

DEPARTMENT OF HUMANITARIAN AFFAIRS

PAPUA NEW GUINEA

FAMINE CAUSED BY DROUGHT AND FROST

**United Nations Appeal for International Assistance
on Behalf of the Government of Papua New Guinea**

11 December 1997

United Nations Disaster Assessment and Coordination

UNDAC Team



United Nations

PAPUA NEW GUINEA
FAMINE CAUSED BY DROUGHT AND FROST
1997-98

**United Nations Appeal for International
Assistance
on Behalf of the Government of Papua New
Guinea**

Section	Contents	Page
I	SUMMARY	1
II	INTRODUCTION	1
III	EMERGENCY SITUATION	2
IV	NATIONAL RESPONSE TO THE EMERGENCY	3
V	INTERNATIONAL RESPONSE TO THE EMERGENCY	4
VI	EMERGENCY MANAGEMENT	5
VII	RURAL WATER SUPPLY	6
VIII	FOOD RELIEF	7
IX	HEALTH AND NUTRITION	9
X	AGRICULTURE	10
XI	INTERNATIONAL RELIEF STRATEGIES	12
Annexes :	A AusAID Assessment Classification System	13
	B PNG Drought and Frost Affected Areas, as at 24 November 1997	14
	C National Structure for Drought Relief Coordination	15
	D Consolidated Table of International Donor Contributions to Date	16
	E Consolidated Table of Priority Relief Needs	18

UNDAC MISSION TO PAPUA NEW GUINEA

I

SUMMARY

Disaster :	Prolonged and severe drought caused by the El Niño Southern Oscillation.
Date :	From January 1997 (in some areas), and forecast to continue well into 1998.
Location :	The highlands, coastal areas and islands across Papua New Guinea (PNG).
Appeals :	<ol style="list-style-type: none">1. Government request for international assistance, issued through DHA2. UN Appeal for International Assistance on behalf of PNG: USD 4.2 million requested for emergency relief until December 1998. USD 16.1 million in cash, goods in kind and relief services donated to date.
UNDAC Team :	Charlie Higgins (UNDHA) Joe Barr (Australia) Luke Ratuvuki (Fiji)
Mission Duration :	20 November - 7 December 1997. Total: 18 days.
Nature of the Mission :	To support the UN Resident Coordinator in his efforts to coordinate international relief with the national emergency response to the drought, at the express request of the Government of PNG.
Significant Result :	The production of the UN Appeal for International Assistance on behalf of the Government of PNG, and its presentation to the international donor community at an information meeting on 11 December 1997.
Main Debrief Points:	
◆ weaknesses:	<ul style="list-style-type: none">◇ the inability of the team to meet before its arrival, all on different days;◇ the failure to cooperate fully with the simultaneous WFP Mission.
◆ strengths:	<ul style="list-style-type: none">◇ the team's ability to remain focused on the production of the appeal;◇ the team's flexibility and teamwork, especially in writing the appeal.
◆ threats:	<ul style="list-style-type: none">◇ the challenge of verifying and reconciling the large quantity of often inconsistent and incomplete government data;◇ that the poor coordination of national response and could affect the credibility of a UN Appeal on behalf of the Government of PNG.
◆ opportunities:	<ul style="list-style-type: none">◇ to refine the UNDAC appeal writing process;◇ to produce a template appeal format for the UNDAC Field Handbook.◇ to improve inter-departmental coordination within the Government of PNG by bringing some of the key actors closer together.

United Nations Appeal for International Assistance

on behalf of the Government of Papua New Guinea

I SUMMARY

1.1 Objective

The objective of the United Nations Appeal for International Assistance on behalf of the Government of Papua New Guinea (PNG) is to encourage donors to contribute to continuing relief needs in drought and frost affected areas for up to twelve months. The appeal concentrates on priorities for international assistance in emergency management, rural water supply, food relief, health and nutrition, and agriculture.

1.2 United Nations Appeal: Breakdown by Sector

Serial	Sector	Requirement, in cash (USD)
1	Emergency Management	173,000
2	Rural Water Supply	2,729,000
3	Food Relief (including logistics)	(4,120,000 /month)
4	Health and Nutrition	503,000
5	Agriculture	781,000
	Total Sum Appealed For:	4,186,000 (+ 4,120,000 /month)

II INTRODUCTION

2.1 UNDAC Mission

This appeal was prepared during a United Nations Disaster Assessment and Coordination (UNDAC) mission from 21 November to 6 December 1997. The UNDAC team examined a range of measures to support drought affected communities for a period of up to twelve months. The priority needs were determined on the basis of consultations with senior officials in departments of national and provincial government, United Nations agencies and NGOs, and representatives of the donor community in PNG. The team was also able to meet with members of the teams which carried out the nation-wide assessment of the situation, and to make two visits to affected areas in the Highlands and on the coast.

2.2 Papua New Guinea: Country and Society

PNG is a country of about 463,000 sq. km area with a population of 4.4 million. Geographically the country occupies half of the large island of New Guinea as well as a large number of other islands ranging in size from the 38,000 sq. km of New Britain, down to small atolls a few hectares in area. The main island is dominated by a rugged spinal mountain range rising to 4,300 metres, on which the majority of the population live. Elsewhere the population is concentrated in the most fertile land although nowhere is completely uninhabited. PNG Society is extremely culturally and linguistically diverse owing to its isolated development in steep highland valleys, and dispersal through many islands. More than 700 languages, one quarter of all known, are spoken in the country. Three official languages, English, Tok Pijin and Motu (both artificial) help to draw the country together.

2.3 Papua New Guinea: Level of Development

PNG became independent in 1975 after many years of German, British and latterly Australian government. Since independence, development in administration and public service has been slow, limited by restricted educational opportunities and changing political priorities. In recent years there

has probably been a reduction in infrastructure in rural areas, particularly in relation to education and health. Life expectancy in 1990 was 52 years for men and 51 years for women. Malaria and respiratory diseases are endemic, typhoid is not uncommon and there is significant infant mortality from meningitis, diarrhoea and pneumonia. Nutritional standards are low since, although supplies of staples are generally adequate, these are mainly root crops of low energy and protein density. Chronic malnutrition among children is as high as 35-40%. A recent UNICEF report suggests that subsistence agriculture, on which approximately 25% of the population depend, is becoming unsustainable because of increased population pressure and land constraints. Another 60% depend on cash crops.

2.4 Papua New Guinea: Political / Administrative System

PNG is a democracy in which 109 Members of Parliament (MP) are elected for terms of up to 4 years. Governments are generally formed by coalitions in constant flux, though to maintain some continuity, votes of no confidence are not permitted to unseat a government until it has been in power for 18 months. For administrative purposes, the country is divided into 19 provinces, plus the National Capital District around Port Moresby. One MP is elected to represent each province, who is usually also appointed as Governor. The Provinces are divided into Districts, each also with an MP, and subdivided into Local Level Governments (LLGs). LLGs have elected local assemblies each electing a president. Provincial Assemblies, consisting of the Governor, all district MPs, the presidents of all district assemblies and a few nominated special-interest counsellors, govern each province. A career public service based on the Australian model is responsible for national administration.

2.5 Emergency Management System

PNG has a National Disaster Act and supporting National Disaster Plan prepared in 1987. The disaster management system is headed by a National Disaster Committee (NDC), responsible to Cabinet, the National Executive Council (NEC). The NDC is composed of the secretaries of selected departments, chaired by the Secretary of the Department of Provincial and Local Government Affairs (DPLGA). There are lower level disaster committees in provinces and districts, with varying levels of training and effectiveness. A permanent National Disaster and Emergency Service (NDES), a headquarters organisation constituted within the DPLGA, is responsible for the operational coordination of emergency response, including logistics and communications.

III EMERGENCY SITUATION

3.1 Nature of the Emergency

The situation in early December 1997 is described in UNDHA -Geneva Situation Reports on the PNG Drought and Frost, Nos. 1-5. The worst affected mainland provinces are Chimbu, Enga, Western, Sandaun (previously West Sepik), East Sepik, Southern, Eastern and Western Highlands, and the coastal and island provinces of Gulf, Milne Bay and Manus. Many areas in these provinces have not had significant rainfall since July 1997, and some have had almost none all year. Meanwhile, the El Niño Southern Oscillation (ENSO) is continuing, and though there has been some rain in the Highlands, lower than average rainfall is expected to continue into 1998. Fires have devastated extensive areas of grassland, forest, tree plantations and gardens, and the haze has at times restricted aviation. To compound the situation, above 2,200m a prolonged series of nightly frosts have destroyed cash crops and staple root-vegetable crops.

3.2 Impact of the Emergency

The current food situation in the Highlands, and in the islands, where water supply is often more critical than lack of food, is either as predicted or worse, with most communities already at risk moving into higher categories (the classification system used is at Annex A). In the worst affected areas, all garden food has gone and remaining forest food is already much reduced by extensive burning. Approximately 80% of PNG's total population are now reliant on unfamiliar water sources, usually the larger (and also more polluted) rivers. Community health care and education are affected with health centres, aid posts and many rural schools closed due to lack of water. Overall, some 500,000 people now have very little food and restricted access to safe water, and the consequences of this are becoming more apparent, with an increasing incidence of eye infections, skin disease and

diarrhoea, and strong anecdotal evidence of deaths amongst those who would not normally be considered vulnerable.

A graphic presentation of the current situation, based on a nation-wide assessment, is at Annex B.

3.3 Projected Evolution of the Emergency

As the drought continues the numbers in need of food aid grow with each passing month. Even if widespread heavy rain falls soon, and subsistence farmers are able to plant seedlings, the first crops will not be ready for consumption before April 1998. However, most seedlings in the Highlands have been consumed, and if rain comes large quantities of seed materials will be needed in the affected areas. If no rain falls the country will enter the next dry season (May to October), and food aid for increasing numbers will be needed throughout 1998.

3.4 Implications for the Economy and Public Utilities

The drought emergency is damaging not only subsistence farming but also the production of cash crops such as coffee. More significantly for the national economy, some mines have had to close as the level of water has dropped in the rivers on which they depend for supplies and the transport of ore. There are three main hydro-electric schemes PNG and all are less than half full. The Surinumu Dam provides both power and water to Port Moresby where power is already being rationed. By March 1998 no further water will be available for hydro-electric purposes. As alternative generation capacity is very limited major power restrictions will ensue. Urban water supply alone will run out in August/September 1998, unless there is major rainfall in the catchment area.

3.5 Implications for Society

Most alarming are the wider social implications of the emergency for PNG, which is already subject to strong centrifugal forces, with the possibility of large-scale population migration from the rural to the urban areas. Such a movement is already perceptible. This could cause law and order problems in the localities to which the Highlanders descend, long term damage to social cohesion, and even conflict.

IV NATIONAL RESPONSE TO THE EMERGENCY

4.1 Government

Government response to date has been limited, although planning for greater response is under way. Some officials privately acknowledge that the emergency is beyond the capacity of PNG to manage alone. Though not a comprehensive overview of government response, a "National Action Plan from 1 December 1997 to 31 March 1998" has been prepared and distributed to the international community. In financial terms USD 2.8 million was granted to provincial authorities from emergency funds in September, and a special drought relief trust-fund has recently been established with USD 15.5 million. A recent supply bill proposes USD 42 million for drought relief in 1998.

4.2 Private Sector

Villagers have their own coping mechanisms including the use of their limited cash reserves, selling assets and changing spending patterns to buy imported food. Rice sales are running at 550,000 MT per week, 25% more than 1996, even before the delivery of significant food aid. The numbers threatened by famine will rise as many families' cash runs out, and there is particular concern for those living in areas away from the road network who have little contact with the market economy.

4.3 National Red Cross Society and NGOs

There are a limited number of secular NGOs in PNG but the churches play major roles in health services, welfare and disaster relief activities. The PNG Council of Churches is conducting food distribution in Southern Highlands, and is planning to assist water supplies with funding from a World Council of Churches Appeal. The PNG Red Cross Society is undertaking relief distributions with the support of IFRC.

V INTERNATIONAL RESPONSE TO THE EMERGENCY

5.1 Donor Community

The reluctance of donors to make large contributions reflects the slow and relatively modest national response. The exception is Australia, which has provided the majority of international assistance to date. In addition to expertise and funds, AusAID continues to provide extensive technical, logistical and operational support to PNG. The Australian Defence Force (ADF) is mounting an airlift to deliver rice, flour and oil to the worst affected communities which are inaccessible by road. Their mission is planned to continue into 1998. Donor contributions to date are listed at Annex D.

5.2 United Nations

As Chairman of the UN Disaster Management Team (UNDMT), the Resident Coordinator has been requested by the Government to act as the focal point for the coordination of international assistance. UNDP has established a database of donor contributions and monthly resource requirements to contribute to the Government's information management of the emergency. WFP has fielded a mission to assess the food security situation and to make recommendations for further action. DHA dispatched a UN Disaster Assessment and Coordination (UNDAC) team with national members from Australia and Fiji, to identify unmet relief needs and to assist resource mobilisation through the preparation of this appeal to the international community.

5.3 International Federation of Red Cross and Red Crescent Societies (IFRC)

IFRC has launched an emergency appeal (No. 17/97) for USD 407,000 to assist 160,000 beneficiaries in dire need, for a period of six months.

5.4 International NGOs

Action by Churches Together (ACT) has launched an appeal for USD 500,000 to provide food, medical and other relief assistance in close cooperation with provincial authorities. A number of international NGOs have been supported by AusAID and other donors, and whilst no consolidated list of NGO activity is maintained by the Government, the following activities have been identified:

- **CARE Papua New Guinea** (an offshoot of CARE Australia): provision of facilitators to advise the governments and disaster committees of three provinces on relief distribution;
- **Caritas**: food distribution through Catholic missions, training of national relief teams, provision of planting materials and of water storage and distribution systems;
- **World Vision**: provision of facilitators to advise one provincial government and disaster committee on relief distribution;
- **Adventist Development and Relief Organisation (ADRA)**: water related activities in highland provinces;
- **Medecins sans Frontieres**: considering the provision of health and water related assistance in Western Province;
- **OXFAM / Community Aid Abroad**: presently evaluating a range of possible inputs.

5.5 Other Possible Sources of Assistance

The World Bank would not normally consider short term humanitarian aid, but rather strategic preparation for the future through long term project assistance. Nevertheless, it is considering a scheme of road improvement in the Highlands to develop the very poor communications infrastructure, to facilitate relief, and above all to generate a modest cash income with which those in most need can buy the rice and other commodities which are still available. Such a programme would cost a USD 5 million and take at least 4 months to initiate. USAID has also conducted an information gathering mission, but has yet to make any decision to provide additional assistance to PNG.

5.6 Summary of International Donor Contributions

A consolidated table showing all international assistance to date, broken down by sector, is at Annex D. This table is summarised below:

Serial	Sector	Value (USD)
1	Emergency Management	468,000
2	Rural Water Supply	3,000
3	Food Relief (one-off / monthly)	174,000 / 3,243,000
4	Health and Nutrition	1,149,000
5	Agriculture	25,000
6	Cash to Govt Trust Fund	733,000
7	Cash to IFRC & NGOs	2,918,000
	Total Value Donated	5,470,000 (+ 3,243,000 /month)

VI EMERGENCY MANAGEMENT

6.1 Objective

To assist the national emergency response structure to manage the current crisis effectively, and if possible to build its capacity to manage future crises.

6.2 Situation: Assessment Findings and Recommendations

An extensive assessment of the situation in September/October provided the first concrete evidence of the severity of the crisis, and of its potential human consequences. The assessment was sponsored and led by AusAID and involved 13 teams, mainly agriculturists from the Department of Agriculture and Livestock (DAL), but also health and water supply specialists. Many of the same persons are members of the 16 teams currently conducting a two week reassessment to be completed by 16 December 1997. Their aim is to refine the data collected and to cover the areas not visited on the first assessment in September/October. The AusAID Assessment Report is the foundation of both the national and international response to the drought. It recommended the following actions:

- provide immediate food aid in certain locations;
- facilitate access to cash income by villagers;
- provide irrigation for crop production and maintenance of planting material;
- facilitate access to drinking water for villagers and institutions;
- address urgent health problems;
- restore infrastructure for aid delivery;
- transmit key extension messages.

6.3 National Response To Date

A more complex structure than that described at paragraph 2.5 above has been established to manage this drought. Political coordination of the drought response is the responsibility of a National Drought Relief Committee (NDRC), chaired by the Governor of Eastern Highlands Province with mixed political and public service membership and an outside executive officer. An advisory Working Group (WG), composed of the convenors of a range of specialist technical working groups, was created to provide advice to the NDC and the NDRC. Unfortunately, there is confusion both within the Government and without, over the division of responsibilities for the relief operation between these *ad hoc* groups and the permanent organisations already described, though this is being resolved as the main operational coordination role is assumed by NDES. However, at present this office is neither prepared nor resourced to manage such a nation-wide life-threatening emergency. At provincial and district level, measures to combat the drought vary according to their general administrative effectiveness.

A schematic diagram of the national system for management of the emergency is at Annex C.

6.4 International Response To Date

Australia has dominated the international assistance to national management of the emergency. This has concentrated upon the situation and needs assessment missions, but to promote coordination Australia has also established a mechanism for liaison between NDES and the provinces. On a technical level it has also included direct support to NDES and DPLGA through the provision of computer equipment, the secondment of advisers and emergency management training for staff.

6.5 Urgent Unmet Needs

The immediate strengthening of PNG emergency response structures at national, provincial and district levels is clearly needed. This would include the clarification and reinforcement of a government-wide structure to coordinate national response, and the designation of a single national emergency management focal point with responsibility for issuing written requests for donor assistance. Strengthening these institutions within a limited time frame will require expertise - particularly in operational and information management - at key points in the structure to facilitate communication within the system, to monitor and report on the effectiveness of relief measures, and to provide relevant training.

6.6 Priority Relief Requirements

Identified inputs to improve national emergency management are as follows:

- access to satellite (NDVI) imagery for assessment and monitoring, at a cost of USD 35,000;
- mounting a drought awareness campaign in radio and print, at a cost of USD 28,000;
- production and distribution of a self-help drought education video, at a cost of USD 70,000.
- emergency management training for NDES and provincial staff, at a cost of USD 40,000;

The total cost is estimated at USD 173,000.

VII RURAL WATER SUPPLY

7.1 Objective

To provide safe and sufficient drinking water to communities in the Highlands, coastal and island areas.
--

7.2 Situation

Much of PNG experiences year-round rainfall, the volume varying with the seasons. Port Moresby is the driest area with most of the 1000 mm of seasonal rain falling between November and April. Elsewhere, rainfall ranges from 2000 to 6000 mm and falls more evenly through the year. With such regular rainfall, irrigation is not generally practiced and wells and cisterns are uncommon except in the driest areas. Between April and November 1997 there has been a 20 to 80% rainfall deficit at almost every observer site, and many of the shallow wells, creeks and springs on which people normally rely have dried up. Water still flows in the major rivers but the rural population must travel long distances to collect water, the quality of which is deteriorating. Purification capacity is limited; communities are therefore forced to use unsafe water for survival, despite known disease risks.

7.3 National Response To Date

There is no single water department in PNG, and the national response has been fragmented, concentrating on public education using leaflets, newspapers, radio and television programmes

encouraging people to preserve water resources and to boil drinking water. Meanwhile, priorities for practical measures are agreed at the technical level but there is limited capacity for implementation.

7.4 International Response To Date

Australia has funded the provision of 4,500 20 litre water containers for domestic use, and has commenced delivery of fresh water to isolated island communities. UNFPA has pledged USD 300,000 for health and water related needs (see also the Health Sector above).

7.5 Urgent Unmet Needs

Two different categories of people have urgent unmet needs. In the Highlands the main mechanism for coping with severe water shortages is migration. Their main need is for accessible points from which safe drinking water can be collected. In some of the outer islands, people are already having to drink brackish water or increasingly scarce coconut milk. Where these are unacceptable or unavailable, they must move to places where water is still available. In these areas it is necessary to ensure adequate water storage facilities and either to transport water to them or to provide desalination equipment. Schools and health centres require reliable water supply systems to remain open, and as assets valued by the community, they would be suitable centres for community water storage or purification facilities. It may be possible to link such water projects with existing school and health facility development projects to obtain best value from funds.

7.6 Priority Relief Requirements

The following are considered the immediate priorities for relief in the water sector:

- assistance with transportation and storage of drinking water for small islands in Manus and Milne Bay Province, at a cost of USD 21,000.
- provision of technical assistance and equipment to establish ground water collection points for communities in 25 coastal areas (with others to follow), at a cost of USD 5 00,000;
- provision of small-scale pumping and purification facilities at bridges on major rivers to give access to safe drinking water, at a cost of USD 694,000;
- Improve supplies to high schools closed by lack of water, at a cost of USD 1,094,000;
- supply of 40,000 20 litre plastic collapsible water containers, at a cost of USD 316,000;
- provision of a water level / quality monitoring service, at a cost of USD 104,000;

The total cost is estimated at USD 2,729,000.

VIII FOOD RELIEF

8.1 Objective

To provide food assistance to affected communities (categories 4 and 5) facing famine.
--

8.2 Situation

At least 150,000 people are presently in a critical life -threatening situation, with no food other than dwindling bush or “famine” foods available. In early October, a further 175,000 were eating only very small amounts of rapidly diminishing food from their gardens and were supplementing this with bush food. Another 220,000 still had some food in their gardens, which will be consumed by the end of the year. Thus about 545,000 people (13% of PNG’s total population) in highland provinces, remote lowlands and the outer islands now have insufficient food on which to live, a figure which is expected

to rise with the conclusion of the reassessment exercise . Most of these areas are characterised by weak and in places non-existent infrastructure, particularly in roads and truck capacity (only 2 -300 in the whole Highlands), which has significant logistic implications. Although there is a functional if expensive freight forwarding and local distribution network, security on most highland roads is also a serious concern.

8.3 National Response To Date

In September 1997 the Government disbursed USD 2.8 million to provincial disaster committees to procure and deliver food relief for one month to affected villages. In rural areas, the traditional method of sharing individual earnings among all clan members (the “wantok” system) ensures distribution of the limited food across the community. The worst affected have been avoiding starvation by consuming various survival foods from the bush, i.e. yams, pandanus, ferns and young plant shoots. In some areas these “famine” foods are now scarce as forest fires and the heat of the dry soil has destroyed wild vegetation.

8.4 International Response To Date

The ADF airlift is targeting communities classified as Category 5 and 4+ in need of immediate food aid that are completely inaccessible other than by air, at a cost of USD 3.2 million per month. The operation currently supplies 60,000 persons, a figure which could rise to 160,000 by the end of 1997, regardless of any rainfall, stretching available ADF airlift capacity to the limit. The food ration, originally designed just as a supplement to locally available food, is based upon 8 kg of rice, 2 kg of wheatflour and 1 litre of vegetable oil, per person per month. It is recognised to be deficient in protein. Following its own assessment mission, WFP will reconsider the food security situation in January and, if necessary, make plans for a limited food intervention.

8.5 Urgent Unmet Needs

The National Action Plan sets the monthly food needs as follows:

Province	Rice (MT)	Flour (MT)	Oil (litres)	Tinned Fish (cartons)	Tinned Meat (cartons)
Western	415	104	51,000		
Central	208	52	26,500		
Chimbu	370	92	46,200		
Madang	480	120	90,000		
Milne Bay	315	85	40,750		
Morobe	220	69	38,380		
Sandaun (W. Sepik)	109	27	13,440		
Enga	744	27	92,800		
Southern Highlands	728	182	92,000		
Eastern Highlands	681	168	84,090		
New Ireland	40	10	4,830		
North Solomons	46	12	5,750		
East Sepik	157	39	19,740		
Manus	29	9	3,750		
Gulf	100	16	12,300		
Oro	41	10	4,800		
Western Highlands	250	66	33,300		
Monthly Totals	4,933	1,090	659,630	20,000	20,000

8.6 Priority Relief Requirements

The Government has allocated USD 15.5 million to cover all relief needs from November to the end of 1997. At the current rate of USD 2.8 million per month to purchase food aid alone, plus an estimated USD 1.3 million for delivery, distribution and security, the Government allocation will not last beyond

early 1998. Although a further USD 42 million is earmarked in a supply bill for drought relief in 1998, this is still unconfirmed, and assistance with funding or with food supplies in kind is required.

IX HEALTH AND NUTRITION

9.1 Objective

To provide basic health and nutrition services for those put at risk by the drought.
--

9.2 Situation

At the national level, health and nutrition in PNG is the responsibility of the Department of Health. Each province also has a health division responsible for day-to-day administration of health matters. Health facilities are provided by both government and the churches with the proportion of each varying from province to province. Many of the church facilities are significantly supported by government funding. Hospitals are generally located in major centres or missions whilst remaining rural areas are serviced by aid posts staffed by nurses or paramedics. Some 50% of aid posts are established and maintained by the churches. A significant number are closed at present by lack of water or because staff have not been paid. Although no deaths have been certified as directly attributable to the famine, the death rate outside health facilities appears to be increasing. Between 300 and 500 deaths from malaria, diarrhoea and other causes have been reported amongst people not normally at serious risk from these causes of death. It is assumed that they are weakened by lack of food or have been forced to drink unsafe water.

9.3 National Response To Date

After a delay when supplies were held up on the wharf, the Department of Health has begun to distribute new stocks of health stores and pharmaceuticals to hospitals and aid posts. It is also increasing its disease monitoring and responding to recently reported outbreaks of malaria, typhoid, diarrhoea and possible encephalitis, as best it can. A shortage of professional staff is inhibiting this response as is the closing down of aid posts.

9.4 International Response To Date

Australia has supplied pharmaceuticals and medical supplies to the value of USD 845,000 which are now in Port Moresby. It has also provided fuel to keep Balimo Health Centre running and air transport of supplies for remote health facilities not accessible by road. UNFPA has pledged USD 300,000 to meet health and water supply needs.

9.5 Urgent Unmet Needs

The general run-down of the health system has resulted in a lack of nutrition and health surveillance. There are concerns about the nutritional adequacy of the food relief ration and its impact on standards of health. Increasing incidence of disease is being reported but PNG is short of health professionals able to assess reported outbreaks and to plan appropriate response. Disease prevention capacity is also limited and in view of the resources needed to rejuvenate the health patrol system, the only short term solution is to increase public awareness through a comprehensive media campaign.

9.6 Priority Relief Requirements

PNG has identified the following priority requirements for relief in the health and nutrition sector:

- monitoring of nutritional status in Category 4 and 5 communities, including travel, equipment and logistical support, at a cost of USD 67,000;

- a nutritionist to advise on supplementary food needs of those receiving food aid, particularly vulnerable groups such as children and pregnant or lactating mothers, at a cost of USD 20,000;
- technical personnel for disease outbreak surveillance and response, at a cost of USD 347,000;
- assistance in preparing and mounting a multi -lingual media campaign (in radio and print) with measures to prevent the outbreak of serious disease, at a cost of USD 69,000.

The total cost is estimated at USD 503,000.

X AGRICULTURE

10.1 Objective

To re-establish the supply of seeds and planting materials for all staple crops through rapid multiplication in central locations and the importation of seeds unavailable locally.

10.2 Situation

The recent assessment of the drought/frost affected areas has confirmed the devastation caused to agricultural production in general. In affected areas, many food gardens have been completely unproductive, denying the people of their basic staples and daily provisions. In addition, poor harvests in many areas have meant that the few remaining replanting materials have inevitably been consumed as survival food.

10.3 National Response To Date

The Department of Agriculture and Livestock (DAL) has made a submission for the procurement and supply of seeds and planting materials for rehabilitation. The following programmes have been initiated by the DAL headquarters to supplement other ongoing rehabilitation work undertaken by provincial and district offices:

- 70 MT of seed potatoes distributed to the five Highland Provinces in November 1997. Another 60 MT are expected in January 1998;
- 5 MT of maize seeds distributed to Morobe, Central, Madang and Eastern Highlands;
- 200 kg of peanut seeds have been planted in nurseries, with seed materials expected to be distributed to farmers in February 1998 when multiplication plots are harvested (plus additional imported seeds from Israel);
- the Kandep High Altitude Research Centre has been allocated USD 140,000 for improvement in station capacity;
- PNG Cocoa Board has allocated USD 347,000 for rehabilitation of cocoa production over 12 months, in addition to free distribution of seeds;
- the Coffee Industry Corporation (CIC) will subsidise coffee seedlings produced and distributed by selected farming nurseries over 12 months, at a cost USD 486,000.

10.4 International Response To Date

AusAID has seconded an agriculture rehabilitation adviser to DAL and New Zealand has donated USD 35,000 towards seed materials through Baptist Missions in all highland provinces.

10.5 Urgent Unmet Needs

Whilst approximately 540,000 people need immediate food aid, the number in need of planting materials is estimated at 100,000 families. Without urgent provision of seeds and planting materials to restore staple food supplies, food aid will have to continue beyond April 1998.

10.6 Priority Relief Requirements

Agricultural rehabilitation will involve the restoration of short term subsistence crops in both Highland and coastal areas, over the next six to eight months. Proposed requirements for planting materials and imported seeds for distribution are listed in two sub-programmes according to their geographical region, and the specific locations where stockpiles will be established:

Lowland Region:

Serial	Crop	Requirement	Cost (USD)	Locations for Stockpiles
1	Sweet Potato	15 million cuttings	104,000	Bubea, Kerevat, Laloki
2	Taro	1 million suckers	26,000	Bubea, Kerevat, Laloki
3	Cassava	200,000 cuttings	5,000	Bubea, Kerevat, Laloki
4	Yam	200 MT	15,000	Bubea, Kerevat, Laloki
5	Corn/Maize	10 MT	30,000	Erap, Kerevat, Laloki
6	Vegetables	imported seed	3,000	Bubea, Laloki
	Subtotal		183,000	

Highland Region:

Serial	Crop	Requirement	Cost (USD)	Locations for Stockpiles
1	Sweet Potato	25 million cuttings	200,000	Aiyura, Kondiu
2	Potato (Irish)	120 MT	83,000	Mt. Hagen
3	Potato Plantlets	150,000 plantlets	70,000	Aiyura
4	Corn/Maize	10 MT	24,000	Mt. Hagen
5	Vegetables	imported seed	20,000	Mt. Hagen
6	Cassava	50,000 cuttings	6,000	Menifo
	Subtotal		403,000	

The total cost, including distribution of these materials at USD 195,000, is estimated at USD 781,000.

XI INTERNATIONAL RELIEF STRATEGIES

11.1 United Nations Appeal

The United Nations Appeal on Behalf of the Government of PNG is for a sum of USD 4.2 million to provide immediate relief from the effects of the frost and drought emergency, plus a further USD 4.1 million per month to cover food needs. A breakdown of the appeal by sector is presented in the Consolidated Table of Priority Relief Needs at Annex E, and this is summarised below:

Serial	Sector	Requirement, in cash (USD)
1	Emergency Management	173,000
2	Rural Water Supply	2,729,000
3	Food Relief (including logistics)	(4,120,000 /month)
4	Health and Nutrition	503,000
5	Agriculture	781,000
	Total Sum Appealed For:	4,186,000 (+ 4,120,000 /month)

11.2 Channels for Contributions

It is envisaged that donors could contribute to this UN appeal either by making a general cash donation, or by targeting a specific sector and relief need with cash or with the goods and services identified above. In the latter case, to ensure coordination of international response with the existing national and international response, potential donors are requested to liaise with the relevant UN agency, NGO and/or counterpart government department. Cash contributions can be made through any of the following channels:

- through UNDHA (to be channelled through the UN Resident Coordinator in Port Moresby) by direct transfer to account No. CO-590.160.1 at Swiss Bank Corporation, PO Box 2770, CH-1211 Geneva 2, citing “PNG - Drought”.
- through NGOs active in the relief effort, specifically the National Red Cross Society, ADRA, CARE, Caritas, World Vision and the PNG Council of Churches.
- directly to the PNG Government National Drought Relief Trust Account (No. 294 -236444, Papua New Guinea Banking Corporation, Port Moresby);

In order to assist the UN Resident Coordinator to fulfil the focal point role given to him by the Government of PNG, donors are requested to report any cash donation, and the value of any goods or services in kind, to DHA -Geneva.

11.3 Implementation and Monitoring

Funds channeled through DHA will be spent in coordination with the relevant organisations of the UN system, in accordance with national priorities. NDES within the Department of Provincial and Local Government Affairs (DPLGA) will assume the national coordinating role for the implementation of the contributions, in liaison with the UNDMT and the donor committee in Port Moresby. All relief activities funded by this appeal will be implemented by respective government departments and/or by the NGOs indicated in the Consolidated Table of Outstanding Relief Needs at Annex E. Monitoring at point of delivery will be carried out by provincial and district administrators assisted by NGO representatives stationed in selected provinces.

11.4 Reporting and Accountability

All disbursements through DHA and UNDP to the implementing organisations and government departments will follow the procedures established by DHA for emergency appeals. DHA and UNDP will make provision for accounting for the use of funds channeled through them, and will produce a report on the results of the appeal and on the use of the funds raised, which will be submitted to donors within twelve months of the appeal.

ANNEXES:

- A. AusAID Assessment Classification System.**
- B. PNG Drought and Frost Affected Areas, as at 24 November 1997.**
- C. National Structure for Drought Relief Coordination and Project Implementation.**
- D. Consolidated Table of International Donor Contributions to Date.**
- E. Consolidated Table of Priority Relief Needs.**

+ DEPARTMENT OF HUMANITARIAN AFFAIRS +

AusAID Assessment Classification System

Categories of Severity

In order to force observers to discriminate between areas on the basis of critical needs, the assessment teams were requested to summarise and to categorise each area observed, on a scale of 1 to 5.

On the original forms issued to the teams, food and water conditions were conflated into one statement of food conditions *and* water conditions *and* health conditions. It would have been better to have asked for the summaries to categorise on the basis of food and/ *or* water and/ *or* health. However, individual questions on the form allowed the separation of food issues from water issues, so that the categories represented in this report are shown in the box.

This classification has proved to be, in the main, a robust and reliable way of distinguishing between places. In many cases, where an assessment of the same area was carried out by a professional member of an assessment teams and by a lay person, such as a missionary or a local government councillor, the detailed information on the form differed in quality, but the summary categories enable both to arrive at similar assessments in the area.

Category	Food Conditions / Water Conditions / Health Conditions
1	Unusually dry, but no major food supply, or drinking water or health problems.
2	Some inconvenience. Staple food is short but other food is available, and/or must travel further to collect drinking water. Health satisfactory.
3	Conditions are difficult, with food reduced and some famine food being eaten, and/or water available only at a distance, and/or some babies and old people unwell. No lives at risk.
4	No food in gardens, famine food only being eaten, and/or water in short supply and possibly polluted, and/or increasing sickness, and/or the lives of small children and old people at risk.
5	Extreme situation. Only famine food available, and/or water very short, and/or many people ill, and/or small children and old people seriously at risk.

PNG Drought and Frost Affected Areas, as at 24 November 1997

**National Structure for Drought Relief Coordination
and Project Implementation**

Consolidated Table of International Donor Contributions to Date

Ser.	Relief Provided	Value in USD	Deadline or ongoing	Donor	Remarks
------	-----------------	--------------	---------------------	-------	---------

1 Emergency Management					
1	Initial assessment of drought impact	176,000	16/10/97	Australia	completed
2	Reassessment of drought impact	70,000	16/12/97	Australia	under way - to be completed by 16/12/97
3	Establish mechanism for liaison between NDES & Provinces	35,000	21/12/97	Australia	completed
4	Computer (x2)	4,000		Australia	for DPLGA
5	Computer (x2) & printer	not known		Australia	for NDES
6	Secondment of staff (x1)	not known		Australia	to NDES Ops Centre
7	Emergency management trainer	not known		Australia	technical assistance to NDES
8	Drought brochures (x2)	not known		Australia	printing costs
9	UNDAC member (x1)	10,000		Australia	UNDAC team dispatched
10	UNDAC member (x1)	2,000		Fiji	to identify needs & assist mobilisation of resources
11	UNDAC member (x1)	20,000		UNDHA	
12	Emergency management consultants (x2)	111,000		UNDP	For DPLGA (WG) & UNDP, for 6 ? months
13	Emergency management training	40,000		UNDP	For DPLGA (WG), NDES & Provinces
	Subtotal	468,000 +			

2 Rural Water Supply					
1	Water delivery to isolated island communities	not known	ongoing	Australia	delivered 60,000 litres to Samarai Islands
2	20 litre plastic collapsible water containers	3,000	1/12/97	Australia	quantity 4,500
	Subtotal	3,000 +			

3 Food Relief (& logistics)					
1	Food for inaccessible communities at Cat 5 & 4+ (60,000 people, possibly increasing to 160,000)	423,000 / month (increasing with nos)		Australia	ration of rice, flour & oil (& commitment to continue airlift for these areas in future months)
2	Airlift operation for inaccessible communities at Categories 5 & 4+	2,820,000 / month		Australia	now supplying up to 60,000 people
3	10 MT of food	not known	3/12/97	France	delivery by aircraft
4	Cash for food relief	174,000		UK	through Salvation Army
5	Assessment mission	not known		WFP	to assess possible inputs
	Subtotal (fixed)	174,000			
	Subtotal (per month)	3,243,000			

Ser.	Relief Provided	Value in USD	Deadline or ongoing	Donor	Remarks
------	-----------------	--------------	---------------------	-------	---------

4 Health and Nutrition					
1	Key pharmaceuticals	845,000	27/10/97	Australia	for Department of Health
2	Kerosene & Diesel	4,000		Australia	for Balimo Health Centre
3	Relief flights of supplies	not known		Australia	for Rumginae Health Centre
4	Cash pledge	300,000		UNFPA	for health and water
	Subtotal	1,149,000			

5 Agriculture					
1	Agriculture rehab. expert	25,000	2 weeks	Australia	secondment to DAL
	Subtotal	25,000			

6 Cash to Govt Trust Fund					
1	Pledge	500,000		Japan	
2	Pledge	30,000		Korea	
3	Pledge	30,000		Norway	through DHA
4	Cheque	35,000	late Nov	Taiwan	
5	Cheque	83,000	16/10/97	UK	
6	Pledge	25,000		USA	
7	Pledge	30,000		UNDHA	DHA grant to UNDP
8	Cheque	4,000	4/12/97	PNG Institute of Accountants	
	Subtotal	737,000			

7 Cash to IFRC & NGOs					
1	NGO programme support	2,113,000		Australia	projects under selection
2	Caritas PNG	100,000		Caritas Austr.	for relief supplies
3	IFRC, CARE, Churches	286,000		EU	for relief supplies
4	World Vision	62,000		New Zealand	for Southern Highlands
5	IFRC Appeal	155,000	22/10/97	New Zealand	for transport/logistics
6	Baptist Mission, Lae	56,000	22/10/97	New Zealand	for drought awareness course
7	Baptist Missions in all highland provinces	35,000		New Zealand	towards seed materials
8	PNG Red Cross	100,000		Australia/PNG Bus. Council	held in trust account
9	PNG Churches	11,000		Assemblies of God (AGRA)	for relief supplies
	Subtotal	2,918,000			

	GRAND TOTAL	5,470,000	plus 3,243,000	per month	
--	--------------------	------------------	----------------	-----------	--

Consolidated Table of Priority Relief Needs

Ser.	Relief Requirements	Cost in USD	Deadline or ongoing	Implementing Responsibility	Remarks
------	---------------------	-------------	---------------------	-----------------------------	---------

1 Emergency Management					
1	Satellite (Normalised Differential Vegetative Imagery) for drought assessment & monitoring	35,000	1/12/97	Geological Survey of PNG (GS-PNG)	NDVI available from NOAA - cost includes 1 year's imagery & training
2	Awareness campaign	28,000	ongoing	DPLGA	through radio & print
3	Produce & distribute self-help video	70,000	31/1/98	DPLGA	for drought education
4	Emergency management training for NDES & provincial authorities	40,000	30/4/98	DPLGA	to ensure in-country capacity to organise & implement National Plan
Sub total		173,000			

2 Rural Water Supply					
1	Transportation & storage of drinking water	21,000	ongoing	provincial authorities	for small islands in Manus & Milne Bay
2	Establish ground water collection points (25 tube wells, infiltration galleries, & pumps, etc.)	500,000	1/12/97	GS-PNG & provincial authorities	for drinking water in Manus & Milne Bay (possibly includes desalination plants)
3	Pumping & treatment facilities at bridges for rural communities	694,000	1/12/97	GS-PNG & provincial authorities	alternative to polluted river water - includes technical advice
4	Improve supplies to high schools closed by lack of water (x20 in 12 months)	1,094,000	ongoing	provincial authorities	could combine with an existing EU programme for maintaining schools
5	20 litre plastic collapsible water containers	316,000	1/12/97	NDES	quantity 40,000
6	Water level / quality monitoring	104,000	ongoing	GS-PNG & Health Dept	
Sub total		2,729,000			

3 Food Relief (& logistics)					
1	Feeding of Cat. 4 & 5 communities accessible by road (approx 545,000)	2,780,000 / month	ongoing	DPLGA & provincial authorities	PNG Govt Trust Fund will cover purchase of food relief until early 98
2	Delivery & distribution of relief supplies by road	670,000 / month	ongoing	DPLGA & provincial authorities	PNG Govt Trust Fund will cover delivery of food relief until early 98
3	Provision of security for delivery of relief supplies	670,000 / month	ongoing	DPLGA & provincial authorities	PNG Govt Trust Fund will cover security of food relief until early 98
Sub total (per month)		4,120,000			

Ser.	Relief Requirements	Cost in USD	Deadline or ongoing	Implementing Responsibility	Remarks
------	---------------------	-------------	---------------------	-----------------------------	---------

4 Health and Nutrition					
1	Monitoring of nutritional status in Cat. 4 & 5 areas	67,000	ongoing	Health Dept	travel, equipment & supplies
2	Secondment of nutritionist to Health Dept	20,000 for 1 month	1/12/97	Health Dept	WHO approached but no response to date
3	Disease outbreak surveillance & response	347,000	1/12/97	Health Dept & provincial authorities	outbreaks of malaria, diarrhoea, typhoid, encephalitis reported
4	Awareness campaign for measures to prevent serious disease outbreaks	69,000	ongoing	Health Dept	
Sub total		503,000			

5 Agriculture					
1	Procurement of seeds & planting material	183,000	ongoing	DAL	for lowlands: Bubea, Erap, Kerevat, Laloki
2	Procurement of seeds & planting material	403,000	ongoing	DAL	for Highlands: Aiyura, Hagan, Kondiu, Menifo
3	Distribution of planting materials	195,000	ongoing	DAL & provincial authorities	
Sub total		781,000			

OVERALL TOTAL		4,186,000	plus	4,120,000	per month
----------------------	--	------------------	------	-----------	-----------