

Emergency Food Security, Nutrition and Livelihoods Assessment for Typhoon Bopha (Pablo), Philippines

January 2013

Key Findings

Typhoon Bopha (local name Pablo) made landfall early morning on 4 December 2012, in Davao Oriental (Mindanao) and traversed Mindanao, Visayas and Palawan leaving severe damages and destruction behind. This Typhoon contained twice the rainfall and three times the wind strength of the Tropical Storm Washi which hit northern Mindanao in December 2011. Typhoon Bopha severely affected several regions along its course and in seven regions 6.2 million persons (over 1.2 million families) were reported to have been affected.

The Philippines Department of Agriculture (DA) estimated cost of damage caused by Typhoon Bopha at more than Php30 billion (USD 750 million). According to the DA, the banana industry incurred the highest loss, amounting to around Php20 billion (USD 500 million). Damage to coconut farms amounted to Php7.22 billion (USD 193 million), while rice and maize farms incurred damage costs reaching Php197 million (USD 5 million) and Php362 million (USD 9 million), respectively. Farms growing high value crops like coffee, cacao, vegetables, rubber and fruit trees had a total damage valued at Php2 million (USD 50 thousand). Abaca plantations incurred Php233,000 (USD 6,000) worth of damage, while livestock and poultry raisers incurred Php327, 000 (USD 8,000.) Damage to fisheries infrastructure was estimated at Php53 million (USD 1.3 million), and irrigation facilities at Php829 million (USD 21 million).

Worst affected was the eastern part of the island where the typhoon made its landfall, particularly the provinces of Davao Oriental, Compostela Valley, Surigao del Sur and Agusan del Sur. The government reported that a total of 14,176 hectares (ha) of banana plantations, mostly located in Compostela Valley Province, were destroyed in the typhoon. The majority of losses were incurred by small growers (9,020 hectares). The Philippine Coconut Authority-Region XI (PCA-XI) estimates that Bopha affected at least 101,000 ha of coconut farms in the region. Coconut farmers in Compostela Valley and Davao Oriental suffered the most severe damage, losing 33 percent and 52 percent, respectively, of their total coconut areas.

Pre-typhoon livelihoods in Eastern Mindanao were characterized by subsistence agriculture and small livestock and poultry-raising, augmented with income from various labour opportunities, both salaried and unsalaried, and skilled and unskilled. The area enjoyed a mixed food economy, with most households growing some of their food and purchasing the rest with income earned from both farm and off-farm activities. Staple food supplies in the market were generally sufficient, and markets prices stable.

Typhoon Bopha turned this picture upside down overnight, destroying houses and infrastructure, devastating agricultural and horticultural assets, seriously eroding the commercial agriculture industry for which the area is known, and thereby seriously reducing other income streams for some time to come.

One month after the typhoon, a survey was conducted jointly by the Department of Social Welfare and Development, National Nutrition Council, Department of Labor and Employment, World Food Programme (WFP), UNICEF, FAO, UNDP, ILO, World Vision International and Action Against Hunger (ACF International) to better understand the impact of the typhoon on household food security, nutrition and livelihoods. The survey covered a total of 865 households in the 4 worst affected provinces. The affected communities were divided into 6 strata – worst hit municipalities in Davao Oriental (Boston-Cateel-Baganga) and Compostela Valley (New Bataan-Compostela-Montevista), rest of these two provinces, Surigao del Sur and Agusan del Sur. Additionally, 172 traders and 125 community questionnaires were also canvassed to elicit market and community level information through key informant interviews.

Key Findings

Demography

More than half of the respondents in this survey are females (54%). One-fifth surveyed households are headed by females. Educational attainment of the head of the household was lowest in Agusan Del Sur (47%) compared to rest of the survey areas (77%). Around 28 percent households belong to Indigenous People (67% in Boston-Cateel-Baganga). The average household size is 5. Around 30 percent households have children aged 0-59 months – 53 percent boys and 47 percent girls.

Housing and Amenities

Around three-fourth respondents own their houses, with those in Rest Of Compostela Valley (86%), Agusan Del Sur (88%) and Surigao Del Sur (86%) were higher, while in Boston-Cateel-Baganga only 42 reportedly owning their own houses. At the time of the survey, 45 percent households in Boston-Cateel-Baganga lived in Temporary Shelters. Nearly two-third of the respondents in Boston-Cateel-Baganga cited living conditions from poor to very poor, compared to 45 percent in New Bataan-Montevista-Compostela. Overall, 77 percent reported some damages to their housing. The greatest depth of damage was reported in Boston-Cateel-Baganga (65% reporting complete destruction), followed by New Bataan-Montevista-Compostela (37%). New Bataan-Compostela-Montevista reported maximum usage of unsafe water sources (38%), followed by Boston-Cateel-Baganga (35%). Across all strata, 76 percent respondents reported access to a toilet, either owned or shared. Only 4 percent, on average, reported no access to a toilet. Conditions were worst in Boston-Cateel-Baganga, where 13 percent reported no access to toilet.

Access to Education and Healthcare

A large majority of respondents (80%) reported sufficient access to education (i.e. average, good or very good access). Of those citing bad or very bad access, Boston-Cateel-Baganga stood out (53%) from the rest. Nearly 40 percent respondents reported changes in children's behavior since the typhoon (62% in Boston-Cateel-Baganga). These parents reported more frequent crying and screaming, sadness and depression, nightmares and inability to sleep, fear of going out or being separated from parents etc.

Overall, 80 percent respondents rated their access to health care as sufficient, although respondents in Boston-Cateel-Baganga and Agusan Del Sur rated their access to health care much lower compared to other areas.

Livelihood

Before typhoon, agriculture, including livestock and poultry-raising, was the most important livelihood, along with skilled and unskilled labour. More respondents reported skilled and unskilled salaried employment in Surigao Del Sur, Agusan Del Sur and Compostela Valley. Fishing was predominant livelihood activity only in Surigao Del Sur and Davao Oriental, and transportation work was a principal activity only in Davao Oriental.

Due to the impact of Typhoon Bopha, agriculture as the primary source of livelihood declined by 23 percent followed by poultry and livestock declined (18%) and fishing (26%). Boston-Cateel-Baganga saw a 45 percent drop in the number of households reporting agriculture as a principle livelihood activity after the typhoon. Nearly 12 percent respondents are rendered completely jobless as a result of typhoon – majority from the agriculture (farming and livestock based) and fishing sectors. Increase in the reliance of households across the strata on a host of 'other' formerly minor livelihoods activities is reported everywhere. Shift in livelihood as a result of the disaster is more pronounced in Boston-Cateel-Baganga and New Bataan-Montevista-Compostela. More people are currently engaged in daily paid labour, offered by the government and other agencies as a part of humanitarian response. Between 40-66 percent rated their access to work and income generating activities as 'bad' or 'very bad', signifying a drop in local economic opportunities.

Nearly two-third of the households own their farm land, while 15 percent are tenant farmers, 11 percent are leased/borrowed/rented free of charge and 6 percent households got their land through award of certificate of land ownership (more Agrarian Reform Beneficiaries in Boston-Cateel-Baganga – 13%). In terms of land holding, around 47percent hold less than 2 ha and 37 percent 2-5 ha, signifying that majority are small farmers. As high as 80 percent reported that their maize/corn production was affected. This is followed by impact on coconut (73%), Banana plantation (72%), rice (72%) and cassava (61%) growing. Apart from losses on farmland, crops and plants, households also reported damages on livestock (57%), poultry (59%), farm machineries (47%), irrigation facilities (45%), post-harvest facilities (42%) and fishing boats (70%), which clearly demonstrate the extent of damages to agricultural sector as a whole.

Food Consumption

A composite Food Consumption Score (FCS) was computed by combining food frequency and dietary diversity of the households. Based on FCS analysis and grouping of households in 'poor', 'borderline' and 'acceptable' food consumption groups, nearly 38 percent households have low food consumption levels. Broken out by strata, the greatest proportions of low food consumption reported in New Bataan-Montevista-Compostela (48%), Agusan Del Sur (43%) and Surigao Del Sur (43%). Furthermore, New-Bataan-Montevista-Compostela had a significantly greater depth (severity) of lower level of food consumption, with two-third of its households scoring in the lowest possible category ('poor').

Those households who perceived their access to income to be 'very good' had the highest food consumptions scores (only 7% low food consumption). Those who perceived their access to income as 'good' have 14 percent in low food consumption. 'Bad' and 'very bad' access to income reported 33 percent and 52 percent low food consumption respectively. Households with more children (3-5) have much lower levels of food consumption than those with fewer children. Based on gender of the head of the household, 57 percent female-headed households have acceptable levels of food consumption compared to 65 percent male-headed households. In Surigao Del Sur, only 25 percent female-headed households reported acceptable levels of consumption as compared to 60 percent male-headed households.

On average, there is perfect relationship between educational level attained by the head of the household and food consumption levels, meaning the higher the level of education the better the level of food consumption. However, this relationship is less pronounced in Boston-Cateel-Baganga and New Bataan-Compostela-Montevista. In terms of livelihoods, those relying on charcoal making / forestry (61%) and daily / common labour (48%) have lower food consumption levels, followed closely by livestock and poultry raising (43%) and unskilled salaried employment (40%). Somewhat better, but still nearly one-third or more households with low food consumption are reported in 'other' (37%), agriculture (37%), and construction / skilled labour livelihood groups.

Households in New Bataan-Montevista-Compostela and Boston-Cateel-Baganga are heavily reliant on relief food assistance for two thirds of their consumption. Market purchase is their second most important source for food. This is in stark contrast to all other affected areas, where two thirds or more of food consumption comes from non-relief sources.

Coping Strategies

Typhoon-affected households are applying a variety of coping mechanisms to address the sudden loss of agricultural production, jobs and income. The most frequently applied coping responses are reliance upon less preferred, less expensive food, reducing expenditures on other living costs, accepting emergency food assistance and food from friends and relatives, borrowing money and spending down savings. In the worst-hit areas, one in five families reported having to reduce the number or portion of meals in order to get by. Unfortunately, many of these strategies are negative and some of them are irreversible, potentially causing indelible damage on a household and individuals.

Household Expenditure

Main expenditures reported by the surveyed households are on house construction material, food, medical care, education, celebrations and social events and clothing. Expenditures on house construction materials are valued the highest (Php3,027), followed by food. The highest average estimate was observed in Boston-Cateel-Baganga while the lowest was in the rest of Davao Oriental.

Access to Markets

About half of the total respondents (52%) said there is a market in close proximity to their dwellings. Cost of travelling to the market (one-way) in the sample areas is Php26, cheapest (Php16) in New Bataan-Montevista-Compostela, while most expensive (Php55) in Boston-Cateel-Baganga.

Access to Credit

One-third respondents considered their access to credit as average, 23 percent as good. About one-fifth viewed their access to credit as bad, followed by very bad (17%). Boston-Cateel-Baganga households report most proportion of very bad (39%) and bad (28%) access to credit. Almost all respondents said that they borrow money mostly from their relatives and friends. Local lenders and pawnshops, and other local institutions (i.e., sari-sari stores, local traders, and landlords) are also significant sources for borrowing money. Around 45 percent households borrowed money to buy food in the last month preceding the survey.

Health and Nutrition

The impact of an emergency situation on infant, young child and maternal nutrition and health cannot be overstated. Of the 494 children aged 0-59 months in the surveyed households, 66 percent are reported to have developed an illness since the onset of the disaster. The observed incidence of illnesses (i.e. fever, cough, and diarrhea) was highest among children 6-23 months. When viewed across all age groups, more children are reported ill in Boston-Cateel-Baganga.

Results of the assessment showed that almost 66 percent of the children are ever breastfed. At the time of the interview, 33 percent of the children 0-59 months are still receiving breastmilk. A 24-hour recall of the child's food intake shows that about 57 percent are given complementary food at least 3 times per day.

Priorities of the Households

Households in all areas surveyed cited access to food, shelter and income as their most pressing concerns, and also as their highest priorities for immediate intervention. Households prioritized food and shelter at a rate of two to one over the next closest priorities - lack of money and finding work/job. For households in the worst-affected areas, these concerns were higher still. Shelter concerns were highest in Boston-Cateel-Baganga and New Bataan-Compostela-Montevista. Income and livelihood issues occupied the next level of concern, followed by health, water and sanitation and health, and education.

The Way Forward

The restoration of food and nutrition security in this region will depend greatly upon households' abilities to find alternative income generation activities to replace, at least temporarily, the traditional income opportunities lost until traditional banana and coconut production can be restored, or until alternative long-term household livelihood strategies can be consolidated. Some immediate income opportunities will come in the way of the unskilled casual labour required to rehabilitate the damaged commercial agricultural sector. It is important that the Government of the Philippines, commercial investors and contract farmers work together to secure a tri-partite strategy to restore these critical commercial agricultural sectors as quickly as possible.

The significance of banana and coconut production to the food security and livelihoods of the people in the affected areas cannot be understated. While cereal crops (rice, maize) can be replanted almost immediately, and will begin to restore normality to at least one part of the household livelihood picture within as little as 3-4 months, restoring the critical contribution of bananas and coconuts will be measured in years, not months.

The shock to household food security and livelihoods resulting from Typhoon Bopha was widespread and comprehensive, impacting all sectors. Subsistence and commercial activities alike have been brought to a standstill. In the immediate term, the food and nutrition security and livelihood strategy must focus on ensuring adequate food consumption and income support to allow people to get on with the most pressing needs of recovery. Providing agricultural inputs and technical support for the next rice and maize crop are also key objectives, followed by assistance with the restoration of assets associated with household banana and coconut production, fishing and other traditional (or substitute) livelihoods. At every step, a complementary health and nutrition strategy is also required, primarily to address critical nutritional needs of children 6-59 months and pregnant and lactating women. Short term hunger mitigation strategies like targeted general food distribution, vulnerable group feeding, emergency school feeding etc. could be useful measures at least till these households get some semblance of their pre-typhoon socio-economic status by accessing recovery and rehabilitation interventions that are more medium to longer term in nature.

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