

The Role of Rice in the 1997 PNG Drought

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Abstract

Trukai Industries was the major supplier of emergency rice during food shortages associated with the drought and frosts in 1997. The drought forced big changes on household economies because garden crops failed and sweet potato, a major staple carbohydrate of the PNG diet, was not available. Rice, which normally only provides a portion of the total diet, was one of the only available food sources and people used their cash reserves to supplement food supplies with rice. The increase in the demand for rice posed a major challenge to the supply chain. This was met by sourcing increased supplies from overseas, continuous 24-hour operations at rice mills, extra shipments and increased warehouse and haulage operations.

As the drought took hold, consultation and coordination occurred between Trukai Industries, the PNG National Disaster and Emergency Services, the Australian Defence Force and other private sector interests, but these services were slower to reach villagers because of the government decision-making processes involved. When their cash reserves were low, people raised money to buy food through activities such as the sale of soft drink bottles but there was also an increase in criminal activity. As aid rice began to reach the people, commercial sales fell. Overall, the commercially operated distribution system was able to react faster to the emergency than other government and overseas aid-assisted relief efforts. However, this was made possible because people had some cash reserves. This emphasises the importance to food security of encouraging people to save some money.

RICE played a very significant role during the drought that devastated PNG in 1997. It is not an exaggeration to say that thousands of PNG families survived because rice was available when almost all other food sources failed or had been consumed. Rice was vitally important then, and is likely to be so again for three compelling reasons: it is a long-lasting, nonperishable, easily transported food that people like to eat; there is an efficient, established, commercially maintained and operated supply network in PNG, available full-time through 12 distribution centres; and private enterprise is equipped and attuned to respond to

market demand for increased supply and will take decisions when bureaucracy is unable or unwilling to react with necessary speed.

Trukai Rice Industries' Response to Increased Demand

It was not weather reports that first alerted Trukai Industries to the onset of the drought, but reports from our sales representatives of increased rice sales. Travelling through the country, they began to report stories from their customers of failing food supplies. The cause was not only drought, but in some areas frost as well. Nationwide sales of rice began to exceed those of previous years in July 1997 (Fig. 1) and wholesalers started to exceed credit limits to meet extra demand.

Trukai Industries' logistics and stock management systems responded in a programmed way to the

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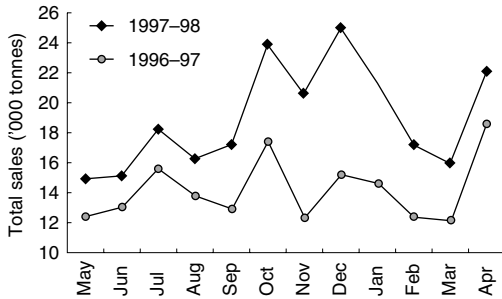


Figure 1. National rice sales, PNG, 1996–98 (Trukai Industries Ltd).

increasing demand. The 1997 budget for all Trukai rice sales in all of PNG was 170,000 tonnes. The forecast sales and therefore the stock orders necessary to meet those sales, rose quickly to 228,000 tonnes. Including 8000 tonnes of aid rice from Japan, the total demand actually reached 236,000 tonnes.

This posed a major challenge to Trukai’s supply chain. Could an additional 58,000 tonnes of rice be sourced, paid for, uplifted and landed in PNG in time to meet a food crisis? The urgent situation also called upon Trukai, as a commercial operator, to respond rapidly to the demands of its customers.

Rice Stock Movements and Increased Freight Requirements

How big a challenge was it to find and distribute an additional 58,000 tonnes of rice in a hurry? For a start, the rice had to be sourced. In Australia, the Rice-growers Co-operative Limited responded to the call by dramatically increasing the allocation of supplies to PNG, including the diversion of 4300 tonnes of rice intended for other countries.

Six rice mills operated seven days a week, three shifts a day—that is, continuous 24-hour production, with no rest days—until the additional 58,000 tonnes of rice had been supplied, on top of the normal budgeted demand.

The rice had to be shipped, and in a hurry. The extra 58,000 tonnes meant nine extra ships, provided by the shipping contractor Central Container Services.

Trukai Industries’ rice mill at Lae also worked three shifts, 24 hours a day, seven days a week. Extra staff were employed in the warehouse operation and Pagini Transport, the road haulage contractor, also had to employ an extra 20 staff, right through the period from

August 1997 to February 1998, to handle the extra cargo. Pagini had the responsibility of carrying an extra 24,000 tonnes of rice to the highlands, which meant 960 extra truck loads.

So it was a large logistics exercise, requiring the cooperation of many parties. This was a private sector response to market demand. All this extra purchasing and transportation was market-driven and funded.

Coordination with Emergency Services and Subsequent Government Action

The very nature of government emergency resources, which are only used intermittently, meant that there was a very significant difference between the government’s ability to respond and the response of the commercial organisations.

Trukai Industries, as the major food supplier, obviously sought consultation with government agencies. As the drought took hold, in August 1997, and increased reports of hardship were coming in, Trukai asked if drought relief supplies were going to be required by the National Disaster and Emergency Service (NDES).

A preliminary assessment of the extent of the need had been carried out by Dr Mike Bourke and Dr Bryant Allen who were engaged by the Australian Agency for International Development (AusAID). Meetings began with them in September 1997.

From rough estimates made at that time, it was calculated that extra rice would be needed for the NDES in November and December and Trukai sent urgent orders to Australia for another 5000 tonnes. This was done ‘on spec’; there was no government order placed with Trukai Industries at this time.

Assessment results were made available, unofficially, in October 1997 and in the same month NDES sought quotations for supply. Payment became an issue, with all tenderers calling for payment in advance because of the previous poor payment record of government. Even with advance notice for payment and the urgency of providing relief supplies to starving people, the PNG Finance Department took five weeks to action payment.

In the meantime, people were starving. AusAID personnel volunteered to take control of supply to remote areas highlighted as being critical in the Bourke–Allen report. AusAID personnel negotiated their own supply

contracts and commenced relief distribution on 2 October 1997. NDES drought relief supplies were mobilised two months later, on 5 December 1997.

Without intending to speak too critically of government agencies, this highlights the fact that a well-managed, already active, commercially operated distribution system can react much faster in an emergency. Aid rice was vitally important because, even with sufficient quantities of commercial rice available, not all the people had money to buy it.

There are lessons to be learned, and improvements that could be made, with regard to communication between the disaster headquarters, local disaster committees, Trukai headquarters and regional warehouses. There was some confusion and some duplication. For example, the Trukai Industries' assessment list was different to the ones given to local committees.

Further Increases in Demand

Even with Trukai's resources mobilised, the private sector buying and distributing large extra quantities of rice, AusAID picking up the worst cases at the end of remote supply lines and NDES getting into action, the crisis continued. If anything, it got worse, requiring ships to be diverted with bulk loads of rice to keep the worst-affected areas resupplied.

Such was the demand from PNG consumers, that the level of rice stock in Trukai Industries PNG warehouses was severely depleted before new shiploads arrived. As shown in Table 1, it was not the demand for aid rice from AusAID and NDES that was the greatest challenge (AusAID actually took just 2677 tonnes, and NDES 5484 tonnes), but keeping up with consumer demand.

Keeping Prices Down

At a time when Trukai was making huge efforts to procure and distribute more rice, every tonne sold was costing the company more.

PNG, and Trukai Industries, were on the horns of a nasty dilemma. As the hardships caused by the drought continued to mount, the value of the PNG kina (PGK) continued to slide (Fig. 2). Rice is purchased on the open international market in US dollars. The PNG kina was buying only US\$0.62 at that time and, as a consequence, at the height of the drought in December 1997, Trukai Industries was losing 98 PGK per tonne of rice sold.

The Trukai Industries Board decided to support their customers, the rice consumers of PNG, at a time

of great national need, and continued to sell at pre-drought, predevaluation prices. During this period, Trukai Industries lost 9 million PGK on sales, which translated as a year-end loss to its shareholders.

Response by Rural Communities to the Drought

The drought forced some very big changes on household economies. Research indicates that 85% of all consumers in PNG supplement their food budgets with garden produce. In some places, garden crops failed altogether and people resorted to forest foods and

Table 1. Extra volumes of rice 1997–98.

Agency	Rice distributed (tonnes)
Trukai Industries:	
– forecast sales	170,000
– actual sales	227,917
– additional sales	57,917
Japanese government aid	8,000
Total rice consumption	235,917
Additional over forecast	65,917
Distribution of additional rice:	
– commercial	49,759
– Australian government aid (AusAID)	2,674
– National disaster relief (NDES)	13,484
– total	65,917

Source: Trukai Industries Ltd

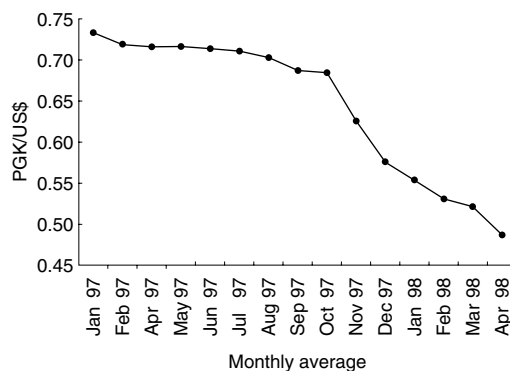


Figure 2. Exchange rate of the PNG kina (PGK), January 1997 to April 1998 (Department of Treasury).

killed their livestock to survive. Large-scale human-ignited bush fires (which traditionally are thought to cause rains) exacerbated the situation and thousands of hectares of forest were burnt out.

With traditional food sources failing, people had no alternative but to purchase all their food requirements. Sweet potato, which is the basic carbohydrate in the PNG diet, was not available, and households purchased more rice than normal to fill the gap in the family diet.

Sales of tinned fish, corned beef and chicken declined dramatically as families with limited resources struggled to fill bellies. Rice normally provides a portion of total nutrition in PNG. In the drought it was, at times, the only food keeping people alive.

Breaking Open the Money Jar

Cash to supplement family expenditure on food had to come from somewhere, and people sold their stores of returnable soft drink bottles and soft drink companies hired space to warehouse the extra bottles.

Local leaders with financial reserves bought large quantities of rice through the commercial system to supply their people.

Other people resorted to ‘help-yourself’ tactics. With large volumes of food moving along highways, two complete truckloads of stock en route from Lae to Mt Hagen were hijacked and looted, and there were reports of other losses by hold-ups from NDES disbursements in the regions.

In some provinces there was disorder in the distribution of rice. Local disaster committees in some cases were surprised by the large quantities of rice that arrived, and consequently had storage and security problems. Other committees coped well.

As aid rice began to reach the people in need, commercial sales dropped. In fact sales of commercial rice declined by the exact amount of aid rice purchased by NDES. Japanese aid rice arrived in December and was distributed in January, which was well after the worst point of the crisis.

Trends in Rice Consumption

The Trukai Industries Board had made the decision to absorb cost increases incurred during the drought so as not to add further to the hardship of rural people. But economic reality falls upon companies too, not just on hungry families. Trukai was losing money, and sharing the hardship, in a big way.

From May to November 1997, the basic cost of rice rose by 20%. Trukai Industries absorbed those costs during the drought, but as the drought eased and people had other food choices, economic reality forced Trukai to advise the Price Controller of the need to increase the price of rice by 5% per month for four months from December 1997 (Fig. 3).

Sales of rice declined sharply from February 1998 as the higher-priced product reached the shelves.

When the drought broke, Trukai sales representatives reported extensive planting of gardens in the highlands and increasing availability of local produce from markets. This trend continued through 1998 and early 1999. In fact, there have been gluts of sweet potato and other garden crops at times in the highlands markets but, because these are temporary and perishable, they do not constitute a sufficient food reserve to guarantee national food security. Obviously, drought impacts immediately on such garden crops, as do frost, fighting and other disruptions.

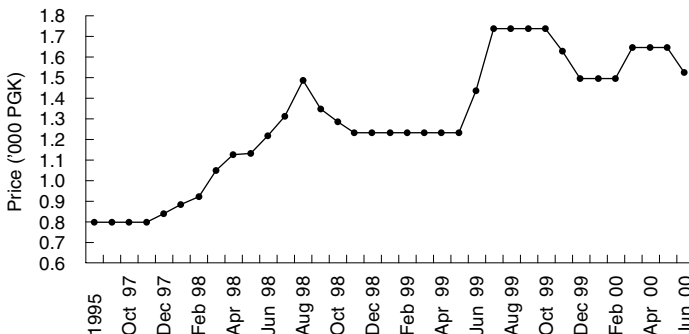


Figure 3. Rice distribution price, PNG 1995–2000 (Trukai Industries Ltd).

For 20 years, from 1972 to 1992, Trukai rice was the best value-for-money carbohydrate food available in PNG. Per capita consumption grew at slightly more than the official population growth rate (Fig. 4). Rice is a very popular food. People buy rice in stable economic times by choice and not necessity.

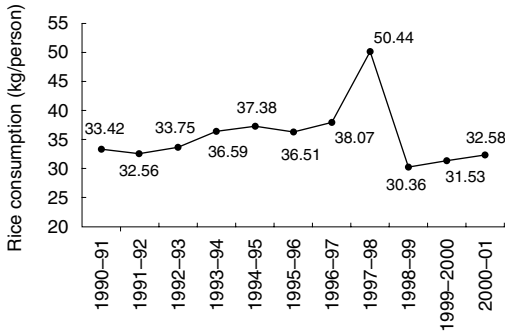


Figure 4. Rice consumption (kg/person), PNG 1990–2000 (Trukai Industries Ltd).

Lessons from the 1997 Drought

Distribution of rice during the drought taught us that the commercial food distribution network is the best equipped to cope with food emergencies. It is responsive, efficient, accountable and always ready to roll.

Government decisions can often be slow due to bureaucratic red tape. Quicker decision-making processes are needed and thus government agencies should be encouraged to use commercial linkages because they are efficient and accountable.

The experience also confirmed that, in guaranteeing food security in PNG, a reliable source from a close neighbour is very valuable.

However, there is an important factor in the 1997 picture that may not be in place in any future food shortage. Papua New Guineans, through prosperous years in the early 1990s, had built up cash reserves. This enabled them to supplement their supplies through the drought. They should be congratulated for this and encouraged to always have some cash in reserve.

In conclusion, consider one image that often haunts the world. How many nights on television do we see piles of food aid dumped on the wharves in miserably drought-affected countries like Ethiopia and Sudan, with no hope of moving it to where it is needed, while thousands of people starve painfully to death? Those countries do not have a commercial food distribution system like the one we have in PNG. PNG is lucky to have such a safety net, made up of ships, warehouses, trucks, bank accounts and people. Trukai Industries is glad to see itself as a major contributor to this national food security safety net.