

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Committee on Disaster Risk Reduction

First session
25-27 March 2009
Bangkok

**ENHANCING REGIONAL COOPERATION ON DISASTER RISK
REDUCTION IN ASIA AND THE PACIFIC: NETWORK OF
NETWORKS OF KNOWLEDGE SHARING AND
ANALYSIS FOR DISASTER MANAGEMENT**

(Item 5 (a) of the provisional agenda)

Note by the secretariat

SUMMARY

The present report explores avenues for optimized cooperation for sharing knowledge and analysis for disaster management in Asia and the Pacific. It provides a preliminary overview of major existing regional cooperation initiatives and networks in disaster-related fields, including their activities, territorial coverage, types of disasters addressed and services provided. Based on the overview and findings, the secretariat proposes increased and enhanced regional cooperation towards establishing a network of networks on knowledge sharing and analysis to support the implementation of the Hyogo Framework for Action.

Knowledge sharing and analysis for disaster management in the Asia-Pacific region is of critical importance due to the high vulnerability of ESCAP member States to disasters. Although there are various efforts at the international, regional and national levels to enhance disaster preparedness, there is still an opportunity for further cooperation and collaboration. In this context, a network of networks on knowledge sharing and analysis for disaster management in the Asia-Pacific region could contribute to strengthening the resilience of member States to natural disasters.

The Committee may wish to consider the approach proposed in the present document and examine the possible roles that the ESCAP secretariat could perform in the implementation of the proposed network.

CONTENTS

	<i>Page</i>
Introduction.....	2
I. A RECENT DEVELOPMENT: LEARNING FROM THE CASE OF CYCLONE NARGIS	3
II. OVERVIEW OF EXISTING INITIATIVES AND NETWORKS FOR DISASTER RISK REDUCTION IN THE ASIA-PACIFIC REGION	3
A. Type of structure	4
B. Activities, information and services	5
C. Territorial coverage	5
III. POTENTIAL AREAS OF OPPORTUNITY FOR REGIONAL COOPERATION	7
A. Consolidation of data, information and knowledge	7
B. Enhanced coverage of international and regional initiatives and cooperation mechanisms	8
C. Thematic gaps	8
IV. ESTABLISHMENT OF A NETWORK OF NETWORKS ON KNOWLEDGE SHARING AND ANALYSIS FOR DISASTER MANAGEMENT IN THE ASIA-PACIFIC REGION	9
A. Rationale and conceptualization.....	9
B. The role of ESCAP	11
C. The network vis-à-vis the Hyogo Framework for Action	13
D. Sharing information and knowledge on the network	14
V. ISSUES FOR CONSIDERATION.....	14
Diagram 1. Proposed components of the network of networks on knowledge sharing and analysis for disaster management in the Asia-Pacific region.....	10

Introduction

1. In January 2005, the World Conference on Disaster Reduction, held in Kobe, Japan, adopted the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.¹ In that Framework, the Conference identified multiple priorities for action, one of which was to “use knowledge, innovation and education to build a culture of safety and resilience at all levels.”² Some of the key activities envisioned in order to pursue that priority involved strengthening networks among disaster experts, managers and planners, promoting and improving dialogue and cooperation among scientific communities and practitioners working on disaster risk reduction (DRR), and encouraging partnerships among other stakeholders.³

¹ A/CONF.206/6 and Corr.1, chap. I, resolution 2.

² Ibid., para. 14.

³ Ibid., para. 18 (b) and (c).

2. Despite considerable efforts to make these activities a reality, there are significant gaps. The second Asian Ministerial Conference on Disaster Reduction, held in New Delhi in November 2007, adopted a declaration that, among other things, encouraged national Governments to enhance regional and subregional cooperation for DRR, including early warning, capacity-building, networking and sharing of information and good practices among stakeholders, and requested the regional stakeholders to work together more closely towards greater coherence and harmonization of their efforts as a generic point of entry for enhanced regional cooperation.⁴

3. In this context, the purpose of the present report is to explore avenues for optimized cooperation in the sharing of knowledge and analysis for disaster management in Asia and the Pacific.

I. A RECENT DEVELOPMENT: LEARNING FROM THE CASE OF CYCLONE NARGIS

4. Various networks and initiatives provide an increasing amount of data, information, knowledge and services on key elements of disaster management. A regional high-level expert group meeting on post-Nargis issues in Myanmar held by ESCAP and the Association of Southeast Asian Nations (ASEAN) in October 2008 repeatedly emphasized the importance of information sharing and analysis, such as the post-Nargis joint assessment (PONJA).

5. The meeting found that, had an efficient regional information-sharing mechanism been in place, the international community could have better mobilized and enabled expertise from the region to contribute to finding solutions and addressing a wide scope of specific needs in a cost-effective manner, while increasing the effectiveness of humanitarian and disaster recovery and reconstruction activities on the ground, as envisaged in the Hyogo Framework for Action. Clearly, such a mechanism would be a valuable tool enabling experts in various sectors and disciplines to lend their expertise to disaster coordination authorities to aid in the recovery of the affected area, leading to further enhanced disaster preparedness and mitigation in the future.

6. In the wake of the Cyclone Nargis experience, it has been shown that there are an increasing number of networks and initiatives with a specific focus on certain types of natural disasters, phases of disaster management and geographical locations and that they are progressively expanding coverage, data and information. Thus, the challenge lies in leveraging that information, knowledge and expertise so that it can be shared by disaster experts, government officials and various other stakeholders and partners.

II. OVERVIEW OF EXISTING INITIATIVES AND NETWORKS FOR DISASTER RISK REDUCTION IN THE ASIA-PACIFIC REGION

7. In pursuit of the Hyogo Framework for Action priority for action 3 mentioned in paragraph 1 above, the secretariat carried out a survey of major national, regional and international initiatives and networks for disaster management that assist ESCAP member States in their respective areas and capacities. Key international and regional mechanisms which provide a framework for member States to determine a course of action, policies and regulations were also surveyed. Online search, literature review and informal interviews with disaster experts were conducted as part of the methodology. As the survey is an ongoing activity, the list is in no way exhaustive.

⁴ See <http://nidm.gov.in/amcdrr/declaration.asp>.

8. These surveyed networks and initiatives can be distinguished by the type of structure, activities and services and territorial scope. For a list of key international, national and non-governmental networks, see E/ESCAP/CDR/INF/5.

A. Type of structure

9. Non-governmental initiatives and networks. The two main categories of organizations are: (a) not-for-profit entities, including civil society actors, such as non-governmental organizations and academic institutions; and (b) for-profit companies in areas such as logistics, transportation, construction and health care which have joined networks such as the World Economic Forum's Disaster Resource Network.⁵ Some for-profit organizations have become globally influential; thus they have the power, within the framework of corporate social responsibility, to join with Governments and civil society to work towards DRR.

10. For instance, the Sahana Disaster Management System, a web-based collaboration tool, is the result of a project initiated by volunteers in the Sri Lankan free and open-source software development community after the December 2004 Asian tsunami. The Government of Sri Lanka used the system, which was released as free and open-source software. Sahana⁶ has also been used to manage different aspects of disaster relief and recovery operations in China, Indonesia, Pakistan, Peru, the Philippines and Sri Lanka.

11. National Government initiatives and networks. Some Governments have established national disaster management centres (NDMCs) and as part of the actions recommended in the Hyogo Framework for Action. Some have established national platforms for disaster risk reduction (NPDRs), in cooperation with international organizations and civil society. Information on NPDRs is available on the website of the International Strategy for Disaster Reduction (ISDR).⁷

12. Regional and international initiatives and networks. National Governments have understood the benefits of sharing information with countries around the world. They have committed to working towards DRR through such mechanisms as the Hyogo Framework for Action and have joined regional and global intergovernmental organizations in their efforts. These networks have taken various shapes, such as multi-stakeholder declarations of cooperation, working groups, information-sharing mechanisms. The humanitarian information centres of the Office for the Coordination of Humanitarian Affairs, for example, support coordination for a wide range of parties encompassing national Governments, non-governmental organizations and United Nations agencies through online information-sharing platforms, such as the Humanitarian Information Centre for Myanmar.⁸

13. The Mekong River Commission (MRC) is an organization that was established in 1995 by an agreement between the Governments of Cambodia, the Lao People's Democratic Republic, Thailand and Viet Nam "to cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin".⁹ Their programmes include flood management and mitigation¹⁰ with real-time precipitation data provided for flood forecasting.¹¹

⁵ <http://www.weforum.org/en/initiatives/drm/index.htm>

⁶ <http://www.sahana.lk>

⁷ <http://www.unisdr.org/eng/country-inform/ci-national-platform.html>

⁸ <http://myanmar.humanitarianinfo.org/>

⁹ http://www.mrcmekong.org/about_mrc.htm

¹⁰ <http://www.mrcmekong.org/programmes/flood.htm>

¹¹ <http://ffw.mrcmekong.org/>

B. Activities, information and services

14. Effective disaster management requires certain activities, types of information and services. The networks working in disaster management can further be distinguished by their different objectives. Some are focused on particular disaster types (for example, floods, earthquakes) and the others on certain services (for example, earth observation by satellite, early warning systems, capacity-building). Furthermore, some initiatives and networks focus specifically on certain phases of disaster management, such as risk reduction, preparedness, response, recovery and long-term reconstruction. The types of disaster information and services could also be categorized broadly by sector and community, including space, information and communications technology (ICT), geographic information systems, scientific research, statistics and other socio-economic clusters.

15. In the area of space-based disaster information and services, the International Charter Space and Major Disasters was established to provide “a unified system of space data acquisition and delivery to those affected by natural or man-made disasters through Authorized Users”.¹² At the regional level, Sentinel Asia,¹³ in close association with the Asia-Pacific Regional Space Agency Forum (APRSAF), provides countries in the region with satellite images upon request in a disaster situation.

C. Territorial coverage

16. National networks gather information and share it with their citizens and institutions within their national boundaries, while international and regional networks usually gather and share information within the boundaries of the member countries. For example, the Pacific Islands Applied Geoscience Commission (SOPAC), the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation (APEC) forum, the South Asian Association for Regional Cooperation (SAARC) and the Bay of Bengal Initiative for Multi-Sectoral and Technical and Economic Cooperation (BIMSTEC) have structures and teams working on disaster management.

17. Additionally, ESCAP member States take part in the following:

- (a) At the global level:
 - (i) The Global Platform for Disaster Risk Reduction;
 - (ii) The Global Facility for Disaster Reduction and Recovery;
 - (iii) The International Recovery Platform;
 - (iv) The Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations;¹⁴
- (b) At the regional level:
 - (i) The Asian Ministerial Conference on Disaster Reduction;
 - (ii) The Pacific Framework of Action for Disaster Risk Management;
 - (iii) The Comprehensive Regional Framework for Action 2006-2015 in South Asia;

¹² <http://www.disasterscharter.org/>

¹³ <http://dmss.tksc.jaxa.jp/sentinel/>

¹⁴ United Nations, Treaty Series, vol. 2296, No. 40906.

- (iv) The South Asian Regional Platform for Disaster Risk Reduction and Management;
- (v) The ASEAN Agreement on Disaster Management and Emergency Response;
- (vi) The Regional Consultative Committee of the Asian Disaster Preparedness Center (ADPC);
- (vii) The Asian Conference on Disaster Reduction of the Asian Disaster Reduction Center (ADRC);
- (viii) The APEC Task Force on Emergency Preparedness;
- (ix) The Shanghai Cooperation Organization Agreement on Disaster Reduction;
- (x) The Regional Cooperative Mechanism for Disaster Management for South-South Cooperation in the Asia-Pacific Region;
- (xi) The Economic Commission for Europe Convention on the Protection and Use of Transboundary Watercourses and International Lakes.¹⁵

18. An overview of major international and regional mechanisms active in the Asia-Pacific region can be found in E/ESCAP/CDR/1.

19. The survey covered more than 100 initiatives, including governmental and non-governmental organizations and United Nations agencies and programmes, all of which deal with activities or specialties that are useful for reducing risks associated with various types of disasters and address immediate disaster response needs. Examples of these activities and specialties are earth observation, weather forecast, water level measurement, government and community capacity-building, hazard-resistant design, land-use planning, and multi-hazard early warning systems.

20. The scope of their geographical coverage, areas of expertise, range of information, knowledge and services, and specialization in a certain disaster phase varies. There may be areas of considerable overlap in some sectors and areas where coordination and collaboration could be enhanced among some of the initiatives and networks; on the other hand, certain types of hazards and disasters are not addressed sufficiently. In that regard, the Global Survey of Early Warning Systems¹⁶ highlighted the proliferation of communication technologies and the loss of a single authoritative voice as one of the major gaps in the context of assessing the effectiveness of early warning components. In particular, it expressed concern over the fact that different organizations issue untargeted disaster warning messages, inducing wrong responses due to misinterpretation which in at least one case caused unnecessary losses among agricultural operators. The report also highlighted the following as major gaps in the context of monitoring and warning services:

- (a) No adequate or effective sharing of information with affected countries urgently after major disasters occur;

¹⁵ <http://www.unece.org/env/water/>

¹⁶ United Nations Inter-Agency Secretariat of the International Strategy for Disaster Reduction, Global Survey of Early Warning Systems: An Assessment of Capacities, Gaps and Opportunities toward Building a Comprehensive Global Early Warning System for All Natural Hazards, 2006 (available online at <http://www.unisdr.org/ppew/info-resources/ewc3/Global-Survey-of-Early-Warning-Systems.pdf>). See also A/62/340.

- (b) Insufficient multidisciplinary, multi-agency coordination and collaboration;
- (c) Inadequate coverage and sustainability of observing systems for monitoring of hydro-meteorological hazards;
- (d) Limited membership of global and regional initiatives;
- (e) Lack of linkages between global and regional initiatives;
- (f) Lack of monitoring and warning systems for many hazards, such as dust- and sandstorms, severe storms, flash floods and storm surges, particularly in at-risk countries and least developed countries;
- (g) Inadequate access to information from countries outside the affected region;
- (h) Inadequate communication systems to provide timely, accurate and meaningful forecasting and early warning information down to the level of communities.

III. POTENTIAL AREAS OF OPPORTUNITY FOR REGIONAL COOPERATION

21. On the basis of the preliminary findings of the survey carried out by the secretariat, it may be inferred that, in most cases, member States find it time-consuming and difficult to access, vet, analyse and make full use of the available data, information, knowledge and services from the numerous initiatives and networks, especially in the urgency of a disaster situation. In addition, it is not clear how the initiatives and networks surveyed are collaborating to create synergies, assist member States in every disaster phase and address the demand-driven multi-sectoral requirements that are often encountered in a disaster situation.

22. More specifically, noticeable gaps have been identified in the areas described below. These could represent areas of potential regional cooperation for further improving timely access to information, knowledge and expertise by disaster management authorities and experts.

A. Consolidation of data, information and knowledge

23. *Disaster-related statistics at the national level.* There are some initiatives that assist member States in collecting disaster-related statistics, but not all member States are covered. Furthermore, very few collect historical data on disasters for further analysis. This could be a valuable source of information for enhancing disaster preparedness and planning disaster responses.

24. *Demand-driven multi-sectoral knowledge and expertise.* Disaster management requires a great deal of specialized expertise and knowledge: soil conditions, geology, hydrology, meteorology, agriculture, fisheries, forestry, education, health, business, statistics, settlement, communication and infrastructure, among others. Although a number of initiatives and networks provide much information, knowledge and expertise, it is not clear if the necessary information can be delivered in a timely and quickly accessible manner to government officials and disaster experts on the ground to facilitate evidence-based decision-making.

25. *Good practices and lessons learned.* In past disaster situations, a number of important lessons learned and good practices were identified in various sectors, such as disaster recovery planning, aid management, resettlement and early warning. This could be a critical factor in planning and implementing disaster response and recovery activities in other member States. For instance, the methodology used in the preparation of the post-Nargis joint assessment report should be widely available to other countries so that they can prepare for or respond to disasters. There have already been a number of reports and analyses on lessons learned from past experiences.

B. Enhanced coverage of international and regional initiatives and cooperation mechanisms

26. *Access to disaster-related knowledge and expertise.* For some initiatives, membership is limited to certain types of organization and access to information, knowledge and services restricted. This is helpful for preventing abuses of access to information. However, limited membership may prevent beneficiaries from receiving information when they need it most.

27. *Adoption of international conventions.* The International Charter Space and Major Disasters, which is meant to facilitate disaster management at the global level, has only four members in the Asia-Pacific region: China, Turkey, Japan and India. The Tampere Convention has been ratified by 36 countries around the world, but only three of them—India, Sri Lanka and Tonga—are in the Asia-Pacific region.

28. *Membership or involvement in information-sharing mechanisms.* A great number of initiatives and networks are limited in terms of geographic coverage and membership. Not all of the ESCAP member States are covered by them in an equitable manner. This limitation poses significant constraints in planning and implementing disaster responses, especially among the least developed countries, which have fewer capabilities and available data. More often than not, these are the countries which are not covered by the initiatives and networks.

C. Thematic gaps

29. *Multi-hazard cooperation.* There seem to be opportunities for cooperation aimed at reducing the risks from multiple hazards. Such opportunities include hazard zone mapping, hazard-resistant engineering and design, stream and ground water level flow measurement. Data obtained from satellites and other sources could be applied to the mitigation of the effects in various disasters, not only to disaster response and recovery.

30. Some of these findings may overlap with previous findings and recommendations. While in recent years these initiatives and networks have made significant progress in the ESCAP region, there could still be many avenues for improved collaboration on disaster management. In this regard, the views of member States on the gaps and opportunities would be welcome.

IV. ESTABLISHMENT OF A NETWORK OF NETWORKS ON KNOWLEDGE SHARING AND ANALYSIS FOR DISASTER MANAGEMENT IN THE ASIA-PACIFIC REGION

A. Rationale and conceptualization

31. As a way to address the gaps and seize the opportunities mentioned above, the links between the existing networks could be reinforced by facilitating the sharing and analysis of information, knowledge and expertise among them to address the disaster management needs of member States. The information, knowledge and expertise could be easily and rapidly shared and made available through a regional knowledge sharing mechanism. The aim is to create synergies and add value by providing consolidated knowledge and expertise for efficient and effective disaster management.

32. ESCAP member States could consider establishing a network of networks on knowledge sharing and analysis for disaster management for the purpose of:

(a) Facilitating the sharing of information, knowledge and expertise among various networks and initiatives covering and connecting various sectors;

(b) Facilitating the access of member States to a central knowledge and expertise information bank shared by each member network and initiative as well as experts. New research and analysis opportunities for disaster management would be opened.

33. At its first session, held in Bangkok from 19 to 21 November 2008, the Committee on Information and Communications Technology recommended that the secretariat promote a network of networks on knowledge sharing. It also recommended that the secretariat promote the sharing of information, communications and space infrastructure and resources by strengthening existing regional cooperative mechanisms. In addition, the Committee requested that the secretariat conduct a study on ICT applications for DRR and that the Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT) develop a training module on ICT and DRR (see E/ESCAP/CICT/6, chap. I).

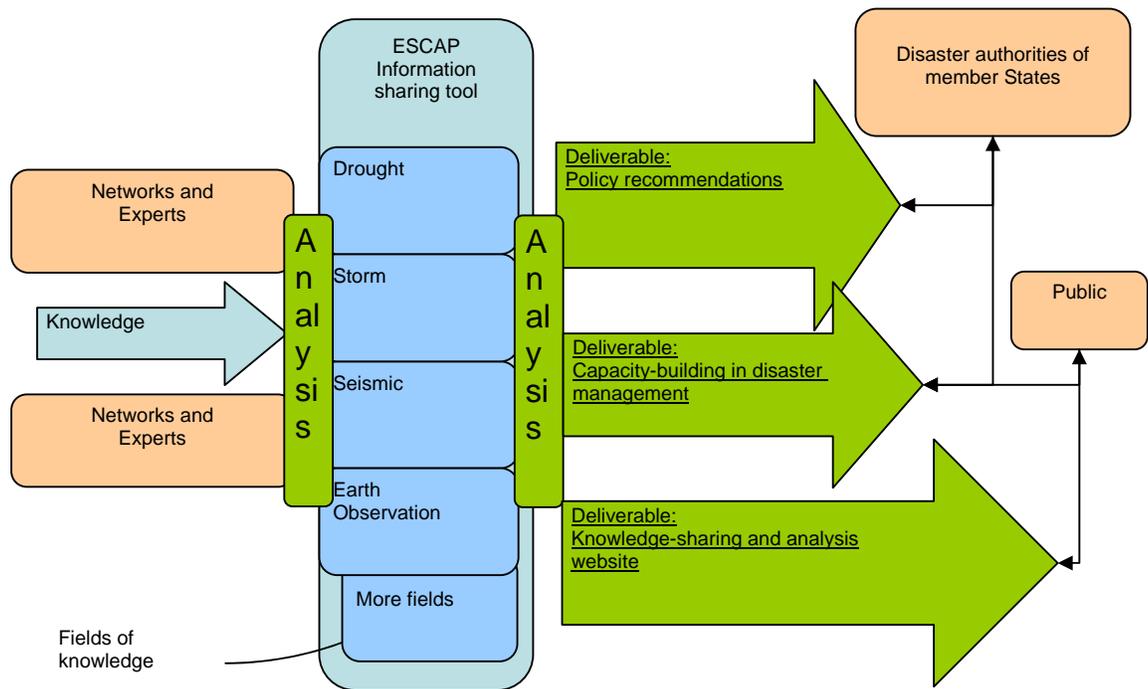
34. The proposed network is illustrated in the diagram. The shared knowledge will be compiled, analysed, classified and prepared for presentation in the form of three key deliverables:

(a) Knowledge-sharing and analysis website;

(b) Policy recommendations;

(c) Capacity-building in disaster management: curricula and training materials.

Diagram 1. Proposed components of the network of networks on knowledge sharing and analysis for disaster management in the Asia-Pacific region



35. *Knowledge-sharing and analysis website.* The network proposed will consolidate information and knowledge on lessons learned in disaster management with the goal of translating analysis and knowledge into action. In more specific terms, through the website, disaster management authorities and experts will be able to access:

- (a) Analysis, lessons learned and good practices in each specific disaster;
- (b) Templates and knowledge base;
- (c) Experts' contacts and a directory of initiatives and networks.

36. This component could establish a list of necessary actions to be taken by disaster authorities within a time frame based on an analysis of past experiences and knowledge and align knowledge and experts in each phase.

37. *Policy recommendations.* The second component will focus on policy recommendations to be discussed during sessions of the Committee on Disaster Risk Reduction and of the Commission if there are any policy gaps or options which require consideration by member States.

38. *Capacity-building in disaster management.* At the ASEAN-United Nations expert group meeting mentioned above (see para. 4), participants requested that ESCAP establish a disaster management university to build the capacity of various stakeholders, in particular national and local government officials. In this context, ESCAP could contribute to the development of curricula and training materials based on the activities and outcomes of the above analysis, and any policy gaps identified, in partnership with various organizations, including ISDR, OCHA, UNDP and UNESCO.

39. The network of networks on knowledge sharing would not seek to create an additional institution or commence activities from the very bottom up, but rather to reinforce and extend cooperative mechanisms already existing between networks and create new cooperation links where they could be useful while maximizing the use of available knowledge and analysis, filling in gaps and translating knowledge and analysis into purposive action.

B. The role of ESCAP

40. ESCAP has been an active regional player in disaster reduction and preparedness for more than five decades, which has given it extensive experience in integrating risk management into the socio-economic development process. ESCAP builds up its strength from programmes of work in the areas of space applications, water-related disaster management, tsunami trust fund management and other areas related to economic and social development. Moreover, ESCAP is experienced in policy coordination, capacity-building, consensus-building, promotion of regional cooperation and partnerships—expertise that is very much needed in the different phases of the disaster reduction process.

41. ESCAP convenes or coordinates intergovernmental regional meetings to adopt regional strategies in various areas of disaster reduction. Among those meetings are the annual session of the Commission, the biennial sessions of the committees on disaster risk reduction, information and communications technology and environment, regular meetings of the regional coordination mechanism, the annual consultations with subregional organizations. In addition, ESCAP has established several regional cooperative mechanisms: the Mekong River Commission in 1957; the ESCAP/WMO Typhoon Committee in 1968 (see E/ESCAP/CDR/6); the WMO/ESCAP Panel on Tropical Cyclones in 1971 (see E/ESCAP/CDR/7); and the Regional Space Applications Programme for Sustainable Development (RESAP) and its network in 1994.

42. Promoting regional cooperation is at the core of the work of ESCAP and has been an important component of the implementation of RESAP, where ESCAP has played a significant role by promoting the use of information technology and satellite imagery for disaster reduction. RESAP has promoted (a) a regional cooperative framework; (b) a policy framework on products/services for floods/drought disasters; and (c) a regional cooperative mechanism on drought disaster management.

43. The work of ESCAP on water-related disaster management includes strengthening subregional networks on early warning and disaster risk management, especially the Typhoon Committee and Panel on Tropical Cyclones. It also includes supporting the development of guidelines and technical manuals on disaster risk management and focusing attention on the integration of disaster risk management into the socio-economic development process and capacity-building, including at the community level.

44. Support to regional tsunami early warning systems has also been provided by ESCAP. In 2005, ESCAP established the Multi-Donor Voluntary Trust Fund on Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia.¹⁷ ESCAP secretariat divisions provide multidisciplinary technical assistance (including environment and water, ICT and space technology, infrastructure, and social and gender issues) on various aspects of disaster management to ensure a coordinated approach to resource mobilization for building capacity and enhancing tsunami early warning capacities at various levels in accordance with the needs of countries. The ESCAP subprogrammes all have a direct or indirect linkage to disaster management.

¹⁷ See Commission resolution 62/7 of 12 April 2006.

This enables the ESCAP secretariat to conduct socio-economic analyses of the impacts of disasters, and further develop a multidisciplinary approach to DRR.

45. In this context, the Committee could consider recommending that the secretariat of ESCAP play any or all of the roles described below in order to facilitate the planning, establishment and implementation of the network of networks on knowledge sharing and analysis.

1. Analysis of disaster management

46. Through the experience of ESCAP in various fields, it is well placed to provide a one-stop facility for adding value to information and knowledge available from member States or networks which require assistance in the analysis of disaster management. This would also form the basis for policy recommendations and capacity-building described above (see paras. 37-38). In the context of the proposed network, ESCAP could also be in a privileged position to leverage the expertise of members of the network to provide knowledge and value added services in fields in which it has no expertise.

47. As a result of innovation in telecommunications and information technology in recent decades, the capacity of small and medium-sized research centres has grown to levels which in the past were reserved for large research centres in the most developed countries. This recently acquired capacity for a large population of researchers around the world to capture, store and exchange data among them and to process it through the use of consumer-based microprocessors has opened up a new era of discovery for developing countries.

48. It would be to the advantage of member States to offer their scientists, policymakers and communities a large source of information and knowledge from around the region. This would fuel research on locally specific conditions and disasters and constitute a stepping stone for potential discoveries that could help better equip Governments to face natural disasters. ESCAP would then make every effort to involve local scientific communities in the network with a view to enhancing the range and scope of analysis in disaster management.

2. Good practices – identification, promotion and collaboration

49. In connection with the analysis component (see paras. 35-36), ESCAP could review good practices suggested by a member State or a network with a view to assessing their socio-economic and environmental impacts. This could include identifying assessment methodologies as well as compiling data and information. As part of this exercise, intermediate and final practices, services and methodologies in the region for various phases of the management of major disasters would be analysed for easy adoption by disaster management authorities and other relevant entities.

3. Collaboration with and support to existing electronic clearinghouses

50. In order to minimize the possibility of failure and to maximize the availability of data before and after a disaster, it is recommended that the tools and channels for disaster data sharing overlap and be redundant.¹⁸ Currently, few existing electronic mechanisms collect information from various sources and publish it for easy access, such as the Emergency Events Database (EM-DAT), the Global Disaster Alert and Coordination System, Pacific Disaster Net, PreventionWeb and ReliefWeb. The network of networks on knowledge sharing would facilitate and support further

¹⁸ In engineering, redundancy is the duplication of critical components of a system with the intention of increasing the reliability of the system, usually in the case of a backup or fail-safe.

cooperation among the above-mentioned mechanisms and reach out to ESCAP member States in order to maximize the effectiveness and impacts of information already available online on those platforms, while identifying any gaps that may exist. The network of networks on knowledge sharing would establish a coordination mechanism based on the strengths of existing initiatives and networks while sharing analyses, good practices and policy recommendations with disaster management authorities and experts in various sectors.

4. Urgent response

51. As mentioned in the above chapter, it is critical to provide consolidated disaster information, knowledge and expertise to assist affected countries when a disaster occurs. The services of ESCAP in this area would add value by making available analyses, good practices and lessons learned to the benefit of affected countries.

5. Facilitation to match the supply of knowledge and expertise with the demand

52. The role of ESCAP in such a network could take the form of facilitation to match the supply of information, knowledge and expertise with the demand in collaboration with existing initiatives and networks. The virtual network could handle requests for information, knowledge and expertise related to disaster management, including major types of disasters and services (for example, exchange of historic or real-time data, risk assessment services, capacity-building and satellite imaging). In this process, the specific need of users for easily understandable, affordable and tailored knowledge products and services would be matched with end-user agencies, initiatives and networks that deal with the particular type of disaster.

6. Capacity-building

53. On the basis of the analyses, policy recommendations, shared knowledge and identified gaps, ESCAP could develop institutional and individual capacity-building programmes in collaboration with APCICT and other training institutions specialized in DRR and disaster management.

C. The network vis-à-vis the Hyogo Framework for Action

54. The network of networks on knowledge sharing and analysis would benefit member States by establishing one platform for sharing knowledge and expertise as recommended in Priority for Action 3 of the Hyogo Framework for Action:

“Information management and exchange: In the medium term, develop local, national, regional and international user friendly directories, inventories and national information-sharing systems and services for the exchange of information on good practices, cost-effective and easy-to-use disaster risk reduction technologies, and lessons learned on policies, plans and measures for disaster risk reduction.”¹⁹

55. The network would also benefit from working towards common agreements concerning the standardization of data collected and shared as recommended in the Hyogo Framework for Action:

“International organizations: In close collaboration with existing networks and platforms, cooperate to support globally consistent data collection and forecasting on natural hazards, vulnerabilities and risks and disaster impacts

¹⁹ A/CONF.206/6 and Corr.1, chap. I, resolution 2, para. 18 (e).

at all scales. These initiatives should include the development of standards, the maintenance of databases, the development of indicators and indices, support to early warning systems, the full and open exchange of data and the use of *in situ* and remotely sensed observations;²⁰

D. Sharing information and knowledge on the network

56. When sharing information, knowledge and expertise, the modality of knowledge sharing is affected by multiple factors, such as intellectual property. The network would aim at creating knowledge-sharing links among as many members as possible, but respecting the limitations and needs of the participating initiatives and networks. For this reason, all knowledge sharing would be based on voluntary collaboration arrangements. The national disaster reduction centre of every country in the ESCAP region would be able to contribute to and receive information and knowledge from the network. The participation of least developed countries and small island developing States would be encouraged.

V. ISSUES FOR CONSIDERATION

57. Knowledge sharing and analysis for disaster management in the Asia-Pacific region is of critical importance due to the high vulnerability of ESCAP member States to disasters. Although there are various efforts at the international, regional and national levels to enhance disaster preparedness, there is still an opportunity for further cooperation and collaboration. In this context, a network of networks on knowledge sharing and analysis for disaster management in the Asia-Pacific region could contribute to strengthening the resilience of member States to natural disasters.

58. The secretariat has expounded the possible roles that it could perform in the implementation of the proposed network. In this context, the Committee may wish to consider the following actions:

(a) Supporting the continuation of the survey of existing initiatives and networks;

(b) Requesting the secretariat to conduct in-depth and focused analysis and research and make recommendations on how to enhance knowledge sharing among member States at the regional level with the goal of improving the resilience of countries in the region to natural disasters;

(c) Supporting the efforts of the secretariat to promote regional cooperation for disaster management, especially by undertaking a survey of the knowledge requirements of member States as regards disaster management;

(d) Supporting the establishment of a network of networks on knowledge sharing and analysis for disaster management, and providing the secretariat with guidance regarding the manner of its establishment and functioning, including the extent of involvement of regional and international organizations and United Nations agencies and programmes, with a view to ensuring the sustainability of the network.

.

²⁰ Ibid., para. 32 (f).