

# EMA Research & Innovation Program

The EMA Projects Program is aimed at fostering projects that help improve Australia's capabilities for preventing or dealing with natural or technological hazards and disasters.

Please be advised that the EMA Projects Program has now been replaced by the EMA Research and Innovation Program. Information on this new funding initiative is available on the EMA website [www.ema.gov.au](http://www.ema.gov.au) or by contacting Rheannon Nicholson, Co-ordinator Development Projects, (02) 6256 4614 or [rheannon.nicholson@ema.gov.au](mailto:rheannon.nicholson@ema.gov.au)

## Field trial of WARPS in two Australian states

*Maureen Norman – CEO, WARPS Australia Pty Ltd*

This final project report describes Project 02/03: "Field Trial of WARPS" (Wireless Automated Response Positioning System) in two Australian States:

An innovative hands-free radio-tracking technology". WARPS was purpose-designed to reduce known risks to volunteer fire fighters, and the Report provides a review of the operational effectiveness and benefits of the technology during trials with rural fire services in New South Wales and Australia. The Trial Report considers the implications of the technology for all emergency services regardless of their primary function, and describes its acceptance by volunteers and management, and transferability to other agencies.

The EMA trial of WARPS was conducted with four rural fire service brigades in Gosford, NSW and five brigades across Mt Lofty Ranges, SA over a period of four months (1 December 2003–31 March 2004). WARPS units were installed in a range of vehicles (urban and rural pumpers and tankers, rescue and command vehicles). WARPS software was installed on standalone computers at local operation headquarters. Following installation each rural fire service continued operations as usual.

Technical viability was assessed using a range of parameters, including accuracy, functionality in poor radio signal areas and variance in radio communications infrastructure. Volunteer and management feedback was assessed during post-trial using notebooks and interviews. Operational data were collected from both sites using the AIIMS database, to identify the number and types of incidents attended. A comprehensive literature search was conducted, with a focus on recommendations from previous Bushfire Inquiries, the limitations of radio infrastructure, and workplace safety/legal liability issues. Discussions with and presentations

to other emergency service organisations provided an opportunity to assess WARPS capacity to assist a wider range of agencies.

The EMA trial demonstrated that WARPS technology delivers a uniquely simple, elegant and problem-specific resolution to communications and workplace safety problems common to all emergency service organisations (ESOs), particularly those based in rural areas typically marginalised in terms of accessing viable new technology.

WARPS provides the means to achieve national interoperability for vehicle location, by delivering the key enabling technology required for all ESOs to locate, monitor and deploy vehicles using their existing radio network architecture, with minimal cost and maximum resource efficiency.

The trial identified issues of importance to managers and suppliers of emergency service radio network services, and to State/Territory and Federal bodies responsible for ensuring the rapid, effective deployment of resources to major incidents.

Discussion of the trial findings goes beyond the use of WARPS with rural fire services. It assesses WARPS validity as a management tool across the spectrum of emergency service response capacity as part of the counter-terrorism environment that all emergency service organisations (ESOs) function in 2004. It considers the implications for EMA and all levels of Government involved in counter-terrorism planning, preparedness, response and recovery across State and Territory borders in light of the wide variation in radio communications infrastructure which currently exists from State to State.

# RESULTS OF AJEM SURVEY 2004

In March 2004 a survey was sent to our subscribers asking for feedback on the *Australian Journal of Emergency Management* (AJEM). A total of 36.6 percent of our readers responded to the survey, providing valuable suggestions, thoughts and opinions on the relevance of AJEM to its readership and what opportunities existed for its future evolution.

The Editorial Advisory Committee was delighted with the high level of survey returns and have provided these results as a general guide to the survey responses.

## AJEM format

Each issue of the Journal contains regular features that include the EMA Updates, Conference Diary, Notes from the Field, Historical Snapshot, and Interesting Websites. The survey revealed that the most popular of these regular features was the EMA Updates and the Notes from the Field.

The editors welcome contributions for consideration for publication in the Notes from the Field feature.

Although we live in a technological age, 82 percent of responses indicated a clear preference for the printed version of AJEM over an electronic version, archived to the EMA website.

The survey indicated that the Journal is largely successful in catering to its varied audiences. Its aim for a blend of articles in each issue that appeals to a diverse audience from academics to practitioners, appears generally well received by our readership.



## Content

The production of a quality Journal involves an editorial process that often results in a 'lag' of information to its readership. Despite this process, it was pleasing to note that over 55 percent of respondents considered AJEM contained timely information that was well written and nearly 90 percent believed it contained information relevant to their work.

## Readership extension

The survey asked if readers would recommend AJEM to their colleagues. It is very encouraging to see that 96 percent of respondents indicated that they would or currently do recommend AJEM to colleagues and associates.

Over 70 percent of survey respondents indicated that they retained the Journal as a resource and referred to it on a regular basis. Respondents indicated that the Journal was used in planning, training, education, exercise management, and presentations as

well as a range of other uses. This has resulted in the introduction of an annual index of AJEM articles to be published in the last AJEM for each Volume to assist the easy referencing to past articles. The index for Volume 19 is included in this issue.

## Article submission

To maintain the quality of AJEM content and its relevance to the readership and industry, AJEM has comprehensive submission guidelines to assist authors. These are available at <http://www.ema.gov.au/agd/EMA/emaInternet.nsf/Page/AJEM>. Assistance with capturing your story in print is available if required.

## Conclusion

The *Australian Journal of Emergency Management* is regarded as the principal or prime source of information for the emergency management sector within Australia. It is the only regular, comprehensive, multi-disciplinary publication of its type and is regarded by its readership as a reliable and credible source of information covering the full spectrum of emergency management.

The AJEM Advisory Committee thanks those who took the time and gave thoughtful feedback in this survey. It is these valuable comments and suggestions that inform the future direction of the Journal.

# EMA Update

Emergency Management Australia provides national leadership in the development of measures to reduce risk to communities and manage the consequences of disasters. EMA Update keeps AJEM readers abreast of the courses and activities that assist in this aim.

## KNOWLEDGE MANAGEMENT & BUSINESS

### Community awareness

The revised *Lightning Action Guide* is now available for distribution. This guide is the sixth in the series and provides helpful safety tips during a lightning storm. The guide is DL (1/3 A4) in size and printed on self adhesive card. A limited number of print copies are available from EMA and it is accessible via the EMA website.

### Australian Emergency Manual series

Emergency Planning (manual number 43) is the latest addition to the series. Although this manual focuses primarily on planning needs at the community level the processes adopted in this manual are equally applicable to emergency planning at all levels including corporate planning.

The revision of *Commonwealth Counter Disaster Concepts and Principles* is nearly complete. This revised publication had input from all States and Territories and reflects a national approach to emergency management concepts and their application. It supports the Prime Minister's commitment that protecting Australia is the Government's highest priority and emergency management is a critical component of this approach.

Designed to be the introductory volume in the *Australian Emergency Manual Series*, the primary audience includes members of emergency management organisations and their supporting agencies as well as those who are planning a career in emergency management.

*Emergency Risk Management—Applications Guide* has also been revised. This manual was first published in 2000 to provide a comprehensive guide to Emergency Risk Management (ERM) and how it is applied at the community level. This revised Guide is timely as it follows publication of the 2004 *Risk Management Standard* AS/NZS 4360 on which ERM is based and includes the growing body of experience in the application of ERM. In 2000 the ERM process was in its infancy and therefore the Guide was theoretically based. Now that ERM is a proven and accepted process, this version has a user-friendly structure and reflects the latest in emergency management thinking and practice.

Most manuals within the series are freely available for download from the EMA website. Limited print copies may also be available.

For further information contact Cate Moore  
Phone: 03 54 21 5296; email: [cate.moore@ema.gov.au](mailto:cate.moore@ema.gov.au)

### EMA library

The EMA Library collection has expanded over the last year with over 700 new items added to the collection including books, reports, videos and emergency management plans. In addition, the library team indexed more than 400 journal articles which are searchable via the new library catalogue. To keep up-to-date with the latest library additions visit the online library catalogue via the EMA Library webpage and click the 'New items list'.

The library is implementing a number of new initiatives in 2005 to further develop client online services. There is a range of electronic full-text databases available online to registered library members via the library webpage. These databases provide access to over 5,000 journals, with full-text available on most journals. Also available is a selection of full-text newspapers and newswires from Australia and New Zealand covering a range of regional and international topics. Registered library members can obtain a username and password for these resources by contacting the library.

For further information contact Troy Watson  
Phone: 03 5421 5223, email: [troy.watson@ema.gov.au](mailto:troy.watson@ema.gov.au)

### Australian Disasters Information Network (AusDIN) portal group

The AusDIN Portal Group is progressing a project plan to build a national Emergency Management Portal. At the last meeting in Brisbane in November 2004 a project plan and interim funding were agreed and sub-groups were formed to progress various aspects of development. Phase 1 of the portal is scheduled to go live in May/June 2005.

### AusDIN working group

The future direction of the AusDIN Working Group is currently the subject of a discussion paper given changes in jurisdictions and the emergency management environment generally. This paper has aroused interest, and further discussions with members will be held in the first quarter of 2005.

## KNOWLEDGE MANAGEMENT & BUSINESS CONT

A meeting will be organised in the first half of the year. Issues for consideration at this meeting may include the Emergency Management Mapping Project, development of the AusDIN Portal, the Australian Bureau of Statistics Emergency Management Information Development Plan (ABS EMIDP), and national issues noted by Australasian Libraries in the Emergency Sector (ALIES) and Emergency Management Spatial Information Network Australia (EMSINA).

### The Emergency Management Mapping Project

The aim of the Emergency Management Mapping Project is to identify all Government and National, State and Territory groups and committees working in emergency management within Australia. Queensland is the pilot State with others to follow in the future. Stage one is scheduled to be completed by the end of March 2005.

*For further information contact John Laurie  
Phone: 03 5421 5280; email: john.laurie@ema.gov.au*

### Website

The EMA website has maintained a strong presence on the web, with a peak of 36,000 visits during December 2004 – 59 percent coming from overseas with the USA being the largest origin of visitors. Tsunami information available on the EMA schools website was responsible for much of this increase. During the tsunami crisis visitors were directed to the Australian Government's "tsunamiassist" website for immediate assistance.

In response to the tsunami disaster new material was developed by a nation-wide group of educationalists and emergency management experts to assist school communities in dealing with student responses to this event.

### Disasters database

Working with other government agencies and organisations, EMA has commenced a project to enhance the information contained in the database and to increase its effectiveness and scope as a community information source.

*For further information contact John Haydock  
Phone: 03 5421 5297; email: john.haydock@ema.gov.au*

## EDUCATION & TRAINING

### School education

In 2005 EMA will employ a full-time School Curriculum Officer to liaise with education and emergency management specialists to support integration of emergency management issues into the school curriculum. The School Curriculum Officer's duties will include developing effective networks in the schools sector and development and maintenance of the school education web-site. EMA will establish a national reference group to assist in this important work.

*For further information contact Judy Parker  
Email: judy.parker@ema.gov.au*

### Community engagement

Community engagement is an enabling skill in the national emergency management competency standards and is often cited by our clients as an area where they would like further skill development. In response to this need, EMA is in the process of recruiting a Senior Education Officer with knowledge and skills in community engagement.

*For further information contact Margery Webster  
Phone: 03 5421 5283; email: margery.webster@ema.gov.au*

### Graduate Certificate in Emergency Management

In November 2004 candidates from the first intake of the Graduate Certificate in Emergency Management attended the residential component of the second module. A number of leading thinkers in the field of emergency management in Australia presented their own and related research to introduce current issues and trends in the field of emergency management.

In December, 25 candidates were selected for the second intake. The standard of applications was high and represented the broad field of emergency management. In addition to the emergency services, candidates were from the utilities, local government, health, human services and agriculture.

*For further information contact Mike Tarrant  
Phone: 03 5421 5219; email: mike.tarrant@ema.gov.au*

## EDUCATION & TRAINING CONT

### **Advanced Diploma in Public Safety (Emergency Management)**

A pilot program of the Advanced Diploma in Public Safety (Emergency Management), delivered over two years, commenced in February. To achieve the award candidates must complete six core and five elective competency standards. A full range of competencies is available at [www.ntis.gov.au](http://www.ntis.gov.au). The electives for the EMA pilot were selected in consultation with States and Territories. The *2005 EMA Institute Handbook*, available at [www.ema.gov.au](http://www.ema.gov.au), includes more information about the program and a table showing the range of qualifications in the Public Safety Training Package which includes the competency standards delivered by EMA.

*For further information contact Mike Tarrant  
Phone: 03 5421 5219; email: [mike.tarrant@ema.gov.au](mailto:mike.tarrant@ema.gov.au)*

### **Competency standards for recovery management**

Consultations are currently underway to identify competency standards for Recovery Management. Consultations were held in South Australia, Perth, Victoria and Tasmania in February with a second round of consultations for NSW, Queensland, Northern Territory and ACT in July. The Project is due for completion in September 2005.

*More information is available at [www.ema.gov.au](http://www.ema.gov.au)*

### **Tsunami assist**

Led by the Planning and Operations Group, EMA staff members are actively involved in co-ordinating Australia's assistance to the areas affected by the Asian tsunami. Lessons learned from work in the National Emergency Management Coordination Centre and from EMA Liaison Officers posted overseas will be captured to provide a valuable context for EMA programs in 2005.

## DEVELOPMENT

### **Emergency Management Volunteers Summit 2005**

Planning is in its final stage for the *Emergency Management Volunteers Summit 2005* to be held in Canberra 6-7 April 2005 with nominations closed in December 2004. The themes for the 2005 Summit are 'Drivers for Change' and 'Enhancing Links to Further Benefit Volunteers & Their Communities'. This year's Summit builds on initial aims and objectives from the 2001 Summit with the overarching goal of developing a stronger volunteer sector – nationally. That goal already has the strong support of the Australian Government Attorney-General, the Hon Philip Ruddock MP, who has portfolio responsibility for emergency management. The Summit will be officially opened by the Governor-General Michael Jeffery AC CVO MC (Retd).

*For further information contact Justine Rixon  
Phone: 02 6256 4616; email: [justine.rixon@ema.gov.au](mailto:justine.rixon@ema.gov.au)*

### **Emergency Management 'Volunteers in Action' photographic competition**

The Volunteers in Action photographic competition closed on 14 February 2005. The judging panel is made up of representatives from the volunteer emergency management community and the photography profession. They are currently evaluating the hundreds of entries EMA received. Winners will

be announced at the *Emergency Management Volunteer Summit 2005* held in Canberra 6–7 April. EMA would like to thank all those who entered the competition and wish you all good luck. EMA hopes the photographic competition goes some way to showing that volunteers in this sector are not taken for granted.

### **COAG report on natural disasters in Australia—reforming mitigation, relief and recovery arrangements**

This landmark report has examined the ways in which Australia's national capacity to mitigate natural disasters and to manage their effects could be improved. It made a total of 12 Reform Commitments and 66 Recommendations for Action. The report can be downloaded from [http://www.dotars.gov.au/ndr/nat\\_disaster\\_report/naturaldis.pdf](http://www.dotars.gov.au/ndr/nat_disaster_report/naturaldis.pdf).

The Council of Australian Governments (COAG) gave in-principle approval to this Report in December 2003. Since then there has been considerable work by governments and agencies, seeking to respond to the report beyond the 'in-principle' stage, by examining in detail the report's commitments and recommendations. The Australian Emergency Management Committee (AEMC) has been reconstituted, as recommended by the Report, and the new national Ministerial Council, the Augmented Australasian Police Ministers' Council (A/APMC) will meet for the first time in March 2005.



## DEVELOPMENT CONT

This meeting will involve the Ministers responsible for emergency management in each jurisdiction. From an Australian Government agencies' point of view, EMA provides a secretariat and reporting service to eight working groups set up to develop the federal response to the Report. They will report via the AEMC to the A/APMC.

*For further information contact Helen Righton  
Phone: (02) 6456 4675; email: helen.righton@ema.gov.au*

### **Bushfire awareness and preparedness day initiative**

On 8 September 2004, the Prime Minister announced a funding allocation of \$24 million over three years to assist local communities to better prepare for bushfires. Part of this funding package comprised \$6 million over three years towards the establishment of Bushfire Awareness and Preparedness Day activities. The funding for this initiative will be managed by EMA. EMA has commenced a consultative process with State and Territory representatives, the Bushfire CRC, and Federal Government representatives and instigated preliminary discussions with relevant AFAC subcommittee representatives. Both the National Community Safety Working Group (reporting to AEMC) and the Australian Government Community Safety Working Group (feeding into the monitoring processes for the COAG Natural Disasters Report) have been alerted to these current developments and invited to contribute.

*For further information contact Li Peng Monroe  
Phone: 02 6256 4610 ; email: lipeng.monroe@ema.gov.au*

### **2004 Australian Safer Communities Awards**

The 2004 Australian Safer Communities Awards ceremony was held at the Mural Hall, Parliament House, Canberra on Thursday, 2 December, 2004. The Attorney-General announced the national winners of the Awards at the ceremony. The Awards recognise best practice and innovation that help to build safer communities. They cover organisations and individuals working in risk assessment, research, education and training, information and knowledge management, prevention, preparedness, response, and recovery. Details of the awards including information on past years' winners are also available on the EMA website—[www.ema.gov.au](http://www.ema.gov.au).

### **EMA Research and Innovation Program 2004/2005**

The EMA Research & Innovation Program 2004/2005 is focusing on nationally determined priorities for research and innovation in emergency management. The Program aims to facilitate the capture and transfer of innovative practice and disaster research outcomes across the sector. From the 84 applications received for financial year 2004/2005, the Program will provide funding for six projects from a range of locations across Australia. The projects encompass a wide range of topics including volunteer issues, assessment tools and the assessment of flood mitigation devices. The projects are outlined on the EMA website. Completed projects from EMA's past funding program – EMA Projects Program – are also located on the EMA website in the research category, and are available for loan from the EMA Library at Mt Macedon, Victoria.

*For further information contact Rheannon Nicholson  
Phone: 02 6256 4614;  
email: rheannon.nicholson@ema.gov.au*

#### **Erratum:**

The November 2004 edition of the Journal included an article by Annabelle Beckenham and Susan Nicholls entitled *Government communication strategies for the community recovery following the ACT Bushfires, January 2003*. The diagram on page 74 reflects the Recovery Communication Model devised from the research. The box labeled 'CCRG' should read 'CERG'. There is no change to the box labeled 'Secretariat (CCRG)'.

# CONFERENCE DIARY

Conference details are sourced from the EMA website.  
For more information about these and future conferences, visit [www.ema.gov.au](http://www.ema.gov.au)

## INTERNATIONAL 2005 March

### 2-4 March

Location	Miami, FL
Title	A Conference on America's Beaches: Current Issues in Beach Management, Tourism, and the Coastal Environment.
Details	This conference will focus on overlapping contemporary social and scientific issues facing beach managers as scientists, marketers, citizens, and policy makers face the tough challenges of coastal life today. Topics include beach management and tourism, beach management in the face of coastal disasters, and beach management and the environment.
Enquiries	The International Hurricane Research Center, Florida International University, University Park Campus, MARC 360, Miami, FL 33199. tel: (305) 348-1339; email: <a href="mailto:defraene@fiu.edu">defraene@fiu.edu</a> web: <a href="http://www.ihrc.fiu.edu/">http://www.ihrc.fiu.edu/</a> .
Sponsor	International Hurricane Research Center.

### 21-23 March

Location	The Netherlands
Title	The First International Symposium on Geo-Information for Disaster Management.
Details	This symposium will focus on the response and relief phases of disaster management, encouraging a wide discussion on systems and requirements for use of geo-information under time and stress constraints and unfamiliar situations, environments and circumstances. It will address these challenges by bringing together technology developers, disaster management bodies, information providers, developers of standards, and users.
Enquiries	Elfriede M. Fendel, P.O. Box 5030 2600 GA, Delft, The Netherlands tel: +31152784548 email: <a href="mailto:e.fendel@otb.tudelft.nl">e.fendel@otb.tudelft.nl</a> web: <a href="http://www.gdmc.nl/gi4dm/">http://www.gdmc.nl/gi4dm/</a> .
Sponsor	Delft.

### 21-25 March

Location	New Orleans, Louisiana
Title	2005 National Hurricane Conference
Details	
Enquiries	web: <a href="http://www.hurricanemeeting.com/">http://www.hurricanemeeting.com/</a> .
Sponsors	American Association for Wind Engineering, Federal Emergency Management Agency, American Red Cross, Institute for Business and Home Safety

### 4-8 April

Location	Kansas City, Missouri
Title	Mass Fatalities Incident Response Planning
Details	This course addresses the essential elements of planning for response to a mass fatalities event. It is designed to help planning-level officials from various governmental jurisdictions, public service, private sector business, and voluntary organizations understand the concepts of a multifaceted, integrated response plan.
Enquiries	National Mass Fatalities Institute, 6301 Kirkwood Boulevard SW, Cedar Rapids, IA 52404 tel: (319) 398-7122 email: <a href="mailto:nmfi@kirkwood.edu">nmfi@kirkwood.edu</a> web: <a href="http://www.nmfi.org/events.htm">http://www.nmfi.org/events.htm</a>
Sponsor	National Mass Fatalities Institute

### 5-9 April

Location	Denver, Colorado
Title	Association of American Geographers (AAG) Annual Meeting.
Details	This professional and scholarly meeting typically features a variety of hazards- and disaster-related sessions and provides attendees with the opportunity to network with colleagues, discover new developments in geography, and learn about cutting-edge research.
Enquiries	AAG, 1710 16th Street NW, Washington, DC 20009 tel: (202) 234-1450 email: <a href="mailto:meeting@aag.org">meeting@aag.org</a> web: <a href="http://www.aag.org/annualmeetings/index.cfm">http://www.aag.org/annualmeetings/index.cfm</a> .

## INTERNATIONAL 2005 April

### 12–14 April

Location	Lafayette, Louisiana
Title	Progress in Understanding Coastal Land Loss and Restoration In Louisiana: The W. Alton Jones Foundation Report Revisited.
Details	This symposium will focus on recent scientific and technological developments that provide insight into the causes of land loss, the consequences of the rapid changes during the twentieth century, and predicting the outcomes of system-scale restoration efforts. While the focus is on coastal Louisiana, discussion of important findings from other systems will be integral to the symposium program.
Enquiries	University of Louisiana Lafayette, Continuing Education, CREST Symposium 2005, P.O. Box 42411, Lafayette, LA 7050 tel: (337) 482-5712 web: <a href="http://www.gulfcrest.org/activities.htm">http://www.gulfcrest.org/activities.htm</a> .
Sponsors	National Oceanic and Atmospheric Administration, U.S. Army Corps of Engineers, U.S. Geological Survey, and Louisiana Governor's Applied Coastal Science Program.

### 13–15 April

Location	Algarve, Portugal
Title	Coastal Engineering 2005.
Details	Scientists and engineers involved in the study and use of computational methods for coastal engineering problems are invited to attend this conference, which will address the study of seas and coastal regions under normal and extreme conditions, emphasizing the practical applications. Discussions will also take place on environmental problems of coastal areas, which are frequently densely populated or sites of industrial development. Abstracts are due as soon as possible.
Enquiries	Rachel Green, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton, SO407AA, UK tel: +44 (0) 238 029 3223 email: <a href="mailto:rgreen@wessex.ac.uk">rgreen@wessex.ac.uk</a> web: <a href="http://www.wessex.ac.uk/conferences/2005/coastal2005/">http://www.wessex.ac.uk/conferences/2005/coastal2005/</a> .
Sponsors	Wessex Institute of Technology, University of Coimbra

### 17–20 April

Location	Kansas, City, MO
Title	2005 APWA North American Snow Conference
Details	More than 30 education and technical sessions and roundtables at this conference will address a variety of topics including snow plowing procedures, new salt applications, anti-icing and de-icing, AVL/GPS/GIS, winter pavement maintenance, fleet responsibilities in a disaster, new technologies, snow removal, winter vehicle maintenance, and more.
Enquiries	APWA, P.O. Box 802-296, Kansas City, MO 64180 tel: (816) 472-6100 email: <a href="mailto:snow@apwa.net">snow@apwa.net</a> web: <a href="http://www.apwa.net/meetings/snow/2005/">http://www.apwa.net/meetings/snow/2005/</a> .
Sponsor	American Public Works Association (APWA)

### 18–20 April

Location	Brussels, Belgium
Title	ISCRAM 2005: Second Annual Conference on Information Systems for Crisis Response and Management
Details	Tilburg ISCRAM2005 will bring together designers, developers and users of information systems that support crisis-related activities, such as planning and training for crisis response, responding to a crisis, and performance evaluation. Organizers welcome academic and industry researchers, practitioners, and policy makers.
Enquiries	ISCRAM email: <a href="mailto:iscram2005@uvt.nl">iscram2005@uvt.nl</a> web: <a href="http://www.sckcen.be/iscram">http://www.sckcen.be/iscram</a> .
Sponsors	University, Nuclear Research Center SCK-CEN, Royal Flemish Academy of Belgium for Science and the Arts, New Jersey Institute of Technology.

### 19–21 April

Location	New York, New York
Title	The 16th Global Warming International Conference.
Details	A variety of topics related to global warming will be addressed at this conference, including global warming science and policy, extreme events and impact assessment, and human health in a changing climate.
Enquiries	James A. Roberts, GWXVI International Program Committee, P.O. Box 5275, Woodridge, IL 60517 email: <a href="mailto:jroberts@globalwarming.net">jroberts@globalwarming.net</a> web: <a href="http://www.globalwarming.net/">http://www.globalwarming.net/</a>
Sponsor	Global Warming International Center



## 24–26 April

Location	Santa Fe, New Mexico
Title	ASDSO 2005 West Regional Conference
Details	This regional conference will be geared toward dam safety engineers and dam owners/operators in the Western states. Both technical and nontechnical topics will be included on the agenda.
Enquiries	ASDSO, 450 Old Vine Street, Floor 2, Lexington, KY 40507 tel: (859) 257-5140 email: <a href="mailto:info@damsafety.org">info@damsafety.org</a> web: <a href="http://www.damsafety.org/">http://www.damsafety.org/</a>
Sponsor	Association of State Dam Safety Officials (ASDSO)

## 24–29 April

Location	Vienna, Austria
Title	European Geosciences Union General Assembly 2005
Details	Open to scientists of all nations, this assembly will include union symposia, oral and poster sessions on disciplinary and interdisciplinary topics covering the full spectrum of the geosciences and space and planetary sciences, short courses and workshops, key note and medal lectures, and town hall and splinter meetings
Enquiries	EGU Office, Max-Planck-Strasse 13, 37191 Katlenburg-Lindau, Germany tel: +49-5556-1440 email: <a href="mailto:egu@copernicus.org">egu@copernicus.org</a> web: <a href="http://www.copernicus.org/EGU/ga/egu05/index.htm">http://www.copernicus.org/EGU/ga/egu05/index.htm</a>
Sponsor	European Geosciences Union (EGU)

## AUSTRALIA

### 17–18 March

Location	Perth, Western Australia
Title	2005 West Australian Emergency Management Conference: Bridging the Gap Between Crisis and Consequence Management.
Details	The conference seeks to explore the relationship between crisis and consequence management as it applies to the field of emergency management. It provides new ideas and approaches to problem solving in emergency management; leading edge and topical presentations from international and local speakers; and opportunities to network with key individuals and organisations across the emergency management industry.
Enquiries	Management Conference FESA Emergency Management Services PO Box P1174 PERTH WA 6844. tel: +61 8 9323 9418 fax: +61 8 9323 9462 email: <a href="mailto:ssmith@fesa.wa.gov.au">ssmith@fesa.wa.gov.au</a> web: <a href="http://www.ems.fesa.wa.gov.au">http://www.ems.fesa.wa.gov.au</a>
Sponsor	Fire and Emergency Services Authority of Western Australia, Government of Western Australia.

### 12 April

Location	Canberra
Title	2005 Humanities—Security & Counter-Terrorism Research Forum
Details	The Research Forum will showcase a range of important projects from the humanities and social science disciplines that are making a significant contribution to safeguarding Australia. The Forum is not a conference as formal papers are not presented. Instead presenters will provide sufficient information on their work to enable the audience to understand their research work and why it is important.
Enquiries	tel: + 61 2 6161 5143 fax: +61 2 6161 5144 email: <a href="mailto:athol.yates@homelandsecurity.org.au">athol.yates@homelandsecurity.org.au</a> web: <a href="http://www.homelandsecurity.org.au/humanit">www.homelandsecurity.org.au/humanit</a>
Sponsors	Australian Homeland Security Research Centre and the Australian Academy of the Humanities  2005 Safeguarding Australia Summit, Canberra, 12–14 July 2005  Organised by Australian Defence Forces Academy, University of Melbourne, Engineers Australia and Queensland University of Technology  <a href="http://www.homelandsecurityconference.org.au">www.homelandsecurityconference.org.au</a>