas, namely education, health, agriculture, water and sanitation in Comoros. The Galawa Declaration of May 2007 sets out the roadmap for all the above issues.³⁴

Training material on DRR of cultural heritage has been valuable for Ministries to integrate DRR in World Heritage sites. UNESCO has even published a resource manual on “Managing Disaster Risk for World Heritage”, which provides valuable knowledge and insight on how to manage risk. UNESCO has a clear comparative advantage in that regard, like the training from Rohit Jigyasu, which was viewed as a comprehensive approach on the disaster preparedness and mitigation at the world heritage sites. It also provided

Box 2: Landslide Consortium

UNESCO has hosted many forums and workshops that have included key policy leaders such as the First World Landslide Forum, co-organized by UNESCO, which raised attention worldwide on landslide risk reduction. UNESCO’s involvement has been key in providing significant headway towards enhancing cooperative mechanisms for earthquake risk reduction in both the Mediterranean and South Asia regions through international and regional workshops such as the 24th RELEMR International Workshop on Seismicity and Earthquake Engineering in the Extended Mediterranean Region (see Annex A).

³¹ Field visits to communities in Indonesia

³² Interviews in Indonesia

³³ UNESCO, Jakarta Tsunami Information Center, June 2009

³⁴ UNESCO, Report by the Director-General on the Execution of the Programme adopted by the General Conference 180 EX/4, March 2008. Paris.

insight on the spatial planning of the temples in regards to the management of the temples in the context climate variability, and the possible vulnerability (exposure) of temple stones due to its location. In addition, the national Ministry of Culture and Tourism was able to generate government resources to enact policy change on disaster preparedness and mitigation at the cultural heritage sites. According to high level officials, the inclusion of disaster risk management training in this small technical assistant project for Borobudur Temple, had triggered the ministry to have new initiatives at the national level such as regulatory change to include mitigation and preparedness at the World and cultural heritage sites.³⁵ Indeed, it is hoped that by the end of 2010, a presidential regulation on this topic will be established. UNESCO has also been involved in Iran regarding DRR of cultural heritage sites, these are increasing being viewed as part of disaster mitigation strategies rather than disaster liabilities.³⁶

Through supporting the Government of China's actions after the Sichuan earthquake, the Centre for Earth Observations and Digital Earth (CEODE) in China (a member of the Open Framework Initiative between UNESCO and space agencies) illustrated the critical role that properly processed remote sensing and aerial data can play in post-disaster recovery interventions.³⁷ Also, the RELSAR seismic workshop provides an opportunity for experts to meet and exchange on valuable data sets, thus allowing experts to advise their governments about disaster potentials.³⁸ UNESCO's science-based approach aims to provide a forum to exchange valuable data in order to help its member states. This has also been the case for UNESCO's involvement in a workshop with the USGS, and the Kandilli Observatory and Earthquake Research Institute (KOERI), on Data Exchange and Analysis for Earthquakes in the Dead Sea Rift and the Zagros Mountains, where thirty-seven participants from different countries attended.³⁹ The IOC project on the development of an Indian Ocean TWS, has also provided impetus for member states to incorporate tsunami preparedness into policy (see Case Study B).

In the communications and information sector, a four-day workshop organized and aimed at training 50 journalists and media professionals from the Caribbean countries on the issues of hurricane season coverage was successful (see case study E). While workshops are valuable, there needs to be follow-up to continue building capacity.⁴⁰

UNESCO aims to involve key national experts within its activities as a means to build capacity of the experts to advise their governments. As a result, the contribution of UNESCO in achieving its expected outcome 3 of SPO is mainly indirect in general.

SPO 5 Expected Outcome 4: *Contributions to the development of national strategies for natural and human-induced disaster prevention and vulnerability reduction*

The strategies that have stemmed from UNESCO activities have been varied and at different levels of government, as well as within different sectors. There are indications that the work done by the IOC (see box 3 above) has provided input on policy change,

Box 3: Towards the Development of an Indian Ocean TWS

As a result of this project, a regional consensus was achieved on the nature of all tsunami early warning system and the design of its core elements (via two major intergovernmental coordination meetings to address the governance of the IOTWS). Overall, there were enhanced capacities for action and planning by public authorities in the countries affected (through national assessment missions - enhanced awareness of policy makers, i.e. India has now included disaster awareness and risk reduction in its school curricula) (see Annex B)

³⁵ Interviews in Indonesia

³⁶ Interview HQ

³⁷ UNESCO, Report by the Director-General on the Execution of the Programme adopted by the General Conference 180 EX/4, March 2009. Paris.

³⁸ UNESCO, Report on the Seventh International Workshop on Seismic Analysis in the South-Asia Region, Bhutan. June 2008.

³⁹ UNESCO, REMELR Data Exchange and Analysis for Earthquakes in Dead Sea Rifts and the Zagros Mountains, Workshop Report. Istanbul, May 2008.

⁴⁰ UNESCO, Technical Cooperation for Enhancing the Management Effectiveness of Borobudur Temple Compounds, Indonesia: Final Report. June 2009.

however direct attribution is difficult to measure.

The Culture Sector has established a Strategy to Reduce Risk that was approved in 2007, which will aim to contribute to the development of national strategies for heritage sites.⁴¹ The World Heritage Center is now looking for donors to bring experts in the field of DRM and heritage, as well as finding avenues to promote cooperation between heritage site to share in experiences in disaster mitigation and preparedness. In addition, UNESCO supported through its Chair Program on Cultural Heritage and Risk Management an International Training Course on Disaster Risk Management of Cultural Heritage 2010.⁴² During the Third International Training Course in 2008 participants provided outlines of Disaster Risk Management Plans of Cultural Heritage for a variety of World Heritage Sites in Bhutan, Iran, Nepal, Serbia, and Taiwan (see table below).

Bhutan	Disaster Risk Management Plan for Tashichhodzong
Iran	Disaster Risk Management for Bam's Cultural Heritage
Nepal	Disaster Risk Management Plan for Kathmandu Valley World Heritage Site Patan Durbar Square Monument Zone
Serbia	Disaster Risk Management Plan for Lower Town in Belgrade Fortress
Taiwan	Disaster Risk Management Plan for Fort San Domingo in Tamsui and Surround Historical Buildings

To conclude, in the education sector, let us note the on-going efforts to influence national policies on disaster mitigation and preparedness by the DIPECHO project and by the One UN preparedness programme in Pakistan.⁴³

Intersectoral Platforms

Overall, the intersectoral platforms of particular relevance to DRR and SPO 5 include: (i) the SIDS platform which contributes to the reduction of vulnerability of small islands to coastal related hazards such as tsunami, cyclone and other climatic hazards; (ii) the climate change platform which contributes to addressing the vulnerability of countries to the climate risks; (iii) the post-conflict and post-disaster (PCPD) platform which has contributed to the creation of incentives (new funds, new tools, new instrumental knowledge of DRR in the regions where PCPD is operating; and, (iv) the Education for Sustainable Development Platform which has shown interest in promoting DRR integration in education.

The SIDS platform is focused on UNESCO's contribution to the implementation of the Mauritius Strategy for the Sustainable Development of Small Island Developing States. Events reported to the platform include contributions towards a Response to Ocean-Based Extreme Events in the Indian Ocean. With the support from the government of Italy, UNESCO contributed to capacity development for 60 scientists in hydrographical data acquisition processing and management, development of coastal inundation maps construction, natural disasters risk assessment and management. In the South West Pacific Islands, on tsunami hazard during the period 2005-2009, it provided training to 20 staff of national agencies on seismic monitoring, sea level monitoring and tsunami warning systems. Activities will increase significantly in the coming years, with a Disaster Risk Reduction specialist based in Fiji. However, interviews at HQ revealed that DRR is an area that has yet to be explicitly discussed in the regular meetings of SIDS platform.⁴⁴

The CCIP (Climate Change Intersectoral Platform) is itself concerned with the disaster risks arising from climate change. So far UNESCO has tried to integrate the climate change dimension in its biosphere reserve projects, in particular from the perspective of climate risk management. Indeed, "UNESCO is committed to support all stakeholders, especially in Africa, to cope better with the impact of climate

⁴¹ UNESCO, Strategy for Risk Reduction at World Heritage Sites, 2007

⁴² Found at: <http://www.ritsumei-gcoe.jp/heritagerisknet.dmuch/itc/index.html#01>

⁴³ Survey

⁴⁴ Interview in HQ, Paris

change, to be more resilient and less vulnerable to natural hazards and disasters and their adaptation capacity.”⁴⁵ While most would agree that climate change adaptation is clearly linked to disaster preparedness and mitigation, there are few specific activities linking the two at the moment in the UNESCO portfolio. There are however exceptions, such as The Climate Frontlines project, which clearly responded to a need for SIDS with a global online forum for community-based experiences with climate change. Nevertheless, the mission to Jamaica has also clearly revealed that UNESCO’s involvement on this topic of climate change and SIDS remains limited, even more so when one draws the relationship to DRR.

The PCPD platform, traditionally more closely associated with SPO 14, has contributed in some instances to the creation of DRR related tools, knowledge and DRR funding opportunities. It is by far the intersectoral platform which is seen as the most operationally oriented in the DRR realm within UNESCO so far. It is generally viewed as highly successful by UNESCO staff, with a high rate of participation and responsiveness. In that respect, the other platforms may gain from its experience and the tools it has developed to elicit action. With respect to SPO 5, the Namibia post disaster response has been used for instance to produce a “School Manual on Emergency Preparedness and Response” – a product based on accumulated experiences - seen to be in the sphere of SOP5/SPO14. –Recently, USD 100 000.00 for a multi-hazard early warning system in Haiti was allocated from the post disaster funding window. In Myanmar, UNESCO was able to provide Myanmar’s DRR education support with USD 400 000.00, through the work done in conjunction with the platform.⁴⁶ The Rehabilitation of the Education System in Earthquake-affected Areas of Pakistan Administered Azad Jammu and Kashmir was also closely linked to SPO 5 (see case study in Annex D).

The Education for Sustainable Development. (ESD) intersectoral platform has recently tried to integrate DRR into ESD content. UNESCO and ISDR partners raised the flags of DRR integration for the first time at the World Conference of Education for Sustainable Development in 2009 in Bonn.⁴⁷As a result of this initiative, and in the light of the Conference follow-up, DRR is now included in the document “UNESCO Strategy for the Second half of the United Nations Decade of Education for Sustainable Development.

In general though, this evaluation has revealed that, with the exception of PCPD, with its clear operational focus, there still lacks a clear link between the projects and programmes and the aforementioned intersectoral platforms. These are often seen in the field as means of information exchange rather than as mechanisms that have a bearing on project implementation and priority setting, as no financial resources are typically associated with the work of these platforms.⁴⁸

Global Priorities of Africa and Gender Equality

Africa has not, so far, been a significant focus of the disaster preparedness and mitigation work of UNESCO. That is not to say though that disaster do not strike in Africa. It rather confirms the lower priority given to DRR in Africa by UNESCO.

Indeed, of the total 1331 natural hazards becoming disaster events from 1980 to 2009 in African continents, floods are the most common phenomenon as it accounts a total of 35%. Epidemics stand at the second (33%), drought and storm share the same level of events (average 11% each). Earthquakes are only 4%. (See Figure 6). In fact, when measured by impacts of events such as death, of the total 657,000 death during the same period, 84% accounted for drought associated events and 12% are associated with epidemics. Off course this should be carefully read as often drought and war interface makes African countries all too vulnerable to cope with simple drought.

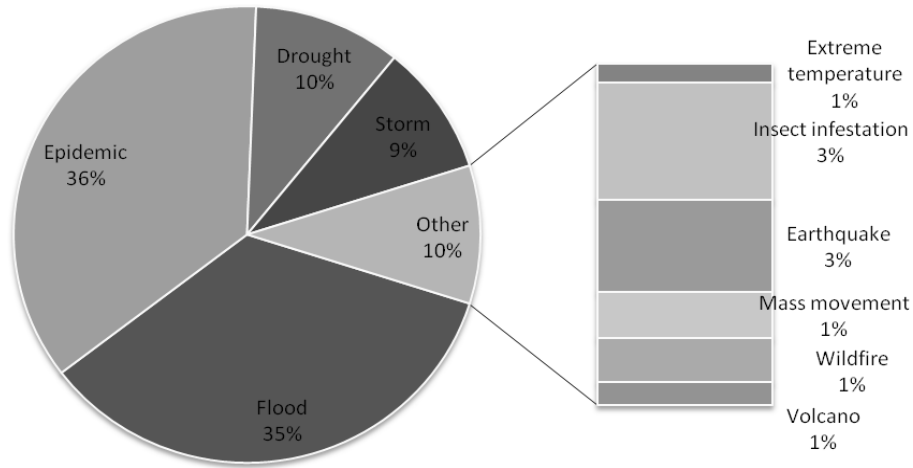
⁴⁵ Executive Board 184 EX/5 Paris 5 March stated in page 13:

⁴⁶ Interview in HQ, Paris

⁴⁷ <http://www.esd-world-conference-2009.org/fileadmin/download/workshops/ESD2009WS4DisasterEN.pdf>

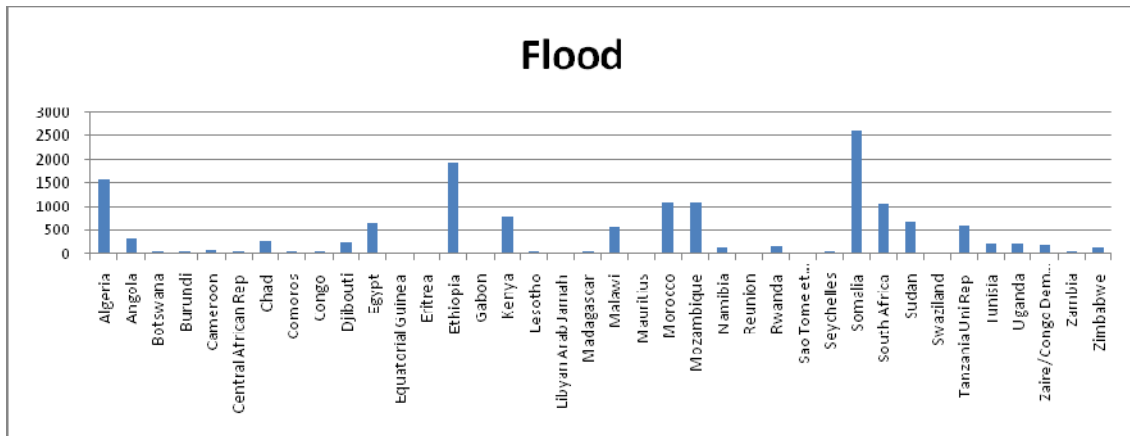
⁴⁸ Interviews in Indonesia

Figure 6: Disaster Events in Africa 1980-2009 (source: EMDAT May 2010)



Due to the high prevalence of death associated with droughts and epidemics, organizations and experts tend to overlook risks from natural hazards in Africa. In terms of earthquake risks, Algeria and Egypt are the hotspot in Africa. Given the fact that the Indian Ocean Tsunami in 2004 also affected some of the 44,000 people, displaced 5,000 and killed 150 people in the north coast of Somalia⁴⁹, not including the coasts of Kenya, Tanzania and The Seychelles, the figure below is underestimating the risks of tsunami in the region. Should one include the potential risk of tsunami coming from the direction of the North-eastern Atlantic, the Mediterranean countries such as Egypt and Algeria would be at risk. Landslides are also common in Africa.

Figure 7: Flood related deaths in African Countries 1980-2009 (Source EMDAT May 2010)



The analysis above on DRR in Africa also reveals the potential that exists to tackle such issues, in particular through a stronger focus on climate change adaptation risk management, which can be more closely linked to drought and flood disasters.

⁴⁹ See Disaster Risk Reduction: Cases from Urban Africa, Edited by Mark Pelling and Ben Wisner 2009. Earthscan: London.

With regard to gender equality, the The Gender Equality Action Plan 2008 – 2013 clearly states as one of its outcomes: *Gender-responsive approach to disaster risk reduction*,⁵⁰ however this is rarely presented in project documents. The evaluation has also revealed that there is a lack of gender mainstreaming in the overall DRR activities. According to interviews in Indonesia and at HQ, impact of disaster on women and children is not incorporated in the Tools developed with UNESCO support. In addition, according to the UNESCO Report by the Director-General on UNESCO Actions Promoting Women’s Empowerment and Gender Equality Annex (2009), there has not been any progress achieved towards meeting the GEAP outcome: Gender-responsive approach to disaster risk reduction. The areas where UNESCO seems to have made the most headway in integrating gender-related concerns is at the level of community awareness actions, typically targeting women as community leaders in disaster preparedness awareness training. However, even there, indications are that this is more by chance than by purposeful design. Given UNESCO’s breath of work and its leadership in awareness raising and capacity building on gender equality and climate change at the international level, taking appropriate and concrete measures to ensure that gender equality is mainstreamed would render the work of UNESCO in this field all the more relevant and effective.⁵¹

Capacities and internal coordination procedures that need to be built

The general view of UNESCO’s work in disaster mitigation and preparedness has been mixed depending on the area and sectors of work. The general consensus from the survey, interviews and missions, is that UNESCO needs to build more capacity to respond to emerging needs of its member states. Each State being at a different stage of development, such capacity building must be tailored to its specific needs through adequate preparedness assessments. Some interviewees felt that UNESCO can play a role in the field given its science-based nature, however, there are still many constraints, for instance available human and financial resources as well as positioning in the region’s DRR networks.⁵²

UNESCO has a vital role in the preservation of Cultural Heritage. As presented above UNESCO has indeed done some valuable work in drafting Disaster Risk Management Plans for World Heritage sites. This effort needs to be continued by increasing the capacity of member states to undertake such activities. Additionally, the cultural sector needs to promote the importance of DRM plans, as only 50% of member states in the Caribbean region have ratified the Convention for the Safeguarding of the Intangible and Tangible Cultural Heritage.⁵³

To conclude, given the involvement and expressed interest of all sectors in disaster preparedness and mitigation, UNESCO would also need to increase its capacity to foster coordination within its varying sectors.

Overall, the evaluation concludes that UNESCO needs to have a more strategic and focussed approach to its DRR activities, given its limited resources. This will become clearer after the following review of efficiency and sustainability challenges faced in the disaster preparedness and mitigation work of UNESCO, in the next chapters of this report.

EFFICIENCY

The efficiency section will aim to provide insight on the pertinent questions outlined in the ToRs. In addition, the evaluation will seek to gain insight on challenges faced in ensuring efficient use of resources; timely delivery of outputs; the use of current funding modalities and programme delivery mechanisms. The main questions outline in the ToRs that are pertinent to the efficiency criteria, are the following:

Efficiency in terms of measures

- Whether the current level of funding and staffing is adequate for the programmes that contribute to SPO 5; if possible, the evaluation will give indications as to whether funding and staffing

⁵⁰ UNESCO, Priority Gender Equality: Action Plan 2008-2013.

⁵¹ Interviews in Indonesia

⁵² Interviews in Jamaica

⁵³ Ibid.

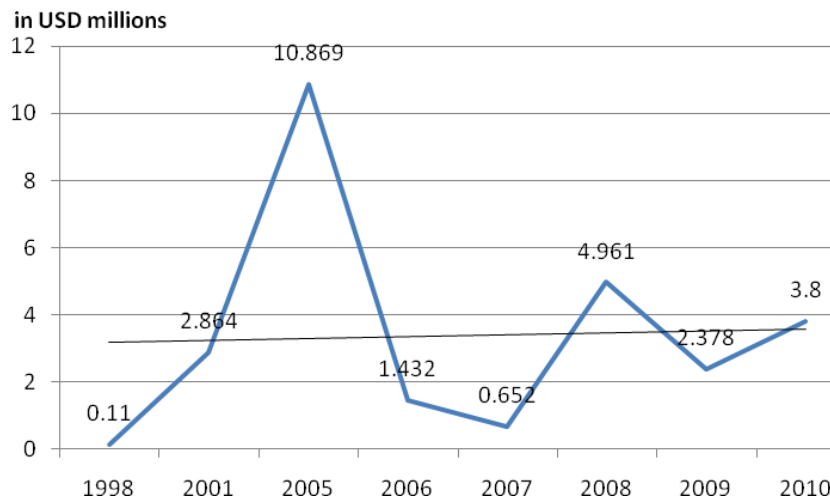
should be increased or decreased for any projects or programmes or terminated on the basis of their lack of relevance, ineffectiveness or inefficiency

- Whether new programme delivery mechanisms or modalities need to be developed or existing ones diminished
- Which relationships, both inside and outside UNESCO and the UN, need to be strengthened to meet the expected outcomes of SPO 5

In terms of funding and staffing

According to the UNESCO list of Disaster Preparedness and Mitigation projects compiled within the framework of this evaluation, the funds available and invested in disaster preparedness and mitigation have been quite variable over the past few years (see Figure 8). There was a larger investment in 2005, as a response to the 2004 tsunami in Asia, but overall there seems to be a trend towards a slight increase since the establishment of the MTS for 2008 – 2013, a trend that is generally explained by the spike engendered by occurring disasters and flash appeal processes set forth, as can be deduced from the graph below. In that respect, although there is more funding in disaster preparedness and mitigation, the sporadic nature of the available funds makes long-term planning challenging. This also highlights the strong connection in practice that can be found between flash appeals following a disaster (theoretically more related to post-disaster focus) and the availability of funding for disaster preparedness and mitigation which is actually largely aligned to these processes as well. This may militate in favor of more closely linking, within UNESCO, strategic planning for both pre and post disaster work in the future. Indeed, this is a point that has been raised on several occasions through the interview process for this evaluation. The distinction made within the organization between SPO 5 and SPO 14 was recurrently presented as essentially an intellectual construction rather than a reflection of how investment in pre and post disaster work are planned and put together in practice.

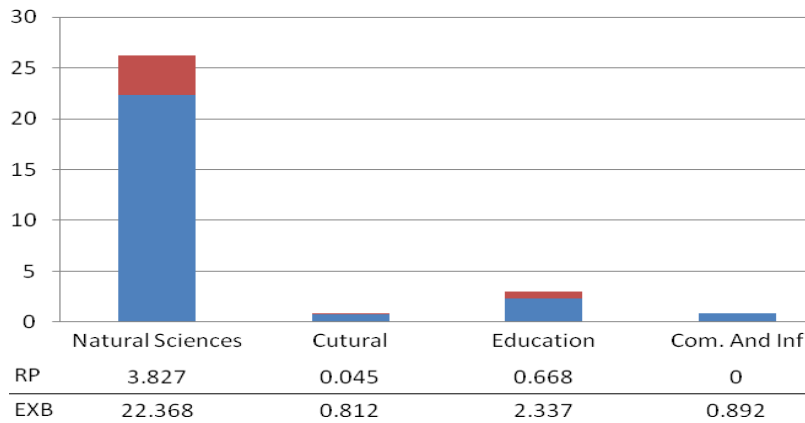
Figure 8: UNESCO Funds in Disaster Preparedness and Mitigation from 1998 to 2010



Source: UNESCO portfolio data provided to evaluation team, 2010.

In terms of how the funds are distributed within UNESCO, the data shows that the majority of the budget for SPO 5 activities comes from extra-budgetary funds (EXB), with 85% of the total budget, whilst 15% came from regular programme funds (RP). As presented in Figure 9 below, the natural sciences sector (including IOC work) and the education sector are the major recipients of the regular programme funds, as well as extra-budgetary funds.

Figure 9: Distribution of Funding Type by UNESCO Sector



Source: UNESCO SISTER Database

Some of the funds provided by UNESCO are limited to pilot projects and these projects are too small and their life too short to make sure the efforts have broader impacts, which in turn can limit UNESCO's ability to become a bigger player with regards to DRR advocacy.⁵⁴ The ability of officers to access extra-budgetary funds for their projects and programmes is therefore key to assuring the sustainability and success of UNESCO activities. UNESCO has not always been able to mobilize extra-budgetary funds to create leverage, therefore limiting the efficiency of some activities.⁵⁵

The evaluation has revealed that there is a dichotomy in regards to the availability of funds and staff in DRR between field offices and HQ. This fuels a perception by local partners of inefficiency arising from the work of UNESCO field offices. Partners have a general impression that UNESCO is more of a head quarter organization, while more funds should be allocated to the field to render its projects more efficient and effective.⁵⁶ This issue is of course not particular to UNESCO's work under SPO 5, but is more an organization-wide challenge. Conversely, the Disaster Reduction Section within the Natural Sciences Sector at HQ can only count on two dedicated staff focused on DRR activities with an internal budget of 100 000 USD, which also limits the activities that can be undertaken by HQ itself on this subject. Outside the science sector, there is no dedicated staff on DRR issues, nor are there specific programme funds allocated to such initiatives. As such, any sector that undertakes DRR activities does it through the use of its normal resources and staff, seriously restraining the ability to broaden the scope of this work.⁵⁷

Field visits reveal that a high staff turnover rate at the UNESCO country offices, all on short term contracts when it comes to DRR, poses challenges for its partners in the field. In addition, delays caused by the admin system for some projects were noted on a few occasions, in particular during the mission in Indonesia.⁵⁸ According to some key interviewees in the field, the main challenge institutionally relates to the Headquarter nature of UNESCO where generally 60% of the resources are concentrated, leaving little regular budget and human resources to be assigned to programs on the ground, including in DRR. This constraint is further exacerbated by the regional nature of the Jakarta office. To provide adequate regional coverage, adequate resources would also need to be assigned to staff time travelling to other countries, and to their travel expenses.⁵⁹

⁵⁴ Interviews in Indonesia

⁵⁵ Survey results and interviews in Jamaica

⁵⁶ Interviews in Indonesia and Jamaica

⁵⁷ Interviews with HQ

⁵⁸ Interviews in Indonesia

⁵⁹ Interviews in Indonesia and Jamaica.

The absence of regular budget for disaster preparedness and mitigation in Field Offices also limits the ability of UNESCO to invest in and test innovative approaches to DRR, especially in a context as large and diverse as the Asia Pacific region.⁶⁰ Interviews with partners in the field reveal that the limits on staff resources clearly constrain the ability of field offices to actively follow all relevant DRR platforms at the country level, let alone in other countries in a given region.⁶¹ For instance, at present, it is evident from discussions with other donors and partners that UNESCO's DRR staff in Jakarta is already overstretched in terms of providing adequate supervision for its activities and adequate representation to donor coordination forum. Clearly, if UNESCO believes in its involvement in DRR, it has to invest further programme resources. This is especially the case since the Jakarta office has recently started expanding its DRR activities to other countries in the region, demanding even more coverage from an already limited staff, which is, at the moment, funded almost exclusively from extra-budgetary contributions. On that last point, interviews revealed that typically, overhead in UNESCO extra-budgetary projects represent 13% of project budget.⁶² This 13% appears high in view of what is the standard rate practiced by UN organizations for overheads on project managed, which typically stands at 7%. Interviews at HQ reveal that efforts are underway to try to streamline this rate. This will be essential to keep UNESCO competitive, especially when it comes to the attracting extra-budgetary resources for its future DRR work. Part of the effort at this level will involve having a closer look at what is actually a project administration cost and what is not from an accounting perspective.

In terms of program delivery mechanisms and modalities

Field visits have revealed the general perception that UNESCO's investment in disaster preparedness and mitigation is scattered and ad hoc. In the past, there did not seem to be consistency with regard to the type of activities or the geographic areas that UNESCO wishes to cover, as a result, the organization has not really benefited from much visibility from its activities. In addition, this traditional approach has been deemed inefficient in regards to the resources allocated for the achievement of concrete results by key interviewees in the field. In order to be effective and efficient, UNESCO should put in place a strategy to avoid ad hoc mitigation measures and responses.

Over the past three and a half years, however, there have been substantial efforts at rationalizing the portfolio in some regional offices. In Indonesia, at the time, the portfolio consisted of a large number of small and scattered activities. To counter this problem, the Jakarta office has proposed a strategy composed of three main elements to rationalize delivery and management: 1) The development of the Indonesia Country Programme document covering the period 2008-2011 to help bring priorities in focus; 2) Ensuring a regional science focus, of which DRR is a part (along with Climate change, Hydrology and Ecological Sciences); 3) The development of 4 distinct but interrelated flagship programs, which include one programme on Disaster Preparedness.⁶³ The new focus has therefore been on building the strategic approach and the prioritization around larger programs in which a smaller number of stand alone activities are integrated as much as possible. This is also helping to deal with the admin burden put on a very limited staff. Larger projects in turn allow for the hiring of CTAs to assist in the management, supplementing the capacity of the Jakarta office.⁶⁴

In Jamaica UNESCO has had in the past a set of small initiatives with UWI and especially CEDERA (now CDEMA). These have rarely followed-up with new projects. Visibility therefore is weak and most actions have been seed funds allocated for research and workshops. Quite recently the Haiti earthquake has brought enhanced visibility with a need assessment conducted with expertise from the Jamaica UNESCO office. Although Haiti does not fall under the responsibility of the Jamaica cluster office, it was felt by partners that this tragic event might signal a new more active involvement in DRR in the cluster region under the Kingston's office mandate. The timeliness of funding is also key to ensure that projects and programmes are properly delivered. Interviews revealed that some projects have incurred funding

⁶⁰ Interviews in Indonesia.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Ibid.

delays, which resulted in a negative start to the projects, such as was the case of the project, School-based Disaster Preparedness Model for Aceh, which had to be conducted during a national holiday, with the inefficiencies this brought in terms of training attendance, etc.⁶⁵

The average project length varies quite extensively from one month to many years, and according to the project list, the projects under the regular programme are generally conducted over the span of two years. The project length has an important impact on the efficiency of a project or programme. Projects that are starting from scratch need time to build partnerships and networks to ensure that the implementation of the project is well received. In some cases, the project lengths do not seem adequate to ensure sustainability and impact.⁶⁶

It is clear from the field work carried out that the types of funding available also need to be increased and diversified in order to respond to the needs of UNESCO field offices. According to interviewees in the field, UNESCO DRR work, and its work on other emerging issues, would benefit from an access to flexible sources of funding, to allow the organization to innovate and invest those emerging sectors at the right time.⁶⁷ One option could be through partnerships. One example is through access to multilateral donor trust funds for disasters, where donors can pull their funds together. There might be a potential for UNESCO to administer some of those funds, and link under it its work on DRR, Climate Change and Environment, especially if an UNDAF window is set up.⁶⁸ Furthermore, some suggested that member states should also provide more funding for SPO 5.⁶⁹

In terms of management modalities, interviews in the field have revealed that the call for proposals process for projects has encountered some challenges, in regards to the time allocated to respond and the unit responsible within the UNESCO Country Offices to manage the process, which sometimes make administrative processes for contracts complex and lengthy, leading to delays in implementation. This was corroborated by international partners who have provided extra-budgetary funds to UNESCO to manage projects in DRR, or are involved in activities in parallel to UNESCO. In addition to delays, they have also pointed out to the limited human capacity of UNESCO, which in some cases has impeded its ability to deliver, such as on the Tsunami Early Warning System, where money had to be returned to the international partner in the end in Indonesia.⁷⁰

Finally, the 10% of budget allotted to travel for UNESCO projects is generally negatively viewed. Key interviewees have made it clear that given the nature of disaster preparedness and mitigation projects, the travel budget is not enough to reach the intended target groups. In the case of the IOC for instance, the evaluation has revealed that given the global nature of its activities, there is a clear need to increase the travel budget to reflect the realities and needs of the organization.

In terms of relationships

Given the nature of UNESCO's work in DRR, ensuring that relationships are properly maintained is key to promote the efficiency of a project or programme. In this case UNESCO has proven its ability to garner local partnerships with a multitude of local organizations and with the government.⁷¹ According to interviewees in the field, UNESCO must continue to work closely with local organizations to build their capacity in DRR. However, such involvement requires adequate supervision time and a focus on the institutional development processes of the partner organizations themselves, rather than only mainly on the project delivery. This is a challenge for UNESCO, given its limited capacity to accompany partners, when compared with other international partners in the field.⁷² However, in its other countries of work

⁶⁵ ISDR, School-based Disaster Preparedness Model for Aceh: Project Completion Report. 2009

⁶⁶ ISDR, Building Models for Disaster Preparedness: Project Completion Report. 2009

⁶⁷ Interviews in Indonesia

⁶⁸ Ibid.

⁶⁹ Survey

⁷⁰ Ibid.

⁷¹ ISDR, Building Models for Disaster Preparedness: Project Completion Report. 2009

⁷² Interviews in Indonesia

that has not been the case. For instance, in Jamaica, UNESCO is not currently actively pursuing partnerships with key organizations in the field of DRR.⁷³

The evaluation has revealed that UNESCO faces a challenge with regards to building its relationships with other organizations on DRR issues and clarifying its role and niche in that respect. This is clearly a reflection from the aforementioned issue of UNESCO's more scattered approach in the field of DRR. As such, there needs to be clearer sense of the added value of each player in the DRR realm. For instance, for the development and implementation of the Education For All (EFA) programme at the national and local level, there is a need to define clearer boundaries and roles between UNESCO and UNICEF, especially when it comes to their respective part on issues such as curriculum development, ministerial policy dialogue as well as field delivery.⁷⁴ It was interesting to note in that respect that while interviewing UNESCO and international partners separately in the field, they both felt they had the same comparative advantage and niche on these issues.

In line with this and within the framework of the One UN approach, it is clear that UNESCO will need to further strengthen its relationships with key UN partners if it is to have an efficient approach to achieving results on DRR with partners such as UNICEF, UNDP, Save the Children and UNISDR. UNESCO is sometimes a member of donor coordination groups on education or on DRR, which typically regroup all key players working on those issues in a given country. However, interviews in the field reveal there is significant potential to reinforce the representation at this level. Indeed, UNESCO is not always seen as a very active member of such coordination groups, although there is an expectation that it could be. Again, that lack of presence is attributed mostly to the limited (and mostly project-based) personnel UNESCO has on DRR at the country level to coordinate adequately (for comparison purposes, UNDP alone has 50 people working on DRR in its Jakarta Office, managing a number of multi-million dollar projects, including in community disaster management and in disaster risk reduction and education). UNESCO must step up its efforts to make sure its work is well articulated with that of other organizations, such as, for instance, the support to the local authorities in West Sumatra, also supported by other donors like GTZ.⁷⁵ That being said, collaboration with GTZ has already taken place on a number of issues in the past such as the joint work with LIPI on intro videos on: 1)Earthquakes, Tsunami and Hazards; 2)Tsunami Early warning Systems; 3)preparedness and mitigation; and 4)Standard Operational procedures.

IMPACT

The impact section aims to evaluate whether the projects and programmes implemented by UNESCO have had an impact. With respect to SPO 5, this relates in particular to the issue of whether or not projects and programmes have had influence on policies at a national level, and in terms of an increased level of preparedness of member states. The main questions outline in the ToRs that are pertinent to the impact criteria, are the following:

- Are there programmes that add little value and should be terminated?
- To what extent do the programmes that contribute to SPO 5 influence policies at the national level?
- What specifically are UNESCO's comparative advantages as they relate to SPO 5?

Given the type of activities supported by UNESCO, such as network-building, producing publications, providing DRR tools and plans, the reporting on impacts has been quite limited. However, although small, some impacts are worth noting. According to the different sources consulted within the framework of this evaluation, one of the key impacts from UNESCO's activities has been through its education

⁷³ Interviews in Jamaica

⁷⁴ UNDAF, 2006 - 2010

⁷⁵ Interviews in Indonesia

activities (in both the Science and education sectors), and its information and communication activities. Activities such as trainings and publications have reduced the stigma of certain disasters such as tsunamis and floods for local populations. This has altered the approach taken for preparedness and mitigation of such disasters which is a significant impact. Most of the examples of impacts that could be analysed within the framework of this evaluation came from the field visits conducted as part of this evaluation team. As little disaster preparedness and mitigation activities actually took place in Jamaica, little could be witnessed there in terms of impacts. A number of interesting examples could however be drawn from the field visit to Indonesia, where numerous UNESCO DRR activities have been on-going for sometime now. For instance, the training provided in the use of the PASTI community disaster preparedness tool has led, according to interviewees in the field, to the development of good relationships between villages, and an improved response to disasters.⁷⁶ This has also had an impact on vulnerable populations, as in Padang, where the creation of a SOP for a school has prepared the students and the teachers to properly react in case of a tsunami. They have also stated they are less panicked at the thought of such an event as they have clear directions to follow in the SOP and they have rehearsed it often during training in the school.⁷⁷

Some of the tools or protocols created within the context of UNESCO advisory interventions, projects, and programmes have been the basis for policies and have had (or may have in the case of the Caribbean) an impact on reducing the vulnerability of populations⁷⁸. Such is the case for the project with LIPI in Indonesia which has promoted tools at policy level to be used by interested actors. For example, the tools for Tsunami SOP in Padang 2006 will soon become a legal SOP for tsunami. In addition, the issue of school preparedness and the five parameters for assessment developed by LIPI are now integrated into the draft national policy.⁷⁹ UNESCO's work on developing a manual for flood mitigation to reduce the impacts of floods and the capacity building have also had some positive impacts; since the end of the project, one flood occurred in 2007, where less casualties were witnessed.⁸⁰ However, for the tools to have a real impact it must be tailored to the capacities of the local groups that are expected to implement it.

Such a concern is what led to the support from UNESCO to develop a second version of the community preparedness assessment tool in a simplified and more user friendly format, called PASTI. This second tool was developed working through HFI, a Jakarta-based civil society organization. The tool is still being used, after project end, by HFI in its activities. In terms of scope of awareness raising and community preparedness impacts, it is interesting to note that twenty-one sub-districts in West Java are now using it. HFI has also provided for training of trainers in Jakarta, Padang, etc. In fact, at least 75 trainers were formed by HFI on the tool after project end. HFI is now in discussion with UNDP which is interested in reprinting the tool for further dissemination in Indonesia. The training in the 21 sub-districts has focused on women as users of the tool. Through these trainers, awareness has been raised in some 40 villages, with an average population of about 2000 to 3000 people per village, for a total population reached of between 80 000 and 120 000 inhabitants. HFO Indonesia continues to this day its efforts, with an increased capacity from 2 full time staff before the UNESCO project, now standing at three full time staff, and looking for new

Box 4: Rehabilitation and Protection of Cultural Heritage in the Earthquake-affected areas in the Special Region of Yogyakarta and the Province of Central Java, Indonesia

UNESCO has greatly contributed to DRR in cultural heritage sites, such as in the case for the Prambanan Temples in Indonesia. Since the earthquake, all damaged temples have been reopened to the public. During 2008, both the Borobudur and Prambanan World Heritage properties were included in the list of National Vital Objects based on the Minister of Culture and Tourism Decree No. PM.34/HM.001/MKP/2008 on Securing National Vital Objects of Culture and Tourism

⁷⁶ Interviews in Indonesia

⁷⁷ Ibid.

⁷⁸ Interviews in Jamaica and Barbados (phone)

⁷⁹ Interviews in Indonesia

⁸⁰ Ibid.

opportunities to promote the PASTI assessment tool. The evaluation team was also informed that PASTI is now used in other countries as well. For instance, HFI has also introduced the tool in Yemen. There are also discussions to introduce the tool in Macedonia and, in another region of the country itself, in Bali. Discussions are also taking place between HFI and a Dutch relief NGO to review the PASTI kit to mainstream into it the climate change dimension.⁸¹

With respect to the TEWS, the work in establishing the facilities has been valuable in increasing the global number of sea level measuring stations that deliver data in real time. Since the TEWS have been put in place there has been better usage of existing observing networks i.e. the Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)-UNESCO agreement on the sharing of seismic observations.⁸² Most countries have made progress developing policies, assessing technological needs, and establishing coordination mechanisms at a national level for tsunami warning and mitigation. Local planning and preparedness activities are being carried out first in selected target areas, or cities and towns, rather than as comprehensive national programmes (see case study in Annex B). However, there is a need for clearer responsibilities for disaster preparedness at all levels (i.e. tsunami emergency plans, outreach programmes, educational curricula, community education in all countries) as a number of participating members have yet to develop tsunami emergency and evacuation plans or test response procedures for tsunamis or earthquakes. In addition, as already mentioned in an earlier section, there is a gap in translating the data collected in a more user friendly manner so it may be useful to local population in a timely manner. More education and local participation from partners and governments are needed to really have a significant impact on the vulnerable population.⁸³

UNESCO has also provided guidance and experts for some of its member states in regards to disaster preparedness and mitigation. For example, UNESCO was approached by the government of Libya to provide them with technical assistance in establishing a seismology station, which now houses a team of experts and is part of the larger network for information sharing.⁸⁴

Overall, the impact of UNESCO's work in DRR is still quite limited. There are indications that the work done by the IOC, in education (through the work of both the Science and Education sectors) and the culture sector has provided input on policy changes, however determining UNESCO comparative advantage based on an analysis of its impacts at this point remains difficult, as this provides a limited basis to conclude soundly and definitively on this topic. Suffice to say at this stage that UNESCO projects are generally of a small size, limiting the scope of their direct impacts and that the case studies done within the framework of this evaluation, support the view that UNESCO is moving towards achieving impacts, while recognizing that a number of intermediary steps are required after project end to see these impacts materialize. Such a conclusion militates in favor of a more programmatic approach to UNESCO DRR work in all sectors, not just at headquarters, but also in the countries and regions where it is active on this topic and has established momentum.

SUSTAINABILITY

The sustainability section aims to evaluate whether the projects and programmes implemented by UNESCO are sustainable, in terms of the support from local institutions and the extent of the benefits from the projects and programmes. In addition, the main question outline in the ToRs that is pertinent to the sustainability criteria, is the following:

- Which relationships, both inside and outside UNESCO and the UN, need to be strengthened to meet the expected outcomes of SPO 5

⁸¹ Interviews in Indonesia

⁸² Survey

⁸³ Interviews in Indonesia

⁸⁴ Interview with HQ

The evaluation has shown that the sustainability of the projects and programmes results is quite varied. In terms of the sustainability of the achieved expected outcome, *Tsunami early-warning systems established and operational in Africa, the South Pacific, the Mediterranean Sea, and the North-East Atlantic and the Caribbean*, the establishment of the TEWS by the IOC has been sustainable in regards to providing key technical equipment, technical staff, and training. This has reduced the risk of member states from tsunami and other ocean-related hazards (MLA expected result). In addition, the TEWS have increased the capacity of local experts in evaluating risk and transmitting valuable data, as such it has improved knowledge on tsunamis and knowledge sharing within countries.

In turn, UNESCO activities have achieved some key results aimed at achieving the SPO5 expected outcome, *Vulnerable and weakened communities prepared to cope with disaster through access and use of information and knowledge and to mitigate impact*, by increasing awareness of disasters in local communities, through school-based projects, and by ensuring that local level organizations are included in community-based projects as a means for sustainability.

The Community-based flood preparedness and mitigation project in Jakarta city sub-district Bidara Cina is another example of a project that has had significant involvement from some members of the community in disaster preparedness activities, such as the 'training and simulation on flood preparedness' organized by the City Government of East Jakarta or the 'International Youth Day' which sought to raise disaster awareness of the young generation. However, local involvement has not always been successful which was the case for the participants of the KOGAMI project where government, community, religious

Box 5: Rehabilitation of the Education System in Earthquake-affected Areas of Pakistan

The project on the Rehabilitation of the Education System in Pakistan has proven to have a high level of involvement from the local population which has ensured its success, and by the same token promoted its long term sustainability. The project has provided an ongoing contribution to a safer teaching and learning environment, and continues to provide a strengthened technical and vocational training system that focuses on standardized construction skills (see Annex D).

leader, private sectors (APINDO, Coca Cola Padang)⁸⁵ are still struggling to develop a basic SOP for tsunami preparedness as demand from local companies is still low.⁸⁶ Partnerships at the local level are valuable to ensure that activities are properly implemented, but also sustainable.

The tools and publications created within the context of DRR projects have been used to continue to provide information to other organizations, which provides a good indicator of continuation and sustainability of some project results. These tools and publications have raised awareness on disaster preparedness, improved preparedness, and provided an increase in knowledge which has reduced the risks from disasters through knowledge dissemination (MLA expected result). This was the case for the project in Indonesia with LIPI, which continued to replicate/reuse and upscale the use of the tools, in particular those dealing with the assessment of population preparedness, with its own regular budget.⁸⁷ LIPI was able to identify other users the

Red Cross, PMI, YTBI, BRR and University of Indonesia, as well as eight districts in coasts/sea situated in western Indonesia to continue the dissemination of information. The tool has even been disseminated to other countries, such as Cambodia and Vietnam and was the subject of a dissemination workshop. It was also presented at the IOC level, where it got attention of various members. There has thus already been replication in the use of the tool at the local level, and a real potential for replication elsewhere in the region.

Institutional sustainability in support of longer term and larger scale result achievement is quite dependent on external factors, such as funding, political will, and capacity. One of the issues that has arisen is that UNESCO projects are often co-funded with extra-budgetary funds. The sustainability of its operations in

⁸⁵ See also the appreciation from Coca Cola in their website; http://www.coca-colabottling.co.id/ina/ourbusiness/index.php?select_month=08&select_year=2009&id_sort=7&p_id=223&sm=8

⁸⁶ Ibid.

⁸⁷ Ibid.

support of longer term results and institutional support to UNESCO partners lie in the ability of UNESCO to replenish its funds once the funding cycle of the co-funder is over. That being said, a number of the institutions supported by UNESCO have been able to find new funders, For instance, the IOC has also been able to secure extra-budgetary funds provided by the governments of Australia, Belgium, Czech Republic, Finland, France, Germany, Israel, Italy, Japan, Norway, Spain, the United States of America as well as the International Strategy for Disaster Reduction (ISDR), the Permanent Commission for South East Pacific (CPPS) and the UN Economic and Social Commission for Asia Pacific (ESCAP). These partnerships and funding opportunities are vital to ensure that the TEWS continue to provide vital data information and that they are sustainable.⁸⁸ Ensuring that relationships with donors and local governments are maintained can provide impetus to keep projects moving and structures sustainable, in order to meet the expected outcomes of SPO 5.⁸⁹

On the other hand, the capacity of local governments has been an issue in ensuring the sustainability of project outcomes. This has been the case for some of the other activities such as the Pakistan education project, where although there is local involvement and support, the weak institutional capacity of the government hinders the achievement of project outcomes and the sustainability of those achievements.

As already mentioned, the projects and activities funded by UNESCO have most often been on a very small scale and a short duration, either workshops or small scale pilot or demo projects; as such the sustainability of the results is sometimes conditioned by project length, which must be adequate to nurture capacities. On the other hand, activities supported from HQ which are mainly networks appear to have been effective and sustainable in regards of the scale of the budget, such as the International Consortium on Landslides for which there have been continuous exchange in data and forum on the issue.⁹⁰ As such, the results from these networks can be viewed as a sustainable potential contribution to the achievement of the expected outcome. *Governments are advised and assisted in the design of policies mitigating disaster risks and impact.* A related example concerns the Natural Science project focused on Enhancing cooperative framework on disaster risk reduction through knowledge base, capacity building, education and awareness in a number of member states (see case study Annex A). Although completed, the cooperative mechanisms have continued through different international workshops, establishment of world centres of excellence on Landslide Risk Reduction for example as well as other conferences, i.e. July 2009 Turkey UNESCO-IPRED Workshop on “Make the Citizens a Part of the Solution” and 2nd session of IPRED. There was not enough available information from the documents reviewed to assess financial sustainability however it is likely that such a framework will depend on international donors via UNESCO and UN-ISDR as well as government funding of participating countries. The latter risks being lower since some governments in the three regions have a greater need of financial assistance.

In all these cases, a move to a more programmatic approach by UNESCO would be beneficial, as it offers the opportunity to build longer term partnership than the typical project length associated with UNESCO projects.

The sustainability of UNESCO supported results is also dependent on available human resources. This is relevant for the staff at Headquarters as well as the available staff in the field offices. As already mentioned, currently, UNESCO has two full-time dedicated staff to DRR at Headquarters, while there are no dedicated DRR staff in the field offices or within the other Sectors at Headquarters. The staff that take on DRR projects, do not necessarily have the mandate to do so on a regular basis, as such the projects with a DRR component are more on a sporadic basis rather than a continued effort to integrate DRR within their sector or projects. Designating staff members that are dedicated to UNESCO’s DRR activities, would ensure a long-term continued integration of DRR within each of UNESCO’s sector and its field offices, by providing an opportunity to proactively maintain partnerships within UNESCO on the issue of DRR and with local and international partners. Action on this issue has already been taken at the Jakarta Field Office, in collaboration with the IOC they have agreed to establish a Disaster Risk Reduction and Tsunami Information Unit in the next biennium to assure JTIC will be able to cater wider

⁸⁸ IOC UNESCO, Annual Report, 2008

⁸⁹ Interviews in Indonesia

⁹⁰ Interview with HQ

stakeholders of the member states of the Indian Ocean Tsunami Warning System as well as for UNESCO Jakarta Office to be able to implement DRR activities in the ASIA Pacific Region.⁹¹

Overall, the sustainability of results are varied and contingent on a variety of factors. Some have been able to continue and provide an impact. However, some projects are rather small and the evaluation team has not been in a position to retrieve any valuable information post-project to assess this sustainability concern in a conclusive manner. Overall though, for UNESCO, as it is for other donor-funded projects and programmes, the sustainability of project results remains a challenge as typically the key building blocks of sustainability (economic, social, political and ecological) are not comprehensively addressed in project designs to start with, nor are sustainability plans and exit strategies set clearly in those project documents.. In order for UNESCO to ensure sustainability of its results, key partnerships need to be nurtured with local and international partners within the countries of work. Such partnerships also need to be nurtured within UNESCO itself, between its sectors and with staff members in the field bureaus that work on disaster mitigation and preparedness issues. This is a must to strengthen UNESCO's visibility and approach in the long-term.

⁹¹ IOC UNESCO, Jakarta Tsunami Information Center, Final Report. 2009

CONCLUSION

Overall, UNESCO's activities in mitigation and preparedness are *relevant* to the expected outcomes of SPO 5, as well as the expected results to MLA 3 and the HFA priorities and globally a reflection of international DRR concerns. However, while UNESCO's activities have shown relevance in the response to the 2004 tsunami with a majority of the work in Asia-Pacific, this has been at the expense of other geographic areas, most notably Africa (a MTS priority) and Latin America and the Caribbean which have had very limited visibility from UNESCO. There has also been a lack of gender mainstreaming in DRR activities, which is an MTS priority. UNESCO has clearly demonstrated its comparative advantage and its relevance in the establishment of the tsunami early warning systems and its work in the Education Sector is held in high regard too. However, given its unique role in maintaining world heritage sites, more work in DRR would provide UNESCO with a unique opportunity to mainstream DRR within the Culture Sector. The potential also exists to further the use of networks, approaches and technologies developed and promoted by the communication and information sector in disaster preparedness and mitigation. With respect to the intersectoral platforms, UNESCO still has work to do to clearly link them with its activities; such mainstreaming would greatly enhance the relevance of UNESCO's activities at a global scale.

With respect to *result achievement*, the evaluation team concludes that generally, UNESCO's Disaster preparedness and mitigation work has been *effective* in the field by raising awareness, increasing the accessibility of information regarding hazards, thus decreasing vulnerability of communities. It has also been effective in providing platforms for data exchange through building networks with experts and hosting international consortiums which can contribute to its member states. However, given the involvement and expressed interest of all sectors in disaster preparedness and mitigation, UNESCO would need to further increase its capacity to foster coordination between its various Sectors to raise this effectiveness.

Although UNESCO has shown some significant results achieved it faces challenges *in terms of the efficiency* with which it can deliver these results. Issues that have arisen relate for instance to the challenges in terms of timely project delivery and complex administrative modalities, adequate coordination with partners and insertion of its interventions into the broader DRR community at the country level. The lack of human resources and funding opportunities or access to flexible funding modalities for DRR activities in the field was noted as well as the need to move towards more programmatic approaches to DRR to face these challenges.

Given the relative novelty of UNESCO's disaster mitigation and preparedness activities, the *impact* of UNESCO's work in DRR is still quite limited. More time is required to see such impact materialize. There are indications that the work done by the IOC, in education (through both the Science and the Education Sectors) as well as in the Culture Sector has provided input on policy changes, however determining UNESCO comparative advantage based on an analysis of its impacts at this point remains difficult, as this provides a limited basis to conclude soundly and definitively on this topic. This is also amplified by UNESCO's lack of visibility from its activities, given that some key stakeholders in DRR within the Caribbean region and in Indonesia were not aware of UNESCO's work in DRR. The question as to whether or not UNESCO should streamline the number of sectors it works through in DRR remains open for discussion, partly because DRR is deemed to be an intersectoral issue by its very nature.

UNESCO projects are generally small, limiting the scope of their direct impacts. However, evidence suggests that UNESCO is moving towards achieving impacts, while a number of intermediary steps are required after project end to see these impacts materialize. Such a conclusion also militates in favor of a more programmatic approach to UNESCO DRR work in all sectors, not just at headquarters, but also in the countries and regions where it is active on this topic and has established momentum.

To conclude, on the sustainability of the achieved results, it is quite varied and contingent on a variety of factors. Some of those achievements have lived on, in particular through increased institutional capacity of partners and through replication, and led down the road to policy impacts for instance. However, some

projects are rather small and the evaluation team has not been in a position to retrieve relevant information post-project to systematically assess this sustainability concern. The sustainability of UNESCO results is dependent on the organization building and nurturing key partnerships with local and international partners within the countries it works in. Such partnerships also need to be nurtured within UNESCO itself, between its Sectors and with staff members in the field offices that work on disaster mitigation and preparedness issues. This will be instrumental in strengthening UNESCO's visibility and approach in the long term.

LESSONS LEARNED

Below are some of the key lessons learned that can be derived from the analysis provided above, as part of this evaluation process.

- Intersectoral platforms can be an effective means for mainstreaming, if adequately resourced and profiled within the organization with a budget to conduct pilot activities, allotted time for staff to participate, and senior management participation to ensure commitment and visibility within the organization.
- UNESCO must continue to build on its acquired comparative advantage with respect to issues such as the establishment of tsunami early warning systems, the promotion of scientific study of natural hazards, development of curricula for the education sector, and mainstreaming DRR in cultural heritage.
- High dependency on short-term extra-budgetary resources can limit the ability of UNESCO to efficiently deliver on the ground and to provide adequate project supervision, timely project administration, and adequate accompaniment and coordination with local, regional and international partners.
- This in turn, can negatively on the visibility, perception, and ability of an organization to innovate and occupy a niche that could be seen as a natural fit, leaving a void that can be filled by other organizations with more readily available resources. Efficiently addressing DRR requires a clear programme priority framework that may help focus the use of limited resources
- While technologically advanced systems have a key role to play in tsunami early warning systems, they must be seen as complementary to community awareness raising, which is equally important, as is the promotion of indigenous knowledge as a support to decision making.
- An organization such as UNESCO, focussed on science, education and culture, which are linked to the technical stakeholders active in these fields, can only claim long term and indirect contributions to policy change through its focus on building the capacity of local and national champions.
- In an organization such as UNESCO, the sustainability of results is contingent on staff members' personal commitment and ability to secure extra-budgetary funding to continue the work. As such, partnerships with donors and governments are crucial elements to ensuring the sustainability of the project and programme achievements. Building such partnerships itself requires an important time investment on the part of staff.
- In an organization like UNESCO, the lack of human resources dedicated to DRR can have a real impact on the sustainability of results, but also on the mainstreaming of DRR concerns within relevant UNESCO activities. In addition, adequate time and resources (including travel budget) must be allotted to ensure there is adequate follow-up in the field.

- An adequate focus on nurturing capacity in local partners is key to ensuring replication of the pilot results achieved through UNESCO support.
- Impacts require time to materialize and their assessment is therefore best performed a few years after project end. Their achievement is generally based on nurturing the conditions for intermediate states to evolve out of project outcomes. An organization that tends to have small and short term technical assistance and knowledge sharing interventions should be realistic about the level and scope of the impacts it can achieve at the national, regional or international level.
- A key component to ensuring the effectiveness of the development of DRR data collection tools at a community level is establishing a common DRR approach and by using appropriate terminology understood by all. This is especially valuable in terms of producing and disseminating training manuals. In the case of one project, the ISDR disaster terminology was used to assist in achieving a DRR framework.

RECOMMENDATIONS

In light of analysis and findings provided in this report, the evaluation team makes the following recommendations:

- Taking into account the increasing vulnerability of Member States to natural hazards, UNESCO should consider consolidating and supporting further resources it devotes for its contribution to disaster mitigation and preparedness.
- UNESCO should consider defining links between its work in DRR, and contribution to SPO 5, with certain intersectoral platforms (SIDS, climate change and Sustainable education in particular) with the provision of adequate resources to materialize these links by the promotion of demo/pilot activities, in addition to using them as a mechanism for information exchange and coordination involving senior management. This may go a long way towards further mainstreaming the issues being promoted, especially when it comes to gender and adaptation to climate change. With respect to this last issue, UNESCO would gain from more closely linking disaster preparedness and adaptation concerns, while recognizing that DRR is of course broader than climate change. This might also bring in focus the particular DRR challenges that Africa, a priority region for UNESCO, is also facing with respect to disaster preparedness and mitigation. When promoting intersectorality, UNESCO should also formalize and strengthen its coordination mechanism on DRR. Such a coordination function should be promoted at a decision-making level within UNESCO that would ensure the adequate commitment and participation of all sectors concerned in the process, above turf battles.
- Within the spirit of strengthening intersectoral collaboration at a decentralized level, special care should be taken, by the platform leaders, to systematically develop the reach of the relevant intersectoral platforms at the regional level, to ensure their experience is fed and connected to on-the-ground experiences.
- On gender equality, beyond general consideration, special efforts should be made to ensure that gender-transformative project and programme specific results and indicators of performance find their ways into DRR project/programme logical frameworks that go for approval. Reporting should be done on those performance indicators during project implementation by those in charge of project supervision. This should help bring into focus this dimension in the DRR work. This gender dimension, along with other critical issues, could be the subject of a review process by the intersectoral coordination mechanism on DRR, to ensure that DRR concerns are integrated upstream, not just in the projects and programs, but also in the future strategic thinking of UNESCO on DRR. In that respect, adequate background information on the relationship between DRR and gender should be made available to project proponents by

UNESCO. UNESCO gender equality specialists, including Gender Focal Points in both Headquarters and Field Offices, should be involved in this process.

- If it is serious about efficiently addressing disaster preparedness and mitigation, UNESCO must devote focused program resources to that task in selected countries/regions, while not losing sight of its focus on upstream work. In that respect, it should focus its limited resources on those countries (rather than a region as whole) where it has already developed extensive expertise and a track record. Its focus should remain on natural disasters and not be expanded to other types of disasters given the limited resources available. UNESCO must have an ambition commensurate with its means in that respect.
- With a view to nourish its mandate and work on upstream issues, some of those resources should be devoted to testing and promoting innovative pilot actions on the ground, while ensuring adequate capacity of the field offices to manage and supervise such pilot projects in a timely fashion. Such resources could go a long way in proving to UNESCO's donors and national partners it can deliver the goods, on time and within budget, paving the way towards further leveraging of larger and longer-term extra-budgetary resources for work in its developed DRR niches, and in accordance with the focused agreed to with its ISDR partners. Dedicated staff to UNESCO's DRR activities, both at HQ and on the ground in the countries where UNESCO already has a track record such as Indonesia, can also provide an opportunity to maintain and build further relationships at the local, national, and international levels to support UNESCO action in disaster preparedness and mitigation.
- UNESCO must put an adequate focus and commitment in its DRR work to supporting and accompanying capacity development processes with its local and national partners in disaster preparedness and mitigation and help ensure the sustainability of its achievements in this way. As a first operational step in this process, UNESCO should take stocks of international best practices in capacity development and develop a roadmap for its own officers on the key aspects to be taken on-board in projects and programmes to ensure that such capacities are adequately catered to and nurtured. Such a roadmap could be developed within the framework of the strengthened DRR coordination mechanism referred to in the first recommendation above.
- UNESCO as a whole as well as its regional offices should be encouraged to move to a more programmatic approach. This would lengthen the duration of their strategic interventions and provide them with the required flexibility in terms of mutually reinforcing interventions on a given issue at the global level and on the ground. It would also act as a means to nurture partnerships with international and local partners working in DRR, and ensuring inter-sectoral coordination. Such partnerships will be key in ensuring the scaling up and replication of the pilot approaches and methodologies developed with UNESCO support. The new biennium programme and medium term strategy should be an opportunity to structure and promote such a programmatic approach on DRR within UNESCO as a whole (from the global to the local level). In that respect, the strengthened intersectoral coordination mechanism on DRR referred to above could be the platform through which this programmatic approach is shaped in the next 12 months. As part of this process, two issues that should be tackled within that discussion are: a) the a-propos of keeping the separation between SPO 5 and SPO 14 within UNESCO, given that they are different stages of the same continuum, recognizing that, while SPO 5 deals essentially with natural hazards, the scope of SPO 14 goes beyond "natural" disasters to cover responses to conflicts and other crisis situations as well; and, b) the need to substantially simplify the UNESCO intervention logic in DRR, which at present, is constituted a varying levels of results, across SPOs, MLAs and IPs, making it extremely diffused and combersome. This could be a first step towards steamlining.
- The IOC would benefit from stronger partnerships with national and local partners, building in particular on the experience and track record of the education sector in DRR at the community

level, in order to transmit their data in a more user friendly way to benefit vulnerable populations, especially women.

- In order to avoid any duplication of activities in the field, especially when it comes to training, education and awareness raising activities, UNESCO should assess what other organizations are doing prior to undertaking its activities, and ensure that its projects and programmes are complementary and provide synergies with other organizations in the field, like what has been done by the IHP within the IFI programme. Here again, the intersectoral coordination mechanism on DRR has a role to play.
- While its global flagship programmes already get their fair share of publicity, UNESCO should work on ensuring its work on the ground on demo projects also gets adequate visibility. This is a critical element in ensuring the sustainability of the organization's work on DRR globally and its uptake by others. In that respect, efforts should be made to develop simple promotional material on some of the successful pilots supported by UNESCO on the ground in its 5 sectors of interventions. While this should be done by the respective sectors in coordination with the regional offices, the output from this process should be facilitated by the UNESCO DRR coordination mechanism. This promotional material should then be the subject of a mail-out campaign at the global and regional level, targeting UNESCO's DRR partners, making use of the information offices of UNESCO and their expertise.

ANNEX A – Natural Science Case Study

Title: Enhancing cooperative framework on disaster risk reduction through knowledge base, capacity building, education and awareness in a number of member states.

Duration: January 2006- December 2007

Executing Agency: UNESCO

Local Partner(s): various country governments and educational institutes

Budget: US \$ 0.302 million

Project/Programme Goal: To enhance a cooperative framework on disaster risk reduction through knowledge base, capacity building, education and awareness in a number of member states.

This project focused on improving the cooperating mechanisms between various member states to increase their level of education, capacity building and awareness regarding disaster risk reduction. It was directly relevant to SPO 5 Outcomes B,C, MLA 3 Expected Result 2, IP 2 and targeted a growing need to enhance DRR capacities. It targeted both the professional scientific community and policy and government leaders, as well as the indirect beneficiaries (the communities directly affected by disaster hazards). There was not enough information to assess the efficiency of the project. Regarding its sustainability, although completed, the cooperative mechanisms have continued through different international workshops, establishment of world centres of excellence on Landslide Risk Reduction for example as well as other conferences, i.e. July 2009 Turkey UNESCO-IPRED Workshop on “Make the Citizens a Part of the Solution” and 2nd session of IPRED. There was not enough available information from the documents reviewed to assess financial sustainability however it is likely that such a framework will depend on international donors via UNESCO and UN-ISDR as well as government funding of participating countries. The latter risks being lower since some governments in the three regions have a greater need of financial assistance.

Results

- Significant headway towards enhancing cooperative mechanisms for earthquake risk reduction in both the Mediterranean and South Asia regions such as via international and regional workshops such as the 24th RELEMR International Workshop on Seismicity and Earthquake Engineering in the Extended Mediterranean Region.
- The promotion of the integration of disaster reduction knowledge into public awareness programmes was also enhanced such as via the 2006-2007 UN-ISDR World Campaign for Disaster Reduction Education.
- Additionally made steps towards increasing the capacities of specialists in disaster reduction such as through the 2007 kick off of the International Platform for Reducing Earthquake Disasters (IPRED.)

Lessons learned:

- Various regions develop their cooperative mechanisms at differing rates. The project thus identified the need for an earthquake risk reduction initiative in the Balkan Region.

Sources Reviewed:

UNESCO Report “Enhancing cooperative framework on disaster risk reduction through knowledge base, capacity building, education and awareness in a number of member states”. Roubhan Badaoui
“2006 Tokyo Action Plan” Strengthening Research and Learning on Landslides and Related Earth System Disasters for Global Risk Preparedness.

Memorandum of Understanding between UNESCO and The Disaster Prevention Research Institute, Kyoto University, Japan
Report of the First World Landslide Forum held on 18-21 November 2008 supported by the Activity Contract No. 4500048734

**Additional Sources used for this Case Study:*

<http://www.unesco-ipred.org/>

2009 International Workshop on Earthquake Risk Reduction in the Northeast Asian Region

[http://portal.unesco.org/science/en/ev.php-](http://portal.unesco.org/science/en/ev.php-URL_ID=8013&URL_DO=DO_PRINTPAGE&URL_SECTION=201.html)

[URL_ID=8013&URL_DO=DO_PRINTPAGE&URL_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=8013&URL_DO=DO_PRINTPAGE&URL_SECTION=201.html)

June 2006: Education for Natural Disaster Preparedness in Asia-Pacific in the context of ESD. June 2006 workshop in Bangkok <http://www.unescobkk.org/education/esd/upcoming-past-events/past-events/bangkok-workshop-disaster-preparedness-06/>

IPRED Workshop 2009 [http://portal.unesco.org/science/en/ev.php-](http://portal.unesco.org/science/en/ev.php-URL_ID=7719&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL_ID=7719&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=7719&URL_DO=DO_TOPIC&URL_SECTION=201.html)

RELEMR [http://portal.unesco.org/science/en/ev.php-](http://portal.unesco.org/science/en/ev.php-URL_ID=6072&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL_ID=6072&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=6072&URL_DO=DO_TOPIC&URL_SECTION=201.html)

14th World Conference on Earthquake Engineering

[http://portal.unesco.org/science/en/ev.php-](http://portal.unesco.org/science/en/ev.php-URL_ID=6855&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL_ID=6855&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=6855&URL_DO=DO_TOPIC&URL_SECTION=201.html)

THEORY OF CHANGE

With a scope as broad as the one in this project, it is more challenging to illustrate what the potential intermediary stages could look like due to the fact that many factors are involved in many different countries. Additionally the project did not specify how many cooperative mechanisms it was aiming to begin. However, it is clear that from the workshops and conferences already held, that a Cooperative framework on Disaster Risk Reduction through knowledge base, capacity building, education and awareness in a number of member states has begun and appears to be strengthening. In order to move from the project's outcomes to a truly enhanced framework, key **impact drivers** could include:

- National governments utilize the knowledge gained and expertise they acquire via the cooperative mechanisms to then apply them to their own national disaster risk reduction plans efficiently and effectively.
- Building on synergies with other organizations that are working on Disaster Risk Reduction in the region, or integrating educational material into other types of projects (i.e. education, health)
- Integrating knowledge sharing at the community level in order to foster community based Disaster Risk Reduction and to increase the empowerment of those directly affected by such disasters.

Assumptions include:

- Countries in the three regions remain committed to knowledge-sharing
- International donor funding continues

THEORY OF CHANGE ANALYSIS DIAGRAMME

Outcomes

Intermediary Stages

Impact/Project Goal

Cooperative mechanisms for earthquake risk reduction in the Mediterranean Region, in Balkan Region, in the South Asia Region

Capacities of specialists in disaster reduction strengthened, regional and national networks on knowledge, innovation and education for disaster reduction strengthened and operational.

Promote integration of disaster reduction knowledge into educational and public awareness programmes.

- Impact Drivers:
- National governments utilize the knowledge gained and expertise they acquire via the cooperative mechanisms to then apply them to their own national disaster risk reduction plans efficiently and effectively.
 - Building on synergies with other organizations that are working on Disaster Risk Reduction in the region, or integrating educational material into other types of projects (i.e. education, health)
 - Integrating knowledge sharing at the community level in order to foster community based Disaster Risk Reduction and to increase the empowerment of those directly affected by such disasters.

All 3 regions have earthquake risk reduction cooperative mechanisms and various countries' own disaster risk preparedness is increased as a result of the cooperative mechanisms and increased capacities of their specialists.

To enhance cooperative framework on disaster risk reduction through knowledge base, capacity building education and awareness in a number of member states

- Assumptions:
- Countries in the three regions remain committed to knowledge-sharing
 - International donor funding continues

Contributes to SPO 5 outcomes B,C; MLA 3 Expected Result, 2, IP 2.

ANNEX B – IOC Case Study

Title: Towards the Development of An Indian Ocean TWS

Duration: April 2005- December 2005

Executing Agency: IOC of UNESCO in partnership with UN-ISDR, WMO

Local Partner(s): Member State governments: *Australia*, Bangladesh, Comoros, Djibouti, East Timor, France (*La Reunion*), India, Indonesia, Islamic Republic of Iran, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Myanmar, Oman, Pakistan, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, United Arab Emirates, *United Kingdom (British Indian Ocean Territory-Chagos Archipelago)*, Yemen.

Italics indicate that these countries are not considered to require funds for the project.

Budget: US \$ 3.526 million

Project/Programme Goal: To provide an overall integrated framework for strengthening early warning systems in the Indian Ocean region, primarily for tsunamis, but also recognizing the context of multiple hazards, risk management and risk reduction.

This project directly focused on the national priorities of the targeted countries and the needs of their population vis-à-vis the lack of an integrated framework for tsunami warning in the Indian Ocean and their general lack of preparedness when a tsunami warning is issued. It reflects the consensus of the special ASEAN leader's meeting held in Jakarta on 6 January 2005 which called for the establishment of a regional tsunami early warning system for the Indian Ocean and Southeast Asia region. In this respect it was in direct alignment with SPO5 outcome A and MLA 3 Expected Result 1 and IP 2 as well as the HFA Priorities, in particular 2, 3 and 5. The project builds on experience and knowledge accumulated over the last 40 years of tsunami warning in the Pacific Ocean with IOC including incorporating indigenous knowledge regarding tsunamis and synergies with other agencies and institutions such as the Pacific Tsunami Warning Center (PTWC) , the Japanese National Center, European Space Agency's Meteostat, Japan Meteorological Agency), UN International Strategy for Disaster Reduction (ISDR) and. The main source of funding appears to have been so far from the IOC/UNESCO via donor countries such as and based on the timely completion of activities, it can be estimated that they were made efficiently To remain sustainable the project will likely need continued donor funding. There is a need for Member states to consider long-term financial and in-kind support to ensure sustainability of sea-level instrumentation networks and their maintenance.

Results

- Regional consensus achieved on the nature of a tsunami early warning system and the design of its core elements (via two major intergovernmental coordination meetings to address the governance of the IOTWS)
- Enhanced capacities for action and planning by public authorities in the countries affected (through national assessment missions (enhanced awareness of policy makers, i.e. India has now included disaster awareness and risk reduction in its school curricula SPO5 outcome 3)
- Support of national tsunami awareness increased (i.e. Distribution of pamphlets and educational material, Tsunami Teacher)
- Improved public confidence and security (i.e. via the Global Sea Level Observing System (GLOSS); by April 1, 2005, an interim warning system was in place and operating; 26 out of 27 nations have established official Tsunami Warning Focal Points)

- Coordination and informed implementation of tsunami warning systems in the region has begun (i.e. through training courses and workshops)

Lessons learned:

- Key to enhancing Disaster Risk Preparedness is education and awareness and the establishment of emergency plans for the local population. There is a need for clearer responsibilities for disaster preparedness (i.e. tsunami emergency plans, outreach programmes, educational curricula, community education in all countries) Although work has already progressed in reprinting and producing pamphlets etc. few participating countries have developed tsunami emergency and evacuation plans or tested response procedures for tsunamis or earthquakes. Although scientific monitoring capacities of tsunamis may be improved, it is worthless if a population does not know what to do when such information is relayed to them. Therefore both efforts need to go hand in hand, especially at the local level.
- It became clear that not all member states share the same level of coordination and information dissemination capacity, something which needs to be enhanced in order to improve the IOTWS

Sources Reviewed:

Flash Appeal Final Report Towards the Development of An Indian Ocean Tsunami Warning And Mitigation System within a Global Framework (ca 2006/2007)

The International Training-Workshop on the Numerical Modeling of Tsunami for Developing Countries in Southeast Asia, the Pacific, and the Indian Ocean Philippine Institute of Volcanology, 7-19 November 2005

Project Document: Towards the Development of an Indian Ocean Tsunami Warning and Mitigation System within a Global Framework-Phase 1 February-July 2005

MEMORANDUM OF UNDERSTANDING United Nations Inter-Agency secretariat of the International Strategy for Disaster Reduction (UN/ISDR) & UNESCO Intergovernmental Oceanographic Commission (UNESCO/IOC)

Project “Towards the Development of an Indian Ocean Tsunami Warning and Mitigation System within a Global Framework” PROGRESS REPORT, March 6, 2006

Intergovernmental Oceanographic Commission Workshop Report No. 196

Intergovernmental Oceanographic Commission Workshop Report No. 198

**Additional Sources Used for this case study:*

Intergovernmental Oceanographic Commission (of UNESCO) Fifth Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System. Putrajaya, Malaysia 8-10 April 2008

THEORY OF CHANGE

Following the logic of Theory of Change for the development of an IOTWS, the project has already overcome many challenges such as lack of scientific equipment, educational material, regional cohesion and information sharing. Although work has begun on

However, **barriers** (which could be transformed into impact drivers) that still appear to remain include:

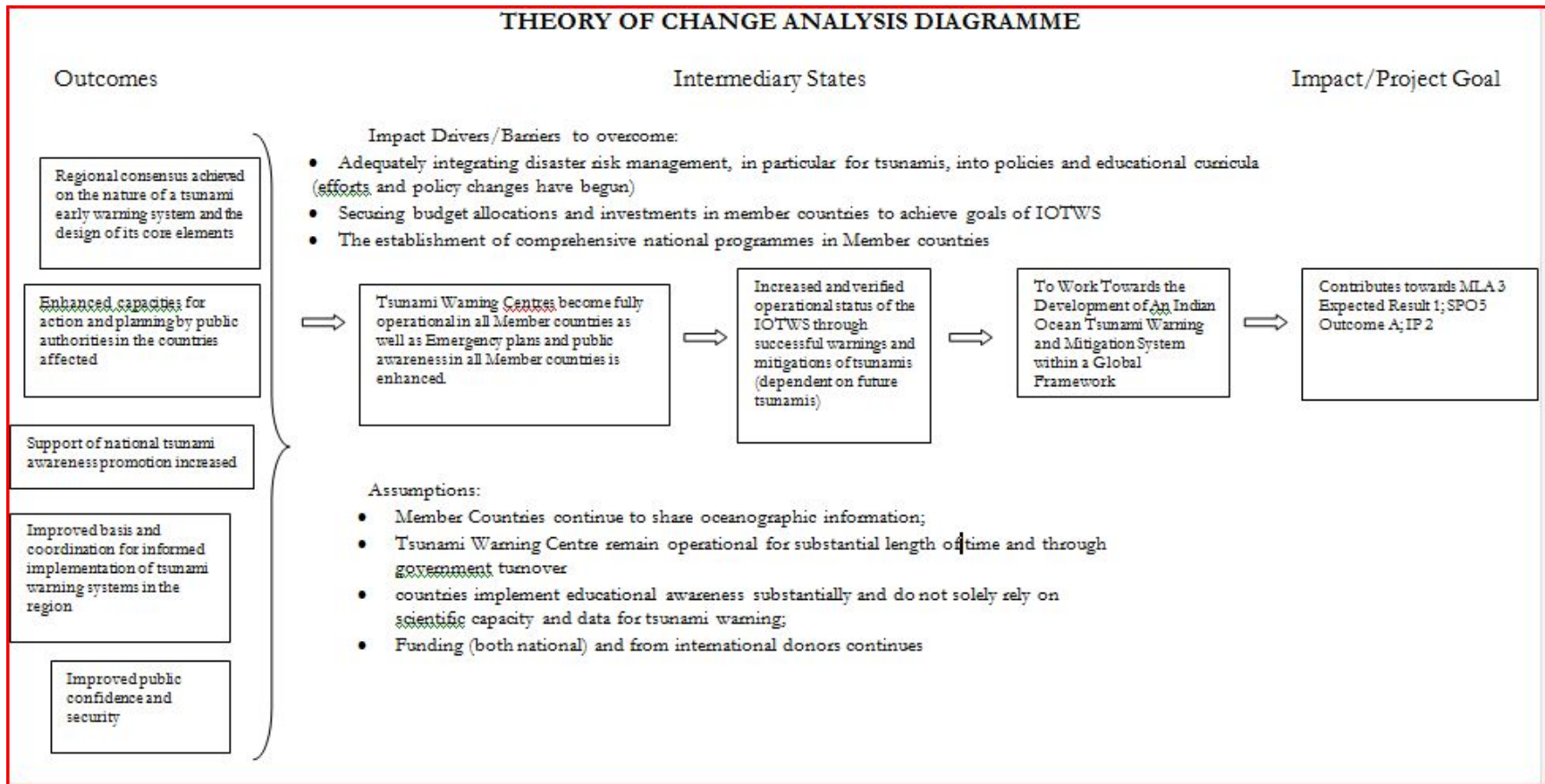
- Adequately integrating disaster risk management, in particular for tsunamis into policies and educational curricula (efforts and policy changes have begun)
- Securing budget allocations and investments in member countries to achieve goals of IOTWS
- The establishment of comprehensive national programmes in Member countries

The underlying assumptions on which this TOC is based include:

- Member Countries continue to share oceanographic information;
- Tsunami Warning Centre remain operational for substantial length of time and through government turnover
- countries implement educational awareness substantially and do not solely rely on scientific capacity and data for tsunami warning;
- Funding (both national) and from international donors continues

The project appears to have made substantial steps forward to upgrading the scientific monitoring and networks needed for warnings as well as assisting in propagating educational materials and training for tsunami awareness-raising. Although barriers still exist, an IOTWS is well on its way to its optimal potential.

THEORY OF CHANGE ANALYSIS DIAGRAMME



ANNEX C – Culture Case Study

Title: Rehabilitation and Protection of Cultural Heritage in the Earthquake-affected areas in the Special Region of Yogyakarta and the Province of Central Java, Indonesia

Duration: May 2006- July 2008

Executing Agency: World Heritage Centre (WHC) of UNESCO, in close partnership with UNESCO Jakarta, the International Council on Monuments and Sites (ICOMOS) and the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM)

Local Partner(s): Indonesian Ministry of Culture and Tourism, Gadjah Mada University, Regional Culture Office, Borobudur Heritage Conservation Office, Centre for Conservation of Archaeological Heritage.

Budget: US \$ 75,000 for Emergency Assistance, US \$ 250,000 from UNESCO Extra-budgetary Funds (Saudi Arabia Funds-in-Trust for Emergency Rehabilitation) and US \$ 15,000 as international assistance to support the organization of a UNESCO Monitoring Mission to Sangiran World Heritage Site.

Project/Programme Goal: To rehabilitate and protect the World Heritage Property of Prambanan Temple Compound after damages caused by the earthquake of the 27th May 2006

This project's primary focus was to rehabilitate and protect the World Heritage Property of Prambanan Temple Compound after damages caused by the earthquake of the 27th May 2006. In this sense it was aligned with SPO5 outcomes B and C, however funds provided for Emergency Assistance were more aligned with SPO14 because they aimed to implement post-earthquake measures for safeguarding the World Heritage property of Prambanan Temple. This project was also relevant to the World Heritage value of this site which has been inscribed on the World Heritage List in 1991. In view of its sustainability, funds are needed to continue efforts to repair the remaining earthquake damage, including the restoration of the Siwa Temple, as in the Action Plan defined at the International Expert Meeting of March 2007. Regarding efficiency, there was no information in the documentation available to determine whether the disbursements from the Saudi Arabia Funds-in-Trust, and Emergency Assistance were timely. The international assistance to support the organization of a UNESCO Monitoring Mission to Sangiran World Heritage Site appears to have been spent. According to the "State of Conservation of the World Heritage Properties in the Asia-Pacific Region – Prambanan Temple Compounds", conservation and management of the WH Property is financed entirely by the Indonesian State, but funding is considered insufficient. This would be true for disaster mitigation or preparedness too. As a consequence of the Minister of Culture and Tourism Decree on Securing National Vital Objects of Culture and Tourism, the Ministry of Culture and Tourism will work with the Indonesian Police Force to secure the Prambanan Temple Compounds.

Results

- All damaged temples have been reopened to the public which had been closed after the earthquake.
- During 2008, both the Borobudur and Prambanan World Heritage properties were included in the list of National Vital Objects based on the Minister of Culture and Tourism Decree No. PM.34/HM.001/MKP/2008 on Securing National Vital Objects of Culture and Tourism.

Lessons Learned

- The process of restoration of a damaged site is an opportune time to promote and enhance local capacities in disaster preparedness (since this project was a mix of SPO 5 AND 14). Local community involvement in needs assessments, planning and implementation of emergency assistance programs is crucial to their effective implementation

Sources Reviewed:

Emergency Assistance Approved Letter

Saudi Arabia Project Closure

UNESCO expert mission to Sangiran WH Site letter

Croci Report of 7 June 2006

PRESS RELEASE IEM 280207

WH Action Plan Final

whc06-30com-7b.addE

whc06-30com-7bE

whc06-30com-19e

whc07-31com-24e

whc09-33com-7Be

State of Conservation of the World Heritage Properties in the Asia-Pacific Region – Prambanan Temple Compounds.

THEORY OF CHANGE

There is very little available information about outputs and outcomes achieved vis-à-vis expected outputs and outcomes. However, according to the WHC decision reports, it seems that the local risks of unstable blocks and falling fragments etc., as obvious dangers to people and workers, as well as the risk of collapse for certain structures appear to have been eliminated. Additionally, most of the programs in the Action Plan have been executed.

This being said, the outcomes appear to likely be almost completely achieved, and by following the Theory of Change logic, some **impact drivers** should be taken into consideration in order to move from these three outcomes to the goal of rehabilitation and protection of the WH Property of Prambanan Temple Compound after damages caused by the earthquake of the 27th May 2006. They include:

- Adequately continuing efforts made towards the rehabilitation of the property to make good the remaining earthquake damage, including the restoration of the Siwa Temple;
- Adequately integrating disaster risk management, in particular earthquake risks, into Prambanan Temple Compounds management practices and policies;
- Supporting the implementation of the Action Plan by the International Community;
- Maintaining local capacities.

The movement from Outcomes to Impact hinges on the following **assumptions** as well:

- Government commitment at the national and provincial levels continues;
- Financial support by the International Community continues;
- The Prambanan WH Site provides economic value through tourism.

THEORY OF CHANGE ANALYSIS DIAGRAMME

Outcomes

Local risks related to unstable blocks and fragments, etc. which could fall down with obvious risks to people and workers are eliminated

The risk of collapse for certain structures is eliminated

The action plan for the rehabilitation of Earthquake-affected Prambanan WH Site is implemented

Intermediary States

Impact Drivers/Barriers to overcome:

- Adequately continuing efforts made towards the rehabilitation of the property to make good the remaining earthquake damage, including the restoration of the Siva Temple;
- Adequately integrating disaster risk management, in particular earthquake risks, into Prambanan Temple Compounds management practices and policies;
- Supporting the implementation of the Action Plan by the International Community;
- Maintaining local capacities

Risks induced by the 2006 earthquake are eliminated; disaster risk management procedures, equipment, activities and capacities are promoted within the Prambanan Site's management and coordination

Temples are restored; disaster risk mitigation and preparedness activities are included in Prambanan Site management and coordination activities; disaster mitigation and preparedness local capacities are built; and local public awareness on the values of the temples and the rehabilitation works in the site is raised

Assumptions:

- Government commitment at the national and provincial levels continues;
- Financial support by the International Community continues;
- The Prambanan WH Site provides economic value through tourism.

Impact/Project Goal

Rehabilitate and protect the World Heritage Property of Prambanan Temple Compound after damages caused by the earthquake of the 27th May 2006

Contributes towards MLA 3 Expected Result 2; SPO 5 Outcome B and C; IP 2

ANNEX D – Education Case Study

Title: Rehabilitation of the Education System in Earthquake-affected Areas of Pakistan Administered Azad Jammu and Kashmir. (a follow-up to UNESCO’s Earthquake Response Programme that began in Nov. 2005 with funding from the Government of Japan, DFID and UNESCO.

Duration: 1 June 2008 – 31 May 2010*. In order to complete the activities and utilise the remaining funds the project requires three months extension until March 2010.

Executing Agency: UNESCO

Local Implementing Partner(s): Earthquake Reconstruction and Rehabilitation Authority (ERRA), Department of Education (DoE)and Technical Education and Vocational Training Authority (TVETA)of the Government of State of Azad Jammu & Kashmir (GoAJK). Within the DoE, DEE will be the main partner for implementation.

Budget: US \$ 1.2 million

Project/Programme Goal: to contribute to the government’s efforts to rebuild and improve the education system

This project focused on rehabilitating and improving the education system in the areas affected by the earthquake of Pakistan Administered Azad Jammu and Kashmir. It is directly relevant to Pakistan’s constitution that guarantees the right to education to its citizens as well as UNESCO’s SPO 5, Outcome B, MLA 3 Expected Outcome 2. It contributes to HFA Priorities especially (3 and 5) as well as Education For All (EFA), the Millennium Development Goals (MDG) , and UNESCO’s IP related to Support to countries in post-conflict and disaster situations and both its Biennial Sectoral Priorities. It was noted however, that the project contained a mix of recovery and mitigation components, therefore not solely contributing to SPO5, but also to SPO 14. The project addresses the most underfunded areas within education: middle, secondary schools, vocational training, teacher training, reconstruction of schools in high altitude areas and targets the need for education during emergencies to help protect children from exploitation (i.e. awareness of hygiene, other health risks, disaster risk reduction) It builds upon the work of other organizations in the area namely, UNICEF, WB, USAID, Aga Khan Development Network, UNHABITAT, NAVTEC, EU-GTZ, DFID other INGOs. There is not enough information to assess efficiency except that it can be assumed they were disbursed in a timely manner through their implementation rate. Sustainability of the project is currently dependent on donor contributions, particularly from the Zayed Bin Sultan Al Nahayan Charitable and Humanitarian Foundation, United Arab Emirates as part of a four-year Agreement of Cooperation between the Foundation and UNESCO, until 2012.

Results

- Ongoing contribution to a safe and better teaching and learning environment to selected middle and secondary schools affected by the earthquake (i.e. Construction work has started for middle and high school sections of three new schools. Construction of Science, Library and ICT Lab block at Government Boys High Schools Noopur Nakran will be ready by December 2009. (partially met target)
- A strengthened technical and vocational education and training system with a focus on standardised construction skills training to youth and adults has begun (i.e. Skill development policy, strategy and action plan has been developed and submitted to PAK TEVTA for implementation. Work on development of skill standards in carpentry is in progress (search for expert in carpentry standards took longer than expected; in masonry it is still ongoing).

- A strengthened teacher training policy and practices of the Department of Education has begun
(An improved Head Teacher Training Module for teachers which has been pilot tested in a 2-week workshop (met target) for middle and secondary school head teachers; Work currently in progress for the finalization of the draft Strategic Framework for Teacher In-service Training in PAK)

Lessons Learned:

- Rehabilitation from a natural disaster is an opportune time to increase Disaster Preparedness. It is not clear whether the project is using the rehabilitation as an opportunity to enhance the integration of Disaster Risk Reduction educational awareness into education system rehabilitation (this can be via curricula; TVE teacher training; middle school and high school teacher training; ICT education using the computer as a medium to raise awareness on earthquakes (i.e. within the ICT in Education Action Plan).to enhance the components that contribute to SPO 5
- The delay caused by the challenges faced by this project such as lack of sufficient funds in the PAK DoE and PAK TEVTA (a longer term project will be desirable to increase sustainability); administrative delays such as government approvals decreasing security in the country; lengthy recruitment processes for experts; difficulty in finding local TVET experts (short supply) and international experts (reluctance to go to Pakistan) could be used to enhance capacities in DRR at the community or local level
- More time should be allotted for recruitment processes in the future and for general delays

Sources Reviewed:

Project Proposal Document 570-PAK-1001,

Draft TOR for Evaluation, 570-PAK-1001

3rd Quarterly Progress Report January – September 2009

Annual Report 2008. Evaluation to be carried out May 2010

Early recovery and reconstruction of the education system in the earthquake-affected areas of NWFP and AJK Logical Framework (2006) – Prior to current project

THEORY OF CHANGE

This project appears to have worked well to achieve most of its outputs working towards fully achieving its outcomes. For example, entire school reconstruction has yet to be completed to allow for a safe and better teaching and learning environment (Outcome 1). Work is well underway, however. Training modules and the draft policy for SMCs will help contribute to Outcome 2 to Strengthen Technical and Vocational Education and Training System however standards have yet to be approved and all the training could not be carried out. Again, Outcome 3 to Strengthen teacher training policy and practices in the Department of Education is not fully achieved, however, a crucial step, the completion of a draft Strategic Framework for Teacher In-service Training in PAK has been made. It is not clear however whether such training for TVE or middle and high school teachers will include Disaster Risk Management education and awareness topics so that teachers and trainers can teach and pass on this vital information and thus render the rehabilitation of the education system also a form of disaster mitigation.

This being said, **the outcomes appear to likely be fully achieved**, and by following the Theory of Change logic, some important **impact drivers** be taken into consideration in order to move from these three outcomes to the goal of the Rehabilitation of the Education System in Earthquake-affected Areas of Pakistan-Administered State of Azad Jammu and Kashmir. They include:

- Continued training of local trainers to improve teacher capacity, leadership, management skills etc and to increase the project's sustainability
- Government approved skills standard for various trades based on the work of the recruited expert and In-service teacher training strategic framework
- Continued community involvement including parents
- Continued improvement of education system one training has commenced, via monitoring, review of education material, curricula etc

The movement from Outcomes to Impact hinges on the following assumptions as well

- The security situation in Pakistan does not worsen severely
- Government commitment remains present and International donors continue their support, especially given the fact that government funding is lacking
- Cost of construction materials does not increase dramatically
- Teachers are willing to undergo training

This project has made great strides and rehabilitation of the education system, as on ongoing process, definitely underway.

THEORY OF CHANGE ANALYSIS DIAGRAMME

Outcomes

Intermediary Stages

Impact/Project Goal

To provide safer and better teaching and learning environment to selected middle and secondary schools affected by the earthquake.

To strengthen TEVT system with a focus on standardised construction skills training to youth and adults.

To strengthen teacher training policy and practice of Department of Education.

Impact drivers/Barriers to overcome:

- Continued training of local trainers to improve teacher capacity, leadership, management skills etc and to increase the project's sustainability
- Government approved skills standard for various trades based on the work of the recruited expert and In-service teacher training strategic framework
- Continued community involvement at all stages
- Continued improvement of education system once training has commenced, via monitoring, review of education material, curricula etc

Physical construction of schools is complete as well as approved trade skills standards and approved training policy for teachers

Teaching and educational quality is enhanced leading to increased school attendance and sustainable education management (i.e. via continuous training of local Trainers)

To support the Government of Pakistan to rebuild the education system by improving access to, and quality of, various educational services.

To more directly align with SPO5 outcome B: Disaster Risk Reduction enhanced by integrating it into the project as a whole, via teacher training, awareness during carpentry skills standards, SMCs etc

Contributes to SPO5 Outcome B, MLA 3 Expected Outcome 2, IP 1 & 2

Assumptions:

- The security situation in Pakistan does not worsen severely
- Government funding and commitment remain present
- Cost of construction materials does not increase dramatically
- Teachers are willing to undergo training

ANNEX E – Communication and Information Case Study

Title: Regional workshop on hurricane press coverage in the Caribbean

Duration: Actual workshop: 4 days;

Executing Agency: Research Department of the Jose Marti International Journalism Institute as well as others i.e. Institute of Meteorology of Cuba, Cuban Civil Defence, Cuban Red Cross which will supply the experts for conferences and general advisory services.

Local Partner(s): Research Department of the Jose Marti International Journalism Institute as well as others i.e. Institute of Meteorology of Cuba, Cuban Civil Defence, Cuban Red Cross which will supply the experts for conferences and general advisory services

Budget: US \$27 600 (US \$ 22 100 requested from IPDC)

Project/Programme Goal: To improve the communicative capacity of media professionals and the people they serve, and develop tools and links for a more effective coverage of the hurricane season.

This project aimed to improve the reporting, tracking and forecasting abilities of journalists in the Caribbean to enhance hurricane coverage. It reflects a continuous need to prepare and be well informed for the hurricane season in the Caribbean especially due to the intensification of storms as a result of climate change in addition to providing accurate information such as forecasting tracking and impact of the hurricanes is especially relevant to the most marginalized populations. In this respect it is aligned with UNESCO SPO 5 Outcome B; MLA 3 Expected Result 2 ; IP 1, 2. As this was a relatively small project, it can be assumed that the funds were executed efficiently seeing as the workshop was a success. The sustainability however, is dependent on how the information acquired from the workshop is utilised by the participants in the future once they return to their home countries. The journalist training can be rendered sustainable by using this workshop as an impetus to begin the continual updating, review and enhancement of workshops and the development of new educational programmes for journalists. Financially speaking, further workshops and trainings will most likely depend on international donor funding.

Results

- 60 journalists and media professionals from the Caribbean countries were trained in a four day workshop on the issues of hurricane season coverage.
- Knowledge, quality preparedness and response to hurricanes and other weather disasters in the area was improved (i.e. via A multimedia storage device with workshop contents was produced for the participants; A printed publication detailing best practices, directories, glossaries, tools for reporting on hurricanes and other disasters)

Lessons Learned

- The success of this workshop reflects the need for continuous learning in this area (i.e. journalists and any other links that can aid in information dissemination to the most marginalized and at-risk communities)

THEORY OF CHANGE

This 4 day workshop was successfully executed having met its targets and appearing not to have had no great challenges. It was an important step in working towards improving the communicative capacity of media professionals and the people they serve, and to develop tools and links for a more effective coverage of the hurricane season. However it will only be known whether such capacity has been improved after its usage and application in future hurricane seasons. Additionally, journalists will most likely need more opportunities to hone their skills and apply the tools they have acquired.

Impact drivers for this TOC could include:

- International workshops for journalists continue in the Caribbean region
- National governments capitalise on the training journalists have received to better communicate with the public during emergency situations during hurricane season

Assumptions include:

- International donor funding continues
- Journalists give the public the most unbiased and truthful information to the best of their ability

THEORY OF CHANGE ANALYSIS DIAGRAMME

Outcomes

Intermediary Stage

Impact/Project Goal

To train 50 journalists and media professionals from the Caribbean countries in a four day workshop on the issues of hurricane season coverage.

To improve knowledge, quality preparedness and response to hurricanes and other weather disasters in the area.

Impact drivers:

- Workshops for journalists continue in the Caribbean region that also facilitate knowledge and experience exchange
- National governments capitalise on the training journalists have received to better communicate with the public during emergency situations during hurricane season



Journalistic professional development opportunities regarding hurricane coverage is increased via ongoing learning mechanisms such as platforms, workshops, conferences etc



To improve the communicative capacity of media professionals and the people they serve, and develop tools and links for a more effective coverage of the hurricane season.



Contributes to SPO 5 Outcome B; MLA 3 Expected Result 2, IP 1,2

Assumptions:

- International donor funding continues
- Journalists give the public the most unbiased and truthful information to the best of their ability

ANNEX F – List of Interviewees

Interviewee (done by phone)	
Giovanni Boccardi Chief of Unit	Asia and the Pacific Section World Heritage Centre, Culture Sector.
Ms. Eli Rognerud Programme Specialist	Section for Education in Post-conflict and Post-disaster Situations, Education Sector
Mr. Matthew Stephenson Seconded Expert	Division for the Coordination of the United Nations Priorities in Education, Education Sector
Mr. Klaus Peter Koltermann Head of Tsunami Unit	Tsunami Unit Intergovernmental Oceanographic Commission
Mr. Badaoui Rouhban Chief of Section	Disaster Reduction, Natural Sciences Sector
Interviews done in Paris the week of May 18th	
Mr. Hans Thulstrup Programme Specialist	Sustainable Development of Coastal Regions and Small Island Developing States Section, Natural Sciences Sector
Ms. Eli Rognerud Programme Specialist Mr. Matthew Stephensen Seconded Expert	Section for Education in Post-conflict and Post-disaster Situations, Education Sector
Mr. John Crowley Chief of Section	Ethics of Science and Technology Section, Social and Human Sciences Sector
Mr. Joe Hironaka Programme Coordinator, Post-Conflict and Natural Disaster Situations	Section for Conflict and Post-Conflict Situations, Bureau for Field Coordination
Mr. Peter Dogse Programme Specialist & Manager of Intersectoral Platform on Climate Change	Natural Sciences Sector, Ecological Sciences and Biodiversity Section
Ms. S. Gülser Corat Director	Communication Development Division for Gender Equality Office of the Director-General
Mr. Wijayananda Jayaweera Director	IPDC Secretariat Communication Development Division
Mr. Badaoui Rouhban Director Mr. Takashi Imamura Programme Specialist Ms. Kristine Tovmasyan Assistant Programme Specialist	Section for Disaster Reduction, Natural Sciences Sector
Mr. Mogens Schmidt Deputy-Assistant Director-General for CI, and manager of PCPD intersectoral platform	Division for Freedom of Expression, Democracy and Peace
Indonesia Mission	
Representatives	DRR/JTIC Group
Representatives	ECO Unit
Representatives	CLT Unit
Representatives	HYD Unit
Representatives	LIPI
Representatives	BMKG

Representatives	Ministry of Culture and Tourism's Directorate General for History and Archaeology
Mr. El Mostafa Beniamih and Ibu Beate Trankmann	UNRC/UNDP
Site visit and meeting with local stakeholders	West Sumatra
Jamaica Mission	
Andria Grosvenor	CDEMA
Isidro Fernandez-Aballi	Adviser for Communication & Information for the Caribbean.
Cesar Toro Programme Specialist in Natural Sciences/Head of IOCaribe of IOC	UNESCO Field Office
Robert Parua Education Programme Specialist	UNESCO Field Office
Himalchuli Gurung Programme Specialist in Culture.	UNESCO Field Office
Pedro Monreal Gonzalez. Programme Specialist in Social & Human Sciences	UNESCO Field Office

ANNEX G – List of Documents

- ICG/NEAMTWS Secretariat Draft Programme and Budget 2010-2011
- ICL “2006 Tokyo Action Plan” Strengthening Research and Learning on Landslides and Related Earth System Disasters for Global Risk Preparedness.
- ICL UNESCO Report of the First World Landslide Forum held on 18-21 November 2008 supported by the Activity Contract No. 4500048734
- ICL, MoU
- ICL, Kyoto University MoU
- ICL, WLF Report 2008
- IOC Workshop Report No. 196
- IOC Workshop Report No. 198
- ISDR Flash Appeal Towards the Development of An Indian Ocean Tsunami Warning And Mitigation System within a Global Framework FINAL REPORT (ca 2006/2007)
- Lassa, Jonatan, Draft Field Notes from Kingston Jamaica, 2010
- NEAMTIC, Tsunami early warning, mitigation and preparedness for the North-eastern Atlantic, the Mediterranean and connected seas (Information Centre for the NE Atlantic and Mediterranean - NEAMTIC)
- NEAMTIC, Tsunami early warning, mitigation and preparedness for the North-eastern Atlantic, the Mediterranean and connected seas
- News Article. The International Training-Workshop on the Numerical Modeling of Tsunami for Developing Countries in Southeast Asia, the Pacific, and the Indian Ocean Philippine Institute of Volcanology, 7-19 November 2005
- IPDC 51st Meeting New Projects Approved for Financing by 51st IPDC Bureau
- IPDC Report of the IPDC on its Activities 2006-2007
- ISDR. Towards a Culture of Prevention: Disaster Risk Reduction Begins at School. 2007
- Prof. Eng. Giorgio Croci Report. 2006
- UN/ISDR & UNESCO Intergovernmental Oceanographic Commission (UNESCO/IOC) EMORANDUM OF UNDERSTANDING Project “Towards the Development of an Indian Ocean Tsunami Warning and Mitigation System within a Global Framework” PROGRESS REPORT, March 6, 2006
- UNESCO/IOC Towards the Development of an Indian Ocean Tsunami Warning and Mitigation System within a Global Framework –Phase 1 February- July 2005
- UNESCO/IOC Annual Report 2008

UNESCO/ICHARM/PWRI. Global Center of Excellence for Water Hazard and Risk Management. International Centre for Water Hazard and Risk Management under the auspices of UNESCO. 2009

UNESCO/ICHARM/PWRI ICHARM Action Plan for 2008-2010. 2009

UNESCO/WMO/UNU/ISDR International Flood Initiative, 2007

UNESCO/IHP IHP-VII Water Dependencies Systems under Stress and Societal Responses 2008-2013 Strategic Plan. 2009

UNESCO/IHP IHP-VII Water Dependencies Systems under Stress and Societal Responses 2008-2013 Pamphlet. 2009

UNESCO/IHP FRIEND Flow Regimes From International Experimental and Network Data. Pamphlet. n.y.

UNESCO Priority Gender Equality Action Plan 2008-2013.

[UNESCO, Medium Term Strategy 2008-2013 - 34 C/4](#)

[UNESCO, Programme and Budget Revised Version 2010-2011 – 35 C/5](#)

[UNESCO, Approved Programme and Budget, 2008-2009 - 34 C/5](#)

[UNESCO, Approved Programme and Budget, 2006-2007 - 33 C/5](#)

UNESCO, [Report of the Director-General on the Activities of the Organization in 2006-2007 – 35 C/3](#)

UNESCO, [Report of the Director-General on the Activities of the Organization in 2004-2005 - 34 C/3](#)

UNESCO, [Report by the Director-General on the Execution of the Programme adopted by the General Conference 181 EX/4](#)

UNESCO, [Report by the Director-General on the Execution of the Programme adopted by the General Conference 180 EX/4](#)

UNESCO, [Report by the Director-General on the Execution of the Programme adopted by the General Conference 179 EX/4](#)

UNESCO, [Report by the Director-General on the Execution of the Programme Adopted by the General Conference 176 EX/4](#)

UNESCO, [Report by the Director-General on the Execution of the Programme Adopted by the General Conference 175 EX/4](#)

UNESCO, Establishment of the UNESCO/IOC liaison office to UN/ISDR-PPEW

UNESCO, Establishment of the ICG/NEAMTWS Secretariat 2008

UNESCO, Report Assessment Mission on Tsunami Preparedness in Lebanon

UNESCO. Indonesia-UNESCO Country Programming Document 2008-2011

UNESCO, [Evaluation of the Capacity Building Programme for Natural Disaster Reduction \(CBNDR\) in Central America and the Caribbean](#)

UNESCO, [Evaluation of UNESCO Strategic Programme Objective 14: Support through UNESCO's domains to countries in post-conflict situations and post-disaster situations. IOS Summary Report](#)

UNESCO, [Evaluation of UNESCO Strategic Programme Objective 3: Leveraging scientific knowledge for the benefit of the environment and the management of natural resources](#)

UNESCO, MP II - Regular Budget Situation of MLA3 (as at 2 November 2009) – source Bureau of Budget

UNESCO, SC- MLA 3 Extrabudgetary Projects as at 12/11/2009 – source Bureau of Budget

UNESCO, Summary Report of the 1st Session of the ICG/NEAMTWS

UNESCO, Strengthening the Tsunami Early Warning System in Pakistan

UNESCO/IOC, Tsunami Information Centre at UNESCO Office in Jakarta. Final Report. 2009

UNESCO, Reducing Earthquake Losses in the Eastern Mediterranean Region (RELEMR) - Report Istanbul 2008

UNESCO, Reducing Earthquake Losses in South Asia and North East Asia Regions (RELSAR) Report Bhutan 2008

UNESCO, Support to International Consortium on Landslides (ICL)

UNESCO, Disaster Preparedness and Mitigation, UNESCO's role, 2007

UNESCO, Five Years After the tsunami in the Indian Ocean, From Strategy to Implementation, Advancement in global early warning systems for tsunamis and other ocean hazards 2004-2009.

UNESCO, The International Platform for Reducing Earthquake Disasters (IPRED) project outline - more information available at: <http://www.unesco-ipred.org/>

UNESCO, [Tsunami Risk Assessment and Mitigation for the Indian Ocean, June 2009](#)

UNISDR, External Evaluation of the UNISDR-Coordinated Tsunami Early Warning Systems Initiative

UNESCO, Support for the Establishment of the Indonesian National Earthquake and Tsunami Warning Centre, Project Document, December 2006.

UNESCO, Strengthening Community-Based Preparedness in Indonesia, January 2007.

UNESCO, Building Models for Disaster Preparedness, Project Proposal.

UNESCO, Building Models for Disaster Preparedness, Phase II Report.

UNESCO, School-base Disaster Preparedness for in Aceh, Report.

UNESCO, School-base Disaster Preparedness for in Aceh, Proposal.

UNESCO, JTIC Final Report

UNESCO, Flood Disaster Prevention and Mitigation Measures in Asia and the Pacific Region

UNESCO, Post Disaster Assessment System for Education Sector

UNESCO, Community-based Flood Preparedness Project

UNESCO, Report on APFRIEND Meeting on Intensity Frequency Duration and Flood
UNESCO, Frequencies Determination in Vietnam.

UNESCO, Building Models for Disaster Preparedness Proposal.

UNESCO, Concept Note for Caribbean Training Workshop, April 2010.

UNESCO, DRAFT ACRE document.

UNESCO, Education Short Term Needs Proposal 11 June 2008.

UNESCO, ERP DFID Logical Framework Matrix.

UNESCO, Follow- Up Study of Training Programmes for Teachers and Senior Managers in the
Earthquake Affected Areas of NWFPA and AJK, 2008.

UNESCO, Integration of Seismic Resistant Design & Construction into the Curricula of the
Diploma in UNESCO, Associate Engineering - Civil: An Action Plan, 2009.

UNESCO, Myanmar Education Recovery Program, Progress Report, 2009.

UNESCO, Educational flooding response & shared good practices, 2010 UNESCO
Contribution Disaster Risk Preparedness, Mitigation and Response in Pakistan.

UNESCO/IOC , 5 Years After the tsunami in the Indian Ocean. From strategy to
implementation. Advancements in global early warning systems fro tsunamis and other
ocean hazards 2004-2009.

UNESCO, Final Report: Support for the Establishment of the Indonesian National Earthquake
and Tsunami Warning Centre 2006

UNESCO, Narrative Final Report. Support for the Establishment of the Indonesian National
Earthquake and Tsunami Warning Centre 2006

UNESCO Jakarta, Final Report Strengthening Community-Based Preparedness in Indonesia.
January 2008

UN/ISDR, Project Proposal Basic Agreement Document for Funds Directed to UNESCO for
Building Models for Disaster Preparedness. 2007

UNESCO Jakarta, Building Models for Disaster Preparedness Project Completion Report. 2009

UNESCO Jakarta, School-based Disaster Preparedness in Aceh. Project Proposal. 2009

UNESCO Jakarta, School-based Disaster Preparedness Project Completion Report. 2009

UNESCO Jakarta, Technical Cooperation for Enhancing the Management Effectiveness of
Borobudur Temple Compounds, Indonesia. Project Proposal. 2008

UNESCO Jakarta, Technical Cooperation for Enhancing the Management Effectiveness of Borobudur Temple Compounds, Indonesia Terminal Report. 2009

UNESCO Jakarta, Jakarta Tsunami Information Centre. Final Report. 2009

UNESCO Jakarta, Post Disaster Assessment System for Education Sector Progress Report.

UNESCO Jakarta, Strengthening community-based flood resilience in Bidara Cina, East Jakarta, Indonesia

UNESCO Jakarta, Emergency Support for the Safeguarding of Cultural Resources in the earthquake affected areas in West Sumatera, Indonesia Project Proposal 2009

UNESCO Jakarta, Building Models for Disaster Preparedness Project Proposal 2007.

UNESCO Jakarta, Assessment Report and Recommendations for Action Plan for the Rehabilitation of Earthquake-affected Cultural Heritage in West Sumatra. 2009

UNESCO Emergency Assistance Approved. 2006

UNESCO Expert Mission Report 2006

UNESCO and Department of Tourism. Press Release. 2007

UNESCO. (Sector for External Relations and Cooperation), Saudi Arabia Project Closure Letter. 2008

UNESCO Office and Dept. of Tourism Action Plan for The Rehabilitation of Earthquake affected Prambanan world Heritage Site. 2007

UNESCO. World Heritage Committee 30th Session. Item 7 2006

UNESCO. World Heritage Committee 30th Session Item 7b added. 2006

UNESCO. World Heritage Committee 30th Session Decisions Adopted. 2006

UNESCO. World Heritage Committee 31st Session Decisions Adopted. 2007

UNESCO. World Heritage Committee 33rd Session. 2008

UNESCO and The Disaster Prevention Research Institute, Kyoto University, Japan, Memorandum of Understanding

UNESCO Project Proposal Document 570-PAK-1001,

UNESCO ISLAMABAD Draft TOR for Evaluation, 570-PAK-1001

UNESCO Rehabilitation of the Education System in Earthquake affected Areas of State of Azad Jammu and Kashmir 3rd Quarterly Progress Report January – September 2009

UNESCO Rehabilitation of the Education System in Earthquake affected Areas of State of Azad Jammu and Kashmir Annual Report 2008. Evaluation to be carried out May 2010

UNESCO Early recovery and reconstruction of the education system in the earthquake-affected areas of NWFP and AJK Logical Framework (2006) – Prior to current project

UNESCO Workshop Report 196. 2005

UNESCO. Workshop Report 198. 2005

UNESCO Report “Enhancing cooperative framework on disaster risk reduction through knowledge base, capacity building, education and awareness in a number of member states”. Roubhan Badaoui

UNESCO and The Disaster Prevention Research Memorandum Institute, Memorandum of Understanding Kyoto University, Japan. 1999

UNESCO/UNEP A commitment to Act Now. Broadcast Media and Climate Change. 2009

Additional Web Sources Used.

Accessed on April 30, 2010

<http://www.unesco-ipred.org/>

2009 International Workshop on Earthquake Risk Reduction in the Northeast Asian Region

http://portal.unesco.org/science/en/ev.php-URL_ID=8013&URL_DO=DO_PRINTPAGE&URL_SECTION=201.html

June 2006: Education for Natural Disaster Preparedness in Asia-Pacific in the context of ESD.

June 2006 workshop in Bangkok <http://www.unescobkk.org/education/esd/upcoming-past-events/past-events/bangkok-workshop-disaster-preparedness-06/>

IPRED Workshop 2009 [http://portal.unesco.org/science/en/ev.php-](http://portal.unesco.org/science/en/ev.php-URL_ID=7719&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL_ID=7719&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=7719&URL_DO=DO_TOPIC&URL_SECTION=201.html)

RELEMR [http://portal.unesco.org/science/en/ev.php-](http://portal.unesco.org/science/en/ev.php-URL_ID=6072&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL_ID=6072&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=6072&URL_DO=DO_TOPIC&URL_SECTION=201.html)

14th World Conference on Earthquake Engineering

[http://portal.unesco.org/science/en/ev.php-](http://portal.unesco.org/science/en/ev.php-URL_ID=6855&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL_ID=6855&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/science/en/ev.php-URL_ID=6855&URL_DO=DO_TOPIC&URL_SECTION=201.html)

Email communication (2010) detailing the Status Report, Project Document of Regional Project Workshop for Training Journalists in Hurricane Coverage in the Caribbean.