Viet Nam
Drought and Saltwater Intrusion
Rapid Assessment Report

Assessment conducted 21-24 March 2016

Joint Assessment Team
(MARD, MoH, PACCOM, UN, INGOs)
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EXECUTIVE SUMMARY

Following the briefing of partners held by the Ministry of Agriculture and Rural Development (MARD) on 15 March 2016, six inter-agency rapid assessment teams visited Ben Tre, Ninh Thuan, Binh Thuan, Gia Lai, Kon Tum and Kien Giang Provinces to conduct an assessment of humanitarian needs. The joint assessment teams were supported by representatives from MARD, MoH, PACCOM, INGOs and UN.

The assessment was conducted during 21-24 March 2016. The focus of the teams was on identifying priority humanitarian needs along with other immediate needs of the affected communities. To aid the assessment process, existing inter-agency guidance and tools for emergency needs assessment were used, along with supplementary questions to adapt to the specific drought situation and context.

This consolidated assessment report presents immediate humanitarian needs along with other priority needs that are likely to be needed in responding to the challenges posed by drought and saltwater intrusion. As such, this report does not include identification of longer term development and/or socio-economic needs. As the teams visited only six of the affected provinces, there remains a gap in collecting information from other affected provinces.

This assessment report will help inform discussions and reach agreement on a joint response strategy to mitigate the impact of drought and saltwater intrusion. In supporting the people and Government of Vietnam, we have a collective responsibility to agree on a joint response strategy so that required resources can be mobilized to meet these needs.

DISCLAIMER

The report was consolidated from rapid field assessment reports submitted by the six joint assessment teams. These initial findings may be subject to change as more data becomes available, however this report provides a first snapshot for priority humanitarian needs at the time of assessment. Please note that the views and opinions expressed in the report are solely those of team members, and of those they interviewed. Due care has been taken to provide an initial estimation of needs using the joint assessment and Government reported information. However, the overall picture may change as new information becomes available and must continually be cross-checked and validated with the local provincial authorities.
1. Context

As a result of the El Nino phenomenon, the Central and the Central Highland regions of Viet Nam have been experiencing severe drought since the end of 2015. So far, nearly 42,000 Ha of crops have been damaged by drought conditions. Water shortages and saltwater intrusion have affected about 340,000 Ha in the Mekong Delta in the south, according to the latest reports by MARD (the Ministry of Agriculture and Rural Development).

On 15 March 2016, the Government and the UN organized an extraordinary partners meeting with donors, development partners, INGOs, technical experts and the media to discuss joint efforts for drought response and recovery. Following this discussion it was agreed to conduct a joint assessment.

The Disaster Management Working Group, consisting of representatives from the Government, UN agencies and international non-governmental organizations (INGOs), mapped out the working areas of all agencies in the affected provinces in order to utilize resources effectively.

A joint assessment team (JAT) was established consisting experts in WASH, nutrition, gender, disaster risk reduction (DRR), agricultural economics, communication, humanitarian relief and food security from UN agencies, INGOs, Vietnam Women Union and Public Health Centre. The JAT conducted a three-day rapid needs assessment in six selected provinces (Ben Tre, Binh Thuan, Ninh Thuan, Kien Giang, Gai Lai and Kon Tum) from 22 to 24 March 2016. On 25 March 2016, assessment team members provided initial field reflections to the UNDRMT. On 30 March development partners were debriefed on the findings in a meeting co-chaired by the MARD Minister and the UN Resident Coordinator.
2. Joint Assessment Methodology

2.1 Assessment Team
The Joint Assessment Team included representatives from the Ministry of Agriculture and Rural Development (MARD), Ministry of Health (MoH), People’s Aid Coordinating Committee (PACCOM), UN and INGOs. A list of team members and their contact information is provided in Annex-III to this report.

2.2 Assessment Objectives
The Objectives of the Joint Assessment included the following:

1. Identify needs for immediate humanitarian assistance in the South-Central, Central Highlands and Mekong Delta regions
2. Outline the impact of drought, water scarcity and saltwater intrusion on affected communities
3. Specify the impact of drought and saltwater intrusion on agriculture, food production, food security, health, nutrition, education, child protection, women and gender

2.3 Assessment Tool
The JAT used an assessment template based on MIRA guidance (June 2015 version) adapted to Vietnam’s common standard guidelines. The assessment template is provided in Annex-I to this report.

2.4 Information Collection Methods
Following a review of secondary data, the assessment collected information from meetings with targeted groups, key informant interviews with the Provincial and District sector leads including with the Provincial People’s Committee, the Provincial Department of Agriculture and Rural Development, the Provincial Department of Water Resources, focus group discussions, face-to-face interviews with households and the Commune People’s Committees as well as observation.

2.5 Provinces/Communes Visited
The areas visited by the JAT included:

1. Gia Lai Province (Chu Puh, Chu Se, Krong Pa)
2. Kien Giang Province (Dong Thai, Nam Thai in An Dong District; Van Khanh in An Minh District)
3. Binh Thuan Province (Thuan Hoa in Ham Thuan Bac district; Tan Phuc, Tan Xuan and Tan Thang in Ham Tan district)
4. Ninh Thuan Province (Bắc Ái district, Phước Trung commune, Giua Tren village; Ninh Hải district; Phước Nhơn commune, Nhan Khanh village)
5. Ben Tre Province (in An Hiep and Bao Thanh communes in Ba Tri District; My An and Phu Khanh communes in Thanh Phu District; and Binh Khanh Dong commune in Mo Cay Nam District)
6. Kon Tum Province (affected districts: Sa Thầy, Đăk Hà, Ia H’Drai and Đăk Tô)

3. Scope and Limitations

In a three-day period, the rapid joint assessment was only able to provide an initial snapshot of the impact of drought and saltwater intrusion on communities in affected provinces. More detailed data collection was not possible due to the limited time available. For example, the assessment was unable to assess water needs by all sectors in the affected provinces, including the industrial sector.

This assessment report therefore, does provide sector specific impact data, but rather gives us a sense of the impact of drought and saltwater intrusion on affected communities.

4. Summary of Findings

Kon Tum province

- A total of 4,142 wells are dry, affecting more than 5,400 households (27,000 people) with 6,320 children (Provincial Department of Agriculture and Rural Development (DARD) Report 2016)
- The shortage of fresh water for agriculture production and household use is a major challenge.
- Over 1,391 Ha of agricultural produce has been lost due to water shortages (DARD Report 2016)
- An increase in the number of cases of diarrhea has been reported: 2,277 in February 2016 compared to 1,226 in February 2015 (Provincial Department of Health Report 2016)
- An increase in the number of cases of foot and mouth disease has been reported from 2 to 48 (Provincial Department of Health Report 2016)
- An increase in the number of cases of dengue has been reported, from 0 to 66, influenza from 1,389 to 2,277 (Provincial Department of Health Report March 2016)
- 166 schools, 407 satellite schools and 34,899 school children have been reported adversely affected by the drought (Provincial Department of Education and Training Report March 2016)

Gia Lai province

General situation

- Emergency Status has been declared for the Province as of 3 March 2016. The drought has had an impact since September 2015, but rain is not expected until June 2016.
- A total of 38 out of 184 rural communes have been affected by drought (Province Drought report)
• Around 55% of total population are ethnic minorities with the two biggest groups being Jrai and Ba Na. Almost all of the most affected people are ethnic minorities (reported by PPC)
• The poverty rate is 11.67 %, of which 85% are estimated to be ethnic minority people (SEDP Provincial report)
• In 4 affected districts with an estimated population of 2,660 under 5 children, it was reported that 1,056 are stunted (39.7% of under 5 children) and 550 (2%) amongst them are suffering from severe acute malnutrition. About 2,000 pregnant women and lactating mothers are at risk of micronutrient deficiencies (DOLISA, 2016).

Food security

• A total of 58,568 persons, including 15,230 children are suffering from food shortages (reported by PPC) in the three most affected districts as of March 23rd, (DARD, 2016)
• Their main food source is rice supplemented by corn, cassava, cassava leaves and a small amount of dried fish (DARD). Only rice and cassava leaves were available as of March 23rd (DARD)
• The number of meals per day has been reduced. Both quantity and quality are being compromised too. Before the drought, they were able to eat 3 meals per day, but during the drought this has been reduced to only 1-2 meals per day (Assessment findings, 2016)
• Due to prevailing social norms women are reported to be eating last as well as less (Assessment findings, 2016)

Access to water and sanitation

• As of March 23rd, a total of 25,331 people were reported to be living in remote areas (the 3 most affected districts) without daily access to clean water for drinking and cooking purposes (DARD, 2016)
• Only women and girls are involved in fetching water for the family. The frequency and distance to collect water is increasing. This has impacted negatively on women’s health and hygiene (Assessment findings, 2016).
• Water quality is not ensured. In all visited districts the water was seen to be cloudy (Assessment findings, 2016).

Livelihoods/ early recovery

• An estimated 70% of the total rice harvest has been lost, as well as 6% of other staple food crops for the province
• Around 15% of livestock and/or aquaculture has been lost
• Over the coming six months the next crop cultivation season is likely to be affected as rain is only expected in June. If the next crop can't be cultivated straight away the next season will be missed. This will significantly increase the number of people affected (DARD, 2016)
• The districts of Chu Puh, Chu Se and Krong Pa have all lost their rice crops as well as secondary crops including vegetables, corn, cassava and beans (District reports, 2016)
• The following crop loss or damage is estimated: 612.1 Ha cassava yield reduced/destroyed; 2.5 Ha maize destroyed, 74.3 Ha vegetables yield reduced, 2,486 Ha rice destroyed (DARD, 2016)
• It is estimated that women’s income has reduced around 28% as they have to spend more time collecting water. Men prioritise daily labour (in which maintains men’s income) (Assessment findings in Krong Pa district, 2016).
• Female-headed households are understood to be the most at risk. With the burden of collecting water, they are experiencing the most reduced income during the drought.
• A number of poor households are reported to have borrowed money to buy rice at high interest rates (Assessment findings in Chu Don commune, Chu Puh district, 2016)

Health

• Increased incidence of dengue fever, diarrheal, dysentery, skin and gynaecological diseases have been reported, particularly among women, and especially ethnic minority women. (source: Assessment findings, 2016)
• All Commune Health Centers in the assessment areas reported a lack of water supply.
• Women have to travel long distances to fetch water for family use. This may have a longer-term detrimental impact on women’s health.
• In 8 affected districts with estimated population of 6,300 under 5 children, it was found that 2,230 are stunted (36% of under 5 children) and 1,500 (2.3%) amongst them are suffering from severe acute malnutrition. About 2,200 pregnant women and lactating mothers are at risk of micronutrient deficiencies (DOLISA, 2016).
• Adequate nutrition is not ensured for pregnant women and children, with only rice provided. There is a lack of multi-micronutrient supplementation programmes for pregnant women and for fortified complementary foods for children under 5 years of age.
• The Integrated Management of Acute Severe Malnutrition has not yet been implemented in affected areas.
• Home delivery without skilled birth attendants is common among ethnic minority groups in affected areas and could potentially be adversely affected by the lack of water supply
• Hand, foot and mouth disease has been reported by Krong Pa district Health Section
Education

- All main and satellite schools reported a lack of water
- Children are staying home from school due to the heat, and the lack of water. Gender norms mean that girls are often supporting their families by going further afield to collect water, and both boys and girls, but particularly girls, are taking up jobs to support their family income. Both girls and boys are helping out in the fields
- There were no daycare centres reported in the assessment areas.

Ninh Thuan province

General situation

- Six of the seven districts are said to be affected (excluding Phan Rang): A total of 110,686 households (of which 16,525 are poor) have been affected, affecting at total of 423,546 people, with an estimated 130,000 of those children: 211,773 male; 211,773 female; 10,588 women pregnant or with children under 2; and 52,576 children under 5 years of age.
- A total of 719 public schools and school branches have been affected by the drought, including 72 kindergartens and daycare centers, 152 primary school and 65 secondary Schools.

Food security

- A total of 130,283 people are reported to be in need of food aid, including 3,257 pregnant women and with 5% estimated to be breastfeeding, as well as 11,721 children under five. They are now dependent on central and local Government for support.
- An estimated 21,500 tonnes of rice will be required for the period from Feb – Dec 2016 (15 kg/person/month). At least 6,000 tonnes will be required to cover the three critical months (Feb – April). Around 2,000 tonnes have already been distributed by the Government in Q1-2016.

Agriculture and Livelihoods

- Staple crop production has decreased by 36,087 tonnes of rice, and 8,670 tonnes of corn.
- The sowing area of the winter – spring crop has been reduced by 5,775 ha.
- Some 1,110.33 ha of rice has had to be changed to dry-land crops.
- A total of 169 cattle have died and a further 3,815 had to be transported from dry areas to water sources.

WASH

Estimated total number of people that are in need of water support is 4,467.
The following are required:
• At least 1,442 30L cans
• 360 kg of chloramine B (flour)
• 500,000 tablets of aqua tab
• 500,000 tablets of chloramine B
• An estimated VND 613,500,000 is needed for functioning running water (Phuoc Trung commune)
• The lack of drinking water is locally limited and under the control of the provincial authorities. However, if the drought continues beyond May 2016, water shortages will become more serious over a larger scale.

Health

In 6 affected districts with estimated population of 48,351 under 5 children, it was reported that 13,297 are stunted (27.5% of under 5 children) and 1,000 (2%) amongst them are suffering from severe acute malnutrition. About 3,200 pregnant women and lactating mothers are at risk of micronutrients deficiencies (DOLISA, 2016).

The following are required:
• 10 tonnes of ready to use therapeutic food – the RUFT (a locally made Hebi product) is required for 1000 SAM children with detected SAM in 6 current districts without IMAM
• 600,000 tablets of multiple micro-nutrients for pregnancy and breastfeeding women for 3,257 targeted women for a duration of 6 months
• 450,000 sachets of multiple-micronutrient supplements (Bibomix) for home food fortification applied for 5000 children under five with stunting (27.3%) for 3 months, with priority for an estimated 1200 children at moderate stunting (10%)

Schools

The following are required:
• 333 water tanks of 5-m3 capacity
• 84 tanks x 3 m3
• 57 tanks x 2m3
• 10,296 m3 of drinking water for schools for 4 months, from April to June 2016.

Binh Thuan province

General situation

• From early 2016, prolonged drought across the province has meant that reservoir capacity in the province has only reached 33% of design capacity and irrigation in the province has a total of 31 million m3 of water, just 14% of design capacity.

• ¹ This is based on 62 m3/days for 4.467 people in need for 90 days
• The worst-hit localities of Binh Thuan are Ham Tan, Ham Thuan Bac, Duc Linh, Tanh Linh and Bac Binh (Source: Binh Thuan DARD on 21 Mar 2016)

Food security

• During the field assessment in Ham Tan and Ham Thuan Bac, if drought conditions continue, Bac Binh DARD predict that food shortages will be a concern during June to September 2016 (Total population of 3 districts of Ham Tan, Ham Thuan Bac and Bac Binh is about 491,780 people with 101,092 children)

Access to water and sanitation

• A total of 90,000 people do not have water for daily use
• 1,451 persons lack access to water for proper hygiene practice (Thuan Hoa commune- Ham Thuan Bac district)
• 473 persons are being forced to use polluted water (Thuan Hoa commune - Ham Thuan Bac district)
• There is a lack of water for flushing toilets. Around 80% of local people in all assessed communes are estimated to practice open defecation.

Livelihoods/ early recovery

• An estimated 15,423 ha of rice could not be cultivated (15.423 ha x 8.500 VND/1 ha (income) = 131.059.000.000 VND)
• Over 1.398. ha have been ravaged by drought (43 ha of corn and 400 ha of cassava, Farm products damaged > 70%: 11 ha, 800 ha of fruit trees including 300 ha of dragon fruit, 300 ha of mango, 100 ha of mandarin orange, orange and 200 ha of cashew nuts)
• If the drought continues, it is predicted that about 200ha of cassava in Ham Tan, 3,000ha of rice in mountainous communes of Ta Linh district, and a widespread area of perennial trees like rubber, dragon fruit, pepper and cashew will be severely affected. (Source: Binh Thuan DARD report on 21 Mar 2016)

Health

• There are reports of an increased number of cases of communicable diseases in children and women and elderly, including respiratory diseases, dermatitis, diarrhea and sore eyes and kidney
• Health clinics lack clean water supply to meet daily needs

Education

• A shortage of water and hygienic sanitation and inadequate drinking supply is reported in educational facilities.
• Inadequate drinking water supply to educational facilities.
Ben Tre province

General situation

- Emergency Status has been declared for the Province as of 16 Feb 2016. The province has been severely affected by drought and saltwater intrusion since Oct 2015 (more than 5 months). This is the most severe emergency situation that the province has experienced over the last century. The emergency is forecasted to continue until at least June 2016 (Province drought and saltwater intrusion report).
- As of 17 March a total of 162 out of 164 communes in all 9 districts of the province are reported to have been affected by drought and saltwater intrusion. The level of saline was reported to be as high as 32% at some points in the local rivers. On average the level ranges from 4-20‰ (Province Drought report).
- By the end of 2015, the total number of poor households is reported to be 22,414 households (6.07%); near poor households 19,250 (5.21%) (DOLISA: poverty standard of 2011-2015). However, following the new poverty standard of 2016-2020, it is reported by DOLISA that Ben Tre has a total of poor households: 44,165 households (11.95 %); near poor households 16,281 (4.41%).
- The PPC reported that the total primary economic losses due to the emergency may be as high as VND 250 billion.

Food security

- At the moment, food security and/or food shortage is not reported to be a problem in Ben Tre.

Access to water and sanitation

- A total of 76 out of 80 water supply systems in Ben Tre have been affected by saline water with levels of 1.5-9‰ (at observation points in local water supply centers). Consequently, most of the population are using saline contaminated affected water, leaving them at risk of experiencing health impacts (1,134,494 people/ 332,412 households) in the coming months.
- It is estimated 220,000 people including 51,000 children, (44,000 households) are in urgent humanitarian need. They lack clean water supply for drinking and cooking, with the situation likely to continue for the next 3 months. Most at risk are poor and nearly poor households who have been using saline contaminated water and acute shortage of clean water for drinking and cooking. These households lack water storage capacity and are facing risks of health impacts from long-term use of saline contaminated water for drinking.
- Immediate support to reduce saline contamination is urgently required at water supply points, including 10 new public water collection points that have been established by the province to extend water supply capacity in the commune.
- Close monitoring of the water supply system is needed to ensure that clean water for drinking and cooking is available and accessible to the population for drinking. The number of people/households estimated to be experiencing water...
shortage is estimated to be ~ 353,000 people with 91,780 children, (88,208 households). Of which, Ba Tri: 15,000; Binh Dai: 11,800; Thanh Phu: 20,000; Giong Trom: 8,931; Chau Thanh: 7,000; Mo cay Nam: 20,000; Mo Cay Bac: 5,477 households

Livelihoods/ early recovery

- As of 10 Mar, 100% (or 19,774 ha) of paddy rice production in the province has been damaged. (Ba Tri: 11,439; Thanh Phu: 5,158; Giong Trom: 2,628)
- Aquaculture damaged: 475ha (Binh Dai: 450ha, Thanh Phu: 25ha)
- Cash crop damaged: 509ha (of which, Thanh Phu: 407)
- Fruit tree seedlings damaged: 103,000ha in Cho Lach district (this is the center of fruit tree seedling supply areas for the whole Mekong delta provinces)
- Fruit trees damaged: 5,756ha (Giong Trom: 1,250; Cho Lach: 4,500; Mo cay Bac: 6)
- Incomes from livestock is at a high risk of loss and households are spending more money to buy animal feed (grass and straw) from Dong Thap and An Giang, as well as purchasing fresh water to reduce saline levels for safe feeding of animals. There are increasing reports of cases of poultry and pigs lost after drinking saline water. Raising cows, which is the main income source of the province, particularly in the three coastal districts, is also at high risk due to the increased prevalence of diarrheal disease.
- It is anticipated that the level of debt will increase in the province in the coming month. At the point of assessment, farmers are reporting increased stress due to rising levels of debt. This is particularly acute for the poor and nearly poor households who have already lost rice and aquaculture crops. Many borrowed production inputs on credits (seedling and fertilizers) for rice farming and many report having to buy on credit for aquaculture and next season’s rice crop. Poor and nearly poor households report spending more of their monthly income and saving on buying clean water in the past two months.

Health

- Increased incidence of dengue, diarrhea and skin disease cases are being reported in the province, especially women and children. Women, are increasingly vulnerable to experiencing skin and gynecological diseases after using saline water for bathing over time. Lactating and pregnant women as well as new born babies are being forced to bath in saline water. The situation is likely to become more acute in the coming months.
- All health facilities report contamination of water supply, lacking clean water for daily use.

Education

- Most educational facilities are reporting water supply affected by salinity. Some water supply systems in schools are lightly contaminated by saline water. Even in 1-2 schools where desalination RO treatment are available, the actual water supply for students is still contaminated with saline due to poor maintenance
• Cases of drowsiness, headache or exhaustion have been reported by schools. This is not considered to be normal at this time of year. The explanation given by the school health unit is that they are not able to access sufficient clean water during the day. Further investigation is recommended.

Kien Giang province
• An estimated 80,000 people are facing acute water shortages as they depend on rainwater
• Prolonged shortage of drinking water has led to an increased incidence of infectious diseases (diarrhea, skin infections, respiratory infections) and dengue
• Health care facilities, especially commune health stations are lacking clean water or using salty water for daily operation
• Knowledge on health protection and awareness of health risks is low
• Poor water supply and sanitation conditions at schools
• Poorer households are unable to access clean drinking water due to increased costs (VND 50,000 to 100,000/m3)
• 11,416 Ha of shrimp cultivation has been damaged by saltwater intrusion
• Young people are being forced to migrate to urban centers in search of work
• Children are dropping out of school to help support family needs for water collection and procurement as well as income generation

5. Response by Government and Other Actors

Kon Tum province
Local government has provided 7.6 billion VND so far. More than 17.5 billion VND has been provided by the National Government budget to support the province in drought response. Given the high value, water provision has been prioritised for coffee plantations, where there are inter-cropping lands of rice and coffee. The loss of 1 ha of coffee may be equal to 300-400 mil VND. Out of 7,250 ha of winter-spring crop of rice, 2,000 – 3,000 ha (one-third) is under consideration to be converted into different plants to cope with the arid land. At the time of the assessment, 412 ha of rice were converted into planting maize, beans and other subsidiary crops. 179.6 ha of land were irrigated by using a water pump to draw water from nearby streams. Local communities are helping to dig wells to get water for irrigation and daily usage. 7 wells were dug at 50-60m depth in Kon Tum city and 3 wells were dug in Sa Thầy District. Kon Tum city also provided fresh water to local households surrounding the city by using mobile water tanks.

Gia Lai
Local authorities do not yet have a clear response plan. However, the District Authorities have used their own budget for purchasing water tanks, provided rice to households through two rounds of distribution, as well as guided communities to empty canals and irrigation system for streaming. The private sector has contributed 800
packages to households. The provincial Red Cross has provided 2,010 packages, two water tanks, plastic cans and aqua tabs to households.

**Ninh Thuan**
Local government support is being provided for purchasing water (VND 75,000/person/month). A local authority action plan is in place to solve the problem with water sources. Preparations are underway to build a dam to prevent saltwater intrusion. The Vietnamese military has provided water to two communes by tanker. Local authorities are also implementing plans for connecting urban and rural schemes for 4,000 households.

**Binh Thuan**
The provincial government has provided cash grant assistance of VND 2 billion to poorer households for purchase of fresh water, VND 1,313 billion to dig wells and installed 5 water tanks. A total of VND 21 billion has been released by the Government of Viet Nam to support new construction and upgrading of the water system. World Vision has provided VND 0.5 billion for upgrading small-scale water supply facilities in Bac Binh District.

**Ben Tre**
The Vietnam Bank for Social Policies has made available a loan of VND 6 million to households for making containers.

6. **Priority Humanitarian Needs**
The joint assessment clearly identifies priority humanitarian need to provide urgent drinking water to approximately 450,000 people in the six provinces assessed and, in the 12 emergency declared provinces, the Government has identified approximately 1.5 million people in need of water. There is also an urgent need to improve poorer households access to water, containing rising number of cases of dengue, diarrhea, dysentery and hand foot and mouth disease, as well as foot and mouth disease amongst livestock.

<table>
<thead>
<tr>
<th>Province</th>
<th>Number of People in Urgent Need of Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kien Giang</td>
<td>80,000</td>
</tr>
<tr>
<td>Ben Tre</td>
<td>220,000</td>
</tr>
<tr>
<td>Binh Thuan</td>
<td>90,000</td>
</tr>
<tr>
<td>Kon Tum</td>
<td>27,000</td>
</tr>
<tr>
<td>Gia Lai</td>
<td>25,331</td>
</tr>
<tr>
<td>Ninh Thuan</td>
<td>4,467</td>
</tr>
</tbody>
</table>
Food shortages in two out of the six provinces assessed need to be addressed now to ensure that families at highest risk are able to survive for the next couple of months. If drought conditions continue, the number of persons requiring food assistance will rise. The situation of malnutrition and micronutrient deficiencies require immediate response actions to avoid recovery costs for addressing the consequences.

Priority humanitarian needs are in the following areas: (a) provision of clean drinking water, (b) ensuring access to clean water sources, (c) containing rising cases of diseases and (d) addressing food shortages (e) addressing malnutrition.

7. Field Observations
While in the field, the JAT members had an opportunity to make several observations through their interaction with individuals, households, People’s Commune Members and local authority representatives. The Supplementary Note (Annex-II) outlines key such areas of relevance over which observations were made. Key challenges raised include accessing water; securing livelihoods; continuing education of children; ensuring access to health and other facilities; and pricing of essential commodities, and inappropriate dietary intake amongst under 5 children and pregnant women amongst others. There were also lack of communication materials to empower the people maintain hygiene standard to avoid outbreak of preventable communicable diseases. As time for collecting detailed information was short these initial observations have been used as a basis to propose some of the medium to longer term recommendations in the following section.

8. Recommendations including Medium and Longer-Term Measures
8.1 Water Management
- There is a need to ensure adequate water supply to households, schools and health facilities. Communicating the importance of parents continuing to send children to schools will be the next priority.
- Desalination measures need to be put in place for shrimp cultivation and other agricultural activities.
- Local authorities need to design and maintain water storage facilities for public distribution (household use, health facilities, schools).
- A province-based plan should be put in place to ensure maintenance and upkeep of all reservoirs within the province.

8.2 Crop Management
- There is a need to explore drought-resistant crop species as alternatives, and to consider further adaptation measures
- Explore options for using the ASEAN platform for sharing of technical know-how for latest technology available for desalination and prevention of saltwater intrusion, as well as drought resistant crop varieties.
8.3 Regulatory Measures
- The price of water and other essential commodities needs to be regulated by government.
- Geological surveys are recommended to help guide and regulate digging of new wells.

8.4 Emergency Preparedness
- Guidance to local authorities should be provided, including local response plans and dedicated resources allocated for plan implementation.
- National and local level contingency planning should be streamlined for strengthening preparedness against multi-hazard scenarios.

8.5 Livelihood Support and Capacity Building
- Cash for work programmes are needed to contain unemployment and migration of youth to urban areas.
- Programmes could be implemented for capacity building through vocational training. A cadre of trainers should be trained and stationed at provincial and district levels.
- It is recommended that community awareness raising programmes be tailored for best practices in (a) personal hygiene, (b) drought-resistant cropping methods, (c) emergency preparedness.
- Low cost construction methods and local materials should be used for construction of toilets and related training provided to communities. Arrangements should be put in in place for continued maintenance of such facilities.

8.6 Addressing Malnutrition
- Implement IMAM programme including supply of Ready to Use Therapeutic Foods (RUTFs)
- Supply of multiple micronutrient powders for under 5 children
- Provision of multiple micronutrient tablets for pregnant women and lacking mothers
- Carry out integrated communication and education on prevention of malnutrition in emergencies
9. Annexes:
Annex I: Assessment Template

JOINT RAPID ASSESSMENT REPORT TEMPLATE

Title: Assessment of Response Needs due to (Disaster) in (Number) villages of (Name) District, (Name) Province.

Date of Report:

Summary:

- Summary of Disaster
- Summary of Damages
- Summary of Needs

1.0 Introduction
- Type of Disaster
- Date(s) of Assessment
- Affected Area(s)
- Joint Assessment team
- Methodology of Assessment

2.0 Disaster situation
2.1 General

- Description of natural disaster event
- Brief description of damages
- Trend of disaster event

2.2 Initial Response

- Response of local authorities
- Response of community
- Coordination mechanism

3.0 Priority Needs (district wise or village wise)
Description (Total households, total affected households, No. of poor households affected, number of men, women and children affected, number of schools affected, number of kindergarten and daycare centers affected, number of healthcare centers affected, etc.)

3.1 Shelter
Description of shelter needs

- No. of houses damaged
- Availability of temporary shelters
- Community groups,
- Gender issues
- Local availability of temporary shelter materials
- Availability of space for building shelters
- Ability of poor households repairing or rebuilding their houses

<table>
<thead>
<tr>
<th>No.</th>
<th>Location (Village, district)</th>
<th>Total No. of people requiring assistance</th>
<th>No. of people receiving assistance</th>
<th>No. of people who need external assistance (men, women, children). Specify type of assistance required e.g. Tents, plastic sheeting, blankets, mosquito nets, clothing, household articles)</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>2.</td>
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* Recommendation:

3.2 Child Protection

Description:

- Total number of boys and girls (under 18)
- Availability of day care centers, which group of children do not attend day care centers, condition of travel between home and day care centers
- Condition of day care center - water, sanitation, food, staff, recreational facilities.
- Assessment of post traumatic stress, material and emotional support to children of families with deaths, care for orphaned children, child right violations, children needing special protection.

<table>
<thead>
<tr>
<th>No.</th>
<th>Location (Village, district)</th>
<th>Total No. of children attending day care centers</th>
<th>No. of children who need day care service</th>
<th>Additional facilities needed in day care centers</th>
<th>Priority</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

* Recommendation:

3.3 Food Security, Nutrition and Livelihood

Description:

- Number of pregnant women
- Number of children ( < 6 months, 6 months to 5 years, 5 years – 16 years)
- Main foods normally consumed
- How normal food availability affected
- Market situation
- Community food stock
- Crop damage
- Affected groups
- Availability of alternative jobs for livelihood
- Gender issues
- Infant feeding practices

<table>
<thead>
<tr>
<th>No.</th>
<th>Location (Village, district)</th>
<th>Total No. of people requiring food</th>
<th>No. of people receiving food assistance</th>
<th>No. of people who need food assistance (men, women, children). List of supplies needed (food items, cooking equipment, cooking fuel)</th>
<th>Number of people needing livelihood support</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</tbody>
</table>

* **Recommendation:**

3.4 Health

**Description:**

- Number of affected men, women and children
- Status of communicable diseases – location causes, groups affected, response plan, trend
- Available health care services
- Public health promotion status
- Vector borne disease control
- Malaria control

<table>
<thead>
<tr>
<th>No.</th>
<th>Location (Village, district)</th>
<th>Injured</th>
<th>Condition of medical facilities, hospital wards, casualty rooms, operating theatres, laboratories, water supply ancillary equipment</th>
<th>List of personnel, supplies and equipment needed from external sources</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>Serious</td>
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<td>2.</td>
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<td>Walking wounded</td>
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</tbody>
</table>

* **Recommendation:**

3.5 Water

**Description**

- Number of affected men, women and children
- Water supply situation before disaster
- How water supply affected
- Presently available water sources, location, quantity, reliability, quality, management responsible, necessity of treatment
- Alternative water sources, obstacles, logistics of transporting and storing of water
- Efforts of community and local authority
<table>
<thead>
<tr>
<th>No.</th>
<th>Location (Village, district)</th>
<th>Total No. of people without water</th>
<th>No. of people receiving potable water</th>
<th>Number of people needing potable water (men, women, children)</th>
<th>List of items needed (supplies for water treatment, containers, trucks, etc.)</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
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</tbody>
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**Recommendation:**

### 3.6 Sanitation

**Description**

- Number of affected men, women, children
- Change in defecation practices
- Available facilities for disposal of excreta, anal cleaning, cleaning hands
- Types and sufficiency of latrines, availability of materials and space for constructing toilets and available know-how
- Solid waste disposal

<table>
<thead>
<tr>
<th>No.</th>
<th>Location (Village, district)</th>
<th>Total No. of people without adequate sanitation</th>
<th>No. of people receiving sanitation facilities</th>
<th>No. of people needing sanitation facilities from external sources (men, women, children)</th>
<th>List of arrangements needed (latrines, soaps, detergents, chlorine powder, insecticides, sprayers)</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
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**Recommendation:**

### 3.7 Education

**Description**

- Number of affected men, women and children
- How is education affected due to disaster
- How long
- Damage to educational facilities, equipment, materials
- Efforts of local authority

<table>
<thead>
<tr>
<th>No.</th>
<th>Location (Village, district)</th>
<th>Total No. of children who need assistance</th>
<th>No. of people receiving assistance from local response</th>
<th>Number of children needing assistance from external sources</th>
<th>List of assistance needed (school, transport, equipment, books, etc.)</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
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</table>

**Recommendation:**
Annex II: Supplementary Note

Supplementary Note: Inter-Agency Joint Assessment

The joint rapid assessment format is being used for assessing the gaps in the ongoing response and is expected to provide in-depth multi-sectoral analysis. The situation analysis in turn is expected to design coordinated response from the development partners alongside the government. This is further expected to provide some strategic guidance to build resilience of vulnerable communes against drought and saline intrusion in long-run.

Understanding that unique nature of drought and saline intrusion, the following paragraphs provides an outline of supplementary points for the assessment teams. The points below could be collected through: field observations, interviewing communes and subsequent discussion with line department officials.

**Domestic and drinking water:**

- Explore a comparative analysis of pre-drought and post-drought conditions – also across year e.g. how was the situation at this point of time last year and couple of years earlier.
- Variance in the access and availability of water resources – how do they compare the situation prior to the drought verses now?
- Is the source of water for drinking and cooking purpose different from water uses for other purposes now? The other domestic water requirements include: ablution, cleaning and bathing. Was the water use pattern same as earlier i.e. prior to the drought?
- The distance to travel for securing domestic water uses including drinking water prior to drought and now.
- Is there any water quality surveillance/testing and management system in place at commune/ village level or by the district/province authorities? Explain.
- Are they paying for water now? Were the people paying earlier? How is the difference? Note the changes in the cost.
- How much water do a household buy a day? Do they buy only for drinking and cooking? Normally a bucket is of 10 litres.
- Are people facing problem in securing the total domestic water demand due to drought? Is the shortage of water for drinking, cooking, ablution or bathing?

**Impacts of inadequate domestic water supplies:**

- Are people spending more time to collect water? Is it affecting their time investment in livelihood and other engagements? explain
- Change in defecation practices – are people switching to open defecation due to less water availability?
- Are people bathing less? Does it affect hand-washing practice?
- Are there impact on their cleanliness – clothing, etc.?
Are there communal tensions as a result of competition to secure water from same sources?

Relief water supply:

- Are they receiving water supply organised by provincial government or any other agency?
- Quantity - how much is that? Is that adequate?
- Is that delivered in the village or door-step? Are they spending extra time to collect the relief water supply?
- Are there communes/villages still not covered? Identify the proportion of population not receiving 15 litre of water per person per day.

Water for livestock and agriculture:

- Do people have livestock that demand adequate water?
- How do they fulfil this demand?
- Does this leads to any temporary migration?
- Do they meet to the demand of agriculture water?
- Are there noticeable crop failures?
- Are they adopting crops – that are salt resistant – specifically in Mekong Delta?

Water for industries:

- Are there industries in the province? Where are they? List the type of industries – brick manufacturing, coffee making, aluminium, etc.
- Is there anyway the water consumption by these industries quantified?
- Is there any change in their production pattern due to shortage of water?

Water supply and sanitation in schools?

- Is water supply and toilet facilities working in the school?
- Was it working prior to the drought season?
- Is the water supply supporting critical requirements such as drinking and hand-washing?

Water supply and sanitation in health clinics?

- Is water supply and toilet facilities working in the health centres?
- Was it working prior to the drought season?
- Is the water supply supporting critical requirements such as hand-washing, cleaning and drinking?
- Is there noticeable water shortage in health centres, as a result of drought?

Scope for increasing efficient use of water:
- Explore identifying scope for reduction of wastage of water or increasing efficiency of water uses.
- Any repair of water systems – that may reduce water wastage.
- Any other possibilities to operationalise existing defunct water supply systems!
- More ideas to increase the availability of safe drinking water and water for other domestic uses???

Annex III: Joint Assessment Team

<table>
<thead>
<tr>
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Annex IV: Maps
Joint Need Assessment Conducted Regions
Affected Regions

- China
- Laos
- Vietnam
- Thailand
- Cambodia
- Hanoi

Affected regions
Joint Rapid Assessment conducted regions

- Ben Tre
- Kien Giang
- Kon Tum
- Gia Lai
- Ninh Thuan
- Binh Thuan
Affected Regions
Emergency declared provinces
Tien Giang
Ben Tre
Vinh Long
Kien Giang
Ca Mau
Soc Trang
Kon Tum
Gia Lai
Ninh Thuan
Binh Thuan
Tay Ninh
Long An