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Evaluation pursuant to resolution 67/4: Establishment of the Asian and Pacific centre for the development of disaster information management

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Report of the evaluation team**



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EVALUATION PURSUANT TO RESOLUTION 67/4: ESTABLISHMENT OF THE ASIAN AND PACIFIC CENTRE FOR THE DEVELOPMENT OF DISASTER INFORMATION MANAGEMENT

Report of the evaluation team

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interviews and surveys, and who expressed their candid views on the need for, and benefit of, establishing the Asia and Pacific Centre for Disaster Information Management (APDIM, the Centre) as

a subsidiary body of the Commission.

We would like to extend our special appreciation to the various offices and representatives of the

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Teemu Alexander Puutio; Research Assistant

Acronyms

ACPR	Advisory Committee of Permanent Representatives and Other Representatives Designated by Members of the Commission	
ADPC	Asian Disaster Preparedness Center	
ADRC	Asian Disaster Reduction Centre	
APDIM	Asian and Pacific Centre for Disaster Information Management	
ASEAN	Association of Southeast Asian Nations	
ASEAN DiscNet	ASEAN Disaster Information Sharing and Communication Network	
BHRC	Building and Housing Research Centre, Islamic Republic of Iran	
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation	
CRED	Centre for Research on the Epidemiology of Disasters	
DRR	Disaster Risk Reduction	
ECO	Economic Cooperation Organization	
EGM	Expert Group Meeting	
EM-DAT	Emergency Events Database	
ESCAP	Economic and Social Commission for Asia and the Pacific	
GAR	Global assessment report on disaster risk reduction	
HFA	Hyogo Framework for Action	
HFA 2	Hyogo Framework for Action 2	
ICT DRR	Information and Communications Technology and Disaster Risk Reduction	
IDD	Information Communication Technology and Disaster Risk Reduction Division	
IEER	Institute of Earthquake Engineering Research, Islamic Republic of Iran	
INFORM	Inter agency Index for Risk Management	
MRC	Mekong River Commission	
NCC	National Cartographic Centre	
ОСНА	Office for the Coordination of Humanitarian Affairs	
PCGIAP	Permanent Committee on Geographical Information System	

Infrastructure for Asia and the Pacific

PDC	Pacific Disaster Centre
PDRC	Pacific Disaster Reduction Centre
SPMD	Strategy and Programme Management Division
RIMES	Regional Integrated Multi-Hazard Early Warning System for Africa and Asia
SAARC	South Asian Association for Regional Cooperation
SIAP	Statistical Institute for Asia and the Pacific
SOPAC	South Pacific Applied Geosciences Commission
UNDAFs	United Nations Development Assistance Framework
UN-DMT	United Nations Disaster Management Team
UNDP	United Nations Development Programme
UNGGIM	United Nations initiative on Global Geospatial Information Management
UNISDR	United Nations International Strategy for Disaster Reduction, most recently United Nations Office for Disaster Risk Reduction

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1. Executive summary

This report is based on an independent evaluation of Asian and Pacific Centre for the Development of Disaster Information Management (APDIM) as mandated by ESCAP resolution 67/4. Through this resolution, the Commission decided to initiate the process for the establishment of APDIM in the Islamic Republic of Iran. This decision followed a number of reviews by the Commission of the proposals by the Government of the Islamic Republic of Iran to establish the Centre, including the proposals brought forward through resolution 63/10 in May 2007, resolution 64/10 in April 2008 and resolution 66/8 in May 2010. Pursuant to resolution 67/4, the purpose of the evaluation was to assess the activities under paragraph 2 of resolution 67/4 and the need for, and benefit of, establishing the Centre as a subsidiary body of the Commission for the development of disaster information management. The results of the evaluation will be considered by the Commission at its seventy-first session to be held in May 2015.

The evaluation was conducted by external evaluation consultants from October 2014 to January 2015. The evaluation team assessed the activities of APDIM vis-à-vis its engagement under ESCAP subprogrammes, engagement with ESCAP sub-regional offices, cooperation with UN entities and the need for and benefit of establishing APDIM as a subsidiary body of ESCAP. The main evaluation criteria comprised relevance and effectiveness, against which APDIM's already conducted and planned activities, the potential establishment as a subsidiary body of the Commission, and the engagement with ESCAP and other UN entities were assessed.

The evaluation was conducted through extensive desk-research and comprehensive consultations and interviews with key stakeholders ranging from ESCAP member States to UN entities and potential beneficiaries of APDIM. In establishing the need for and potential benefits of the Centre, the evaluation team analyzed resolutions, reports and other documents produced by ESCAP, UNISDR and several other relevant entities and organizations that deal with disaster risk reduction and disaster information management. United Nations Development Assistance Frameworks (UNDAF) were utilized as a source for verifying needs and demands concerning disaster information management. All findings were triangulated and validated to the extent possible through, e.g., the utilization of multiple sources of data.

Key findings:

Regardless of a number of initiatives in the area of disaster information management there is a persistently growing need for further support, in particular for the most vulnerable sub-regions and member States in the Asia and the Pacific region. The need for establishing a regional centre to support the vulnerable member States to bridge their disaster information management gaps is further highlighted by the disaster risk profile of the region, the unmet disaster information needs identified in the various regional reports and the national UNDAFs, the Yogyakarta Declaration of Asian Ministerial Conference on Disaster Risk Reduction in Indonesia (October 2012) which calls for enhanced regional cooperation mechanisms and centres on disaster information management, and the member States' explicit views and request.

The most direct evidence of the need for and benefit of establishing APDIM under the auspices of ESCAP emerge from the three subregional and regional expert group meetings (EGMs), which have highlighted the lack of consensus and consistency of disaster-related data, including the number of lives lost, number of people affected and economic damage, among various disaster databases, regionally and globally and the limited number of institutions available to provide capacity development training on multi-hazard risk assessment as well as damage, loss and needs assessment. Through the outcomes of these meetings, the ESCAP member States recognized that APDIM can play an important role in addressing some of these above mentioned gaps, supported APDIM's proposed programme of work and recommended APDIM should utilize various cooperation modalities, such as capacity building, information sharing and knowledge networking in delivering said programme of work while continuing to provide group training on priority issues.

Since the adoption of resolution 67/4, significant progress has been made by the Government of the Islamic Republic of Iran in establishing the Centre with a view to address some of these gaps. During the evaluation mission to Tehran the officials of the Government of the Islamic Republic of Iran reported that in May 2012, the Parliament passed an Act concerning the establishment of the Centre including bearing the costs of establishing as well as operating the Centre and its programme for five years with a maximum budget of up to US\$ 50 million. In addition, the Government of the Islamic Republic of Iran confirmed that it will provide in-kind contributions in the form of office space and other operational costs.

The Islamic Republic of Iran has significant disaster information management experience and expertise to address some of the region's most urgent needs in the area of disaster information management. It has a credible institutional base and international reputation in disaster related research, in particular for seismic research, as well as operational products. This capability, expertise and in-depth experience can be reflected in the value-added products and services that the Centre could deliver.

Designated host government officials have been maintaining the relationship between ESCAP and the relevant governmental bodies in the Islamic Republic of Iran on APDIM matters. A core team has been created to support APDIM's establishment, which consists of its leader Dr. Mojitaba Khalesi, Head of Economic Commissions and Councils and in charge of the establishment affairs of APDIM, and four other representatives from entities such as the Building and Housing Research Centre (BHRC), the Department of Environment and Sustainable Development, Department of International Affairs and Scientific Board of National Cartographic Center. In addition, a steering committee has been established, which consists of representatives of Vice Presidency for Strategic Planning and Supervision, National Disaster Management Organisation, Ministry of Foreign Affairs and other relevant ministries, organizations and institutions. Whereas APDIM has been granted ample office space, it is yet to have full time and substantive staff.

The strong cooperation between ESCAP and the Islamic Republic Iran, particularly since 2012, and the trust in ESCAP's advice are evident from the increased engagement between these parties. With the support of ESCAP, APDIM has successfully developed a draft Strategy and Work Plan to address the disaster information management needs in the Asia and the Pacific region, and consulted the vulnerable countries through three subregional and regional EGMs.

APDIM's vision is to facilitate, network with and coordinate the national and international capacities within the regional and sub-regional institutes and member States rather than duplicate what already exist. Operationalizing these capacities is the challenge ahead of APDIM that ESCAP needs to address.

The main conclusions of the evaluation are:

■ ■ ■ Relevance

The need for establishing a regional centre to support the vulnerable member States to bridge their disaster information management gaps is evident based on explicit member State views and requests issued at ESCAP Commission sessions in the form of resolutions 63/10, 64/10, 66/8 and 67/4 and the three outcome documents of the EGMs, the disaster risk profile of the region, the unmet disaster information needs identified in the various regional disaster reports and the national UNDAFs, as well as the member States' explicit views and request. The evaluation found that establishing the Centre would strengthen the capacities of particularly the more vulnerable countries and sub-regions within the Asia and the Pacific region in dealing with disaster information management.

Concerns over duplication with other regional organizations can be allayed as the Centre can deliver unique services and products. Indeed, currently there is no evidence of significant duplication — either explicit or potential. At the same time, the demands for disaster information management in the region are high. In essence, the question becomes more one of careful coordination, rather than one of duplication.

Establishing APDIM with the status of an ESCAP subsidiary body would provide greater visibility, policy influence and leverage for the planned activities of the Centre. Furthermore, establishment as a subsidiary body would enhance the member States' willingness to engage with the Centre.

ESCAP's convening power adds credibility to APDIM within the member States as well as the donors. This raises expectations from ESCAP to assume a vital role in nurturing the Centre. A strong institutional commitment from ESCAP can influence the Centre's future positively. However, given the need to ensure financial sustainability of the Centre in view of its current reliance on only one source of funding, the continuation of the subsidiary body status after the initial five years of operation should be conditional on the continued financial responsibility of the Centre being borne by the host country.

■ ■ Effectiveness

Taking the first steps is a challenging task for any organization – and it has been so for APDIM.

Nevertheless, the Government of the Islamic Republic of Iran has made significant progress in laying the foundations for APDIM's operations, including passing a parliamentary act that details the government's financial commitments to APDIM; procuring a dedicated office building and establishing interim management for the Centre; and signing partnership agreements with two national centres, namely the BHRC and the NCC.

With ESCAP's support, APDIM has successfully developed a draft Strategy and Work Plan to address the disaster information management needs in the Asia and the Pacific region. The evaluation found that APDIM has concluded three EGMs and one capacity development training on microzonation, and has planned future activities and initiatives under APDIM that reflect the needs and aspirations of the ESCAP member states. Further, the evaluation found that in planning its activities, APDIM has given due priority to the more vulnerable countries and sub-regions within the Asia and the Pacific region.

The aforementioned APDIM Work Plan is aligned with the ESCAP subprogramme 5 in ICT-DRR. The current Work Plan of the Centre covers a broad range of potential activities. Implementing these potential activities will be a major challenge, unless a clear roadmap with geographical and subject-matter priorities is established. It is essential to fully contextualize the ownership of member countries within each sub-region with respect to the APDIM Strategy and the Work Plan.

Since 2011, APDIM has engaged with ESCAP and its sub-regional offices with satisfactorily increasing intensity. In particular, the organization of EGMs in Almaty and New Delhi showed that APDIM has the capacity to successfully cooperate with not only the ESCAP secretariat, but also its sub-regional offices.

■ ■ Forward looking conclusions

The financial viability of APDIM is contingent on voluntary contributions from ESCAP member States, which in the first phase consist solely from the contributions of the Government of the Islamic Republic of Iran, which has committed to bearing the costs of establishing as well as operating the Centre and its programme for five years with a maximum budget of up to US\$ 50 million. In addition, the Government of the Islamic Republic of Iran confirmed that it will provide inkind contributions in the form of office space and other operational costs.

In accordance with the draft work programme (see annex IV), APDIM would provide disaster information management services that are relevant to the whole of Asia-Pacific, with a particular focus on more vulnerable States. Furthermore, the governance of the centre would comprise of representatives from a broad range of member and associate members, including the host Government.

The process of establishing a regional institution in accordance to ESCAP practices is a lengthy process. APDIM will benefit from a dedicated management team to lead this process and to keep the momentum created by the EGMs in determining more precisely the needs and fine-tuning the substance of its work plan.

The Centre lacks visibility, hence knowledge of the Centre's status and activities is limited among its key stakeholders. APDIM has not been effective in widespread and regular dissemination of information about its achievements and the challenges it has faced with its key stakeholders.

APDIM's strategy relies on collaboration with a broad range of organizations, including UN entities and other regional and sub-regional organizations. The wide network of partners with whom APDIM seeks partnerships which can be seen as an extension of APDIM's capacity to deliver development impact in the region.

Making additional resources available to APDIM would significantly enhance the Centre's positive impact on disaster information management in the region. South-South cooperation and capacity building could gradually leverage the resources, especially the human resources, within the countries of Asia and the Pacific region.

The prevailing conditions in the Islamic Republic of Iran necessitate acknowledgment of particular issues that may affect APDIM's operationalization, including organizing international fund transfers and procurement and recruitment of international staff. Partnerships with other UN entities such as UNDP may be sought to facilitate the operationalization of APDIM in its initial phases.

The main recommendations of the evaluation are:

- In light of the growing need for regional disaster information services and in acknowledgment of the Government of Islamic Republic of Iran's strong commitment to provide financial support to the Centre, it is recommended that the Commission considers establishing APDIM as a regional institution operating under the auspices of ESCAP in accordance with the following requirements: i. the management and operation of Center shall be fully funded through voluntary contributions from the host government; ii. the Center shall have international and national staff who shall be ESCAP staff members, including a Director at the D1 level and a sufficient amount of professional staff and support staff, appointed under the appropriate UN rules and regulations; iii. the Director of the Centre shall report to the Executive Secretary of ESCAP for the administration of the Centre and implementation of its programme of work in the same manner as the other regional institutions; and iv. the programme of work of the Centre shall be aligned with ESCAP's subprogramme 5 on information and communications technology and disaster risk reduction. Further, it is recommended that APDIM be established with an arrangement made for deciding upon its continuation after five years of operations, based on the results of an independent evaluation of the Centre to assess its performance and relevance as well as its financial status.
- It is recommended that during its first phase of operations, APDIM focuses on the most vulnerable countries of the region, including as a priority those in North and Central Asia as well as South and South West Asia. It is also recommended that during its first phase, APDIM focuses on earthquakes, and that it delivers a programme of work that targets a few countries with the most urgent needs and aims to support them in establishing long-term capacities.
- In order to maximize the benefits the establishment of APDIM could potentially generate to
 the Asia and the Pacific region, it is recommended that a matrix mapping the member State
 needs, and resources and capacities in disaster information management is developed in
 consultation with the relevant UN entities and regional and subregional organizations.
- The process of establishing a regional institution in accordance with UN secretariat rules and regulations can be a lengthy process. Consequently, it is recommended that a dedicated management team for APDIM is established, which would be responsible for fine-tuning

and implementing APDIM's programme of work and supporting the necessary steps for the establishment of the Centre, as an ESCAP regional institution, including the conclusion of a headquarters agreement between the host Government and the United Nations. Furthermore, it is recommended that the proposed dedicated management team shall include international and national staff who are to be recruited by ESCAP on a temporary basis to be funded by the host Government through extrabudgetary contributions.

• The Centre should develop a communication strategy to disseminate information of its activities and progress. APDIM would benefit from more wide-spread and regular dissemination of its achievements and the challenges it has faced to the member States, the relevant UN agencies and potential partner organizations and institutions in the region.

2. Introduction

2.1. Background of the evaluative review

At its 67th session held in May 2011, the ESCAP, through resolution 67/4, decided to initiate the process for the establishment of APDIM in the Islamic Republic of Iran. That decision was made following several reviews by the Commission and consultations with the secretariat on the proposal by the Government of the Islamic Republic of Iran to establish the Centre through resolution 63/10 in May 2007 originally presented as a draft resolution to the 62nd Commission session in 2006 where it was deferred to the 63rd session, resolution 64/10 in April 2008 and resolution 66/8 in May 2010.

Following the earlier resolution 63/10, the secretariat commissioned in 2007 an independent feasibility study on the modalities for strengthening regional coordination and cooperation in natural disaster information management and early warning in Asia and the Pacific through the establishment of a Centre in Tehran. In a post-Indian Ocean tsunami climate, the utilization of space technology to generate real-time data for improving early warning systems was regarded as a pressing need in the region, which was the proposed focus for the Centre at the time. Thus, it followed logically that it would be the central theme for the feasibility study. Over time, this gap was filled by both existing entities' activities and new initiatives on early warning. Moreover, the feasibility study identified that the main capacities of the proposed Centre in Tehran were not in real-time data for early warning, but rather in other technical areas of disaster information and disaster risk management.

As a consequence, member States requested that the Islamic Republic of Iran review the operational details as well as the scope, functions and value-added products and services of the Centre against the findings of the feasibility study as stated in paragraph 4 of resolution 67/4 as follows: "[...] invited the Government of the Islamic Republic of Iran to provide the Commission with the supplementary information requested in paragraph 1 of resolution 64/10 and consider revising its draft resolution to take into account the outcome of the review (feasibility study) requested in paragraph 1 of resolution 64/10, in consultation with the secretariat". Paragraph 8 of resolution 67/4 notes with appreciation "[...] the outcome of efforts made by the Government of the Islamic Republic

of Iran to further develop the proposal for the establishment of the centre and for making the necessary adjustments according to resolution 66/8 in consultation and coordination with the secretariat."

In the above text, member States acknowledged with satisfaction that adjustments had been made by the Government of the Islamic Republic of Iran in accordance with resolution 66/8. The adjustments entailed a revised focus of APDIM on promoting regional cooperation mechanisms and knowledge sharing arrangements for disaster risk reduction. In May 2011, through resolution 67/4, the Commission invited all members and associate members to participate actively in the process of developing the programme of the Centre and to support its activities, as appropriate, in a comprehensive manner. It also requested the Executive Secretary to support the process for the establishment of the Centre, including, inter alia, the development of the required modalities and arrangements for its operationalization through:

- a) Enhanced engagement under ESCAP subprogramme 5, Information and Communications Technology and Disaster Risk Reduction (ICT-DRR), with the more vulnerable countries and sub-regions in the areas of disaster risk reduction and disaster information management;
- b) Enhanced engagement under the ESCAP sub-regional offices in the areas of disaster risk reduction and disaster information management;
- c) Cooperation with UN entities, in particular with the Asia-Pacific Office of the Inter-Agency Secretariat of the International Strategy for Disaster Reduction, and with other international, regional and non-governmental entities;
- d) Inclusion of the details of the activities under paragraph graphs (a), (b) and (c) above in the secretariat's annual reporting to the Commission.

Furthermore, the Commission requested the Executive Secretary to include in the secretariat's evaluation plan for 2013 an evaluation of the above-mentioned activities and the **need for, and benefit of, establishing the Centre as a subsidiary body of the Commission** for the development of disaster information management, and to submit the results of that evaluation to the Commission at its 70th session.

At its second plenary meeting, on 23 May 2014, the Commission took note of the request of the Government of the Islamic Republic of Iran to postpone the evaluation related to the establishment of APDIM – citing the reasons that the sub-regional and regional EGMs had not taken place as per the planned schedule and therefore evaluation at this stage would not be realistic. Consequently the Commission decided to review the evaluation at the 71st session in 2015.

2.2. Purpose, objectives and outputs

This evaluation was mandated by the Commission and conducted independently by an external evaluation team with the guidance and support from the secretariat. The purpose of this evaluation is to assess the activities under paragraph 2 and the need for, and benefit of, establishing the Centre as a subsidiary body of the Commission for the development of disaster information management, as requested through resolution 67/4. The results of the evaluation will be considered by the Commission at its 71st session to be held in 2015.

2.3. Scope (including evaluation questions)

The evaluation assessed the establishment of the Centre based on the following evaluation criteria and questions:

■ ■ ■ Relevance:

- Do the member States of ESCAP, particularly the more vulnerable countries and subregions, find the establishment of the Centre reflective of their needs and aspirations in the areas of disaster risk reduction and disaster information management?
- What are the perceived benefits of establishing the Centre as a subsidiary body of the Commission from the perspective of the member States and other stakeholders?
- Do the member States of ESCAP, particularly the more vulnerable countries and subregions, find the establishment of the Centre adding value in strengthening their capacities in disaster information management?
- What are the gaps and barriers in disaster information supply chain in the vulnerable countries and sub-regions, and to what extent the establishment of the Centre addresses those gaps and barriers?
- What are the unique services and products of the Centre that demonstrate its unique comparative advantages vis-à-vis other regional and sub-regional disaster-related organizations addressing information management issues the region?
- To what extent has the Centre's work aligned with the ESCAP's subprogramme 5 on ICT-DRR?

Effectiveness:

- To what extent has the Centre been effective in engaging, under ESCAP subprogramme 5 on ICT-DRR, with the more vulnerable countries and sub-regions in the areas of disaster risk reduction and disaster information management?
- To what extent has the Centre been effective in engaging under the ESCAP sub-regional offices in the areas of disaster risk reduction and disaster information management?
- To what extent has the Centre been effective in cooperating with UN entities, in particular
 with the Asia-Pacific Office of the Inter-Agency Secretariat of the International Strategy for
 Disaster Reduction, and with other international, regional and non-governmental entities?

2.4. Methodology

The evaluation was carried out through two missions to Bangkok in October (14th–24th) and November (17th–21st) 2014 to conduct interviews with member State representatives, UN entities and regional institutes and entities based in Bangkok, and to attend the APDIM/ESCAP Regional Expert Group Meeting on Capacity Development for Disaster Information Management in Bangkok during 21–22 October 2014. Further, the evaluation included a mission to Tehran in December (6th–

10th) 2014 to meet the relevant Government departments, APDIM focal points, national partner institutions and the UN-Disaster Management Team (UN-DMT) in Tehran. The rest of the information collection was carried out through desk-research, telephone interviews and electronic questionnaires.

2.4.1. Evaluation team

An evaluation team comprising of a **Lead Evaluator** and a **Research Assistant** were assigned to undertake the evaluation. The team carried out a transparent and participatory evaluation process that involved representatives from member States and development partners as well as secretariat staff members. The Lead Evaluator assumed the overall responsibility for carrying out the evaluation and presenting the final report to ESCAP secretariat and the member States, through the ACPR. The Research Assistant was responsible for analyzing and summarizing information gathered from various sources and for assisting with the questionnaire surveys and the finalization of the evaluation report.

2.4.2. Reference group

In accordance with ESCAP Evaluation Guidelines, a Reference group was established to support the evaluation process, provide advice on evaluation methodology and facilitate the engagement of all relevant stakeholders or informants in the evaluation process. The Reference group was chaired by the Deputy Executive Secretary of ESCAP.

2.4.3. Data collection and sources

A mixed method approach was employed utilizing qualitative and quantitative data collection methods. Triangulation of data, which refers to empirical evidence gathered through three major sources of information, namely perception, validation and documentation, was not possible for every aspect of the evaluation due to the low rate of stakeholder engagement in interviews and questionnaires. Validation of the information and findings was achieved through cross-referencing of sources. The main methods for data collection and analysis comprised the following:

Structured interviews were held with key ESCAP secretariat staff of relevant divisions including the Office of the Executive Secretary and the Strategy and Programme Management Division (SPMD) involved in planning, approval processes, monitoring, evaluation and management issues. Interviews and consultations (face-to-face and telephonic) were held with the following:

- member States' permanent representatives in Bangkok;
- participants of the EGM from South-East Asia and the Pacific held in Bangkok, as well as the technical contributors to the meeting from the national partner organizations of the Government of the Islamic Republic of Iran (BHRC and the Institute of Earthquake Engineering Research (IEER));
- senior representatives of the Government of the Islamic Republic of Iran in Tehran and the staff of the NCC and the BHRC;
- heads of the Subregional Office for North and Central Asia and the Subregional Office for South and South-West Asia
- UN agencies based in Bangkok and Tehran and other regional/sub-regional organizations;

- ESCAP Deputy Executive Secretary, relevant Division heads and professional staff involved in delivering ESCAP's work in the area of disaster risk reduction, and
- United Nations Country Team based in Tehran.

During the evaluation, several member state representatives were met in Bangkok. Further, various participants to APDIM's EGMs, relevant ESCAP staff and staff from other UN entities were interviewed. Representatives from regional and other organizations and institutions were also engaged. In Tehran a total of six consultations were held with staff from various levels of the government and technical institutions being involved, as well as a meeting with UNCT was undertaken

The evaluation team also conducted web- and paper-based electronic surveys of key stakeholder groups: 1) members of Advisory Committee of Permanent Representatives (APCR), 2) member State participants in the EGMs from Ministries and departments in the area of disaster risk reduction, who were asked to acquire feedback from a wider set stakeholders in their countries.

The main sources of information for the evaluation included:

- The reports of the three EGMs supported by ESCAP Secretariat in 2014 at sub-regional and regional levels related to the programme of work of APDIM and to assess the need for and benefits of the Centre to the member States;
- The report of the microzonation training held in Tehran;
- Desk review of related resolutions, mission reports to Tehran and other documentations; declarations of the 6th Asian Ministerial Conference on Disaster Risk Reduction, Recommendations of 69th Session of ESCAP Commission especially the recommendations of ESCAP Theme Study on Building Resilience to Natural Disasters and Major Economic Crisis, UNISDR study reports on HFA implementations in the Asia and the Pacific region (2011, 2013), UNDAFs of countries in the region, feasibility study of APDIM (2008), various technical reports on DRM in the region; official communications related to the establishment of the Centre.

2.5. Limitations of the methodology and scope and problems encountered

Despite several attempts by the secretariat to contact the member State representatives in Bangkok for interviews and consultations, the number of responses remained limited. Consequently, the evaluation drew from the intensive consultations with member States held at the EGMs. As they are the members to decide on the subsidiary status of APDIM, their views and recommendations were important to capture in this evaluation. To supplement their inputs, an electronic survey was conducted with the ACPR members. Again, this survey resulted in a sub-optimal response rate. This limitation was overcame by undertaking a thorough review of the relevant documents where the member State needs vis-à-vis disaster information management were stated, such as the official reports of the three sub-regional EGMs, and the outcomes of the side event organized by the Islamic Republic of Iran at the Yogyakarta Ministerial meeting.

The term 'effectiveness' refers to the extent to which the expected objectives or outcomes have been achieved. As the Centre has been in action only for a limited period of time, during which it has

been used to consult with the partners and beneficiaries of its services, effectiveness had to be assessed in terms of potential achievement of objectives and outcomes and the benefits thereof.

3. Findings

3.1. General findings about the overall relevance of disaster information management services to the region

In addition to being the most disaster-prone region of the world, the Asia and the Pacific is also the region most seriously affected by natural hazards. The most common type of disaster the region faces is flooding, followed by storms. The greatest numbers of losses of life, however, are inflicted by earthquakes (ESCAP/UNISDR, 2012). As climate change progresses, the frequency, severity and impact of disasters in Asia and the Pacific are predicted to increase. In fact, the Intergovernmental Panel on Climate Change lists Asian and African mega deltas as among the four areas of the world most vulnerable to the effects of climate change, due to large populations and high exposure to sea level rise, storm surges and river flooding. There is mounting evidence that climate change is already altering weather patterns. This makes it increasingly likely that areas will be exposed to disasters they are not used to, and are poorly prepared for (ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness Early Warning Systems in the Indian Ocean and Southeast Asia, 2011).

In an increasingly vulnerable region, information and knowledge management are essential for improving disaster risk management. Data and information becomes valuable not only in improving response capacities, but also in risk identification, risk assessment and risk remediation. It is the most critical component that needs to be developed and standardized in order to use it for more accurate post-disaster needs assessment, damage and loss assessment and identification of future risks. Similarly, disaster loss databases are important for accounting the disaster impacts. The capacity of national statistical systems should be enhanced to capture disaster losses and related social vulnerability more precisely. The design and development of spatial data infrastructure and standards holds the key for sharing the data across various sectors and agencies in the region.

While a number of bi-lateral and international initiatives, as well as sub-regional organizations have been addressing different aspects of disaster information, institutional capacity constraints remain in most of the Asia and the Pacific countries. This creates a continued demand for relevant products and services for disaster information management.

3.2. General findings about the actions taken towards the establishment of APDIM

It is against this growing demand that the Commission in its resolution 67/4 requested the Executive Secretary to support the process for the establishment of APDIM, including the development of the required modalities and arrangements for its operationalization.

During the evaluation mission to Tehran the officials of the Government of the Islamic Republic of Iran reported that in May 2012, its Parliament passed an Act concerning the establishment of the Centre and approved the first portion of the budget for the Centre for 2012 and 2013. These developments were reported by the Islamic Republic of Iran's delegation to the 68th Commission in

May 2012. A Steering Committee was then set up for operationalizing the Center and decision-making on other matters. A senior official from the Office of the Vice Presidency for Strategic Planning and Supervision was appointed as the ESCAP focal point, followed by the appointment of a director as the focal point in October, who held various high-level positions, including as the Vice-Minister of Foreign Affairs. On 31 October 2013 a draft activity plan-cum-budget for the Centre until 2014 was provided by the Government of the Islamic Republic of Iran to the ESCAP focal point.

Pursuant to resolution 67/4 the Government of the Islamic Republic of Iran confirmed its support for the establishment of the Centre and to bear the costs of establishing as well as operating the Centre and its programme for five years, up to US\$ 50 million. During the evaluation mission, the Government of the Islamic Republic of Iran also confirmed that its financial commitment will cover staffing and programme costs. In addition, the Government of the Islamic Republic of Iran will provide in-kind contributions in the form of office space and other operational costs, such electricity, building maintenance, and other indirect costs. In addition to these commitments, the Government of the Islamic Republic of Iran provided the budget for the three EGMs and the microzonation training. While the commitment to establishing the Centre came from the previous leadership, the current leadership continues to be dedicated to pursuing the statutory body status and is prepared to take the necessary remaining steps to establish APDIM as a subsidiary body of the Commission. High-level commitment to the Centre was evident during our discussions with the various offices of the government in Tehran, during which the Vice Presidency of Planning and Supervision and the Ministry of Foreign Affairs lent their political support to the Centre.

■ ■ Findings about the management of APDIM and cooperation with ESCAP

Currently the coordination of APDIM with ESCAP is managed by a newly appointed focal point from the Vice Presidency of Planning and Supervision, International Cooperation Centre. The Head of Centre for Public Relations, Informatics and International Affairs provides the overall senior management responsibility, directly reporting to the Vice Presidency. These officials maintain the relationship between ESCAP and the relevant governmental bodies in the Islamic Republic of Iran, coordinate through ESCAP the various member State consultations, and facilitate the linkages between the national institutes in the Islamic Republic of Iran and the relevant divisions of ESCAP. APDIM does not yet have any full time and substantive staff. Rather, its substantive direction largely comes from ESCAP, partner institutes from the Islamic Republic of Iran's such as the BHRC and the National Cartographic Centre (NCC), and the member States through the EGMs. These national institutes provided technical support to the activities as required, but they do not form a formal technical advisory group. A formal governance structure that operates under an ESCAP statutory framework is not yet in place, pending the decision of the Commission on the status of the Centre.

Instead, designated government officials have been maintaining the relationship between ESCAP and the relevant governmental bodies in the Islamic Republic of Iran. A core team has been created to support APDIM's establishment, which consists of its leader Dr. Mojitaba Khalesi, Head of Economic Commissions and Councils and in charge of the establishment affairs of APDIM, and four other representatives from entities such as BHRC, the Department of Environment and Sustainable Development, Department of International Affairs and Scientific Board of National Cartographic Center. In addition, a steering committee has been established, which consists of representatives of Vice Presidency for Strategic Planning and Supervision, National Disaster Management Organisation,

Ministry of Foreign Affairs and other relevant ministries, organizations and institutions. Whereas APDIM has been granted ample office space, it is yet to have full time and substantive staff.

The Islamic Republic of Iran's governmental bodies in charge of APDIM's oversight and management of the process were aware of the ESCAP rules for regional institutions. Technical support related to substantive and institutional matters are provided by the Information and Communications Technology and Disaster Risk Reduction Division (IDD) and SPMD at ESCAP. As far as the authorities in the Islamic Republic of Iran are concerned the biggest obstacle to fully operationalizing the Centre as a truly international entity is the pending statutory status, without which it is not possible for the Centre to recruit international staff and pay salaries. The option of operating as a regional entity then moving to a UN status, as for example SIAP Centre in Japan, is not practical as the funding for APDIM comes from a special budget line created for international cooperation. Moreover, due to the prevailing conditions in the Islamic Republic of Iran, funding to hire international staff can only be channeled through the UN system.

Activities undertaken by APDIM

To date, APDIM has completed a number of key activities towards operationalizing the Centre. With the support of ESCAP, APDIM has devised a preliminary programme of work for the Centre, which focuses on delivering capacity development in disaster information management for vulnerable subregions and countries of Asia and the Pacific. In particular, the programme of work guides APDIM towards addressing existing gaps and building institutional capacities in disaster information management for the benefit of the vulnerable countries of the region.

This programme of work acknowledges and builds upon the results of the meetings and trainings APDIM has held thus far. Successfully conducted activities include EGMs held in Almaty during 26–27 February 2014, in New Delhi during 16–17 April 2014 and in Bangkok during 21–22 October 2014, and a capacity development training on seismic microzonation held in Tehran during 16–20 August 2014. APDIM was also engaged in a side-event on disaster information management on 24 October 2012 during the fifth Asian Ministerial Conference on Disaster Risk Reduction, where the need for the Centre was emphasized by the participants.

3.3. Assessment of relevance

Do the member States of ESCAP, particularly the more vulnerable countries and sub-regions, find the establishment of the Centre reflective of their needs and aspirations in the areas of disaster risk reduction and disaster information management?

The need for and benefit of establishing the Centre were ascertained through the following sources:

- a) ESCAP resolutions, ESCAP, UNISDR and other reports, and UNDAFs for their reference to disaster information management needs in general in the region;
- b) resolutions and declarations that endorse the need for a centre, or the specific APDIM Centre:
- c) recommendations of the three EGMs representing the views of the potential partners and beneficiaries of the services and products of the Centre; and

d) interviews and survey results to determine the need for and benefit of the subsidiary body status.

Relevant resolutions:

The numerous resolutions that support the focus of this evaluation can be categorized into resolutions that concern the substance of what the Centre is expected to focus on and into resolutions that have been steering the process of establishing the Centre. Through these resolutions, ESCAP member States have explicitly expressed the need and demand for the establishment of APDIM for the development of disaster information management. These resolutions have also requested ESCAP to provide support for the Centre, and have shaped the working modalities and the relevance of the Centre's focus so that it better aligns with the member State needs. Selected details of the relevant resolutions are contained in annex I.

Relevant UN reports:

With reference to the Asia-Pacific Disaster Reports (ESCAP/UNISDR, 2010; ESCAP/UNISDR, 2012), Global Assessment Report 2013 (UNISDR, 2013), the ESCAP Theme Study — Building Resilience to Natural Disasters and Economic Crisis (ESCAP, 2013a) and the Asia Pacific Inputs to HFA 2 (UNISDR, 2014), the gaps in and the need for disaster information management systems are evident in the region.

As early on as 2010 the Asia Pacific Disaster Report, stated that "many countries lack comprehensive, accurate historical data on direct, physical disaster-related losses, or lack guidelines for systematic damage assessment. Yet few countries in Asia and the Pacific examine disaster scenarios as a regular part of economic forecasting" in relation to HFA Priority Area 2: "Identify, assess and monitor disaster risks and enhance early warning." With regard to bridging information gaps, the same report stated that "Almost all countries in Asia and the Pacific have conducted risk mapping and assessment. But many face severe limitations [...] Many countries also lack the appropriate cartographic and attribute data needed for complex modeling; the geographical coverage may be incomplete, at unsuitable scales, outdated, or of dubious quality. Some countries also lack the technical capacity to use remote sensing and GIS tools operationally". More recently, the Asia Pacific Disaster Report 2012 emphasized the pressing need to "set international, regional and national standards for data collection, the analysis and interpretation of resulting information and its dissemination to enable targeted and better-informed strategies for creating safer societies".

The latest HFA synthesis report from 2013 notes that implementing disaster risk information systems poses a difficult challenge for countries with limited access to financial resources and technological skills. Many countries that have disaster mapping processes and databases in place noted that the cost of maintenance, lack of human resources and limited awareness and understanding at the end-user level hamper the full utilization of these systems. As a result, many countries suffer from a lack of comprehensive data, which would cover all relevant aspects of disaster risks and losses and the costs and benefits of DRR integration. Further, many countries – including those that have achieved more progress in terms of the HFA implementation overall – note that standardizing of disaster risk information systems and tools of assessment is required for further progress to be made (UNISDR, 2011, 2013b).

GAR 2013 (UNISDR, 2013a) validates and partially builds upon these HFA reports and their findings. In particular, GAR 2013 notes that efforts in establishing systematic disaster information systems are

hampered by short-term, one-off project approaches, which are difficult to institutionalize and sustain due to limited resources and knowledge. These various views and requests are reinforced within the 'Asia-Pacific Input Document for the Post-2015 Framework for Disaster Risk Reduction', the contents of which are synthesized in annex II.

UNDAFs:

A study of available UNDAFs of the countries in the region shows that disaster information management and mapping, and their equivalent terms, have emerged in UNDAFs rather recently and are yet to permeate throughout the region. Based on the explicit references in UNDAFs, it is possible to synthesize disaster information mapping needs in the region as follows:

- Several countries suffer from a lack of data on the impact of disasters. Those countries that
 do have access data and information request support in enhancing the quality and utilization
 of existing knowledge, information and systems so that disasters, including climate-induced
 ones can be better forecast, and monitored;
- Several countries request the UN to support in improving the management of disaster information within government ministries and between international counterparts; and
- Explicit needs include data integration and single sourcing. (See: annex III for the full list of countries with UNDAF reference to disaster information management).

References to APDIM:

While UNDAFs and other regional reports establish the need for and the benefit of disaster information management in general terms, it is important to note that the Yogyakarta Declaration of Asian Ministerial Conference on Disaster Risk Reduction in Indonesia (October 2012) calls for enhanced regional cooperation mechanisms and centres on disaster information management. It further highlights the needs for improving risk governance through local risk assessment and financing. The language of the declaration in paragraph 11 is as follows: "Call on DRR stakeholders [...] to promote regional exchange and collaboration to enhance local resilience through bridging existing practical methodologies and practices in local risk assessment and financing; and enhance and support regional cooperation mechanisms and centers on disaster information management."

This ministerial declaration is an important milestone indicating the **need** for such centres in Asia and the Pacific. However, the specific **need** and **benefit** of establishing the APDIM Centre can only be assessed based on the outcomes of the sub-regional EGMs and the interview results. It is due noting that the overall endorsement of the Centre by all the participating experts in the three EGMs was unanimous. While each sub-region expressed their specific needs there was overall agreement on the proposed plan of work and the modalities.

The individual interviews conducted by the evaluation team provided the opportunity to further explore the views of the member States, the UN entities and the regional and sub-regional institutions on the need for and benefits of a centre on the subject, as well as to capture positions

¹ The Ministerial Conference was attended by 50 Asia Pacific countries (including 24 Ministers). 22 countries from outside the region also attended but were not party to the Declaration. They included US, Canada, several Middle Eastern countries, Switzerland and other key donors.

held by the interviewees regarding the question of the need and benefit of according APDIM subsidiary status. The fact that the Asia and the Pacific region is the most disaster-prone area of the world facing severe economic and social losses, was the most frequently cited rationale for the need and benefit of having the Centre to serve the region. As stated by one interviewee "no effort on information management would suffice, given the scale of disaster risks in the region."

On the whole, the relevant institutions and organizations that work in the field of DRR were welcoming of the idea of a new centre on the subject. Some member States called for a narrower geographical focus for the Centre, in order not to duplicate efforts by entities such as ASEAN or South Pacific Applied Geosciences Commission (SOPAC). Further, some member States called for targeting highly vulnerable countries with low level of capacities in particular. Other member States stated that the diverse needs of the region could not be fully met out of one centre alone, and requested for extending the coverage of the Centre through sub-regional partnerships and by considering, in due time, establishing sub-regional offices for the Centre.

What are the perceived benefits of establishing the Centre as a subsidiary body of the Commission from the perspective of the member States and other stakeholders?

The need for and benefit of establishing APDIM as an ESCAP subsidiary body was not readily evident to the majority of respondents. Some interpreted the resolution 67/4 as an endorsement of the Centre as a subsidiary body of ESCAP. On the whole, establishing APDIM under the auspices of ESCAP was welcomed, provided that the Centre remains financially secure. The benefits of operating under ESCAP were seen to include greater visibility, policy influence and leverage in APDIM's area of work. Some member State representatives were of the view that establishing APDIM as a centre that is independent of ESCAP would limit the value added as it will merely be a regional or national centre similar to others. Due to the goodwill generated by the UN emblem and the perceived authoritative status of UN entities, the majority of the stakeholders would be more willing to engage with APDIM should it be a centre operating under the auspices of ESCAP. Some of the interviewed member States and UN staff highlighted the importance of consistent communication concerning the progress made and challenges faced in establishing the Centre.

As for the Islamic Republic of Iran, the subsidiary body status is a prerequisite, which will enable the Centre to operate internationally. It was also pointed out that the status of a centre operating under the auspices of ESCAP would greatly facilitate collaboration with member States, other centres and the UN entities. It is also due noting that further funding towards the establishment and operationalization of APDIM granted by the Islamic Republic of Iran is conditional to APDIM's subsidiary body status.

Do the member States of ESCAP, particularly the more vulnerable countries and sub-regions, find the establishment of the Centre adding value in strengthening their capacities in disaster information management?

Clearly, the most important value added that member States expected from APDIM are the financial and technical resources it would provide, the enhancement of South-South cooperation and all other benefits that accrue to the region from having a centre on disaster information management with UN status and the multidisciplinary support of ESCAP. Among these latter benefits are the facts that i) the convening power of ESCAP provides a forum for member States to engage in dialogue and

to adopt common policies and approaches to regional and sub-regional challenges in DRR and ii) ESCAP as a catalyst for cooperation could serve as a clearing-house for information and its dissemination. Based on the interview of ESCAP staff, a centre dedicated to capacity building of the member States, particularly of the most vulnerable countries, adds value to the implementation of its ICT-DRR policies and strategies in the area of disaster information management. From the perspective of member States, the establishment of the Centre will enhance their cooperation with the UN entities that are often seen to work in silos and will help the countries in various sub-regions to acquire disaster-related information from a dedicated source. From a technical perspective, establishing reliable and authenticated databases that focus on mapping of hazards, risks, losses, etc. is cited by some organizations as the most significant potential benefit of APDIM.

What are the gaps and barriers in disaster information supply chain in the vulnerable countries and sub-regions, and to what extent the establishment of the Centre addresses those gaps and barriers?

A number of global, regional, sub-regional, and national databases and information management systems exist to serve the region with different strengths and challenges. They vary in geographical and technical focus, as well as accessibility. It should be noted that even among the global loss databases like CRED's EM-DAT, UNDP/UNISDR-supported DesInventar, and the two insurance-based Swiss Re-Sigma and Munich Re-NATCAT, there often is a lack of consensus and consistency in the estimated numbers of disasters, lives lost, numbers of people affected and economic damage caused by the disasters. Furthermore, there are several challenges involved in using the disaster data from the sources mentioned above for hazard and risk assessment. Key among these challenges is the problems of standardizing the information, as it is collected from a variety of sources. Data collected by insurance companies is easily biased as it is collected for specific purposes related to the coverage of the insurance premiums. Disaster information collected at the local level (e.g., DesInventar) is more complete as it is more standardized and includes also small magnitude and high frequency events. However, the coverage of such database is geographically limited and the system faces problems of sustainability in some countries where it is applied with limited external funding without the required local institutional support.²

Regional inter-governmental organizations have been the key enablers for sharing information and building the capacity for disaster information management in the region. For example, organizations such as **SAARC**, and **ASEAN** Disaster Information Sharing and Communication Network (**ASEAN DiscNet**) facilitate information exchange, primarily in the area of disaster response. Other initiatives include the Mekong River Commission (**MRC**), which operates on flood management, **SOPAC** which works on comprehensive hazard and risk management under the Economic Cooperation Organization (**ECO**), and the Regional Centre for Risk Management of Natural Disasters focusing on drought monitoring and early warning, which operates at Mashhad, the Islamic Republic of Iran. Other relevant examples include the **Pacific Disaster Net**, a virtual Centre of Excellence for Disaster Risk Management to improve information and knowledge management in the Pacific Island countries, and the **Disaster AWARE** of Pacific Disaster Centre (**PDC**), which provides access to hazard and risk information and analytical products for multi-hazard monitoring and early warning.

² Representatives of Cambodia and Islamic Republic of Iran raised this at the EGM meeting in Bangkok.

Sub-regional databases and training on tropical storms and typhoons are more common in Southeast Asia and the Pacific. The region is also served by some specialized institutions such as Asian Disaster Preparedness Center (ADPC), the Asian Disaster Reduction Centre (ADRC) and the Pacific Disaster Reduction Centre (PDRC), which have been effective in capacity building, information exchange and professional services. ADRC contributes to the region through the Sentinel Asia project. ADPC's contributions come through a new project, SERVIR, which uses satellite information and imagery. Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), an intergovernmental institution, also generates real-time early warning information. Among the UN entities – in addition to UNDP and UNISDR – OCHA has developed with partners such as DfID and UNICEF an initiative called Inter agency Index for Risk Management (INFORM). INFORM examines the global natural and man-made hazards, exposure thereto, and the vulnerability and capacity of countries with a view of establishing a risk model to facilitate emergency management. This, and several of the initiatives utilized the few existing global databases as their only sources of data.

These valuable initiatives and institutional engagements have facilitated the progress made in disaster information management in the region. Nevertheless, severe gaps remain at the national level. According to the 2013 UNDP survey on disaster databases in different regions, in Asia only 30 percent of countries have a functioning database.³ Similarly, the earlier UN ESCAP report, *Tsunami Early Warning Systems in the Indian Ocean and Southeast Asia Report on Regional Unmet Needs*, (2009) recognized that despite significant investment and progress made in tsunami-related information management and early warning, it may still be difficult for governments and disaster managers to access reliable and standardized data that are needed. Availability of reliable and validated data, its standardization and regular updating are all critical issues for disaster information management. Consequently, institutional capacity development to scale up such efforts becomes an important challenge. The gaps mentioned above are also echoed among the recommendations of the EGMs, which highlight the need for a geospatial information management system based on UNGGIM standards.

What are the unique services and products of the Centre that demonstrate its unique comparative advantages vis-à-vis other regional and sub-regional disaster-related organizations addressing information management issues the region?

The 2008 feasibility study of the Centre was not able to identify a specific set of deliverable products and services, other than the early warning system. The authors of that report felt that, given the Islamic Republic of Iran's capacity in disaster research and management and high international reputation in this area, it should not be difficult for the Centre to develop a list of such products and services. Since that report, through a number of resolutions, consultations and advice given by ESCAP, APDIM developed a strategic direction to match its capacities and the requests expressed by member States.

In 2012, ESCAP provided technical support to APDIM for developing its strategic framework and work plan. In consultation with the main stakeholders, key thematic priorities were identified. The first thematic priority was developing the Centre as a **knowledge hub** for multiple hazards, vulnerability, exposure and disaster risk. The second thematic priority was that the Centre could

³ UNDP/BCPR, A comparative review of country-level and regional disaster loss and damage databases, 2013.

become a leading establishment for **capacity development** in disaster information management with the following proposed expected results:

- i) disaster databases filling the critical gaps;
- ii) disaster information inventory setting the standards;
- iii) information sharing platform;
- iv) focus on disaster information with transboundary origins;
- v) addressing capacity needs in high risk and low capacity countries; and
- vi) analytical study on disaster risks of vulnerable sub-regions.

The APDIM *Draft Strategic Framework and Work Programme* that resulted from the support by IDD was developed around these priority areas, with a view to provide the proposed list of services and products:

- Capacity development in disaster information management training and technical support;
- Information support and analytical works on hazard, vulnerability, exposure and risk assessment at regional and sub-regional levels;
- Communications and publications;
- Development of and support to regional and sub-regional disaster information networks;
- Supporting local and national capacity development initiatives and programmes in disaster information management; and
- Providing information services for disaster risk management priorities.

The experts who attended the subregional EGMs strongly supported the Centre's proposed programme of work and agreed that it would fill several gaps in capacity development in disaster information management. Additional demands came from all EGMs. For example, the Almaty EGM suggested that the Centre should develop specific products, particularly hazard zonation, including seismic microzonation, floods, glacial lake outburst floods, landslide and drought, and mapping vulnerability, exposure and disaster risk, etc. The experts also supported the Centre's suggested work on promoting South-South and regional cooperation on disaster information management, and hydro-meteorological disasters, including disasters with trans-boundary origins. The Pacific Island countries highlighted the need for a geospatial information management system based on UNGGIM standards. Experts agreed with the cooperation modalities APDIM proposed to utilize in delivering its programme of work, such as capacity building, joint projects, information sharing and knowledge networking. In addition, the experts recommended that APDIM should further develop other mechanisms including toolkits and guidelines. Among the cooperation modalities proposed by APDIM, the participants of the EGMs and those that are interviewed for this evaluation had an overriding preference for capacity building. APDIM was asked by the experts to further define and fine-tune the scope of the Centre and prioritize its deliverables through national-level consultations. The modality of working in cooperation and partnership with others in the region was also highlighted as the key to enhance the effectiveness and efficiency of delivery. It was also suggested that APDIM should devote time to prepare a matrix of needs and capacities in disaster information management in the region through national and regional consultations.

The scope of the proposed APDIM work plan, combined with additional services and products requested by the sub-regional expert groups is ambitious and may well prove too demanding within

the short-to-medium term period. APDIM work plan suggests a gradual expansion of its services, as well as a geographical focus initially in a few sub-regions in a phased manner.

■ ■ To what extent has the Centre's work aligned with ESCAP's subprogramme 5 on Information and communications technology and disaster risk reduction?

Resolution 67/4 called for the Centre's objectives and activities to be aligned with subprogramme 5 of the ESCAP Secretariat. Expected Accomplishments of ESCAP subprogramme 5 on Information and communications technology and disaster risk reduction and management for 2016–17 are:

- a) Strengthened regional cooperation in information and communications technology, connectivity, space applications and disaster risk reduction and management for inclusive and sustainable development
- b) Improved knowledge and awareness of member States of effective strategies and policies in information and communications technology connectivity, space applications and disaster risk reduction and management, including their gender dimensions for inclusive, equitable, sustainable and resilient development
- c) Strengthened capacity of member States to apply information and communications technology connectivity, space applications and disaster risk reduction and management, including their gender dimensions for inclusive, equitable, sustainable and resilient development.

The evaluation team found that APDIM's proposed draft strategy and plan of work is well aligned with ESCAP's subprogramme 5 in terms of both the policy direction and strategy. The work of APDIM falls under the ambit of ESCAP's Committee on Disaster Risk Reduction, which meets biannually. Establishing close reporting ties with the Committee would allow for enhanced alignment of APDIM towards subprogramme 5. Further, APDIM may also benefit from linkages to the Committee on Statistics.

3.4. Assessment of effectiveness

To what extent has the Centre been effective in engaging under ESCAP subprogramme 5, Information and communications technology and disaster risk reduction, with the more vulnerable countries and sub-regions in the areas of disaster risk reduction and disaster information management?

In the aftermath of the 2004 Indian Ocean Tsunami, there was significant interest and investments in DRR in the region, particularly in 'end-to-end' early warning systems with emphasize on real-time and near-real-time data, also the main focus of the Centre at the time. During this period, ESCAP was also in the process of expanding its capacities from mostly ICT to a broader outlook on DRR and its engagement with the member States in DRR at policy and strategic levels. Subsequently, there have been two distinctive periods of engagement between the Centre and ESCAP. The first phase covers the period between resolution 63/10 in 2007 and resolution of 67/4 in 2011 during which the Centre was being conceptualized by the Government of the Islamic Republic of Iran and ESCAP. This was a period when a series of consultations with the member States and other stakeholders in the region were held in order to define the need for and focus of the Centre. The relationship with ESCAP

focused on the process of defining the modalities for establishing the Centre through a feasibility study. During this first phase of engagement, the main role of ESCAP was to provide technical assistance to the Government of the Islamic Republic of Iran in finalizing its proposal for and concept of APDIM, through the means of the aforementioned feasibility study and by facilitating the organization of a workshop on disaster information management and early warning. The second phase of ESCAP and APDIM engagement began in 2011 with resolution of 67/4, which marked the beginning of intense involvement from both sides in establishing the Centre in accordance with the recommendations of the resolution. During this period the Islamic Republic of Iran was engaged in DRR subprogramme activities of ESCAP, in particular the meeting of the Second session of Committee on DRR, held in 2011. Experts from the Islamic Republic of Iran were engaged on specific issues related to disaster information management through other modalities as well, including through the Regional Expert Group Meeting on Geo-reference Disaster Risk Management System in Asia-Pacific Region held in 2012. Further, together with ESCAP and UNISDR, the Islamic Republic of Iran organized a side-event on disaster information management on 24th October of 2012 during the 5th Asian Ministerial Conference on DRR in Yogyakarta, Indonesia.

The engagement between ESCAP and APDIM at the technical level intensified following resolution 67/4. Three bilateral consultative meetings between APDIM and ESCAP were organized as mandated by resolution 67/4 and were aimed to supporting the process for the establishment of the Centre, including the development of the required modalities and arrangement for its operationalization.

At the 3rd Ministerial Conference on Public-Private Partnerships for Infrastructure Development, held in Tehran in November 2012, the former Executive Secretary of ESCAP visited potential APDIM partner organizations, including the BHRC and NCC, and advised that the Centre should capitalize on building the institutional partnership with BHRC and NCC to deliver its programme of work in the region. During the same visit the former Executive Secretary provided guidance to the Government of the Islamic Republic of Iran on the development of a draft work programme of the Centre..

The former Executive Secretary was keen to harness the technical expertise in the region for providing advice on implementing the APDIM resolutions. Consequently, the former Executive Secretary set up an Advisory Group of experts. The first meeting between the Advisory Group and the delegation from the Islamic Republic of Iran was held during the 69th Commission Session. The Advisory Group noted that winning the confidence of the member States was of the highest priority for implementing the resolutions. Accordingly, the Advisory Group suggested that EGMs at subregional and regional levels should be organized (ESCAP, 2014a).

APDIM's engagement with the vulnerable countries has intensified since 2012 in parallel with its stronger engagement with ESCAP. The side-event on disaster information management during the 5th Asian Ministerial Conference on DRR in Yogyakarta, Indonesia in 2012 and the establishment of the Advisory Group of experts by the former Executive Secretary of ESCAP facilitated a stronger commitment to action. The three sub-regional EGMs recommended by the Advisory Group provided the platform for identifying the needs of the vulnerable countries and their demands from the Centre.

⁴ 15 - 17 February 2012, Bangkok and Sub-regional Workshop on Geo-referenced Disaster Risk Management System for South and South-West Asia, and Central Asia, 10-12 July 2012, Kathmandu.

⁵ The Advisory Group comprising Lt General (R) Nadeem Ahmad – Former Chairman, Pakistan National Disaster Management Authority, Dr Surin Pitsuwan – Former Secretary General ASEAN, and Dr. William Sabandar – Former Envoy of ASEAN Secretary General on Cyclone Nargis.

The Regional Capacity Development Group Training on Seismic Microzonation in 2014 is so far the first and only training organized by APDIM, with collaboration with ESCAP. This activity followed from the EGM in New Delhi, which recommended the organization of short-term regional capacity development training for the member States in the areas of seismic risk reduction with a focus on seismic microzonation. The capacity development training was attended by government officials and experts from the vulnerable member States of North and Central Asia, and South and South-West Asia sub-regions of ESCAP, namely Afghanistan, Azerbaijan, Bangladesh, Bhutan, Islamic Republic of Iran, Nepal and Pakistan. As a follow-up to the meeting, the Government of Bhutan officially requested APDIM to provide technical assistance for microzonation in the capital Thimphu. This request is currently under consideration in consultation by the national technical institutes, such as BHRC and IEER.

The chosen countries for the first training were in line with Resolution 67/4, which requested that "[...] the Centre would commence its functions and programmes with a focus on the more vulnerable sub-regions of Asia and the Pacific." This statement in the Resolution was interpreted in the Draft Strategic Framework and Work Plan of the Centre prepared by ESCAP and APDIM as "[...]the Centre is to commence its activities with a focus on ESCAP sub regions of South and South West Asia as well as North and Central Asia due to the priority of these sub-regions in disaster risk reduction and management cooperation, but may eventually cover all Asia and the Pacific region".

There is consensus that APDIM should target the most vulnerable countries, which are in need of capacity development. There seems to be consensus on recognizing the special needs of the Central Asian region, although less consensus on how to meet those needs. In this context it needs to be stressed that APDIM is intended to service the entire ESCAP region in accordance with the modalities of ESCAP. Accordingly, opinions on the geographical focus of the Centre are diverse. There is some consensus on the side of the UN entities and some member States that, to begin with, Central Asia, West Asia and South West Asia could be given first priority. It should be noted that unlike in the other sub-regions, there are no sub-regional, multi-lateral organizations working on disaster risk reduction in Central Asia. At the same time, Southeast and East Asia are served by sub-regional institutions and organizations and bi-laterally by the donors, while SOPAC serves the Pacific sub-region. However, some bi-lateral developments had been pursued between the countries of Central Asia. Kazakhstan and Kyrgyzstan had a bi-lateral agreement to establish a centre for capacity building and training in Almaty with the support of OCHA. The idea is to extend the Centre's activities to the whole Central Asia sub-region; however, agreement could not be reached by 2013. In addition, Kyrgyzstan has plans to set up a centre in Bishkek, but as of today resources have not been available and the idea remains dormant.

Among countries which have been highlighted by key stakeholders as being in particular need of support are Tajikistan, Kyrgyzstan as emphasized by the ESCAP sub-regional office in Almaty, and Nepal and Pakistan as noted by a staff from the AIT Consulting, which works with several countries in the region on microzonation, building codes etc. According to a staff from the UNDP regional office, the current focus in Asia and the Pacific region seems to be on climate change related disasters, hence on hydro-meteorological hazards. To augment this work, APDIM could do well by focusing on earthquakes, selecting a few countries with needs and supporting them for the long-term.

In conclusion, there is an evident need for further consultation with stakeholders to fully contextualize the needs of the region, and how APDIM could most effectively act to address them. As one senior ESCAP manager stated, it is essential that the vulnerable countries take leadership of APDIM and that they take ownership over its programme of work.

To what extent has the Centre been effective in engaging under the ESCAP sub-regional offices in the areas of disaster risk reduction and disaster information management?

Following the outcomes of the first Advisory Group meeting, ESCAP intensified its support to APDIM and proceeded to provide technical assistance on the substantive issues through organizing EGMs in Almaty, New Delhi and Bangkok and a microzonation training workshop in Tehran. The ESCAP Sub-Regional Offices in Almaty and New Delhi were also closely involved in this process. The evaluation team noted the strong cooperation between ESCAP and the Islamic Republic Iran and the trust in ESCAP's advice during the mission to Tehran. Despite this sustained cooperation and increased support since 2012, there were still some uncertainties on the part of the Islamic Republic of Iran's officials and APDIM focal points regarding the modalities of regional institutes. These uncertainties were propagated by the delays in granting APDIM a subsidiary status under ESCAP, and the disappointment around the issue as those responsible for establishing the Centre believed that they had been duly responding to all requests from ESCAP, concerning the funding, the APDIM building and establishing national partnerships to consulting the member States. Changes in the Government after the Parliamentary and presidential elections respectively in 2012 and 2013 the turnover of APDIM focal points could also be contributing factors to the aforementioned uncertainties.

In conclusion, continued strong institutional commitment from ESCAP is expected to influence APDIM's future positively through, inter alia, added credibility in the eyes of key stakeholders, increased accountability, adoption of essential resolutions, organization of expert groups and other forms of use of its convening power.

To what extent has the Centre been effective in cooperating with United Nations entities, in particular with the Asia-Pacific Office of the Inter-Agency Secretariat of the International Strategy for Disaster Reduction, and with other international, regional and non-governmental entities?

UN entities have been invited by ESCAP to participate in the activities and consultations of APDIM. For example, the side event of the Islamic Republic of Iran on disaster information management at the 5th Ministerial Conference in Yogyakarta, Indonesia was co-organised by ESCAP and UNISDR. Further, UN entities and several sub-regional organizations have engaged with APDIM through their participation in the EGMs. For instance, UNDP, UNISDR, OCHA and intergovernmental organizations such as BIMSTEC, ECO and SAARC participated at the EGM in New Delhi, where they noted the importance of data and information for effective disaster risk reduction and management at the national level as well as at the sub-regional and regional levels for disasters with transboundary origin and effects. They also welcomed APDIM's initiatives for building capacities of member States in disaster information management (APDIM, 2014b). It was suggested that the South Asia Disaster Knowledge Network of the SAARC Disaster Management Centre be included as a mechanism for regional disaster Information generation and exchange in the programme of work of APDIM, with a view to further enhancing its capacities and enabling it to provide tangible benefits to the member States while achieving greater regional cooperation for disaster information sharing (APDIM, 2014b). The EGM in Almaty saw the participation of UNDP, UNISDR, and OCHA (APDIM, 2014a). The EGM in

Bangkok was attended by UNDP, UNISDR, and OCHA as well as the regional organizations ADPC and RIMES.

A number of UN entities and some regional organizations have in their portfolios work related to disaster information, though the focus is mostly on loss data, and information for humanitarian response. While they have different focuses, the work of these entities involves disaster information and consequently they need reliable and standardized data. Thus, it is important that APDIM continues to involve UN entities in its work and networks with relevant regional organizations. Further, it is important that APDIM avoids overlaps and contributes to enhancing the work of other entities through facilitating dedicated capacity building for the most vulnerable countries. Were APDIM given a status of an ESCAP subsidiary body, its collaboration with UN entities and other centres would be facilitated. The role of ESCAP is critical in this respect, as it has a unique mandate for convening regional and sub-regional meetings and for adopting resolutions, which other UN entities in the region do not have.

3.5. Assessment of other relevant factors

■ ■ ■ Resources

The Feasibility Study on modalities for strengthening regional coordination and cooperation in natural disaster information management and early warning from 2008 states that "achieving financial sustainability will be a major challenge for APDIM, unless there are significant changes proposed in operational details of the proposed centre." It should be noted that the intended scope and modalities of the proposed Centre at the time was fundamentally different. At that time, a system of 24/7 data management for early warning of multiple disasters, a large number of staff and monitoring equipment was envisioned. The budget presented to ESCAP at the time covered 28 staff at a cost close to USD 4 million annually only for the salaries, the adequacy and sustainability of which was questioned by the feasibility study.

The Islamic Republic of Iran took note of issues around financing and staffing of the Centre and revised its financial and operational strategy vis-à-vis the process of redefining its focus of work. The staff costs were re-estimated based on the UN international staff salaries at Tehran duty station. It is likely that the staffing of APDIM will be a mixture of international, national and seconded staff for example from NCC, BHRC or international, a clear organigram needs to be developed to define the various types of contracts and salary scales for a more accurate budget.

The current financial commitment by the Islamic Republic of Iran of annually up to 10 million US\$ well exceeds the budgets of other regional institutions such as SIAP and APCICT, which run on operational modalities similar to the ones proposed by APDIM.⁶ Facilitation and coordination of existing capacities within the Islamic Republic of Iran and in the region can initially be managed by a small team the size of which can incrementally increase based on the demand. National institutions informed us that their cost of supporting APDIM's activities and on-loan staff can be met out of their own budgets. The Islamic Republic of Iran already met the set-up costs and capital

⁶ SIAP receives 80 per cent of its budget from the Government of Japan in cash and in-kind and 20 per cent from the voluntary contributions (telephone interview with the director of SIAP).

expenditure of the APDIM building. A 15-storey building – property of the Vice Presidency for Planning and Supervision – has four floors allocated for APDIM. More space can be allocated as per future demand. The expenses related to the maintenance of the building will not be charged from the APDIM budget or provided separately as in-kind contributions from the host government

As for the issue of financial transactions, according to UNDP Office in Tehran, the main venue for financial logistics including international fund transfers and procurement services in the Islamic Republic of Iran is through UNDP. This venue is currently functioning well. Some agencies, such as UNICEF operate through their own modalities. Until ESCAP would establish its own modalities it needs to operate through the UNDP.

Capacities

The Islamic Republic of Iran has significant disaster information management experience and expertise. It has a credible institutional capability, expertise and in-depth experience to be reflected in the value-added products and services that the Centre could deliver.

The IIEES is an international research institute in the field of earthquake monitoring that was established in the Islamic Republic of Iran based on the 24th UNESCO General Conference Resolution DR/250 and the Government of the Islamic Republic of Iran approval in 1989 as an independent institute under the Islamic Republic of Iran's Ministry of Science, Research and Technology. The main goal of IIEES is seismic risk reduction and mitigation both in the Islamic Republic of Iran and the region by promoting research and education in science and technology related to seismotectonic, seismology and earthquake engineering as well as risk reduction.

BHRC, which was originally established with UNDP's support, has the expertise in building codes, safe building materials and assuring safety of structures, etc. The APDIM work programme may capitalize on BHRC's institutional capacity. BHRC draws additional staff from the universities and can allocate staff to APDIM at no cost.

NCC has in-house expertise in capacity development training relevant for disaster risk/vulnerability assessment. NCC has been the key member of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific (PCGIAP) — a voluntary regional forum that has been a major player in strengthening "information infrastructure". NCC has demonstrated capacity for developing spatial data infrastructure for disaster risk management following international standards. Working Group 2 of the institutional capacity of NCC may be used on behalf of the Centre to leverage not only the Islamic Republic of Iran's know-how but also PCGIAP's platforms and resources for strengthening disaster information infrastructure capacity in the vulnerable subregions. Both NCC and the Statistical Centre come under the Vice Presidency of Strategic Planning and Supervision, which provides the oversight to APDIM. Further, APDIM could also derive support for its continuity from the work of the aforementioned Working Group.

Other than these institutes, Housing Foundation, National Disaster Management Authority and the various universities possess capacities in disaster risk management in the Islamic Republic of Iran. APDIM's vision is to facilitate, network with and coordinate the national and international capacities

within the regional and sub-regional institutes and member States rather than duplicate what already exist. Operationalizing these capacities is the challenge ahead of APDIM that ESCAP needs to address. This may require a dedicated, full time, interim management team until all the necessary steps are completed for a subsidiary body status. In the medium term, taking SIAP as an example of a well-functioning regional institution of a similar nature, a team of 4–5 staff members could be a good start for an incremental increase based on demand and available resources.

4. Conclusions

■ ■ ■ Relevance

The need for establishing a regional centre to support the vulnerable member States to bridge their disaster information management gaps is evident based on explicit member State views and requests issued at ESCAP Commission sessions in the form of resolutions 63/10, 64/10, 66/8 and 67/4 and the three outcome documents of the EGMs, the disaster risk profile of the region, the unmet disaster information needs identified in the various regional disaster reports and the national UNDAFs, as well as the member States' explicit views and request. The evaluation found that establishing the Centre would strengthen the capacities of particularly the more vulnerable countries and sub-regions within the Asia and the Pacific region in dealing with disaster information management.

Concerns over duplication with other regional organizations can be allayed as the Centre can deliver unique services and products. Indeed, currently there is no evidence of significant duplication — either explicit or potential. At the same time, the demands for disaster information management in the region are high. In essence, the question becomes more one of careful coordination, rather than one of duplication.

Establishing APDIM with the status of an ESCAP subsidiary body would provide greater visibility, policy influence and leverage for the planned activities of the Centre. Furthermore, establishment as a subsidiary body would enhance the member States' willingness to engage with the Centre.

ESCAP's convening power adds credibility to APDIM within the member States as well as the donors. This raises expectations from ESCAP to assume a vital role in nurturing the Centre. A strong institutional commitment from ESCAP can influence the Centre's future positively. However, given the need to ensure financial sustainability of the Centre in view of its current reliance on only one source of funding, the continuation of the subsidiary body status after the initial five years of operation should be conditional on the continued financial responsibility of the Centre being borne by the host country.

Effectiveness

Taking the first steps is a challenging task for any organization – and it has been so for APDIM.

Nevertheless, the Government of the Islamic Republic of Iran has made significant process in laying the foundations for APDIM's operations, including passing a parliamentary act that details the government's financial commitments to APDIM, procuring a dedicated office building and establishing interim management for the Centre; and signing agreements with two national centres, namely the BHRC and NCC.

With ESCAP's support, APDIM has successfully developed a draft Strategy and Work Plan to address the disaster information management needs in the Asia and the Pacific region. The evaluation found that APDIM has concluded three EGMs and one capacity development training on microzonation, and has planned future activities and initiatives under APDIM that reflect the needs and aspirations of the ESCAP member states. Further, the evaluation found that in planning its activities, APDIM has given due priority to the more vulnerable countries and sub-regions within the Asia and the Pacific region.

The aforementioned APDIM Work Plan is aligned with the ESCAP subprogramme 5 in ICT-DRR. The current Work Plan of the Centre covers a broad range of potential activities. Implementing these potential activities will be a major challenge, unless a clear roadmap with geographical and subject-matter priorities is established. It is essential to fully contextualize the ownership of member countries within each sub-region with respect to the APDIM Strategy and the Work Plan.

Since 2011, APDIM has engaged with ESCAP and its sub-regional offices with satisfactorily increasing intensity. In particular, the organization of EGMs in Almaty and New Delhi show that APDIM has the capacity to successfully cooperate with not only the ESCAP secretariat, but also its sub-regional offices.

■ ■ Forward looking conclusions

The financial viability of APDIM is contingent on voluntary contributions from ESCAP member States which in the first phase consist solely from the contributions of the Government of the Islamic Republic of Iran, which has committed to bearing the costs of establishing as well as operating the Centre and its programme for five years with a maximum budget of up to US\$ 50 million. In addition, the Government of the Islamic Republic of Iran confirmed that it will provide in-kind contributions in the form of office space and other operational costs.

In accordance with the draft work programme (see annex IV), APDIM would provide disaster information management services that are relevant to the whole of Asia-Pacific, with a particular focus on more vulnerable states. Accordingly, the governance of the centre would need to comprise of representatives from a broad range of member and associate members, including the host Government.

The process of establishing a regional institution in accordance to ESCAP practices is a lengthy process. APDIM will benefit from a dedicated management team to lead this process and to keep the momentum created by the EGMs in determining more precisely the needs and fine-tuning the substance of its work plan.

The Centre lacks visibility hence knowledge of the Centre's status and activities is limited among its key stakeholders. APDIM has not been effective in widespread and regular dissemination of information about its achievements and the challenges it has faced with its key stakeholders.

APDIM's strategy relies on collaboration with a broad range of organizations, including UN entities and other regional and sub-regional organizations. The wide network of partners with whom APDIM seeks partnerships which can be seen as an extension of APDIM's capacity to deliver development impact in the region.

Making additional resources available to APDIM would significantly enhance the Centre's positive impact on disaster information management in the region. South-South cooperation and capacity building could gradually leverage the resources, especially the human resources, within the countries of Asia and the Pacific region.

The prevailing conditions in the Islamic Republic of Iran necessitate acknowledgment of particular issues that may affect APDIM's operationalization, including organizing international fund transfers and procurement and recruitment of international staff. Partnerships with other UN entities such as UNDP may be sought to facilitate the operationalization of APDIM in its initial phases.

5. Recommendations

5.1. Recommendation 1

In light of the growing need for regional disaster information services and in acknowledgment of the Government of Islamic Republic of Iran's strong commitment to provide financial support to the Centre, it is recommended that the Commission considers establishing APDIM as a regional institution operating under the auspices of ESCAP in accordance with the following requirements: i. the management and operation of Center shall be fully funded through voluntary contributions from the host government; ii. the Center shall have international and national staff who shall be ESCAP staff members, including a Director at the D1 level and a sufficient professional staff and support staff, appointed under the appropriate UN rules and regulations; iii. the Director of the Centre shall report to the Executive Secretary of ESCAP for the administration of the Centre and implementation of its programme of work in the same manner as the other RIs; and iv. the programme of work of the Centre shall be aligned with ESCAP's subprogramme 5 on information and communications technology and disaster risk reduction. Further, it is recommended that APDIM be established with an arrangement made for deciding upon its continuation after five years of operations, based on the results of an independent evaluation of the Centre to assess its performance and relevance as well as its financial status.

5.2. Recommendation 2

It is recommended that during its first phase of operations, APDIM focuses on the most vulnerable countries of the region, including as a priority those in North and Central Asia as well as South and South West Asia. It is also recommended that during its first phase, APDIM focuses on earthquakes, and that it delivers a programme of work that targets a few countries with the most urgent needs and aims to support them in establishing long-term capacities.

5.3. Recommendation 3

In order to maximize the benefits the establishment of APDIM could potentially generate to the Asia and the Pacific region, it is recommended that a matrix mapping the member State needs, and resources and capacities in disaster information management is developed in consultation with the relevant UN entities and regional and subregional organizations.

5.4. Recommendation 4

The process of establishing a regional institution in accordance with UN secretariat rules and regulations can be a lengthy process. Consequently, it is recommended that a dedicated management team for APDIM is established, which would be responsible for fine-tuning and implementing APDIM's programme of work and supporting the necessary steps for the establishment of the Centre, as an ESCAP regional institution, including the conclusion of a headquarters agreement between the host government and the United Nations. Furthermore, it is recommended that the proposed dedicated management team shall include international and national staff who are to be recruited by ESCAP on a temporary basis to be funded by the host Government through extrabudgetary contributions.

5.5. Recommendation 5

The Centre should develop a communication strategy to disseminate information of its activities and progress. APDIM would benefit from more wide-spread and regular dissemination of its achievements and the challenges it has faced to the member States, the relevant UN agencies and potential partner organizations and institutions in the region.

Key reference documents

Resolutions

- ESCAP Resolution 63/10 Review of modalities for regional cooperation in natural disaster management, in particular the establishment of an Asian and Pacific centre for information, communication and space technology-enabled disaster management
- ESCAP Resolution 64/10 Review of the operational details of the feasibility study for the establishment of an Asian and Pacific centre for information, communications and space technology-enabled disaster management
- ESCAP Resolution 66/8 Review of the proposal for the establishment of the Asian and Pacific centre for information, communication and space technology-enabled disaster management
- in the Islamic Republic of Iran
- ESCAP Resolution 67/4 Establishment of the Asian and Pacific centre for the development of disaster information management

Other ESCAP documents and reports

- Background Note (3 March 2014) on The establishment of the Asian and Pacific centre for the development of disaster information management (the Centre) in Iran (ESCAP, 2014a)
- Draft programme of work for the biennium 2014-2015 (ESCAP, 2014b)
- E/ESCAP/64/9: Overview of the feasibility study on the modalities for strengthening regional
 coordination and cooperation in natural disaster information management and early warning
 and the viability of establishing a regional centre for information, communication and space
 technology-enabled disaster management in the Islamic Republic of Iran (ESCAP, 2008a)
- ESCAP Theme Study Building Resilience to Natural Disasters and Economic Crisis (ESCAP, 2013a)
- ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness Early Warning Systems in the Indian Ocean and Southeast Asia, 2011 Report on Regionally Unmet Needs, (ESCAP, 2011a)
- Review of Issues pertinent to the Subsidiary Structure of the Commission: Disaster Risk (Item 2 (f) of the provisional agenda) (ESCAP, 2011b)
- Feasibility Study on modalities for strengthening regional coordination and cooperation in natural disaster information management and early warning (ESCAP, 2008)
- Final Report Evaluation of the APCICT (ESCAP, 2010a)
- Improving disaster data and statistics on vulnerable groups: Contributing to building a resilient Asia Pacific region (ESCAP, 2013b)
- Protecting Development Gains Reducing Disaster Vulnerability and Building Resilience in Asia and the Pacific: The Asia-Pacific Disaster Report, 2010 (ESCAP/UNISDR, 2010)
- Reducing Vulnerability and Exposure to Disasters The Asia Pacific Disaster Report 2012 (ESCAP/UNISDR, 2012)
- Report of the Committee on Disaster Risk Reduction on its first Session, Sixty-fifth session 23-29 April 2009 Bangkok (ESCAP, 2009)

APDIM

- Asian and Pacific centre for the development of disaster information management Draft Strategic Framework and Work Programme
- Report of Capacity Development Group Training on Seismic Microzonation, Tehran, Islamic Republic of Iran, 16-20 August 2014 (APDIM, 2014c)
- Report of ESCAP Expert Group Meeting on Capacity Development for Disaster Information Management in North and Central Asia Report, Almaty, Kazakhstan, 26 - 27 February 2014 (APDIM, 2014a).
- Report of Expert Group Meeting on Capacity Development for Disaster Information Management in South and South West Asia Report , New Delhi, India, 16-17 April 2014 (APDIM, 2014b).
- Report of Regional Expert Group Meeting on Capacity Development for Disaster Information Management Bangkok, Thailand 21-22 October 2014 (APDIM, 2014d)
- Working Paper on the Road Map for the Asia Pacific centre for Disaster Information management (Vinod & Menon, 2014)

Other documents

- A comparative review of country-level and regional disaster loss and damage databases (UNDP/BCPR, 2013)
- Asia-Pacific Input Document for the Post-2015 Framework for Disaster Risk Reduction (HFA2) (UNISDR, 2014)
- Declarations of the 6th Asian Ministerial Conference on Disaster Risk Reduction
- Global Assessment Report 2013 (UNISDR, 2013a)
- Study reports on HFA implementations in Asia and the Pacific region (UNISDR, 2011, 2013b)
- The Hyogo Framework for Action in Asia and the Pacific: regional synthesis report 2011-2013 (UNISDR, 2013)
- UNDAFs of countries in the region
- United Nations Development Programme: Supporting Capacity Development (UNDP, 2013) Yogyakarta declaration on disaster risk reduction in Asia and the Pacific 2012

6. Annexes

Annex I

Selected details from relevant resolutions concerning APDIM

resolutions related to disaster information management, DRR and regional cooperation

•Resolution 64/2 - 2008

Regional cooperation in the implementation of the Hyogo Framework for Action 2005-2015:

 Building the Resilience of Nations and Communities to Disasters in Asia and the Pacific

•Resolution 68/5 - 2012

Asia-Pacific Years of Action for Applications of Space Technology and the Geographic Information System for Disaster Risk Reduction and Sustainable Development, 2012-2017

•Resolution 69/12 - 2013

Enhancing regional cooperation for building resilience to disasters in Asia and the Pacific

•Resolution 70/13 - 2014

• Regional cooperation for building resilience to disasters in Asia and the Pacific

resolutions related to the establishment of APDIM

•Resolution 63/10 - 2007

Review of modalities for regional cooperation in natural disaster management, in particular the establishment of an Asian and Pacific centre for information, communication and space technology-enabled disaster management

•Resolution 64/10 - 2008

Review of the operational details of the feasibility study for the establishment of an Asian and Pacific centre for information, communications and space technology-enabled disaster management

•Resolution 65/5 - 2009

Review of the operational details of the feasibility study for the establishment of an Asian and Pacific centre for information, communication and space technology-enabled disaster management in the Islamic Republic of Iran

•Resolution 66/8 - 2010

•Review of the proposal for the establishment of the Asian and Pacific centre for information, communication and space technology-enabled disaster management in the Islamic Republic of

•Resolution 67/4 - 2011

Establishment of the Asian and Pacific centre for the development of disaster information management

Annex II

Asia-Pacific Inputs for the Post-2015 Framework for Disaster Risk Reduction (HFA2)

PRIORITY AREA 2 PRIORITY	More work is still needed to address extensive risks and trans-boundary risks. Other tools, such as multi-hazard risk assessments and cost-benefit analysis are gaining momentum. Capacity and information is needed to guide these activities, with many countries noting that generating, sharing, managing and using data remains a complex task. Opportunities remain to build knowledge, capacities and tools to address complex tasks such
AREA 3	as multi-hazard and vulnerability assessment, predictive risk modeling and cost-benefit analysis through tertiary education and stronger cooperation with academia.
RISK INFORMATION	Strengthen risk information and knowledge
AND MAPPING	Collect, analyze and use risk information in decision making. This should include: Collection and analysis of hazard, risk, vulnerability information for natural, system, technological, human induced and critical infrastructure risks. Mandatory collection and analysis of sex, age and disability disaggregated data to increase knowledge and understanding of the underlying risks and social vulnerabilities and to address them in the development and disaster risk reduction planning and implementation processes Use both historical loss and damage data and future scenarios tools such as risk models to inform development planning at national and local levels Assess systemic risks to address the potential causes of cascading disasters Use new technologies and techniques in risk assessment activities such as risk modeling and space technologies Strengthen collaboration with science, research and academia, to build capacity of decision makers through tertiary education Strengthen capacities of the national and local governments for information generation, analysis and application for planning and implementation
	Provide guidance for research and support in risk and vulnerability information generation and sharing (with tools, methodologies) Strengthen regional cooperation mechanisms for data and information sharing
INTEGRATION AND COOPERATION	Integration needs to be supported at the highest political level for it to be successful. Integration can be limited by lack of policy coherence, weak governance, lack of capacity and limited financial resources. There are currently structural and procedural barriers that hinder integration, particularly where responsibilities are divided between different government bodies and where coordination is weak between the national and local branches of government. Achieving integration requires reforming institutions and procedures and strengthening institutional capacity across all government sectors and levels.

Annex III

Findings from regional UNDAFs

A study of all available UNDAFs in the region shows disaster risk reduction is as often considered as a stand-alone intervention area as it is a cross-cutting one. Further, the study shows that disaster information mapping, and its equivalent terms, have emerged into the development assistance frameworks rather recently and are yet to permeate through the region. Based on the explicit references, it is possible to synthesize the regions disaster information mapping needs as follows:

- Several countries suffer from a lack of data on impact of disasters Those countries with data and information request enhancement of the existing knowledge, information and systems so that disaster and climate induced can be better forecast, assessed and monitored;
- Several countries request the UN systems support in enhancing the management of the gathered information within government ministries and between international counterparts; and
- Explicit needs include data integration and single-sourcing.

Country	Priorities/Outcomes/Pillar mentioning disasters	Detailed contents concerning disaster information, mapping, assessments etc.
Afghanistan 2009-2013	Outcome 5. Improve capacities to manage natural resources to support poverty reduction and dispute resolution and to reduce vulnerability to natural disasters	
Armenia 2010-2015	Outcome 4: Environment and disaster risk management is integrated into national and local development frameworks.	
Azerbaijan 2005-2009	Disasters are not mentioned	
Bangladesh 2012-2016	UNDAF Pillar 5: Climate Change, Environment, and Disaster Risk Reduction & Response	
Bhutan 2008-2012	National priority: To enhance environmental sustainability and disaster management	
	Outcome 2.2 National and local capacity for disaster preparedness and response systems to prevent, mitigate and cope with disasters/climate change strengthened. (WFP, UNDP, UNV, UNICEF, UNESCAP)	
	Disaster management capacity must be strengthened as Bhutan is vulnerable to numerous natural hazards such as glacial lake outbursts, floods, earthquakes, landslides, and forest fires. Although Bhutan does not contribute to green house gas emission, the country is vulnerable to effects of climate change. The UN will focus on supporting capacity strengthening of key government agencies to implement disaster management framework, mainstream disaster/climate risk reduction into plans and polices and to strengthen national and local capacity for disaster preparedness and response systems	
Cambodia 2011-2015	Outcome 5: Social Protection	Risks: Uncertainty of the impact of external

⁷ Documents sourced from http://www.undg.org/index.cfm?P=234&f=A. For each country only the latest UNDAF has been used. ESCAP member States that are not included in the list are considered developed and are outside the UNDAF initiative.

	F 11 Diseases and a second sec	
	5.11 Disaster needs assessment conducted during every declared disaster	shocks such as macroeconomic, natural disasters or health shocks on people's income
China 2006-2010 Georgia 2011-2015	Focus Area 5: Strengthened natural disaster preparedness and risk management UNDP Outcome 6: Strengthened natural disaster preparedness and risk management 1. National coordination mechanism established 2. Capacity to analyze and manage disaster risks at the national level and selected communities strengthened. UNDAF Thematic Area 3: Disaster Risk Reduction Outcome 2 – Disaster risks are identified,	
	assessed and monitored and early warning is enhanced	
India 2013-2017	Outcome 6: Sustainable Development	Lack of sufficient disaggregated data on impact of disasters, climate change and its variable effect on communities and ecosystems makes it difficult for communities and governments to prepare themselves.
Indonesia 2011-2015	Strengthen national and local RESILIENCE to climate change, threats, shocks and disasters Outcome 4: DRR / Resilience Increased national resilience to disasters, crisis and external shocks by 2015	A) Risk assessments prepared and endorsed; Willingness of sectoral agencies to fund and collaborate on early warning systems and mechanisms; Government agencies are willing and committed to collaborate and share information on DRR, climate change, conflict and endemic disease monitoring/prevention; Gender experts are consulted during the formulation of ancillary regulation, standards and guidelines.
Iran 2015-2019	Priority B: Addressing acute vulnerability and participation gaps Outcome B.1: Strengthened resilience through enhanced government and community disaster risk management capacities	By the end of 2019, women and men in the most vulnerable communities will have the necessary information and capacities to avoid the risks or mitigate the consequences of environmental disasters and other consequences of past poor environmental stewardship, while minimizing conflict and its consequences.
Kazakhstan 2010-2015	UNDAF Outcome 2: Environmental Sustainability By 2015, communities, national, and local authorities use	

	more effective mechanisms and partnerships	
	that promote environmental sustainability and enable them to prepare, respond, and recover	
	from natural and man-made disasters.	
Kiribati	No mentions of disaster	
2003-2007	The members of disaster	
Kyrgyzstan 2012-206	Pillar 3: Inclusive and Sustainable Growth for Poverty Reduction	Absence of disaster risk reduction (DRR) monitoring system that would inform local level planning
Lao People's Democratic Republic 2007-2011	UNDAF Outcome 1: By 2011, the livelihoods of poor, vulnerable and food insecure populations are enhanced through sustainable development (within the MDG framework) 1.4.4 Enhanced capacity at all levels of Government disaster management for preparedness, response and rehabilitation	
Maldives 2011-2015	Outcome 6: Environment, Climate Change Adaptation and Disaster Risk Reduction	
Mongolia	Priority 3:	OUTPUT 8.1
2012-2016	Environment, climate change and disaster risk reduction	National climate and disaster risk management capacities improved in inter-sectoral coordination, communication, information sharing and networking (UNDP)
Myanmar 2012-2015	Development challenge: Negative impact of climate change, including increasing vulnerability to natural disasters; Strategic Priority 3 Reduce vulnerability to natural disasters and climate change (contributing to MDG 7)	Strategic Priority 3 focuses on three Outcomes to be achieved by 2015 which address risk reduction at three levels: the national/policy level; the institutional/systems level; and the community level. The focus will be on: (ii) enhancement of knowledge, information and systems to enable key stakeholders and decision-makers to have access to information to assess, forecast and monitor disaster and climate induced risks; and
Nepal 2013-2017	Component I: Advancing equality through equity Outcome 7: People living in areas vulnerable to climate change and disasters benefit from improved risk management and are more resilient to hazard-related shocks	
Pakistan	SPA 3: Increased national resilience to disasters,	
2013-2017	crises & external stock	
	The new programme needs to more strongly emphasize disaster risk mitigation and disaster risk management, including emergency preparedness. Other initiatives will focus on	

	hazards and vulnerability mapping, early warning systems development, technology transfer, community-based disaster risk management, multi-hazards disaster risk management planning and working to ensure that DRM is mainstreamed across all sectors.	
Papua New Guinea 2012-2015	UNDAF Cluster 4: Environment and Disaster Risk Management	Past experience and programme activities, reviews, and evaluations carried show that the enabling environment for effective crisis risk management is insufficient at both the national and sub-national level. This includes levels of awareness, data collection and analysis, policy and legislative frameworks, and the necessary governance arrangements, including systems, division of responsibilities, and capacities.
Philippines 2012-2018	Outcome Area 4: Resilience toward disasters and climate change	The UN will support the integration of DRRM into national and local policies, plans and programmes; the implementation of priority DRRM mitigation and preparedness actions at the national and the local levels, such as capacity-building, small-scale infrastructure, and the development of tools and frameworks; the development of DRRM knowledge management systems; and the strengthening of national and local capacities to respond to large-scale emergencies.
Samoa 2003-2007	Objective 3: Improve natural resource management and promote environmental sustainability 3.3 Improved Disaster mitigation and management capacity	
Solomon Islands 2003-2007	Disasters not mentioned	
Sri Lanka 2013-2017	UNDAF Pillar 4: Environmental Sustainability, Climate Change and Disaster Risk Reduction	Information Management: In line with ongoing efforts to improve information management and promote evidenced based policy making and programming, partners will be supported to put in place systems with the capability to integrate data from multiple sources and sectors as well as carryout physical, social. Economic and environmental analysis to support policies and programmes and target resources in improving sustainability

		and resilience.
Tajikistan 2010-2015	Three of the UNDAF pillars have incorporated outcomes on disaster risk management. They focus on improving early warning and information systems; ensuring the right policies and procedures are in place; developing prevention and mitigation capacities in the face of emergencies; supporting early recovery linked with mid- and longer-term development; and ensuring emergency supplies are available in the country.	
Thailand	National Priority or Goal: National development processes enhanced towards climate resilience and environmental sustainability	Outcome 3: Harmonized information and knowledge system built and partnerships established among line ministries, department and other stakeholders (including neighbouring countries) for informed decision making
Timor-Leste 2009-2013	Outcome 2: By 2013, vulnerable groups experience a significant improvement in sustainable livelihoods, poverty reduction and disaster risk management within an overarching crisis prevention and recovery context.	
Turkmenistan 2010-2015	National priority: Combating of illicit drug trafficking and organized crime strengthened; border management improved; more effective preparedness and response to natural and manmade disasters	Considering that Turkmenistan is affected by different types of disasters that could have a devastating effect on livelihoods, it is necessary that population, particularly vulnerable groups, has increased awareness of, and preventive capacity toward, natural disasters. More broadly, regional cooperation on emergency preparedness urgently requires expansion.
Tuvalu 2003-2007	Disasters are not mentioned	CAPATION III
Uzbekistan 2010-2015	Principles of sustainable development integrated into country policies and program	3. Preparedness for and responsiveness to resource related disasters strengthened indicator: Functioning interagency risk assessing, hazard mapping, mitigation planning/implementation and preparedness system put in place among the MoES, Ministry of Public Education (MoPE) and MoH
Vanuatu 2003-2007	Objective 3: Improve resource management and	
Viet Nam 2012-2016	environmental sustainability Focus Area One: Inclusive, Equitable and Sustainable Growth	

Annex IV

Asian and Pacific centre for the development of disaster information management - Draft Strategic Framework and Work Programme

SUMMARY

Project title:	Strategic Framework and Work Programme of Asian and Pacific centre for the development of disaster information management
Beneficiary countries:	ESCAP member Countries with focus on vulnerable subregions viz., South and South West Asia as well as North and Central Asia
Participating countries:	All ESCAP member Countries
Target groups:	Primary: Governments; Active participation of civil society is also sought.
Implementing and participating agencies:	The Asian and Pacific centre for the development of disaster information management (the Centre), with the funding and institutional support from the Government of the Islamic Republic of Iran, will be the main implementing agency. ESCAP and UNISDR are the principal cooperating agencies,
	while ESCAP Subregional Offices – South and South West Asia – New Delhi and North and Central Asia – Almaty will collaborate on implementing the project in the respective subregions.
	Cooperation will also be sought from other UN and intergovernmental entities including the UN Country

Team Iran, UNDP and UNOCHA as appropriate. The intergovernmental organizations such as ECO and SAARC will be closely involved in project implementation. Close coordination with the UN country teams in the beneficiary countries will be sought. Active participation of and inputs from selected NGOs will be sought.

1. Situation analysis

The Asia-Pacific region is the most disaster-prone area of the world. Almost 2 million people were killed in the region due to the disasters between 1970 and 2011, representing 75 per cent of all disaster fatalities globally. The past two years have been challenging ones for the Asia-Pacific region in several respects, but 2011 has been particularly unforgettable as disaster losses in the region amount to 80 per cent of the annual global disaster losses of \$366.1 billion; it is even more striking that the region's single year losses were also 80 per cent of its total disaster losses from the decade 2000-20098.

These are stark reminders of the unmitigated growth of accumulated disaster risks that affect the socioeconomic conditions in the region. Many leaders and much of the public are still struggling to understand how the various components of risk - hazards, vulnerability and exposure - interact to increase the region's total risks and continue to trigger ever-greater losses. It also has become disturbingly evident that rapid economic growth alone does not result in reducing vulnerabilities sufficiently, but actually creates even greater conditions of public exposure to a growing variety of disaster risks.

The information and knowledge gaps with regards to understanding the risk - hazards, vulnerability and exposure have been amongst the key challenges. The recent Asia Pacific Disaster Report 2012, a joint publication of ESCAP and UNISDR, highlights that those countries and subregions that have effective early warning systems and efficient information management systems in place have succeeded in saving lives in the event of major disasters. However, there are vulnerable countries and subregions faced with high risks to disasters. And they continue to be under-served and remain information poor. They are increasingly finding it difficult to even cope with small-scale disasters.

The Resolution 67/4 on establishment of the Asian and Pacific centre for the development of disaster information management (the Centre), adopted at the 67th session of ESCAP Commission, has been envisaged reducing the gaps and uncertainty in disaster information supply chain. The resolution identifies ESCAP's role in implementing ESCAP Resolution 67/4 by way of supporting the process for the establishment of the Centre following the procedures such as:

⁸ Asia Pacific Disaster Report 2012 – Reducing vulnerability and risk to disasters, ESCAP and UNISDR Joint Publication.

Enhanced engagement under the ESCAP subprogramme related to disaster risk reduction, with the more vulnerable countries and subregions in the areas of disaster risk reduction and disaster information management;

Enhanced engagement under the ESCAP subregional offices in the areas of disaster risk reduction and disaster information management;

Cooperation with United Nations entities, in particular with the Asia Pacific Office of the Inter-Agency Secretariat of the International Strategy for Disaster Reduction, and with other international, regional and non-governmental entities;

It's in this context that the strategic framework and programme of the work for the Centre have been outlined following the multi-stakeholders' consultative process since the adoption of the resolution in May 2011. While the details of the consultations are placed at Annex I, it is important to highlight that the Yogyakarta Declaration of Asian Ministerial Conference on Disaster Risk Reduction, October 2012, Indonesia, which calls for enhanced regional cooperation mechanisms and centres on disaster information management, highlights the needs for improving risk governance through local risk assessment and financing.

2. The Centre - Mission, Goal and Objectives

The strategic objective of the Centre, as outlined by the resolution, is to reduce losses and damages resulting from natural hazards by developing the capacities and capabilities of the countries and organizations of the region and strengthening regional cooperation on information sharing and management for disaster risk reduction, and that the Centre would commence its functions and programmes with a focus on the more vulnerable subregions of Asia and the Pacific.

In more specific terms, the objectives, scope, functions and services are:

2.1 Objectives

- **2.1.1** To reduce human losses and material damages and negative impact of natural hazards through enhancement of disaster information management in Asia and the Pacific region;
- **2.1.2** To strengthen the capabilities and capacities of the countries and regional organizations in the fields of disaster information management and disaster risk reduction and implementation of the Hyogo Framework for Action;
- **2.1.3** To contribute to enhancement of regional cooperation and coordination among countries and organizations in the region in the field of disaster information management aiming at socio-economic development of nations and achieving the Millennium Development Goals;

2.2 Scope

- **2.2.1** The Centre is to commence its activities with a focus on ESCAP subregions of South and South West Asia as well as North and Central Asia due to the priority of these subregions in disaster risk reduction and management cooperation but may eventually cover all Asia and the Pacific region;
- **2.2.2** The Centre is to apply a multi-hazard approach in its planning and activities with a focus on earthquake, floods, cyclone/typhoon and drought as the main hazards of the region;
- **2.2.3** The Centre is to include all phases and sectors of disaster management and risk reduction before, during and after the occurrence of disasters.
- **2.2.4** The focus of the programs and activities of the proposed Centre is to:
 - a) provide capacity development in the area of disaster information management;
 - b) provide technical assistance and supplementary information services during major disasters which require regional and international assistance through promotion of complementary cooperation with other relevant organizations and institutions.

2.3 Functions

- **2.3.1** Providing disaster information management services to the member States and national and regional institutions in the various fields of disaster prevention and risk reduction, preparedness, response and recovery with a focus on disaster monitoring and early warning;
- **2.3.2** Providing technical and advisory support and services on disaster information policies, strategies and systems to the member States and organizations in the region;
- **2.3.3** Facilitate access to regional and global disaster information and data sources through creation of appropriate standards, frameworks and mechanisms and development of regional programmes such as the establishment of the regional disaster database;
- **2.3.4** Capacity development of developing countries and regional organizations to transform the regional and global disaster data and information to applicable outcomes and products at national and local levels by

strengthening and mobilizing the required resources and benefiting from all available possibilities and initiatives such as public-private partnerships;

- **2.3.5** To create and promote complementary cooperation among subregional disaster management centres and mechanisms in the Asia-Pacific region to exchange disaster data, information, and knowledge by filling the existing gaps and by creating appropriate regional cooperation frameworks and protocols such as establishment of regional disaster information management network with a focus on multi-hazard disaster monitoring and early warning;
- **2.3.6** To develop disaster information management tools and mechanisms such as publications and virtual networks;
- **2.3.7** To act as a regional platform for disaster information for exchange of expertise, experiences and knowledge and provide technical services and support to the member States and responsible disaster management institutions in the various fields of disaster management and risk reduction by benefiting from other available programs and initiatives such as south-south cooperation, and other regional organizations and ESCAP institutions;
- **2.3.8** To facilitate or conduct surveys and researches and provide specialized training services on the new tools, techniques and standards to improve disaster information management and to fill the existing gaps in disaster information supply chains at national and regional levels;
- **2.3.9** To facilitate or conduct specialized surveys on the assessment of needs and capacities, challenges and opportunities in the area of disaster information management to support disaster management policy makers and managers at national and regional levels when and where required;
- **2.3.10** To facilitate or conduct specialized studies and provide scientific and applied services in the development of disaster risk reduction measures and programs and implementation of the Hyogo Framework for Action and coping with weather related hazards.

2.4 Products and services

- **2.4.1** Capacity development in disaster information management training and technical support;
- **2.4.2** Information support and analytical works on hazard, vulnerability, exposure and risk assessment at regional/subregional levels;
- **2.4.3** Communications and publications;
- **2.4.4** Development of and support to regional and sub-regional disaster information networks;

- **2.4.5** Supporting local and national capacity development initiatives and programmes in disaster information management;
- **2.4.6** Providing information services for disaster risk management priorities

3. Strategic and result framework for Centre's work programme implementation

3.1 Strategy: the guiding principle

The guiding principle of the strategic framework of the Centre is eessentially to help in inculcating a stronger sense of ownership and encourage collaboration among the members Countries. These include:

Inclusiveness: The evolution of the Centre should tend towards inclusiveness. The partnership of the Centre is to include a larger number of stakeholders, including national governments, regional and intergovernmental institutions, major International NGOs, civil society, regional development banks and other players.

Coherence: The programme of work of the Centre should promote greater coherence and joint programming and planning between the key stakeholders. This should be achieved through clear identification of the Centre's activities by ensuring that projects at all levels are complementary in their objectives and add value to the final outcome.

Flexibility: As disaster risk reduction and management procedures are initiated by the Governments and they are the final beneficiaries and stakeholders, it is not only imperative to have them on board, but also have flexibility in the services being offered to them. This flexibility would have to be built into the implementation of the work programme.

South-South cooperation: Sharing information, sound practices and lessons through South-South cooperation has been the key enabler for disaster risk reduction and management. The Centre is to harness the potential of South-South cooperation in implementation of the work programme.

Convergence: An effecive convergence mechanism is probably the best bet to avoid duplication and overlap in implementing the work programme. Though the extent of operationalisation of Centre is an issue that requires greater debate, none the less, as a Centre of Excellence for disaster information management and capacity development, it should evolve constructive ways to forge convergence among the key stakeholders – government, intergovernmental and civil society organisations.

3.2 Partnership approach

The Centre should build strong collaboration and partnership, to start with, the premier institutions in the Islamic Republic of Iran and then form the network of the community of practices in disaster information management by collaborating with the related institutions in the subregions and beyond. In this regard, the resolution has already outlined the partnership approach for the establishment of the Centre. It envisages the enhanced engagement of ESCAP

through its subprogramme on disaster risk reduction, the ESCAP subregional offices and also with the cooperation with United Nations entities, in particular with the Asia Pacific Office of the Inter-Agency Secretariat of the International Strategy for Disaster Reduction, and with other international, regional and non-governmental entities.

While ESCAP and UNISDR are the principal cooperating agencies, ESCAP Subregional Offices – South and South West Asia – New Delhi and North and Central Asia – Almaty will collaborate on implementing the project in the respective subregions.

Cooperation is to be sought from other UN and intergovernmental entities including the UN Country Team Iran, UNDP and UNOCHA as appropriate. The intergovernmental organizations such as ECO and SAARC is to be closely involved in project implementation. Close coordination with the UN country teams in the beneficiary countries needs to be sought. Active participation of and inputs from selected NGOs can be sought for implementing the work programme.

3.3 Alignment with ESCAP strategic framework

The Centre's objectives and activities are to be aligned with the ESCAP strategic framework for DRR subprogramme 2013-2014 which aims at enhancing regional cooperation for improved disaster risk reduction and management, as well as for improved management of the associated socio-economic risks, for inclusive and sustainable development in Asia and the Pacific. And the expected accomplishments include (i) increased sharing the knowledge and information among policymakers on effective strategies and policy options for disaster risk reduction, including those related to climate change adaptation, and (ii) strengthened regional cooperation mechanisms in disaster risk reduction.

The related strategic focus of the subprogramme is to improve the capabilities of ESCAP members to create more disaster resilient societies and reduce the socio-economic impact of disasters. The subprogramme collaborates with regional organizations and existing mechanisms in support of the development of an Asia-Pacific gateway on disaster risk reduction and development for information sharing and analysis, and the preparation of an Asia-Pacific disaster report, and provide member States with high-quality analysis, strategies and policy options in disaster risk reduction, including relevant measures for climate change adaptation, and development.

3.4 Thematic priorities

The Centre is to facilitate the exchange of data, information, advices, discussions, good practices and lessons learned between the countries of the vulnerable subregions of South and South West Asia as well as North and Central Asia as well as draw upon the knowledge and practices of countries outside the subregions. The strategy takes the key thematic priorities identified during the stakeholder's consultations and dialogues and establishes five key project results that include outcomes and activities addressing the main objectives of the Centre. The first thematic priority is that the Centre may be envisioned to develop as knowledge hub for multiple hazards,

vulnerability, exposure and disaster risk. The second thematic priority is that the Centre could be a leading establishment for capacity development in disaster information management.

Thematic focus on the Centre as knowledge hub in disaster information management

Project result 1: Disaster databases – filling the critical gaps

Recognizing the critical gaps in availability of the data capturing the disaster events – their economic, social and environment impacts, the ESCAP Committee on Disaster Risk Reduction, during its 2nd Session on 29 June - 1 July 2011, and subsequently the 68th Session of the Commission, recommended that the development of standards, methodologies and guidelines for disaster databases/statistics should receive a higher priority by the key institutions. The ESCAP and UNDP and their development partners were requested to increase their support to building national capacities in the collection and analysis of disaster data for hazards and vulnerability assessments, disaster preparedness and mitigation and contingency planning. Specific request was made to provide more training on practical disaster assessment methodologies, including on how to conduct disaster assessments more efficiently.

The Asia Pacific Disaster Report 2012, the joint publication of ESCAP and UNISDR, listed out strengthening the socio-economic evidence base as a way forward towards reducing vulnerability and exposure to disaster risks.

The Islamic Republic of Iran is the host to a number of fine institutions, which frequently compile and have access to a range of relevant disaster data and also have the analytical capacity to develop the information products for decision making to disaster risk reduction activities. Jointly with the Government, the UNDP Iran has made efforts to develop a systematic baseline on disaster risk (while factoring hazards, vulnerabilities and capacities) to address specific problems associated with risk reduction. Systematic baseline data and adequate risk profile of the Country is helping the Government to prioritize risk reduction activities. The Centre's work programme may use this sound practice to benefit other vulnerable countries/subregions. There are sound practices in many other countries of the regions, which may be used for replications through the work programme.

Project result 2: Disaster information inventory –setting the standards

From the access and availability to disaster databases, the next step is to have the 'actionable' information that enables informed decision making process for risk reduction. The Asia Pacific Disaster Report 2012 recommends setting the international, regional and national level standards for data collection, information generation and sharing to enable targeted and better informed actions for building the socio-economic evidence for disaster risk reduction. Disaster information inventory at regional/subregional/national levels with context specific standards may have strong enabling impact in this regard.

There are several disaster information inventory especially disaster loss databases/information run by Governments, UNISDR, UNDP or Partners in the countries such as Indonesia, Iran, Maldives,

Thailand, Nepal, India, Lao PDR, Sri Lanka and Vietnam. The Centre's work proragmme may capitalize on these initiatives.

Iran's National Cartographic Centre (NCC) has been the key member of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific (PCGIAP) — a voluntary regional forum that has been a major player in strengthening "information infrastructure". The NCC has demonstrated capacity to develop spatial data infrastructure for disaster risk management following international standards. The institutional capacity of NCC may be used on behalf of the Centre to leverage not only Iran's know how but also PCGIAP's platforms and resources for strengthening disaster information infrastructure capacity in the vulnerable subregions.

Project result 3: Information sharing platform

Disaster risk profiles covering the vulnerable subregions are the important component for disaster information management. In the existing initiatives, there are gaps with regards to comprehensiveness of disaster information for the vulnerable subregions. The international Emergency Events Database (EM-DAT) does not capture adequately the information sharing needs for vulnerable countries.

Iran's National Disaster Risk Management Information Portal is an excellent proto-type, which may be used to scale up through the Centre's information sharing platform addressing regional/subregional information sharing needs. The first key element of the work programme may be to collect and consolidate existing information on disaster risks in the vulnerable subregions from a range of dispersed institutions through developing an information hub. Once collected, this information may be housed in and disseminated through an information portal, which links national, subregional, regional and international partners in risk reduction. The system may be linked up with DRR Gateway (ESCAP), Preventionweb (UNISDR), Reliefweb (UNOCHA), South Asia Disaster Knowledge Networks of SAARC, ECO Disaster Management related Portal, etc.

Project result 4: Focus on disaster information with transboundary origins

The ESCAP Committee on Disaster Risk Reduction recognized that many types of disasters had trans-boundary effects and could only be effectively predicted and mitigated through bilateral, subregional and regional cooperation. Several delegations informed the Committee about developing the disaster information repository for monitoring and mitigation of such disasters. The Centre work programme may attach priority to the disaster with transboundary origins in the subregions – such as earthquake, drought, sandstorm, regional floods, etc.

B. Thematic focus on the Centre as capacity development hub in disaster information management

Project result 1: Addressing capacity needs in high risk and low capacity countries

Asia Pacific Disaster Report 2012 highlights that for low capacity countries, small-scale disasters equally destructive compared to large-scale disasters. In particular, in low capacity countries like Nepal, the number of deaths and the damage to housing is similar from large scale but rare disasters as compared to small scale but frequent ones.

The Building and Housing Research Centre (BHRC) of the Government of Iran has the expertise in evaluating physical and mechanical properties of building and housing materials, discovering new building materials, progressing the constructional technology of building and housing systems, and assuring safety of structures subjected to dynamic and static loads, especially, loads induced by earthquake. The resilient building code of BHRC is extremely valuable knowledge resource to share with high risk vulnerable countries. The Centre's work programme may capitalize on BHRC's institutional capacity.

Iran's NCC has in-house expertise in capacity development training viz., disaster risk/vulnerability assessment. Several training activities were organized in the past on bilateral basis. Damage and loss assessment (DaLA) methodology is emerging as priority area for post-disaster recovery, rebuilding and reconstruction. The DaLA contributes to benefit the affected countries substantially for the resource mobilization during post-disaster recovery and reconstruction efforts. Although DaLA is standardized and well accepted methodology, it's based multi-sectoral data and highly information intensive. The Centre with the support from the development partners may take up capacity development training of DaLA.

Project result 2: Analytical works

Global Assessment Report and Asia Pacific Disaster Report do capture disaster trends including exposure and vulnerability issues at global and regional levels. There are specific issues at subregional level, which normally do not get adequately highlighted in these analytical reports. The Centre, with the focus on disaster information management, will be in better position to bring out the context specific and detailed analytical report highlighting the key issues and actionable recommendations, especially in the context of vulnerable subregions. These analytical reports will complement and supplement Asia Pacific Disaster Report.

Aiming at building the capacity in disaster information management in order to contribute to the resilience building to the disasters, including the implementation of the Hyogo Framework of Action and Rio+20 outcome, the strategies include providing policy advice and facilitating capacity building services including strategic learning, technical assistance, research, training, and exchange of information for effective disaster risk reduction and management.

3.5 Results framework

Expected Accomplishments (EAs)

EA1: Enhanced information and knowledge-sharing, partnerships and cooperation among the ESCAP member States of the subregions, civil society and other relevant development partners to have the access to and capacity for using disaster database and benefiting from the information and knowledge about hazard, vulnerability, exposure and disaster risk as a result of the Centre functioning as the repository/hub of disaster information management.

Project results/outputs	Indicators	Means of Verification
Project result 1: Increased access of disaster databases and improved understanding of disaster risk by the key stakeholders in South and South-West Asia as well as North and Central Asia and enhanced capacity of policymakers to design policies that accelerate building disaster resilience in the Subregion	At the end of the project, stakeholders indicate improved understanding of disaster risk and that majority of stakeholders indicate improved capacity to design policies for disaster risk reduction and management.	Project reports, meeting reports, surveys of key stakeholders and development partners, media reports.
Output 1a: Stakeholders have got sustainable access to data, information, research and analysis of disaster risk for implementing disaster reduction and management policies in the subregions, in particular through the Centre's activities.	By the end of the project, a majority of stakeholders indicate having access to and capacity for using disaster data/information amenable through the Centre's database/information repository.	Downloads, questionnaires, official commentary and media reports

Key activities:

Organization of two expert group meetings jointly with ESCAP subregional offices in Almaty and New Delhi to discuss all project results and strategize way forward befitting the member States;

Development of the repository of disaster databases – covering the major disasters in the subregions;

Providing access to a range of relevant disaster data covering major hazards of the subregions;

Development of the information products for decision making to disaster risk reduction activities - jointly with the Government, the UNDP Iran and other development partners;

Organization of subregional and national forums and workshops to discuss disaster database issues for countries of the subregion.

Output 1b:	By the end of the	Downloads,
	project,	questionnaires,
The Stakeholders have shared data,	a majority of	official commentary
exchanged information, learnt from	stakeholders indicate	and media reports
the experiences of knowledge	sharing the	•
based disaster risk management	data/information and	
and reduction, in particular through	learnt from the	
the Centre's initiatives on building		
collaboration and partnership.	experiences.	
' '		

Key activities:

Development/harnessing the regional cooperation framework for sharing the data/information;

Development of the community of practices for sharing data/information;

Building collaboration framework for sharing the data within the subregions and across;

Organization of subregional and national forums and workshops to discuss disaster database issues for countries of the subregion.

Project result 2:	By the end of the	Project reports and
Kanatahahahahandan da	project, a majority of	publications,
Key stakeholders' enhanced	participants have	questionnaires.
capacity to design and implement	improved capacity to	
policies for disaster risk reduction	design and implement	

and management using the disaster information inventory/ information management system of the Centre.	disaster risk reduction and management policies relevant for countries of the subregions	
Output 2a: The stakeholders in the subregions have got enhanced information and knowledge using disaster information repository /management information system for disaster risk reduction and management developed/facilitated by the Centre.	The majority of participants have increased information and knowledge in addressing disaster risk reduction and management issues	Participant questionnaires and feedback

Key activities:

Putting in place disaster information inventory at regional/subregional/national levels;

Collaboration with Iran's National Cartographic Centre for developing GIS database inventory;

Subregional review and analysis of disaster risk profiling;

Organization of a subregional seminar to discuss the findings of the review and research and propose recommendations for next steps.

Output 2b:

The cooperation between the government officials, policymakers and other key stakeholders in the subregion has been increased on harnessing the benefit from standardized disaster information management systems for more efficient disaster risk reduction and management.

By the end of the project, a majority of participants and other stakeholders have increased cooperation and common strategies for disaster risk reduction and management.

Project reports and studies, participant questionnaires, surveys of key stakeholders, official announcements and related media coverage

Key Activities:

Compilation of the experiences of disaster loss databases/information run by Governments, UNISDR, UNDP or Partners in the countries;

Documentation of the standards and bringing out their implementation strategies in the subregions;

Collaboration with Iran's National Cartographic Centre (NCC) and to capitalize on its association with Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific (PCGIAP);

Documentation of the experiences of spatial data infrastructure, with the support from NCC, for disaster risk management following international standards;

Harnessing the institutional capacity of NCC and PCGIAP's platforms and resources for strengthening disaster information infrastructure capacity in the vulnerable subregions.

Project result 3:	By the end of the	Project reports,
Key stakeholders' enhanced capacity to design and implement policies for disaster risk reduction and management by using the disaster information sharing platform developed by the Centre.	project, member countries have strengthened their institutional capacity to implement disaster risk reduction strategies	participant questionnaires, surveys of key stakeholders, media reports and analysis of development strategies
Output 3a: The government officials and other stakeholders in the	The majority of participants have increased knowledge of	Participant questionnaires and feedback

subregion have enhanced	lessons learned and	
information sharing	good practice in disaster	
experiences by virtue of using	information sharing.	
the common/standardized		
platforms.		

Key Activities:

Put in place collaborate strategy to learn from Iran's National Disaster Risk Management Information Portal as proto-type and scale up through the Centre's information sharing platform addressing regional/subregional information sharing needs;

Collection and consolidation of the existing information on disaster risks in the vulnerable subregions from a range of dispersed institutions through developing an information hub;

Development of the communication and dissemination strategy through an information portal, which links national, subregional, regional and international partners such as DRR Gateway (ESCAP), Preventionweb (UNISDR), Reliefweb (UNOCHA), South Asia Disaster Knowledge Networks of SAARC, ECO Disaster Management related Portal, etc;

Organization of subregional forums, jointly with key stakeholders including SAARC and ECO agencies, to discuss priorities and lessons learned for the design and implementation of disaster information management strategy.

Output 3b:	By the end of the	Project reports and
The enhanced cooperation and capacity between government officials, policymakers and other key stakeholders in the subregion have been strengthened in disaster information sharing using the various operational platforms for sharing data/information.	project, a majority of participants and other stakeholders have increased cooperation and common strategies for sharing disaster information.	studies, participant questionnaires, surveys of key stakeholders, official announcements and media coverage of disaster risk reduction initiatives

Key Activities:

Review of the cooperation framework for sharing disaster data/information;

Preparation of a report on research and analysis identifying the specific challenges to disaster information sharing and identification of opportunities taking into account SAARC Disaster Management Framework as well as ECO Disaster Management initiatives etc to overcome these challenges;

Organization of an Expert Group Meeting at subregional levels to arrive at key recommendations on disaster information management based on the enhanced subregional cooperation.

Project result 4: Enhanced information and knowledge on the disasters with transboundary origins in the subregions – such as earthquake, drought, sandstorm, regional floods, etc.	By the end of the project, the information with regards to disasters with transboundary origins will be increased.	Project reports, participant questionnaires, surveys of key stakeholders, media reports and analysis of disaster with transboundary origins.
Output 4a: The key stakeholders have enhanced awareness and information about disaster with transboundary origins.	By the end of the project, the stakeholders have better information and improved knowledge about disasters with transboundary origins.	Participant questionnaires, and Project report.

Key activities:

Compilation of the disaster databases on transboundary origins in the subregions;

Collaboration with Iran's National Cartographic Centre for having the spatial databases on such disasters and disseminate through the Centre's information exchange platform;

Organization of subregionl seminar for building collaboration and information exchange on such disasters.

Analyze and documentation of the subregion impacts of such disasters for building regional cooperation.

Expected Accomplishments (EAs)

EA2: Enhanced capacity of ESCAP member States in the priority subregions to have the access to and capacity for using disaster database, information and knowledge for more efficient and effective disaster risk reduction and management as a result of the Centre functioning hub of capacity development for disaster information management.

Project results/outputs	Indicators	Means of Verification
Project result 1: Enhanced knowledge, partnerships and capacity of key stakeholders using disaster information more efficiently in support of disaster risk reduction and management.	Increased number of Senior government officials and policymakers report enhanced information/ knowledge and increased partnership opportunities.	Reports and publications, questionnaires of participants, surveys of key stakeholders, downloads and site visits, number of partnership and cooperation initiatives
Output 1a: The key stakeholders have enhanced capacity to apply information and knowledge acquired from the Centre's work programme for building disaster resilience in development.	A majority of project participants report greater knowledge of challenges and strategies for resilient strategy.	Questionnaires of participants, project reports

Key activities:

Organization of the capacity building training workshops in disaster information management for the key functionaries from the member countries taking advantage of the existing South-South cooperation initiatives in the subregion;

Collaboration with Iran's Building and Housing Research Centre (BHRC) for sharing information and knowledge with regards to the resilient building code and land use planning for seismic risk reduction and facilitate South-South cooperation for sharing earthquake resilient strategies in the subregions;

Collaboration with Iran's NCC for harnessing the in-house expertise in capacity development training viz., disaster risk/vulnerability assessment;

Imparting the capacity development training on standardized Damage and loss

assessment (DaLA) methodology with the support from the development partners;

Providing demand driven technical assistance to the member Countries for addressing information needs towards mainstreaming disaster risk reduction in development policies, group training/capacity development etc.

Output 1b:

The government officials and other key stakeholders especially in high risk and low capacity least developed countries, land locked developing countries and small island developing countries have the enhanced capacity to use more effectively disaster information services from the Centre.

By the end of the project, a majority of participants report greater opportunities for regional cooperation on capacity development for disaster information management.

Surveys of key stakeholders, participant questionnaires

Key Activities:

Development the training modules including training of trainers suiting the institutional and policy landscape of high risk and low capacity countries;

Organization of specialized training related to seismic risk reduction for capacity development in high risk countries – following South-South cooperation strategy;

Organization of subregional seminars, forums and dialogues to discuss challenges and recommendations for enhancing the capacity of high risk countries by context specific disaster information.

Project result 2: Enhanced knowledge of government officials, policymakers and other stakeholders of good practice in disaster information management for policy design at the subregional, national and subnational levels Output 2a:	By the end of the project, participants report an increased capacity to design policies to address disaster risk reduction following HFA in their respective countries	Project reports and publications, Disaster risk impact evaluations, HFA, participant questionnaires
Government officials, policymakers and other stakeholders have an increased capacity as a result of the Centre's analytical works on disaster information management to design policies that contributes to implementation of HFA in the subregions.	project, a majority of participants report increased knowledge of disaster risk reduction strategies and assessment tools.	questionnaires

Key activities:

Analytical study, with the focus on disaster information management, to bring out the context specific details highlighting the key issues and actionable recommendations, especially in the context of vulnerable subregions. These analytical reports will complement and supplement Asia Pacific Disaster Report – jointly brought by ESCAP and UNISDR.

A research study on the links between MDGs and HFA vis-à-vis changing patterns of disaster risk in the face of challenges such as climate change in the subregion;

Joint initiatives with the respective UN agencies, SAARC/ECO to support HFA implementation process in the member Countries and bring out the subregional perspectives of issues and key challenges for further discussions during ESCAP Committee on DRR, Expert Group Meetings, Commission sessions etc;

Organization of a regional seminar, jointly with key stakeholders, to discuss the findings of the review and research and propose recommendations for next steps and policy implementation which could lead to greater coherence between MDG and HFA as well as contribute to inclusive, resilient and sustainable development efforts in the subregion.

Annex V

List of interviewees

Member State representatives and experts, including ACPR members and participants of EGMs

Australia Mr. John James, Third Secretary, Political and Economic Section, Australian Embassy,

Bangkok

Bhutan Mr. Minjur Dorji, Executive Secretary, Thimphu Thromde Municipality, Kingdom of

Bhutan

Cambodia H.E. Eat Sophea, Ambassador, Royal Embassy of Cambodia, Bangkok

Mr. Sophak Phoeun, Senior DRR Coordinator and Executive Assistant to Senior Minister and 2^{nd} Vice President of National Committee For Disaster Management, Cambodia

Fiji Mr. Filipe Alifereti, Permanent Secretary, Ministry of Rural and Maritime Development

and National Disaster Management, Fiji

Japan Mr. Hisanobu Mochizuki, Counselor and Deputy Permanent Representative of Japan,

Embassy of Japan, Bangkok

Pakistan Ms. Aqsa Nawaz, First Secretary, Embassy of the Islamic Republic of Pakistan, Bangkok Samoa Mr. Titimanu Alain Simi, Senior DRR Officer, Disaster Management Office, Samoa

United States

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