
**International Early Warning Programme
Advisory Group Meeting**
First session
Bonn, 26 – 27 March 2007
Item 4(b) IEWP Strategic Plan 2007-2009

DRAFT

The International Early Warning Programme (IEWP)

Strategic Plan

Summary

This Strategic Plan provides the background of the International Early Warning Programme (IEWP), its vision and purpose, how the IEWP operates, its scope and strategic areas of work, institutional arrangement and the programme's governance mechanism, based on the recommendations of previous early warning conferences, the Global Survey of the Early Warning Systems (2006), and the results from the Interim IEWP Advisory Group meeting, December 2006. In particular, it addresses the positioning of the IEWP and the role of the PPEW in the strengthened ISDR system, and related mechanisms, established to support the implementation of the Hyogo Framework for Action 2005-2015.

The IEWP was launched at the Second International Conference on Early Warning (EWC II) in 2003, and is dedicated to reducing the impact of disasters through effective 'people-centred' early warning systems worldwide based on the cooperation of partner organizations.

The IEWP Strategic Plan covers the period 2007-2009. The plan has proposed five areas of work for the IEWP in line with the recommendations of the EWC II, and specifically focus on the follow-up of the recommendations of the Third International Conference on Early Warning (EWC III) and the Global Survey on the Early Warning Systems (2006).

The IEWP will be 'owned' and shaped by many partners and supporters, and its goals will be largely achieved through the ongoing work of the stakeholders. However, additional resources of a substantial and long-term character will be needed to achieve more significant progress intended under the IEWP and for the supporting platform.

Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Introduction	1-6	3
II. Purpose of the IEWP Strategic Plan	7	5
III. Purpose and Scope of the IEWP, and the PPEW	8-41	5
A. Vision for the IEWP	8	5
B. Platform for the Promotion of Early Warning (PPEW)	9-11	6
C. Scope of the IEWP, its areas of focus and priorities	12-19	7
D. Benefits of the IEWP	20-21	8
E. Organizational Structure	22-26	9
F. Functions	27-28	10
G. Governance	29-34	10
H. Monitoring, reporting and performance indicator	35-37	12
I. Funding for the IEWP	38-41	12
Acronyms		14
Annex 1: Comparative chart between the specific recommendations of the EWC II and the recommendations of the Global Survey of Early Warning Systems		15
Annex 2: Recommendations for action in the Global Survey of Early Warning Systems		18

I. Introduction

1. In the past two decades, on average more than 200 million people have been affected every year by natural hazards. These disasters have caused a massive loss of life and negative long-term social, economic and environmental consequences. Vulnerable societies have been deeply affected by these disasters throughout the world, in particular in developing countries with less coping capacity. The threats of disaster triggered by natural hazards to these states pose a serious obstacle to the achievement of the Millennium Development Goals¹.

2. The past lessons including the tragic Indian Ocean Tsunami of 2004 demonstrated that although the occurrence of natural hazards cannot be prevented, the impact of these hazards could be decreased when resilience of the nations and communities are strengthened. After the ten-year review of the progress made in the area of disaster reduction, the World Conference on Disaster Reduction (WCDR)² adopted its outcome document, the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters³ (referred in this document as ‘Hyogo Framework’) in Kobe, Japan in January 2005. The Hyogo Framework highlighted early warning as one of the major elements of disaster risk reduction which could both save lives and help protect livelihoods and national development gains. Early warning has been recognized as an effective tool to reduce vulnerabilities and to improve preparedness and response to natural hazards.

3. The importance of early warning has been underlined in various resolutions of the General Assembly as a critical element of disaster reduction. When the International Strategy for Disaster Reduction (ISDR) was established in 2000⁴ as the successor to the International Decade for Natural Disaster Reduction (IDNDR, 1990-1999)⁵, promotion of early warning was clearly underlined and included in its mandate. Historically, the significance of early warning for disaster reduction has also been repeatedly emphasized in major international agendas including the Yokohama Strategy⁶, the Agenda 21⁷, the Barbados Plan of Action for Small Island Developing States⁸, the Johannesburg Plan of Implementation⁹, the Mauritius Strategy¹⁰ and the meeting of G8 ministers in Gleneagles¹¹ as well as major multilateral environmental agreements (MEAs) including the UN Framework Convention on Climate Change and the UN Convention to Combat Desertification.

¹ The Secretary General’s Report “Road map towards the implementation of the United Nations Millennium Declaration” (A/56/326, 2001) includes specific strategies relevant to the ISDR and early warning.

² World Conference on Disaster Reduction, <http://www.unisdr.org/wcdr/>

³ Hyogo Framework for Action 2005-2015: building the resilience of nations and communities to disasters, <http://www.unisdr.org/eng/hfa/hfa.htm>

⁴ The General Assembly Resolution (A/RES/54/219)

⁵ Resolution proclaiming the 1990’s as the International Decade for Natural Disaster Reduction (A/RES/44/236)

⁶ Yokohama Strategy and Plan of Action for a Safer World (1994), http://www.unisdr.org/eng/about_isdr/bd-yokohama-strat-eng.htm

⁷ <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm>

⁸ Barbados Plan of Action for Small Island Developing States (1994),

<http://www.un.org/documents/ga/conf167/aconf167-9.htm>

⁹ World Summit on Sustainable Development (WSSD, Johannesburg, South Africa, 2002)

http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf

¹⁰ Report of the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (Port Louis, Mauritius, January 2005) (A/CONF.207/11), <http://www.un.org/smallislands2005/documents/documents.html>

¹¹ Response to the Indian Ocean disaster, and future action on disaster risk reduction at the Gleneagles G8 meeting (2005), http://www.g8.gov.uk/Files/KFile/PostG8_Gleneagles_Tsunami.pdf

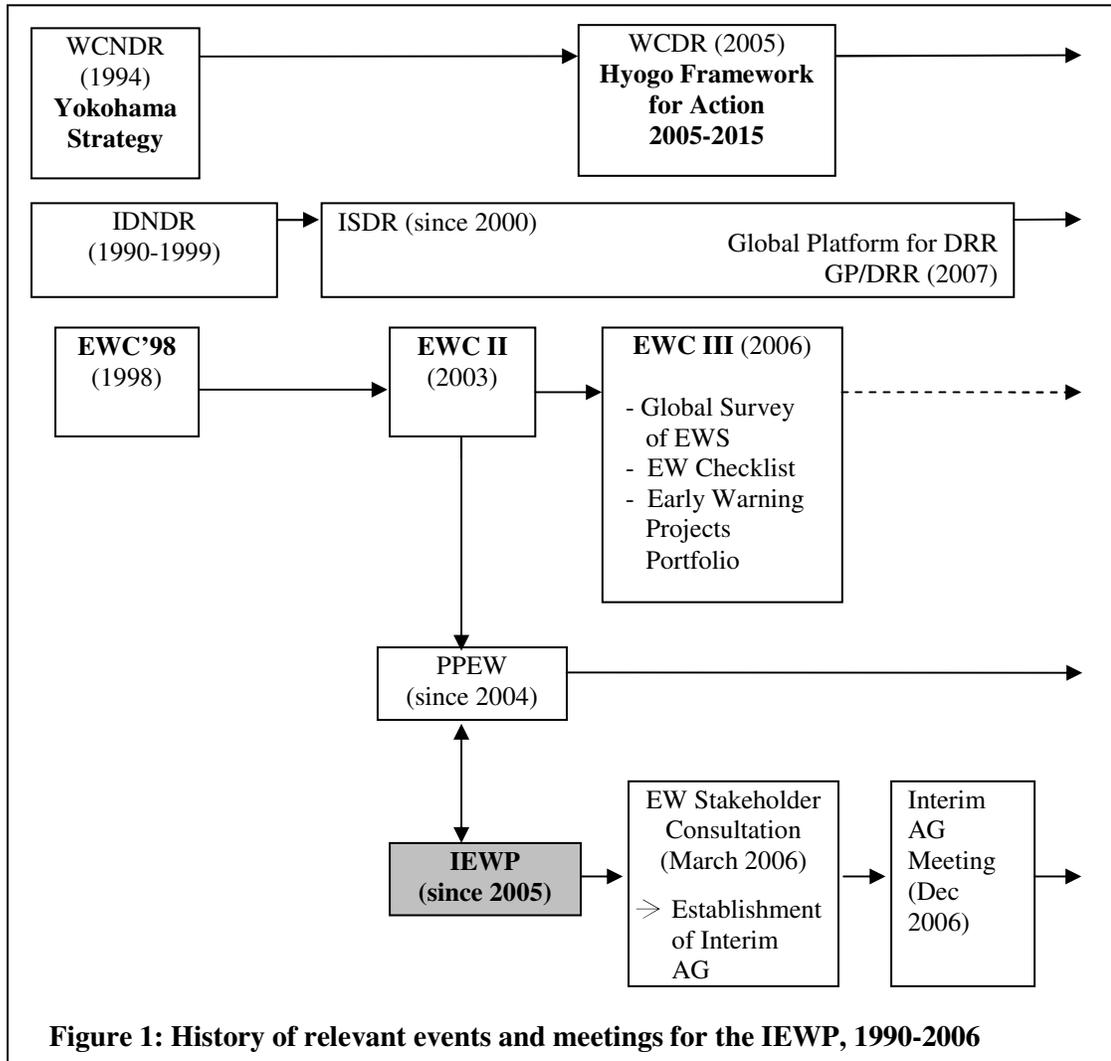


Figure 1: History of relevant events and meetings for the IEWP, 1990-2006

4. To promote the goals of the Yokohama Strategy of 1994, specific activities on early warning were undertaken during the IDNDR. In 1998, the International Conference on Early Warning Systems for Natural Disaster Reduction (EWC'98)¹² was convened in Potsdam, Germany with the focus on the state-of-the-art knowledge of early warning systems. The Second International Conference on Early Warning (EWC II)¹³ was organized in Bonn, Germany, in 2003, by the International Strategy on Disaster Reduction (UN/ISDR) and the Government of Germany¹⁴. It was linked to the efforts of the Working Group 2 on Early Warning¹⁵ of the Inter-Agency Task Force on Disaster Reduction (IATF/DR). The EWC II emphasized the need for integrating early warning into relevant public policy. After the adoption of the Hyogo Framework at the WCDR in 2005, the Third International Conference on Early Warning (EWC III)¹⁶ was convened in

¹² <http://www.gfz-potsdam.de/ewc98/>

¹³ <http://www.ewc2.org/>

¹⁴ Specifically the conference was organized by the German Committee for Disaster Reduction (DKKV) and the Federal Foreign Office.

¹⁵ The members of the IATF Working Group 2 were: ADRC, CDERA, Drought Monitoring Centre (Nairobi), FAO, GeoForschungsZentrum Potsdam, HABITAT, IRI, Max Planck Institute for Chemistry, SOPAC, UN/ISDR, UNCCD, UNDP, UNEP (Chair), UNESCO and WMO. <http://www.unisdr.org/eng/task%20force/force/working-groups2-eng.htm>

¹⁶ <http://www.ewc3.org/>

Bonn, Germany in March 2006 devising some concrete measures and project ideas to implement the Hyogo Framework. The history of the relevant events and meetings for the IEWP are shown in figure 1.

5. Early Warning received more attention after the 26 December 2004 Tsunami. In 2005, at the request of the United Nations Secretary-General, a global survey of early warning systems¹⁷ was undertaken with a view to advancing the development of a global early warning system for all natural hazards. The survey report concluded that while some warning systems are well advanced, there are numerous gaps and shortcomings, especially in developing countries and in terms of effectively reaching and serving the needs of those at risk. The survey report recommended establishment of a globally comprehensive early warning system, rooted in existing early warning systems and capacities. It also recommended a set of specific actions toward building national people-centered early warning systems, filling in the main gaps in global early warning capacities, strengthening the scientific and data foundations for early warning, and developing the institutional foundations for a global early warning system.

6. In response to the call for establishing a suitable framework for advancing early warning as an essential risk management tool, the International Early Warning Programme (IEWP) was proposed at the EWC II in 2003¹⁸. A facilitating platform, the Platform for the Promotion of Early Warning (PPEW) was established in Bonn, Germany, with support from the Government of Germany, to facilitate the implementation of the proposed IEWP, to sustain the dialogue on early warning and to mobilize resources to strengthen partnerships and capacities at all levels. The IEWP was formally launched at the World Conference on Disaster Reduction in January 2005. In 2006, The EWC III emphasized the need to strengthen the IEWP and the PPEW as part of the ISDR system, and to facilitate the implementation of the Hyogo Framework for Action.

II. Purpose of the IEWP Strategic Plan

7. This Strategic Plan provides the background of the IEWP, its vision and purpose, how the IEWP operates, its scope and strategic areas of work, institutional arrangement and the programme's governance mechanism, based on the recommendations of previous early warning conferences, the Global Survey of Early Warning Systems (2006), and the results from the interim IEWP Advisory Group meeting, December 2006. This Plan also specifies the benefits that the IEWP can generate and its added values to the previous and on-going efforts of the relevant institutions dealing with early warning, in particular in promoting 'people-centred' early warning systems at all levels.

III. Purpose and Scope of the IEWP, and the PPEW

A. Vision for the IEWP

8. The IEWP is dedicated to reducing the impact of disasters through effective 'people-centred' early warning systems. The importance of the people-centred and technically sound early warning systems was reiterated by the recent UN General

¹⁷ A/C.2/61/CRP.1

¹⁸ "Effective Early Warning to Reduce Disasters: The Need for More Coherent International Action," http://www.ewc2.org/upload/downloads/EW_programme.pdf

Assembly resolutions¹⁹, the recommendations of the Global Survey and the outcome of the EWC III²⁰. The IEWP aims to improve resilience of the people to all types of natural hazards including droughts, wildfires, floods, tropical cyclones, landslides, volcanic eruptions, tsunamis and epidemics, and to reduce their negative impact on human lives and livelihoods.

B. Platform for the Promotion of Early Warning (PPEW)

9. The platform was established with the support of the Government of Germany to promote the recommendations of the EWC II and to facilitate the IEWP. The PPEW became operational in early 2004 and started its first work programme in mid-2004. The PPEW takes strategic direction for its work from the IEWP Advisory Group. Considering the wide partnership of the IEWP network, the PPEW plays a central role in coordinating the work of the IEWP as well as in maintaining the vitality of the network and in ensuring that partners are connected with each other and can contribute effectively to and benefit from the work of the IEWP. The PPEW functions include:

- Overall secretariat's functions including support and coordination for the IEWP with guidance provided by the IEWP Advisory Group
- Partnership and alliance building
- Advocacy and promotion of early warning and the IEWP
- Development of web tools, clearing house and repository for knowledge and information
- Mobilizing resources for the IEWP
- Monitoring progress in the implementation early warning and the IEWP

10. As a fundamental principle the IEWP advocates that the four cross-cutting key elements of the 'people-centred' early warning will be duly reflected in the international agenda and dialogue on early warning including the IEWP strategic plan. The four elements are based on the following: (i) risk knowledge, that is, prior knowledge of the risks faced by communities; (ii) monitoring and warning service; (iii) communications and dissemination of understandable warnings to those at risk; and (iv) response capability and preparedness to act by those threatened (see figure 2). These four basic elements are of cross-cutting nature, and will be reflected in all of the activities of the IEWP.

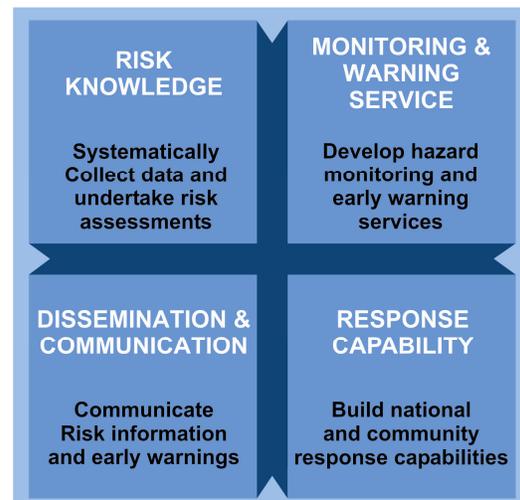


Figure 2: The four key elements of people-centred early warning systems

11. As a core part of the IEWP, the PPEW is mandated to advocate for enhancement of early warning systems at all levels, to collect and disseminate information on best

¹⁹ A/RES/60/195 and A/61/422/Add.3

²⁰ <http://www.ewc3.org/>

practices and to stimulate cooperation among stakeholders. In order to achieve these objectives, activities in the PPEW work programme have been organized for effective outreach and communication including re-designing the existing website, upgrading the newsletter, launching a technical publication series and building a strong collaboration with the media.

C. Scope of the IEWP, its areas of focus and priorities

12. The IEWP, with the secretariat support of the PPEW, is a thematic platform set in the context of the strengthening of the International Strategy for Disaster Reduction (ISDR). It is expected that the present institutional basis of the IEWP will be enhanced to strengthen its linkage with the Global Platform for Disaster Risk Reduction and to support the implementation of the Hyogo Framework.

13. The EWC II in 2003 defined the IEWP's five areas of work. The outcome and the recommendations of the EWC II were endorsed by the UN General Assembly²¹, and were brought to the World Conference on Disaster Reduction in 2005 to advance discussion on early warning. More detailed description of each focus area is shown in Annex 1. The IEWP's five strategic areas of work are:

- (i) Better integration of early warning (and related disaster risk reduction and management) into development processes and public policies;
- (ii) Improved data availability for investigating, forecasting/predicting and managing risks on different time scales;
- (iii) Improved capacities and strengthened early warning systems, particularly in developing countries;
- (iv) Development of people-centred warning systems; and
- (v) Mechanisms for sustaining the early warning dialogue and supporting the development and implementation of a programme.

14. Guided by the Hyogo Framework, the recommendations of the Global Survey, the UN Secretary General's recent reports on the Implementation of the International Strategy for Disaster Reduction²² as well as the outcome of the EWC III, the above mentioned five areas will primarily form the base of the IEWP's imminent priorities and focus for the period 2007-2009. A more detailed work programme, expected outcomes, activities, outputs, financial resources, timeframe and performance indicators are elaborated in the PPEW work programme (IEWP(I)/4).

15. The Hyogo Framework sets out specific priorities for action on early warning for all hazards and on associated risk assessment and preparedness. With the bitter lesson learned from the Indian Ocean Tsunami of 26 December 2004 which caused massive losses of human lives, the Secretary-General in his report entitled "In larger freedom: towards development, security and human rights for all"²³ proposed that the United Nations system should take a leadership role in developing comprehensive global

²¹ A/RES/58/214

²² A/60/180 and A/61/229

²³ A/59/2005

capacities for systematic people-centred early warning systems covering all hazards and all countries and communities. Subsequently, the ISDR PPEW coordinated a survey²⁴ of existing capacities and gaps in current early warning systems in collaboration with a multi-party working group established at the 11th session of the IATF/DR in May 2005.

16. The Global Survey made the following five recommendations:

- Recommendation 1: Develop a globally comprehensive early warning system, rooted in existing early warning systems and capacities
- Recommendation 2: Build national people-centred early warning systems
- Recommendation 3: Fill the main gaps in global early warning capacities
- Recommendation 4: Strengthen the scientific and data foundations for early warning
- Recommendation 5: Develop the institutional foundations for a global early warning system

17. The ISDR PPEW has been mandated to provide a lead in stimulating and where necessary coordinating follow-up activities on the Global Survey and the EWC III in March 2006. A comparative chart for the IEWP between the specific recommendations/actions of the Global Survey and the five focus areas of the IEWP recommended by the EWC II is shown in Annex 1. The chart shows that there is a close linkage between the recommendations of the Global Survey and the five originally suggested focus areas of the EWC II and that therefore the PPEW work programme for 2007-2009 will be developed in such a manner that it will also systematically follow-up the recommendations of the Global Survey. The two main outcome documents of the EWC III, a checklist of good practice in early warning and a compendium of early warning projects will also be considered by the PPEW as an integral part of the five strategic areas of work.

18. The PPEW's annual work programme will be reviewed and updated regularly by the IEWP Advisory Group in order to reflect the outcome of the consultations by relevant stakeholders and the discussions of the GP/DRR.

19. In the long term, the IEWP's associated strategy and the PPEW work programme will be progressively enhanced to reflect the outcomes of future dialogue on early warning among UN agencies, international organizations, academic institutions, non-governmental organizations, and private sector actors, as well as between these entities and their counterparts at all levels. The IEWP's strategic plan, the PPEW work programme and main achievements will be reported to the Global Platform for Disaster Risk Reduction (GP/DRR) which will hold its first session in June 2007.

D. Benefits of the IEWP

20. The IEWP provides added values to its partners by building on their on-going activities on early warning. Benefits of the IEWP include more effective common agendas, wider information flow, a better focus on integrated people-centred early warning systems, wider recognition of early warning's role in meeting development goals, and ultimately the reduction of impacts and disasters on vulnerable communities.

²⁴ A/C.2/61/CRP.1

The IEWP can also systematically demonstrate the financial perspective of early warning that relevant systems can be good for investment by improving preparedness for natural hazards and reducing their negative impacts.

21. Beneficiaries of the IEWP include governments and national disaster reduction platforms, the UN system, inter-governmental and regional organizations, scientific and academic institutions and civil society (NGOs, CBOs, private sectors).

E. Organizational Structure

22. Overall direction and scope of the IEWP will be defined by various multi-agency and multi-sectoral discussions on early warning. Active agencies with specific expertise and commitment on early warning are expected to contribute to the activities of the IEWP. The PPEW, as secretariat to the IEWP, will coordinate and facilitate in identifying these appropriate institutions for the implementation of the IEWP.

23. Since the establishment of the UN/ISDR, its Inter-Agency Task Force on Disaster Reduction (IATF/DR) has been primarily in charge of coordinating policy and action on disaster reduction at the global level. In the recent ISDR reform processes, the IATF/DR has evolved into the Global Platform for Disaster Risk Reduction (GP/DRR). The membership of the GP/DRR is open to the United Nations and other international agencies, regional organizations, civil society organizations and technical and scientific bodies covering the social, economic, humanitarian, political, environmental and scientific fields that are committed to disaster risk reduction.

24. The IEWP, one of the 'self-organized' thematic platforms for the GP/DRR, will contribute to the strengthening the ISDR system by providing thematic support on early warning to the GP/DRR. In order to ensure the continuation of discussions from the IATF/DR Working Group 2 on Early Warning²⁵, former members of the Working Group 2 may remain active members of the IEWP at its inception phase along with any other institutions which have been involved in the Working Group for the Global Survey²⁶, established during the 11th session of the IATF/DR in May 2005.

25. The IEWP will also work closely with ISDR's regional offices and other thematic platforms²⁷ to advise and support the efforts of the governments to establish national platforms for disaster risk reduction as the entry point to strengthen early warning at the national level. The IEWP will actively contribute to strengthening ISDR's support to national and regional implementation of the Hyogo Framework.

26. More detailed information on the roles and expertise of relevant United Nations and other organizations in the operations of early warning systems is included in the Global Survey²⁸. The institutions are categorized according to their specific expertise for

²⁵ The IATF/DR Working Group 2 on Early Warning completed its work in 2003.

²⁶ The member of the working group were Asian Disaster Preparedness Center, Global Fire Monitoring Center, Intergovernmental Authority on Development's Climate Prediction and Applications Centre, ITU, UNDP, UNEP, United Nations Human Settlements Programme, UNITAR, UNOCHA (Co-Chair), UNU-EHS and WMO (Co-Chair). (A/C.2/61/CRP.1)

²⁷ Other thematic platforms include the Capacity for Disaster Reduction Initiative (CADRI), the Education Platform, the International Recovery Platform (IRP) and the Global Risk Identification Programme (GRIP).

²⁸ The matrix of international organizations involved in early warning systems is available in the final version of the Global Survey at <http://www.unisdr.org/ppew/info-resources/ewc3/Global-Survey-of-Early-Warning-Systems.pdf>

cross-cutting areas of the four components of the people-centred early warning and per specific hazards types at the end of the survey report. The information can be a basis for identifying suitable organizations to implement specific PPEW work programme activities of the IEWP during the period from 2007 to 2009.

F. Functions

27. The IEWP undertakes activities to improve early warning systems worldwide but neither directly provides early warnings nor substitutes for the work of organizations that could otherwise operationally contribute to the implementation of early warning systems. The programme will be governed, shaped and largely implemented by its stakeholders. It draws on and encourages synergies between the programmes of its partner organizations, including multi-organisation partnerships on earth observations systems, weather forecasting and warning, and humanitarian early warning and alert systems.

28. A large part of the work of the IEWP will be implemented by the institutions with specific expertise and commitment. Some of the activities will be handled by ISDR's regional offices through their facilitation offer the states in their respective region in establishing national platforms on disaster reduction. Other advocacy and coordination work will be selectively undertaken by the PPEW as the secretariat of the IEWP.

G. Governance

29. The UN General Assembly, through its Second Committee, is the principal decision-making body for intergovernmental governance of the ISDR system, including endorsement of policies related to disaster risk reduction. On the other hand, the current form of the IEWP is based on an inter-agency mechanism, and not based on the inter-governmental mechanism. The IEWP, an integral part of the ISDR System, will reflect the decisions of the General Assembly in its overall direction. In addition, the IEWP's strategic plan, the detailed PPEW work programme, and the affirmed responsibilities of institutions and their activities in the IEWP are expected to reflect a major international dialogue in disaster risk reduction. Discussions within the ISDR including ISDR's Management Oversight Board, the ISDR Support Group, the Programme Advisory Committee (PAC) of the Global Platform and other consultations relevant to early warning such as the Tsunami Consortium²⁹ will contribute to the governance structure of the IEWP.

30. General guiding principles suggested³⁰ for the governance of the IEWP are as follows:

- The IEWP programme and PPEW activities should be based on strong policy and institutional demand.
- Relevant stakeholders and technical communities should be engaged.
- Accountability and effective delivery should be ensured.

²⁹ http://unisdr.unbonn.org/initiative_viewer.php?initiative_id=46

³⁰ These principles were discussed at the Interim AG meeting, 1-2 December 2006. Although the AG suggested that the IEWP's mandate be endorsed by the national governments, the current governance mechanism of the IEWP does not directly involve an inter-governmental process. The early warning initiatives arising from the IEWP activities that require intergovernmental agreement will therefore be pursued through the mandates and governance mechanisms of the ISDR and, as needed, those of relevant international and regional organizations.

31. The Early Warning Stakeholder Consultation Meeting at the EWC III proposed establishing a small and effective advisory group for the IEWP whose members represent various expertise and interests in a balanced manner. In particular, the composition of the members and their expertise should reflect the four elements of 'people-centred' early warning. The membership of the advisory group is voluntary in nature, and it is expected to maintain close communication and collaboration with the advisory bodies of the ISDR and the GP/DRR.

Advisory Group of the IEWP

32. The role of the Advisory Group (AG) is to provide policy guidance to ensure that the IEWP's structure and programmes duly reflect the outcomes of the major global dialogues on early warning including the WCNDR, WCDR, EWC'98, EWC II, EWC III, IATF/DR and future discussion on the GP/DRR, the major recommendations of the Global Survey of the Early Warning Systems as well as the outcomes of any other consultations of the ISDR System relevant to early warning. The AG identifies priorities, expected outputs, gaps and opportunities for the IEWP, and advises on the operational matters of the IEWP including planning and reporting of the programme and opportunities for mobilizing additional resources. The AG will also provide recommendations on the achievements of the PPEW work programme as far as these functions are defined as those of the secretariat to the IEWP.

33. An interim advisory group for the IEWP was formed as a result of the Early Warning Stakeholder Consultation Meeting at EWC III in March 2006 building on the preceding consultation mechanism of the Inter-Agency Task Force on Disaster Reduction (IATF/DR). The small Interim Advisory Group of active members consists of UNEP (Chair), UNU, UNESCO-IOC, UNOOSA, WMO, ADRC, DKKV and the Global Fire Monitoring Centre. These entities met in December 2006 to guide the IEWP development process including identification of main priorities and expected outputs, and review possible mechanisms and options for implementing the IEWP. The AG is expected to meet at least once a year in addition to maintaining regular communication by other means.

Terms of Reference for the Advisory Group³¹

34. The Advisory Group to IEWP will perform specific tasks as follows:
- a) Advise on priorities; provide capacity-building assessments and overall strategies for the PPEW secretariat and the IEWP including support to extreme events such as the 2004 Indian Ocean tsunami.
 - b) Advise on the use of indicators (hard numbers) of success for the IEWP programme, as well as overall early warning database development.
 - c) Advise on and contribute to a general strategy for publication dissemination, outreach, communications and media partnerships.
 - d) Review the work and status reports on the PPEW Early Warning Projects Portfolio (EWPP) as well as the Global Survey of Early Warning Systems.

³¹ The Terms of Reference for the Advisory Group was proposed in the Interim Advisory Group meeting, 1-2 December 2006.

- e) Provide guidance and perspective on the utilization of existing investment analysis and cost/benefit strategies. The guidance should seek to capitalize on the work of partner agencies and note opportunities to engage private sector partners.
- f) Provide advice and guidance for further assessment of the gaps noted in the Global Survey of Early Warning Systems.
- g) Provide guidance on successful inter-agency synergy initiatives and concerted actions related to early warning which could be reported to the Global Platform.
- h) Provide advice and guidance on reporting procedures, which address work related to strengthening national platforms.
- i) Advise on resource mobilization opportunities.

H. Monitoring, reporting and performance indicator

35. The progress of the implementation of the IEWP will be monitored by the PPEW and will be reported annually to the Advisory Group. The PPEW will systematically collect and compile substantial and technical information about the IEWP activities of the executing agencies. The information will also become one of the bases for annual reporting of the UN Secretary-General on the implementation of the International Strategy for Disaster Reduction, for the sections regarding early warning, in particular, the request for establishment of a global, end-to-end, multi-hazard early warning system.

36. As indicated in the TOR of the Advisory Group, some quantifiable and verifiable performance indicators will be developed for assessing the achievement of the objectives and expected outcomes of the IEWP programme using a logical framework based approach.

37. For financial management and reporting, the PPEW, through the ISDR secretariat, will be responsible only for the activities that are funded from the United Nations Trust Fund for Disaster Reduction including the initial contribution from the Government of Germany, to specifically implement and assist the IEWP. If any other IEWP activities are executed by other agencies, the responsibility for financial management and reporting will remain within these agencies. However, the PPEW may request some financial data from these agencies if such information is required for tracking or assessing the level of financial inputs for the implementation of the IEWP as a whole.

I. Funding for the IEWP

38. The IEWP will be ‘owned’ and shaped by many partners and supporters and its goals will be largely achieved through the ongoing work of the stakeholders. Therefore, the major part of the funding for the activities of the stakeholders of the IEWP is expected to be identified from the existing funding sources of each institution. Accordingly, the PPEW work programme will specify the name of a responsible organization(s) per activity as well as its specific funding sources.

39. Additional resources of a substantial and long-term character will be needed to achieve more significant progress intended under the IEWP and for the supporting

platform. The Government of Germany has provided assistance in establishing the PPEW, and its initial activities regarding the IEWP. However, more resources will be required for the PPEW to maintain its secretariat functions for the IEWP and to execute and manage selected IEWP activities jointly with other partner agencies.

40. Ensuring predictable, stable and adequate financial resources is a call by the entire ISDR as expressed in the latest report³² of the Secretary General for the implementation of the Hyogo Framework. In this context, Member States of the UN, in particular, the stakeholders of the ISDR have been requested to increase their financial contribution to the existing United Nations Trust Fund for Disaster Reduction³³ to better enable the ISDR system to support the implementation of the Hyogo Framework including the activities related to early warning, particularly at global and regional levels, to complement other funding mechanisms, such as the Global Facility for Disaster Reduction and Recovery of the World Bank.

41. In order to supplement the current efforts of the ISDR, the PPEW will engage in its own resource mobilization in close coordination with the ISDR specifically in the area of promotion of early warning systems and in implementing the IEWP. In view of the collaborative nature of the IEWP, partnerships with wider stakeholders including the private sector, will be explored for ensuring adequate and sustainable funding for the programme.

³² Report of the Secretary-General: Implementation of the International Strategy for Disaster Reduction (A/61/229) and its corrigendum (A/61/229/Corr.1)

³³ Established as per GA resolution A/RES/54/219

Acronyms

ADRC	Asian Disaster Reduction Center
AG	Advisory Group
CADRI	ISDR Capacity for Disaster Reduction Initiative
CBO	Community-based organization
CDERA	Caribbean Disaster & Emergency Response Association
DKKV	Deutsches Komitee Katastrophenvorsorge e.V. (German Committee for Disaster Reduction)
ECOSOC	United Nations Economic and Social Council
EW	Early warning
EWC	International Early Warning Conference
EWPP	ISDR PPEW Early Warning Projects Portfolio
FAO	Food and Agriculture Organization
GA	United Nations General Assembly
GEO	Group on Earth Observations
GP/DRR	ISDR Global Platform for Disaster Risk Reduction
GRIP	Global Risk Identification Programme
HABITAT	United Nations Human Settlements Programme
IATF/DR	ISDR Inter-Agency Task Force for Disaster Reduction
IDNDR	International Decade for Natural Disaster Reduction (1990-1999)
IEWP	ISDR PPEW International Early Warning Programme
IFRC	International Federation of Red Cross and Red Crescent Societies
IRI	The International Research Institute for Climate and Society, Columbia University
IRP	International Recovery Platform
ISDR	International Strategy for Disaster Reduction
ITU	International Telecommunication Union
MEAs	Multilateral Environmental Agreements
MOB	ISDR Management Oversight Board
NGO	Non-governmental organization
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PAC	ISDR Programme Advisory Committee
PPEW	ISDR Platform for the Promotion of Early Warning
SOPAC	The South Pacific Applied Geoscience Commission
SPIDER	Space-based Information for Disaster Management and Emergency Response
TOR	Terms of Reference
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDG	United Nations Development Group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNOOSA	United Nations Office for Outer Space Affairs
UNU	United Nations University
UNU-IEHS	United Nations University - Institute for Environment and Human Security
USG	Under-Secretary-General
WB	World Bank
WCDR	World Conference on Disaster Reduction, Kobe, Hyogo, Japan, 18-22 January 2005
WCNDR	World Conference on Natural Disaster Reduction, Yokohama, Japan, 23-27 May 1994
WMO	World Meteorological Organization
WSSD	World Summit on Sustainable Development, Johannesburg, South Africa, 26 August - 4 September 2002

Annex 1: Comparative chart between the specific recommendations of the EWC II and the recommendations of the Global Survey of Early Warning Systems

Five key areas for IEWP identified in the EWC II	Related recommendation(s) and suggested action(s) in the Global Survey ³⁴
<p>Area of focus 1: <i>Better integration of early warning (and related disaster risk reduction and management) into development processes and public policies</i> This includes support for the efforts of policy makers and decision makers at all levels, in particular those aimed at:</p>	
<ul style="list-style-type: none"> · Motivating long-term political commitment, particularly through the demonstration of benefit/cost relationships and other value assessments of early warning services. 	2-v, 5-ix
<ul style="list-style-type: none"> · Developing legislation and institutional frameworks with defined roles and responsibilities and sustainable budgets. 	2-iii, 5-viii, 5-ix
<ul style="list-style-type: none"> · Integrating early warning into policies on disaster management and humanitarian assistance. 	2-v, 5-ix, 5-vi
<ul style="list-style-type: none"> · Training officials at all levels. 	2-viii, 4-ix, 4-vi
<ul style="list-style-type: none"> · Seeking better linking of early warning in national economic planning such as debt management and investment in structural measures of disaster risk reduction. 	5-ix
<ul style="list-style-type: none"> · Identifying needs and approaches in respect to new and complex types of hazards, and building linkages with health and ecology groups and their early warning activities. 	5-vi
<ul style="list-style-type: none"> · Identifying institutional and individual role models and those who can “champion” early warning. 	2-ii
<ul style="list-style-type: none"> · Stimulating public/private partnerships to leverage public inputs, and to develop linkages with financial risk management. 	2-vii, 2-vi
<ul style="list-style-type: none"> · Developing, testing and implementing benchmarks and targets for early warning system performance. 	4-i,
<ul style="list-style-type: none"> · Strengthening the role of early warning in national development frameworks, national platforms for disaster risk reduction, regional coordinating mechanisms, and international networks. 	5-ix, 5-iii
<ul style="list-style-type: none"> · Promotion of early warning in important international forums and programmes, e.g. those concerned with the conventions on climate change and combating desertification, the Commission for Sustainable Development’s follow up of the World Summit on Sustainable Development, and humanitarian relief. 	5(i-ix)
<p>Area of focus 2: <i>Improved data availability for investigating, forecasting/predicting and managing risks on different time scales</i> This involves actions of mainly technical character, particularly:</p>	
<ul style="list-style-type: none"> · Securing basic hazard monitoring and data infrastructure, particularly for hydro-meteorological networks and facilities. 	1, 3(i-xii), 4-iii
<ul style="list-style-type: none"> · Improving the sustainability of equipment through international collaboration on more appropriate system design choices. 	1, 3(i-xii)

³⁴ See Annex 2 for the reference numbers (e.g., ‘3-i’ refers to the specifically proposed action ‘i’ of the Recommendation 3 of the Global Survey (A/C.2/61/CRP.1)).

· Developing and disseminating systematic assessments and maps of hazards, risks and vulnerabilities.	3-i, 3-ii, 3-ix, 4-I, 4-ii
· Making better use of satellite data and spatial data methodologies, and engaging with global initiatives on these technologies.	4-iv, 4-ix, 4-x
· Improving the quality of warnings (accuracy, timeliness, relevance).	4-v, 4-vi
· Standardizing early warning concepts, terminologies, databases, maps, and information management.	4-i
· Developing mechanisms and networks for freely exchanging information and experience among stakeholders and disciplines and enhancing trans-boundary cooperation and data exchange.	4-vii, 5-vii
· Developing improved information on emerging threats and risk scenarios.	4-x
Area of focus 3: <i>Improved capacities and strengthened early warning systems, particularly in developing countries</i> This includes capacity building in all countries to fill gaps in skills and technical facilities, such as through:	
· Systematic assessment of capacity needs, including compilation of inventories of early warning systems, covering institutional and social factors, system performance, research, and supporting mechanisms.	2-iv, 3-i
· Conducting self-assessments of early warning systems, their resource bases, and roles.	2-iv, 3-i
· Training people involved in early warning, risk management, and related policy.	2-viii, 4-ix
· Exchange of early warning knowledge.	4 (i-x)
· Developing education curricula.	2-ix
· Engaging private sector networks, especially those concerned with insurance, finance, risk assessment and risk reduction.	2-ii, 2-vi, 2-vii
· Assisting in the design and provision of warning systems for developing countries.	3-xii
· Development of user-oriented locally relevant techniques for early warning, including risk assessments, warning dissemination and response methods.	2-viii,
· Building the capacities of relevant national scientific institutions, including social and economic expertise.	4-ix
Area of focus 4: <i>Development of people-centred warning systems</i> This focus area identifies steps needed to make early warning systems much more effective for those at risk. These include:	
· Developing community-focused early warning and disaster risk reduction programmes, using participatory approaches to both design and implementation.	2-viii,
· Making the needs of those at risk the explicit focus of warning services, recognising the diversity (age, gender, disability, education, etc.) of those affected, and fostering linkages with end-users.	2-viii
· Identifying gender-relevant information, guidelines, and policies in early warning systems.	2-vii
· Accessing and using local wisdom and traditional knowledge relevant to early warning.	2-viii
· Promoting specific engagement of civil society actors in the warning system.	2-ii, 2-vii, 2-viii

· Institutionalization of local civil protection units to sustain activities at local levels.	2-viii,
· Development and dissemination of practical response methods for those at risk.	2-vii, 2-ix, 2-x
· Broaden the audience and improve public awareness and knowledge through advocacy, publicity, and education.	2-ix
· Developing guidelines and indicators for achieving people-centred warning services.	2-i, 4-i
Area of focus 5: <i>Mechanisms for sustaining the early warning dialogue and supporting the development and implementation of a programme</i> This focus area calls for actions to strengthen the role and capacities of the UN to support early warning stakeholder needs, particularly the following:	
· Supporting the development of international strategies and networking to advance early warning, with emphasis on specific priorities, targets, roles and financial support.	1, 4-ix, 5
· Promoting early warning and its integration into policies in key international forums and programmes, including the Second World Disaster Reduction Conference planned for 2005.	5
· Seeking the integration of other strategic frameworks, such as the UNCCD Thematic Programme Framework Network for Early Warning Systems, into the ISDR.	5
· Stimulating innovation on early warning in areas such as: specific benchmarks, targets and operational protocols; improved data on disasters and early warning; economic valuation of disasters and early warning investments; and supporting partners and networks with information resources.	4-i, 4-viii, 5
· Supporting the improvement of early warning capacities, especially in vulnerable countries, through projects to develop, demonstrate and test early warning methodologies, including benchmarking, and to evaluate benefits.	2-vi, 4-i, 5

Annex 2: Recommendations for action in the Global Survey of Early Warning Systems³⁵

Recommendation 1: Develop a globally comprehensive early warning system, rooted in existing early warning systems and capacities

A global early warning system will require long-term sustained action by diverse players, strong political commitment to engender public action and to make early warning a core task of national policy and disaster risk reduction strategy, strong international support and coordination, with clear roles and responsibilities, and wide participation of non-governmental organisations, private sector and regional organisations. Specific actions are needed to build national capacities, fill the main gaps in global warning capacity, strengthen science and data foundations, and develop the global institutional foundations, as elaborated in the following four recommendations.

Recommendation 2: Build national people-centred early warning systems

Country-based early warning systems are needed for the protection of the citizens and also provide the building blocks of the global early warning system. They involve national, district-level, and community-based capacities and are only complete when the necessary capacities for warning dissemination and preparedness and response are in place. The main challenges for countries are firstly, to build or strengthen institutional capacities, and secondly, to effectively engage the affected population in the system. National action on early warning systems should be incorporated into, and should materially contribute to the national implementation of the Hyogo Framework. On this basis, the following tasks are recommended as priorities.

Specific proposed actions for recommendation 2:

- i. Adopt the guiding principle that the country's early warning systems must be people-centred in addition to being technically sound.
- ii. Establish (or strengthen) a multi-party early warning roundtable, such as a subcommittee of the national platform for disaster reduction, to ensure coordination among the key actors and the integrated implementation of early warning capabilities across all hazards and all user needs.
- iii. Ensure at national level that the authority and political responsibility for issuing warnings are established in law and are appropriately assumed, and that the chains of command for the dissemination of warnings are clearly established.
- iv. Undertake a systematic national survey of all early warning system needs, covering hazards and vulnerabilities, institutional and social factors, and existing system capacities, performance and gaps.
- v. Develop a long-term national plan for the systematic strengthening of early warning systems, covering technical and social elements, seeking synergies among the different hazard components, and with clear definitions of the targeted populations and the expected performance of the systems.

³⁵ A/C.2/61/CRP.1

- vi. Where appropriate, request the support of the United Nations Resident Coordinator and the World Bank to support project identification and resourcing, in partnership with other donors, United Nations Development Programme, relevant United Nations technical agencies and programmes, and non-governmental organisations.
- vii. Establish a national strategy and standards for warning dissemination that target stakeholders' needs and interests and reach to local level, and engage both the public and private sectors, especially the media, in their development.
- viii. Stimulate community-based risk assessment and early warning systems through the assignment of specific responsibilities for risk reduction and emergency management to local bodies, the support of local training and information needs, and the use of traditional knowledge and experience in warning system design.
- ix. Develop necessary curricula and institute a public education programme that reaches all the population at least once each year to enable them to understand the risks they face, the nature and meaning of warnings and the appropriate responses to take.
- x. Undertake annually a well-publicised exercise to demonstrate and test national early warning systems, evacuation plans and public response, preferably involving all or large fractions of the at-risk population.

Recommendation 3: Fill the main gaps in global early warning capacities

There are many gaps to be filled, particularly at national and regional levels, and much work to be done to decide how best to fill them. The development of a globally comprehensive early warning system will require multiple actions at all levels and in all sectors, and covering hundreds of issues and criteria. Nevertheless, it is recommended that the following tasks be adopted as immediate priorities.

Specific proposed actions for recommendation 3:

- i. Conduct a detailed survey of gaps and needs in respect to weather-, climate- and water-related extreme hazards, and associated vulnerabilities and warning capabilities, particularly in the developing and least developed countries, and to develop plans for the systematic strengthening of early warning capabilities for these hazards in countries in need.
- ii. Identify and fill, on a country-by-country basis, the key gaps in operational forecasting and warning systems within each national meteorological and hydrological service, such as for severe storms, flash floods, storm surges, dust, and sand storms.
- iii. Establish, where not already present, a minimum basic meteorological early warning service in all countries affected by tropical cyclones, covering technical needs and linkages to dissemination and preparedness mechanisms.
- iv. Implement monitoring, forecasting, and early warning systems for the 100 flood-prone rivers of the world that most threaten large populations, including multilateral arrangements for monitoring, data sharing and early warnings exchange for basins that span more than one country or territory.

v. Build or strengthen tsunami warning systems in all tsunami-prone basins, as part of a globally coordinated system, through the development of regional intergovernmental coordinating groups, multilateral systems for observational and data systems, networks of national tsunami centres, and national tsunami programmes.

vi. Prepare and implement integrated plans for coastal risk warning, mitigation and management systems, covering tropical cyclones, storm surges, and coastal flooding, founded on cross-disciplinary and regional cooperation.

vii. Establish a global network of drought monitoring centres for all drought-prone regions, incorporating existing networks, and support them to design and implement a global drought and food security warning and response system, including effective monitoring systems.

viii. Devise institutional mechanisms and agreements under United Nations and regional intergovernmental auspices to solve the problem of repeated failure by Governments and international donors to effectively respond to early warnings for food security in Africa.

ix. Prepare a global survey of all volcanic risks that threaten significant populations, covering hazards and vulnerabilities, and establish a mobile volcano monitoring capability that can deploy necessary equipment at short notice to emerging volcanic risk areas, supported by a ready-reaction task team of experts.

x. Support the development of the intergovernmental agreements and resourcing necessary to implement a global wildland fire monitoring and early warning system, based on existing initiatives and partnerships.

xi. Implement a pilot project on landslide monitoring and early warning in every country that has suffered significant loss of life from landslides in the last decade, harnessing lessons learned from Central American systems developed after Hurricane Mitch and community-based models in Kenya and Uganda.

xii. Implement under strong international support one major early warning project in each of the least developed countries, chosen on the basis of an assessment of the country's hazards, vulnerabilities and existing early warning capabilities, and as a first demonstration step of a long-term plan towards an integrated national warning system for all hazards.

Recommendation 4: Strengthen the scientific and data foundations for early warning

Scientific and technical expertise and capacity are well recognised as core features of early warning systems, particularly in respect to hazards and to operational systems. However, there are several areas of weakness, such as in knowledge of some hazard processes and risks, lack of hazard and vulnerability mapping, and the limited engagement of relevant social sciences. It is recommended that the global early warning capacity be based on a strong foundation of knowledge and data, and that the following actions be taken as priorities.

Specific proposed actions for recommendation 4:

i. Establish internationally agreed standard methods for monitoring and mapping natural hazards and related societal vulnerabilities, including hazard-relevant vulnerability indicators and their tracking, and prepare working tools to enable their implementation by countries.

- ii. Prepare a comprehensive catalogue of information on extreme geological hazards, such as the return periods and scales of future eruptions, the identification of overdue locked-fault segments, and the location and characteristics of areas of unstable terrain prone to landslides.
- iii. Design and implement a pan-African project to overcome the continent's deficit in hazard monitoring systems and to build related capacity in data analysis, forecasting, and warning.
- iv. Develop through Group on Earth Observation mechanisms a comprehensive long-term globally comprehensive plan for observational and communications requirements to meet the data needs for all early warning system requirements.
- v. Upgrade the World Meteorological Organization-coordinated Global Telecommunication System to support high-speed links to all countries and develop its capacity to handle data streams and communication of warnings for all hazards.
- vi. Identify and implement capacity-building programs needed to establish and maintain the observational and telecommunication infrastructure for reliable and efficient delivery of warnings to populations at risk.
- vii. Establish an international framework agreement on the regional and basin-wide data exchange necessary for early warning, including standardised nomenclature, through a consultation process among affected countries and building on existing agreements including Resolution 40 of the World Meteorological Organization Congress–XII, May-June 1995.
- viii. Make early warning concerns a priority in the International Strategy for Disaster Reduction mechanisms for scientific and technical advice, including through the establishment of a high-level international science panel on extreme and natural hazards to identify and quantify the occurrence and potential impacts of such hazards.
- ix. Develop an international agenda on science and data-related needs for early warning, as part of the International Early Warning Programme, with the active participation of national scientific groups, including young developing country scientists, and associated training initiatives.
- x. Establish a United Nations coordinated web-accessible portal that provides access to information on natural hazards and early warnings, including current and emerging risks, as a collaboration of the agencies and institutes already engaged in providing these services.

Recommendation 5: Develop the institutional foundations for a global early warning system

The mechanisms of international and regional governance, coordination and support form one of the two pillars of a globally comprehensive early warning system, the other pillar being the country's capacities. These mechanisms provide clarity on the roles and capacities of the relevant organisations, support necessary institutional partnerships, coordinate technical development, and ensure appropriate mechanisms of accountability to Governments. The priority tasks are as follows.

Specific proposed actions for recommendation 5:

- i. Affirm through appropriate United Nations processes the goal to build a comprehensive global early warning system, rooted in existing early warning systems and capacities, and including necessary supporting governance mechanisms.
- ii. Request the International Strategy for Disaster Reduction system to facilitate the development of the comprehensive global early warning system, guided by the Hyogo Framework, and including overall strategies, clarification and documentation of mandates and responsibilities, definition of standards and terminology, support of capacity building, fostering of partnerships, and the development of an International Early Warning Programme for multi-party action on these issues.
- iii. Call on regional organisations, including the United Nations economic and social commissions and organisations concerned with disaster reduction, preparedness and early warning, to foster partnerships and prepare strategies and plans to support the development of early warning systems in their regions.
- iv. Undertake an assessment of the institutional mechanisms, capacities, and operational experience of the World Meteorological Organization, and apply the lessons learned, and where advantageous the available capacities, to the development and operation of early warning systems for hazards not currently mandated to the World Meteorological Organization system.
- v. Assign or reaffirm the responsibility for the global governance and coordination of early warning systems for geological hazards to the United Nations Educational, Scientific and Cultural Organization, in collaboration with the World Meteorological Organization and the International Council for Science-affiliated science organisations that currently are the main bodies active in geophysical monitoring and warning, and strengthen the United Nations Educational, Scientific and Cultural Organization's capacities to effectively meet this responsibility.
- vi. Confirm the responsibilities for the global governance and coordination of early warning systems of the Food and Agriculture Organization for food production and food security, United Nations Environment Programme for environment status and stress, Office for the Coordination of Humanitarian Affairs of the United Nations Secretariat for complex emergencies, including the World Food Programme and the United Nations Children's Fund's roles in the Inter-Agency Standing Committee for Humanitarian Action, and the World Health Organization for health-related aspects of disasters, while recognizing also the related responsibilities and competences of other United Nations and United Nations associated actors, and the need for United Nations System coordination.
- vii. Call on the United Nations Office for Outer Space Affairs and the Group on Earth Observations to coordinate the integration, improvement and sustainability of the observing systems and data exchange policies needed to support the comprehensive global multi-hazard early warning system, and request the International Telecommunication Union to incorporate early warning system telecommunications needs into the specifications for the Next Generation Network.

viii. Identify and prioritise the challenges for developing multi-hazard approaches, such as in legislative, organisational, technical, and capacity building areas, and develop necessary strategic partnerships with relevant actors at international, regional, and national levels and follow-up action plans.

ix. Request the World Bank and the United Nations Development Programme to jointly facilitate necessary planning and coordination of, and support for, the inclusion of early warning systems development in national poverty reduction strategies and development plans, and request the United Nations Department of Economic and Social Affairs to support the follow up to the World Summit on Sustainable Development Johannesburg Plan of Implementation on this subject.