THE MACEDON DIGEST

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Produced by the Australian Natural Disasters Organisation

NEW DIRECTOR GENERAL FOR NDO

The Minister for Defence recently announced that Brigadier B.W. (Hori) Howard AO, MC, will be promoted to the rank of major-general on 27 January 1987, and be appointed Director General, Natural Disasters Organisation on 27th February 1987.

Brigadier Howard was commissioned into the Royal Australian Infantry in 1959. He served in Australia and Papua New Guinea, prior to an exchange posting with the U.S. Army in Okinawa, Japan, from 1963 to 1965. Regimental and instructional postings preceded his service in South Vietnam in 1967, where he was awarded the MC.

He attended the Canadian Armed Forces Staff College in 1972. Following his return to Australia, he served in staff appointments in Canberra until assuming command of 3 RAR in 1976. After completing studies at the Joint Services Staff College in 1978, he assumed the position of Australian Exchange Instructor at Staff College Camberley in the U.K. In 1981 he was promoted to Colonel and appointed as Director of Infantry. He was promoted to the rank of Brigadier, commanding the Army's Sixth Brigade in 1983. Brigadier Howard is currently Director General Operations and Plans in Army Office, Canberra.

The functions of the Natural Disasters Organisation are:

- to develop national counter-disaster plans;
- to co-ordinate Commonwealth physical assistance in disaster response;
- to operate the National Emergency Operations Centre (NEOC) and to maintain fallout shelter expertise;
- to provide advice on plans to cope with natural disasters and civil defence in Commonwealth Territories;
- to develop plans for Australian operations to assist neighbouring south-west Pacific countries in disaster mitigation, as requested by the Australian Development Assistance Bureau (ADAB);
- to arrange co-operation between the Commonwealth and States to ensure effective civil defence planning and preparations; and
- to direct the Australian Counter Disaster College.

The present Director General, Air Vice-Marshall John Lessels, OBE, with a disaster season still ahead, has already guided NDO through many counter-disaster operations since early 1984. At about that time, NDO's role was expanded to include counter- disaster assistance to south-west Pacific nations. AVM Lessels recalls a particularly busy period in late January 1985, when NDO provided assistance at home and in the Pacific in six concurrent incidents. These were: severe bushfires in Victoria, South Australia and New South Wales, cyclones in Fiji and Vanuatu and wild wind/hail storms in Brisbane. Other recent notable operations include assistance to PNG (cyanide barge capsize and coffee rust disease outbreak), Cyclone 'Winifred' in North Queensland and NDO's largest overseas operation to date, involving major assistance to the Solomon Islands, during Cyclone 'Namu'. The 'Namu' operation was very successful.

During his time as DGNDO AVM Lessels has directed his attention to the enhancement of Australia's counter-disaster and civil defence capabilities, by fostering in this regard Commonwealth/State relations and interest in civil defence. In late 1984 he visited Switzerland, Israel, Sweden, the United Kingdom and Canada to ascertain the latest developments in civil defence. The trip produced the idea for a Civil Defence Symposium, which was held at the College between 22 and 24 October 1986. It was attended by a number of international experts in the field. He has also visited countries in south-west Pacific, with a view to ensuring the effectiveness of Australian aid in disaster response and training, which are co-ordinated by NDO.

The counter-disaster community throughout Australia are appreciative of the efforts of AVM Lessels and wish him well in his future pursuits.

EXOTIC ANIMAL DISEASE ERADICATION IN AUSTRALIA

Australia enjoys relative freedom from the more serious diseases of animals, with consequent advantages over many of its competitors in international trade in livestock and animal products.

As part of the measures to protect its export markets, contingency plans have been developed by Australian animal health authorities, for the rapid eradication of the major exotic diseases of animals should they occur here.

These contingency plans include control strategies and operational procedures, for the eradication of the major animal diseases. They are written specifically for Australian conditions, drawing on experience gained by other countries in their disease control programmes where appropriate. The technical disease eradication plans are supported by counter-disaster plans of the State/Territory emergency services, and of the Commonwealth's Natural Disasters Organisation.

Should the presence of an exotic animal disease be suspected in Australia, a well defined chain of events ensues. The Chief Veterinary Officers of all States, the Northern Territory, the Commonwealth Department of Primary Industry and CSIRO in their capacity of 'Consultative Committee on Exotic Animal Diseases', consult on the emergency. They then recommend to the Australian Agricultural Council (comprising all Australian Ministers with responsibility for agriculture), a course of action for eradicating the suspected disease. Once agreed by the Australian Agricultural Council, a full-scale eradication effort is mounted. In practice, this sequence of events takes only a few hours to complete.

While quite independently determining its own course of action to eradicate an exotic animal disease, Australia must act in such a way as to:

- protect the health status of other countries receiving Australian animals and animal products;
- minimise unnecessary trade disruption to Australian exports consistent with preventing the spread of disease; and
- achieve disease eradication as rapidly as possible in conformity with internationally accepted standards.

The eradication strategies adopted by Australia, are designed to comply with the Office International des Epizooties (OIE) 'International Zoo-sanitary Code for trade in animals and animal products'. Compliance with this code is the optimal way of achieving disease eradication, of gaining international acceptance of Australian claims of freedom from the disease at the conclusion of an eradication campaign, and of the re-establishment of our export markets.

In achieving these aims, Commonwealth veterinary authorities provide situation reports to interested countries and organisations periodically, throughout an exotic disease emergency.

Once an outbreak of an exotic animal disease is discovered in Australia, the international animal disease reporting agency, OIE, is notified of the nature of the disease outbreak and of the control measures that are being instituted. OIE relays this information by telex to member countries throughout the world. In addition, destination countries for Australian livestock and livestock products and countries in close proximity to Australia, are provided with more detailed information on the outbreak and its eradication. All Australian embassies and trade posts are also advised of the emergency and of eradication measures.

Throughout the emergency, updates on the progress of eradication are provided to follow the initial notification of the disease outbreak. This advice culminates in a declaration by Australia of freedom from the disease, at the conclusion of the eradication campaign.

By these means, Australia aims to maintain good international relations and to promote its integrity as a reliable supplier of disease free animals and animal products.

Source: Bureau of Rural Science,
Department of Primary Industry Canberra.

RESEARCH DIRECTORY

Work has commenced on the compilation of the Third Edition of the Australian Disaster Research Directory.(ADRD). It is expected to be published during 1987. Any individual who has completed, is conducting or contemplating undertaking disaster research in Australia is invited to inform the editor of details. Previous editions of ADRD have included information about research in a wide variety of fields including building research, environmental planning, medicine, computing, agriculture, forestry, effects of nuclear war, and the long term psychological adjustments to disaster.

The current edition of ADRD is not considered totally comprehensive. In addition, it is proposed to expand the Third Edition of ADRD, to include a section on researchers and practitioners who would provide prompt advice on their fields of expertise, during disasters. It is intended to make available an abbreviated version of this panel, on IBM compatible floppy disk.

The editor would be pleased to hear from anyone who is not included in the current edition of ADRD (1985), or those who would be willing to be included in the panel of experts.

Please contact:

Ian McDermott
Research Officer
Australian Counter Disaster College
Mount Macedon, VIC, 3441

VISITS

Professor E.L. Quarantelli - January 1987

Professor E.L. Quarantelli will be in Australia between 20 and 30 January 1987, to attend the Disaster Research Workshop, to be conducted by the College (see Education).

Professor Quarantelli will deliver the Keynote Address at the Workshop.

Professor J. Scanlon - June 1987

The keynote speaker at the Disaster Management Training and Education Seminar, to be conducted at the College between 15 and 19 June 1987, will be Professor Joseph Scanlon, from the Emergency Canada Research Unit at Carleton University, Ottawa, Canada. The Seminar is intended to draw together senior training and education policy makers and practitioners from organisations which contribute to counter-disaster training and education in Australia.

More information about this important activity will be published in the next and later editions of TMD.

FEATURE

GENERAL PRINCIPLES OF HUMAN RESPONSE TO CRISIS SITUATIONS

This is the third article in a series on Human Responses to Natural Disasters, by Ruth Wraith and Rob Gordon from the Department of Child and Family Psychiatry, at the Melbourne Royal Children's Hospital. In this article, they look at the general principles of human response to crisis situations.

In order to understand how people react in disasters, it is necessary to bear in mind general principles of the human response to crisis. These principles serve as the basis for understanding disasters, as well as other personal, social or political crises. They are based on the general population in normal communities.

General Population

Communities are composed of people with widely varying capacities for coping with crisis and stress. Surveys in normal populations, to estimate the ability of people to adjust healthily to adverse conditions, find that about ten percent can be considered exceptionally stable. They are resilient and seem to adjust to most crises, with a minimum of difficulty. Another ten percent either suffer from some form of mental illness, or have difficulty coping at the best times and require considerable assistance in the event of a crisis, often from trained workers. The remaining 80 percent can be called 'average'. They cope with everyday life and in a crisis adjust with varying degrees of success, possibly needing the help of family, friends and community services. They are able to work their way through life's difficulties and carry on. Figure 1 summarises these groups:

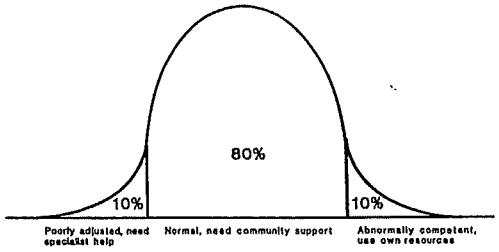

Figure 1. General population-adjustment and response to crisis

Most people can be expected to look after themselves and will want to do so. They continue to discharge their reponsibilities, even when under considerable stress. Only a small number are likely to 'break down'. However many people do need support and in unusual circumstances, may not be able to recognise their own needs for help, rest or relief.

It should be emphasised here that disasters are a particular form of community crisis, and human responses in these circumstances involve a minimum of what could be called 'mental illnesses'. Instead, the reactions are those of people experiencing *normal responses to abnormal situations.*

Assisting them to cope means adopting measures which provide *support* and *preventative help*, based on understanding the needs of people in crisis in relation to the stages of the disaster process.

Normal Response to Crisis

In everyday circumstances, people respond to events with a combination of emotions and thoughts. Emotions register the impact things have, identifying them as good or bad, pleasant or painful. Thoughts provide an understanding of the meaning of events, their cause and possible responses. For the average person, engaged in everyday activities, thoughts usually outweigh emotions in determining how he reacts to events. For example, if he sees something he wants, he thinks first whether he can afford it, or if faced with a problem, he thinks up a solution to it.

A crisis however, invariable brings with it strong emotions. They tend to outweigh thinking, which becomes greatly reduced in efficiency and people often respond on an emotional basis. They may no longer be responding to the realities of the situation, but only to its highly personal impact on them. The result is often behaviour which is not helpful or appropriate. Figure 2 illustrates these two situations:

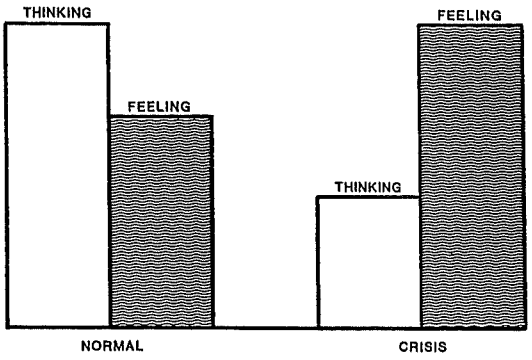

Figure 2. Normal and crisis responses

(from Mitchell & Resnick -Emergency Response to Crisis, Brady, 1981)

As can be seen in Figure 2, the relative strengths of thought and emotions are reversed in a crisis. Understanding a crisis may be simple - losing your house in a bushfire for instance - but the emotions are intense and long-lasting and demand more attention that thought processes at this stage. It requires time for the balance of thought and emotions to be re-established.

Following the impact of a crisis, the human response can be divided into a series of stages. Although the sequence and even nature of the stages may vary widely from one person to another and alter with different crises, important life events always have to be dealt with, little by little. Figure 3 illustrates the typical sequence which may be followed by someone in dealing with a crisis:

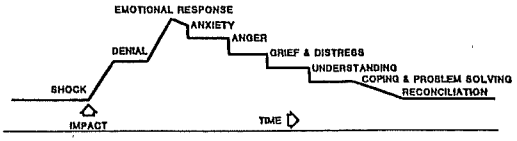

Figure 3. Stages in coping with crisis

A serious crisis usually provokes a state of *shock* in which things may seem unreal, and the significance of the event cannot be grasped. The person may then behave as though it has not happened. Soon, however, this gives way to a state of high anxiety or fear which may even cause a temporary state of collapse. The person may panic about his ability to cope in the face of the events. The unstable state cannot continue, however, and most people are able to pull themselves together by temporarily denying the event again. Denial is not an ability to comprehend the initial shock state, but involves selectively turning one's attention away from it and going back to the familiar things of life as a protection against the emotional impact.

Sooner or later, however, the denial breaks down and the full *emotional impact* occurs. This may be hours, days, weeks or even longer in some situations. In long lasting severe crises, such as a combat, it may occur years later. A series of emotions

usually occur and are worked through. They include *anxiety or fear*. The person often responds to this with anger, hostility or resentment which may be directed at people who can be held responsible however unrealistically, inanimate things such as 'life' or the weather, or even the person himself. This stage of anger can be a very emotionally turbulent one, or it may lead to *guilt, depression and withdrawal*. If all goes well, however, anger will give way to genuine *grief, sense of loss, and remorse* and although these are painful feelings, they lead on to the next stages. In individual cases other emotions may come to the fore.

With time, the emotional intensity subsides and *thought and understanding* are applied to the situation, leading to the development of *coping skills* and *solving the problems*, that the crisis has left in its wake. The final stage is one of *reconciliation and acceptance*, which imply having integrated the event into the ongoing flow of life.

Dealing with Crisis

When crisis strikes, it makes demands on the individual which go beyond his or her normal resources. Dealing with crisis, therefore involves obtaining support in order to use one's own abilities effectively and to supplement them from other people.

On an individual basis, the primary need is to move through the various emotional stages required to integrate the experience. This means accepting and expressing the various feelings and thoughts which arise at different points. However people can usually only express themselves and make themselves available for help when they feel in a supportive environment. They need to feel there are people around, who understand and accept them, and can offer help and advice as they need it.

In the first instance, people in crisis draw on their personal networks of family and friends. These people know the individual well and can provide him with a perspective on his experiences, emotional support and understanding, help him with evaluating himself and his responses, also identify priorities, needs and help make decisions.

Where members of the personal network are also in crisis (as is likely in a disaster), or when they lack adequate skills to help, or when the relationships are such that they do not allow for effective support, the person in crisis draws on community networks. They may include local municipal services, local doctor, clergy or other counsellors, work-based services, self-help groups, or informal local helping networks. Only when these are inadequate, in relation to the special needs, do people tend to seek out professional help. The local community networks cater for the greater proportion of people in crisis, and can be effectively utilised to assist people in most situations.

When professional help is sought, it is often seen as a 'last resort'. However most community and disaster-related mental helath work could be seen as 'preventative' in nature. That is, its aim is to assist people to deal with current problems so that they will not cause future difficulties. To do this, professional help avoids putting people into the role of 'patient' or 'victim', but instead concentrates on helping them identify and employ their own skills, as well as those of their personal and community support networks, in weathering the crisis. In this sense, professional help becomes an extension of the support network already existing around the individual.

It is now well established that people who are worst affected by crisis of any sort, are those who lack effective support networks. When a crisis occurs which stresses many people in a community, the most effective strategy for both individual and community alike is to look to identifying, developing and supporting the existing networks, both personal and community, formal and informal, and any specialist or professional services introduced into the situation will serve people in need best, if they are integrated into these systems.

Continued in March TMD - 'Immediate and Short Term Human Responses'.

INTERNATIONAL

Disaster Response - The British Fire Services

The Journal 'Fire' (July 1986, Vol 79, No. 973) comments that....'The British Fire Service is not equipped or trained to deal with.....(a Chernobyl type).....incident. Indeed it is not equipped to cope with any really large-scale disaster. Despite all the pre-planned procedures, the protective clothing and specialised equipment currently provided is only adequate for first-aid spillages and relatively minor chemical incidents .....what is available is not standardised among the emergency services, particularly the army, navy and airforce'.

1985 Mexico Earthquake

Following the major earthquake which struck Mexico City on 19 September 1985, a joint reconnaissance team from New Zealand visited the site. The aim of the visit was to examine the damage first hand, to determine whether New Zealand seismic design procedures and practice provide for proper defence against major earthquakes. The team in its Preliminary Report, reached the following specific conclusions about the Mexico Earthquake:

1. The characteristics of the earthquake, especially its dominant period, were such that buildings were attacked selectively and damage was of a special nature.
2. Many buildings suffered damage in storeys about mid-height, for example, from the fourth to the eighth floor in a twelve storey building. The reason for this is not clear. Possibly soil-structure interaction contributed. More study is needed.
3. In Mexico City, buildings which collapsed or which were severely damaged included some buildings designed to comply with the 1977 Code as well as with earlier codes.
4. Mexico City Codes have hitherto offered little encouragement to designers to detail for ductile behaviour. It will be interesting to see whether the October 1985 emergency provisions offer enough margin between loads prescribed for non-ductile and for ductile structures to persuade designers to design for ductility.
5. The use of structural steel will not in itself overcome problems of inadequate design and workmanship errors, and so ensure good seismic performance.
6. Almost universally beam and column ties in reinforced concrete structures had right angle hooks where there should have been proper anchorage. Ineffective ties contributed to many failures.
7. Pounding of adjacent structures even though seismic separation gaps were usually provided, was a significant contribution to damage.
8. The recorded maximum ground acceleration corresponds roughly to the 500 year return period ground acceleration for soft soils in Mexico City.
9. Even in the epicentral zone where the strong motions records show that there was vigorous high frequency as well as low frequency content, there was selective attack of larger structures. One and two storey adobe and brick houses were largely unscathed, except in a very few towns.

Source: Bulletin of the New Zealand National Society for Earthquake Engineering, Vol 18, No. 4, December 1985.

EDUCATION

ACDC Program - 1 January to 3 April, 1987

Disaster Research Workshop (see below)	27-30 January ✓
Introduction to Disaster Management	1-6 February
Counter Disaster Planning	8-13 February
Introduction to Disaster Management	15-20 February
Disaster Management Briefing for Local Government Officials	2-5 March
Disaster Management Briefing for Local Government Officials	10-13 March
Hazard Analysis (see below)	15-20 March
Disaster Response Management	22-27 March ✓
Hazard Analysis (see below)	29 March - 3 April

Enrolment procedures vary according to the type of activity. Details are outlined in the 1986/87 College Handbook, or can be obtained by contacting the College direct on (054) 261 205.

Disaster Research Workshop

The aim of the Workshop is to:

- provide a forum for the discussion of views and findings among workers in a variety of disaster-related areas;
- incorporate the findings of various research programs into improved disaster management methods;
- identify deficiencies in national disaster research; and
- stimulate new ideas for prospective research.

Participants will include researchers from a wide range of disciplines, including earth sciences, civil engineering, psychiatry, social sciences and economics.

Hazard Analysis Courses

A Hazard Analysis Workshop involving academics and practitioners, was held at the College in November 1986, to establish the current state-of-the-art of hazard analysis in Australia. Ideas generated by the Workshop were used to develop the courses, with the aim of making information and techniques available to planners and disaster managers, to enable them to undertake the important initial steps in effective disaster planning.

Social Sciences and Disaster Management Seminar

The theme of this Seminar, held at the College on 8 August 1986, was the translation of disaster scholarship into effective disaster management in Australia. The Seminar was arranged to correspond with the visit to Australia of Professor E.L. Quarantelli, Professor of Sociology and Director of the Disaster Research Centre of the University of Delaware. Professor Quarantelli delivered the Keynote Address on the topic of 'Converting Disaster Scholarship into Effective Disaster Management'. Other papers presented at the Seminar included:

- 'The Individual and Disaster', by Dr. A.C. McFarlane, Lecturer in Psychiatry, Flinders University, Adelaide.
- 'Organisations and Disaster', by Professor John Oliver, Emeritus Professor and Consultant and Dr. Neil Britton, Information and Research Co-ordinator, Australian Overseas Disaster Relief Organisation.
- 'Government and Disaster Management', by Dr. Robert Smith, Public Service Board of Victoria.

A Report of Proceedings of the Seminar will be available shortly.

Bushfires in Heathlands Miniconference

A miniconference, planned for May 1987 on heaths and shrubs as fuels for bushfires, is proposed to be held at the Australian Defence Force Academy in Canberra. It will follow the format of the successful 'Bushfires and Computer Technology' conference held in early 1986. Part of the time will be allotted to workshop sessions and it is hoped to have Dr. Jim Brown from the U.S. Forest Service as principal speaker.

Further information concerning this activity can be obtained from Wendy Catchpole at the Australian Defence Force Academy on (062) 66 3454.

CIRDNH Courses

CIRDNH (Committee for Information and Research on Disasters and Natural Hazards) at Chisholm Institute of Technology, is planning to commence disaster-oriented short courses and seminars, in March 1987. These courses are aimed especially at educating the general public. It is proposed that the first course will be a half day seminar, 'Disasters - is Melbourne at risk?', and will aim:

- to provoke thinking and discussion of the possibility of another disaster affecting the Melbourne metropolitan area;
- to provide basic advice regarding precautions, survival and recovery, applying especially to individuals and families in such disaster; and
- to promote more extensive courses.

For further information on this and other planned CIRDNH courses, contact Ian Murray, at CIT on (03) 573 2477.

Natural Disasters in Australia: A Report on the 9th Invitation Symposium of the Academy of Technological Sciences at Sydney, October, 1985.

This symposium had, as its subtitle, 'Technology in the mitigation of fire, flood, storm and drought', and consequently there was a marked emphasis in the 15 invited papers upon the ways in which science and technology can be applied to the prevention, control or amelioration of natural disasters. The first four technical papers examined the nature, behaviour and incidence in Australia of the four designated natural hazards. The next paper in the sequence provided an up-to-date commentary on the detection, surveillance and warning systems available in Australia to assist both the counter-disaster organisations and the general public. This demonstrated the important contribution of the Bureau of Meteorology. The subsequent presentations shifted the emphasis to ways by which technology could meet the four hazards, and opportunities for further advances in this respect. The potential of a different strategy, insurance, was examined in two papers, the first of which provided also, in an appendix, a list of 'significant disasters' experienced in Australia since 1967. The important contributions of information technology and of communication systems in assisting counter-disaster response, received attention in the two final papers. Amongst other subjects, the acquisition of data (greatly strengthened by remote sensing techniques) and its storage and manipulation, particularly with the use of computer applications, were examined. The symposium conveyed a powerful picture of the roles and potential of technology in disaster management and response and in these respects, the Academy deserves full recognition for the selection of the symposium topic and its excellent organisation.

Several of the contributors of papers recognised that the application of the technological skills in practice, depended upon the extent to which decision makers, emergency practitioners and the public ('the victims') appreciated the possibilities of technology and were prepared to put it to good use. In the concluding open forum, the importance of taking

human behavioural patterns into consideration, when evaluating the potential of technology to assist the response to natural disasters, also influenced some of the comment and questions. It was not the aim, however, of the symposium to look comprehensively at the whole spectrum of disaster planning and management. The relevance of the social science part of this package though noted, was not therefore examined in any depth. This is not an adverse commentary upon the symposium, but a reminder that human factors play a significant role. In a balanced, total study these factors would need to be given full attention.

Source: Professor John Oliver, Emeritus Professor and Consultant

Forest Pests and Diseases Contingency Planning Workshop

A workshop on contingency planning to combat forest pests and diseases was held at the Forestry Commission of NSW Wood Technology and Forest Research Division, West Pennant Hills (Sydney) on 29 and 30 July 1986.

The workshop was chaired by Dr. D.I. Bevege, Chief of the NSW Wood Technology and Forest Research Division, and was attended by forestry and agricultural scientists and senior forestry administrators from Australia and New Zealand.

The workshop produced a series of statements and recommendations for future planning in this important field. Subject matter covered included:

- maintenance of effective quarantine;
- quarantine for host target groups;
- compatibility of legislation relating to forest pests and diseases;
- development and co-ordination of forest pest and disease data bases;
- capability and capacity of identification services for forest pests and diseases; and
- the organisation, structure and funding of a proposed Quarantine Action Committee.

Further information may be obtained from Dr. D.I. Bevege at the NSW Wood Technology and Forest Research Division, PO Box 100, Beecroft 2119.

RESEARCH

Epidemiology of Bushfire Losses of Life

13 January 1939,	Victoria	: 71 dead
14 January 1944,	Victoria	: 50 dead
7 January 1967,	Hobart	: 53 dead
16 February 1983,	Victoria & South Australia	: 73 dead

We don't seem to be improving. These and countless other cases demonstrate that the death toll from bushfires in rural Australia continues to rise, seemingly at as high a rate as ever.

What strategy should we adopt in order to contain the uncontrolled rise in this toll? More fire tankers? Better technology? Improved community education?

Let us pause before answering in haste. We already have more trucks; our technology is already vastly improved; and arguably our education is at least as good as it was 50 years ago. Perhaps there is another type of alternative.

A basic tenant of good management is to know and understand what is being managed: we can get the best out of a system only if we know what's in the system and how it works And so it is for deaths during bushfires. Are we really much the wiser about the way in which people are killed during bushfires than we were 50 years ago? What studies have been done? Until such time as we know how and when the deaths are occurring, how can we hope to minimise deaths?

In common with other deaths from violent causes, bushfire deaths are invariably the subject of coronial inquiry. Sometimes these are extensive and extravagant, but the results are generally put to limited use. Events are considered in isolation from each other, and little account is usually taken of fire behaviour. Hence there exists a gap for research to fill.

A study in progress at the National Bushfire Research Unit (CSIRO Division of Forest Research) in Canberra seeks to determine the types of people being killed, and the circumstances surrounding their deaths.

The study will examine factors such as the fire type and intensity, the capability, age and degree of protection of the victim, the form of protection used, and the contribution of other factors such as accidents and alcohol.

Much of the information will be gained by examining transcripts and exhibits of the coroner's inquiries into the Ash Wednesday fires and the Hobart fires in 1967. The aim is to apply to these data standard epidemiological techniques, such as have successfully been used in reducing the number of deaths occurring because of heat and other environmental stresses.

From previous work it is apparent that houses and motor vehicles are often safe refuges. Nevertheless, some people in these refuges are killed. This poses questions about the circumstances under which houses and vehicles are and are not safe. Similarly, previous work indicates that a disproportionately high number of elderly people seem to be killed, yet many elderly people survive quite successfully. Can factors be identified which govern whether or not these people are likely to survive? These are some of the questions which the project will address.

The project should lead to the identification of factors which lead to deaths during bushfires. With this information, fire and other emergency services should be able, with confidence, to formulate and pursue informed and responsible strategies for the management of people during bushfires.

PUBLICATIONS

A Study of Recent Advances in Disaster Medicine and Federal Support in Emergency Situations

Don Withers, Principal Executive Officer (Counter Disaster), Commonwealth Department of Health, undertook a study tour in 1985, of several countries, in which he examined recent advances in disaster medicine and federal support. A report of his tour has recently been produced.

Don visited the United States, Switzerland, the United Kingdom, Italy and Singapore between April and June 1985. He was the Public Health Travelling Fellow of the National Health and Medical Research Council of Australia.

The aim of the study tour was to enhance Australia's medical and health awareness and preparedness. This was achieved by:

a. visiting two international conferences (World Congress and Exposition for Disaster and Emergency Management in Indianopolis and the Fourth World Congress on Emergency and Disaster Medicine in Brighton England);
b. an examination of the response to various types of disaster;
c. examining disaster response procedures at various levels; and
d. an examination of specific medical response situations.

The report has become a working document for the various working parties and committees of the National Disaster Relief (Health) Committee. Copies have also gone to State Medical Disaster Co-ordinators as well as a wide cross-section of Australian counter-disaster agencies. A copy is retained in the College library.

Further information about this report can be obtained from Don on (062) 897 777.

CRES Publications

Two recent Working Papers produced by the Australian National University Centre for Resource and Environmental Studies (CRES), are:

1. 'The NSW Draft Floodplain Development Manual: A submission to the Flood Policy Advisory Committee' by J. W. Handmer and D. I. Smith.
2. 'The Identification of High Hazard Floodplain areas for possible acquisition', by John W. Handmer.

The first paper (1. above) was produced in response to a New South Wales State Government Floodplain Development Manual. The CRES paper sets out views on the positive and negative aspects of the Manual and contains recommendations designed to help alleviate potential problems.

The second paper (2. above) aims to help determine in which circumstances the option of acquiring flood prone land can be recommended and how it might best be implemented. To this end, effort was devoted to developing specifications for acquisition areas which take account of both geophysical dimensions and socio-economic factors.

For further information about these Working Papers, enquiries should be directed to Dr. John Handmer, CRES, GPO Box 4, ANU, Canberra 2601, or telephone (062) 494 729.

CIRDNH Publications

Ian G. Murray of the Committee for Information and Research on Disasters and Natural Hazards (CIRDNH), at Chisholm Institute of Technology, Melbourne, has produced a paper on the 'Credibility of Disaster Research'. The paper concentrates on people-oriented research, which has received comparatively poor funding in the past. Research findings from North America and Sydney regarding disaster myths, are compared with those involving groups of police and welfare students in Melbourne. The credibility of research into some specific areas is examined, including mental health, blame, warnings and evacuations. The role of the media in credibility is briefly examined, as well as more general strategies for increasing credibility. The importance of psychological, social and political factors in research credibility are emphasised.

Copies can be obtained from Ian at CIT (PO Box 197, Caulfield East 3145, Victoria, Australia) or telephone (03) 573 2477.

CIRDNH

CIRDNH (Centre for Information and Research on Disasters and Natural Hazards), based at the Chisholm Institute of Technology in Melbourne, was formed in 1979, its main objectives being:

- to provide a clearing-house for information and results of investigations in the field of disasters and natural hazards;
- to sponsor and undertake research in these fields; and
- to promote interest and act as a forum for discussion in these fields.

In October 1985, the Centre was formally replaced by a Committee responsible to the School Board of Social and Behavioural Studies, within Chisholm. CIRDNH will develop proposals for short courses and seminars, aimed especially at educating the general public (for details see EDUCATION). A clearing-house function has continued, with inquiries from local, interstate and overseas sources being received.

Reviews, reports and articles of a critical or evaluative nature are invited by CIRDNH, for publication in the newsletter 'Beyond Impact'. For further information about CIRDNH or for contributions to 'Beyond Impact', the contact is Ian Murray, Chisholm Institute of Technology, PO Box 197 Caulfield East, Victoria 3145, Australia, Telephone (03) 573 2477.

BUILDING IN FLOOD-PRONE AREAS

Steve Liebmann of Radio Station 3AK Melbourne, spoke to Geoff Luscombe from the Macquarie University Earth Sciences Department on 8th August, about the recent flooding in the Sydney urban area. They talked about the need for more research into storm flooding in Sydney and other major centres. Mr. Luscombe mentioned that the NSW Public Works Department have handed the responsibility for mapping flood-prone land to local Councils, who on the whole have not carried out this task. Mr. Luscombe felt that local Councils were faced with the problems of limited expertise in a fairly specialised field. Mr. Luscombe also commented that 100 year flood statistics are misleading. A 100 year event means, in fact, that there is a one per cent chance of major flooding occuring in any year, rather than once every 100 years. Mr. Luscombe was of the view that little could be done to protect existing urban areas because it is too expensive for these area to be modified to avert all future floods. But in new urban areas, forward planning can avert the problems apparent in the established suburbs.

Source: Australian Reference Services, Melbourne, 20 August 1986.

REFLECTIONS

If widespread fires occurred in Melbourne, Geelong would be the only town in Australia which could help us with extra hoses. The statement, reported in the Melbourne Argus of July 3, 1956, was attributed to Mr. L.P. Whitehead, Chief Officer of the Melbourne Fire Brigade. Mr. Whitehead was attending the opening course at the Civil Defence School at Mount Macedon, which included top public servants, municipal leaders, heads of police, fire and water services and the armed services.

Mr. Whitehead said that apart from Geelong, hoses from every other town would not fit Melbourne's hydrants. At least six different sizes of hose couplings were in use in Australia, he said. The cost of standardising them would be 250,000 pounds.

LIBRARY

The following publications have recently been added to the ACDC library collection. Items may be requested through the inter-library loan system.

ASFAHL, C. Ray: INDUSTRIAL SAFETY & HEALTH MANAGEMENT. 1984; Englewood Cliffs, N.J., Prentice-Hall, Inc.

613.62 ASF

AUSTRALIA'S ARMED FORCES OF THE EIGHTIES. Rev. & enlarged edition. Edited by Ross Gillett. 1986; Sydney, Child & Henty Pub. P/L.

F 355.80994 AUS

A VULNERABLE COUNTRY? Civil Resources in the Defence of Australia. Edited by J.O. Langtry & Desmond Ball. 1986; Canberra, ANU Press in assn. with The Strategic & Defence Studies Centre.

363.350994 VUL

COMBINED EMERGENCY SERVICES SEMINAR, 3rd Annual 'HAZARDOUS MATERIALS, EMERGENCIES AND DISASTERS', Nov. 1981. Conference Notes. Institution of Fire Engineers, Vic. Branch.

P363.170994 COM

COMMONWEALTH GOVT. DIRECTORY. Vol. 2 - FOI Statements:
Education Portfolio, May 1985
Defence Portfolio, Aug. 1985
Resources & Energy Portfolio, Nov. 1985

P 354.9404 COM

DISASTERS & THE DISABLED - prepared in the Office of the United Nations Disaster Relief Co-ordinator, Geneva. 1982; New York, United Nations.

P 363.348 DIS

EMERGENCY 82. International Congress on Disaster Preparedness & Relief, Geneva, Oct. 1982. Record of the Proceedings. 1983; Geneva, ICDO.

F 363.347 EME

HANDBOOK FOR EMERGENCIES. PART ONE: FIELD OPERATIONS. 1982; Geneva, United Nations, High Commissioner for Refugees.

363.34 HAN

McCORMACK, Mark H.: WHAT THEY DON'T TEACH YOU AT HARVARD BUSINESS SCHOOL: Notes from a street-smart executive. 1984; Toronto, Bantam Books.

650.1 MAC

McCORMICK, Ernest J. & ILGEN, Daniel R.: INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY. 1985; Englewood Cliffs, N.J., Prentice-Hall, Inc.

158.7 MAC

MORENTZ, James W.: EXERCISE SOURCEBOOKS - (4 Vols):
Exercises - A Research Review
Orientation & Tabletop Exercises
Operating Center Simulations
Outside Disaster Drills
1984; Rockville, M.D., Research Alternatives

P 363.340724 MOR

ON TERRORISM & COMBATING TERRORISM. Edited by Ariel Merari. Proceedings of an International Seminar, Tel Aviv, 1979; Frederick, Maryland, University Publications of America, Inc.

363.32 ONT

PRATT, David. CURRICULUM: Design & Development. 1980; New York, Harcourt Brace Jovanovich, Inc.

375.001 PRA

THE RATIONALIZATION OF TERRORISM. Edited by David C. Rapoport and Yonah Alexander. 1982; Frederick, MD, University Publications of America, Inc.

303.62 RAT

ULSCHAK, Francis L. HUMAN RESOURCE DEVELOPMENT: The Theory & Practice of Need Assessment. 1983; Reston, Va., Reston Pub. Co. Inc. (Prentice-Hall)

658.301 ULS

WILKIE, Wm. UNDERSTANDING STRESS BREAKDOWN. 1985; Melbourne, Greenhouse Pubns.

158.1 WIL

ZUCKERMAN, Edward. THE DAY AFTER WORLD WAR III: The U.S. Government's Plan for Surviving a Nuclear War. 1984; New York, The Viking Press.

355.033573 ZUC

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