

AUSTRALIA
NATIONAL SUMMARY
IDNDR

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SECTION A: PROFILE

(This section contains relevant basic information about your country.
Please complete and check the information already included.)

1. Composition of National Committee (Focal Point):

(Please list the names of the institutions represented and indicate in the brackets the number of members for each group)

Ministries

- Department of Defence
- [1]

Non-Government Organisations

- Australian Red Cross
- [1]

Academic & Research Institutions

- Australian National University - Centre for
Resource and Environmental Studies
- Queensland University of Technology - The
Centre for Applied Environmental and
Social Education Research
- [2]

Media

- Life, Be in it
- [1]

1. continued

Private Sector

Insurance

- Centre for Earthquake Research in Australia -
- [1] -

Public Services (e.g. meteorological, etc)

Others

- Emergency Management Australia - State and Territory Emergency Services
- Australian Emergency Management Institute
- Bureau of Meteorology -
- Australian International Development Assistance Bureau -
- Department of Health, Housing, Local Government and Community Services -
- Department of Industry, Technology and Regional Development -
- Australian Geological Survey Organisation -
- Department of the Environment, Sport and Territories -
- Commonwealth Scientific Industrial Research Organisation -
- [14] - [1]

2. **Internal organisation of the National Committee**

(Please describe hierarchy, responsibilities, coordination and cooperation mechanisms in natural disaster reduction activities)

- * Australian IDNDR Coordination Committee meets bi-annually (March and October). This committee is responsible for coordination of all Australian IDNDR activities and relevant programs for the South Pacific.

2. continued

- ★ A select sub-committee comprising five members of the Coordination Committee (including the Chairman) also meets bi-annually to select projects, monitor the progress of currently funded projects and to consider policy aspects of the national program. Where highly specialised projects are proposed for funding this sub-committee invites external experts to assist in evaluating such proposals.

3. Prevailing hazards

Type	Location	Affected Population
Tropical Cyclone	QLD, WA, NT	3 million
Flood	All 8 States/Territories	15 million
Severe Storm - (includes Wind, Hail & Tornados)	All 8 States/Territories	17 million
Bushfire	All 8 States/Territories	5 million
Earthquake	All 8 States/Territories	★
Tropical Storm Surge	Eastern and North western Coastal Areas	2 million
Drought	All 8 States/Territories	17 million
Heatwave	All 8 States/Territories	17 million

(Please attach additional information if necessary)

Additional Information:

- ★ Relates to potentially damaging infrequent hazard earthquake in Australia's urban area - most of population of about 17 million.

(Note: Map of Australia on following page)

4. Recent natural disasters

Date	Type	Location	Affected	Population Death	Injury	Insured Losses A\$(1993) Million
★ 1994 Jan	Bushfire	NSW	4 million	4	250	150+
1993 Dec	Severe Storms	VIC	250,000	0	20	13

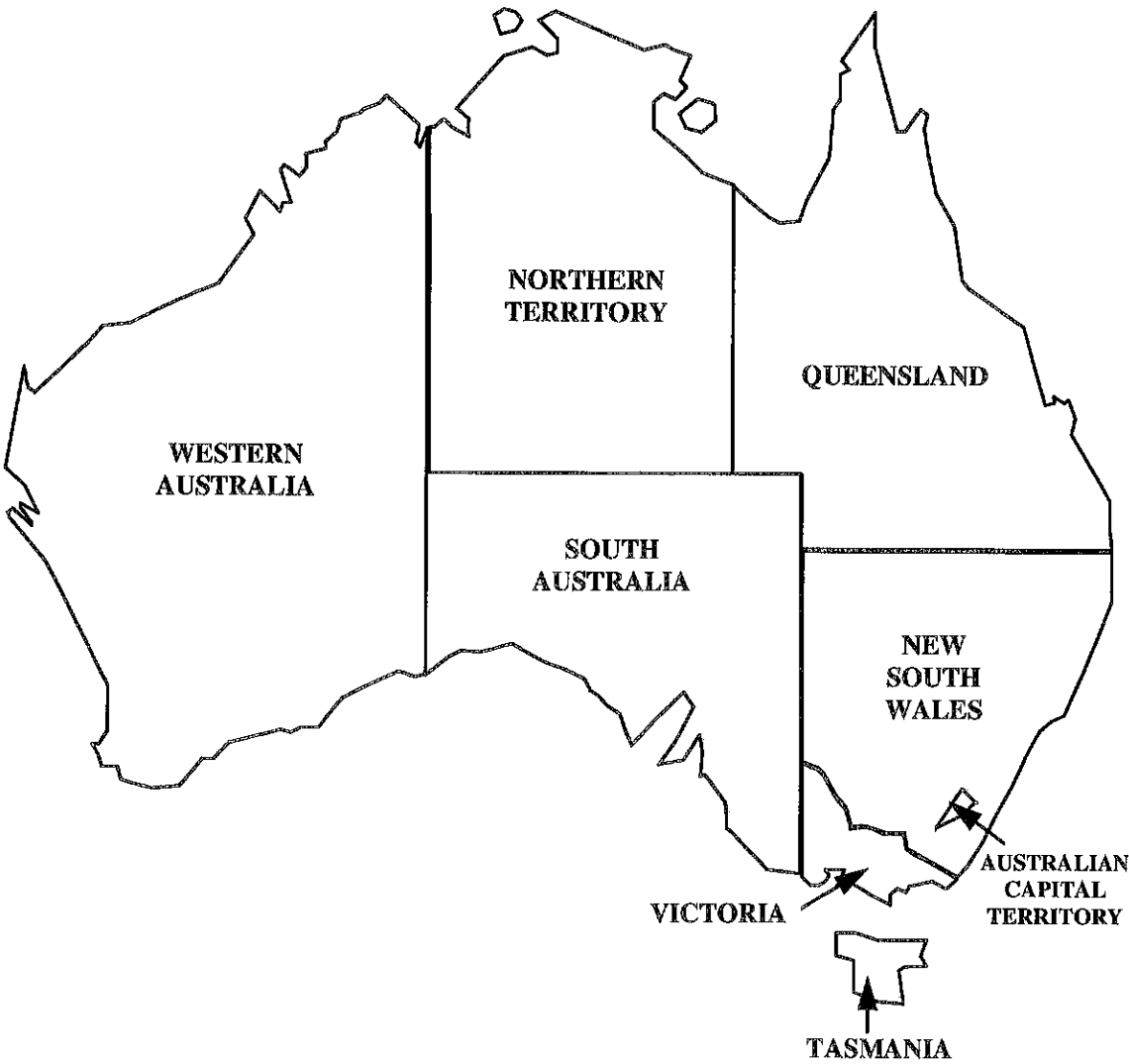
4. continued.....

Date	Type	Location	Affected	Population Death	Injury	Insured Losses A\$(1993) Million
1993 Oct	Flood	VIC/NSW	10,000	0		200
1993 Sep	Tornado	WA	10,000	0	10	5
1993 Feb	Heatwave	VIC/SA/NSW	8 Million	17	1,000	
1992 Dec	Flood	SA	500	1		160
1992 Aug	Flood	SA	250	2	5	20
1992 Feb	Severe storm	NSW	1,000	0		101
1991 Oct	Bushfire	NSW	300	2	20	10
1991 Apr	Cyclone	WA	500,000	29	10	25
1991 Jan	Storm - Hail	NSW	1 million	1	100	191
1990 Dec	Cyclone	QLD	250,000	6	35	64
1990 Mar	Flood	QLD/NSW	10,000	6	51	32
1990 Mar	Storm - Hail	NSW	500,000	0	25	326
1989 Dec	Earthquake	NSW	500,000	13	160	1,200

(Note: Map of Australia on following page)

★ At time of compilation - Data may need refining when final analysis is completed.

AUSTRALIAN STATES AND TERRITORIES



5. National socio-economic conditions

- **Population:** June 1993 - 17,661,500
- **Gross-National Product (GNP):** 1992 A\$ 377,011 Million
- **Per-Capita Income:** 1992 A\$ 18,125

6. Availability of assistance to other countries in the field of natural disaster reduction.

(Please list potential resources, scientific expertise, technology, etc.)

- ★ Australia has considerable practical and theoretical experience in designing and teaching geography and social studies curricula for natural disaster reduction. A major publication has been prepared and disseminated within Australia, while the Coordinator of the Education for Natural Disaster Reduction Project, sponsored by the International Council of Scientific Unions Committee on the Teaching of the Science, the International Geographical Union Commission on Geographical Education and the International Geological Union Committee on Geology Education is based in Australia.

DR JOHN LIDSTONE (Queensland University of Technology, Brisbane, Australia)

- ★ Consultancy Study into the Future of Hong Kong's Auxiliary Medical Services and Civil Aid Services - EMA December 1992 - February 1993.

GPCAPT L. NAYLOR (Royal Australian Air Force) and MR D. WITHERS (Department of Health, Housing, Local Government and Community Services, Canberra, Australia)

- ★ Asia-Pacific Emergency Workshop for National Managers: ADPC Bangkok - February 1993.

MR D. WITHERS (Department of Health, Housing, Local Government and Community Services, Canberra, Australia)

- ★ World Health Organisation, Geneva, Switzerland - June 1993 - Expert Adviser to WHO for development of Community Emergency Preparedness Manual.

MR D. WITHERS (Department of Health, Housing, Local Government and Community Services, Canberra, Australia)

6. continued.....

- ★ World Seismic Safety Initiative, International Association of Earthquake Engineers, Seminar for Southeast Asia and South Pacific, Bangkok, Thailand February 1993 - Application of methodology of earthquake zonation mapping for urbanised areas towards earthquake mitigation. This involves multi disciplinary information integrating seismology, geology, built environment, emergency management and local government planning adopted to the local and cultural requirements of the area concerned. This will be significant in reducing earthquake loss (both from life and property) in future earthquakes - particularly in relation to continental regions and island nations in both developing and developed countries.

DR JACK RYNN (Centre for Earthquake Research in Australia, Brisbane, Australia)

- ★ Australia's development assistance program provides a number of opportunities for assistance for Disaster Preparedness activities for the countries of the South West Pacific and Papua New Guinea.

- ♦ **Bilateral Program.** Funds are available for a range of activities as part of Australia's bilateral development assistance programs. For example, Australia provided weather surveillance and wind finding radar at Nadi International Airport and a complementary weather surveillance unit at Nasouri, Suva at a total cost of A\$2 million.

Australian International Development Assistance Bureau (AIDAB), South Pacific Regional Environment Programme (SPREP) and Australian IDNDR Assistance. Financial assistance will be forthcoming for the South Pacific reports for the World Conference at a cost of A\$25,000

- ♦ **Pacific Disaster Preparedness Program.** A major Australian contribution to IDNDR is the Pacific Disaster Preparedness Program (PDPP). In 1989, the Australian Minister for Foreign Affairs and Trade endorsed an AIDAB program under which Australia offers disaster preparedness assistance to Pacific countries. The PDPP provides packages of assistance for countries according to their needs for the development of their national disaster preparedness. A national package may be funded for an initial period of up to three years from the Emergency Aid Allocation of AIDAB's Global Program. Assistance available includes;

- Hazard and Vulnerability Analysis
- National Policy Advice
- Counter Disaster Planning
- Emergency Operations Centres
- Training in Australia or National Workshops
- Emergency Simulation Exercise Writing and Organisation
- Needs and Damage Assessment
- Public Awareness and Education
- Equipment

6. continued.....

- ♦ **NGO Disaster Preparedness Training Program for the South Pacific and Papua New Guinea.** Australia will provide A\$670,000 over three years (1994-96) for a series of twelve in-country and three sub-regional workshops for indigenous Non Governmental Organisation's (NGO'S) and community groups.

MR P. BUCKLEY (Australian International Development Aid Bureau, Canberra, Australia)

- ★ Through the international links which are being established, a wealth of information pertaining to all aspects of emergency management is being made available to emergency services worldwide. Users of Australian Disaster Management Information Network (ADMIN) facilities are constantly in electronic mail conferences with their international counterparts. Proceedings from workshops and conferences held in Australia are being made available to assist the international emergency management community. Situation reports and debriefing from disasters have recently been disseminated internationally for discussion which will result in better future responses.

MR D. TILSON (Centre for International Research on Communication and Information Technologies, Melbourne, Australia)

- ★ As part of Australia's contribution to the International Decade for Natural Disaster Reduction, Australia provides a qualified and experienced disaster manager working in the capacity of providing instruction and development assistance to the Countries of the region. The IDNDR Instructor position is based within the Emergency Management Australia Canberra Head Office.

During the period under review the Instructor has attended both Australian sponsored conferences, in the Solomon Islands in 1992 and in Vanuatu in 1993. For each conference the Instructor produced the report of proceedings and in the case of the Vanuatu conference he was also the conference facilitator.

Training assistance was provided to Vanuatu in 1993. This consisted of facilitating the development of a training strategy, individual training programs, lesson plans and assistance in the conduct of a five day basic disaster management training course for members of the Police, the Vanuatu Mobile Force, and members of the various responsible organisations in respect of marine and airport disasters. This course also provided assistance towards the development of national marine and air smash plans.

Assistance was provided to the Australian Overseas Disaster Response Organisation (AODRO) at a disaster management workshop for non-government organisations in Western Samoa.

Initial negotiations were commenced for the provision of training assistance to both Fiji and Papua New Guinea.

6. continued.....

Within Australia, the Instructor assisted in the provision of instruction and facilitation of special introduction to disaster management and planning training courses in both Norfolk Island and the Australian Capital Territory. The Instructor also provided facilitation at several National Workshops and Study Groups.

MR G. JAMES (Emergency Management Australia, Canberra, Australia)

7. International assistance required for natural disaster reduction.

(Please indicate requirements for scientific expertise, technology, resources etc.)

★ Not applicable to Australia. Own resources are normally adequate.

3. Legislation introduced and enacted in relation to natural disaster reduction

- ★ At the National level there is no legislation enacted and a requirement does not exist for such legislation.

(Note: Legislation for counter disaster management does however exist for individual states and territories).

4. Disaster mitigation activities completed or underway:

- ★ The Australian IDNDR Coordination Committee has initiated 20 projects for the Decade years 1990 through 1993. Several projects have operated over the four years of the Decade thus far in specific and individual phases related to either geographical locations or particular hazards. Thus, in effect, an actual total of 25 individual projects have been undertaken. A summary of these is given in Table 4.1.
- ★ A summary of these Australian IDNDR Projects in terms of the categories (a) - (f) is also attached on Table 4.2. Details for individual projects in their respective categories follow.
- ★ Australian IDNDR activities have been applicable to the Southwest Pacific, both in specific projects therein and related Australian national projects. These are listed in Table 4.2, defined in Table 4.3 (noting Categories (a) - (f) and listed under additional Category (g)).

AUSTRALIAN IDNDR CO-ORDINATION COMMITTEE
"PROJECTS INITIATED 1990 - 1993"
AS AT 31 DECEMBER 1993

REGISTR- ATION NUMBER	TITLE	STATUS	PROJECT MANAGER	FUNDING (A\$000)	
				AUSTRALI A IDNDR	EXTERNAL
1991					
1/91	Australian Tropical Cyclone Workstation Phase 1 - 1991-1992 Phase 2 - 1992-1993 Phase 3 - 1993-1994	Phase 1 Completed - 1992 Phase 2 Completed - 1993 Phase 3 In Progress	Mr C. Pierrehumbert	20 55 70	(100)
2/91	Regional Hazard Potential Mapping - Southwest Pacific Quadrant	Commenced - 1992 In Progress	Dr W. Johnson	15	(15)
3/91	Earthquake Zonation - Mapping of Urban Areas in Australia Phase 1 - SYDZON (Sydney) - 1991-1992 Phase 2 - SEQZON (SE QLD) - 1992- 1993 Phase 3 - NEWZON (Newcastle) - 1993 Phase 4 - MELZON (Melbourne) - 1993 - 1994	Phase 1 Completed - Oct 1992 Phase 2 Completed - Oct 1993 Phase 3 Completed - Dec 1993 Phase 4 In Progress	Dr J. Rynn	20 30 0 30	30 80 50 80
4/91	Hazard Education - Mapping the Australian Curriculum	Completed - Oct 1993	Dr J. Lidstone	25	10
5/91	Media Aspects- TV/Radio Campaigns Phase 1 - Cyclones - 1991 - 1992 Phase 2 - Bushfires - 1992 - 1993 Phase 3 - Severe Storms - 1993	Phase 1 Completed - Oct 1991 Phase 2 Completed - Nov 1992 Phase 3 Completed - Oct 1993	Dr I. Bennett	55 110 120	1500
1992					
1/92	South West Pacific Disaster Managers Workshop, 1992	11-14 May 1992, Honiara, Solomon Islands Report Published - Dec 1992	Mr T. Hatchard	100	
2/92	Australian Disaster Management Information Network (ADMIN)	In Progress	Mr D. Tilson	37	90
4/92	Telecom Phonecard Issue	Planned completion Oct 1994 To be issued on World Disaster Reduction Day - 12 Oct 1994	Mr T. Hatchard	0	(5)
5/92	Australia Post Stamp Issue	Completed - Sep 1993 Issued on World Disaster Reduction Day - 13 Oct 1993	Mr T. Hatchard	0	10
8/92	Economic Benefits of Disaster Mitigation	In Progress	Dr J. Handmer	27	20
9/92	Tropical Storm Surge, Damage Assessment and Emergency Planning	Completed - Jun 1993	Mr D. Smith	16	(16)
12/92	Distribution of "STOP Disasters" Newsletters	An ongoing initiative for the duration of the decade.	Mr T. Hatchard	10	

TABLE 4.1

TABLE 4.1 continued

1993					
REGISTR -ATION NUMBER	TITLE	STATUS	PROJECT MANAGER	FUNDING (A\$000)	
				AUSTRALI A IDNDR	EXTERNAL
1/93	IDNDR South West Pacific Regional Conference, 1993	25-26 Aug 1993, Port Vila, Vanuatu Report Published - Nov 1993	Mr T. Hatchard	50	10
2/93	Booklet Regional Hazard Map - Refer to Project 2/91	In Progress	Dr W. Johnson	12	(12)
9/93	World Conference for IDNDR, Yokohama, Japan , May 1994	In Progress	Mr T. Hatchard	Planning Stage	
10/93	Sacklon Akson Gaed (Cyclone Action Guide) - Solomon Islands	Completed - Aug 1993	Mrs P. Taloikwai & Mr T. Hatchard	1	
11/93	Cyclone Awareness and Education - Vanuatu	Completed - Aug 1993	Mr K. Kalkaua & Mr T. Hatchard	3	
12/93	Sacklon Sisen Jeklist (Cyclone Season Checklist) - Vanuatu	Completed - Aug 1993	Mr K. Kalkaua & Mr T. Hatchard	1	
13/93	Damage Assessment Proforma - Vanuatu	Completed - Aug 1993	Mr K. Kalkaua & Mr T. Hatchard	1	
17/93	Provision of Australian Emergency Manuals to overseas countries	On going for the duration of the decade	Mr T. Hatchard & Mr P. May	10	

TABLE 4.1

**AUSTRALIAN IDNDR CO-ORDINATION COMMITTEES PROJECTS
INITIATED 1990 - 1993 IN TERMS OF MITIGATION CATEGORIES
AS AT 31 DECEMBER 1993**

a. Identification of Hazard Zones: Hazard Assessment:

2/91 3/91 9/92 2/93

b. Monitoring, Prediction and Warning:

1/91

c. Short-Term Protective Measures and Preparedness:

1/91 3/91 9/92

d. Long-Term Preventive Measures:

3/91 8/92 9/92

e. Land-use and Risk Management:

1/91 3/91 8/92 9/92

f. Public Education and Information:

1/91 2/91 3/91 4/91 5/91
2/92 4/92 5/92 8/92 9/92 12/92
2/93 9/93 17/93

In addition:

g. Australian IDNDR Activities Application to Southwest Pacific

Specific	1/92	1/93	10/93	11/93	12/93	13/93			
Related	1/91	2/91	3/91	5/91	2/92	8/92	9/92	12/92	17/93

TABLE 4.2

**AUSTRALIAN IDNDR ACTIVITIES APPLICABLE TO
THE SOUTH WEST PACIFIC
AS AT 31 DECEMBER 1993**

REGISTRATION NUMBER	PROJECT DESCRIPTION	MITIGATION CATEGORY
1/91	Australian Tropical Cyclone Workstation - Software will be made available to all countries	b, c, f
2/91	Natural Hazards Maps	a, f
3/91	Earthquake Zonation Mapping of Urban Areas in Australia - Development of Methodology for continental areas and its applicability to island nations	a, c, d, e, f
5/91	Media Campaign -Posters developed for Solomon Islands and Vanuatu. (Cyclone posters will be available before the next cyclone season)	f, g
1/92	South West Pacific Disaster Managers Workshop - Solomon Islands 12 -14 May 1992	g
2/92	Australian Disaster Management Information Network (ADMIN is designed to integrate into existing information technology networks and will be linked to overseas agencies)	f
8/92	Economic Benefits of Disaster Mitigation	d, e, f
9/92	Tropical Storm Surge, Damage Assessment and Emergency Planning	a, c, d, e, f
12/92	Distribution of the Newsletter "Stop Disasters"	f
1/93	IDNDR Regional Conference - Vanuatu 25-26 Aug 1993	g
10/93	Saeklon Akson Gaed (Cyclone Action Guide) - A joint Solomon Islands/Australian IDNDR project	g
11/93	Oi Sefti Prosiija Blong Saeklons Lons Vanuatu - A joint Vanuatu/Australian IDNDR project	g
12/93	Saeklon Sisen - Jeklist - A joint Vanuatu/Australian IDNDR project	g
13/93	Disasta Damej Ases Men Fom - Rural Eria - A joint Vanuatu/Australian IDNDR project	g
17/93	Provision of Australian Emergency Manuals to overseas countries	g

TABLE 4.3

SECTION B: STRATEGIES AND ACTIVITIES

(This section deals with current or planned strategies and activities.)

1. Steps towards achieving the 3 main Decade targets

- (a) **Comprehensive national assessments of risks from natural hazards, with these assessments taken into account in development plans;**

 - ★ Several Australian IDNDR Projects facilitated by EMA are directed towards assessments of risk for specific natural hazards, which include:
 - ♦ Cyclone, Earthquake, Storm Surge.
- (b) **Mitigation plans at national and/or local levels, involving long-term prevention and preparedness and community awareness; and**

 - ★ Several Australian IDNDR Projects facilitated by EMA are directed towards mitigation plans at national, state and local levels, which are now being implemented therein. These projects, which are indirectly related to the community for their awareness, preparedness and long-term preventative planning include:
 - ♦ Cyclone, Earthquake, Storm Surge, Education and Training, Media Campaigns and Economic Benefits of mitigation activities.
- (c) **Ready access to global, regional, national and local warning systems and broad dissemination of warnings.**

 - ★ Bureau of Meteorology (with WMO) - all weather warnings, including Cyclones.
 - ★ US Navy (NAVOCEAN COMMCEN: Guam/Pearl Harbour) - Cyclone/Typhoon warnings and advisories.
 - ★ US Pacific Tsunami Warning Centre (PTWC, Hawaii) - Tsunami warnings for Pacific Ocean.
 - ★ Australian Geological Survey Organisation (Australian Seismological Centre, Canberra) - information on effects of major worldwide and all Australian and South Pacific regional Earthquakes.

2. **Present national plan for natural disaster reduction**

★ **AUSDISPLAN - Australian Disaster Plan**

The Australian Disaster Plan has been prepared by Emergency Management Australia (EMA) as a general contingency plan to meet State/Territory requests for Commonwealth physical assistance arising from any type of disaster. The main body of the plan contains provisions applicable to all types of disasters and is supplemented by annexes containing additional planning information related to specific types of disasters (cyclones, earthquakes, floods, bushfires, etc) and specific disaster-related operations.

a) **Time span covered:**

- ★ Always in force and under continual review.

b) **Agencies, institutions and organisations involved:**

- ★ Emergency Management Australia and all Commonwealth of Australia Government Departments.

c) **Implementing agencies:**

- ★ Emergency Management Australia and all Commonwealth of Australia Government Departments.

d) **Funds available for implementation:**

- ★ Funded by individual departments/agencies as required.

- ★ In addition:

- ♦ National Plan for Overseas Aid - PLAN AUSAID

- ♦ As a developed country, Australia accepts a humanitarian responsibility for provision of aid to countries in need. This responsibility extends to provision of assistance to countries affected by disasters. PLAN AUSAID deals primarily with the response phase of post disaster assistance. If government resources are to be used, either alone or in combination with physical or technical resources of non-government organisation, or the private sector, Emergency Management Australia may be called upon, through its National Emergency Management Coordination Centre (NEMCC), to coordinate the relief operations.

4. **Disaster mitigation activities completed or underway:**

a) Identification of hazard zones: hazard assessment

1. **Title of Project: AUSTRALIAN IDNDR PROJECT 2/91 REGIONAL HAZARD POTENTIAL MAPPING - SOUTHWEST PACIFIC QUADRANT**

Status: This Project is in progress, having commenced in 1992. All data for the 1:10 million scale map of natural-hazard potential in the Southeast Asian and Southwest Pacific region has been digitised. This map is currently being edited. U.S. Geological Survey will be publishing the map on behalf of the Circum-Pacific Map Project. The current plan is to distribute the published map to selected agencies and individuals throughout the region. This project will provide decision makers, emergency planners, and those involved in disaster preparedness and land-use management with reliable and practical hazard information.

Participating institutions in the country and/or on the international level:

Australian Geological Survey Organisation (AGSO) - Australia
 United States Geological Survey - USA
 Bureau of Meteorology - Australia
 Macquarie University - Australia
 University of New South Wales - Australia
 Port Moresby Geophysical Observatory - Papua New Guinea
 Asian Institute of Technology, Bangkok - Thailand
 La Trobe University - Australia
 Centre for Earthquake Research in Australia - Australia
 Australian International Development Assistance Bureau

Costs of project: Australian IDNDR A\$15,000 with supporting external funding

Sources of funding: Australian IDNDR Coordination Committee
 Australian Geological Survey Organisation (AGSO)
 Australian International Development Assistance Bureau

Implementing agencies: Australian IDNDR Coordination Committee
 Natural Hazard Maps Working Group
 Circum-Pacific Council for Energy and Mineral Resources Map Project

Address (telephone and fax number) of the agency in charge:

Chairman, Australian IDNDR Coordination Committee
 Emergency Management Australia
 P.O. Box 1020
 DICKSON ACT AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4a. continued.....

2. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 3/91 EARTHQUAKE
ZONATION MAPPING OF URBAN AREAS IN
AUSTRALIA**

Status:

This project selects specific urban areas (cities) to produce zonation maps in terms of vulnerability for potential zones in future earthquakes. It is still in progress having already mapped three areas - Sydney, Southeast Queensland and Newcastle. A map for Melbourne is currently in progress. A methodology involving multi disciplinary analysis of seismology, geology, built environment, engineering and emergency management has been developed, which can now be used for any region in the world. Local government authorities, emergency management agencies and land-use planners benefit from the practical outcomes of the maps and associated technical information. The program actively involves the potential users of the zonation maps. The outputs have already been used in such planning and development considerations and in training of emergency personnel through simulated earthquake exercises in two major cities.

Participating institutions in the country and/or on the international level:

Centre for Earthquake Research in Australia (CERA)
Australia's Federal, State and Local Government Emergency Management
Agencies
(State Emergency Services, Police, Fire, Ambulance, Local Government
Authorities)

Costs of project: Australian IDNDR A\$80,000 with supporting external
funding of A\$240,000

Sources of funding: Australian IDNDR Coordination Committee
State Government Departments

Implementing agencies:

Australian IDNDR Coordination Committee
Centre for Earthquake Research in Australia
State and Local government Departments

Address (telephone and fax number) of the agency in charge:

Chairman, Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4a. continued.....

3. Title of Project: **AUSTRALIAN IDNDR PROJECT 9/92
TROPICAL STORM SURGE, DAMAGE
ASSESSMENT AND EMERGENCY PLANNING**

Status:

This project represents a pilot study into potential storm surge damage for the City of Mackay, Northern Queensland. The ANUFLOOD computer package was modified to assess building losses and so assist emergency services in their planning to respond to such a disaster. A detailed listing of all buildings in the city was produced and losses from potential storm surges of differing magnitudes and average annual damage estimated. The project has been successfully completed, from which the methodology can be used for any such area in tropical regions.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental Studies (CRES)
Mackay City Council
Bureau of Meteorology

Costs of project:

Australian IDNDR A\$16,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4a. continued.....

4. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 2/93**
 BOOKLET REGIONAL HAZARD MAP (IN
 ASSOCIATION WITH PROJECT 2/91)

Status:

This project is still in progress. The booklet will be a supplement to the National Hazard map of the Southwest Pacific Quadrant (Project 2/91), to describe and illustrate the various natural hazards that affect the region, as shown in the map.

Participating institutions in the country and/or on the international level:

Australian Geological Survey Organisation (AGSO) - Australia
United States Geological Survey - USA
Bureau of Meteorology - Australia
Macquarie University - Australia
University of New South Wales - Australia
Port Moresby Geophysical Observatory - Papua New Guinea
Asian Institute of Technology, Bangkok - Thailand
La Trobe University - Australia
Centre for Earthquake Research in Australia - Australia

Costs of project:

Australian IDNDR A\$12,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
Australian Geological Survey Organisation (AGSO)
Australian International Development Assistance Bureau

Implementing agencies:

Australian IDNDR Coordination Committee
Natural Hazard Maps Working Group
Circum-Pacific Council for Energy and Mineral Resources Map Project

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

b) *Monitoring, prediction and warning*

- 1. Title of Project: AUSTRALIAN IDNDR PROJECT 1/91
 AUSTRALIAN TROPICAL CYCLONE
 WORKSTATION**

Status:

This project is still in progress, having completed several stages of early development of the software package. The premise is to support hazard cyclone prediction activities. The ATCW was first commissioned in Fiji. Since then, more than 45 countries worldwide have requested the package.

Participating institutions in the country and/or on the international level:

Bureau of Meteorology, Australia
Naval Oceanographic and Atmospheric Research Laboratory (NOARL), USA
US National Oceanic and Atmospheric Administration (NOAA), USA
World Meteorological Organisation (WMO), Switzerland
European Community (EC)

Costs of project:

Australian IDNDR A\$145,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
Bureau of Meteorology - Australia
Australian International Development Assistance Bureau

Implementing agencies:

Bureau of Meteorology - Australia

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

c) Short-term Protective measures and preparedness

1. Title of Project: **AUSTRALIAN IDNDR PROJECT 1/91
AUSTRALIAN TROPICAL CYCLONE
WORKSTATION**

Status:

This project is still in progress, having completed several stages of early development of the software package. The premise is to support hazard cyclone prediction activities. The ATCW was first commissioned in Fiji. Since then, more than 45 countries worldwide have requested the package.

Participating institutions in the country and/or on the international level:

Bureau of Meteorology, Australia
Naval Oceanographic and Atmospheric Research Laboratory (NOARL), USA
US National Oceanic and Atmospheric Administration (NOAA), USA
World Meteorological Organisation (WMO), Switzerland
European Community (EC)

Costs of project:

Australian IDNDR A\$145,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
Bureau of Meteorology - Australia
Australian International Development Assistance Bureau

Implementing agencies:

Bureau of Meteorology - Australia

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4c. continued.....

2. **Title of Project: AUSTRALIAN IDNDR PROJECT 3/91 EARTHQUAKE
ZONATION MAPPING OF URBAN AREAS IN
AUSTRALIA**

Status:

This project selects specific urban areas (cities) to produce zonation maps in terms of vulnerability for potential zones in future earthquakes. It is still in progress having already mapped three areas - Sydney, Southeast Queensland and Newcastle. A map for Melbourne is currently in progress. A methodology involving multi disciplinary analysis of seismology, geology, built environment, engineering and emergency management has been developed, which can now be used for any region in the world. Local government authorities, emergency management agencies and land-use planners benefit from the practical outcomes of the maps and associated technical information. The program actively involves the potential users of the zonation maps. The outputs have already been used in such planning and development considerations and in training of emergency personnel through simulated earthquake exercises in two major cities.

Participating institutions in the country and/or on the international level:

Centre for Earthquake Research in Australia (CERA)
Australia's Federal, State and Local Government Emergency Management
Agencies
(State Emergency Services, Police, Fire, Ambulance, Local Government
Authorities)

Costs of project: Australian IDNDR A\$80,000 with supporting external
funding of A\$240,000

Sources of funding: Australian IDNDR Coordination Committee
State Government Departments

Implementing agencies:

Australian IDNDR Coordination Committee
Centre for Earthquake Research in Australia
State and Local government Departments

Address (telephone and fax number) of the agency in charge:

Chairman, Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4c. continued.....

**3. Title of Project: AUSTRALIAN IDNDR PROJECT 9/92
TROPICAL STORM SURGE, DAMAGE
ASSESSMENT AND EMERGENCY PLANNING**

Status:

This project represents a pilot study into potential storm surge damage for the City of Mackay, Northern Queensland. The ANUFLOOD computer package was modified to assess building losses and so assist emergency services in their planning to respond to such a disaster. A detailed listing of all buildings in the city was produced and losses from potential storm surges of differing magnitudes and average annual damage estimated. The project has been successfully completed, from which the methodology can be used for any such area in tropical regions.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental
Studies (CRES)
Mackay City Council
Bureau of Meteorology

Costs of project:

Australian IDNDR A\$16,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

d) Long-term protective measures

1. Title of Project: AUSTRALIAN IDNDR PROJECT 3/91 EARTHQUAKE ZONATION MAPPING OF URBAN AREAS IN AUSTRALIA

Status: This project selects specific urban areas (cities) to produce zonation maps in terms of vulnerability for potential zones in future earthquakes. It is still in progress having already mapped three areas - Sydney, Southeast Queensland and Newcastle. A map for Melbourne is currently in progress. A methodology involving multidisciplinary analysis of seismology, geology, built environment, engineering and emergency management has been developed, which can now be used for any region in the world. Local government authorities, emergency management agencies and land-use planners benefit from the practical outcomes of the maps and associated technical information. The program actively involves the potential users of the zonation maps. The outputs have already been used in such planning and development considerations and in training of emergency personnel through simulated earthquake exercises in two major cities.

Participating institutions in the country and/or on the international level:

Centre for Earthquake Research in Australia (CERA)
Australia's Federal, State and Local Government Emergency Management Agencies
(State Emergency Services, Police, Fire, Ambulance, Local Government Authorities)

Costs of project: Australian IDNDR A\$80,000 with supporting external funding of A\$240,000

Sources of funding: Australian IDNDR Coordination Committee
State Government Departments

Implementing agencies:

Australian IDNDR Coordination Committee
Centre for Earthquake Research in Australia
State and Local government Departments

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4d. continued.....

2. Title of Project: **AUSTRALIAN IDNDR PROJECT 8/92
ECONOMIC BENEFITS OF DISASTER MITIGATION**

Status:

This project is still in progress. Its aim is to produce a small manual setting out standard guidelines for the assessment of economic benefits of disaster mitigation activities. The manual is based on the flood disaster but the principles will apply to all hazards. The manual would set out and explain: the relevant economic concepts; the reasons for applying them; the results of **not** applying the concepts; what constitutes damage in an economic sense; and the importance of not ignoring what is hard to measure.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental Studies, (CRES), Canberra, Australia
Middlesex University, Flood Hazard Research Centre, London, United Kingdom

Costs of project:

Australian IDNDR A\$27,000
CRES A\$20,000

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4d. continued.....

3. **Title of Project: AUSTRALIAN IDNDR PROJECT 9/92
 TROPICAL STORM SURGE, DAMAGE
 ASSESSMENT AND EMERGENCY PLANNING**

Status:

This project represents a pilot study into potential storm surge damage for the City of Mackay, Northern Queensland. The ANUFLOOD computer package was modified to assess building losses and so assist emergency services in their planning to respond to such a disaster. A detailed listing of all buildings in the city was produced and losses from potential storm surges of differing magnitudes and average annual damage estimated. The project has been successfully completed, from which the methodology can be used for any such area in tropical regions.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental Studies (CRES)
Mackay City Council
Bureau of Meteorology

Costs of project:

Australian IDNDR A\$16,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

e) Land-use and risk management

1. **Title of Project:** AUSTRALIAN IDNDR PROJECT 1/91
AUSTRALIAN TROPICAL CYCLONE
WORKSTATION

Status:

This project is still in progress, having completed several stages of early development of the software package. The premise is to support hazard cyclone prediction activities. The ATCW was first commissioned in Fiji. Since then, more than 45 countries worldwide have requested the package.

Participating institutions in the country and/or on the international level:

Bureau of Meteorology, Australia
Naval Oceanographic and Atmospheric Research Laboratory (NOARL), USA
US National Oceanic and Atmospheric Administration (NOAA), USA
World Meteorological Organisation (WMO), Switzerland
European Community (EC)

Costs of project:

Australian IDNDR A\$145,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
Bureau of Meteorology - Australia
Australian International Development Assistance Bureau

Implementing agencies:

Bureau of Meteorology - Australia

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4e. continued.....

2. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 3/91 EARTHQUAKE
ZONATION MAPPING OF URBAN AREAS IN
AUSTRALIA**

Status: This project selects specific urban areas (cities) to produce zonation maps in terms of vulnerability for potential zones in future earthquakes. It is still in progress having already mapped three areas - Sydney, Southeast Queensland and Newcastle. A map for Melbourne is currently in progress. A methodology involving multidisciplinary analysis of seismology, geology, built environment, engineering and emergency management has been developed, which can now be used for any region in the world. Local government authorities, emergency management agencies and land-use planners benefit from the practical outcomes of the maps and associated technical information. The program actively involves the potential users of the zonation maps. The outputs have already been used in such planning and development considerations and in training of emergency personnel through simulated earthquake exercises in two major cities.

Participating institutions in the country and/or on the international level:

Centre for Earthquake Research in Australia (CERA)
Australia's Federal, State and Local Government Emergency Management
Agencies
(State Emergency Services, Police, Fire, Ambulance, Local Government
Authorities)

Costs of project: Australian IDNDR A\$80,000 with supporting external
funding of A\$240,000

Sources of funding: Australian IDNDR Coordination Committee
State Government Departments

Implementing agencies:

Australian IDNDR Coordination Committee
Centre for Earthquake Research in Australia
State and Local government Departments

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4e. continued.....

3. Title of Project: **AUSTRALIAN IDNDR PROJECT 8/92
ECONOMIC BENEFITS OF DISASTER MITIGATION**

Status:

This project is still in progress. Its aim is to produce a small manual setting out standard guidelines for the assessment of economic benefits of disaster mitigation activities. The manual is based on the flood disaster but the principles will apply to all hazards. The manual would set out and explain: the relevant economic concepts; the reasons for applying them; the results of **not** applying the concepts; what constitutes damage in an economic sense; and the importance of not ignoring what is hard to measure.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental Studies, (CRES), Canberra, Australia
Middlesex University, Flood Hazard Research Centre, London, United Kingdom

Costs of project:

Australian IDNDR A\$27,000
CRES A\$20,000

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4e. continued.....

4. **Title of Project: AUSTRALIAN IDNDR PROJECT 9/92
 TROPICAL STORM SURGE, DAMAGE
 ASSESSMENT AND EMERGENCY PLANNING**

Status:

This project represents a pilot study into potential storm surge damage for the City of Mackay, Northern Queensland. The ANUFLOOD computer package was modified to assess building losses and so assist emergency services in their planning to respond to such a disaster. A detailed listing of all buildings in the city was produced and losses from potential storm surges of differing magnitudes and average annual damage estimated. The project has been successfully completed, from which the methodology can be used for any such area in tropical regions.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental Studies (CRES)
Mackay City Council
Bureau of Meteorology

Costs of project:

Australian IDNDR A\$16,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

f) Public education and information

1. Title of Project: **AUSTRALIAN IDNDR PROJECT 1/91
AUSTRALIAN TROPICAL CYCLONE
WORKSTATION**

Status:

This project is still in progress, having completed several stages of early development of the software package. The premise is to support hazard cyclone prediction activities. The ATCW was first commissioned in Fiji. Since then, more than 45 countries worldwide have requested the package.

Participating institutions in the country and/or on the international level:

Bureau of Meteorology, Australia
Naval Oceanographic and Atmospheric Research Laboratory (NOARL), USA
US National Oceanic and Atmospheric Administration (NOAA), USA
World Meteorological Organisation (WMO), Switzerland
European Community (EC)

Costs of project:

Australian IDNDR A\$145,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
Bureau of Meteorology - Australia
Australian International Development Assistance Bureau

Implementing agencies:

Bureau of Meteorology - Australia

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

2. Title of Project: **AUSTRALIAN IDNDR PROJECT 2/91 REGIONAL HAZARD POTENTIAL MAPPING - SOUTHWEST PACIFIC QUADRANT**

Status: This Project is in progress, having commenced in 1992. All data for the 1:10 million scale map of natural-hazard potential in the Southeast Asian and Southwest Pacific region has been digitised. This map is currently being edited. U.S. Geological Survey will be publishing the map on behalf of the Circum-Pacific Map Project. The current plan is to distribute the published map to selected agencies and individuals throughout the region. This project will provide decision makers, emergency planners, and those involved in disaster preparedness and land-use management with reliable and practical hazard information.

Participating institutions in the country and/or on the international level:

Australian Geological Survey Organisation (AGSO) - Australia
 United States Geological Survey - USA
 Bureau of Meteorology - Australia
 Macquarie University - Australia
 University of New South Wales - Australia
 Port Moresby Geophysical Observatory - Papua New Guinea
 Asian Institute of Technology, Bangkok - Thailand
 La Trobe University - Australia
 Centre for Earthquake Research in Australia - Australia
 Australian International Development Assistance Bureau

Costs of project: Australian IDNDR A\$15,000 with supporting external funding

Sources of funding: Australian IDNDR Coordination Committee
 Australian Geological Survey Organisation (AGSO)
 Australian International Development Assistance Bureau

Implementing agencies: Australian IDNDR Coordination Committee
 Natural Hazard Maps Working Group
 Circum-Pacific Council for Energy and Mineral Resources Map Project

Address (telephone and fax number) of the agency in charge:

Chairman
 Australian IDNDR Coordination Committee
 Emergency Management Australia
 P.O. Box 1020
 DICKSON ACT
 AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

3. Title of Project: AUSTRALIAN IDNDR PROJECT 3/91 EARTHQUAKE ZONATION MAPPING OF URBAN AREAS IN AUSTRALIA

Status: This project selects specific urban areas (cities) to produce zonation maps in terms of vulnerability for potential zones in future earthquakes. It is still in progress having already mapped three areas - Sydney, Southeast Queensland and Newcastle. A map for Melbourne is currently in progress. A methodology involving multidisciplinary analysis of seismology, geology, built environment, engineering and emergency management has been developed, which can now be used for any region in the world. Local government authorities, emergency management agencies and land-use planners benefit from the practical outcomes of the maps and associated technical information. The program actively involves the potential users of the zonation maps. The outputs have already been used in such planning and development considerations and in training of emergency personnel through simulated earthquake exercises in two major cities.

Participating institutions in the country and/or on the international level:

Centre for Earthquake Research in Australia (CERA)
Australia's Federal, State and Local Government Emergency Management Agencies
(State Emergency Services, Police, Fire, Ambulance, Local Government Authorities)

Costs of project: Australian IDNDR A\$80,000 with supporting external funding of A\$240,000

Sources of funding: Australian IDNDR Coordination Committee
State Government Departments

Implementing agencies:

Australian IDNDR Coordination Committee
Centre for Earthquake Research in Australia
State and Local government Departments

Address (telephone and fax number) of the agency in charge:

Chairman, Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

4. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 4/91**
 HAZARD EDUCATION - MAPPING THE
 AUSTRALIAN CURRICULUM

Status:

This project was completed with the publication of a book co-authored with secondary school geography teachers in Australia and New Zealand. The book "Learning to live safely in the Australian Environment" was launched on World Disaster Reduction Day 1993. The book comprises information on specific hazards in Australasia and listing methods for the subject.

Participating institutions in the country and/or on the international level:

Queensland University of Technology, The Centre for Applied Environmental
and Social Education Research,
Australian Geography Teachers' Association.
Australian IDNDR Coordination Committee

Costs of project:

Australian IDNDR A\$25,000 with supporting external funding A\$10,000

Sources of funding:

Australian IDNDR Coordination Committee
Queensland University of Technology

Implementing agencies:

Australian IDNDR Coordination Committee
Australian Geography Teachers' Association
Queensland University of Technology

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

5. Title of Project: **AUSTRALIAN IDNDR PROJECT 5/91
MEDIA ASPECTS - TV/RADIO CAMPAIGNS**

Status:

This project is continuing, having completed several phases on the community awareness of cyclones, bushfires and severe storms (1991-1993). The mediums of TV (and radio (by tapes)) were employed in "Call to Action" campaigns as a public service. The campaigns have become well known and appreciated in those areas of Australia, prone to such disasters, and have been adapted for use in several South Pacific island nations.

Participating institutions in the country and/or on the international level:

"Life, Be In It", Australia
Bureau of Meteorology, Australia
Australian IDNDR Coordination Committee
All Australian Television and Radio Stations

Costs of project:

Australian IDNDR Committee A\$285,000 with supporting external funding (community service announcements on television and radio) of A\$1.5 million.

Sources of funding:

Australian IDNDR Coordination Committee
Participating Television and Radio Stations

Implementing agencies:

Australian IDNDR Coordination Committee
"Life, Be in it"

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT 2602
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

6. Title of Project: **AUSTRALIAN IDNDR PROJECT 2/92
AUSTRALIAN DISASTER MANAGEMENT
INFORMATION NETWORK (ADMIN)**

Status:

ADMIN is still growing at a rapid rate among the Australian Emergency Services. Currently the majority of the network utilises text based delivery, however a lot of work is currently being undertaken to provide a graphical user interface. Initially the system only allowed for telephone modem access. This is in the process of being extended to allow worldwide radio access and entry through high speed international computer networks such as AARNET, INTERNET and UNIENET.

Participating institutions in the country and/or on the international level:

Australian Emergency Management Institute
Institute of Fire Engineers
Australian Red Cross Society
The National Institute of Forensic Science
Federal Department of Health
Wireless Institute Civil Emergency Network Australia
Bureau of Meteorology - Australia
Health Informatics Society of Australia
Victoria Police
Victorian State Emergency Service
Victorian Department of Health
Victoria Country Fire Authority
Victoria Ambulance Service
Melbourne Metropolitan Fire Brigade
Victorian Institute of Forensic Pathology
Community Services Victoria
Wireless Institute Civil Emergency Network Victoria
Centre for International Research on Communication and Information
Technologies
Fairfield Infectious Diseases Hospital
West Australian Department of Health
Wireless Institute Civil Emergency Network West Australia
Queensland Emergency Services
Wireless Institute Civil Emergency Network Queensland
South Australian State Emergency Service
Wireless Institute Civil Emergency Network South Australia
Telecom South Australia
Wireless Institute Civil Emergency Network Northern Territory
New South Wales State Emergency Service
Wireless Institute Civil Emergency Network New South Wales

4f. continued.....

6. continued

Australian Capital Territory Emergency Services
Fiji School of Medicine (FIJI)
Volunteers In technical Assistance - VITA (USA)
Emergency Communications Network - EMERGNET (USA)
Emergency Preparedness Information Exchange (CANADA)

Costs of project: A\$52,000

Sources of funding:

Australian IDNDR Coordination Committee
Victorian Institute of Forensic Pathology

Implementing agencies:

Australian IDNDR Coordination Committee
Centre for International Research on Communication and Information
Technologies

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4f. continued.....

7. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 4/92**
 TELECOM PHONECARD ISSUE

Status:

The Telecom Phonecard Design Committee approved a phonecard issue for Australian IDNDR activities. The Phonecard will be issued on World Disaster Reduction Day 1994.

Participating institutions in the country and/or on the international level:

Telecom Australia

Costs of project:

Nil

Sources of funding:

Funded by Telecom

Implementing agencies:

Telecom Australia
Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

8. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 5/92**
 AUSTRALIA POST STAMP ISSUE

Status:

Completed. Australia Post cooperated with the Australian IDNDR Committee in agreeing to promote public awareness through production of a pre-stamped envelope focussing on IDNDR. The pre-stamped envelope first day of issue was on World Disaster Reduction Day 1993.

Participating institutions in the country and/or on the international level:

Australia Post

Costs of project:

Nil

Sources of funding:

Australia Post

Implementing agencies:

Australia Post
Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT 2602
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4f. continued.....

9. Title of Project: **AUSTRALIAN IDNDR PROJECT 8/92
ECONOMIC BENEFITS OF DISASTER MITIGATION**

Status:

This project is still in progress. Its aim is to produce a small manual setting out standard guidelines for the assessment of economic benefits of disaster mitigation activities. The manual is based on the flood disaster but the principles will apply to all hazards. The manual would set out and explain: the relevant economic concepts; the reasons for applying them; the results of **not** applying the concepts; what constitutes damage in an economic sense; and the importance of not ignoring what is hard to measure.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental Studies, (CRES), Canberra, Australia
Middlesex University, Flood Hazard Research Centre, London, United Kingdom

Costs of project:

Australian IDNDR	A\$27,000
CRES	A\$20,000

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4f. continued.....

**10. Title of Project: AUSTRALIAN IDNDR PROJECT 9/92
TROPICAL STORM SURGE, DAMAGE
ASSESSMENT AND EMERGENCY PLANNING**

Status:

This project represents a pilot study into potential storm surge damage for the City of Mackay, Northern Queensland. The ANUFLOOD computer package was modified to assess building losses and so assist emergency services in their planning to respond to such a disaster. A detailed listing of all buildings in the city was produced and losses from potential storm surges of differing magnitudes and average annual damage estimated. The project has been successfully completed, from which the methodology can be used for any such area in tropical regions.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental Studies (CRES)
Mackay City Council
Bureau of Meteorology

Costs of project:

Australian IDNDR A\$16,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

11. Title of Project: **AUSTRALIAN IDNDR PROJECT 12/92
DISTRIBUTION OF "STOP DISASTERS"
NEWSLETTERS**

Status:

On going. The Australian IDNDR Coordination Committee sponsors "STOP" Disasters. The sponsorship is reviewed annually.

Participating institutions in the country and/or on the international level:

Osservatorio Vesuviano
IDNDR Secretariat

Costs of project:

A\$5,000 per annum

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Osservatorio Vesuviano
IDNDR Secretariat
Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4f. continued.....

12. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 2/93
BOOKLET REGIONAL HAZARD MAP (IN
ASSOCIATION WITH PROJECT 2/91)**

Status: This project is still in progress. The booklet will be a supplement to the National Hazard map of the Southwest Pacific Quadrant (Project 2/91), to describe and illustrate the various natural hazards that affect the region, as shown in the map.

Participating institutions in the country and/or on the international level:

Australian Geological Survey Organisation (AGSO) - Australia
United States Geological Survey - USA
Bureau of Meteorology - Australia
Macquarie University - Australia
University of New South Wales - Australia
Port Moresby Geophysical Observatory - Papua New Guinea
Asian Institute of Technology, Bangkok - Thailand
La Trobe University - Australia
Centre for Earthquake Research in Australia - Australia

Costs of project:

Australian IDNDR A\$12,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
Australian Geological Survey Organisation (AGSO)
Australian International Development Assistance Bureau

Implementing agencies:

Australian IDNDR Coordination Committee
Natural Hazard Maps Working Group
Circum-Pacific Council for Energy and Mineral Resources Map Project

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

13. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 9/93**
 WORLD CONFERENCE ON NATURAL DISASTER
 REDUCTION

Status:

Preparatory phase. The Australian IDNDR Coordination Committee is preparing a full report for issue at the Conference.

Participating institutions in the country and/or on the international level:

Australian IDNDR Coordination Committee

Costs of project:

To be decided

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4f. continued.....

**14. Title of Project: AUSTRALIAN IDNDR PROJECT 17/93
THE PROVISION OF AUSTRALIAN EMERGENCY
MANUALS (AEM's) TO OVERSEAS COUNTRIES.**

Status: On going. To date nine manuals of a planned series of 20 manuals have been issued to 49 countries. These manuals are:

AEM - Disaster Rescue (3rd Edition)
AEM - Land Search Operations (incorporating Urban Search)
AEM - Flood Rescue Boat Operations
AEM - Storm Damage Operations
AEM - Community Emergency Planning Guide
AEM - Communications
AEM - Road Accident Rescue
AEM - Training Management
AEM - Chain Saw Operation
AEM - Map Reading and Navigation
AEM - Four Wheel Drive Vehicle Operation
AEM - Vertical Rescue

Participating institutions in the country and/or on the international level:

The eight Australian state and territory Emergency Services.
The eight Australian state and territory urban and country/rural fire services.
The eight Australian state and territory Police and Ambulance services.
The Forestry Commission of New South Wales.
The Insurance Council of Australia
Telecom Australia
Broken Hill Proprietary Company Ltd

Costs of project: A \$10,000

Sources of funding: Australian IDNDR Coordination Committee

Implementing agencies: Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman,
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

g) *Australian IDNDR activities applicable to Southwest Pacific (Specific and Related)*

1. **Title of Project: AUSTRALIAN IDNDR PROJECT 1/92
SOUTH WEST PACIFIC DISASTER MANAGERS'
WORKSHOP**

Status:

The report on the South West Pacific Disaster Managers' Workshop held in Honiara, Solomon Islands, was prepared by Emergency Management Australia, on behalf of the participants and the sponsoring body, the International Decade for Natural Disaster Reduction Coordination Committee.

Participating institutions in the country and/or on the international level:

Police Department - Cook Islands, Ministry of Fijian Affairs & Rural Development - Fiji, Police Department - Kiribati, Ministry of Civil Defence - New Zealand, Police Department - Niue, Ministry of Home Affairs, Royal Solomon Islands Police, Ministry of Health & Medical Services - Solomon Islands, Meteorological Services - Tokelau, Ministry of Works - Tonga, Public Works Department - Tuvalu, National Disaster Management Office - Vanuatu, Prime Minister's Department - Western Samoa, UNDRO South Pacific Programme Office - UNDRO, Australian IDNDR Coordination Committee, Australian International Development Assistance Bureau and Australian Overseas Disaster Response Organisation

Costs of project:

A\$100,000

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

2. Title of Project: **AUSTRALIAN IDNDR PROJECT 1/93
SOUTH WEST PACIFIC REGIONAL MEETING OF
INTERNATIONAL DECADE FOR NATURAL
DISASTER REDUCTION COMMITTEE
REPRESENTATIVES**

Status:

The report of the proceeding of the meeting of representatives of the National International Decade for Natural Disaster Reduction Committees from within the South West Pacific area held in Port Vila, Vanuatu, was prepared by Emergency Management Australia, on behalf of the participants and the sponsoring body, the International Decade for Natural Disaster Reduction Committee.

Participating institutions in the country and/or on the international level:

Australian IDNDR Coordination Committee - Australia, Ministry of Civil Defence - New Zealand, National Disaster and Emergency Service - Papua New Guinea, National Disaster Council - Solomon Islands, National Disaster Management Office - Vanuatu, Secretary to Government - Western Samoa, Asian Disaster Preparedness Centre - Thailand, Civil Protection - New Caledonia, US Agency for International Development - Fiji, UN Department of Humanitarian Affairs - Fiji and IDNDR Secretariat - Geneva.

Costs of project:

A\$50,000

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

3. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 10/93**
 SAEKLON AKSON GAED (CYCLONE ACTION
 GUIDE) SOLOMON ISLANDS

Status:

The Cyclone Guide was developed for the education and awareness of Solomon Islanders.

Participating institutions in the country and/or on the international level:

Solomon Islands National Disaster Council
Australian IDNDR Coordination Committee

Costs of project:

A\$700

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Australian IDNDR Coordination Committee
Solomon Islands National Disaster Council

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4g. continued.....

4. **Title of Project:** **AUSTRALIAN IDNDR PROJECT 11/93**
 OL SEFTI PROSIJA BLONG SAEKLONS LONG
 VANUATU (VANUATU CYCLONE SAFETY
 PROCEDURES)

Status:

The Cyclone Safety Procedures was developed for the education and awareness of the Vanuatu people. The brochures were printed in English and Bislama.

Participating institutions in the country and/or on the international level:

Vanuatu National Disaster Management Office
Australian IDNDR Coordination Committee

Costs of project:

A\$2,690

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Australian IDNDR Coordination Committee
Vanuatu National Disaster Management Office

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

5. Title of Project: **AUSTRALIAN IDNDR PROJECT 12/93
SAEKLON SISEN - JEKLIST (CYCLONE ACTION
GUIDE)**

Status:

The Cyclone Action Guide was developed for the education and awareness of the Vanuatu people.

Participating institutions in the country and/or on the international level:

International recognition.

Costs of project:

\$AU696

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Australian IDNDR Coordination Committee
Vanuatu National Disaster Management Office

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4g. continued.....

6. Title of Project: **AUSTRALIAN IDNDR PROJECT 13/93
DISASTA DAMAJ ASES MEN FOM - RURAL ERIA
(DISASTER DAMAGE ASSESSMENT FORM)**

Status:

The Disaster Damage Assessment Form was developed for the education and awareness of the Vanuatu people.

Participating institutions in the country and/or on the international level:

International recognition.

Costs of project:

\$AU630

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Australian IDNDR Coordination Committee
Vanuatu National Disaster Management Office

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

7. **Title of Project: AUSTRALIAN IDNDR PROJECT 1/91
AUSTRALIAN TROPICAL CYCLONE
WORKSTATION**

Status:

This project is still in progress, having completed several stages of early development of the software package. The premise is to support hazard cyclone prediction activities. The ATCW was first commissioned in Fiji. Since then, more than 45 countries worldwide have requested the package.

Participating institutions in the country and/or on the international level:

Bureau of Meteorology, Australia
Naval Oceanographic and Atmospheric Research Laboratory (NOARL), USA
US National Oceanic and Atmospheric Administration (NOAA), USA
World Meteorological Organisation (WMO), Switzerland
European Community (EC)

Costs of project:

Australian IDNDR A\$145,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
Bureau of Meteorology - Australia
Australian International Development Assistance Bureau

Implementing agencies:

Bureau of Meteorology - Australia

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

**8. Title of Project: AUSTRALIAN IDNDR PROJECT 2/91 REGIONAL
HAZARD POTENTIAL MAPPING - SOUTHWEST
PACIFIC QUADRANT**

Status: This Project is in progress, having commenced in 1992. All data for the 1:10 million scale map of natural-hazard potential in the Southeast Asian and Southwest Pacific region has been digitised. This map is currently being edited. U.S. Geological Survey will be publishing the map on behalf of the Circum-Pacific Map Project. The current plan is to distribute the published map to selected agencies and individuals throughout the region. This project will provide decision makers, emergency planners, and those involved in disaster preparedness and land-use management with reliable and practical hazard information.

Participating institutions in the country and/or on the international level:

Australian Geological Survey Organisation (AGSO) - Australia
United States Geological Survey - USA
Bureau of Meteorology - Australia
Macquarie University - Australia
University of New South Wales - Australia
Port Moresby Geophysical Observatory - Papua New Guinea
Asian Institute of Technology, Bangkok - Thailand
La Trobe University - Australia
Centre for Earthquake Research in Australia - Australia
Australian International Development Assistance Bureau

Costs of project: Australian IDNDR A\$15,000 with supporting external funding

Sources of funding: Australian IDNDR Coordination Committee
Australian Geological Survey Organisation (AGSO)
Australian International Development Assistance Bureau

Implementing agencies: Australian IDNDR Coordination Committee
Natural Hazard Maps Working Group
Circum-Pacific Council for Energy and Mineral
Resources Map Project

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

9. Title of Project: AUSTRALIAN IDNDR PROJECT 3/91 EARTHQUAKE ZONATION MAPPING OF URBAN AREAS IN AUSTRALIA

Status: This project selects specific urban areas (cities) to produce zonation maps in terms of vulnerability for potential zones in future earthquakes. It is still in progress having already mapped three areas - Sydney, Southeast Queensland and Newcastle. A map for Melbourne is currently in progress. A methodology involving multidisciplinary analysis of seismology, geology, built environment, engineering and emergency management has been developed, which can now be used for any region in the world. Local government authorities, emergency management agencies and land-use planners benefit from the practical outcomes of the maps and associated technical information. The program actively involves the potential users of the zonation maps. The outputs have already been used in such planning and development considerations and in training of emergency personnel through simulated earthquake exercises in two major cities.

Participating institutions in the country and/or on the international level:

Centre for Earthquake Research in Australia (CERA)
Australia's Federal, State and Local Government Emergency Management Agencies
(State Emergency Services, Police, Fire, Ambulance, Local Government Authorities)

Costs of project: Australian IDNDR A\$80,000 with supporting external funding of A\$240,000

Sources of funding: Australian IDNDR Coordination Committee
State Government Departments

Implementing agencies:

Australian IDNDR Coordination Committee
Centre for Earthquake Research in Australia
State and Local government Departments

Address (telephone and fax number) of the agency in charge:

Chairman, Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

**10. Title of Project: AUSTRALIAN IDNDR PROJECT 5/91
MEDIA ASPECTS - TV/RADIO CAMPAIGNS**

Status:

This project is continuing, having completed several phases on the community awareness of cyclones, bushfires and severe storms (1991-1993). The mediums of TV (and radio (by tapes)) were employed in "Call to Action" campaigns as a public service. The campaigns have become well known and appreciated in those areas of Australia, prone to such disasters, and have been adapted for use in several South Pacific island nations.

Participating institutions in the country and/or on the international level:

"Life, Be In It", Australia
Bureau of Meteorology, Australia
Australian IDNDR Coordination Committee
All Australian Television and Radio Stations

Costs of project:

Australian IDNDR Committee A\$285,000 with supporting external funding (community service announcements on television and radio) of A\$1.5 million.

Sources of funding:

Australian IDNDR Coordination Committee
Participating Television and Radio Stations

Implementing agencies:

Australian IDNDR Coordination Committee
"Life, Be in it"

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT 2602
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4g. continued.....

11. Title of Project: **AUSTRALIAN IDNDR PROJECT 2/92
AUSTRALIAN DISASTER MANAGEMENT
INFORMATION NETWORK (ADMIN)**

Status:

ADMIN is still growing at a rapid rate among the Australian Emergency Services. Currently the majority of the network utilises text based delivery, however a lot of work is currently being undertaken to provide a graphical user interface. Initially the system only allowed for telephone modem access. This is in the process of being extended to allow worldwide radio access and entry through high speed international computer networks such as AARNET, INTERNET and UNIENET.

Participating institutions in the country and/or on the international level:

Australian Emergency Management Institute
Institute of Fire Engineers
Australian Red Cross Society
The National Institute of Forensic Science
Federal Department of Health
Wireless Institute Civil Emergency Network Australia
Bureau of Meteorology - Australia
Health Informatics Society of Australia
Victoria Police
Victorian State Emergency Service
Victorian Department of Health
Victoria Country Fire Authority
Victoria Ambulance Service
Melbourne Metropolitan Fire Brigade
Victorian Institute of Forensic Pathology
Community Services Victoria
Wireless Institute Civil Emergency Network Victoria
Centre for International Research on Communication and Information
Technologies
Fairfield Infectious Diseases Hospital
West Australian Department of Health
Wireless Institute Civil Emergency Network West Australia
Queensland Emergency Services
Wireless Institute Civil Emergency Network Queensland
South Australian State Emergency Service
Wireless Institute Civil Emergency Network South Australia
Telecom South Australia
Wireless Institute Civil Emergency Network Northern Territory
New South Wales State Emergency Service
Wireless Institute Civil Emergency Network New South Wales

4g. continued.....

11. continued

Australian Capital Territory Emergency Services
Fiji School of Medicine (FIJI)
Volunteers In technical Assistance - VITA (USA)
Emergency Communications Network - EMERGNET (USA)
Emergency Preparedness Information Exchange (CANADA)

Costs of project: A\$52,000

Sources of funding:

Australian IDNDR Coordination Committee
Victorian Institute of Forensic Pathology

Implementing agencies:

Australian IDNDR Coordination Committee
Centre for International Research on Communication and Information
Technologies

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4g. continued.....

12. **Title of Project: AUSTRALIAN IDNDR PROJECT 8/92
 ECONOMIC BENEFITS OF DISASTER MITIGATION**

Status:

This project is still in progress. Its aim is to produce a small manual setting out standard guidelines for the assessment of economic benefits of disaster mitigation activities. The manual is based on the flood disaster but the principles will apply to all hazards. The manual would set out and explain: the relevant economic concepts; the reasons for applying them; the results of **not** applying the concepts; what constitutes damage in an economic sense; and the importance of not ignoring what is hard to measure.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental Studies, (CRES), Canberra, Australia
Middlesex University, Flood Hazard Research Centre, London, United Kingdom

Costs of project:

Australian IDNDR A\$27,000
CRES A\$20,000

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031 Facsimile: 61-6-2571490

4g. continued.....

13. Title of Project: **AUSTRALIAN IDNDR PROJECT 9/92
TROPICAL STORM SURGE, DAMAGE
ASSESSMENT AND EMERGENCY PLANNING**

Status:

This project represents a pilot study into potential storm surge damage for the City of Mackay, Northern Queensland. The ANUFLOOD computer package was modified to assess building losses and so assist emergency services in their planning to respond to such a disaster. A detailed listing of all buildings in the city was produced and losses from potential storm surges of differing magnitudes and average annual damage estimated. The project has been successfully completed, from which the methodology can be used for any such area in tropical regions.

Participating institutions in the country and/or on the international level:

The Australian National University, Centre for Resource and Environmental
Studies (CRES)
Mackay City Council
Bureau of Meteorology

Costs of project:

Australian IDNDR A\$16,000 with supporting external funding.

Sources of funding:

Australian IDNDR Coordination Committee
CRES

Implementing agencies:

Australian IDNDR Coordination Committee
CRES

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

14. Title of Project: **AUSTRALIAN IDNDR PROJECT 12/92
DISTRIBUTION OF "STOP DISASTERS"
NEWSLETTERS**

Status:

On going. The Australian IDNDR Coordination Committee sponsors "STOP" Disasters. The sponsorship is reviewed annually.

Participating institutions in the country and/or on the international level:

Osservatorio Vesuviano
IDNDR Secretariat

Costs of project:

A\$5,000 per annum

Sources of funding:

Australian IDNDR Coordination Committee

Implementing agencies:

Osservatorio Vesuviano
IDNDR Secretariat
Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT
AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

4g. continued.....

**15. Title of Project: AUSTRALIAN IDNDR PROJECT 17/93
THE PROVISION OF AUSTRALIAN EMERGENCY
MANUALS (AEM's) TO OVERSEAS COUNTRIES.**

Status: On going. To date nine manuals of a planned series of 20 manuals have been issued to 49 countries. These manuals are:

AEM - Disaster Rescue (3rd Edition)
AEM - Land Search Operations (incorporating Urban Search)
AEM - Flood Rescue Boat Operations
AEM - Storm Damage Operations
AEM - Community Emergency Planning Guide
AEM - Communications
AEM - Road Accident Rescue
AEM - Training Management
AEM - Chain Saw Operation
AEM - Map Reading and Navigation
AEM - Four Wheel Drive Vehicle Operation
AEM - Vertical Rescue

Participating institutions in the country and/or on the international level:

The eight Australian state and territory Emergency Services.
The eight Australian state and territory urban and country/rural fire services.
The eight Australian state and territory Police and Ambulance services.
The Forestry Commission of New South Wales.
The Insurance Council of Australia
Telecom Australia
Broken Hill Proprietary Company Ltd

Costs of project: A \$10,000

Sources of funding: Australian IDNDR Coordination Committee

Implementing agencies: Australian IDNDR Coordination Committee

Address (telephone and fax number) of the agency in charge:

Chairman,
Australian IDNDR Coordination Committee
Emergency Management Australia
P.O. Box 1020
DICKSON ACT AUSTRALIA 2602

Telephone: 61-6-2665408/2576031

Facsimile: 61-6-2571490

5. Plans to fully achieve Decade targets by the end of 1999

(As in 4 above, for each area of activity [i.e., hazard zoning/assessment, monitoring, preparedness, etc] please indicate as applicable, the project title, the participating institutions in the country and/or on the international level, the costs of projects, the sources of funding and the implementing agencies.)

Project No	Activities (Section B4)							Targets (Section B1)		
	a	b	c	d	e	f	g	a	b	c
<i>Projects Completed As at 31 Dec 1993</i>										
4/91						X			X	
1/92							X		X	
5/92						X			X	
1/93							X	X	X	
10/93							X		X	
11/93							X		X	
12/93							X		X	
13/93							X		X	
<i>Projects Continuing into Second Half of Decade</i>										
1/91		X	X		X	X	X			X
2/91	X					X	X		X	
3/91	X		X	X	X	X	X	X	X	
5/91						X	X		X	
2/92						X	X		X	
4/92						X			X	
8/92				X	X	X	X		X	
12/92						X	X		X	
2/93	X					X			X	
3/93						X			X	
14/93						X	X		X	

★ Action Program For Remainder Of Decade (1994 - 2000)

- ♦ It is planned to initiate projects in natural disaster areas that have been identified by reviewing the activities completed in the first half of the Decade and achievements therein. Such projects will continue to be identified with community needs, as per Section B1, Target (b). Of utmost importance is the outcome of mitigation of a hazard through practical strategies - as clearly manifested in Australia's IDNDR progress to date, reported in this Summary.

5. continued.....

- ♦ The further needs of natural disaster mitigation for the Australian community are identified in this future planning. While continuing to provide information for mitigation of the hazards already addressed, assessments of other hazards (both common, such as meteorological, and rare, such as tsunami) will be afforded. This will lead to further mitigation planning. Through extensions of the media programs with specific reference to television, radio and print, community awareness and preparedness will be expanded. Where applicable, such information can be implemented to improve warning procedures.
- ♦ The Decade objective to reduce, through intensive international action, especially in developing countries, the loss of life, property damage and economic disruption caused by natural disasters will continue at the high level as developed by the Australian IDNDR program. Continuing co-operation will be afforded with our South Pacific neighbours in all avenues of the Decade targets. This will be achieved through adaptation of several key hazard assessment methodologies, such as in the meteorological (cyclone, storm surge etc) and geological (earthquakes, tsunamis, volcanoes, landslides etc), to local requirements for local mitigation planning and community awareness.

SECTION C: INTERACTIONS

(This section focuses on international involvement in the IDNDR.)

1. Publications on IDNDR-related subjects:

(e.g. manuals, brochures, bulletins and other publications of relevance to IDNDR. Please mention title, author/institution, place and year of publication)

* *Australian IDNDR Program*

- ♦ Littleton, C.J., 1991:
The International Decade for Natural Disaster Reduction - Australia's Role.
Insurance Council of Australia Ltd, Melbourne, Australia.
ICA Bulletin, May - June 1991, 8-9
- ♦ Littleton, C.J., 1991:
The International Decade for Natural Disaster Reduction - An Australian Point of View.
Multidisciplinary Science Reviews, 16, 1, 10-12
- ♦ STOP Disasters:

No 0 March - April 1990 - Page 10.
Partners in Action - "The Australian IDNDR Coordination Committee"

No 2 July - August 1991 - Page 10.
International Cooperation in Science and Technology

No 5 January - February 1992 - Cover Photo.
Australia's Natural Hazard Zone Map
Page 7.
IDNDR International Day 1991

No 13 May - June 1993 - Page 5-6.
International Cooperation in Science and Technology - "Application of Robust Microcomputer Technology to Tropical Cyclone Warning in the Southwest Pacific"
- ♦ Jones, R., Chatfield, M. and James G., 1992:
Disaster Management Development in the Philippines.
The Macedon Digest, Mt. Macedon, Australia, 7, 3, 10-12

1. continued.....

- ♦ Cheney, N.P., 1991:
Developing an international program to combat natural disasters. In D.I. Smith and J.W. Handmer (Editors), "Australia's Role in the International Decade for Natural Disaster Reduction",
The Australian National University Centre for Resource and Environmental Studies, Canberra, Australia,
Resource and Environmental Studies No 4, 3-8
- ♦ Nix, H., 1993:
Disaster reduction for sustainability. In J.W. Handmer and D.I. Smith (Editors), "Disaster Reduction for Sustainability - World Disaster Reduction Day 1992"
The Australian National University Centre for Resource and Environmental Studies, Canberra, Australia
Resource and Environmental Studies No 6, 1-4
- ♦ Kouzmin, A., 1993:
Creeping Crises and Expert Systems - Planning for environmental disaster capabilities In J.W. Handmer and D.I. Smith (Editors), "Disaster Reduction for Sustainability - World Disaster Reduction Day 1992"
The Australian National University Centre for Resource and Environmental Studies, Canberra, Australia
Resource and Environmental Studies No 6, 5-24
- ♦ Emergency Management Australia, 1993 (Revised):
Australian IDNDR Coordination Committee Project Proposal, Canberra, Australia, 4pp
- ♦ Emergency Management Australia, 1992:
IDNDR Australia and the South West Pacific (pamphlet), Canberra, Australia

★ *Meteorological Hazards (Cyclones, Severe Storms, Storm Surge etc)*

- ♦ Walker, G.R., 1992:
Australian achievements in the mitigation of wind damage to housing from tropical cyclones. In J.W. Handmer and D.I. Smith (Editors), "The International Decade for Natural Disaster Reduction: Australia's role in the South-west Pacific".
The Australian National University Centre for Resource and Environmental Studies, Canberra, Australia.
Resource and Environmental Studies No 5., 1-8
- ♦ Pierrehumbert, C., 1992:
The Bureau and its Warning Roles.
The Macedon Digest, Mt Macedon, Australia, 7,2,11.

1. continued.....

- ♦ Smith, D.I. and Greenaway, M.A., 1993:
Tropical Storm Surge, damage assessment and emergency planning - A pilot study for Mackay, Queensland. Report to Emergency Management Australia Australian IDNDR Co-ordination Committee, Project 9/92, Canberra, Australia, 51pp.
- ♦ Holland, G.J., Mcgeer, T. and Youngren, H., 1992:
Autonomous aerosondes for economical atmospheric soundings anywhere on the globe.
Bulletin of the American Meteorological Society, 93, 1987 - 1998.
- ♦ Salter, J., Bally, J., Elliott, J. and Packham, D., 1993:
Vulnerability and Warnings.
In P.A. Perryman and C.W.A. Browitt (Editors), Proceedings of the Conference "Natural Disasters: Protecting Vulnerable Communities", held in London, United Kingdom, 13-15 October 1993, 119-129.

★ *Flood Hazard*

- ♦ Smith, D.J., 1991:
The potential to reduce losses from flooding in Australia.
In D.I. Smith and J.W. Handmer (Editors), "Australia's Role in the International Decade for Natural Disaster Reduction"
The Australian National University Centre for Resource and Environmental Studies, Canberra, Australia, Resource and Environmental Studies No 4, 23-33.

★ *Earthquake Hazard*

- ♦ Rynn, J.M.W. 1991:
The potential to reduce losses from earthquakes in Australia.
In D.I. Smith and J.W. Handmer (Editors), "Australia's Role in the International Decade for Natural Disaster Reduction"
The Australian National University Centre for Resource and Environmental Studies, Canberra, Australia, Resource and Environmental Studies No 4, 9-21.
- ♦ Rynn, J.M.W. and Hughes, P.R. 1991:
Report on Seismic Zonation and its Application to Earthquake Mitigation in Australia, and Attendance at the 4th International Conference on Seismic Zonation, 26-30 August 1991, at Stanford University, USA.
The Centre for Earthquake Research in Australia, Brisbane, Australia, Publication, October (1991), 16pp (with Appendices).

1. continued.....

- ♦ Rynn, J.M.W. 1992a:
Interim Report on "Project 3/91: Earthquake Zonation of Urbanised Areas of Australia Phase 1 - 1992 Program: Earthquake Zonation for City of Sydney and Environs".
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- ♦ Lucas-Smith, P., 1993:
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- ♦ Emergency Management Australia, 1991:
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- ♦ Emergency Management Australia, 1993:
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- ♦ Bureau of Meteorology, 1990:
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* ***Training and Education***

- ♦ Lidstone, J. and Wilson, P. (Editors) 1993:
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- ♦ Emergency Management Australia - Australian Emergency Manuals (AEM), Canberra, Australia
 - AEM - Disaster Rescue (3rd Edition)
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- ♦ United Nations, Department of Humanitarian Affairs, 1992:
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* ***With Reference to South West Pacific***

- ♦ Blong, R.J., 1992:
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- ♦ Emergency Management Australia, 1992:
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Australian IDNDR Co-ordination Committee of Emergency Management
Australia Publication, Canberra, Australia, 117pp.
- ♦ Emergency Management Australia, 1993:
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Australian IDNDR Co-ordination Committee of Emergency Management
Australia Publication, Canberra, Australia, 65pp.
- ♦ Solomon Islands National Disaster Council and Emergency Management Australia, 1993:
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Guide: Saeklon Akson Gaed.
- ♦ Vanuatu National Disaster Management Office and Emergency Management Australia, 1993:
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Posta: Ol Saeklons Oli Serios
Guides: Vanuatu Cyclone Safety Procedures - Ol Sefti Prosija Blong Saeklons Long Vanuatu.
- ♦ Vanuatu National Disaster Management Office and Emergency Management Australia, 1993:
Disaster Damage Assessment Form "Disasta Damej Asesmen Fom - Rural Eria", 2pp.

2. IDNDR meetings and conferences held or planned:

(Please indicate, date, location, organising agency, national and international participation.)

* Meetings Held and Attended:

- ♦ 1989 Apr 21 Canberra Prime Minister announces formation of Committee
- ♦ 1989 Jul 25 Canberra Ad-hoc IDNDR Meeting by Natural Disaster Organisation (NDO) to establish Australian Committee.
- ♦ 1990 Feb 11-13 Mt Macedon Launch of IDNDR for Australia

* Australian IDNDR Coordination Committee Meetings:

- ♦ 1989 Nov 16 Canberra
- ♦ 1990 Mar 22 Canberra
- ♦ 1990 Aug 16 Canberra
- ♦ 1991 Mar 01 Canberra International guest from New Zealand
- ♦ 1991 Jun 13 Canberra
- ♦ 1991 Sep 06 Canberra International guest Mr J Bruce, Chairman IDNDR/STC
- ♦ 1992 Mar 26 Canberra
- ♦ 1992 Oct 15 Canberra International guest from Vanuatu
- ♦ 1993 Mar 25 Canberra
- ♦ 1993 Oct 14 Canberra International guest from Fiji

* Australian IDNDR Project Sub-committee Meetings:

- ♦ Four meetings held in Canberra on 27 Aug 1991, 14 Apr 1992, 26 Aug 1992, 20 May 1993.

* Annual World Disaster Reduction Day Seminars:

- ♦ Organised jointly by Emergency Management Australia and the Australian National University Centre for Resource and Environment.
- ♦ 1990 Oct 10 Canberra "Australia's Role in the IDNDR".
- ♦ 1991 Oct 12 Canberra "The IDNDR - Australia's Role in the South-West Pacific".

2. continued.....

- ♦ 1992 Oct 14 Canberra "Disaster Reduction for Sustainability"
International Guest from Vanuatu (Chief
Inspector Knox Kalkaua, Director Vanuatu
National Disaster Management Office)
- ♦ 1993 Oct 13 Canberra "Education for Disaster Reduction" International
Guest from Fiji (Mr Luke Ratuvuki, Chairman,
Fiji IDNDR Committee)

* Meetings of the Scientific and Technical Meetings for the IDNDR.

Attended by Chairman, Australian IDNDR Co-ordination Committee (Commodore C J Littleton):

- ♦ 1992 Mar 16-20 3rd Session Geneva, Switzerland
- ♦ 1993 Feb 3-5 4th Session New Delhi, India
- ♦ 1993 Nov 22-24 5th Session Geneva, Switzerland

* Conferences, Seminars, Workshops organised/attended by Australian IDNDR Committee Members.

- ♦ 1991 Feb 11-15 ESCAP/UNDRO Regional Seminar on IDNDR,
Bangkok, Thailand
- ♦ 1991 Mar 26-28 Regional Seminar on "The Strengthening of Disaster
Management in the South Pacific", Fiji
- ♦ 1991 Aug 26-30 4th International Conference on Seismic Zonation,
Stanford University USA
- ♦ 1991 Aug 31 1st International Forum on Seismic Zonation, Stanford
University, USA
- ♦ 1992 May 11-14 South West Pacific Disaster Managers Workshop,
Honiara, Solomon Islands
- ♦ 1992 Sep 20-28 7th International Seminar on Earthquake Prognostics,
Bangkok, Thailand
- ♦ 1992 Nov International Workshop on the Application of Space
Technologies to Disaster Management, New Delhi, India
- ♦ 1993 International Forum on Hazard Mapping, Japan
- ♦ 1993 Feb 8-11 World Seismic Safety Initiative (WSSI) of the
International Association of Earthquake Engineers
(IAEE) Inaugural Meeting, Bangkok, Thailand
- ♦ 1993 Apr 4-6 "Uncovering the Mysteries", Workshop on 1989
Newcastle Earthquake, Newcastle, Australia
- ♦ 1993 May 1-5 US National Earthquake Conference, Memphis, USA
- ♦ 1993 Jun 27-Jul 3 Seventh Pacific Science Inter-Congress, Pacific Science
Association Okinawa, Japan

2. continued.....

- ♦ 1993 Aug 25 AURISA - Australian Urban and Regional Information Association "Hazard Information Forum", Canberra Australia
- ♦ 1993 Aug 25-26 South West Pacific Regional Meeting of IDNDR Committee Representative, Port Vila, Vanuatu
- ♦ 1993 Nov 12-Dec 9 Visits to South Pacific nations to prepared Regional Report for World IDNDR Conference 1994

★ Meetings, Conferences Planned:

- ♦ 1994 Jan 9-20 IASPEI International Association of Seismology and Physics of the Earth's Interior, 27th Meeting, Wellington, New Zealand.
- ♦ 1994 May 23-27 World IDNDR Conference, Yokohama, Japan
- ♦ 1994 Aug South West Pacific Regional Workshop, Suva Fiji
- ♦ 1994 Aug WSSO forum South Pacific, Suva, Fiji
- ♦ 1994 Oct 13 World Disaster Reduction Day, Adelaide, Australia

3. Current or planned partnerships and cooperation related to IDNDR with other countries

(Please indicate Governments, National Committees, Institutions or Organisations involved.)

- ★ Cooperative programs and discussions continue to expand with Governments and National Committee of the island nations of the South Pacific (Palau, Marshall Island, Papua-New Guinea, Solomon Islands, Vanuatu, New Caledonia, Fiji, Western Samoa, Cook Islands, New Zealand.
- ★ Australian Emergency Manuals (AEM) have been distributed to 49 countries worldwide, totalling 2200 copies.
- ★ Through several specific projects, close cooperative efforts are in place with several overseas and international institutions and organisations. In relation to the Australia IDNDR Projects, these include:
 - ♦ Meteorology - WMO
 - ♦ Earthquake Zonation Mapping - World Seismic Safety Initiative (WSSI), US Geological Survey, Asian Disaster Preparedness Centre (Bangkok), INCEDE (Tokyo) and IASPEI Commission for IDNDR
 - ♦ Hazards Mapping - US Geological Survey, International Vulcanological Association
 - ♦ Many of the projects also have close contact with relevant academic institutions overseas.