

**Evaluative Review of the ESCAP Trust Fund for Tsunami,
Disaster and Climate Preparedness in the Indian Ocean and
Southeast Asian Countries**

Final Report

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LIST OF ACRONYMS

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| ABU | Asia-Pacific Broadcasting Union |
| ADB | Asian Development Bank |
| ADPC | Asian Disaster Preparedness Center |
| ADRC | Asian Disaster Reduction Center |
| ADRRN | Asian Disaster Response and Recovery Network |
| AIT | Asian Institute of Technology |
| ASEAN | Association of Southeast Asian Nations |
| ATWS | Australian Tsunami Warning System |
| CBDRR | Community Based Disaster Risk Reduction |
| CC | Climate Change |
| CCA | Climate Change Adaptation |
| DAC | Development Aid Committee of the Organization for Economic Co-operation and Development |
| DFID | Department for International Development |
| DRR | Disaster Risk Reduction |
| ECHO | Humanitarian Aid Department of the European Commission |
| ECMRF | European Centre for Medium Rain Forecasting |
| EOC | Emergency Operations Centre |
| ESCAP | United Nations Economic and Social Commission for Asia and the Pacific |
| EWS | Early Warning System |
| GFDRR | Global Facility for Disaster Risk Reduction of the World Bank |
| HFA | Hyogo Framework for Action |
| ICG | Intergovernmental Coordination Group |
| ICT | Information and Communication Technology |
| IFRC | International Federation of Red Cross and Red Crescent Societies |
| IOC | Intergovernmental Oceanographic Commission |
| IOC-UNESCO | Intergovernmental Oceanographic Commission of UNESCO |
| IOTWS | Indian Ocean Tsunami Warning and Mitigation System |
| INGOs | International non-Governmental Organizations |
| ISDR | International Strategy for Disaster Reduction |
| JCOMM | Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology |
| JMA | Japan Meteorological Agency |
| NDWC | National Disaster Warning Centre (Thailand) |
| NGOs | Non-Governmental Organizations |
| NTWC | National Tsunami Watch Centre |
| OCHA | Office for Coordination of Humanitarian Affairs |
| PTWC | Pacific Tsunami Warning Centre |
| RIMES | Regional Integrated Multi-Hazard Early Warning System for Africa and Asia |
| RTWP | Regional Tsunami Watch Provider |
| SIDA | Swedish International Development Cooperation Agency |
| SOPs | Standard Operating Procedures |
| TEWS | Tsunami Early Warning System |
| UNDP | United Nations Development Programme |
| UNDP-RCB | UNDP Regional Centre in Bangkok |
| UNEP | United Nations Environmental Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| USAID | United States Agency for International Development |
| US-IOTWS | United States Indian Ocean Tsunami Warning System |
| WMO | World Meteorological Organization |

MANAGEMENT RESPONSE

This section provides the response by ESCAP management to the evaluation and to the specific recommendations.

| General remarks by management | |
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| <p>The evaluative review process has been useful to the Secretariat. It has brought out findings and assessments, including from partners, donors and Member States, some of which would be difficult to identify without an external party. The review has facilitated a process of reflection and commitment to action.</p> <p>The evaluative review recognizes several positive results in the countries covered by the Fund, which Fund projects have contributed to, including the potential saving of lives. This is appreciated. The Secretariat also appreciates the positive appraisal of the efficiency of the governance mechanism, management procedures and the coordination with UN partners.</p> <p>As for the shortcomings of the Fund administration, the review provides an honest and independent assessment. The Secretariat generally agrees with these. The Fund can achieve more in terms of visibility; articulating and communicating a strategic niche taking into account the comparative advantages of ESCAP; and engaging member States in the Fund.</p> <p>The recommendations are logically derived from the identifications of the strengths, shortcomings and opportunities of the Fund. The Secretariat generally agrees to the recommendations and is committed to put forward an action plan. The Secretariat would like to implement a combination of elements from scenarios 1 and 2. The senior management of ESCAP is committed to build on the positive results and revitalize the Fund.</p> | |
| Report recommendation | Management response |
| <p>1. The Fund establishes a more focused strategic direction. The perception among stakeholders is that the end-to-end, multi-hazard approach, including impact from climate change, and targeting all countries in the region is too unfocused. Donors and partners would need what the Fund will/will not do before they can re-engage in collaboration.</p> | <p>Agreed.</p> <p>The evaluative review has pointed out the appropriateness of a focus on Early Warning for coastal hazards in the Indian Ocean and South East Asia. Within this overall geographic (countries and coastal communities) and functional scope (Early Warning), the Fund should focus on the following roles and priorities to build on ESCAP's convening power for facilitating <i>policy changes</i> and <i>institutional capacity enhancements</i> in EW:</p> <ul style="list-style-type: none"> - Link the Fund to the work programme of ESCAP with focus on <i>knowledge products</i> (clearing house function), <i>facilitator for</i> |

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| | <p><i>regional cooperation</i> (Panel on Tropical Cyclones, Typhoon Committee, Disaster Risk Reduction Committee, Regional Cooperative Mechanism on Disaster Monitoring and Early Warning, Particularly Drought and Regional Lessons Learned meetings)</p> <p>- Emphasize <i>South-South mechanisms</i>. Use the Fund as a regional platform for member States to support each other.</p> <p>- Prioritize <i>LDCs, small island developing states, and low capacity/high risk countries</i> (MDG focus), building on synergies with ESCAP regional DRR advisory mechanism.</p> |
| <p>2. The Fund develops a concrete communication plan for the next 12 months and puts it into action in coordination with resource mobilization as soon as possible.</p> | <p>Agreed.</p> <p>Communication and advocacy should focus on results of the Fund so far and the positive contribution it is making to meet needs of Member States in EW for coastal communities. In order to be able to implement the communication plan with the limited staff resources available, communication opportunities should be integrated into programme implementation to the degree possible, and partner resources should be leveraged.</p> <p>A draft communication plan has been developed with the Strategic Communication and Advocacy Section of ESCAP.</p> |
| <p>3. Fund engages Member States and donors as resources. Significant national capacities in EW have been developed through the Fund and others operating in the region that is under-tapped. Actively engaging them with various bodies and activities of the Fund will increase commitment to it. Create a mechanism for sharing expertise among the Member States.</p> | <p>Agreed.</p> <p>The Fund should utilize the events listed in the communication plan to engage member States and donors.</p> <p>The Secretariat would support that all donors are invited to the Advisory Council as observers. An decision regarding amendment of the 20% rule of remaining fund shares as a requirement for membership of the Advisory Council rests with the Advisory Council.</p> |

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| <p>4. The Fund, in collaboration with the Programme Management Division (PMD) in ESCAP, develops a concrete resource mobilization plan for the next 12 months. A new corporate fund raising policy is in progress. The Fund manager needs to work closely with the PMD to determine the best approach to benefit from the corporate support; e.g., how to present the results from the Fund’s support to rally interest.</p> | <p>Agreed.</p> <p>The Secretariat considers the articulation and implementation of the refined strategic focus of the Fund, as well as clearly communicating the results of the Fund, as intrinsically linked to resource mobilization.</p> |
| <p>5. ESCAP convenes a series of meetings/consultations with selected key stakeholders from the 16 projects, donors, programme managers, implementers, etc., to increase cohesiveness and coherence across the projects; to plan the remainder of the funds more effectively; to create a learning platform to be captured on a Fund website; and to share a renewed vision and focus.</p> | <p>Agreed with reservations.</p> <p>The Secretariat believes convening meetings is one of the modalities to implement the other recommendations. However, convening meetings is not an objective in its own right. The focus should be on what can be achieved, and the purpose of meetings should always be linked to the advancement of early warning capacities in the region, with the ultimate goal of building resilient communities.</p> <p>The Secretariat believes that several of the events proposed in the communication plan can serve as a purpose to facilitate coherence across projects, capitalizing on synergies with other initiatives, as well as learning from Fund supported projects.</p> <p>The ESCAP Secretariat is committed to update the Fund website as a part of the ESCAP website, as well as contribute to the Gateway for DRR.</p> |

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| <p>6. Strengthen focus on the small and/or less resourced countries at the upstream end of EW. As a starting point, ESCAP should start a dialogue with RIMES, involving a few key Member States and interested donors, to establish mutual interests and how ESCAP can leverage support for RIMES to service the less resources and small island countries.</p> | <p>Agreed.</p> <p>The ESCAP Secretariat believes that the focus on small and less resourced countries should be a key pillar of the strategic focus of the Fund, along with a focus on policy/institutional capacity at the national level. The Secretariat has already facilitated and encouraged linkages between RIMES and ESCAP member States, including beyond the geographical scope of the Fund (Mongolia and Afghanistan being examples). The Secretariat believes that a collective system like RIMES is an appropriate, efficient and effective in supporting EW capacities for small and less resourced countries.</p> |
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EXECUTIVE SUMMARY

Introduction

The Indian Ocean tsunami of December 2004 resulted in widespread loss of human life and damage to infrastructure. The lack of a tsunami early warning system for the Indian Ocean became evident. In late 2005, a Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia (hereinafter referred to as the 'Fund') was established. As per April 2011, the Fund had received about US\$ 12.7 million in total contributions from the Government of Thailand, as the founding donor (US\$ 10 million), the Government of Sweden (approximately US\$ 2.6 million), and the Governments of Turkey, Bangladesh and Nepal. The Fund is administered by ESCAP. The Fund is a contribution towards the overall United Nations response to establishing effective early warning systems (EWS) in the region.

An Advisory Council makes policy and funding decisions for the Fund. Members include the founding donor Thailand and donors with contributions of more than 20 per cent of the remaining Fund balance. Currently only Sweden qualifies. Six United Nations entities: ISDR, OCHA, UNEP, UNDP, IOC-UNESCO and WMO, continued to partner with the Fund.

In 2008, an evaluative review of the Fund proposed to broaden its scope to include overall disaster and climate preparedness within the Fund's core areas of support. A Strategic Plan, 'ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness' was developed in 2009 in line with this proposed change. End-to-end early warning was defined as the overall framework for the Fund, focusing on coastal hazards such as tsunamis, coastal zone flooding, storm surges and cyclones, while applying a multi-hazard approach.

Out of the 72 proposals received, a total of 16 projects have been approved, with a total budget of approximately US\$ 11.3 million. Projects that have been supported cover a number of aspects of early warning, including development of monitoring and warning services that support the lower capacity countries, risk maps for community preparedness planning, establishment of SOPs, and education and public awareness materials. The Fund is open ended. However, the Fund received no substantial contributions (above 100,000) after 2005. Without additional donations, the Fund is expected to close in 2013/2014.

Background

According to the Terms of Reference, the purpose of this evaluation is threefold:

- **To account for results** to stakeholders of the Fund,
- **To assess future scenarios** for the Fund in terms of focus, role, funding, governance, and
- **To generate useful recommendations** related to policy issues and management of the Fund, including scenarios for possible future donations and governance.

Given the focus of the portfolio on regional level projects, it was also deemed important that in assessing the above the regional dimension and regional added value from the Fund should be the overriding priority. The monitoring and evaluation framework of the Fund suggest that an evaluation should pay particular attention to:

- **The trend in new proposals** being submitted to the Fund and approval rate,
- **The reputation of the Fund** in the region, and
- **The substantive and administrative performance** of the Fund.

Methodology, time frame and limitations

The evaluation utilized a mixed-method approach. Data was collected from multiple sources: a desk review, semi-structured interviews with key informants and group interviews where possible. The evaluator held discussions with the key donors, partner UN agencies as well as project partners and beneficiaries in three countries Thailand, the Philippines and Indonesia. Given the time limitations, detailed assessment of all the completed and ongoing projects at the outcome level was not possible. While the evaluation aimed to examine the possibility of doing a comparison to similar Trust Funds, regional networks and organizations working in early warning systems, this was possible only in a limited way. The evaluation was conducted between June and September 2011. The evaluation report will be disseminated within ESCAP and to donors, and published on ESCAP's website.

Findings

Relevance: Broadening the scope to multiple hazards is technically appropriate, and given the declining funds for tsunami, very timely for the future of the Fund. At the same time, it can create more competition for funding. As the Fund became more open-ended, the emphasis on the coastal areas was regarded as a unifying aspect of the Fund that may need to be more emphasized in the future. At the programmatic level, synergies from multi-hazard approach have already paid dividends. Overall, the Fund has been very beneficial for the small and less resourced countries.

Efficiency: Since its inception, the Fund has been very efficiently managed with a lean administrative structure for its day-to-day management. Synergies with the UN agencies have been very good and mutually supportive. Synergies of the Fund and its projects with the other players in the region could improve. As a rule, partner organizations are expected to contribute to the budget in-kind or in-cash. This is important as it encourages the partners to plan for synergies with other resources. While the importance of end-to-end approach is recognized and appreciated, value added from the Fund at the downstream end can be more debatable where for decades there has been more investment on multi-hazard approaches by the NGO community and the donors. There seems to be less competition at the upstream end of EW. Professional and established inter-governmental mechanisms such as IOC-UNESCO, or self-selected membership programmes such as RIMES support effective coordination among the stakeholders and provide efficiency of scale.

Effectiveness: The Fund is well appreciated by the stakeholders. It is efficiently administered, rules and procedures are properly observed and governance has been served well. Most projects have been effective in developing guidelines, methods, procedures and in their training and testing. These are often collectively undertaken with the stakeholders and beneficiaries, hence the ownership is high. Effectiveness at the project level, largely, depends on the competency of the implementing organization. With a few exceptions, most partners of the Fund have proven technical and administrative track record. The overall effectiveness and the greater collective impact from all 16 projects at the regional level are not immediately evident. Impact from regional activities on the national level takes time. Sequencing of the projects and activities could have been better planned with this in mind. At the regional level, projects may appear more as a collection of excellent activities that span the whole spectrum of the end-to-end approach to EW that are not always planned together in a holistic manner.

Impact: Progress in terms of a regional EW system for tsunami for the Indian Ocean from 2005 to 2011 has been remarkable. Australia, India and Indonesia are on track as Regional Tsunami Service Providers, along with RIMES. An effective network and regional coordination mechanism has been established through IOC-UNESCO, including on SOPs and simulation drill exercises. EW capacities for tsunami at the national level have been significantly enhanced. The study “Potential Life Saving Benefits of a Tsunami Early Warning System in the Indian Ocean” illustrates that lives saved in the next 100 years would be as high as about 1,000 per year, on average, for far field tsunamis. There seems to be enough evidence to suggest that public awareness and CBDRR programmes, if carefully designed and sustained, can also add to saving lives. Within this overall picture, the Fund did play a role as one of the few available financial resources for regional TEW; supported regional projects linked to the Intergovernmental Coordination Group and the establishment of RIMES. Support to the Makran fault assessment and awareness as a potential source of tsunamis, and contribution to activities that supported the least developing and island developing states through RIMES were relatively unique and thus achievements within this scope are more easily attributable to the Fund.

Sustainability: The Fund’s technical appraisal process ensures that projects financed through the Fund have a strong component of sustainability built into their plans. The *Guidelines for Completing the Grant Application Form* clearly communicates these requirements to the organizations that submit project proposals. Sustainability is a particular challenge for TEWS as a tsunami is a rare event; the Fund remains one of the few available mechanisms to take this work forward and help to ensure its sustainability. A well functioning EW system by nature requires maintenance of the equipment, frequent drills to test the SOPs, regular training of the staff in key institutions and the public, updating the risk assessments and the plans at the community level and much more. Sustainability of these cannot be met out of the Fund alone. Organizations such as UNDP and IOC-UNESCO are well placed partners to promote sustainability with the national governments. In the long run, key to sustainability is the national commitment to EW. ESCAP’s substantial power to convene the member States and policy influence remains under-utilized for this purpose.

Synergies with ESCAP DRR programme: ESCAP's excellent reputation and authority add credibility to the Fund with the member States as well as the donors. High-level of ownership of the Fund by the UN partners is also enhanced due to its management by ESCAP as a regional UN entity. All of these raise expectations from ESCAP to assume a vital role in nurturing the Fund. A strong institutional commitment from ESCAP can influence the Fund's future positively. This may require linking the Fund more strategically with the core business of ESCAP. The move of the Fund from the Programme Management Division to the Information and Communication Technology and Disaster Risk Reduction Division on 1 February 2011 can facilitate this.

Governance (Advisory Council) and Advisory mechanisms: Representation only by the two main donors reduces visibility for the Fund and its promotion among the member States and potential smaller donors. ESCAP could have been more proactive in engaging with the Fund's partners and broader stakeholder countries on a more regular basis. ESCAP draws upon its own multi-disciplinary capacity as well as the specialised knowledge of other UN organizations in supporting the appraisal and implementation of the projects. This is well appreciated and the professional rigour of the appraisal process is well known.

Quality Assurance by the Fund: The Monitoring and Evaluation (M&E) Framework of the Fund provides for quality assurance of the specific projects it supports. The bi-annual 'Project Progress Reports' account for the achievements more at the activity level; information at outcome level is usually limited. Project evaluations are not systematically shared with the Fund. A process of learning from these evaluations should be planned.

Conclusions

Indian Ocean countries are significantly better prepared to issue EW in the event of another destructive tsunami than they were before 2004. Many communities would now receive timely warnings and know how to act, and lives would be saved. The Fund is one of the several regional initiatives that have contributed to this positive change.

The Fund remains one of the few available regional financial mechanisms to support EW, including areas of less donor attention. Many regional initiatives launched after the 2004 tsunami with international donor support have now been completed. The regional focus of the Fund and its geographical coverage were relevant and complemented other initiatives.

Multiple-hazard and coastal area focus of the Fund are appropriate. This change is appreciated by the member States as the same national EWS can provide support for multiple hazards more efficiently. Focus of the Fund on the coastal areas that will ultimately reduce risks for the coastal communities of the region that suffer from the coastal hazards is equally appropriate.

The Fund's support for the less resourced and Small Island States is well appreciated, particularly the support through RIMES that meets the requirements of many of its lesser developed member States. This provided an economy of scale and a reliable service for the

countries that cannot easily maintain a full scale early warning system due to resource constraints.

The Fund is efficiently administered and rules and procedures are properly observed. Governance, the Advisory Council, as well as the member States are well served by the Fund. Synergies among the UN agencies and the Fund have been very good and mutually supportive.

ESCAP's excellent reputation and authority adds significant credibility to the Fund with the member States as well as the donors. High-level of ownership of the Fund by the UN partners is also enhanced through its management by ESCAP as a regional UN entity. All of these raise expectations from ESCAP to assume a vital role in nurturing the Fund. A strong institutional commitment from ESCAP can influence the Fund's future positively.

Synergies of the Fund and its projects with the other actors in the region could improve. The Fund has helped to foster sharing and partnering for greater effectiveness among the Fund's partners at the individual project level. At the regional level, there is limited contact with other relevant funds and programmes, including the ones on CCA.

The Fund has been supporting very diverse projects and continues to lack an identifiable strategic direction. Currently, the Fund is too diverse to be associated with any particular area of EW, or to be attractive to the donors. The 16 projects appear more as a collection of excellent activities that are not always planned together in a holistic manner, or for greater impact.

In the long run, the key to sustainability is the national commitment to EW that comes with a policy change. ESCAP's political power to convene the Member States and influence policy remains underutilized for this purpose.

The Fund needs a committed group of donors to drive the Fund and a concrete strategy for resource mobilization. The current lack of these two elements presents a serious threat to the Fund's future.

Regular and frequent communication with the smaller donors to keep them engaged in the Fund has been limited. Efforts need to be intensified to develop a fund raising strategy and to engage potential donors in the Fund.

The Fund does not get enough visibility for itself. Future funding to some extent depends on how well the donors and stakeholders are aware of the Fund's achievements. Other than the RIMES projects and IOC-UNESCO, activities are not widely known.

The Fund does not have clear strategy to engage the stakeholders. Smaller donors and member States feel isolated from the governance and management of the Fund and expressed interest in joining the Advisory Council and the Task Force to review and monitor projects.

The Fund is at a critical juncture regarding its future that depends on a myriad of factors and decisions by ESCAP, the Advisory Council and above all, the stakeholders who have

implemented and the Member States who have benefited from the Fund's support. A number of scenarios are possible from closing down the Fund by the end of 2013/2014 to revitalising it in a more integrated fashion within ESCAP with a renewed focus, governance structure and member State engagement.

Scenarios

The Fund is at a critical juncture regarding its future that depends on a myriad of factors and decisions by ESCAP, the Advisory Board and above all the stakeholders and the member States, which have benefited from the Fund's support. Three future scenarios are suggested:

Scenario 1: Fund revitalized and integrated more closely with ESCAP's core businesses.

The Fund to serve an intergovernmental purpose and act as a 'thread' to integrate/link with ESCAP's various relevant Divisions, Committees and mandates to serve more efficiently and effectively the Member States in policy and practice.

The Fund builds on the expertise in the region as its resource base; facilitates South to South cooperation within a multilateral framework and as such, the Fund becomes a self help mechanism among the member States, as a possible platform primarily – but not exclusively – to support high-risk and low capacity countries.

Scenario 2: A catalytic Fund: A mechanism for facilitating connections in EW in the Region. Design a catalytic Fund and target with the remaining funds support over a fixed period for connecting the various EW networks, organizations, countries and programmes in the region. Facilitate the harmonization in the region of the diverse approaches to EW including among the Fund's projects, member State activities and policies, and other regional and bilateral initiatives.

Scenario 3: Close down the Fund. If the Fund cannot attract new resources, it will have no choice but to discontinue by the suggested 2013/2014 time frame. However, this should be the last option and remaining funds should be planned well. To maximize the impact from the Fund's support so far, a learning/stocktaking exercise(s) that will bring together the representatives from project partners/implementers/beneficiaries will be useful to share knowledge and experiences; document and disseminate the lessons learned and good practices.

Recommendations

1. The Fund establishes a more focused strategic direction. The perception among stakeholders is that the end-to-end, multi-hazard approach, including impact from climate change, and targeting all countries in the region is too unfocused. Donors and partners would need what the Fund will/will not do before they can re-engage in collaboration.

2. The Fund develops a concrete communication plan for the next 12 months and puts it into action in coordination with resource mobilization as soon as possible.

3. Fund engages member States and donors as resources. Significant National capacities in EW have been developed through the Fund and others operating in the region that is under tapped. Actively engaging them with various bodies and activities of the Fund will increase commitment to it. Create a mechanism for sharing expertise among the member States.

4. The Fund, in collaboration with the Programme Management Division (PMD) in ESCAP, develops a concrete resource mobilization plan for the next 12 months. A new corporate fund raising policy is in progress. The Fund manager needs to work closely with the PMD to determine the best approach to benefit from the corporate support; e.g., how to present the results from the Fund's support to rally interest.

5. ESCAP convenes a series of meetings/consultations with selected key stakeholders from the 16 projects, donors, programme managers, implementers, etc., to increase cohesiveness and coherence across the projects; to plan the remainder of the funds more effectively; to create a learning platform to be captured on a Fund website; and to share a renewed vision and focus.

6. Strengthen focus on the small and/or less resourced countries at the upstream end of EW. As a starting point, ESCAP should start a dialogue with RIMES, involving a few key member States and interested donors, to establish mutual interests and how ESCAP can leverage support for RIMES to service the less resources and small island countries.

1. INTRODUCTION

This section describes the background of the evaluation, and the evaluation purpose, objectives, outputs and scope, as outlined in the terms of reference (TOR) of this evaluative review and elaborated in the inception report.

1.1 Background of the evaluation

This is the report of the evaluative review of the ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness in the Indian Ocean and Southeast Asian Countries that was conducted between May and September 2011 by an independent consultant, Yasemin Aysan.

The Indian Ocean tsunami of December 2004 resulted in widespread loss of human life, damage to infrastructure and natural ecosystems, large economic costs, and severe alterations to livelihoods. The lack of a tsunami early warning system for the Indian Ocean became evident. While relief and recovery efforts were soon underway through various international and national efforts, there was a strong recognition of the need also to undertake longer-term steps to mitigate the impact of similar future disasters through adequate preparedness and prevention measures, including early warning.

In late 2005, a Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia (hereinafter referred to as the 'Fund') was established. The Fund aims to ensure a comprehensive and coordinated approach to resource mobilization for building and enhancing end-to-end tsunami early warning system capacities in accordance with the needs of the Indian Ocean and Southeast Asian countries. The Fund is administered by ESCAP. As at April 2011, the Fund had received about US\$ 12.7 million in total contributions from the Government of Thailand, as foundation donor (US\$ 10 million), the Government of Sweden (approximately US\$ 2.6 million), and the Governments of Turkey, Bangladesh and Nepal. According to its Terms and Conditions, the Fund contributes to narrowing the capacity gaps in the region and supports development of an integrated, regional tsunami early warning system.

The Fund is a contribution towards the overall United Nations response to establishing effective early warning systems (EWS) in the region.¹ ESCAP is entrusted with managing and administering the Fund. ESCAP draws on its mandate as the United Nations regional commission for Asia and the Pacific to promote regional cooperation and integration for effective disaster risk reduction.

An Advisory Council makes policy and funding decisions for the Fund. The Advisory Council is chaired by the Executive Director of ESCAP. Members include the founding donor

¹ To be noted in particular are the IOC-UNESCO that functions as the Secretariat for the Inter-Governmental Coordination Committee for the Tsunami Early Warning System for the Indian Ocean, WMO that provides support to national meteorological offices, UNDP that provides support to capacity building at the national level and UNISDR that provides the global framework for Disaster Risk Reduction.

Thailand and donors with contributions of more than 20 per cent of the remaining Fund balance - currently only Sweden qualifies.

Six United Nations entities, ISDR, OCHA, UNEP, UNDP, UNESCO and WMO, continued to collaborate with the Fund by participating in the Fund's Advisory Council meetings. Proposals received by ESCAP are technically appraised by an Inter-Agency Task Force chaired by the Chief of ESCAP's Information and Communications Technology and Disaster Risk Reduction Division (IDD), with the Senior Regional Coordinator of the United Nations International Strategy on Disaster Reduction (ISDR) acting as Alternate Chairperson. The Task Force also include representatives from ESCAP's Social Development Division (SDD); and Environment and Development Division (EDD); and representatives from IOC-UNESCO and UNDP. The Fund's Secretariat acted as Secretary. The Fund is demand-driven and supports projects led by Governments, intergovernmental and non-governmental organizations.

Complete and effective early warning comprises several interrelated elements from upstream legislative and policy frameworks to downstream community preparedness. The Fund operates within this framework and adopts a multi-hazard approach to supporting projects that aim to make improvements in the following four areas of early warning in the region:

1. Risk Knowledge: Systematic collection of data and undertaking of risk assessments.
2. Monitoring and Warning Service: Development of Hazard monitoring and EW services.
3. Dissemination and Communication: Communication of risk information and early warnings.
4. Response capability: Building of national and community response capabilities.

By January 2011, the Fund had conducted six rounds of funding. Out of the 72 proposals received, a total of 16 projects have been approved, with a total budget of approximately US\$ 11.3 million. Projects that have been supported cover a number of aspects of early warning, including development of monitoring and warning services that provide support to lower capacity countries, risk maps for community preparedness planning, establishment of Standard Operating Procedures (SOPs), and education and public awareness materials.

In 2008, an evaluative review of the Fund proposed to broaden its scope to include overall disaster and climate preparedness within the Fund's core areas of support. A *Strategic Plan, ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness*, was developed in 2009 in line with this proposed change. End-to-end early warning was defined as the overall framework for the Fund, focusing on coastal hazards such as tsunamis, coastal zone flooding, storm surges and cyclones, while applying a multi-hazard approach.

The Trust Fund is open ended. However, the Fund received no substantial additional financial contributions (above US\$100,000) after 2005. Without additional donations, the Fund is expected to close in 2013/2014.

The Monitoring and Evaluation (M&E) Framework of the Fund provides for monitoring and evaluation of the specific projects it supports, an annual self assessment of the Fund (captured in the annual reports), and independent external evaluations (evaluative review), the first of which was conducted in 2008.

The evaluative review of 2008 produced 16 recommendations, with the five primary recommendations focusing on the need to: (i) develop a strategic vision and plan, (ii) broaden the scope of the Fund to focus on overall disaster risk reduction, (iii) focus more on downstream work such as “community resilience”, (iv) streamline the appraisal process, and (v) be more proactive and consistent in engaging with stakeholders and managing their expectations.

1.2 Purpose, objectives and outputs

According to the Terms of Reference of the evaluation, the purpose of this evaluation is threefold:

- **To account for results** to stakeholders of the Fund,
- **To assess future scenarios for the Fund** in terms of focus, role, funding and governance, and
- **To generate useful recommendations** related to policy issues and management of the Fund, including scenarios for possible future donations and governance.

Given the focus of the portfolio on regional level projects, it was also deemed important that in assessing the above the regional dimension and regional added value from the Fund should be the overriding priority of the evaluation, for both the individual projects and the Fund as a whole. In view of several other activities that contribute to improvements in early warning in the region at national and regional levels, the specific contribution from the Fund projects and the connectedness of the projects with other initiatives should also be considered as far as it is feasible to investigate.

The outputs of the evaluation include an evaluation report to be disseminated within ESCAP and to donors, and published on ESCAP’s website: <http://www.unescap.org/disaster-preparedness-fund/monitoring-evaluation.asp>

1.3 Scope

Applying the standard DAC evaluation criteria the evaluation will look at the effectiveness, impact (preliminary and potential) and sustainability of completed and ongoing projects supported by the Fund and how the relevance and efficiency of project design and management contributed to this.

The monitoring and evaluation framework of the Fund suggest that an evaluation should pay particular attention to:

- The trend in new proposals being submitted to the Fund and approval rate.
- The reputation of the Fund in the region.

- The substantive and administrative performance of the Fund.

Based on the TOR and the preliminary document review, the key questions that guided the evaluation can be categorized as follows:

Results: What are the results of the Fund? Has it made any difference to national capacities for end-to-end early warning? If positive changes are observed at the national level, what is the contribution of Fund supported projects? Has the Fund contributed to a regional system? Has the Fund demonstrated a unique regional added value to efforts to improve national capacities for effective end-to-end early warning? If the results are limited, what is the explanation for the lack of results? How well is the Fund known? What is the reputation of the Fund in the region among its partners (ESCAP members, donors, implementing partners, UN agencies, NGOs)?

Processes: How efficient are ESCAP's administrative processes and execution of the Secretariat function of the Fund? How appropriate and efficient is the governance (Advisory Council) and advisory mechanisms (Inter-agency Task Force)? What is the trend in proposals submitted and approval rate? Has the Fund been effective in its communications and dissemination strategy? How effective has the partnership strategy been to facilitate positive results? What is the donor perception of the Fund?

2. METHODOLOGY

This section describes the implemented evaluation methodology and limitations of the evaluation.

2.1 Methodology

Assessing results of the Fund involved looking at results of the individual projects as well as assessing the portfolio as a whole. However, given the time limitations, detailed assessment of all the completed and ongoing projects at the outcome level was not possible. Moreover, while six projects of the 16 approved projects have been completed (see Annex IV), and several are expected to be completed in 2011, the longer term impact will in many cases not yet have materialized. The evaluation therefore focused on preliminary and potential impacts that addressed technical, geographical, etc. gaps.

While this evaluation sought to determine if the Fund has added value to positive country-level outcomes and impact in end-to-end early warning systems, it was often difficult to attribute results to only one source of inputs, actions, or actors in a field where there are multiple actors and inputs. Therefore, to the extent possible, the evaluation sought to outline the Fund's contribution to overall results while identifying the synergies with other relevant programmes and activities. More than half of the projects funded explicitly aim for capacity building in their objectives. While capacity building is a complex and long term process to be measured at the project level, this evaluation tried to establish some basic understanding a) of the clarity of assumptions behind these projects regarding the nature of change aimed at appreciation, knowledge, individual behaviour or institutional behaviour change b) as to whether the methods and activities used were appropriate in achieving these capacity building objectives c) as to whether the projects considered sustainability of the capacity beyond the project life cycle.

In order to better assess the positive long term impact of RIMES and increased tsunami early warning capacities in the region, the Fund has commissioned a separate study on potential lives saved by the tsunami early warning system in the Indian Ocean, the results of which are fed into this evaluation.²

2.1.1 Data collection methods

The evaluation utilized a mixed-method approach. Data was collected from multiple sources: a desk review, interviews with key informants, group interviews with beneficiaries where possible.

² Thomas J. Teisberg, *Potential Lives Saved by a Tsunami Early Warning System in the Indian Ocean*, 2011.

Desk Review: The desk review was used as an important tool to assemble evidence of project activities and outputs, as well as to determine if the necessary record keeping and documentation is being carried out by the Fund. These included Fund project documents and reports. Any existing evaluations of the completed projects also formed part of this exercise.

Semi-structured interviews: Primary data was collected through semi-structured interviews with individuals and groups. Interviews covered the relevant divisions of ESCAP and the UN agencies that are present in Bangkok, which are also members of the Inter-agency Task Force; partner and implementing organizations; and donors that have contributed or may in the future contribute to the Fund.

Group interviews were few and they were mostly limited to the staff of the implementing technical departments in Indonesia and the Philippines.

Direct observations were not possible except for the RIMES project where some mapping and modelling applications were presented at their AIT office.

2.1.2 Selection of cases for further analysis

Between 2006 and 2011, the Fund has supported 16 projects. Of these, only six were completed, another eight were ongoing and two had started only in May 2011. Since four out of 16 of the projects and about half of the Fund expenditure have contributed to the establishment and institutionalization of RIMES, it was justifiable to make a more in-depth study of RIMES and its added value (TTF-01, TTF-02, TTF-07, TTF-16). RIMES related projects also constituted three out of six projects that have been completed so far. Their impact was possible to measure to some extent, while the other projects were at various stages of progress where project impact or outcomes have not been possible to determine fully.

Of the ongoing projects, *Strengthening tsunami warning and emergency responses: training workshops on the development of SOPs for the Indian Ocean and Southeast Asia* (TTF-04) by IOC-UNESCO is another tsunami focused and regional project. The *Early Warning Broadcast Media Initiative* (TTF-12) by the Asia-Pacific Broadcasting Union (ABU) and *Tsunami Awareness and Preparedness Tools and Materials Assessment Project* managed by UNESCO Office in Jakarta were also included in the review as examples of regional cooperation. Some recipients and partners of the RIMES, ABU, IOC-UNESCO and UNESCO Jakarta projects were interviewed face to face.

Organized by the Fund Secretariat, the evaluator held discussions with project partners and beneficiaries in three countries Thailand, the Philippines (1.5 days) and Indonesia (2 days). A detailed discussion was possible with the Focal Point of the Maldives RIMES Secretariat and Deputy Director-General, Maldives Meteorological Service, while he was in Bangkok. Additional interviews with partners were conducted over the telephone. These field visits and interviews allowed the evaluator to assess projects that contributed to the establishment and institutionalization of RIMES (TTF-01, TTF-02, TTF-07, TTF-08), EW and broadcasting media (ABU) (TTF-12), Building risk knowledge to enhance early warning (TTF-13), and

Making Provincial Communities Safer Through Disaster Risk Reduction in Development (TTF-09).

While each project can stand alone, effective early warning results from how well the four components of the Fund framework, i.e. risk assessment, monitoring and warning, dissemination and communication and national and community level response capacities work together. Through an examination of the synergies between the various projects and how they complement each other, as well as other existing capacities and activities, it was possible to assess to some extent their impact at the country level.

2.2 Limitations

The following limitations should be noted:

- It was not possible to review all the projects in depth. Given the time and budget constraints, the evaluator could not visit all the countries where project activities have been carried out. A comprehensive review of impact from all projects at country level, or a detailed comparative assessment across projects was not possible.
- Limited time in each country did not allow meetings on all projects targeting that country, or with all the project beneficiaries. In some offices staff turnover in the course of five years was high thereby interrupting institutional memory. In other cases, different staff from an office participated in different regional activities and it was not possible to meet all of them to assess the relevance and benefits from the various regional trainings and meetings.
- In the Philippines, an important recipient organization, the PHILVOCS was on a retreat and could not be consulted.
- Project partners at the national level were often not able to comment on the management of the Fund. This was due to the fact that they were not direct recipients of programme support and received funding through another organization such as UNDP, UNESCO, RIMES or ABU. Regional benefits were not always clear to some beneficiaries where the main activity was at the national level.
- While the evaluation aimed to examine the possibility of doing a comparison to similar Trust Funds, regional networks and organizations working in early warning systems, this was possible only in a limited way. Some regional networks had accomplished their mission and transformed into programmes such as the US-Indian Ocean Tsunami Warning System (IOTWS) Program that was funded by the USAID and implemented from 2005 to 2008. Another trust fund, ECHO, could be met for a limited time only and the regional programme officer was not available for a technical meeting. Germany's €45 million five-year German-Indonesia Tsunami Early Warning System (GITEWS) program with Indonesia could be discussed only briefly with the UNDP office in Jakarta because of limited time in the country. References are made to these programmes as appropriate.

- Completed projects above \$500,000 are expected to be evaluated externally according to the Monitoring and Evaluation framework of the Fund. By the time this evaluation was undertaken only the RIMES1 (TTF-02) and RIMES2 (TTF-07) had been evaluated externally and ABU Early Warning Broadcast Media Initiative (TTF-12) and UNESCO Tsunami Awareness and Preparedness tools and Materials Project (TTF-10) were still being evaluated in line with this policy. This limited the information available for impact assessment.

3. FINDINGS

This chapter provides the findings of the evaluation in accordance with the evaluation criteria and questions.

3.1 General

The Fund supports end-to-end early warning within the Indian Ocean and South East Asian countries, through a multi-hazard approach that is in line with the Fund's objectives and geographic scope, and primarily focus on early warning of coastal hazards such as tsunamis, coastal zone flooding, storm surges and cyclones. The Fund provides grants to Governments, inter-governmental and non-governmental organizations through submission of applications for funding. At this stage, as the only UN Asia-Pacific fund in this area of work, and to avoid spreading resources too thinly, the Fund gives priority to strategic initiatives at the regional level, including regional resource sharing arrangements, South-South cooperation approaches, and initiatives that can have a regional value. Existing Fund-supported projects have balanced a number of aspects of early warning as they were identified in the strategic plan of the Fund³, including:

- Using scientific risk maps for community planning and preparedness;
- Establishment of Standard Operating Procedures;
- Repositories of education and awareness materials that are used in regular national programmes; and
- Development of monitoring and warning services that provide effective support to lower capacity countries.

3.2 Performance assessment

3.2.1 Relevance

The Indian Ocean tsunami of 2004 revealed many gaps in the tsunami early warning system in the region from the lack of highly technical end of instrumentation to the community end of public awareness. The original focus of the Fund on only tsunami and end-to-end early warning was therefore appropriate and very timely.

Post 2004, there were other programmes that were rapidly developed to improve tsunami early warning in the Indian Ocean, such as the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) that was instrumental in establishing the ICG/IOTWS; numerous multilateral, bilateral, and non-governmental organization programmes, including the US, Indian Ocean Tsunami Warning System (US-IOTWS). Some of these programmes targeted the national level and primarily addressed the needs of the countries and areas worst affected by the 2004 tsunami. The regional focus of the Fund and

³ *ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness, Strategic Plan*, NY, 2009, p.12.

its coverage of both the Indian Ocean and South East Asian countries were complementary to those other initiatives such as DIPECHO, ADB and GFDRR, which all have a different focus. Regional focus was also essential for a hazard like tsunami that requires communication and cooperation across countries to transfer the early warning information down to the national levels. The Great Japan Earthquake and Tsunami of 2011 once again revealed the importance of regional cooperation and exchange of information in the region for an effective early warning.

An evaluation review in 2008 recommended the widening of the Fund's scope to cover other types of hazards. Officially from early 2011, in addition to tsunami, the Fund included early warning of other coastal hazards such as coastal zone flooding, storm surges and cyclones within its core areas of support. Partners and donors expressed mixed feelings about this change. Technical departments, such as the national meteorological and hydrological offices in most of the countries visited and interviewed welcomed this change. An integrated, multi-hazard EWS was regarded as more feasible and sustainable at all levels, particularly from the point of view of maintaining technical human resources. It was also claimed that a multi hazard EW human resource and technical capacity would provide better functionality and reliability for high intensity and low frequency hazards such as tsunamis. The tsunami EWS is easier to support when linked to the same institutions, trained staff and technology that monitor other hazards. Moreover, SOPs for tsunami can easily be integrated into the existing SOPs for the hydro-meteorological disasters; communities can integrate tsunami risk into their mapping and evacuation plans.

Broadening the scope to multiple hazards is therefore appropriate for more sustainable and efficient EW of hydro-meteorological disasters as well as tsunamis, and given the declining funds for tsunami, very timely for the future of the Fund. However, at the same time it can create more competition for funding. The Fund, when associated only with tsunami was unique in the region, whereas hydro-meteorological hazards have been addressed for a much longer period by other UN and non-governmental organizations as well as donors. Multi-hazard, in addition to end-to-end approach to EW could be viewed as too unfocused to be appealing to the donors and institutionally 'confusing' as some of the UN partners and NGOs also seek funding for similar programmes. The need to 'avoid overlaps' with others and the importance of 'defining a niche' were suggested. An effective communication and fund raising strategy could have promoted and supported this change.

At the programmatic level, synergies from multi-hazard approach have already paid dividends. Small Island States like the Maldives appreciate the multi-hazard as well as climate change support they have received as they face risks from a complex set of changes in climatic and other variables that cannot be treated in isolation. Bangladesh shares this view as a country of limited resources. The Fund's support to the Phase 2 of RIMES project that had a multi-hazard approach is also appreciated by its Members as the same national EWS can provide support for tsunamis as well as hydro-meteorological hazards as appropriate.

Where the partners, donors and recipients converged in their views more closely was the application of the Fund to the coastal communities of the region as an appropriate limit. From

a risk perspective, low elevation coastal zones of Asia are home to 13% of the regions population and 18% of its fast growing urban population exposed to tropical storms, sea-level rise and are more likely to be affected negatively by the climate change related extremes.⁴ As the Fund became more open-ended, the emphasis on the coastal communities was also regarded as a unifying aspect of the Fund that may need to be more emphasized in the future. The climate change focus is important to the countries and the donors. A recently funded project by RIMES and UNDP (TTF-15) explores the strengthening of EWS to advance climate risk management. Integration of CCA into existing EWS is a feasible approach. However, where the Fund can add value to existing initiatives and networks on CCA in the region, and the potential or obstacles for regional fund raising for CCA are not yet sufficiently articulated.

The Fund's future focus and its relevance are therefore less clear at this stage. Has it become too similar to other programmes? Some stakeholders have adopted a 'wait and see' position, looking at what the Fund will be able to demonstrate as its achievements and what other countries are contributing to this new outlook. As the competition for resources increases, the Fund has to become more strategic and communicate its relevance more forcefully to carry on beyond this cycle of funding.

3.2.2 Efficiency

The assessment against the efficiency criterion refers to the extent to which human and financial resources were used in the best possible way to deliver activities and outputs, in coordination with other stakeholders.

Since its inception, the Fund has been very efficiently managed with a lean administrative structure for its day to day management; an Advisory Council with the main donors as members and stakeholders as observers that now meets once a year; a Inter-Agency (Technical Appraisal) Task Force of the key stakeholder agencies that appraise the projects; and a Grants Committee composed of ESCAP programme and finance staff that look into financial accountability. Much of this support comes from two main donors, Thailand and Sweden, the partner UN agencies and ESCAP. Advisory Council and the Technical Appraisal Task Force members do not charge for their services, though few members pointed out that it could be time consuming, hence indirectly costly. The cumulative cost of the Fund's administration since 2005 is less than 5% of the funds disbursed, which is very reasonable for the complexity and the scale of the programme supported by the Fund. ESCAP charges 3% programme support costs to recover indirect costs of Fund management, such as technical advisory services, management oversight and administrative and financial management support. Implementing organizations of Fund-supported projects can charge 4% within the approved project amounts to cover their indirect costs. In addition, the Government of the Netherlands provided an in-kind contribution in 2008-2011 through funding of an Associate Expert to work on the Fund through the Government's Associate Expert programme with the

⁴From the RIMES and WMO Trust Fund project titled *Reducing Risks of Tsunami, Storm Surges, Large Waves and other National Hazards in Low Elevation Coastal Zones* that started in May 2011 (TTF-16), p.1.

United Nations. This additional position was valuable, particularly in strengthening the Fund's activities in monitoring, evaluation and advocacy.

The project overhead for the UN agencies and the ADPC as implementing partners is established at 4%. It has not been possible to establish the overhead and the percentage of organizational cost for each project. As a rule, partner organizations are expected to contribute to the budget in-kind or in-cash. This is important as it encourages the partners to plan for synergies with other resources. The level of contribution varies across the projects. For example, UNDP as a partner organization contributed an additional \$ 184,000 to the \$344,000 that the Fund had provided for the project on *Building Risk Knowledge* for Indonesia and Sri Lanka (TTF-13); IOC-UNESCO provided in-kind services (TTF-04); and ABU (TTF-12) used its studios and provided staff time. ADPC was also successful in raising additional resources for RIMES, while the NGO, Raks Thai, makes some contribution to the project, it utilizes half of the funding for its setup to provide the 'learning laboratory' for the project titled *Strengthening Community-Based Disaster Risk Management in Asia* (TTF-14).

There was no limitation on the size of the projects. They varied between \$80,000 and \$2.4 million. Of the 16 projects, two received less than \$100,000, seven of them between \$200,000 and \$400,000 and three between \$450,000 and \$600,000, and only four above \$1 to \$2.4 million. There was no obvious pattern to this variation, except for the RIMES 1 and 2 projects that included instrumentation and sophisticated technical inputs that were inevitably expensive.

Difficulties faced by some projects in the start-up phase resulted in the late use or non-utilisation of the funds programmed. These were more at the down stream end projects with multiple participants involved at the implementing and recipient end. More than the size of the project, it is the partner agency capacities to absorb and manage large funds that usually affect the rate of spending. It is also the nature of some capacity/institution building programme that require small but long term funding that may have affected the slow spending.

It is not always possible to 'fast track' development but the Fund had only one modality of funding for very diverse approaches from procuring and installing equipment to shifting national policies. A layered approach of giving small sums, then exiting if ineffective, or scaling up if successful, could have been more appropriate for some larger projects. This would have reduced the risk to the Fund, but at the same time increased the overhead cost of monitoring and administering. A very effective but also lean Fund administration and governance, and a very professional but narrow partnership base for selecting and monitoring the projects, had some limitations as a mechanism for a diverse and large number of projects.

Of the 16 projects, only two involve national government implementation, by the Maldives Meteorological Office (TTF-08) and Sri Lanka DMC (TTF-06), while the others are through various UN agencies, NGOs or regional bodies such as ADPC, RIMES and ABU. A few national organizations expressed their interest in directly accessing the Fund and commented on the additional cost and overhead of the intermediary organizations. While some proposals

may not have been accepted by ESCAP on the grounds that they were not technically sound, the prevailing perception among some stakeholders was that proposals were not accepted because they were nationally focussed rather than regionally focussed.⁵ It is true to some extent that the Fund was established with a regional focus as an appropriate model for tsunami EW. However, many of the projects are ultimately implemented at the national level and mostly are about the national application of tools and approaches developed at the regional level. A number of countries have developed significant capacities since the 2004 tsunami. Feasibility of their use as implementers, as part of regional partnerships, could have been explored. However, this approach would have required more direct monitoring by the Fund for accountability and compliance with the UN rules as well as for technical backstopping that could have resulted in a larger and more costly Fund Secretariat.

The importance of synergies with other relevant organizations and their regional and national programmes were highlighted in both the *Unmet Needs* and the Fund's *Strategic Plan* documents of 2009. Synergies among the UN agencies have been very good and mutually supportive. Participation of the most relevant UN agencies in the Advisory Council as observers and in the Technical Appraisal Task Force to select the projects provide a platform to discuss overlaps, complementarities hence an efficient use of resource and capacities. For example, the UNDP RCB project titled *Building Risk Knowledge to Enhance EW, Preparedness and Mitigation in Tsunami-Affected Countries* (TTF-13) complements an earlier UNDP RCB Regional Programme for *Capacity Building in Risk Reduction and Recovery*. It also extends from an ongoing collaboration with IOC-UNESCO Tsunami Unit, ICG/IOTWS Secretariat to develop *Guidelines for Tsunami Risk Assessment*. The Fund provided the additional resources to conduct national level training on the incorporation of the risk assessment into SOPs and response plans. When planned carefully, such synergies across the agencies and programmes can result in more efficient use of the resources and enhance the project impact.

Synergies of the Fund and its projects with the other players in the region could improve. For example, the European Union fund DIPECHO for DRR has supported ten countries in South East Asia mostly through NGOs at the downstream end of DRR for well over a decade. While DIPECHO funds only a few regional projects, such as the current regional DRR training by IFRC, there is a significant overlap between the two Funds in the methods and approaches used as well as the target groups. Currently, ECHO spends 10 million Euros every 18 months in the region, 2 millions Euros of which is for the regional level. This is a significantly larger fund only for the down-stream end of EW than the ESCAP managed Fund for the entire end-to-end funding for EW. Therefore, the Fund not only has to improve the dialogue with such donors, but perhaps also has to become strategic in selecting the knowledge gaps to fill.

⁵ The 2008 evaluation of the Fund also reports this perception. Philip Hall, *Evaluative Review 2008*, Final Report.

International NGOs and bilateral donors such as DFID, AUSAID and GTZ have been financing programmes in the region before and since the tsunami. Yet, there has not been a systematic and strategic dialogue with these donors and organizations at the Fund level. For example, the absence from the Fund portfolio of the established and experienced INGOs and regional NGOs, particularly the ones that have been operating at the community-based disaster reduction and public awareness end of the EW spectrum as the Fund beneficiaries, is visible. Due to the shortness of time, these organizations could not be surveyed to establish their reasons for this absence. A weak communication strategy and assumptions that the Fund is only for the tsunami and for a limited time period; perceptions that it is mainly a mechanism to fund RIMES and the UN agencies; or even the presence of larger fund facilities for this area of work such as ECHO, might have all contributed to this. Long term experience, established linkages and direct implementation capacity of the NGOs within the communities could have increased the feasibility of the projects at the down stream end of the Fund.

At the project level, dialogue and synergies are good across the different programmes, but there may still be duplication of work or a lack of learning from other similar experiences in the region. Significant amount of funds raised for the tsunami resulted in the over crowding of agencies and donors in a few severely affected countries, such as Sri Lanka and Indonesia. The Fund could have scrutinized potential duplication of beneficiaries and areas of support better. For example, in the two projects Sri Lankan Red Cross and Indonesian Red Cross appear as beneficiaries of local SOPs, or community based DRR, whereas these organizations had received similar guidelines and significant training support from the IFRC and other Red Crosses/Red Crescents. The Fund could have used its limited financial resources more feasibly and to complement others at the national level particularly in the area of community-based DRR or strengthening of local authorities such as in contingency planning where others such as the IFRC, DIPECHO and INGOs had already invested in significantly.

A notable and exceptionally positive example is RIMES1 (and RIMES2) that built upon and operationalized the US-IOTWS tools that were already developed with significant funding from USAID.⁶ In this example, bridging donors, and providing continuity for an enhanced impact is a credit to ESCAP and to ADPC as the partner organization.

Another positive example with some caveat is the project titled “*Making Provincial Communities Safer through DRR into Development*”, (TTF-09) managed by UNDP in Indonesia. This project builds on an earlier approach supported by DFID funding since 2007 (\$8 million) and complements it. Synergies and complementarities are well planned in this project and the locations for piloting the implementation “one mountain, one coastal community” may have been neglected in the past and deserved attention. However, the strategic contribution of the Fund in a country that has planned 1 billion of its own funds for

⁶ From the RIMES1 evaluation by Walter Welz.

community level DRR⁷ and received technical and financial support from funds and donors such as GFDRR, DFID, the Australia-Indonesia Facility for DRR, ACEH Reconstruction Trust Fund, etc., could be questioned. While there is no question on the value added from any funding for rather under funded subjects like EW and DRR, the Fund is too small to spend \$2 million (around 20% of the funds dispersed at the time) in one country of significant donor attention and national commitment and where demonstration projects and policy advice had been possible under previous donor support such as DFID. Perhaps the Fund has to look for filling 'strategic gaps' such as in the case of 'Assessment of Makran Tsunami Hazards' that can put Iran and Pakistan at risk (TTF-11), or in the example of coordination and exchange among the broadcasters in the region by ABU (TTF-12), rather than in countries and on subjects where significant other funding and political commitment exist.

One national partner from a country of significant attention expressed concern that since the tsunami, too many donor driven projects, workshops, guidelines and strategies have been issued by too many different organizations that are not streamlined. Another questioned the value added from spending funds on too many pilots but not enough funding being made available for any significant scaling up. While the importance of end-to-end approach is recognized and appreciated, value added from the Fund at the downstream end can be more debatable where for decades there has been more investment on multi-hazard approaches by the NGO community and the donors. There seems to be less competition at the upstream end of EW. Professional and established inter-governmental mechanisms such as IOC-UNESCO and WMO, or self-selected membership programmes such as RIMES support effective coordination among the stakeholders and provide efficiency of scale.

Maintenance of EW monitoring facilities is difficult to keep up for many countries in the region. Sophisticated equipment such as advanced sea level gauges needs maintenance that poor countries cannot keep the capacity for; therefore, they appreciate the services provided by RIMES. Many RIMES countries can receive warnings issued by the regional tsunami service providers (RTSP) of the IOC system, but can not maintain the capacity to model the impact that is now provided by RIMES. The particular claim that RIMES meets the requirements of many of its lesser developed member States by either developing its own tools and solutions or drawing upon products from other countries, and by adding value through customisation of such products with a minimum investment is another important and well appreciated characteristic of the project that can be used as a benchmark for efficiency in other regional projects.⁸

3.2.3 Effectiveness

The assessment against the effectiveness criterion refers to the extent to which the expected objectives or outcomes of the Fund and its projects have been achieved.

⁷ From the interview with BAPPENAS. However the details of this national funding could not be substantiated due to limited time in the country.

⁸ From the note by Ramraj Narasimhan on RIMES projects, March 14, 2011.

The Fund is well appreciated by the stakeholders. According to the stakeholders interviewed that are directly served by the Fund, it is efficiently administered and rules and procedures are properly observed. Governance has also been served well; documentation for the Advisory Council and other meetings were provided timely and followed up systematically. There has been a collegial relationship between the UN partners and the Fund's administrator(s).

The Fund has been supporting effectively the projects that address most of the 17 priorities and recommendations identified in the *Unmet Needs Report 2009* that are clustered around the five elements of effective EWS, namely Governance and Institutional Arrangements; Risk Knowledge; Monitoring and Warning Services; Communication and Dissemination of Warnings and Response Capability.⁹

The effectiveness of each and every one of the 16 projects and their impact on the beneficiaries were beyond the scope of this evaluation. Most projects have been effective in developing guidelines, methods, procedures and in their training and testing. These are often collectively undertaken with the stakeholders and beneficiaries hence the ownership is high. From a general perspective, as noted in earlier sections, impact from upstream activities that have been managed by professional regional organizations, such as RIMES and IOC-UNESCO projects were more evident. This is partly due to the technical nature of work and the partnership in these projects through the existing professional networks that regularly meet. It is also for the fact that these regional networks are more focussed and have always linked well with the national institutions that facilitates the transfer of knowledge from the regional to the national.

To give an example, Instrumentation out of RIMES1 project namely the near real-time sea level stations that were established/upgraded in the Philippines and Viet Nam and seismic stations that were established in Myanmar, the Philippines and Viet Nam, while expensive, have improved the effectiveness of EW in these countries and as such contribute to the EWS in the region. But more importantly, the agencies appreciate the reliable maintenance provided by RIMES for these sophisticated instruments and the training of the technical staff of agencies on station operation and maintenance. For some such as the Philippines technical capacities will be built in a sustainable manner quicker, whereas for the less developed and small island states this service will be desirable over a longer period due to budgetary limitations to keep technical staff. Ownership of the stations has already been transferred to the National Government counterparts.

According to the technical departments in the Philippines and the Maldives the multi-hazard focus increased the effectiveness of RIMES. Continuity of RIMES through the Fund and other donors enabled the provision of a broader range of services to its members such as short, medium and long-term weather prediction and modelling and localized hydro-meteorological risk information within the framework of WMO. The current system of IOC-

⁹ Expanded from *Third International Conference on Early Warning, Developing Early Warning Systems: A Checklist*, ISDR, 2006.

UNESCO can issue warnings but several RIMES countries cannot continually model it for themselves due to staff shortages and restricted budgets. RIMES provides this service to the less resourced countries in the region. One technical department described this role as the ‘interface between the global WMO and the national systems’ and a very effective way of supporting the less resourced countries in a demand driven way.

With an annual recurring core cost of US\$2.5 million, RIMES claims that it can support its members and collectively help them save in the order of several million dollars annually.¹⁰ Several national institutions met in this evaluation confirmed the financial efficiency of a central facility like RIMES for the less resourced countries and praised the Fund and ESCAP for giving it the credibility as it was established.¹¹ Countries that can provide their own services and some professional networks, while appreciating the important regional role played by RIMES¹, believe that at this stage absence of RIMES would have been less important as the EW systems that have been developed since the tsunami in the region can adequately cover the needs of the countries. This coverage will be more passive and less tailor-made to the specific needs of countries, whereas RIMES is very effective in responding to individual demands from the countries. The role of RIMES in service provision is not in contradiction but complementary with the IOC-UNESCO strategy to develop national capacities. For the less resourced and smaller island developing states capacity development is not limited to training of staff but also relates to the financial ability to afford qualified technical staff. This is what makes RIMES desirable and more feasible as a central capacity owned by them and servicing them. At the down stream end of EW, there is less regional coordination and cooperation among the plethora of networks, organizations and activities at both regional and national levels. There is often no single national organization that can cover all aspects of CBDRR and most CBDRR activities are pilots that cannot have a meaningful impact unless they are scaled up. This requires commitment and dedicated funding from national budgets that are not easily forthcoming. The weaknesses in the chain of capacities and resources from the regional to national inevitably reduce the ultimate effectiveness of activities at the national level. In some other projects, part of the funds was allocated for the national implementation of the regionally developed and shared standards and knowledge that may have helped to increase their impact at the national level.

High turnover of staff from national disaster management organizations, and even from technical offices, were also stated by some interviewees as being among the reasons for reduced impact and effectiveness at national level, particularly from the training based projects.

Effectiveness at the project level, to a large extent, depends on the competency of the implementing organization. Most partners of the Fund have proven technical and

¹⁰ From RIMES’s presentation on Benefits of a Collective System.

¹¹ At the national level, generally the NTWC takes the lead on tsunami monitoring and warning, usually the national meteorological organization conducts monitoring activities and issues warnings in conjunction with the NTWC and/or Emergency Operations Centres. Some countries can not afford to have monitoring staff on duty 24/7 to issue warnings on the appropriate levels or lack staff and resources to maintain this at remote locations.

administrative track record in the areas of EW that they received financial support from the Fund. There are exceptions, however, such as the Asia-Pacific Broadcasting Union (ABU) that has been implementing the “Early Warning Broadcast Media Initiative” (TTF-12). While a very effective and useful network of broadcasters, ABU had limited experience with both the substance and the knowledge base of the subject that they were supposed to train the broadcasters on. Some broadcasters whom had participated in the earlier ABU workshops registered their disappointment with the effectiveness and appropriateness of training. This seems to have changed positively over the course of the project implementation. According to the recent evaluation of the project, ABU has learned some valuable lessons during the implementation of the project and gained experience; and became more relevant to the recipients. Hence, its effectiveness may have increased.¹²

Capacity building of regional institutions that are not normally engaged in EW projects but can have a useful role, such as ABU, can be a valid approach for the Fund. In all projects of the Fund capacity building has been a key objective where the implementing organizations are assumed to have the relevant substantive capacity from which to support others. In the ABU project where this was initially missing, the Fund should have played a far more active role to link ABU with the necessary knowledge base and experience. There was significant work done on the role of media by the ISDR, and at the national level, by the UNDP. ECHO in South East Asia had supported the BBC Foundation in a similar regional work that undertook training and development of material for the media. The Philippines has very experienced broadcasters in this subject, who could have been tapped as a resource for ABU trainings.

An engagement with these other examples by ABU, or their facilitation by the Fund could have improved the effectiveness of the project. However, working in this modality of supporting the capacity gaps of the implementing partners would have increased the transaction costs and required a more substantive Fund Secretariat; or a stronger monitoring role should have played by the partner UN organizations. In the current structure of the Fund, such support would not have been feasible as time consuming and costly. The Fund needs to judge better the consequences of choosing the less experienced implementing partners and not putting in place a mechanism to support them, or it has to choose the safer option of tested partners.

The overall effectiveness and the greater collective impact from all 16 projects at the regional level are not immediately evident. Projects at national level, considered complementary programming more systematically, whereas at the Fund level the demand driven nature of the Fund makes it difficult to sequence and connect projects for greater effectiveness. For example, impact from regional activities on the national level takes time. Sequencing of the projects and activities could have been better planned with this in mind.¹³

¹² From a meeting and correspondence with Walter Welz, the evaluator of ABU project. The evaluation was not finalised by the time of this review.

¹³ This weakness was raised also in the 2008 evaluation. Philip Hall, *Evaluative Review 2008*, Final Report.

RIMES1, RIMES2, and the recent RIMES and WMO joint projects (TTF-16) are good examples of this effective sequencing that was planned carefully by RIMES and received timely support from the Fund. Another positive example is the UNDP-APRC support to Timor-Leste on “*Strengthening EWS for Extreme Weather Events to Advance Climate Risk Management*” (TTF-15) where RIMES is also a partner. This national level work connects well with the regional work undertaken by RIMES.

The Fund has helped to foster sharing and collaborating for greater effectiveness among the Fund partners at the individual project level. At the regional level, projects may appear more as a collection of excellent activities that span the whole spectrum of the end-to-end approach to EW that are not always planned together in a holistic manner. Similarly, while the risks from climate change and climate change adaptation are increasingly more integrated at the individual project level, the objective of the Fund to ‘bridge communities of practice working on disaster risk reduction and climate change’¹⁴ has not been achieved at the Fund level. There are currently no environmental organizations as implementers associated with the Fund projects regionally or internationally and the subject of CC is tackled largely by the DRR community.

3.2.4 Impact

Impact refers to whether the Fund has contributed to changes and effects, positive and negative, planned and unforeseen, with respect to the target groups and stakeholders.

As discussed in section 2, on methodology, assessing impact from the Fund on the IOTWS has its limitations, given the complexity of the development of a regional EW system and the national capacities required to support such a system. However, a starting point for a discussion of impact would be in relation to the overall objective of the Fund, namely the establishment of an effective EW system for tsunami in the region. This section will therefore look at the progress in relation to this overall objective and the potential impact in terms of lives saved. It will then provide an insight into the role of the Fund in relation to any positive change/impact observed. It should be remembered that at the time of this evaluation review few projects were concluded for any measurable long-term impact. Therefore, impact from the Fund is viewed from a more general and regional perspective.

There is no doubt that the progress in terms of a regional EW system for tsunami for the Indian Ocean from 2005 to 2011 has been remarkable. As evident from the eighth session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System¹⁵, Australia, India and Indonesia are on track as Regional Tsunami Service Providers, along with RIMES, to take over as the Interim Advisory Service providers, JMA and PTWC. An effective network and regional coordination mechanism has been established,

¹⁴ Strategic Plan 2009, p. 8.

¹⁵ Intergovernmental Oceanographic Commission of UNESCO, *Eighth Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System*, Executive Summary, Melbourne, Australia, 3–6 May 2011, ICG/IOTWS-VIII/3s, Perth, 25 May 2011.

including development of standards and coordinated work on SOPs and simulation drill exercises. As also observed by this evaluation, the early warning capacities for tsunami at the national level has been significantly enhanced. In summary, there is an EW system for tsunami in place today that was not in place in 2005.

An EW system is most effective for far field tsunamis. For near field tsunamis and end-to-end approach to EW implies a strong focus on education and awareness programmes. There is some evidence that education has improved capacities also for near field tsunamis in high-risk areas, such as Indonesia and the Makran coast of Pakistan since 2005.

Ultimately, early warning is about saving lives. The background study “Potential Life Saving Benefits of a Tsunami Early Warning System in the Indian Ocean” illustrates the potential impact this system provides in terms of saving lives¹⁶. As for far field tsunamis, if assumed that an event like the tsunami of 2004 has only a 1-in-5 chance of recurring in the next century, then the potential lives saved in this event in the last 100 years can be scaled by a 0.2 probability. When this is done, the number of lives potentially saved by a warning system in the next 100 years is about 35,000, or 350 lives per year, on average. However, with the growth in population and change in settlement patterns, this number is likely to be too low. Even if the growth of vulnerable populations is only 1 percent per year, the number of people at risk in the next 100 years will be almost 3 times as great as those who were at risk in the last 100 years. This would imply that lives saved in the next 100 years would be about 1,000 per year, on average. In addition to saved lives, significant number of injuries will be reduced. As for financial savings, tsunamis, giving limited lead-time, do not allow for the same reduction in economic losses to property as other disasters with more lead-time. However, one can assume, that from the end-to-end EW approach itself, with risk assessment as one of its components, improved planning and management for resilience, contribute to reduction of economic losses from damage to property and infrastructure in the event of a tsunami.

Estimates for the proportion of lives saved through public awareness and community-based preparedness are more variable. However, there seems to be enough evidence to suggest that such programmes, if carefully designed and sustained, can also add to saving lives.

If one then assumes, that the end-to-end EW system established for the Indian Ocean contributes to the potential saving of lives, the question is the degree to which the Fund has contributed to such potentially positive impact. The facilitation of the regional EW system for tsunami through the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System was assisted by IOC-UNESCO, which deserves significant credit. First and foremost, the efforts were led and advanced by the countries themselves. Within this overall picture, of the countries themselves and IOC-UNESCO, the Fund did play a role as one of the few available financial resources for regional TEW. As observed by this evaluation, the Fund played a role for supporting regional projects linked to the ICG. As for

¹⁶ Thomas J. Teisberg, *Potential Lives Saved by a Tsunami Early Warning System in the Indian Ocean*, 2011.

near field tsunami, the Fund has been one of a wide range of players in Indonesia, but has played a more significant role for the Makran fault through supporting a project (TTF-11). Contribution to activities that supported the capacity of least developing and island developing states, such as Cambodia, Myanmar and the Maldives through RIMES was relatively unique for the Fund, and thus achievement can be more easily attributable to the Fund projects.

In addition to the potential lives saved by a tsunami early warning system, there are certain benefits in terms of preparedness for other hazards at both the upstream (instrumentation, policies, national institutional capacities) and the downstream level (management at the sub-national and community level) that the Fund has contributed to through its multi-hazard focus. It goes beyond the evaluation to quantify these, but the figures above should be viewed in this context.

3.2.5 Sustainability

The assessment against the sustainability criterion refers to the likelihood that the positive effects of the Fund or the projects will continue in the future.

Stakeholders look to the Task Force and the Advisory Council, as the Fund bodies charged with assessing and approving project proposals, to be attentive for the long-term sustainability of proposed projects and to ensure that the linkages with other funding sources are fully explored. The *Guidelines for Completing the Grant Application Form* clearly communicates these requirements to the organizations that submit project proposals. The technical appraisal process also ensures that projects financed through the Fund have a strong component of sustainability built into their plans. For example, this requirement is stated as the main reason for RIMES to move out of ADPC, which could not guarantee to underwrite continued future funding to sustain it.

Sustainability is a particular challenge for TEWS as a tsunami is a rare event. Many initiatives launched after the 2004 tsunami with international donor support have now been completed, and the Fund remains one of the few available mechanisms to take this work forward and help to ensure its sustainability. In addition, it is being used to support long-term initiatives to develop adequate institutional arrangements for early warning (e.g., regional early warning arrangements and SOPs).¹⁷

Despite the appreciation of RIMES services by a number of its membership and its good reputation with the donors, fund raising to sustain its core businesses still remains a pressing need for RIMES. One major indicator for sustainability of TEWS is the level of on-going financial support from national government budgets. Some donors may have an interest in providing funding to RIMES, but the long-term sustainability can happen only if the members will provide small but regular funding to maintain this service. RIMES Working Group on financial sustainability of RIMES recommended that member States upon signing

¹⁷ 2010 Annual Report ESCAP Multi-Donor Trust Fund for Tsunami, Disaster and Climate Preparedness in Indian Ocean and Southeast Asian Countries (January – December 2010), ESCAP, March 31, 2011, p.10.

the RIMES cooperation agreement to contribute once-in-a-decade member State contribution of 1% of the annual gross national budget of its National Meteorological and Hydrological Services. This recommendation is under consideration by RIMES Council. Maldives and India are the only two countries that have paid so far, respectively US\$12,000 and US\$100,000. Another potential income from the membership is the surplus contributions from member States aimed at providing capacity building assistance to other member States. So far, only India expressed the possibility of making additional surplus contributions. The Philippines, despite their interest, explained that transfer of such funds have to be government to government and through the Ministry of Foreign Affairs. As RIMES is not attached to a country, transfer of funds may not be easy and the Philippines may not be the only country that faces the issue of an appropriate modality of payment. RIMES is widely used in the region by other organizations that also contribute to sustaining their core services.

Different models have been suggested to support the long-term sustainability of RIMES. One option could be to become an official Regional Tsunami Service Provider (RTSP) that requires being attached to a country. RIMES is not attached to the official Thai warning system, which rules out this option. Another option cited was for RIMES to become a convention, for example similar to the model of European Centre for Medium Range Forecasting (ECMRF) that is part of the European Union. The process of becoming a convention can take 5-10 years. The Fund has been the key vehicle for the creation of RIMES and gave a lot of credibility to it in the process. A third option proposed by a number of organizations and donors is for the Fund to tie back 'the umbilical cord' between the Fund and RIMES, and through the Fund attach RIMES to ESCAP to provide the much needed inter-governmental mechanism. For ESCAP to get such a mandate however, a resolution will have to be proposed by a member State. This evaluation could not explore the feasibility and sustainability of any of these options. However, it is worthwhile to highlight the complexity of long-term sustainability of some positive impacts from the Fund that are not always easy to foresee and foster.

A successful example of institutional sustainability contributed by the Fund that can also become a model for RIMES is the project on Tsunami Awareness and Preparedness Tools and Materials Assessment Project (TF-10) managed by UNESCO/Jakarta. This work builds on Canadian International Development Agency (CIDA) funding that provided \$5 million to Indonesia for EW, \$400,000 of which was earmarked for a Jakarta Tsunami Information Centre (JTIC) to serve Indonesia only. JTIC is a national programme located in Jakarta and supported by UNESCO Science Sector and IOC-UNESCO. Through the Fund project, JTIC was able to extend its role from a country service to provide services to Thailand, Philippines and Timor-Leste. Based on this experience, the ICG/IOTWS at its 8th Session supported the concept of JTIC expanding its role to develop as an Indian Ocean Tsunami Information Centre (IOTIC) in the next UNESCO biennium (2012-2013). Sustainability of the focal points in each partner country beyond the life span of this project is of course another challenge that many of the projects supported by the Fund faces.

A well functioning EW system by nature requires maintenance of the equipment, frequent drills to test the SOPs, regular training of the staff in key institutions and the public, updating

the risk assessments and the plans at the community level, scaling up the programmes to cover all vulnerable areas and groups, and much more. Sustainability of these cannot be met out of the Fund alone. At the same time only pilots, tests and innovations without fostering linkages with national policy and strategy for EW will not achieve lasting results. Organizations such as UNDP and IOC-UNESCO are well placed partners to promote sustainability with the national governments, but many others do not, or may not be able to plan sufficiently for what happens at the national level beyond a projects' life span. In the end, key to sustainability is the national commitment to EW. ESCAP's substantial power to convene the Member States and policy influence remains under-utilized for this purpose.

3.3 Other assessments

3.3.1 Synergies with ESCAP DRR programme

ESCAP has been actively involved with disaster management, preparedness and risk reduction for many decades with expertise on the socio-economic development processes and statistics that are critically important for understanding vulnerabilities to hazards and for managing disaster risks. Several disasters related regional cooperation mechanisms related to disasters have been developed by ESCAP over the decades. Among these four are directly relevant for the Fund:

- **ESCAP /WMO Typhoon Committee** was established to promote and coordinate the planning and implementation of measures required for minimizing the loss of life and material damage caused by typhoons in East and Southeast Asia.
- **ESCAP/WMO Panel on Tropical Cyclones** is the organization equivalent to the Typhoon Committee serving the Indian Ocean.
- **South-South Cooperation with UNDP Special Unit on South-South Cooperation**, it is an Asia-Pacific Regional Cooperation mechanism for Disaster Risk Reduction established in late 2007.
- **Committee on Disaster Risk Reduction** was established at the Commission's 64th Session in April 2008 as a new inter-governmental committee that demonstrates the priority attached to this subject by countries of the region.

ESCAP also has a small budget to assist developing member States to address disasters. The political role played by the Commission, alongside ASEAN, in Myanmar after cyclone Nargis was brought up as a commendable achievement practically by all the missions, donors and partner organizations during the interviews. Convening power and political leverage of ESCAP are regarded as its strengths that are stated to have been 'under-exploited', for example, in advancing disaster risk management policies, or cooperation for data sharing so critical for EW. Fostering exchange of experiences and knowledge between the Member States by facilitating, for example, the presentations of Pakistan floods for lessons learned at a meeting in China was another example cited as a praiseworthy exercise to be repeated more frequently.

Entrusting the Fund as its 'home' with ESCAP is a sign of confidence by the international community. The Fund is so far the biggest of well over a hundred trust funds ESCAP manages. ESCAP's excellent reputation and authority adds significant credibility to the Fund with the member States as well as the donors. High-level of ownership of the Fund by the UN partners is also enhanced due to its management by ESCAP as a regional UN entity. All of these raise expectations from ESCAP to assume a vital role in nurturing the Fund. A strong institutional commitment from ESCAP can influence the Fund's future positively. This may require linking the Fund more strategically with the core business of ESCAP. The recent move of the Fund from the Programme Management Division to ICT and DDR Division can facilitate this. The move towards a more corporate fund raising approach that is planned by ESCAP can also benefit the Fund.

3.3.2 Governance (Advisory Council) and Advisory mechanisms (Inter-agency Task Force)

The Advisory Council makes policy and funding decisions for the Fund, currently with Thailand and Sweden as the only two countries as members. This may be a fair representation but one that does not foster engagement of others in the Fund's administration and its visible representation at ESCAP meetings. The Fund is viewed by some as being too 'exclusive' while setting future policies, attracting funders and giving visibility to the Fund would call for a more 'inclusive' approach. A member State raised the same point that 'nobody regularly promotes the Fund at ESCAP meetings' as Sweden is not a full member State and Thailand as the founding member naturally might not want to dominate the Fund.

This limited representation reduces visibility for the Fund and its promotion among the member States and potential donors. A government representative suggested inclusion of a few member States in the Advisory Council to change the 'donor club' perception to a stakeholder representation. A similar desire to be represented from the start, not only as observers but also as full members, was also voiced by one of the UN agencies. For example, it was stated by one observer that the implications of expanding the scope to an all-hazards approach was not sufficiently discussed in the Trust Fund with the partners as they were only observers.

Currently, it is still unclear who is responsible for vision setting for the Fund. Members of the Advisory Council or the Task Force are not fully performing this function. Sweden might not be able to make another donation to the Fund at this stage, and hence may lose its seat. This will leave only Thailand as a full member, which may in fact provide the Fund with the opportunity to rethink a governance structure that is more appropriate to the current needs of the Fund. In this process of redesigning the governance, the message voiced in the interviews that ESCAP could have been more proactive in engaging with the Fund's partners and broader stakeholder countries on a more regular basis can also be addressed.

In administering the Fund, ESCAP draws upon its own multi-disciplinary capacity as well as the specialised knowledge of other UN organizations. This is well appreciated and the professional rigour of the appraisal process is well known. Current stakeholders consider the

proposal process to be easy to access and expedient in its outcomes. At least one government and one agency stakeholder highly praised the application and selection process as ‘the best they came across so far’ and ‘far more flexible than many other donors’. Stakeholders are unanimous in their view that the existing qualification criteria and the proposal format that the 2008 evaluation advised to be improved are practical and clear. However, the assumption by the 2008 evaluation review that a simpler and less complicated format would encourage the smaller and less resourced organizations to apply for funding has not been materialized. It is still the larger and mostly the UN organizations that benefit from the Fund.

In six rounds of selection, and considering that some proposals were resubmitted more than once, the approval rate has been between 1 in 4 to 1 in 5. This evaluation could not review all the proposals to determine the reasons for their selection or rejection. It is assumed and also confirmed by perceptions of most stakeholders interviewed, that the process of selection is rigorous and fair. The number and range of proposals, on the other hand, appear to be low. This may be explained partly by the lack of an aggressive promotion and communication strategy with a wider range of stakeholders. The Climate Change community as well as the international and regional NGOs are not engaged in the Fund. National Governments feel rejected on the basis that they are not regional bodies. Some feedback as to why a proposal is refused can help clarify such concerns and strengthen transparency and learning about the Fund’s priorities and criteria.

One partner raised the fact that the Fund has never been a strategic partner as it was assumed to have a limited life span: ‘when you know the Fund is not likely to continue why you should spend time building a partnership with it?’. Funds like DIPECHO and GEF, or donors like DFID and SIDA are cited as examples of strategic partners that have long-term commitment to a theme.

Few suggestions were made to improve the selection of proposals. A number of national technical departments expressed interest in becoming a reviewer from their vast experience of implementation, which the Fund should consider in the future. A member of the Task Force also raised the difficulty of a critical review of the submissions when the majority of the partners funded so far are also members of the appraisal group. Broadening of the project appraisal process to include some relevant national technical institutions will also change the perception that UN agencies represented on the Task Force benefit more from the funding. The Fund’s approval procedures might at times be slow as it may take time from submission to approval. A UN agency stated that their first proposal took one year and the second one six months to be approved. After approval, the Fund is efficient and provides good and timely administrative support.

3.3.3 Quality Assurance by the Fund

The Monitoring and Evaluation (M&E) Framework of the Fund provides for quality assurance of the specific projects it supports, an annual self assessment of the Fund captured in the Annual Reports, and independent external evaluations of the Fund, the first of which was conducted in 2008.

Monitoring of the projects is done through bi-annual reporting by the project implementers to a well designed structure. These 'Project Progress Reports' account for the achievements more at the activity level; information at outcome level is usually limited. A simple risk log added to the progress reports could help to capture and share problems and issues early on and in a systematic manner. Projects are now more regularly visited by the Fund's administrator than it had been in the past. This will improve direct monitoring and can contribute to synergies across the projects, as well as promotion of and learning for the Fund and its partners. Project evaluations are not systematically shared with the Fund. Out of the six completed projects and the three external evaluations initiated or completed by the time of the review, this evaluator could access only one. The Fund is not involved in the process of selecting the evaluators and does not provide a format for it. As the only learning tool available to the Fund, a minimum standard should be aimed for the end of project evaluations. A process of learning from these evaluations should also be planned for all relevant stakeholders and donors. As a minimum, all evaluations and management response to them as well as the Progress Reports should be shared on the Fund's website, similar to the mid-term external evaluation review and Annual Reports of the Fund that are already on the web site. These few measures may increase the workload for the Fund's administration, but it will also improve the accountability and the learning process. Involving donors and staff from national technical departments and other relevant projects in monitoring missions were also suggested during the interviews.

3.3.4 Resource Mobilization

The Fund's future largely depends on its ability to attract new financial resources. Since its inception, in addition to the two main donors that were instrumental in establishing the Fund, Thailand and Sweden, additional smaller financial contributions were received from the Governments of Turkey, Nepal and Bangladesh. At the time of this evaluation, these donors were not able to make further contributions to the Fund for very different reasons. SIDA has reduced its budget for the region. It is in the process of reviewing its portfolio for the region and will only know what will be funded by the beginning of 2012.

SIDA will focus on truly regional organizations such as ADB and ESCAP and not on a collection of countries. Its focus will be more likely on environment and climate change adaptation rather than DRR. Sweden is more into core funding to the UN than project funding that goes through the Ministry of Foreign Affairs. If there will be any future funding for the Fund it may come under a package to ESCAP to reduce the transaction cost to SIDA of managing too many projects (25% reduction in staffing is envisaged). Priorities will be defined through a dialogue between SIDA, ESCAP and the member States. A South-East Asia CCA Platform with Swedish Environment Institute (SEI) and UNEP is open to everyone with the objective of harmonising knowledge. The Platform proposed to bring together the DRR and CCA communities that the Fund should consider participating. Unlike Sweden, many donors in this region, such as Finland and Norway, are bilateral or multi-country but not regional. Dialogue among the donors of the region is not very strong, particularly at regional level.

| Year | Contribution (US\$) | Donors |
|------|---------------------|------------|
| 2005 | 2,500,000 | Sweden |
| 2005 | 10,000,000 | Thailand |
| 2007 | 2,000 | Nepal |
| 2008 | 65,585 | Sweden |
| 2008 | 100,000 | Turkey |
| 2010 | 10,000 | Bangladesh |
| 2010 | 100,000 | Turkey |

Table 1. Donor contributions

The Government of Thailand has been truly commendable for its vision to initiate the Fund and for providing the lion's share of the finances that are recognized by all stakeholders and donors. The Government of Thailand expressed some disappointment that other donors have not come forward with further contributions. Now that the Fund has broadened its scope to a multi-hazard framework, Thailand expects a fund raising strategy from ESCAP to fulfil this expanded mission that it may consider supporting in the future. All missions visited that received support from the Fund expressed great appreciation of the Fund and ESCAP and conveyed satisfaction with the support to their countries. As for the continuity of contributions to the Fund by the smaller donors, one government expressed that it could have continued with its annual funding. However, there has been no regular communication with the smaller donors to keep them engaged in the Fund and reengagement of the headquarters at this stage is difficult as the momentum is lost. Another small donor stated that its contribution was from the headquarter funds, but continuity of funding at this stage is unclear. One Mission confirmed the possibility of up to \$20,000 from an International Committee Fund. If followed up well, these and discretionary funds from the missions in Thailand can potentially become a small but steady source of income for the Fund. These small donors need to be kept informed and involved in the Fund more actively. They cannot only provide funding but can also profile the Fund well from the Fund's achievements in their countries.

Some of the concerns expressed by stakeholders in the course of the 2008 Evaluative Review may still remain valid: Stakeholders are focusing their efforts on TEW through representation in other bodies (e.g., IOTWS); and stakeholders are inclined to contribute through bilateral rather than multilateral routes, or directly to the UN agencies. Bilateral funding and earmarking for countries rather than non-earmarked and regional funding is the pattern for the majority of donors. There are many global funds that can attract funding but regional funds are rare and fewer mechanisms exist for regional funding. Tapping into the CC funding is also problematic at the regional level as much of it is planned at the national level.

The Fund also needs better branding. Currently it is too diverse to be associated with any particular area of EW. Other than the RIMES project no other activity is widely known, or associated with the Fund. As for branding through the RIMES, according to some stakeholders ADPC profiles its RIMES connection well but the Fund does not publicly take

enough credit for it. While it is a good development principle that the ownership of the projects is established, at the same time future funding to some extent depends on how well the donors and stakeholders are aware of the Fund's achievements. Currently, there is no committed group of donors to drive the Fund. Efforts need to be intensified to develop a fund raising strategy and to engage potential donors in the Fund.

4. CONCLUSIONS

Indian Ocean countries are significantly better prepared to issue EW in the event of another destructive tsunami than they were before 2004. Many communities would now receive timely warnings and know how to act, and lives would be saved. The Fund is one of the several regional initiatives that have contributed to this positive change. For example, it has made significant contribution to instrumentation where it was critical for a complete EW in the Indian Ocean and South East Asia; to its maintenance through support for RIMES; to supporting the networking on SOP development and maintenance through IOC-UNESCO.

The Fund remains one of the few available regional financial mechanisms to support EW, including areas of less donor attention. Many regional initiatives launched after the 2004 tsunami with international donor support have now been completed. These programmes mostly targeted the national level and primarily addressed the needs of the countries and areas worst affected by the 2004 tsunami. The regional focus of the Fund and its coverage of both the Indian Ocean and South East Asian countries were relevant and complemented those other initiatives. The Fund's support to work in areas of less donor attention, like the Makran Fault and the South China Sea TEW that are at risk from tsunamis but were not affected by the Indian Ocean tsunami in 2004, are appropriate and will contribute to reducing future risks from tsunamis.

Multiple-hazard and coastal area support of the Fund are appropriate. In 2009 (effective from March 2011), the Fund had broadened its scope to include overall disaster and climate preparedness within the Fund's core areas of support. This change is appreciated by the member States as the same national EWS can provide support for multiple hazards more efficiently. Focus of the Fund on reducing risks for the coastal areas of the region that suffer from these hazards is equally appropriate in ultimately helping to reduce the risks for the communities living in these high-risk areas.

The Fund's support for the less resourced and Small Island State is well appreciated, particularly the support through RIMES that meets the requirements of many of its lesser developed member States by either developing its own tools and solutions or drawing upon products from other countries, and by adding value through customisation of such products with a minimum investment. This provided an economy of scale and a reliable service for the countries that cannot easily maintain a full scale early warning system due to resource constraints.

The Fund is efficiently administered and rules and procedures are properly observed. Governance, the Advisory Council, as well as the member States are well served by the Fund.

Synergies among the UN agencies and the Fund's administrator(s) have been very good and mutually supportive.

ESCAP's excellent reputation and authority adds significant credibility to the Fund with the Member States as well as the donors. High-level of ownership of the Fund by the UN partners is also enhanced through its management by ESCAP as a regional UN entity. All of these raise expectations from ESCAP to assume a vital role in nurturing the Fund. A strong institutional commitment from ESCAP can influence the Fund's future positively.

Synergies of the Fund and its projects with the other actors in the region could improve. The Fund has helped to foster sharing and collaborating for greater effectiveness among the Fund's partners at the individual project level. At the regional level, there is limited contact with other relevant funds and programmes, including the ones on CCA and the CC constituency.

The Fund has been supporting very diverse projects and continues to lack an identifiable strategic direction. Currently, the Fund is too diverse to be associated with any particular area of EW or to be attractive to the donors. The 16 projects appear more as a collection of excellent activities that span the whole spectrum of the end-to-end approach to EW. Added to this is the multi-hazard approach, while useful, makes the scope of the Fund too broad and diverse. The niche for the Fund is less clear now than when it was launched in 2005. At the same time, focus on only tsunami is not feasible or sustainable by the Member States.

In the end, key to sustainability is the national commitment to EW that comes with a policy change. A well functioning EW system by nature requires maintenance of the system at all levels. While the Fund has made significant contribution to national capacity building through the projects, it has supported policy change and sustainability at the national level cannot be met out of the Fund alone. ESCAP's political power to convene the Member States and influence policy remains underutilized for this purpose.

The Fund needs a committed group of donors to drive the Fund and a strategy for resource mobilization, the current lack of which presents a serious threat to the Fund's future. The Government of Thailand has been truly commendable for its vision to initiate the Fund and for providing the lion's share of the finances, alongside Sweden as a substantial donor, and Turkey, Bangladesh and Nepal as smaller funders. However, ESCAP, having accepted to 'host' the Fund, did not put its weight behind resource mobilization for the Fund. This is partly due to the lack of an 'attractive' strategy to sell, but mostly because the Fund itself, assuming that it would discontinue, was rather passive in raising new resources. A new ESCAP corporate fund raising policy is in progress that will benefit the Fund.

Regular and more frequent communication with the smaller donors to keep them engaged in the Fund has been limited. As a result, re-engagement of their headquarters at this stage is difficult as the momentum is lost. Efforts need to be intensified to develop a fund raising strategy and to engage potential donors in the Fund.

The Fund gets limited visibility for itself. The Fund has kept a low profile and did not seek visibility for itself, including for the achievements such as RIMES that is not associated with the Fund in the minds of many. While it is a good development principle that the ownership

of the projects is established, at the same time future funding to some extent depends on how well the donors and stakeholders are aware of the Fund's achievements. Other than the RIMES project and IOC-UNESCO, no other activities are widely known. These resulted in the perception that the Fund is not interested in continuing or mobilising resources. Partners at the national level know and value added from ESCAP, and the agency/organization that manages their project. Many do not know about the Fund, or many of its projects.

Fund does not have clear strategy to engage the stakeholders. It is still unclear who is responsible for vision setting. Members of the Advisory Council or the Technical Review Task Force are not fully performing this function. Smaller donors and Member States feel isolated from the governance and management of the Fund and expressed interest in joining the Advisory Council and the Task Force to review and monitor projects.

The Fund is at a critical juncture regarding its future that depends on a myriad of factors and decisions by ESCAP, the Advisory Council and above all, the stakeholders who have implemented and the Member States who have benefited from the Fund's support. A number of scenarios are possible from closing down the Fund by the end of 2013/2014 to revitalising it in a more integrated fashion within ESCAP with a renewed focus, governance structure and member State engagement.

5. SCENARIOS

The Fund is at a critical juncture regarding its future that depends on a myriad of factors and decisions by ESCAP, the Advisory Board and above all the stakeholders who have implemented and the member States who have benefited from the Fund's support. A limited evaluation cannot draw up a detailed road map for the Fund but it can raise a number of questions and pose a few plausible scenarios as options to be pursued that are based on what was raised and proposed by those interviewed.

Some of the key questions that need to be discussed by the stakeholders of the Fund are:

Should the Fund continue?

- If it does not/cannot continue, how should the remainder of the funds be spent?
- How can the Fund maximize its impact in the remaining time?
- What should be the Fund's exit strategy?
- How should it be governed to the end of the Fund?

What should the Fund do to continue? If it can, what should it target?

- Should the Fund remain regional, national or both?
- Should the Fund remain multi-hazard? End-to-end? Or be more focussed?
- What should the Fund focus on; what hazards, what aspects of EW, what geographical areas, which countries, target groups?
- Should the Fund continue to finance projects, or become a policy support, research or innovation body?
- Who should be the strategic partners of the Fund? Should it become a UN Fund, or become more all-inclusive?
- Should the Fund remain independent and managed by ESCAP, should it be more integrated with the other relevant divisions of ESCAP?
- How should the Fund be managed and governed? Should the member States and smaller/potential donors be involved in the governance?
- How should the Fund mobilize resources, by whom and through what strategy; who should be targeted?

There are no clear-cut answers to these questions. A number of directions are suggested based on the findings of this evaluation. Above all the Fund is expected to be more focussed. Currently, the Fund is too broad in its scope to have an image to be attractive and too diverse to be effective. The Fund can legitimately target many areas as either areas of EW that require attention in the region and/or areas of ESCAP mandate and strength. It is not an exhaustive list and a number of them can be addressed simultaneously by the Fund, whether it will end in 2013/14 or continue with a renewed energy.

- EW and multi-hazard approach to be maintained as the ‘trademark’ of the Fund.
- Coastal communities as the target group.
- Smaller and less resourced countries as the primary focus for support.
- Higher capacity countries as the technical (and financial) resource base.
- Less downstream work –leaving it to Governments to NGOs, and the UN agencies.
- Regional focus, leaving national level work to Governments and bilateral donors.
- Data and information policy and management focus from ESCAP’s strengths.
- Innovation, e.g. technical with RIMES, and research, e.g. on socio-economic impact of disasters with the relevant divisions of ESCAP.
- Facilitate generation of evidence for policy influence (ESCAP role) on Member States.

Scenario 1: Fund revitalized and integrated more closely with ESCAP’s core businesses.

The ESCAP programme of work 2011-2012 lays emphasis on building resilience to disasters, climate change, resource crisis and volatilities. It calls for improved disaster preparedness and mitigation in Member States and improved regional cooperative mechanism. The Fund should consider contributing to this strategic framework that will help its closer integration with ESCAP.

- The Fund to serve an intergovernmental purpose and act as a ‘thread’ to integrate/link with ESCAP’s various relevant Divisions, Committees and mandates for more efficiency and effectiveness a) to increase synergies and reduce fragmented arrangements; b) to enhance impact from the various disparate entities c) to serve better the Member States in policy and practice. The Fund to work more closely with the newly established DRR programme to use ESCAP’s experience and technical cooperation expertise to support the member States; to come up with a revised/renewed strategic focus and a resource mobilization plan; to remain in close partnership with the UN agencies for a coordinated and effective UN support to the member States.
- The Fund builds on the expertise in the region as its resource base; facilitates South to South cooperation within a multilateral framework and as such, the Fund becomes a self help mechanism among the member States, as a possible platform primarily – but not exclusively - to support high-risk and low capacity countries
- ESCAP to use its convening power to enhance the national commitments based on sound evidence and strategies that are more actionable.
- The governance of the Fund expands to include smaller donors and Member States to be rotated every few years for increased representation and participation.

The Fund should aim to establish and promote this scenario until the end of 2012. If by that date no new contributions are received to support this scenario, then the Fund should plan its exit strategy in line with scenario 3.

Scenario 2: A catalytic Fund; The Fund as a mechanism for facilitating connections in EW in the Region.

Few of the end-to-end EW initiatives in the region are connected into networks for exchanging and harmonising the various approaches and outputs. A good example where this is achieved in the region is the IOC/UNESCO's work with the ICG/IOTWS that helped the regional harmonisation and learning for only on type of hazard, tsunami and for very specific aspects of EW. In other aspects of EW and for other types of hazard EW, there has been less regional cooperation and connections.

- Design a catalytic Fund and provide with the remaining funds a targeted support over a fixed period for connecting the various EW networks, organizations, countries and programmes in the region. Facilitate the harmonisation in the region of the diverse approaches to EW including among the Fund's projects, member State activities and policies, CCA by the World Bank, ADB, UN, GTZ, ECHO, bilateral projects, etc.
- Help ensure long-term sustainability, expand the partnership basis in the region to help harmonize and transition the significant end-to-end EW tools, products, and initiatives into sustainable, long-term platforms (mostly web-based knowledge networks) that will continue independently into the future and into strategic packages for the Members States.
- Bring ongoing needs and gaps to the attention of other donors, agencies and member States for support. Facilitate south-south cooperation among the Member States for mutual technical and financial support.
- Expand the governance mechanism to include representation of all involved agencies and organizations, donors and Member States on a rotational basis.

In this scenario, the Trust Fund will use the rest of its funds, and any new funding that may become available, for facilitating networking, harmonising and dissemination of EW efforts and not for funding of the implementation of new 'projects' as in the current Trust Fund. This scenario will be possible if the Member States will demand from the Fund to facilitate harmonisation of all EW related initiatives in the region on their behalf and that the other organizations and donors agree to the usefulness of this modality. In this scenario, the Fund acts only as a facilitator to identify needs/capacities and match these needs with capacities from within the member States and the existing networks and coordination mechanisms.

Scenario 3: Close down the Fund.

If the Fund cannot attract new resources, it will have no choice but to discontinue and spend the remaining funds by the suggested 2013/2014 time frame. However, this should be the last option.

- To maximize the impact from the Fund's support so far, a learning/stocktaking exercise(s) that will bring together selected representatives from project partners/implementers/beneficiaries will be useful to facilitate sharing of knowledge and experiences among the projects that have been supported by the Fund; document the lessons learned and good practices.

- The stock taking exercise(s) should identify what might be missing from the learning chain that the Fund will supplement in order to enhance the impact from the totality of the Fund's support.
- At minimum, all project documents, reports and evaluations, as well as tools and materials produced out of the Fund should be presented on a Fund website and linked to the relevant sites of the partners and projects.

In this scenario, the governance of the Fund should remain the same to provide continuity.

6. RECOMMENDATIONS

1. The Fund establishes a more focused strategic direction. The Fund must do a few things, do them well, and build an image. The perception among stakeholders is that the Fund is not focussed enough with a clear niche. Donors and partners would need what the Fund will/will not do before they can re-engage in collaboration.

- Remain regional, leave national level to Governments and bilateral donors;
- Maintain the multi-hazard focus;
- Highlight coastal areas hence coastal population as central engagement;
- Concentrate on the needs of the small and/or less resourced countries;
- Understand where Member States want to contribute;
- Provide evidence and actionable strategies to the Member States;
- Consider facilitating with the Member States a 'regional architecture' for multi-hazard EW, where the Fund could contribute strategically in synergy with the DRR work of ESCAP.

2. The Fund develops a concrete communication plan. The Fund needs to prepare a concrete plan for the next 12 months, promote it and put into action as soon as possible.

- Define with the member States and partners what they want to know/disseminate;
- Update the website of projects, documents and products, and provide links to partners' sites;
- Organize events alongside the Commission meetings to profile the Fund and show-case achievements;
- Facilitate member States to present their achievements supported by the Fund in different forums; and
- Maintain a regular contact with donors, partners and Member States, and internally with the relevant ESCAP units.

3. The Fund engages Member States and donors as resources. The Fund to utilize the significant national capacities in EW have been developed through the Fund and others operating in the region that are currently under-tapped. Member States and small donors expressed an interest in being engaged with the Fund. Actively engaging them with various bodies and activities of the Fund will increase ownership and commitment to it. Small resources from these countries can provide the much needed predictability and continuity to the Fund.

- Create a mechanism for sharing expertise among the Member States;
- Consult technically competent national experts and experts from non-UN regional and global entities in the Task Force to appraise proposals, and involve them in the monitoring of projects.

- Remove the rule of 20% funding to become a member of the Advisory Council. Instead, include all donors (on rotation if there will be too many members to be practical); Enlarge the Advisory Council and invite small donors and selected Member States;
- More proactively invite donors to visit projects.

4. The Fund, in collaboration with the Programme Management Division (PMD) in ESCAP, develops a concrete resource mobilization plan for the next 12 months. The Fund manager needs to work closely with the PMD to determine the best approach to benefit from the corporate support; e.g., how to present the results from the Fund's support to rally interest. A comprehensive survey of all funds, bilateral and multilateral resources and discretionary funds can provide the necessary basis for this work. The resource mobilization plan should be developed in close coordination with the relevant divisions of ESCAP and the partner UN agencies to ensure complementing and not competition.

5. ESCAP convenes a series of meetings/consultations with selected key stakeholders from the 16 projects, donors, programme managers, implementers, etc., to increase cohesiveness and coherence across the projects; to plan the remainder of the funds more effectively; to create a learning platform to be captured on a Fund website; and to share a renewed vision and focus.

6. Strengthen focus on the small and/or less resourced countries at the upstream end of EW. RIMES as the best known and most praised project of the Fund that has been serving these countries can be an example to begin with. As a starting point, ESCAP should start a dialogue with RIMES, involving a few key Member States and interested donors, to establish mutual interests and how ESCAP can leverage support for RIMES to service the less resources and small island countries. As a request for support by ESCAP did not come from RIMES but suggested by others, any actions beyond an initial dialogue should be determined jointly.

Annex I. Management Response and follow-up Action Plan

| Title of evaluation: Evaluative Review of the ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness in the Indian Ocean and Southeast Asian Countries | | |
|---|--|---------------|
| | Signature | Date |
| Mr. Shun-ichi Murata, Deputy Executive Secretary |  | 10 9 JAN 2012 |
| Mr. Zengpei Xuan, Chief, IDD |  | 5/1/2012 |
| Mr. Marinus W. Sikkel, Chief, a.i., PMD |  | 5/1/12 |
| General remarks by management | | |
| <p>The evaluative review process has been useful to the Secretariat. It has brought out findings and assessments, including from partners, donors and Member States, some of which would be difficult to identify without an external party. The review has facilitated a process of reflection and commitment to action.</p> <p>The evaluative review recognizes several positive results in the countries covered by the Fund, which Fund projects have contributed to, including the potential saving of lives. This is appreciated. The Secretariat also appreciates the positive appraisal of the efficiency of the governance mechanism, management procedures and the coordination with UN partners.</p> <p>As for the shortcomings of the Fund administration, the review provides an honest and independent assessment. The Secretariat generally agrees with these. The Fund can achieve more in terms of visibility; articulating and communicating a strategic niche taking into account the comparative advantages of ESCAP; and engaging member States in the Fund.</p> <p>The recommendations are logically derived from the identifications of the strengths, shortcomings and opportunities of the Fund. The Secretariat generally agrees to the recommendations and is committed to put forward an action plan. The Secretariat would like to implement a combination of elements from scenarios 1 and 2. The senior management of ESCAP is committed to build on the positive results and revitalize the Fund.</p> | | |

| Report recommendation | Management response | Follow-up action |
|--|---|---|
| <p>1. The Fund establishes a more focused strategic direction. The perception among stakeholders is that the end-to-end, multi-hazard approach, including impact from climate change, and targeting all countries in the region is too unfocused. Donors and partners would need what the Fund will/will not do before they can re-engage in collaboration.</p> | <p>Agreed.</p> <p>The evaluative review has pointed out the appropriateness of a focus on Early Warning for coastal hazards in the Indian Ocean and South East Asia. Within this overall geographic (countries and coastal communities) and functional scope (Early Warning), the Fund should focus on the following roles and priorities to build on ESCAP’s convening power for facilitating <i>policy changes</i> and <i>institutional capacity enhancements</i> in EW:</p> <ul style="list-style-type: none"> - Link the Fund to the work programme of ESCAP with focus on <i>knowledge products</i> (clearing house function), <i>facilitator for regional cooperation</i> (Panel on Tropical Cyclones, Typhoon Committee, Disaster Risk Reduction Committee, Regional Cooperative Mechanism on Disaster Monitoring and Early Warning, Particularly Drought and Regional Lessons Learned meetings) - Emphasize <i>South-South mechanisms</i>. Use the Fund as a regional platform for member States to support each other. - Prioritize <i>LDCs, small island developing states, and low capacity/high risk countries</i> (MDG focus), building on synergies with ESCAP regional DRR advisory mechanism. | <ul style="list-style-type: none"> - Based on the overall direction communicated in the management response, develop a two page refined strategy summary to be agreed by the Advisory Council as appropriate. - Facilitate a coherent project portfolio in line with the strategy in future rounds of funding. - Implement and communicate the new strategy without delay. - Invite member States to an information and discussion meeting after the ACPR meeting in December 2011. |

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| <p>2. The Fund develops a concrete communication plan for the next 12 months and puts it into action in coordination with resource mobilization as soon as possible.</p> | <p>Agreed.</p> <p>Communication and advocacy should focus on results of the Fund so far and the positive contribution it is making to meet needs of Member States in EW for coastal communities. In order to be able to implement the communication plan with the limited staff resources available, communication opportunities should be integrated into programme implementation to the degree possible, and partner resources should be leveraged.</p> <p>A draft communication plan has been developed with the Strategic Communication and Advocacy Section of ESCAP.</p> | <ul style="list-style-type: none"> - Revise the communication plan based on the feedback from the Advisory Council. - Implement the communication plan. |
| <p>3. Fund engages Member States and donors as resources. Significant national capacities in EW have been developed through the Fund and others operating in the region that is under-tapped. Actively engaging them with various bodies and activities of the Fund will increase commitment to it. Create a mechanism for sharing expertise among the Member States.</p> | <p>Agreed.</p> <p>The Fund should utilize the events listed in the communication plan to engage member States and donors.</p> <p>The Secretariat would support that all donors are invited to the Advisory Council as observers. An decision regarding amendment of the 20% rule of remaining fund shares as a requirement for membership of the Advisory Council rests with the Advisory Council.</p> | <ul style="list-style-type: none"> - Engage a broader range of partners and relevant institutions in member States in peer review of project proposals under the next round of funding. - Revise/simplify the Grants application form. - Implement the communication plan, including engagement of member States through existing ESCAP regional mechanisms, such as Panel on Tropical Cyclones, Typhoon Committee, Committee on Disaster Risk Reduction and the ESCAP Commission. |

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| <p>4. The Fund, in collaboration with the Programme Management Division (PMD) in ESCAP, develops a concrete resource mobilization plan for the next 12 months. A new corporate fund raising policy is in progress. The Fund manager needs to work closely with the PMD to determine the best approach to benefit from the corporate support; e.g., how to present the results from the Fund's support to rally interest.</p> | <p>Agreed.</p> <p>The Secretariat considers the articulation and implementation of the refined strategic focus of the Fund, as well as clearly communicating the results of the Fund, as intrinsically linked to resource mobilization.</p> | <ul style="list-style-type: none"> - A short resource mobilization plan is developed by 2011 and sent to the Advisory Council members for input. - The resource mobilization and communication plan is implemented. - Engagement of selected donors bilaterally. |
| <p>5. ESCAP convenes a series of meetings/consultations with selected key stakeholders from the 16 projects, donors, programme managers, implementers, etc., to increase cohesiveness and coherence across the projects; to plan the remainder of the funds more effectively; to create a learning platform to be captured on a Fund website; and to share a renewed vision and focus.</p> | <p>Agreed with reservations.</p> <p>The Secretariat believes convening meetings is one of the modalities to implement the other recommendations. However, convening meetings is not an objective in its own right. The focus should be on what can be achieved, and the purpose of meetings should always be linked to the advancement of early warning capacities in the region, with the ultimate goal of building resilient communities.</p> <p>The Secretariat believes that several of the events proposed in the communication plan can serve as a purpose to facilitate coherence across projects, capitalizing on synergies with other initiatives, as well as learning from Fund supported projects.</p> <p>The ESCAP Secretariat is committed to update the Fund</p> | <ul style="list-style-type: none"> - Implement the communication plan. - Exchange information with existing partners, DIPECHO, GFDRR and ADB with a view to identify synergies and share relevant products and lessons. |

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| | <p>website as a part of the ESCAP website, as well as contribute to the Gateway for DRR.</p> | |
| <p>6. Strengthen focus on the small and/or less resourced countries at the upstream end of EW. As a starting point, ESCAP should start a dialogue with RIMES, involving a few key Member States and interested donors, to establish mutual interests and how ESCAP can leverage support for RIMES to service the less resources and small island countries.</p> | <p>Agreed.</p> <p>The ESCAP Secretariat believes that the focus on small and less resourced countries should be a key pillar of the strategic focus of the Fund, along with a focus on policy/institutional capacity at the national level. The Secretariat has already facilitated and encouraged linkages between RIMES and ESCAP member States, including beyond the geographical scope of the Fund (Mongolia and Afghanistan being examples). The Secretariat believes that a collective system like RIMES is an appropriate, efficient and effective in supporting EW capacities for small and less resourced countries.</p> | <ul style="list-style-type: none"> - Pending the decision of the Advisory Council, implement a seventh round of funding with priority consideration for small and/or less resourced countries. - Closely monitor the results of the two ongoing projects with RIMES (TTF-08 and TTF-16) and continue the constructive dialogue between the ESCAP Secretariat and RIMES. - Feature and facilitate support to less resourced countries during the Typhoon Committee (February 2012, China) and Panel on Tropical Cyclone (Myanmar March 2012). |

Annex II. Terms of Reference

Date: January 2011

Prepared by: ESCAP/Programme Management Division

1. INTRODUCTION

1.1 Background of the evaluation

The *Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia* was established following the destructive Indian Ocean tsunami in December 2004 to address capacity gaps in end-to-end tsunami early warning system through a multi-hazard approach. The Fund is administered by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and covers ESCAP member countries of the Indian Ocean and South East Asia. The Fund has received about US\$ 12.7 million in contributions from the Governments of Thailand (US\$ 10 million), Sweden (US\$ 2.6 million), Turkey, Bangladesh and Nepal.

By the end of 2010, the Fund had conducted five rounds of funding, with a sixth round being in the process of consideration. A total of 14 projects had been approved, with a total budget of approximately US\$ 9.9 million. Additional projects are expected approved in January 2011. Projects supported have covered a number of aspects of early warning, including development of monitoring and warning services that provide support to lower capacity countries, risk maps for community planning and preparedness, establishment of Standard Operating Procedures, and education and awareness materials.

In 2008, an evaluative review of the Fund proposed to broaden its scope to include overall disaster and climate preparedness within the Fund's core areas of support. A Strategic Plan, *ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness*, was developed in 2009 in line with this proposed change. End-to-end early warning was defined as the overall framework for the Fund, focusing on coastal hazards such as tsunamis, coastal zone flooding, storm surges and cyclones, while applying a multi-hazard approach. As such, the Fund focuses on risk knowledge, monitoring and warning services, dissemination and communication and response capability. The name change and expansion of the scope of the Fund was approved formally in November 2010.

The Fund is governed by an Advisory Council, chaired by the Executive Secretary of ESCAP with members from the foundation donor (Thailand) and key donors, defined as donors contributing 20% of the unspent balance of the Fund (up to now, Sweden). An Inter-divisional Task Force was set up in ESCAP for technical appraisal of proposals to the Fund. In June 2010, following the recommendation of the Advisory Council, the Task Force was expanded to include IOC-UNESCO, ISDR and UNDP.

The Monitoring and Evaluation (M&E) Framework of the Fund provides for monitoring and evaluation of the specific projects it supports, an annual self assessment of the Fund (captured in the annual reports), and independent evaluations (to be conducted by external consultants, managed by ESCAP) to be carried out every 2 or 3 years. The first independent evaluation (evaluative review) was commissioned in 2008 to examine the relevance, efficiency, effectiveness, impact and sustainability of the Fund, with the aim of improving the quality of the Fund's future work. The evaluative review of

2008 produced 16 recommendations, with the five primary recommendations focusing on the need to: (i) develop a strategic vision and plan, (ii) broaden the scope of the Fund to focus on overall disaster risk reduction, (iii) focus more on downstream work like “community resilience”, (iv) streamline the appraisal process, and (v) be more proactive and consistent in engaging with stakeholders and managing their expectations.

The Secretariat has attempted to implement these recommendations. However, it is recognized that some of the concerns of stakeholders expressed in the 2008 evaluative review may remain valid. The second evaluative review is planned for 2011, and should take into account the results of the 2008 evaluative review.

The Trust Fund is open ended. However, the Fund received no substantial additional financial contributions in 2008, 2009 and 2010. Without additional donations, the Fund is expected to close in 2013/2014. Further information on the Fund is on http://www.unescap.org/pmd/tsunami_index.asp

1.2 Purpose, objectives and deliverables

As proposed by the Advisory Council in February 2010, since a substantial number of Fund-supported projects will be completed by 2011, a cross-cutting evaluation of Fund-supported projects will be conducted in 2011. While the purpose of the 2008 evaluation was mainly formative, providing recommendations for the management and strategy of the Fund, the 2011 evaluation is expected to also have a strong summative component. This will be done by systematically generating and disseminating evidence on Fund experiences from all completed and ongoing projects to serve as a transparent basis for accountability for results. At the same time, the expanded scope of the Fund and the funding situation make considerations of future possible scenarios of the Fund timely. As such, the purpose of the evaluation is to: (i) account for results to stakeholders of the Fund, (ii) assess future scenarios for the Fund in terms of focus, role and governance, and (iii) generate useful recommendations related to policy issues and management of the Fund. Depending on the findings of the evaluation, it is expected to feed into advocacy for leveraging resources for effective end-to-end early warning strategies and interventions in areas in need. The final evaluation report should be presented to the Advisory Council for decision making.

The objective of the evaluation is to assess the progress achieved, identifying successes, good practices, if any, and issues that need to be addressed applying the standard evaluation criteria of relevance, efficiency, effectiveness, impact and sustainability.

The following main deliverables are foreseen:

- Draft inception report outlining the refined scope, detailed methodology and work plan for the evaluation.
- Inception report workshop to consider the refined scope, methodology and work plan.
- Final inception report.
- Dissemination workshop to consider initial evaluation results.
- Draft evaluation report for review and comment.
- PowerPoint files for the presentation of the final report.
- Final evaluation report according to the UNESCAP standard for evaluation reports.

1.3 Scope

The evaluation will look at the effectiveness, impact (preliminary and potential) and sustainability of completed and ongoing projects supported by the Fund and how the relevance and efficiency of project design and management contributed to this. The evaluation would also look at the Fund as a whole. The regional dimension and regional added value should be assessed for individual projects and the Fund as a whole. Based on justified sampling criteria, some projects might be examined more in detail as case studies, including field visits.

As outlined in the Monitoring and Evaluation Framework, the evaluation should pay particular attention to:

- The trend in new proposals being submitted to the Fund and approval rate.
- The reputation of the Fund in the region.
- The substantive and administrative performance of the Fund.
- The impact project outcomes have on early warning capabilities in the region.

Detailed evaluation questions should be included in the inception report and finalized at the inception report workshop. Recommendations should be realistic, taking into account previous decisions of the Advisory Council.

2. METHODOLOGY

2.1 Methodology

Design and data collection methods: The evaluation study will be mainly a mixed-method study. Data will be collected from multiple sources: a formal desk review, interviews of key informants, interviews and/or focus groups of important groups of beneficiaries, surveys if appropriate, and direct observations of activities with beneficiaries wherever possible. Where opportunity occurs, the evaluation methodology should also examine the possibility of doing a comparison to similar Trust Funds, regional networks, and organizations working in early warning systems but not participating in the projects of the Fund, and/or interview them to determine their perceptions. The evaluation will also conduct a secondary analysis of existing data.

- **Desk Review:** The desk review will be used as an important tool to assemble evidence of project activities and outputs, as well as to determine if the necessary record-keeping and documentation is being carried out by the Fund. These will include Fund project documents, presentations and reports of capacity-building workshops, and instructional manuals.
- **Data Collection:** Primary data – to be collected through interviews and focus groups, surveys if appropriate, and direct observations – will add to the existing knowledge about the activities, and will be used to gauge perceptions of stakeholders of their interactions with the Fund and the utility of the interventions.

Two or more projects can be selected for more detailed review based on justified sampling criteria. Two or more field visits are foreseen in conjunction with such in-depth case studies.

Attribution and contribution: While the evaluation will seek to determine if the Fund has added value to positive country-level outcomes and impact in end-to-end early warning systems, it is often difficult to attribute results to only one source of inputs, actions, or actors in a field where there are multiple actors and inputs. Therefore, to the extent possible, the evaluation will seek to outline the Funds contribution to overall results through a contribution analysis. An impact evaluation framework

should therefore be applied, using counterfactual analysis or other robust methods for impact assessment.

2.2 Limitations

Given time and budget constraints, it will not be possible for the evaluator to visit all the countries where project activities have been carried out. Part of the assessment will therefore be based on desk review and interviews with partners and beneficiaries remotely.

While some projects have been completed, and several are expected completed in 2011, the longer term impact will in many cases not yet have materialized. The evaluation will therefore focus on preliminary and potential impacts.

3. TEAM COMPOSITION AND QUALIFICATIONS

The evaluation is planned to be conducted by one freelance consultant or a team of two freelance consultants. If two consultants are selected, the exact division of work will be decided by the team, but in general, the team leader will have the responsibility for all negotiations, decisions, and deliverables. If a team of two, it is desirable if either the team leader or the member is a woman. The qualifications and experience required are as follows:

- Extensive evaluation expertise and experience (at least 8 years), including methodological frameworks for impact evaluation and evaluation of trust funds/grant programmes.
- Knowledgeable of institutional issues related to development programming (including fund raising, administration, the role of the UN system, and partnerships).
- Knowledge of disaster risk reduction issues either as researcher/evaluator or programme manager. Knowledge and experience in end-to-end early warning systems desirable.
- Language proficiency: Excellent written and oral communication skills in English (mandatory), regional languages are an advantage (depending on the countries selected for the field visits).
- Advanced university degree, preferably in a topic related to disaster risk reduction.
- Good communication and people skills. Ability to express ideas and concepts concisely and clearly to a range of audiences in written and oral form.

4. TIME REQUIREMENTS, ROLES AND RESPONSIBILITIES

4.1 Time requirements

| Task | Estimated time requirement |
|---|----------------------------|
| Desk review | 8 days |
| Develop and inception report with an evaluation plan and evaluation tools | 10 days |
| Mission to Bangkok, including presentation of inception report | 10 days |
| Data collection and analysis, including two field visits outside Thailand | 20 days |

| | |
|---|---------|
| Presentation and discussion of preliminary findings (telephone) | 2 day |
| Drafting of report | 10 days |
| Revision(s) and finalization of report | 6 days |
| Total estimated number of days | 66 days |

4.2 Roles, responsibilities and timelines

The Secretariat of the Fund will act as evaluation manager. The evaluation will be undertaken by an independent evaluation team according to the norms and standards for evaluation of the United Nations Evaluation Group. As such, the evaluators should not have been involved in the design, implementation or review of any of the projects of the Fund. The Inter-Agency Task Force, with members from ESCAP, IOC-UNESCO, UNDP and ISDR, will be asked to comment on the inception report and the draft report. Representatives from the founding donor (Thailand) and the key donor (Sweden) will form a donor reference group and will be invited to comment on the inception report and the draft report.

| Task | Responsibility | Estimated dates |
|--|--|---------------------------|
| Prepare background documents | Evaluation manager | By April 2011 |
| Brief evaluator | Evaluation manager | April 2011 |
| Draft and present inception report | Evaluation team | June 2011 |
| Comment on the inception report | Inter Agency Task Force, donors and evaluation manager | June 2011 |
| Finalization of the inception report | Evaluation team | June 2011 |
| Conduct the evaluation | Evaluation team | June - August 2011 |
| Provide logistical support to the evaluator | Evaluation manager | Throughout the evaluation |
| Submit draft report to the evaluation manager | Evaluation team | August 2011 |
| Comments on draft evaluation report | Inter-Agency Task Force, donors and evaluation manager | August 2011 |
| Submit final evaluation report to the evaluation manager | Evaluation team | September 2011 |
| Finalize evaluation report (editing and layout) | Evaluation manager | September 2011 |

Annex III. List of Documents Reviewed

Annual Report 2008 Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia (January – December 2008).

Annual Report 2009, Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia (January – December 2009).

Annual Report 2010, ESCAP Multi-donor Trust Fund for Tsunami, Disaster and Climate - Preparedness in Indian Ocean and Southeast Asian Countries (January – December 2009).

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<http://www.unescap.org/disaster-preparedness-fund/strategic-plan.pdf>

Intergovernmental Oceanographic Commission of UNESCO, *Eighth Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System*, Executive Summary, Melbourne, Australia, 3–6 May 2011, ICG/IOTWS-VIII/3s, Perth, 25 May 2011.

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<http://www.unescap.org/disaster-preparedness-fund/isdr-escap-coastal-climate-hazards.asp>

Minutes of the 7th Meeting of the Advisory Council of the ESCAP Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia, 20 January 2009.

Minutes of the 8th Meeting of the Advisory Council of the ESCAP Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia, 16 June 2009.

Minutes of the 9th Meeting of the Advisory Council of the ESCAP Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia, 3 February 2010.

Minutes of the 10th Meeting of the Advisory Council of the ESCAP Multi-donor Trust Fund for Tsunami, Disaster and Climate Preparedness in Indian Ocean and Southeast Asian Countries, 19 January 2011.

Monitoring and Evaluation Framework for the Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia, December 2008. Accessed:
<http://www.unescap.org/disaster-preparedness-fund/monitoring-evaluation-framework.doc>

Multi-donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia, Evaluative Review 2008, Final Report. Prepared by Mr. Philip Hall, October

2008. Accessed: <http://www.unescap.org/disaster-preparedness-fund/evaluative-review-2008.doc>

Report on Regional Unmet Needs and Recommendations: Tsunami Early Warning Systems (TEWS) in the Indian Ocean and Southeast Asia, finalized version, 2007

Thomas J. Teisberg, *Potential Lives Saved by a Tsunami Early Warning System in the Indian Ocean*, 2011.

Regional Integrated Multi-Hazard Early Warning System (RIMES), Master Plan 2010-2014, updated 26 February 2011.

Socio-Economic Benefits of Early Warning Systems, March 2010, RIMES.

Tsunami Early Warning Systems in the Indian Ocean and Southeast Asia. Report on Regional Unmet Needs. ESCAP, New York, 2009. ST/ESCAP/2536. Accessed: <http://www.unescap.org/disaster-preparedness-fund/tsunami-early-warning-needs.pdf>

Walter Welz, External Evaluator, End of Project Evaluation, End-to-End Early Warning of Tsunamis and other Natural Hazards for Disaster Preparedness and Mitigation in Indian Ocean and Southeast Asia: Phase 1, Project funded by UNESCAP Tsunami Regional Trust Fund, November 2009.

Walter Welz, ABU Early Warning Broadcast Media Initiative, Final Evaluation, 2011.

Project Documents

ABU Early Warning Broadcast Media Initiative, ABU, 2009, Grant Proposal.

Assessment and Awareness of Makran Tsunami Hazards, IOC-UNESCO, 2009, Grant Proposal.

Building Risk Knowledge to Enhance Early Warning, Preparedness and Mitigation in Tsunami-affected Countries, UNDP RCB, 2009, Grant Proposal.

End-To-End Early Warning of Tsunamis and other Natural Hazards for Disaster Preparedness and Mitigation in the Indian Ocean and Southeast Asia: Phase 1, Asian Disaster Preparedness Center (ADPC), 2007, Grant Proposal.

End-To-End Early Warning of Tsunamis and Other Natural Hazards for Disaster Preparedness and Mitigation in the Indian Ocean and Southeast Asia: Phase II, ADPC, 2008, Grant Proposal.

Enhancing National Capacity for Early Warning Dissemination in Sri Lanka, DMC-Sri Lanka, 2008, Grant Proposal.

Making Provincial Communities Safer Through Disaster Risk Reduction in Development (DRR-PC), UNDP Indonesia, 2008, Grant Proposal.

Reducing Risks for Tsunami, Storm Surges, Large Waves and Other Natural Hazards in Low Elevation Coastal Zone, RIMES and WMO, 2011, Grant Proposal.

Strengthening Community-based Disaster Risk Management in Asia: Shifting from Lessons Observed to Lessons Learned (SCDRM+), Raks Thai Foundation, 2009, Grant Proposal.

Strengthening Early Warning Systems for Extreme Weather Events to Advance Climate Risk Management in the Southeast Asian Region, UNDP APCR, 2011, Grant Proposal.

Strengthening National and Community Capacities for Effective Early Warning Dissemination and Responses, UNDP Maldives, 2007, Grant Proposal.

Strengthening Tsunami Warning and Emergency Responses: Training Workshops on the Development of Standard Operating Procedures for Indian Ocean and Southeast Asian Countries, IOC/UNESCO, 2007, Grant Proposal

Support to the Establishment of Regional Capacities in the Region to Observe and Evaluate Anomalous Sea Level Conditions for Early Warning of Tsunamis in the Indian Ocean and Southeast Asia, ADPC, 2006, Grant Proposal.

Towards Sustaining the Indian Ocean and Southeast Asia End-to-End Multi-Hazard Early Warning System, Maldives Meteorological Service (MMS), Maldives, 2008, Grant Proposal.

Trainers Training Programme on Community-Based Hazard Map Development, ADRC, 2007, Grant Proposal.

Tsunami Awareness and Preparedness Tools and Materials Assessment Project, UNESCO Jakarta, 2009, Grant Proposal.

Project Reports

ABU Early Warning Broadcast Media Initiative, ABU, 2011, Progress Report.

Assessment and Awareness of Makran Tsunami Hazards, IOC-UNESCO, 2011, Progress Report.

Building Risk Knowledge to Enhance Early Warning, Preparedness and Mitigation in Tsunami-Affected Countries, UNDP RCB, 2011, Progress Report.

End-to-End Early Warning of Tsunamis and Other Natural Hazards for Disaster Preparedness and Mitigation in the Indian Ocean and Southeast Asia: Phase 1, Asian Disaster Preparedness Center (ADPC), 2010, Terminal Report.

End-to-End Early Warning of Tsunamis and other Natural Hazards for Disaster Preparedness and Mitigation in the Indian Ocean and Southeast Asia: Phase II, ADPC, 2011, Terminal Report.

Enhancing National Capacity for Early Warning Dissemination in Sri Lanka, Disaster Management Centre (DMC) Sri Lanka, 2011, Terminal Report.

Making Provincial Communities Safer through Disaster Risk Reduction in Development (DRR-PC), UNDP Indonesia, 2011, Progress Report.

Strengthening Community-Based Disaster Risk Management in Asia: Shifting from Lessons Observed to Lessons Learned (SCDRM+), Raks Thai Foundation, 2011, Progress Report.

Strengthening National and Community Capacities for Effective Early Warning Dissemination and Responses, UNDP Maldives, 2009, Terminal Report.

Strengthening Tsunami Warning and Emergency Responses: Training Workshops on the Development of Standard Operating Procedures for Indian Ocean and Southeast Asian Countries”, IOC-UNESCO, 2007, Progress Report.

Support to the Establishment of Regional Capacities in the Region to Observe and Evaluate Anomalous Sea Level Conditions for Early Warning of Tsunamis in the Indian Ocean and Southeast Asia, ADPC, 2010, Terminal Report.

Toward Sustaining the Indian Ocean and SE Asia End-to-End Multi-Hazard Early Warning System, MMS, Maldives, 2011, Progress Report.

Trainers Training Programme on Community-Based Hazard Map Development, ADRC, 2008, Terminal Report.

Tsunami Awareness and Preparedness Tools and Materials Assessment Project, UNESCO Jakarta, 2011, Progress Report.

Annex IV. List of Interviewees

Ali Shareef, Deputy Director-General of Maldives Meteorological Service, Focal Point for the RIMES Secretariat, Male, Maldives.

Ardito Kodijat, Coordinator for Disaster Risk Reduction, Jakarta Tsunami Information Center IOC-UNESCO, UNESCO Office Jakarta, Indonesia.

Arjunapermal Subbiah, Director, RIMES Program Unit, AIT campus, Pathumthani, Thailand.

Bhichit Rattakul, Executive Director, ADPC, Bangkok, Thailand.

Boon Tiong Tay, Deputy Executive Director, Finance & Administration, ADPC, Bangkok, Thailand.

Bruce Ravesloot, Regional Climate Change Adaptation Advisor, Raks Thai Foundation, Bangkok, Thailand.

Chanyuth Tapa, Senior Program Officer, Raks Thai Foundation, Bangkok, Thailand.

Commodore Ho, Director, National Mapping and Resource Information Authority (NAMRIA), Hydrography Department, Manila, Philippines.

David Verboom, Head of ECHO Regional Office, European Commission, Bangkok, Thailand.

Edle Tenden, Programme Officer, Space Applications Section, Information and Communications Technology and Disaster Risk Reduction Division ESCAP, Bangkok, Thailand.

Evelyn S. Agato, Broadcast Station Manager, Philippines Broadcasting Corporation, Manila, Philippines.

Francyne Harrigan, former ABU Project Manager, currently Chief of Strategic Communication and Advocacy, ESCAP, Bangkok, Thailand.

Ian O'Donnell, Disaster Risk Management Specialist, Asian Development Bank, Manila, The Philippines.

Jerry Velasquez, Senior Regional Coordinator, UN International Strategy for Disaster Reduction for Asia & the Pacific, Bangkok, Thailand.

Jitjanya Permpatr, Journalist, Bangkok, Thailand.

Kazi Imtiaz Hossain, Ambassador Extraordinary and Plenipotentiary and Permanent Representative of ESCAP, the Embassy of the People's Republic of Bangladesh, Bangkok, Thailand.

Keran Wang, Chief, Space Application Section, Information and Communications Technology and Disaster Risk Reduction Division, ESCAP, Bangkok, Thailand.

Kriengkrai Khovadhana, Expert, National Disaster Warning Center (NDWC), Ministry of Information and Communication Technology, Bangkok, Thailand.

Kristanto Sinandang, Senior Programme Officer, UNDP Indonesia, Jakarta, Indonesia.

Kurtulus Aykan, First Counsellor, the Embassy of the Republic of Turkey, Bangkok, Thailand.

Linglingay F. Lacanlale, Ambassador Extraordinary and Plenipotentiary and Permanent Representative to ESCAP, the Embassy of the Republic of Philippines, Bangkok, Thailand.

Lolita Bidan, Program Manager, Program Unit, AIT campus, Pathumthani, Thailand.

Malikah Amril, UNDP Indonesia, Jakarta, Indonesia.

Md. Abdullah Al Masud Chowdhury, Economic Counsellor and Alternate Permanent Representative to ESCAP, the Embassy of the People's Republic of Bangladesh, Bangkok, Thailand.

Melchito Castro, Director, National Disaster Risk Reduction and Management Council's Operations Center, Manila, Philippines.

Nancy T. Lance, Sr. Weather Specialist, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Manila, Philippines.

Natalia Ilieva, Asia-Pacific Broadcasting Union (ABU), Kuala Lumpur, Malaysia (over the telephone).

Nescha Teckle, Practice Team Leader and Regional Adviser – Crisis Prevention and Recovery, UNDP Asia Pacific Regional Centre, Bangkok, Thailand.

Noeleen Heyzer, Executive Secretary, ESCAP, Bangkok, Thailand.

Ola Möller, First Secretary, SIDA, the Embassy of Sweden, Bangkok, Thailand.

Richard Kalina, Chief, Programme Management Division, ESCAP, Bangkok, Thailand.

Rosalino C. Delos Reyes, Chief of Staff, the National Mapping and Resource Information Authority (NAMRIA), Manila, Philippines.

Sanjay Kumar Srivastava, Regional Adviser for Disaster Risk Reduction, Information and Communications Technology and Disaster Risk Reduction Division, ESCAP, Bangkok, Thailand.

Sanny Ramos Jegillos, Regional Advisor, UNDP Asia Pacific Regional Centre, Bangkok, Thailand.

Servando, Director, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Manila, Philippines.

Sharad Sadhu, Director, ABU Technology, Technical Department, Asia-Pacific Broadcasting Union, Kuala Lumpur, Malaysia (over the telephone).

Sohail Mahmood, Ambassador Extraordinary and Plenipotentiary and Permanent Representative to ESCAP, the Embassy of the Islamic Republic of Pakistan, Bangkok, Thailand.

Song Ekmahachai (Royal Thai Navy), Director, Warning and Dissemination Section, NDWC, Bangkok, Thailand.

Sugeng Triutomo, Director, Department of Disaster Mitigation, Indonesian National Board for Disaster Management, Jakarta, Indonesia.

Suhardjono, Director, Meteorology, Climatology, and Geophysics Agency (BMKG), Jakarta, Indonesia.

Suprayoga Hadi, Director for Special Area and Disadvantaged Region, Bappenas, National Project Director, National Development Planning Agency, Jakarta, Indonesia.

Surachai Pannoy, Journalist, Thai Public Broadcasting Service (Thai PBS), Bangkok, Thailand.

Surasak Suparat, Director, Development Affairs Division, Department of International Organizations, Ministry of Foreign Affairs, Bangkok, Thailand (over the telephone).

Susan Espinueva, Chief, Hydro Meteorological Division, Philippine Atmosphere, Geophysical & Astronomical Services Administration (PAGASA), Manila, Philippines.

Sugeng Triutomo, Deputy Chief for Prevention and Preparedness, National Agency for Disaster Management (BNPB), Jakarta, Indonesia.

Tachasit Prasittirat, Second Secretary, Development Affairs Division, Department of International Organizations, Ministry of Foreign Affairs, Bangkok, Thailand (by email).

Titin Agustini, Senior National Project Manager for SC-DRR, BAPPENAS and UNDP, Jakarta, Indonesia.

Tokiyoshi Toya, Regional Director for Asia and the South-West Pacific, WMO, Geneva (by email).

Tony Elliott, Head of the ICG/IOTWS Secretariat, IOC-UNESCO Tsunami Unit, IOC-UNESCO Perth, Australia (over the telephone).

Yuichi Ono, Chief, Disaster Risk Reduction Section, Information and Communications Technology and Disaster Risk Reduction Division, ESCAP, Bangkok, Thailand.

Walter Welz, Evaluator for RIMES and ABU (in person and by email).

Zengpei Xuan, Chief, Information and Communications Technology and Disaster Risk Reduction Division, ESCAP, Bangkok, Thailand.

Annex IV. Overview of grants (as of 1 May 2011) (US\$)

| Project number | Title | Implementing Organization | Countries covered | Total expenditure (completed) / Programmed (ongoing) | Status |
|----------------|---|---------------------------------------|--|--|-----------|
| TTF-01 | Support to the establishment of capacities in the region to observe and evaluate anomalous sea level conditions for early warning of tsunamis in the Indian Ocean | Asian Disaster Preparedness Center | Myanmar, Philippines, Viet Nam | 247,901 | Completed |
| TTF-02 | End-to-end early warning of tsunamis and other natural hazards for disaster preparedness and mitigation in the Indian Ocean and Southeast Asia: Phase 1 | Asian Disaster Preparedness Center | Bangladesh, Cambodia, Lao PDR, Maldives, Myanmar, Philippines, Sri Lanka, Thailand, Viet Nam | 2,358,985 | Completed |
| TTF-03 | Trainers training programme on community-based hazard map development | Asian Disaster Reduction Center | Bangladesh, India | 79,819 | Completed |
| TTF-04 | Strengthening tsunami warning and emergency responses: training workshops on the development of SOPs for the Indian Ocean and Southeast Asia | IOC-UNESCO | Myanmar, Pakistan, Philippines, Viet Nam | 444,730 | Ongoing |
| TTF-05 | Strengthening national and community capacities for effective early warning dissemination and response | UNDP Maldives | Maldives | 91,259 | Completed |
| TTF-06 | Enhancing national capacity for early warning dissemination in Sri Lanka | Disaster Management Centre, Sri Lanka | Sri Lanka | 199,880 | Completed |
| TTF-07 | End-to-end early warning of tsunamis and other natural hazards for disaster preparedness and mitigation in the Indian Ocean and Southeast Asia: Phase 2 | Asian Disaster Preparedness Center | Bangladesh, Cambodia, Lao PDR, Maldives, Myanmar, Philippines, Sri Lanka, Thailand, Viet Nam | 1,211,766 | Completed |
| TTF-08 | Towards sustaining the Indian Ocean and Southeast Asia End-to-End Multi-Hazard Early Warning System | Maldives Meteorological Service | Bangladesh, Cambodia, China, India, Lao PDR, Maldives, Myanmar, Philippines, Sri Lanka, Thailand, Viet Nam | 375,000 | Ongoing |
| TTF-09 | Making Provincial Communities Safer Through Disaster Risk Reduction in Development (DRR-PC) | UNDP Indonesia | Bangladesh, Indonesia, Malaysia, Sri Lanka, Thailand | 2,000,000 | Ongoing |
| TTF-10 | Tsunami Awareness and Preparedness Tools and Materials Assessment Project | UNESCO Office Jakarta | Indonesia, Philippines, Thailand, Timor Leste | 599,896 | Ongoing |
| TTF-11 | Assessment and awareness of Makran tsunami hazards | IOC-UNESCO | Islamic Republic of Iran, Pakistan | 220,861 | Ongoing |
| TTF-12 | ABU Early Warning Broadcast Media Initiative | Asia-Pacific Broadcasting Union | Cambodia, China, India, Malaysia, Philippines, Thailand, Vietnam, | 351,108 | Ongoing |

| | | | | | |
|--------------|---|--|--|-------------------|--------------------|
| TTF-13 | Building risk knowledge to enhance early warning, preparedness and mitigation in tsunami-affected countries | UNDP Asia-Pacific Regional Centre | Indonesia, Sri-Lanka | 344,386 | Ongoing |
| TTF-14 | Strengthening Community-based Disaster Risk Management in Asia: shifting from lessons observed to lessons learned. | Raks Thai Foundation | India, Indonesia, Maldives, Sri Lanka, Thailand, Cambodia, Lao PDR, Myanmar, Timor-Leste, Viet Nam | 600,000 | Ongoing |
| TTF-15 | Strengthening EW Systems for Extreme Weather Events to Advance Climate Risk Management in the South East Asian Region | UNDP Asia-Pacific Regional Centre (with RIMES) | Cambodia and Timor Leste | 361,066.40 | Commenced May 2011 |
| TTF-16 | Reducing risks of tsunamis, storm surges, large waves and other natural hazards in low elevation coastal zones | RIMES with WMO | Bangladesh, India, Maldives, Myanmar, Sri Lanka and Thailand | 1,818,274 | Commenced May 2011 |
| Total | | | | 11,304,931 | |