

Assessment of the Impact of Drought In Ninh Thuan Province, Vietnam



A Report by Oxfam GB, drawing upon the findings of the Joint Oxfam GB, UNICEF, World Vision Assessment of the Impact of Drought in Ninh Thuan Province, 29th March to 3rd April 2005.

Date of report: 30th May 2005

EXECUTIVE SUMMARY

Drought has been affecting most areas of Vietnam since mid-year 2004, from the Red River Delta to the Mekong Delta. However, the most especially hard-hit areas are 9 provinces in the Southern Central and Central Highlands regions: Ninh Thuan, Binh Thuan, Khanh Hoa, Phu Yen (in Southern Central); Dak Lak, Dak Nong, Gia Lai, and Kontum (in Central Highlands).

According to the Department of Water Resources in the Ministry of Agriculture and Rural Development (MARD), between 1 million and 1.3 million people in these 9 provinces have been affected by drought and are in need of some type of assistance. This represents between 13-17% of the total population of the 9 provinces.

Oxfam GB conducted an assessment of the impact of the drought in Ninh Thuan Province together with UNICEF and World Vision at the end of April 2005.

Rainfall: There has been a severe drought in Ninh Thuan Province since August 2004 with rainfall in 2004 being about 50% below normal levels. The drought has continued into 2005 with poor rainfall during the first two cropping seasons in irrigated areas.

Impact on crop production: Rice production in Ninh Thuan at the main harvest in December 2004 was 60-70% below normal production levels. Maize and cassava production, the main sources of food and income for chronically poor households in upland areas, were also affected to a similar extent in 2004. Production in irrigated, lowland areas during the December to April season was reduced by 80-90% and prospects for the current April to August season are also poor due to the limited short rains.

Impact on terms of trade between livestock and rice: The drought has also had a severe impact on livestock production resulting in weight loss, increased mortality and reductions in market value. Simultaneously, food prices have been deteriorating. The cost of rice has, on average, doubled from \$0.20 to \$0.40 per kg, dried fish has doubled from \$0.65 to \$1.30 per kg, pork meat has increased from \$1.60 to \$2.60 per kg and the cost of vegetables has increased by 50%. Therefore, the terms of trade between livestock and rice have been deteriorating and placing poor households at increased risk of malnutrition, particularly during the typical lean season during they sell off livestock in order to purchase other foods.

Impact on other sources of food and cash income: Alternative sources of income for poor people in upland areas are limited even in normal times. They include casual labour and the collection of forest foods and other products. However, income from these sources has also declined due to the drought as demand for labour has reduced and the Government restricts access to forests.

Ability to cope: Ethnic minority groups living in upland, rainfed areas are those that have been most vulnerable to the impact of drought and most in need of assistance. They have limited alternative sources of food and cash income and are utilising risky coping strategies, such as debt and the sale of more livestock than is normal. A nutrition assessment conducted in May 2005 found that 19.7% of the children had either severe or moderate acute malnutrition (wasting), compared with the normal national average of 7.7%. Rates of global acute malnutrition above 15% are considered to be critical.

Comparison with normal year: Those in need of assistance because of drought are chronically poor and struggle to meet their basic needs even in a normal year, as evidenced by high rates of chronic poverty and malnutrition. However, the drought has led to an increase in the severity of food insecurity as well as to an increased risk of disease due to the lack of clean and safe water.

Numbers of people needing assistance: Local authorities have estimated that up to 28,041 households (152,042 people) will be unable to cope with the impact of the drought without some form of assistance up to December 2005. This represents 28% of the Provincial population and 43% of the rural population. (Urban and coastal populations have not been considered vulnerable to the drought).

Coverage of needs by the Government: The Government has been distributing rice, trucking water, vaccinating livestock and improving irrigation water supply. However, coverage has been inadequate, particularly in remote upland areas and the Government is now requesting assistance from aid agencies in meeting immediate drinking water needs, short-term food security responses, e.g. seed distribution and in addressing underlying vulnerability to drought.

Is this a humanitarian crisis? As a proportion of the total population, even in drought affected areas, the number of people in need of assistance to meet immediate needs may appear small. However, the situation is severe for these people (increased malnutrition, disease, debt and damage to livelihoods) and in absolute terms the numbers are high: over 1 million people in the 9 provinces identified by the Government as being drought affected. The Government and other local agencies are not meeting all of the immediate and short-term needs. Therefore, there is a need for an immediate humanitarian response in order to ensure that people are meeting their essential food and non-food requirements over the next 6 months and are able to recover resources and assets over the next year. Furthermore, there is a need for enhanced longer-term mitigation programmes to reduce vulnerability to future drought.

LIST OF ABBREVIATIONS

CBDM:	Community based disaster risk management
CFSC:	The Committee for Flood and Storm Control
CFW:	Cash for Work
CHVs:	Community Health Volunteers
DARD:	Department of Agriculture and Rural Development
DOLISA:	Department of Labour, Invalids and Social Affairs
DoET:	Department of Education and Training
FGD:	Focus group discussion
GDI:	Gender Development Index
HH:	Households
HDI:	Human Development Index
IEC:	Information Education Communication
MOLISA:	Ministry of Labour, War Invalids and Social Affairs
PPC:	Provincial People's Committee

1. INTRODUCTION

1.1. The purpose and objectives of the assessment

The analysis presented in this report is largely based upon the information collected during a Joint Assessment by Oxfam GB, UNICEF and World Vision in Ninh Thuan Province, between 29th March and 3rd April 2005. The methodology and further details of this assessment are presented in Annex 1 of this report. Since the original assessment report was completed, Oxfam GB has been monitoring the evolution of the situation as well as incorporating further information into our analysis so as to gain a more precise understanding of the scale and severity of drought impacts and to inform our response strategy.

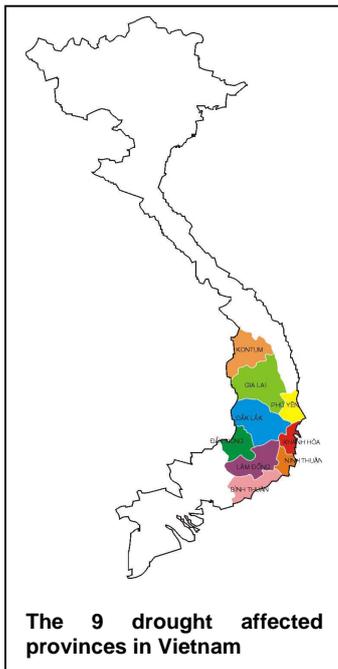
In particular, this latest analysis seeks to answer the following questions:

- How severe is the drought in comparison to normal rainfall patterns?
- What has been the impact of the drought on people's food and income security and access to clean and safe water?
- To what extent are people able to cope with, and recover from, the impact of the drought? Which areas and groups of people are most in need of assistance?
- How is the situation likely to evolve over the next 12 months?
- To what extent are the Government and other local stakeholders able to meet the needs of drought affected people?
- To what extent is there a need for additional assistance by international aid agencies and what are the most appropriate types of response?

Since the Joint Assessment, Oxfam GB has acquired further information from the Ministry of Agriculture and Rural Development (MARD), an assessment of the nutritional situation by the National Institute of Nutrition and UNICEF in Ninh Thuan and Binh Thuan in May 2005, an assessment of the drought by The People's Aid Coordinating Committee (PACCOM) and Counterpart International.

Additionally, a planning workshop was conducted in Ninh Thuan on 8/6/2005 to analyse the problems, identify needs, and consult with provincial authority and district and commune authorities from Bac Ai, Ninh Phuoc Districts about total beneficiaries, working areas, interventions and the way of implementing them, budgeting. Outcomes of this workshop were incorporated in this assessment.

1.2. National drought situation in 2004/05



Drought has been affecting most areas of Vietnam since mid-year 2004, from the Red River Delta to the Mekong Delta. However, the most especially hard-hit areas are 9 provinces in the Southern Central and Central Highlands regions: Ninh Thuan, Binh Thuan, Khanh Hoa, Phu Yen (in Southern Central); Dak Lak, Dak Nong, Gia Lai, and Kontum (in Central Highlands).

According to the Department of Water Resources in the Ministry of Agriculture and Rural Development (MARD), between 1 million and 1.3 million people in these 9 provinces have been affected by drought and are in need of some type of assistance. This represents between 13-17% of the total population of the 9 provinces (see Annex 2).

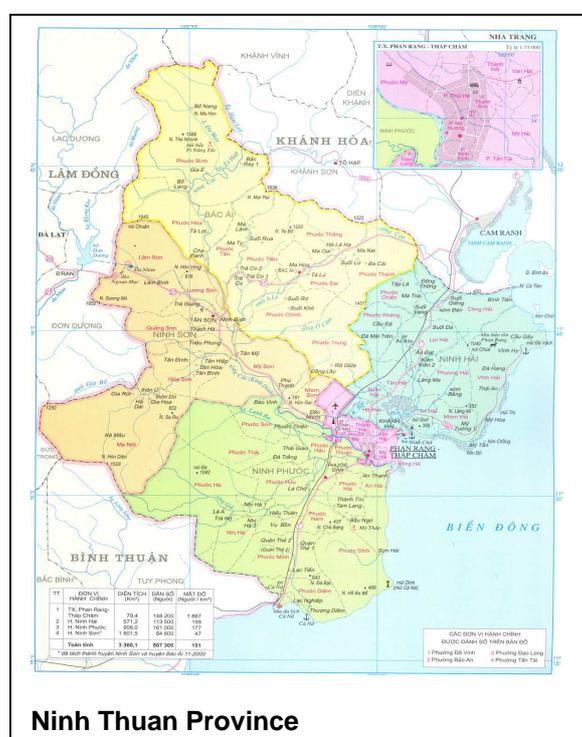
Oxfam GB and other international aid agencies consider the estimates of the Government to be reliable indicators of the overall numbers of people in need of assistance. However, there is a need to disaggregate these numbers when considering the number of people in need of different types of assistance.

1.3. Rationale for Oxfam GB focus on Ninh Thuan Province

Oxfam GB has focused our analysis of the impact of drought on Ninh Thuan Province because:

- The Province normally receives very low rainfall: <700mm per year¹ compared to the national average rainfall of 1,800-2,000mm per year.
- The Ministry of Agriculture and Rural Development (MARD) has identified it as the Province most affected by drought in 2004/05.
- 47% of the population live below the general poverty line and 24% below the food poverty line².
- Ethnic minority groups such as Cham and Raclay account for 23% of the total population across the whole province.
- The Province is considered to be amongst the most vulnerable to drought as a large proportion of the population live in areas where access to clean and safe water is very poor and they depend upon marginal, rain fed agricultural land to meet the majority of their food requirements.

2. BACKGROUND - SITUATION IN NINH THUAN PRIOR TO THE DROUGHT



Ninh Thuan Province

2.1. Demographic information

Ninh Thuan province is located in the Southern Central Region of Vietnam, bordering with 3 provinces, Binh Thuan, Lam Dong and Khanh Hoa. Its total area is 3,360 km² with 4 rural and 1 urban district and includes 59 communes and towns.

According to the Government Statistics Office, Ninh Thuan Province has a total population of 546,100 people / 111,340 households. Approximately, 58% live in rural areas (65,015 households) and 42% in urban areas (46,325 households). Twenty three ethnic groups, of which the Kinh people outnumber the other ethnic groups, and the Cham and Raglai people, make up 23% of the population.

2.2. Normal weather patterns

Ninh Thuan is among the driest provinces of Vietnam. There are two main seasons: the dry season from December to March; and the rainy season from April to November. The annual rainfall is normally between 600 and 2,500 mm per year with uneven distribution through the province. During the rainy season from September to November it rains heavily and quickly, the streams cannot deal with the quantity of water and it often leads to flash floods. In the dry season there is low humidity and high evaporation. The humidity is low at 76% and the average temperature is 27°C up to 35 / 37°C.

2.3. Livelihoods

The main economic sector of the province is agriculture. Major agriculture products: rice, corn, and green bean. Other products in small area: sugar cane, tobacco, and grape. There is only one crop in upland, rainfed areas from July to December. These areas are mostly cultivated by Raglai group using upland rice/corn varieties. Ninh Thuan also has potential for aquaculture with one of the four largest fishing areas in the country, however to date this has

¹ Source: MARD, personal communication

² Source: General Statistics Office. The lower food poverty line is a measure of the expenditure per capita required to secure an intake of 2,100 kcals per day. Non-food items are added to derive the general poverty line.

not been utilized effectively. Other industries of the province include industrial salt production, sugar production and aquaculture production for export.

2.4. Normal geographical and seasonal variations in food security and access to water

Ninh Thuan is enclosed by mountains and is characterized by three kinds of terrain, mountain (63,2%), hill (14,4%) and coastal delta (22,4%). There are two main river systems in the province, the first is the Cai River system with 5 tributaries (Me Lam, Sat, Ong, La and O Cam rivers). These originate from Lam Dong, the mountainous province that borders Bac Ai and Ninh Son. The 2nd system consists of short and ephemeral streams located in the north and south of the province which meet together at the Trau and Ba Rau rivers. These systems provide water sources for agriculture production in the two lowland districts of Ninh Phuoc and Ninh Hai and the town, Phan Rang.

In this report, we analyse variations in the impact of drought between upland areas and lowland areas. Urban and coastal zones are not described here because it was considered that the inhabitants of these areas are not very vulnerable to drought.

Upland areas

The Province consists of upland areas where the population are largely dependent upon rain fed production of maize, rice and cassava. There is only one rice crop a year, starting from late June to November. In the meantime, there are other sources of food people in upland areas can harvest including maize in August and cassava is available throughout the year. Main sources of water are river water, stream water, well water, and water is stored in jars. In upland areas, during dry seasons, people can access drinking water from the streams. In the rainy season, they mainly depend on the rainwater for consumption. These areas are mostly, inhabited by the Raglei ethnic minority group.

Lowland areas

There are 3 rice crops in irrigated areas: Winter-Spring from early Dec to early April; Summer-Autumn from late April to early August and Main cropping season from September to early December. In low land areas, the main sources of water in dry season are river water and well water; and in the rainy season, people mainly use rainwater. There is a major problem with the water in lowland areas being highly saline.

2.5. Chronic poverty and vulnerability in Ninh Thuan Province

According to data provided by the General Statistics Office, using data from the 2002 Household Expenditure Survey, 47% of the population, live below the general poverty line and 24% below the food poverty line³. These people struggle to meet the basic food and non-food requirements essential for a healthy and active life, even in years when rains are normal. This poverty manifests itself in rates of chronic malnutrition (stunting), which were estimated to be around 33.4% for the Province in 2004, compared to a national average of 30.7%⁴. Stunting is a consequence of poor nutritional intake over a prolonged period of time. Rates of acute malnutrition (wasting), resulting from a rapid and recent decline in nutritional intake (due to seasonal food shortages and/or increased health risks) were estimated to be 7.5% in Ninh Thuan in 2004 (month of survey is not available).

The chronically poor and malnourished will be vulnerable to drought in one or more of the following circumstances:

- They acquire a high proportion of their food from their own production, normal levels of production are not much above or below subsistence levels (particularly because they are dependent upon rainfed production), and alternative sources of food and cash income are very limited.

³ Source: General Statistics Office. The lower food poverty line is a measure of the expenditure per capita required to secure an intake of 2,100 kcals per day. Non-food items are added to derive the general poverty line.

⁴ Source: National Institute of Nutrition

- They acquire a high proportion of their food through market purchase, normal levels of cash income are not much above subsistence levels, and alternative sources of food and cash income are very limited.
- They are dependent upon rain or ground water for the majority of their water needs and do not have the capacity to safely store water.

According to these criteria, the people living in upland areas are most vulnerable to the impact of drought. They are dependent upon small plots of infertile, rainfed land, which provide sufficient rice and maize to meet only approximately 60-70% of their staple food requirements even in a normal year. Typically, they are able to make up the deficit by selling off livestock during the dry season, the collection of wild foods and through some casual labour. However, livestock holdings are small and cash income limited and difficult to expand in times of stress.

3. THE SEVERITY AND IMPACTS OF DROUGHT IN 2004/05 ON FOOD SECURITY AND ACCESS TO WATER

3.1. The severity of drought

There has been a severe drought with rainfall in 2004 about 50% below normal levels. In 2005, the light rains that normally start in May have been very limited.

3.2. Impact of drought on general water availability

According to the Provincial DARD, all rivers, springs and reservoirs in Ninh Thuan Province including Ong Kinh Lake, No. 8 lake, CK 7 have become very low. Water volume in major water supplies is 30-40% below normal while most small rivers and streams have become stagnant. The water level of Cai River, the main water resource of Ninh Thuan province has fallen 50cm below the annual average. The Province has 6 reservoirs with a total volume of 30 million m³ but they are now nearly empty. The Government has a hydroelectricity plant located in Lam Dong province, to the North East of Ninh Thuan, with a 130 million m³ reservoir. Part of the outlet from the power station flows through Ninh Thuan and is an essential part of their water supply. The province's agriculture production depends very much on this flow to the Cai River which irrigates the lowland fields. Normally, the flow from the power station is 16.7 m³/s. Currently, however, the volume in the reservoir is only 54 million m³, just over one third of normal capacity, and the inflow to the reservoir is about 3 m³/s with the resultant reduction in outflow to 6 m³/s. If there is no normal rainfall upstream in the near future there will be insufficient water for the hydropower station to operate and the water will stop flowing out completely causing all agriculture production in Ninh Thuan, which relies on the powerstation outflow, to come to a standstill.

3.3. Impact of drought on access to clean and safe water and the public health environment



Girls are collecting water from a shallow well in Dong Day village, Phuoc Nam commune, Ninh Phuoc district

Most communities in the Province still have access to sufficient water for basic needs (between 8 and 30 litres per household per day, comparing to SPHERE standard of 15l/prs/per day). However, this is often from unprotected, contaminated sources. Therefore, in some areas, families are having to buy clean water at a very high price of VND 60,000/m³ (\$4). In some areas the water table for village wells has dropped causing extended re-charge times and in others, sources have dried up completely or turned saline creating a reliance on government water tanker services. Many of the current water sources are unprotected increasing the risk of contamination as many families use one well, and the same source is used for drinking, washing and livestock.

Sanitation: Most villages have very few or no latrines, including in the schools and health centres. Statistic figure from UNICEF drought assessment says in Ninh Thuan, only 9% use septic latrines. And due to lack of water for flushing toilets, more people are defecating in the fields surrounding the village. 75% of the informants say they defecate in the field.

3.4. Impact on crop production

Lowland areas

August – December crop 2004: Rice production even in irrigated areas in December 2004 was 60-70% below normal.

December – April crop 2004/05: According to statistic of Ninh Thuan Provincial People's Committee reported on 11 March 2005, for the December-April crop in 2005, only 7,372 ha were cultivated compared to 17,398 ha in 2004, representing for 42% of the same crop in 2004, in which rice and corn areas were cultivated at 41.2% and 59.5% respectively.

April/May – August crop 2005: At present, some areas are having to postpone or even to cancel this rice crop because of water shortage. It means that residents will probably experience three continuous crop losses.

Upland areas

April to August Maize crop and June to December rice crop 2004: Statistics provided Bac Ai People's Committee showed that the rice harvest of the 2004 main crop harvested in December was reduced for this upland area. Total yield was 328.7 tons with output per ha is 910kg/ha, comparing to 1,179.6 tons with 2,500kg/ha in main crop of 2003, representing for 27.8% of total yield and 36.4% of output per ha in 2003. The outputs from the harvest and total yield of maize, beans, or cassava were also reduced. According to statistic figures of Bac Ai People's Committee, maize output per ha of main crop was 300kg/ha with total yield of 539.5 tons compared to output of 900kg/ha with 1,653 tons of same seasonal year 2003, representing for about 33.3% of the same seasonal year in 2003. For cassava, only 343 tons were harvested compared to 7,876 in 2003.

Impact on food consumption

A longer "Hungry period" than normal years: People in upland areas, usually face food shortage for 4 months from February to May in normal years. During the field assessment it was found that the duration of food shortages have increased to between 7 to 10 months from February to September - December 2005.

Reduction of the nutrition and frequency of meals:

Lowland areas: Prior to the drought, majority of the drought affected communities had a fairly mixed diet of rice with dried fish and vegetables and meat occasionally. Currently, rice and dried fish are still consumed in most meals but neither meat nor vegetables can be afforded.

Upland areas: During normal climate conditions, food security of poor households was quite tenuous with meals consisting of rice, with some corn, dried fish 3 to 4 times a week and supplemented with vegetables and fruit collected from the forests. Since the drought, the quantity of rice available has reduced and there is virtually no dried fish or vegetables included in their diet. In some areas, there are still cassava and wild potato available for forage, however, this has been reduced by the drought and the wild squash, papaya and wild leaves from forest normally used are now very difficult to find. Many poorer households have only 2 meals a day of rice and salt only, this diet is the same for all members of the family with no additional dietary support to the vulnerable groups such as children and pregnant or lactating women.

3.5. Impact on other sources of food security and cash income

Livestock experiencing weight loss, death, or sold out at lower price: According to statistics of Provincial DARD reported on 4 April 2005, 50% of the total number of 106,000 cows, and 30% of 93,050 goat and sheep in the whole province were facing weight loss. Total loss of animal husbandry of the whole province by 31 March 2005 was 45.557 billion VND

(equivalent to 30,371 USD). Part of the reasons is due to decreased grass cultivated areas and decreased shortage of dry food including straw and other products. Moreover, the price of grass and straw increased.

Price of rice and other food items is increasing: Most foodstuffs are still available in the usual markets, however the cost of rice and other items has increased since January. The cost of rice has, on average, doubled from \$0.20 to \$0.40 per kg, dried fish has doubled from \$0.65 to \$1.30 per kg, pork meat has increased from \$1.60 to \$2.60 per kg and the cost of vegetables has increased by 50%. These prices are significantly higher than those which can normally be expected for the time of the year.

Cash income decreased: Building and carpentry, making charcoal and collecting wood and iron ore in the forests are secondary sources of income. However, since the drought demand for such goods and services and the available amount of firewood is reduced and people are having to travel further to collect the same amount of wood.

Loss of access to forests resulting in lower food quality: People normally have easy access to the forests to collect wild vegetable, grass and other forestry products. Since the drought, the Government has prohibited people to enter forest in order to prevent forest fires.

Impact on nutritional status

The National Institute of Nutrition and UNICEF undertook a nutrition assessment in Binh Thuan and Ninh Thuan Provinces in May 2005. In each Province they selected the two most severely affected Districts and within these, the two most severely affected communes. In each commune selected 30 children under the age of 5 years and their families (n=240) were assessed. In Ninh Thuan it was found that 19.7% of the children had either severe or moderate acute malnutrition (wasting), compared with the normal national average of 7.7%. Rates of global acute malnutrition above 15% are considered to be critical.

It should be noted that due to the sampling methodology, the findings cannot be considered representative of other communes. The rates of malnutrition identified are likely to be at the top end of the range in Ninh Thuan Province. However, it is likely that other communes that have a similar profile as those selected, in terms of the food security and public health situation, have malnutrition rates that are also of concern.

An additional impact of drought on nutrition status of people is underweight of new-born child. While people are facing food insecurity, pregnant women are the most vulnerable. According to provided information from An Hai commune health staff, new-born child has been recently given birth at underweight of 1.9kg-2.3kg on average.

Impact on health

An increase in the prevalence of diarrhea in children: According to statistics of Provincial Health Centre, there are 1,304 cases infected with diarrhea in the whole province, an increase of 4.9% compared with normal seasonal levels. This has been caused by either lack of water or available water being unclean. Often hygiene practices such as washing have reduced since the drought because of the additional burden of collecting sufficient water. Also many families are not boiling drinking water, either because it has not been necessary in the past or the increasing scarcity of firewood again adds more burden.

An increase in gynaecological problems in women: since the drought, in areas where normal bathing practices is to use the streams and canals to wash and since these have dried up they no longer bathe. However this is sometimes a better situation than in some areas where women are using dirty water to wash. Percentage of women infected with gynaecological disease has increased from 57% in 2004 to more than 60% in March 2005 across the province while in the Bac Ai and Ninh Phuoc districts, it is 55% (in late 6 month 2004) and 61% (in 2004), respectively⁵.

4. COPING STRATEGIES

⁵ Source: Provincial Health Report

Diversifying crops: Prior to the drought the main livelihood activities were agriculture, with rice and maize as the main crops, and cattle rearing. Since the reduction in rainfall in 2004 the government has been encouraging affected families to grow more drought resistant varieties of rice and corn, beans and fodder crops in lowland areas. This has had some success but some farmers did not understand the change in technology and often the quantity of irrigation water was still insufficient.

Selling valuable assets or livestock with lower price: Generally the poorest families have had no livestock to sell. Other families have not yet had to resort to selling draught animals, however, perhaps half of their small stock or one or two cows. Moreover, the saleable value of a cow has decreased by approximately 30% (from \$650 to \$450) and a goat by 40% (from \$450 to \$260). The value of assets sold to support the households in the drought has also decreased.

Moving to urban centres for paid work: The people moving to urban centres has varied between communities with one community giving a figure of 30% (instead of the usual 10 %) of men leaving to look for labouring work elsewhere. In some communities more women leave as they have opportunities for higher paid positions in the garment industry. Again in the more remote, majority ethnic communities people are not aware of the options available and do not have the confidence to leave their villages to search for work.

Borrowing loans with high interest rate: Some families have had to resort to borrowing rice from vendors or richer members of the community. In other communities the vendors who would normally lend such food stuffs or cash have refused. Many members of the drought-affected communities are in debt following the failed harvests. In one village assessed, 50% of households acquired USD12/130 loans from the vendors before the drought. Now they are refused more loans. Normal practice is to borrow rice, seed and fertilizers from vendors and re-pay at harvest time, the normal interest rate is for every VND 1,000 borrowed, VND 3,000 is paid back. The government has said that there is seed available and when it rains they will make this available at subsidized rates, for example original price 18,000, subsidized price 3,000.

Households moved their livestock to upland in search of fodder: 26% of total cattle in the whole province, accounting for 52,234 cows, goats and sheep were moved to areas with better water and grazing. In Bac Ai, this rarely happened as each family has 2 animals on average. However, due to lack of available straw and grass in the communes, families had to move their cattle to farther places.

Digging wells: Many villages have dug shallow, unprotected wells in the stream beds for water that vary in depth from 1 to 3m, these tend to remain operational for two months before needing deepening. Any household can dig a well on private land or in the stream beds and extract whatever water they can afford.

ABILITY TO COPE

Ethnic minority groups living in upland, rainfed areas are those that have been most vulnerable to the impact of drought and most in need of assistance. They have limited alternative sources of food and cash income and are utilizing risky coping strategies, such as debt and the sale of more livestock than is normal. A nutrition assessment conducted in May 2005 found that 19.7% of the children had either severe or moderate acute malnutrition (wasting), compared with the normal national average of 7.7%. Rates of global acute malnutrition above 15% are considered to be critical.

6. AREAS AND GROUPS LEAST ABLE TO COPE

The drought has affected different groups of people including poor households identified according to the government criteria for poverty (i.e. income is less than \$6.45 per person per month), households with many young children, households led by a disabled head-family, households led by widow with little support from children, elderly men and women, households who are close to the poverty line, pregnant/lactating women, and infants in poor and average families. During discussion with the government they identified the worst hit by the drought as those who had large agricultural lands which are now unproductive. While these are undoubtedly worst hit economically they are not generally suffering from a humanitarian crisis. In reality the most critically affected areas are generally those of the ethnic groups living in or near the mountainous areas and the households most affected by

the drought are generally those who were living on the boundaries of poverty before the drought. This includes those relying on rainfed crops rather than irrigated productive land, people with small areas of land only and women headed households.

7. FUTURE SCENARIOS OVER THE NEXT 12 MONTHS

The situation over the next few months can only get worse, even if there are the light rains that normally fall in May / June, these will not replenish the diminished water table or fill the reservoirs to allow for the necessary irrigation to re-start normal agriculture production. After such a long drought any rainwater will run-off the hard soil possibly removing further nutrients from the soil.

It is likely that crop production will be able to resume only after the main rainy season of September / October. This means there will be no significant harvest until December 2005. Therefore, even if rains are normal over the next 6 months, affected people will still need assistance in meeting their minimum food and non-food needs up until the end of the year. Furthermore, as people have been getting into debt and selling off livestock in order to cope with losses in crop production, there is a need to assist people to recover from their resource base and productive capacity over the next 12 months.

If it does not rain in time for a harvest in 2005, there will be greater food insecurity with increased reliance on emergency coping strategies such as selling productive assets and moving away for work, there is also likely to be a corresponding increase in malnutrition.

8. NUMBER OF PEOPLE IN NEED OF ASSISTANCE

In Ninh Thuan Province, the Government estimated in March that up to 84,400 people (approx 15% of the population) were unable to cope without assistance in accessing food. At the end of May, this number had increased to 129,500 people (23,897 households) – 21% of the population. Furthermore, 152,042 people (28,041 households) – 28% of the population – are considered to be in need of assistance in accessing water. The government has estimated the number of people who need assistance in meeting food and drinking water needs. However, there is a lack of information on the number of people needing other types of assistance, to meet immediate needs e.g. other food and consumables, livestock feed etc; or to promote recovery e.g. seeds, fertiliser, livestock; or to reduce future vulnerability e.g. improved water supply, irrigation, seed diversification

9. GOVERNMENT RESPONSE

For a description of the different Government and other stakeholders involved in the drought response, please refer to Annex 3.

9.1. National response

According to the Government's Decision dated 16 March 2005, 98 billion VND extracted from Central Provision Budget to 9 drought-affected provinces as follows: Ninh Thuan, as the most drought-prone province, is allocated VND 20 billion (USD 1.3 million); Binh Thuan, VND 10 billion (USD 640,000); Dak Lak, VND 15 billion (USD 1 million); Gia Lai, VND 12 billion (USD 770,000); Dak Nong, VND 10 billion (USD 640,000). Kon Tum, Phu Yen, Khanh Hoa and Lam Dong provinces receive from VND 5 billion (USD 320,000) to VND 8 billion (USD 510,000) each province. Interventions include:

- 1/ Ensure to provide drinking water of 40 litres/household/day through trucking water by water tankers, digging more shallow wells, find other sources.
- 2/ Support financial aid to dredging river beds or buy more pumps or for petrol and electricity cost for pumping and trucking water.
- 3/ Provide seeds at subsidised price for drought-affected areas.
- 4/ Vaccinate people and cattle.

In addition, the Government decided to provide 15,000 tons of rice for the 9 provinces with the average rate of 10kg/prs/month in three months. Dak Lak will be allocated 4,500 tons; Dak Nong and Ninh Thuan, 3 thousand tons, respectively; Khanh Hoa and Binh Thuan, 1

thousand tons, respectively. Phu Yen, Lam Dong, Kon Tum and Gia Lai receive from 500 to 750 tons of rice respectively.

9.2. Government response in Ninh Thuan

Rice distribution: In mid January 2005, Ninh Thuan received 500 tons of rice from national government support. Ninh Thuan released another 4 billion VND to purchase 1,070 tons of rice. This amount of rice was distributed to 16,772 households with 91,523 drought-affected people, in which 10,496 are poor families and 6,275 are suffered from food shortage. A second distribution was carried out for 31,720 people with 3,120 tons of rice, and the estimated budget is 11.856 billion VND. A third distribution was completed for 129, 500 people / 23,897 households and completed on 25th May 2005. The government aims to provide 10kg per person per month.

Vaccinate cattle to prevent from diseases: By 4 April 2005, according to statistics of Provincial DARD, 92,375 dose of vaccine were provided to cows, goat, and sheep in the poor communes. The DARD is planning to increase number and coverage of cattle vaccinated in the coming time. Total budget for this activity is 200 million VND.

Provide seeds: The Provincial DARD has a plan to provide seeds for farmers as follows:

- Rice: 300 tons (100 tons for mountainous areas, 195 tons for the poorest low land areas), total budget is 1.02 billion VND
- Corn: 40 tons for mountainous areas only, total budget is 700 million VND
- Beans: each type of bean 5 tons, total budget is 62.5 million VND
- Grass: 3,000 tons, total budget of 1.5 billion

Ninh Thuan Province is submitting this request for support to national government to release fund for seeds distribution. However, the province authority is looking at situation of rainfall to decide whether to implement this plan or not. If the rainfall continues limited, they will not provide seeds for farmers.

Trucking water for daily use: The government did support fuel cost and water tankers to truck water to the most severe communes with total budget of 01 billion VND. According to the government's instruction of providing 40 litres/households/day, the province provided each district with 3 to 4 tankers used for conveying water from different sources (rivers, streams, water supply factories) to commune centres and in Bac Ai only the district centre.

Deepening and developing new shallow wells: Ninh Thuan provided 819 million VND to deep and dig 200 wells more and to truck drinking water to drought-affected people

Maintaining and upgrading water systems: Ninh Thuan allocated 400 million VND for this purpose.

Survey for deep boreholes (80-100m): Department of Natural Resources and Environment is requesting the national government to allocate 10 billion VND for exploring areas with underground water and drill some pilot boreholes. However, it is not approved yet.

Dredging canals, irrigation systems: Ninh Thuan allocated about 3 billion VND for this purpose.

Developing new ponds to provide water for production and animal husbandry: Ninh Thuan allocated about 2 billion VND for this purpose.

Maintaining and upgrading reservoirs and irrigation systems: Ninh Thuan allocated 02 billion VND for this purpose.

Health: There have been some government information programmes on public health but the relationship between hygienic practices and disease is not properly understood. People have been told that they should boil drinking water and wash regularly but they do not appreciate the importance of such actions. Many people collect and store water in open containers and leave food unprotected. Although there are operating health stations in all communes the qualifications of the staff in these varies. Many people still prefer the option of using religious healers or the services of pharmaceutical vendors within the villages.

10. GAPS IN THE COVERAGE OF THE RESPONSE

Food distributions: Evidence collected in the communities suggests that these government distributions have not been consistent. Some families have received 3 or 6 kg per person with some from normal annual distributions and not drought specific activities. Although many families have received some rice distributions from the government, this has not been enough to meet their needs and the small amount of money they can earn is spent on rice with no money left for other items such as vegetables or dried fish.

Water supply: Although the government are trucking water to people by water tankers, such water still cannot meet the demand, especially in remote, upland communes which are difficult for tankers to access. People are therefore still taking water from other unprotected water sources such as shallow wells, streams, even irrigation canals (specifically in Ninh Phuoc District). Moreover, water-fetching methods of people add to further contamination to their drinking water sources.

Seed distribution: The DARD have stated that the amount of subsidised seeds that they will be able to provide to drought affected people will be inadequate to meet all of the needs, especially vegetable seeds, bean seeds and grass seeds. The DARD and PPC have called upon aid agencies to provide complementary assistance.

A vague coordination mechanism between relevant authorities: The CFSC/Committee for Coping with the Drought report to the PPC in provincial weekly meetings and decisions made by the chairman afterward. Provincial Departments involved in drought coping have definite functions and responsibilities but not well coordinated. DARD plays the key role while its human resource limited. The resources are not utilized effectively and efficiently, for example, unprotected water holes were quickly dredged for animal drink and people usage in Suoi Rua village, Phuoc Tien commune, water was tanked to Phuoc Ha commune where water shortage was not imperative as the water source from the commune reservoir can be used in 2 months

11. CONCLUSIONS

Is the situation worse than in a normal year? Those in need of assistance because of drought are chronically poor and struggle to meet their basic needs even in a normal year, as evidenced by high rates of chronic poverty and malnutrition. However, the drought has led to an increase in the severity of food insecurity as well as to an increased risk of disease due to the lack of clean and safe water.

Is this a humanitarian crisis? As a proportion of the total population, even in drought affected areas, the number of people in need of assistance to meet immediate needs may appear small. However, the situation is severe for these people (increased malnutrition, disease, debt and damage to livelihoods) and in absolute terms the numbers are high: over 1 million people in the 9 provinces identified by the Government as being drought affected. The Government and other local agencies are not meeting all of the immediate and short-term needs. Therefore, there is a need for an immediate humanitarian response in order to ensure that people are meeting their essential food and non-food requirements over the next 6 months and are able to recover resources and assets over the next year. Furthermore, there is a need for enhanced longer-term mitigation programmes to reduce vulnerability to future drought.

12. RECOMMENDATIONS

The recommendations presented here are for interventions to complement the on-going response by national and local government structures. The strategy involves:

1. A drought response component to meet immediate needs, protect health and livelihoods
2. A drought recovery component to assist people to recover resources and productive assets

3. A disaster mitigation component in order to increase the capacity of households, communities and local authorities to cope with the impact of future droughts and other natural disasters.

12.1. Drought Response Component

Objectives

- To improve the nutrition and health status and to increase the recovery capacity of drought-affected women, men and children in Ninh Phuoc District and Bac Ai District of Ninh Thuan Province.

Interventions

Cash transfers of approximately USD10 per month to increase access to basic complementary food and hygienic items for a 3 to 6 month period: The government is distributing rice but people are struggling to access other essential food commodities and non-food items such as hygienic items due to reduced purchasing power. In attempts to meet these needs, people are increasingly getting into debt. In order to further assist people to meet their minimum food and non-food requirements it is suggested that aid agencies could make monthly cash payments targeted at those households most in need, particularly those that are unable to benefit from participation in cash-for-work (CFW) projects (see below). Oxfam GB is undertaking further field assessments in order to determine whether such transfers are made in cash or whether it would be more appropriate to identify and register local suppliers and provide vouchers to the beneficiaries. The duration of this assistance will depend upon the performance of rains over the next few months and improvements in crop production and livestock conditions. Moreover, there should be additional cash grants to pregnant women and lactating mothers to support them to buy more supplementary food in addition to on-going daily food.

Protection of existing water sources and rainwater catchment: Many existing water sources currently in use are unprotected. Interventions should improve these sources in order to maximise water retention and to minimize risk of contamination and resultant health risks. Interventions should include deepening existing wells, lining hand-dug wells and creating safe options for water for livestock and washing to minimize contamination risks. Such interventions could be implemented through cash-for-work projects, thereby enabling further cash transfers to households with people available to work.

Distribute plastic water container, vessel, and water filter: The target beneficiaries are households who live far away from water sources, and do not have water containers. The provided items can support them to storage and treat water both in dry season and rainy season.

Distribute hygiene kits: Washbasin, water ladle, soap, face-cloth, toothpaste, tooth brush, panties should be distributed to household members so that people can have means to practice hygiene practices, once they have increased volume of clean water. Moreover, there should be additional distribution of nappy (traditional), new-born child's wear, underwear for infants, pregnant women, and lactating mothers.

Public Health promotion: While facilities are provided, if there lacks guidance and coaching from public health promoters, practices of people will not be improved. A network of nutrition and public health volunteers should be established in each commune, and provided with training in hygiene/ nutrition knowledge, and dissemination skills. They will conduct demonstration sessions or do weekly household visits or group discussion to guide people to use hygiene kits, ensure nutrition meals, and do hygiene practices.

12.2. Drought Recovery Component

Objective

- To increase the recovery capacity of drought-affected women, men in Ninh Phuoc District and Bac Ai District of Ninh Thuan Province.

Interventions

Distribute vegetable seeds, local beans seeds, grass seeds: Many farmers have lost their seed and the Government has stated that it will be unable to cover all requirements, especially vegetable seeds, local beans seeds, and grass seeds. Therefore, it is proposed that aid agencies could seek to complement government sales of subsidized seed. Oxfam GB is undertaking further analysis of the government system and discussing with local DARD in order to identify the most appropriate ways in which aid agencies can provide complementary assistance.

Organise other CFW activities to increase access to job opportunity so that they can have increased income to pay for food or to invest in livelihood recovery: The activities will be suggested by the community for the benefit of the whole community. It may include upgrading inter village-commune roads, establishing child care centres, etc.

12.3. Drought Mitigation Component

The duration, location and budget of this component still have to be determined.

Objective

- To reduce vulnerability to the impact of future drought

Interventions

Irrigation schemes The province of Ninh Thuan relies on an extensive irrigation and rainwater catchment system for both crop production and water for livestock and human consumption. The government has suggested construction of a number of additional livestock pools to store water from the irrigation system, however there appears to be no excess water so if additional water is stored up stream there may be a detrimental affect on the water users downstream. However it is probable that the whole system could be improved to mitigate both the effects of drought and flood as well as maximizing water storage of rain run-off. To achieve this the system needs a review of the whole and a systematic planning with the relevant government authorities.

Crop diversification + extension: Investigations should be carried out with the Department of Agriculture and communities to identify the most suitable crops for long term food security, including diversification to reduce dependence on one crop type. Seed types are likely to include staple crops (rice/maize) and alternatives such as legumes. The investigation should include consideration of the limitations of women headed households where heavy inputs in terms of land preparation and crop care may not be feasible and make recommendations specifically for them. There should be comprehensive training to ensure that beneficiaries fully understand the reasons behind the choice of crops and that they have the technical skills to maximize the harvest. The trainings should all be carried out with the Department of Agriculture, who will then monitor the success of the crops planted.

Development of new water sources including deeper boreholes: To date the province has relied on surface water and shallow wells (up to 20m) for its water supply for all activities. Geological maps of the area identify a layer of impermeable rock close to the surface in the mountainous areas, and much of the water found in the other areas within the top 20m is saline. With changing global weather patterns this may no longer be sufficient.

Hygiene promotion The materials should be disseminated through the commune level health staff and network of CHVs as well as being incorporated into the government health promotion campaigns. Activities should include households level and small group discussions, community meetings and sessions during visits to the health centres for check ups or supplementary feeding distributions.

Capacity building of health staffing health promotion The public health promotion activities should be carried out as part of the roles and responsibilities of the Community Health Volunteers. The responsibilities of the volunteers should include information dissemination and training about hygienic practices, for example water collection and storage, food storage, washing and general cleanliness. They will monitor incidence of water related diseases within the community, feedback the information to the health centres and assist the health centre

staff to implement any necessary response. They will also assist community members with self treatment of minor cases of water related diseases such as diarrhoea (e.g. ORS).

Capacity building of water infrastructure management committees Training and capacity building should include both technical issues related to infrastructure, and public health.

Intallation of latrines in schools and health clinics Intervention should install a number of latrines in key locations for demonstration purposes to introduce the concept to the communities and which can be easily replicated. Locations for latrines should be determined by the Commune People's committee and village elders and should include schools, health centres and homes of village leaders (meeting places). For each latrine a person will be designated to monitor the use of the latrine and ensure it remains clean, for example the school caretaker.

Annex 1: Details and methodology of the Joint Oxfam, UNICEF and World Vision Drought Assessment in Ninh Thuan Province, 29th March to 3rd April 2005

Assessment Team members:

Lisa Reilly	Oxfam GB in Philippines
Nguyen Thi The Yen	UNICEF
Tran Thi Mo	Oxfam GB
Nguyen Dieu Chi	Oxfam GB
Le Anh Tuan	World Vision
Huynh Nhat Tien	World Vision

Organisation/person(s) responsible for the assessment

A joint team made up of Oxfam GB, UNICEF and World Vision carried out the assessment. Representatives of the Department of Agriculture and Rural Development also joined the assessment teams. The Team Leader was an Oxfam GB Programme Manager from the region with experience of public health and drought projects, with team members from the Oxfam GB Humanitarian team based in Hanoi, a UNICEF representative from their programme based in Ho Chi Minh City specialising in health and education, particularly of women and children, and two representatives from the World Vision team currently implementing livelihoods projects in the neighbouring province of Binh Thuan. Support was also provided by nutrition specialists in UNICEF and Oxfam regional and global advisors.

Original report written:	Lisa Reilly	Oxfam GB
	Nguyen Dieu Chi	OxfamGB

Objective of the assessment

To make an assessment on the emergency situation and then to initiate a program in order to respond to the situation

Dates of assessment

March 29th to April 3rd 2005 – Detailed assessment of two districts in Ninh Thuan Province, identified during the rapid appraisal as most affected by the drought, including data collection on Government response, water availability as well as the health and food security position of the most vulnerable groups in the area.

Methodology and sources of information used

Sources of information include secondary data from government agencies and UNICEF, in-depth interviews with key informants from local government units (province to commune level) and line agencies with 4 focus group discussions (FGD) (2 female focus group discussions and 2 male focus group discussions) and 10 household (HH) interviews with community members in the affected communities in two visited communes of Ninh Phuoc and Bac Ai district. FGDs were held with women and men separately to identify how the drought has affected them differently.

The province of Ninh Thuan was identified by the Ministry of Rural and Agriculture Development as one of 9 provinces affected by the drought and was chosen for the assessment because it is the area most severely affected by the drought in the country with an annual rainfall in 2004 of 520mm. The poverty rate of the province is high and 23 % of the population is Raglei and Cham people recognized as vulnerable and marginalized ethnic groups. In addition, Oxfam is starting a livelihood project in 2 communes and a community based disaster risk management (CBDM) project in Bac Ai district.

The two districts of Ninh Phuoc and Bac Ai were chosen for more detailed assessment because their physiology, ethnic diversity and affects of drought are diverse and representative of the province (and area) as a whole. The communes and villages selected for the FGDs and HH level interviews were those identified by the District Level Government as affected by the drought and considered factors such as normal livelihoods of both irrigated lowland and rainfed upland areas, number of poor households and ethnic diversity to ensure a representation of a broad cross-section of the population

Background information on the pre-drought situation of the area was taken from the Participatory needs assessment and gender research carried out by Oxfam in 2003 / 2004. A Training of Facilitator courses on CBDM for district and commune officers in 4 communes in Bac Ai was conducted in Jan 2005. Three CBDM Action planning workshops with participants of village heads and villagers were organised in Mid Feb 2005 in 3 communes. Information from these workshops was used for background for the assessment.

Annex 2: Number of people affected by drought in 9 Provinces of Vietnam according to Provincial statistics

	Population		lacking water			lacking food		
	# HHs	# people	# HHs	# people	% total	# HHs	# people	% total
Ninh Thuan	11,340	546,100	13,745	69,175	13%	16,800	84,000	15%
Binh Thuan	206,748	1,120,200	28,650	122,450	11%	13,382	66,910	6%
Phu Yen	168,839	836,700	12,080	48,330	6%	8,238	41,190	5%
Khanh Hoa	208,843	1,096,600	no data	no data		8,354	41,770	4%
Gia Lai	191,632	1,075,200	120,100	618,540	58%	21,214	106,070	10%
Kon Tum	63,997	357,400	7,455	33,548	9%	9,463	47,315	13%
Dac Nong	145,102	917,800	34,730	161,000	18%	74,612	373,060	41%
Dac Lac	207,474	1,100,000	63,680	318,310	29%	54,883	274,415	25%
Lam Dong	210,893	1,120,100	no data	no data		11,863	59,315	5%
TOTAL	1,514,868	8,170,100	280,440	1,371,353	17%	218,889	1,094,445	13%

Annex 3: Stakeholders involved in disaster management and development

The Committee for Flood and Storm Control (CFSC): This Government committee has a vertical structure from national to commune level. The provincial Committee's key members include representatives of the different sectors including Agriculture, Social Affairs, Planning and Investment, Public Health and Finance. The permanent member is Department of Agriculture and Rural Development (DARD) and they play the key role in planning the province's annual disaster preparedness and mitigation plan and reporting to the national and the Provincial People's Committee (PPC). Due to the drought situation a Steering Committee for Coping with the Drought has been set up with the key departments and led by the vice-chairman of province.

Department of Agriculture and Rural Development: DARD guides the district authorities to cope with the drought in term of agriculture production. They guide and monitor district authorities who implement the agriculture production schedule. The Irrigation Division is responsible for managing and allocating the province's limited water sources for agriculture production. They provide instruction for localities to dredge channels and dig reservoirs. Its' Centre for Water and Sanitation manages the water supply for the people. During the drought the Centre is responsible for conveying water by tankers to communes where there is no longer sufficient water sources. Information related to damage caused by the drought is collected by DARD to report to the People's Committee for decision making. DARD also supervises the livestock disease situation to determine any necessary measures to prevent the outbreak of disease.

District People's Committee: instructs communes on how to implement the agriculture production scheme. It reports back to the DARD and Province People's Committee (PPC) on the impact of the drought in terms of agriculture production, water sources, livestock disease, education and public health.

Commune People's Committee: report the impact of the drought on the communities' livelihoods, water and sanitation and issues related to livestock up to the District Committee. The commune committee provides the district authority with the number of households affected by the drought.

Department of Labour, Invalids and Social Affairs (DOLISA): is responsible for reviewing the numbers of poor households and those with food shortages caused by the drought impact on their livelihoods. The province received 500 tonnes of rice from the national provisional stock for the poor households who lost crops. DOLISA coordinates with the district and commune authorities to identify the poor households and monitor the rice distribution to those affected.

Red Cross: Aims to strengthen the awareness of the communities to disaster preparedness by providing training courses and information dissemination, but its role is very limited in Ninh Thuan province. Some activities conducted by the organization are, building small irrigation works and digging wells funded by the Netherlands Red Cross. It also helps to identify vulnerable households for provision of humanitarian support.

International Organizations: There have been some international organizations involved in humanitarian response activities in the province of Ninh Thuan. During the historical flood in November 2003, CARE provided water filter equipment, seeds and some community based disaster management training. In 2003 UNICEF built water jars to help the local households to preserve water from the rainy season. From 2004, the Netherlands Red Cross supported Ninh Thuan Red Cross to provide courses on capacity building for disaster management and mitigation to district and communal officers of Ninh Hai and Ninh Phuoc districts.