

Field Notes from Initial Assessment in Quang Ngai and Binh Dinh Provinces¹ (19-20 November, 2013)



1. Executive Summary

Typhoon#15 hit the country in south central Vietnam on 15th November, 2013 with torrential rains, e.g., accumulated rainfall from 14-17 November, 2013, in Minh Long of Quang Ngai Province was 973 mm and that in Tien Phuoc, of Quang Nam Province was 545mm. The extremely rapid raising flood water and an enormous amount of mud have caused significant damages to shelter, water and sanitation facilities, agriculture, local schools, and infrastructure. To make the situation worse, affected communities in Binh Dinh and Quang Ngai Provinces were left with little to no time for preparation due to inaccurate forecast on the area the typhoon was expected to hit and that local water reservoirs discharged without proper coordination and warning to the communities.

As of 19th November, 2013, according to report of the Central Committee for Flood and Storm Control (CCFSC), 41 people were killed, 5 missing, 74 wounded, 410 houses collapsed and/or swapped away, 423,573 houses flooded, 1,271 houses fully or partially unroofed, over 4,200 ha of crops damaged, and over 6,000 tons of rice seed damaged. Among 8 affected provinces in the south central Vietnam, Quang Ngai and Binh Dinh Provinces are among the worst affected. Some communities in Binh Dinh Province are still isolated due to flood water and road blockage due to landslides and a number of schools remain suspended and thousands of students haven't resumed school as this report is being written.

'All of the 1,124 households in our commune were flooded 1-4 m under the water, 60% of them flooded 4 m. This is the poorest commune in the district with 60% of the household living below the poverty line before the flood. Now, probably, 90% of them are under the poverty line.'

Mr. Nguyen Minh Tam, People's Committee Chairman, Hanh Tinh Tay Commune, Nghia Hanh District, Quang Ngai Province



Picture 1: Save the Children Assessment Team in a flood-affected house in Quang Ngai Province



Picture 2: Mud flooded community in Quang Ngai Province

¹ By Tran Thi Lan, Central Vietnam Manager, and Tuan Doan, Deputy Country Director, Save the Children in Vietnam by the 20th November, 2013. All photos in this report are by SCI staff unless specified otherwise.

Save the Children sent a small team to Quang Ngai and Binh Dinh Provinces from 19-20 November, 2013 to gather initial data on the impact of the flood. The team visited Hanh Nghia Dong and Hanh Nghia Tay Communes in Nghia Hanh District, Quang Ngai Province and Hoai Nhon and Nhon Tho Communes, in An Nhon Districts, Binh Dinh Province. Major limitations include short timeframe and the lack of the damage data at all levels. Therefore, while the team has seen some communes among the worst affected, it's far from having full understanding of the scope of the damage. Instead, we hope this field notes could suggest further actions including assessment if needed.

Among the affected provinces, Quang Ngai and Binh Dinh are the worst affected, particularly Quang Ngai that was hit by mud-flood. Major damages are in loss of household items, water and sanitation facilities, loss of crop seeds, particularly rice, school materials and furniture, and shelter. Among them, probably, most severe damages have seen in: 1) loss of household items; 2) water and sanitation facilities; 3) school equipment, materials, and furniture; and 4) loss of productive assets including crop seeds, particularly rice. Damages in shelter and food stock at household level is severe among those got hit but the scale appears to be limited although further follow-up is recommended.

2. Major Findings

The economy of the Central Vietnam is featured by rice farming, aquaculture, and fishery. While aquaculture and fishery may be an important economic sector in monetary term, agriculture remains the largest employer; in many communities, rice farming remains dominant source of income with over 80% of population involved. In most of the communities, they grow typically two main rice crops a year although in some coastal villages where there is no irrigation system, only one rice crop a year is possible. People seek additional income from fishing, fishery related livelihood activities, and casual labor works in townships close by but it's seasonal in nature.

Historically, central provinces are the most typhoon-prone, suffering from 7 typhoons a year on average. Typically, south central Vietnam, including provinces affected by Typhoon#15 get hit by typhoons during the second half of annual typhoon season. In recent years, the central Vietnam has suffered from floods more frequently and severely as seen in 2009 (by typhoon Ketsana and Mirinae) and 2011 (with Quang Binh and Ha Tinh among the worst hit), etc.

In recent years, the government of Vietnam has encouraged provinces to develop small scale hydropower stations under decentralized arrangement, i.e., province level departments are fully in charge of technical standards, construction supervision, and operations. There are thousands of water reservoirs in central Vietnam, e.g., in Quang Ngai Province, there are 117 of them and in Binh Dinh Province there are 161. As a result, numerous dams have experience major failure in recent years and the discharge of these hydropower stations and water reservoirs has not well been coordinated, exacerbating impact of floods as they happen. The flood in the south central Vietnam initially brought by Typhoon#15 is not an exception and its impact is a lot worse from anticipated due to the fact of extremely heavy rain within a short timeframe, inaccurate weather forecast, and by the discharge of numerous water reservoirs at the same time in central Vietnam at a short notice.

'I have never seen any flood as fast and severe as this in my life. Within 2 hours, from 16:00-18:00 on the 15th November, the water has risen over 3 m, inundating the whole communities

immediately, pushing thousands of people evacuating during the evening. There are highland communities who have never seen flood before that were fully flooded up to half of the house height. It's estimated that the total damage in our district is close to USD 9 million.'
Mr. Le Han Phong, Chairman, Ba To District People's Committee, Quang Ngai Province²

Extremely high rainfall during the 15th November, 2013 as measured in some weather forecast stations in Quang Ngai and Binh Dinh Provinces were historically high, estimated at 600mm in some highland districts in these provinces. Water level had increased rapidly in most of local water reservoirs and rivers in these provinces, e.g., in Quang Ngai Province, during the evening of the 15th November, 2013, out of 117 water reservoirs, 96 has experienced overflowing while 100 out of 161 water reservoirs in Binh Dinh Province were experiencing overflow³. In some major rivers, the water level increase was above 15m within the evening of the 15th November, 2013, wiping out at least 10 bridges over Lieng and To Rivers, inundating thousands of houses immediately within hours, while leaving many local communities isolated for days. A common understanding among local government and community leaders is that the forecast of, and therefore preparation for, this typhoon was limited due to inaccurate forecast, both in terms of the area the typhoon was hitting the country and the expected level of flood water.

According to the national radio weather forecast on the 15th November, 2013, Typhoon#15 was approaching Vietnam central coast as tropical depression that was potentially bringing heavy rain to the provinces of Phu Yen to Binh Thuan, i.e., very southern part of the central Vietnam. As such, provinces north of Phu Yen, including Quang Ngai and Binh Dinh remain unprepared when the typhoon hit the areas on the 15th November, 2013.

'According to the forecast, the water level would be less than that in 1999 but in fact, it was over a meter higher than the historical flood water level in 1999.'
Mr. Le Trung Thanh, Vice Chairman, Tu Nghia District People's Committee, Quang Ngai Province⁴



Picture 3: Local house in Quang Ngai was flooded over the window as the water mark shows water mark



Picture 4: Local volunteers are cleaning a classroom that is flooded close to 3 meters as shown by the water mark

² <http://vnexpress.net/tin-tuc/thoi-su/tran-lu-lam-hon-40-nguoi-chet-dien-ra-nhu-the-nao-2911404.html>

³ Quang Ngai Committee for Floods and Storm Control report dated 18th November, 2013 and Binh Dinh Committee for Floods and Storm Control report dated 17th November, 2013.

⁴ <http://vnexpress.net/tin-tuc/thoi-su/tran-lu-lam-hon-40-nguoi-chet-dien-ra-nhu-the-nao-2911404.html> downloaded on 20th November, 2013.

‘While the preparation for Typhoon Haiyan was timely and effective at all levels, warning of Typhoon#15 and this flood was too late. Before the typhoon, the weather in the areas was dry and pleasant. It started raining only in the morning of the 15th November, 2013 with some strong wind. By 19:00 of the same day, the flood level was already very high, estimated to be 1 m higher than the water level of the historical flood in 1999.’

Mr. Phan Binh, Chairman, Nghia Hanh District People’s Committee, Quang Ngai Province

Table 1: Initial Damage Summary

Damages		Quang Nam Province	Quang Ngai Province	Binh Dinh Province	Phu Yen Province	Khanh Hoa Province	Ninh Thuan Province	Kon Tum Province	Gia Lai Province	Total
1.	Total casualties/ injured	4/0	15/46	18/1		2/0		1/0	1/0	41/74
2.	Total number of people affected		509,290	490,470						2,117,865
3.	Total number of children affected		170,000	163,000						706,000
4.	Total number of households affected		101,858	98,094						
5.	# of households evacuated	1,313	16,405	220	1,411					
6.	# of people evacuated	4,355	66,961	1,100	7,079					78,395
7.	# of houses flooded		101,858	98,094	187		30			423,573
8.	# of houses collapsed		204	6						410
9.	# of houses damaged/unroofed		727	84	n/a					1,271
10.	Area of rice paddies damaged		200	215	254		393			1,850
11.	Area of non-rice crops damaged		247	369	124		22			2,465
12.	Area of industrial tree farm damaged		1,468	212	3					
13.	# of cattle died	40	10,849	96	1			5		
14.	# of poultry died	250	10,637	20,070	200					
15.	# of boats damaged	1	6		7					
16.	# of classrooms damaged		51	158						
17.	# of schools damaged							3		
18.	# of offices damaged including health facilities		5							
19.	Most severely hit districts ⁵	Dai Loc	Nghia Hanh, Duc Pho, Son Ha	An Nhon, Tuy Phuoc						

(Source: Self-compiled based on reports from the CCFSC and Provincial CFSC reports dated from 15th to 20th November, 2013)

During the assessment, Save the Children staffs have visited Nghia Hanh District in Quang Ngai Province that is among the worst affected ones⁶ with 7 communes inundated 3-4m

⁵ Categorized based on the number of houses collapsed and flooded. Blank cells are due to the lack of data.

(Hanh Tin Dong, Hanh Tin Tay, Hanh Thien, Hanh Thanh, Hanh Phuoc, Hanh Nhan, and Hanh Dung Communes), 3 communes flooded 2m below the water (Hanh Duc, Hanh Minh, Cho Chua Town), and 2 communes 1m under the water (Hanh Thuy and Hanh Trung Communes). As this report is being written, Binh Dinh Province is the only one that still has some communities being flooded, e.g., Phuoc Thuan, Phuoc Son, Phuoc Thang, Phuoc Hoa Communes, etc. Numerous local schools remain suspended with thousands students haven't resumed school while thousands of affected families are still cleaning mud from their houses and communities.

Shelter: The number of houses swapped away and damaged is relatively limited, 410 and 1,271 houses, while the number of flooded houses is very high, 423,573 in all 8 affected provinces, according to the most recent report from CCFSC⁷. Given the limited timeframe, we could not identify how many of them are actually severely damaged, although our impression is that the number of severely damaged houses is relatively small and limited in areas that were affected by mud-flood in Quang Ngai Province and to a lesser degree in water-flooded Binh Dinh Province.

Most of the damaged houses suffer from having lost of part of the roof and/or walls; however, it should be noted that those houses that suffered from severe damage belong to poor and near-poor families who cannot afford permanent ones and may not afford to have them repaired soon.



Picture 5: Inside a flood affected house in Quang Ngai Province full of mud, as deep as 30cm.



Picture 6: Household items damaged in Quang Ngai Province

The assessment team visited Hanh Tin Dong and Hanh Tin Tay⁸ Communes in Nghia Hanh District, Quang Nam Province where 100% of houses were flooded and were 1-4 meter under the water. By the time of the assessment visit, most of the houses remain under a layer of mud of at least 20cm. The villagers told us that they just had enough time to run away from the floods to save themselves but could not save their assets. Most of household belongings were swept away or damaged by flood. At the assessment time, a lot of families still lack of basic stuff such as bedding and clothes, especially for children, in addition to food. In Hanh Tin Dong Commune, we did not see any child during the visit as most of them still stay with their relatives in other villages as their parents are cleaning their houses and roads in communities.

⁶ Picture 3 is from a national media VnExpress, <http://vnexpress.net/tin-tuc/thoi-su/truong-hoc-ngap-bun-dat-sau-lu-lich-su-2912384.html> downloaded on 20th November, 2013.

⁷ Central Committee for Floods and Storm Control report dated the 18th November, 2013

⁸ This is the poorest commune in the district with 60% of its population living under the poverty line.

In addition to the limited need for support in house reconstruction or repair among those who have their houses swapped away or damaged, there is significantly larger need in providing support in replenishing their household and productive assets, including basic household items such as clothes for those houses that were mud-flooded, particularly the most vulnerable in the affected communities in Quang Ngai and Binh Dinh Provinces.

WASH: There is huge number of water well and sanitation facilities that were severely damaged. In Binh Dinh Province, 71,435 water wells and 77,414 sanitation facilities were inundated⁹; while in Quang Ngai Province, 91,823 water wells and 58,952 sanitation facilities¹⁰ were flooded. In addition, there are 59 water supply facilities and 10,631m of water pipeline were damaged in Quang Ngai Province. Our interviews with flood affected households reveal that the urgent need at this point is clean water as many water sources in the affected areas are contaminated and affected families lost their basic tools including water containers. The fact that numerous sanitation facilities are damaged suggests a huge need for rehabilitation while further monitoring for possible epidemic of water borne diseases is needed.

In affected communities, particularly mud-flooded communities in Quang Ngai Province, there is a need in cleaning up the environment and the affected provinces have sent out request for Chlorine B-based products for both, water treatment and environment cleaning.

Education: This is probably among the worst affected sectors as the flood water and mud was rising too rapidly, local school teachers and community members did not have enough time to evacuate their equipment and furniture. A lot of teaching equipment was flooded and damaged, e.g., white boards, tables and chairs of teacher and pupils, teaching and electronic equipment and furniture on the ground floor, etc.



Picture 7: Affected school in Hanh Tin Dong Commune, Nghia Hanh District, Quang Ngai Province



Picture 8: School and teaching materials damaged in Quang Ngai Province

During the assessment visits, a number of local schools remain suspended and expect to re-open in at least 6-10 days after the typhoon hit the areas on the 15th November, 2013. Thousands of students have not resumed school yet. This is unusually prolonged suspension period as usually, the local authorities and schools would try their best to re-open within 3 days as seen in previous disasters. There is an urgent need in supporting local schools in re-equipping basic teaching equipment and materials as well as basic school materials to students whose families affected by the flood.

⁹ Binh Dinh Committee for Floods and Storm Control report dated the 17th November, 2013

¹⁰ Interview with the Head of the Province Department of Health on the 20th November, 2013

Food Security and Livelihood: The typhoon hit the central Vietnam after most of the rice paddies were harvested so the impact on the main rice crop and therefore food security is minimal. During the field visit, we have seen families who lost almost all of their harvested rice stock they keep at home due to the flood. While the number of families may be small, those that lost their harvested rice badly need support as once they lost, they lose everything. According to the report from Quang Ngai Province, 19,084 tons of rice was lost, mainly in Mo Duc District. As such, further monitoring of food insecurity among the most vulnerable groups is needed.

A large amount of crop seeds, particularly rice was lost including that stocked by Provincial and District Departments of Agriculture and Rural Development, local rice seed producers, and farmers. In Binh Dinh, the provincial warehouse lost 500 tons of rice seed and district warehouses lost the same amount of rice seed; it's estimated that local farmers lost 3,700 tons of rice seed that is kept at home¹¹. In Quang Ngai Province, 1,382 tons of rice seed was lost¹², mainly in Mo Duc, Duc Pho, Tu Nghia, and Minh Long Districts. In a usual year, local farmers would start their new crop planting season the first week of December and the last window for planting is the first week of January. It is recommended to follow up immediately as to how this gap be met before further actions could be undertaken.

Health Care: There is limited loss of medical equipment and medicine due to the flood and this should be managed by local authorities. A larger concern should be possibilities of water borne diseases and this will need to be further monitored.

Child Protection: Most of families who had to stay with their extended families or neighbors have returned by the time of the assessment. We are not aware of any child abuse case nor child headed household as a result of the typhoon reported.

Accessibility: By the time of this report, most of the affected areas are accessible as water already started to recede. Some communities in Tuy Phuoc District, Binh Dinh Province may not be accessed due to flood; they include Phuoc Thuan, Phuoc Son, Phuoc Thang, and Phuoc Hoa Communes.

Power and Communications: There is no report so far on the impact of the power and telecommunications.

Market: Local markets seem to be functioning well and there has been seen no major price surge among basic commodities.

3. Current Responses

So far, responses remain limited and mostly at local levels, e.g., local army come to help clean the communities infrastructure, residential houses, and local schools. Quang Ngai Province People's Committee has provide 45 tons of rice, 4,500 boxes of instant noodle and 4,200 bottles of water mainly for affected families in Nghia Hanh District. The local health authorities have started disinfection of water wells using Chloramin B based products.

¹¹ Binh Dinh Province People's Committee report dated the 18th November, 2013.

¹² Quang Ngai Province People's Committee report dated the 18th November, 2013. The volume of crop seeds lost might be larger although it's not very clear from the report. This needs to be verified.

Binh Dinh Provincial People's Committees have made official requests to the central government and line ministries for support of: 1) VND100b for food, medicine, and cleaning up the environment; 2) 4,000 tons of rice seeds for the upcoming rice crop; 3) vaccination of blue ears (500,000), cholera (500,000), bird flu (6m), etc.; 4) VND55b for support for rehabilitation of clean water systems, small infrastructure, and electricity systems; 5) VND50b for irrigation systems. Quang Ngai Provincial People's Committees requested for: 1) 2,000 tons of rice; 2) 5,000 kg of Chloramine B; 3) 100,000 Aquatab tablets; and 4) 800 tons of crop seeds.

According to our informal discussions with key INGOs in Vietnam, Red Cross intends to respond in Binh Dinh, Quang Ngai, and Quang Nam, providing cash grant, household kits, and Aquatab. World Vision intends to respond in Quang Ngai and Quang Nam Provinces, providing food and support in shelter and education. Plan intends to respond in Quang Nam Province and program sectors are to be confirmed. Oxfam and CARE are not likely to respond. However, potential responders are still gathering additional data.

While mobilizing further resources, Save the Children International will provide initial support through NFI distribution including household, education, and hygiene kits for the most affected communities in Binh Dinh and Quang Ngai Provinces starting from later this week.

4. Recommendations

This assessment is limited by the timeframe and human resource available while the data remains quite sketchy at the time of the assessment. Therefore, we would recommend the following:

- The immediate response should focus on urgent needs in WASH (e.g., water, water treatment facilities, and hygiene items), education (e.g., teaching aids for schools and school materials for students), and household items to minimize possible consequences of the flood while supporting effort to stabilize lives at local level.
- Further assessment should be conducted for shelter to identify the scope of the damage, i.e., the number of severely damaged houses that need support for rehabilitation while gathering better understanding of what government support and others would be.
- Further monitoring of the water and sanitation and possible epidemic of water borne diseases is recommended, particularly in the mud-flooded areas.
- Further monitoring of the food insecurity, particularly among the most vulnerable groups is recommended. While it's expected that this may be at small scale, the most vulnerable may badly need support before the local livelihood and next crops arrive.
- Naturally, the central government would respond relatively quickly and effectively to this given the significance of rice farming in the economy and this was confirmed in our interviews with DARD leaders; however, it remains a question to be answered. At the same time, farmer households understand from their past experience that they will have to take initiative for their own crop. As such they may end up purchasing crop seed from un-institutional and un-familiar sources. This may potentially lead to crop failure. Immediate follow-up and monitoring is recommended on the loss of crop seed to identify potential needs and how they could be addressed given that the planning season is starting the first week of December in many communities.

Appendix 1: Case Story in Quang Ngai Province

Ms. Le Thi Ha, 43 years old is a local farmer in Hanh Tin Tay Commune, Nghia Hanh District, Quang Ngai Province. Her husband is also a farmer. They have 4 children, 3 of them are students staying in Ho Chi Minh City. The youngest son, Le The Khang 6 years old, is a first grader attending Hanh Tin Tay Primary School.

They woke up at 6:00AM on the 15th November, 2013 and saw water coming in to the front yard. Instead of taking Khang to school, they had to move all their assets to the garret avoiding getting wet by the flood. However, the flood water was rising very fast and they had to leave most of their assets in the house and ran away to a safe house of their neighbor a couple of hours after the flood water started rising, at about 9:00AM. They came back to their house on the next day only to realize that their house was severely damaged and most of their household and productive assets were lost.



Picture 9: Mrs. Le Thi Ha and her son
(Photo by Tran Thi Lan, SCI)



Picture 10: The boy, Le The Khang at his house
(Photo by Tran Thi Lan, SCI)

Mrs. Ha told us in tears that “All our family assets were swept and my house was damaged. How I can provide support to my 3 children in Ho Chi Minh City to continue their studying as well as look after for Khang after the flood?”

Khang is too young to fully understand his mother worry but he was sad telling us that “I lost all of my school books and clothes. My mother will help me to go back school”. His mother still shed tear when hearing his story while the central Vietnam has been overstretched after 4 typhoons including this flood within just about 6 weeks. Immediate support from the local government to help Khang to go back to school remains slim.