Australian Aid: making a difference in times of disaster

AusAID demonstrates how the Australian Government, through its overseas aid agency, has responded to different emergencies throughout the world.

Disasters can occur anywhere, anytime. They may be in the form of a natural event such as a cyclone or an earthquake or as a man-made phenomenon. In the case of a natural event, often there is no warning. Loss of life is almost inevitable and the social and economic costs can be heavy.

Some nations are better equipped to manage disasters than others. The reasons are varied. Factors such as political and economic stability, sophisticated technology and an informed and educated public can combine to avert disasters or limit the damage caused by them.

This paper outlines how the Australian Government, through its overseas aid agency AusAID, has responded to disasters in different parts of the world, drawing on the expertise of its own staff, of other government agencies and of non-government organisations.

Australians have always responded generously to international appeals for help in times of emergency and disaster. It is this same concern that drives the Australian Government's humanitarian and emergency aid program.

In 2000–2001, Australia provided in the order of $107 million to help relieve human suffering caused by natural disaster, armed conflict and economic and political crises, mainly in Asia, the Pacific and Africa.

Australian governments have a long history of being able to respond rapidly to natural disasters overseas, drawing largely on specialists in overseas aid, the logistic capacity of the Australian Defence Force, and in particular through a standing and close arrangement with Emergency Management Australia.

Extra support has been provided through funding the work of Australian and overseas non-government organisations and by supporting the work of multilateral organisations such as the UN and the Red Cross.

The challenges have been many. Changing climatic patterns, when interacting with the poverty of vast populations in developing countries, have exposed increasing numbers of people to natural disasters. In the past few years there has been a sequence of particularly severe events.

However, it is not just natural emergencies that concern Australia's aid program.

Conflicts and social upheaval now reverberating around Asia and the Pacific also demand a response.

Increasingly these latter challenges assume substantial national priority and require a more complex response than do natural disasters. Such responses often draw on players from many areas such as defence and the civilian police force.

In addition, AusAID bilateral country programs are increasingly providing support to communities recovering from crises and are assisting with indigenous disaster management capacities.

This paper offers examples of how the Australian Government, through its overseas aid agency AusAID, has responded to different emergencies.

Reconstruction in East Timor

In the second half of 1999, Australia became engaged in what has been its biggest humanitarian response to a crisis so far.

After supporting the right of the East Timorese to decide their own future, Australians witnessed a brutal turn of events in the former Indonesian province as militia groups went on the rampage, looting and destroying what they could, before setting fire to buildings, homes and churches.

During this violent period more than 200,000 people fled East Timor, most ending up in refugee camps in West Timor. Hundreds of thousands more fled their homes and sought refuge in surrounding mountains.

The destruction of their former homeland meant the East Timorese had to build a new country from the ashes.

Australians responded with generosity and compassion.

At AusAID headquarters in Canberra, an East Timor Unit was immediately formed to deal specifically with the immediate needs of the East Timorese.

At the time, the world's attention was focussed on the troubles of

Devastation caused by volcanic eruption in Rabaul, 1994.
Photo by Josephine Hutton

Houses in many parts of Vietnam are vulnerable to the elements.
Photo by Tim Acker, courtesy of AusAID.

Kosovo and Angola and the resources of the United Nations were stretched.

Australia's offer to take a substantial role in the reconstruction of East Timor was readily accepted and within six months, the Government had increased its initial funding of $4 million to $80 million.

AusAID provided immediate logistical support from Darwin, transporting equipment, food, goods and personnel to East Timor.

As part of its humanitarian response it sent food and medicine to refugees stranded in camps in West Timor and provided kits of seeds, tools and emergency shelter for people returning to their farms and homes.

The Australian Government also agreed to contribute to a Reconstruction and Development Trust Fund and a United Nations Trust Fund.

The first fund was set up to rebuild East Timor's economy, essential infrastructure and services. The second was to support governance and administration, concentrating on developing the capacity of the East Timorese to run an independent East Timor.

Since then, Australia's commitment to East Timor has not waned.

During 2001–2002 its aid to East Timor is allocated at $40 million and to date in total Australia has contributed $131.8 million.

The funding has been earmarked for measures that reduce poverty and build on East Timor's capacity to govern a peaceful, democratic and independent country.

These include as a high priority, programs which increase and improve education, health, rural development, water and sanitation and governance.

It has helped the country prepare for independence by assisting with budget management and taxation systems, helping to establish land administration systems, providing English Language Training and scholarships targetted at the country's highest priority skill needs.

Other activities have been aimed at vulnerable groups and those living with limited access to resources, particularly outside Dili. This recognises the fact that 85 per cent of East Timor's poorest people live in rural areas, large tracts of which were burnt or severely damaged in the turmoil following the vote for independence. When people returned to their villages in November and December 1999, it was only weeks before the wet season, yet the next season's crops had not been planted. Without immediate action, a food shortage would have been imminent.

The Australian Government contributed to a large crop planting exercise by distributing tools and seeds in November. $1 million was channelled through World Vision and Care Australia to buy seeds and tools and distribute them to farmers in the mountains for planting before the wet season. The seeds included a range of varieties such as pumpkin, tomato, bittermelon, corn, red beans, navy beans, kidney beans, mung beans, soybeans, choy sum, bitter gourd and lettuce. The vegetables formed the basis of a

high protein diet aimed at alleviating malnutrition. The farmers first planted those vegetable seeds that took between one and two months to grow, followed by the maize which took longer. Farmers were also given a 10 kilogram bag of rice each so that people had food on hand to eat and did not resort to eating the seeds. Basic tools such as shovels, crow bars and picks were included in the resettlement kits.

World Vision worked with local groups to decide where the seeds and tools should be distributed and met with local farmers to advise them on the planting.

Australia has also started longer-term development programs to increase food security, and help re-establish rural livelihoods in three districts, a water supply project to bring clean water to three districts and an oral health care program to help re-establish basic dental care through East Timor.

Australia is also providing training for East Timorese leaders and their support staff in democratic parliamentary processes. It has also helped build a functional Parliament building and provided technical advice for the elections held in August 2001.

Flood Control in Central Vietnam

Central Vietnam is one of the poorest regions in the country. In 1998, 48 per cent of those in the region were classified as living below the national poverty line, against a national average of 37 per cent.

The area is extremely vulnerable to natural hazards. It is subject to typhoons and tropical depressions from June to November each year and heavy rains from September to December.

The coastal plains are the most heavily populated. When overloaded by rainfall, waterways discharge their excess run-off into the floodplains as flash floods. Therefore, when extreme weather events such as typhoons and floods occur, the impact on people, their agricultural lands and livestock and their infrastructure is calamitous. Development efforts are set back and the people remain trapped in a cycle of poverty.

In 1998 and 1999, exceptionally heavy rain fell in seven provinces in Central Vietnam with the result that much of the region was severely flooded.

Throughout November and December 1999, some areas received twice their mean annual rainfall in just a few days. By most estimates, these floods were considered the largest to have hit Central Vietnam in the past one hundred years.

The damage was considerable. More than 700 people lost their lives and many more were injured or stricken with disease while coping with the floods. Tens of thousands of people had to be evacuated to higher ground. Many families lost their homes and their livelihoods and had to be resettled to safer areas. There was immense destruction of and damage to homes, schools, clinics and other buildings. Rural and urban infrastructure was damaged or destroyed. Agricultural land was washed away or covered with sediment. Crops were destroyed and thousands of livestock were destroyed or became diseased. Local authorities did not have the resources, rescue materials or training to react effectively.

The cost of the physical damage in the central provinces was estimated to be more than US$340 million and those most affected by the flooding lived in the poorest communities.

In December 1999, immediately after the second flood, the Government of Vietnam and the international donor community recognised the importance of responding to both the immediate and longer-term needs of the people most affected by the flooding.

Australia was the first nation to respond in a practical way to a Natural Disaster Mitigation

AusAid has helped villagers rebuild their market gardens through the East Timor Community Assistance Scheme. Photo by David Haigh, courtesy of AusAID.

Partnership for Vietnam. The partnership grew out of a multi-donor mission that was undertaken in May 2000 and included representatives of the United Nations Development Program, the Asian Development Bank, the World Bank and the Netherlands.

The mission recommended that an Integrated Natural Disaster Mitigation Policy be formulated for Central Vietnam. The policy would take all issues that relate to natural disaster mitigation in Central

Vietnam into account and would result in an action plan that would include a range of short, medium and long-term measures.

Australia provides assistance to East Timorese farmers. Photo David Haigh, courtest of AusAID.

Australia has since signed a Memorandum of Agreement developed between the international donor community and the Government of Vietnam to underpin the partnership.

A Secretariat will ensure there is coordination between individual projects and avertconflicts in competing proposals. A Consultative Group will meet twice yearly to prioritise the allocation of resources and to discuss strategies and policy issues.

In signing the agreement, Australia recognises that limiting the damage caused by disasters will help make its existing development work in rural communities in Vietnam more sustainable.

To this end AusAID commissioned a feasibility study into the Quang Ngai area ofCentral Vietnam.

It found three main causes of vulnerability of the poorer communities to natural disasters.

The first was increased exposure to hazards such as floods, storms and drought because of unplanned and uncontrolled developments.

The second was a lack of resources and emergency services for poor communities to prepare for and respond to natural disasters.

The third was unstable river behaviour, river bank erosion, saline water overflow into agricultural land and an absence of refuges for fishing boats during floods and storms.

The report recommended master planning for the Tra Bong and Tra Khuc river basins to provide guidelines and policies for future developments in the basins. It suggested better community preparedness for natural disasters and the development of appropriate infrastructure to improve the management of river banks and adjacent land, reduce losses from the intrusion of seawater and provide a boat refuge for fishing vessels.

This study will form the basis of an Australian-funded disaster mitigation project in Quang Ngai province, scheduled to start next financial year.

This work builds on other Australian assistance to help North Vam Nao Island in An Giang province in the Mekong Delta in Vietnam to help it withstand flooding and improve the quality of life for 270,000 people.

This $10.3 million program is assisting local authorities and construction firms to build, operate and maintain water control facilities to defer and limit the levels of flooding, improve draining and dry season water supply. By the time the project is finished, there will be a system of dykes, sluices and canals to prevent the entry of early floods into the project site of 31,000 hectares.

The project includes other measures to increase farm production through family training in crop and livestock production. It is also developing and funding a targetted credit program for women and poorer families and giving women the training and materials needed for better nutrition and sanitation.

As well as providing equipment and technical assistance for the final design and construction of the flood control facilities, Australia is meeting about 40 per cent of the total cost of the civil work up to a value of nearly $3 million. It also is providing technical and financial inputs for the credit component, and health and agriculture components. The Government of Vietnam is meeting 60 per cent of the civil works, all resettlement compensation costs and will contribute nearly $800,000 towards the establishment of a pilot farm.

The benefits of the program will extend to the entire population of North Vam Nao, or 270,000 people. Delaying the annual floods will increase crop yields and reduce the need for manually-built earthen dams. Credit, agriculture and health programs will be targetted particularly at women and young families with little or no land to enable them to take advantage of flood control.

Public Health in Mozambique

In March 2000, about 700 people died in heavy flooding in Southern Mozambique. Nearly 300,000 people were displaced, and at least ten per cent of cultivated area in the region was affected. Fishing boats and nets were lost, roads cut and power facilities damaged.

The Ministry of Health in Mozambique asked for technical assistance to help the country's health authorities respond to the immediate disaster and become better prepared for future floods.

The Australian Government, through AusAID, provided Mozambique with a team of experts from Victoria's State Emergency Service.

The team was charged with helping the Ministry of Health respond to the immediate crisis as well as trying to avert a broader public health disaster from epidemics such as cholera and malaria.

One of the main tasks during the mission involved training a range of Government health personnel in strategies to manage public health disasters, especially floods and to increase their capacity to deal with similar emergencies in the future.

The team was also required to identify further steps to assist in the management of post flooding.

The project was conducted against a history of endemic cholera of which there are regular outbreaks around the country because of poor sanitation and hygiene. While a cholera vaccine exists, it has limited efficacy and is too expensive and resource intensive for the Mozambican Government to consider making it generally available. Because of the floods and the resulting severe damage to water and sanitation systems, there was an outbreak of cholera in the affected area. In attempting to minimise its impact, the Government conducted public education campaigns to alert the population together with epidemiological studies to identify new cases to begin treatment early.

The team conducted its field research in the Gaza Province at Chokwe and Macia townships and the Chiaquelane temporary accommodation facility. The initial research included inspecting flood damage to buildings, roads and irrigation facilities at Chokwe and areas of residual flooding, water and sanitation as well as housing. The informal market in the main township was also studied.

The team visited a temporary accommodation facility at Chiaquelane to examine water, sanitation, waste disposal, general living conditions and the Spanish Hospital. It also investigated the temporary accommodation camp at Macia.

Areas in and around Maputo City, Catembe and Matola were assessed for evidence of flood damage on the effect on local infrastructure.

The Xai-Xai area and the Limpopo River flood plain were studied. Visits were then made to the Provincial Director of Health in the Gaza Province, the Institute for Disaster Management, an emergency accommodation centre and associated hospital, health post, health centre and a cholera treatment centre. Consideration was given to the public health implications from local water, sanitation and waste disposal systems.

A large cholera treatment centre in Maputo City was examined in detail.

The Australian team found the country lacked the funds and resources to allocate to a comprehensive disaster prevention program although it recommended a range of actions that could be taken without incurring significant costs. This situation was compounded by the poor state of the small fire service that had inadequate equipment, training and maintenance.

There was no evidence of dam safety emergency plans for any of the dams in Mozambique or a coordinated flood warning system with the neighbouring countries from which most of Mozambique's rivers originate.

The existing limited flood warning system (mainly using school teachers) did not co-ordinate the many river level readings, automatic river gauges, rainfall gauges and local indicators operated by various Government bodies and private industry for their own benefit.

Several areas affected by landslip and erosion in the Maputo City area were found to be in need of stabilisation before they could be repaired and future damage minimised.

The team recommended a water chlorination project be implemented in conjunction with a public education campaign as a matter of urgency.

It found that low-lying stagnant water in Chokwe and its surroundings, especially the market, needed urgent anti/larvae, anti/mosquito treatment for malaria prevention and measures taken to reduce the high risk of an outbreak of diarrhoeal illness, in particular cholera.

AusAID bilateral country programs are increasingly providing support to communities recovering from crises and are assisting with indigenous disaster management capacities.

It also recommended that planning for malaria control in the next season begin immediately.

The group recognised the management of potable water and sanitation were difficult issues and more public health measures were needed to overcome deficiencies. In particular, urgent attention needed to be paid to water quality. A study of bacteria and parasites was needed in flood-affected areas.

The existing system to identify disaster victims and the analysis of the cause of sudden and unexpected death appeared deficient. A better system was seen as an important step in primary prevention strategies for public health in disasters, in particular epidemics.

After identifying the above issues and making its recommendations, the team conducted a bilingual training program in disaster management for 30 public health professionals. Presentations were delivered in English supported by slides and notes in Portugese. Participants identified water and sanitation, together with rural access, as the key recovery issues in an emergency.

The training program ended with the development of outlines for a flood response disaster plan and a public health disaster management plan. The course was well received, as it was the first such training opportunity in disaster management for health.

At the end of the mission, the team delivered a formal briefing to a range of senior Mozambican officials outlining recommendations for the development of a National Disaster Management System and highlighting the importance of work to prevent emergencies the scale of the 2000 floods.

Volcano monitoring in Papua New Guinea

Papua New Guinea has many active volcanoes. Fourteen have erupted over the past 200 years.

In September 1994, Tavurvur and Vulcan volcanoes erupted, inflicting enormous damage on the northeastern part of the Gazelle Peninsula, including Rabaul town. The devastation badly affected the basic socio-economic infrastructure system in Rabaul Township and the surrounding villages and left a damage bill in the order of K280 million.

The eruption exposed weaknesses in the National Volcanological Service and consequently the ability of the PNG Government to provide an effective warning service for the community.

The first weakness was the monitoring equipment used throughout the country by the Rabaul Volcanological Observatory. It had deteriorated because of ageing exaggerated by the tropical environment.

The second was that the Observatory was not able to collect and analyse large amounts of data quickly.

The Australian Government agreed to assist the Government of Papua New Guinea in the form of a $6.5 million project to upgrade and strengthen the National Volcanological Service to try to reduce the impact of active volcanoes on PNG communities. The project had two phases, starting in 1995 and largely ending by June 2000.

During the first phase, the Australian Geological Survey Organisation procured new monitoring equipment for the

Rabaul Volcanological Observatory. The second phase was specifically designed as the outcome of a needs analysis carried out by an AusAID sponsored mission just after the Rabaul eruption. The mission recommended an urgent programme of support be provided to the observatory which was unable to efficiently monitor the behaviour of the volcanoes and provide timely reports of events because of a lack of maintenance, equipment and staff.

To overcome these deficiencies the project responded in four ways.

It helped design and provide volcano monitoring recording equipment and sent specialist advisers to help with installation. It conducted training and established a geochemical monitoring facility.

Staff at the Rabaul Volcanological Observatory were given extra training in the analysis of information relating to volcanoes. A major geophysical survey was done of the deep interior of Rabaul volcano and dating of selected Rabaul rocks was undertaken to determine more precisely the eruptive history of the volcano.

Hardware and software were provided to the observatory so it could operate a Volcanic-hazard Mapping and Information System. The system is used for mapping and assessing areas of risk and in the production of hazard maps. Relevant datasets and training gave staff the ability to operate the system effectively.

The observatory was also given a general package of support in the form of a new four-wheel drive vehicle, internet connection, an improved telephone system and the production of a public-awareness video highlighting the dangers of active volcanoes.

New radio antennae were erected at the five high-risk volcanoes following negotiations with local landowners or custodians over access to land.

There have been no identifiable environmental effects from the antennae.

Additional work has since been done to ensure specific elements of the project can be sustained. These include providing extra training to technical staff, establishing a remote centre at the headquarters of the Australian Geographical Survey Organisation, providing the Rabaul Volcanological Observatory with a comprehensive set of spare parts and components and a technician to install a remote site at Pago.

The extended project is scheduled to end at the end of 2002 at a cost of $435,000.

Disaster Management in the Pacific

The Pacific is one of the most disaster prone areas in the world. Cyclones, droughts, active volcanoes, severe earthquakes, oil pollution, urban fires, aircraft disasters, tsunamis, coastal erosion, global warming, rising sea levels, El Nino and La Nina, armed conflict, civil disturbances, exotic animal and plant diseases and major health emergencies all afflict the region's small island states.

In the early 1990s tropical cyclone Ofa descended on Samoa, causing damage exceeding US$100 million and in Fiji cyclone Kina left the government with a damage bill estimated at over US$120 million. 1997 brought a drought to Papua New Guinea that saw streams, creeks and swamps dry up, rivers disappear, schools close, and major power cuts as lack of water reduced power-generating capacity. One assessment found 777,000 people facing famine. In the same country in 1998, a tsunami of up to 10 metres in height wiped out several villages and killed more than 2,000 people near Aitape.

The scale of lives and property lost to disaster in the Pacific is devastating, but even these statistics do not fully reflect the impact of disasters on the people of the Pacific. Though there is a great diversity of culture and conditions in the Pacific islands, all rely heavily on the exploitation of their natural resources for economic support. Forestry, fisheries, agriculture and tourism are the main industries, with differences of scale from subsistence to large commercial plantations. Each of these industries, and by extension the economy in general, are highly sensitive to their environment and to the weather. A disaster, such as a drought, impacts strongly not just on certain sectors of the community, but on everyone.

While reports by the United Nations Development Program have shown an increase in living standards in many Pacific countries, development is a fragile process. On top of direct economic losses, each time a disaster hits, scarce funds that could have been used for providing better education, health care or improvements in businesses and services must be diverted into disaster relief and rebuilding.

Costs are often extensive. Addressing the losses felt during Fiji's cyclone Kina used up almost 40 per cent of Fiji's capital budget. A United Nations task force stressed that unless preventive measures were taken, future disasters would account for a significant proportion of GDP. Rebuilding often suspends the development process and the frequency of disasters in the Pacific leaves little time to rebuild reserves and capacity to cope before the next one hits. A descending spiral of increased poverty and vulnerability is a serious threat.

In the past, these disasters were seen as overwhelming and unavoidable, as 'Acts of God'. Gradually this attitude is changing as the capacity to manage events and reduce vulnerability has

improved. Specific units within government agencies have taken on responsibility for disaster management activities and some resources have been set aside for mitigation.

Pacific Islands are beginning to recognise though that this issue requires more than the attention of a small part of a single agency. Disasters are a national priority and coordination of planning and resources is needed across government. Appreciation is also growing that the development of response capability is important, but so is preparedness, mitigation and recovery.

To this end, 15 countries are working together with the South Pacific Applied Geoscience Commission, known as SOPAC, on a program that takes a new approach to disaster management in the Pacific.

SOPAC is based in Fiji and is a regional organisation that provides technical advice, training and research assistance to member countries. It is divided into units that focus on mineral, water, and energy resource management, hazard assessment and coastal monitoring. Members include Cook Islands, Federated States of Micronesia, Fiji, Guam, Kiribati, Marshall Islands, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Kingdom of Tonga, Tuvalu and Vanuatu, and Australia, which provided SOPAC with $1.3 million in funding in 2000–01. (French Polynesia and New Caledonia are Associate Members.)

Since its commencement in July 2000, the Disaster Management Unit at SOPAC, with funding from AusAID and the New Zealand Government, has undertaken an ambitious new program which emphasizes preparedness, mitigation and a comprehensive, integrated risk management approach. The unit works at several levels in the community. Training is provided to key disaster management personnel within each country to assist them to design, maintain and evaluate disaster management plans. The intention is that these officers not merely implement plans adopted from larger countries. Each will become skilled in creating their own plans and adapting existing methods to the particular needs of their countries.

Disaster plans will not relate only to a single agency, but incorporate negotiation and coordination with a range of stakeholders. To support this more extensive process, the Disaster Management Unit has established the CHARM model (Comprehensive Hazard and Risk Management) that provides guidelines for an integrated national planning process. Though based on the Australia/New Zealand Risk Management Standard, CHARM is being developed to reflect the unique needs and conditions of the Pacific Islands.

Considerable effort is also going into building networks between National Disaster Management Offices in different Pacific Island countries and counterpart agencies in Australia and New Zealand. This will allow information and expertise to be shared and development of a fuller understanding of regional hazards.

The Disaster Management Unit program also works with non-government organisations, the private sector and the broader government to build an appreciation of the importance and potential benefits of risk management, in the context of disaster management, as a basic approach underlying the core functions of many agencies.

Conclusion

The above country examples are just some of the ways in which the Australian Government, through AusAID, has responded to natural and humanitarian crises around the world. The Government believes it has not only a moral obligation to assist in times of crises but a responsibility to do so for sound social, economic and security reasons.

Through its aid program, AusAID is assisting vulnerable countries to become better prepared for crises. In partnership with these countries, it is giving local people increased confidence and knowledge to put in place measures to reduce the impact of damaging natural events. It is helping build a level of resilience to deal with the financial, social and emotional effects of disasters.

More than ever the aid program is also attempting to reduce vulnerability by supporting activities and approaches that minimise the possibility of conflicts and are responsive both during and after conflicts to restoring the basis for development. This has been clearly evident in AusAID's approach to East Timor where emergency relief has quickly been replaced by long-term sustainable projects.

The Australian Government's aid program does not profess to have all the answers. However it does have the will and the experience to make a substantial contribution to the alleviation of suffering brought about by natural and man-made disasters in developing countries, particularly in the Asia-Pacific region.

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