

Case study: Papua New Guinea El Niño preparedness

1997 - 1998 El Niño

 **80%**

severe reduction in crop yields, up to 80 per cent in many areas

1,450m

increased occurrence of frosts experienced as low as 1,450m above sea level

260,000

260,000 people in a critical, life threatening situation

 **5,000**

water scarcity was a problem with 5,000 people in a critical, life threatening situation

 **40%**

an estimated 40 per cent of the rural population were seriously affected

The last devastating El Niño experienced in PNG in 1997 and 1998 caused a severe reduction in crop yields due to below average rainfall, with up to 80 per cent in many areas. An increased occurrence of frosts were experienced as low as 1,450m above sea level but with most affected areas above 2,200m in the Western Highlands, Southern Highlands and Central Provinces (Allen, 2000). Surveys (Barr, 1999) conducted throughout 1997 found virtually everyone in rural PNG was affected to some extent and an estimated 40 per cent were seriously affected. Analysis from a survey in November-December 1997 found 260,000 people in a critical, life threatening situation and an addition 1.9 million consuming limited food. Water scarcity was also a problem with 5,000 people in a critical, life threatening situation with extremely limited water supplies and 363,000 people with minimal amounts of poor quality water available.

In response to this, an estimated US\$9,173, 000 was spent on agriculture, food relief, health, nutrition and rural water supply. Logistical support for the relief operation was challenging and costly (UNDAC Report, 1998). The 1997/98 event occurred when the population of PNG was estimated at 5.3 million. The current population has almost doubled adding more demand to existing resources and services.

Response

\$9M

spent on agriculture, food relief, health, nutrition and rural water supply

Many lessons were learned. The lack of awareness and early warning of El Niño led to a lack of preparedness. Limited mitigation measures meant steps were not taken by authorities and communities to minimize the impact on the availability of food and water. Several initiatives to strengthen various institutions for future events have occurred including the World Bank-funded drought contingency planning workshop in 2002. This resulted in the establishment of The National Agriculture Drought Response Committee, tasked with formulating strategies for drought mitigation related to agriculture.

In June 2014, in response to an anticipated El Niño event in 2014-15, the PNG Disaster Management Team (DMT) members and relevant stakeholders convened a preparedness workshop. The aim was to discuss and better understand the impending situation and to agree on a common strategy on preparedness and response.

Some of the agreed actions from the workshop included:

- Government to continue monitoring the El Niño situation and inform partners of early warning signs to enable them to make an informed decision on preparedness measures.
- Government to use DMT's members' human resources to conduct country-wide vulnerability assessments to obtain reliable information on vulnerability levels of populations and locations thereby identifying potential hotspots.

- Government to revive the Drought Response Committee. Once accurate information is received, the Government (through the Committee) should launch a drought awareness campaign.
- Department of Health, in collaboration with UNICEF, WHO and other partners, should monitor the nutritional status of local populations of forecasted drought affected areas and start prepositioning medical and nutritional supplies in provinces expected to be affected.
- Given international food shipments take time to arrive, the Government should start early procurements and establish a central food bank.
- Provinces should be encouraged to draft and/or review their contingency plans involving all relevant stakeholders.
- The National Disaster Committee should advocate for a single disaster preparedness information product covering potential El Niño impacts and identify potential strategies by sector.
- Government, through PNG Water and with development partners, to map the status of boreholes and pumps throughout the country and recommend a policy for their utilization as public water sources during emergencies.
- Government to create a 'Disaster Stabilization Fund', a funding pool to be made available during an El Niño event.

The PNG Case Study demonstrates how governments, in cooperation with UN partners, the Red Cross, NGOs and donors can take lessons from previous El Niño events to implement preparedness measures. These actions can mitigate the potential impact of future events and ensure that mechanisms are in place to effectively respond should an El Niño event occur.

This is intended solely for the use of OCHA staff and humanitarian partners to generate and maintain awareness of the evolving dimensions of the El Niño phenomenon, and its potential impact on vulnerable populations in the Asia and Pacific regions.

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