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WEATHERING THE CRISES, FEEDING THE FUTURE

Philippine Food Justice Report



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Jeanne Frances I. Illo is an economist and women's studies scholar. Until she left in 2005, she directed the Women's Studies Program of the Institute of Philippine Culture, Ateneo de Manila University for decades. She is presently a Research Associate of the Women and Gender Institute of Miriam College. She also serves as gender adviser of the Canadian International Development Agency and the Australian Agency for International Development.

Dante Dalabajan is the policy and research officer of the Philippines Economic Justice program of Oxfam. He has 15 years of experience in public policy research, and advocacy and campaigns.

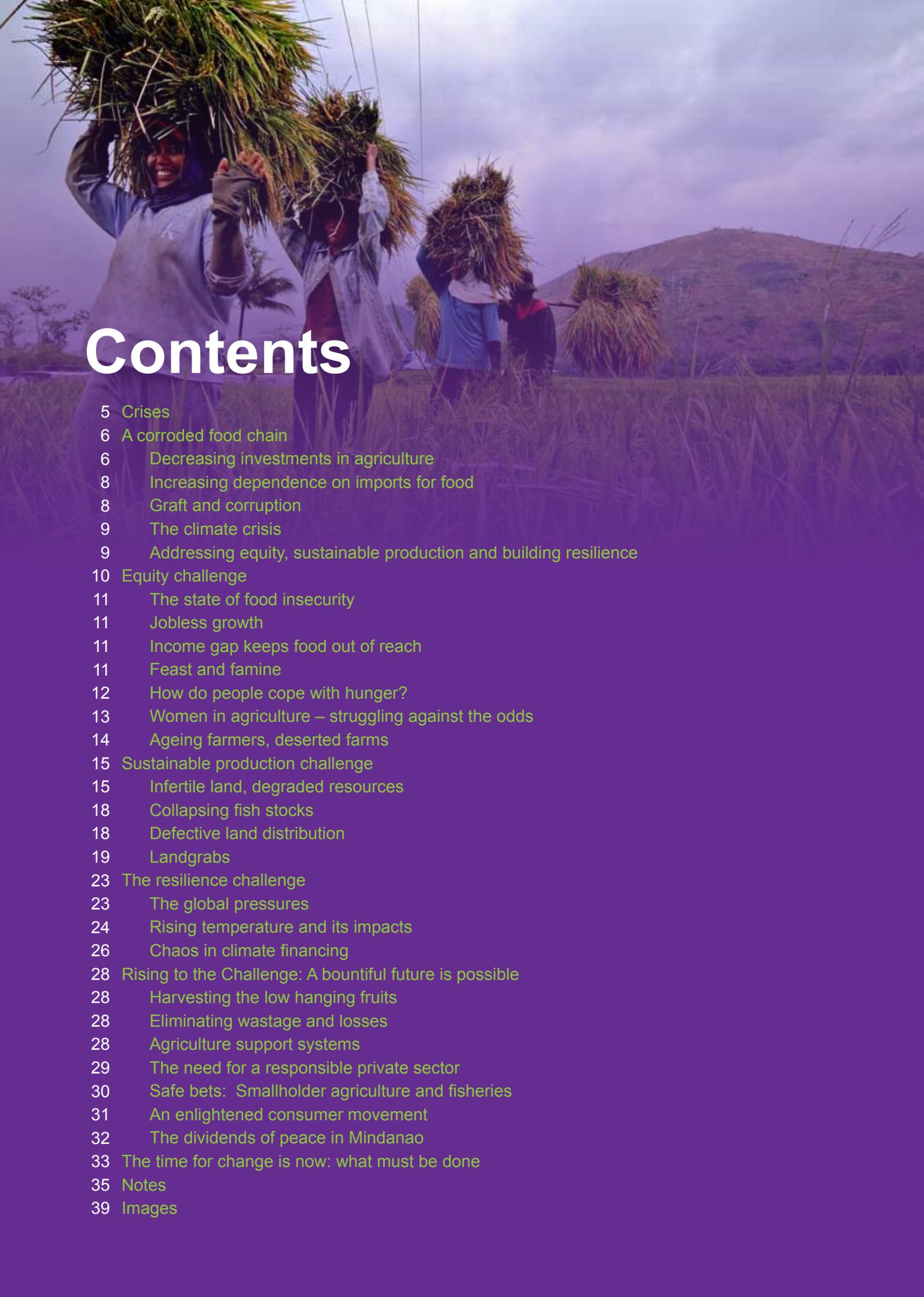


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A little girl gleans shells on the island of Mahaba, Surigao del Sur, to augment the family income. On average, the poorest Filipino households live on less than a dollar a day, 60% of which is spent on food. (Photo: Veejay Villafranca)

“Global food prices are now at dangerous levels and it is also clear that recent food price rises are causing pain and suffering for poor people around the globe.”

World Bank President Robert Zoellick ahead of the 18 February 2011 meeting of the G-20 in Paris

“We mined our way to growth... We burned our way to prosperity. We believed in consumption without consequences. Those days are gone... Climate change is also showing us that the old model is more than obsolete. It has rendered it extremely dangerous. Over time, that model is a recipe for national disaster. It is a global suicide pact.”

United Nations Secretary General Ban Ki Moon in a speech at the World Economic Forum in Davos, Switzerland, 28 January 2011

CRISES

Thirty million people living on less than a dollar a day with 60% of their income spent on food.... Surging rice and oil prices pushing 2 million more into poverty....¹ Meantime, the government scrambles to cobble together a bailout package to stave off the economic fallout of a deepening crisis.² These were the snapshots of the Philippines at the height of the food price crisis in 2008—images that are coming back to haunt us as global food prices soar to another historic peak.

At the height of the food price crisis in 2008, the Philippines was among the countries with “severe localized food insecurity” requiring external assistance in food.³ A series of severe weather-related events occurred in 2009 with the total damage to the economy exceeding 100 bn pesos—more than twice the amount allocated for agriculture that year. Rice imports reached an all-time high of 2.45 million metric tons in 2010, making the Philippines the biggest rice importing country in the world that year.⁴

There are 94 million Filipinos today—up by 4 million since 2008. The population is expected to grow by about 2 million each year from here on.⁵ The domestic food chain—from farm to dining table—is under great pressure. The chain has become weak, corroded by years of neglect and corruption. Unless repaired, it will soon reach the breaking point.

More threats loom in the horizon. Conflict in the Middle East and North Africa reverberates in the Philippines in the form of oil price hikes, pushing commodity prices upwards. Climate change-related events in 2010, which devastated farms in major food-producing countries such as Russia, Australia and China, have pulled global stocks to all-time lows. There is ever less foodstuff for export as countries move to secure domestic demand while the little surplus that is left goes to the highest bidder. None of these is without precedent. Thailand, Vietnam and India, which control 60% of global rice trading, restricted their exports to protect their own domestic supplies during the 2008 food price crisis.⁶

Yet a bright and bountiful future for the Philippines is still possible if all of us can come together for a common cause. This too is not without historical precedent. In 1986, EDSA People Power⁷ triumphed against a disgraceful and scandalous rule. It was a magnificent display of collective outrage, unbridled determination, and shared optimism. Twenty-five years on, we are confronted by the disgrace of wanting in food when we could have enough, and the scandal of having to rely on our neighbours when we could feed our own.

It is time for change.

The way forward is unmistakably clear. Public and private spending on farms and fishing villages must increase to levels that can unleash the productive potential of farming and coastal communities. Public spending and policy innovations must be put in place to ensure climate change adaptation programs are crafted early and implemented for, with and by vulnerable communities. Private sector resources and interest must be harnessed and directed towards key points that can reinvigorate the domestic food chain and mobilize the capacity of small agricultural shareholders. Social protection programs must be developed to strengthen the role of women in villages and the market. The conversion of productive agricultural lands for purposes other than food production must cease. Developing a coherent, long-term strategy with respect to Philippine trade relations with neighbouring countries must serve, not harm, the objective of feeding Filipinos.

A CORRODED FOOD CHAIN

At a glance, the portion represented by the agricultural, fishery and forestry sector (referred to hereafter as agriculture) in the economy is deceiving. From one perspective, the sector contributes less than a fifth to the country’s gross domestic product (GDP). Yet, it absorbs more than a third of total employment.⁸ The entire food chain in the Philippines, which includes food processing, manufacturing and trading of agricultural products, is as big as 40 percent of the economy and employs about two-thirds of the workforce.⁹ Around 1.61 million people are engaged in fishing, 1.40 million in coconut, 1.35 million in rice, 0.68 million in corn, and 1.39 million in sugarcane and other commodities.¹⁰

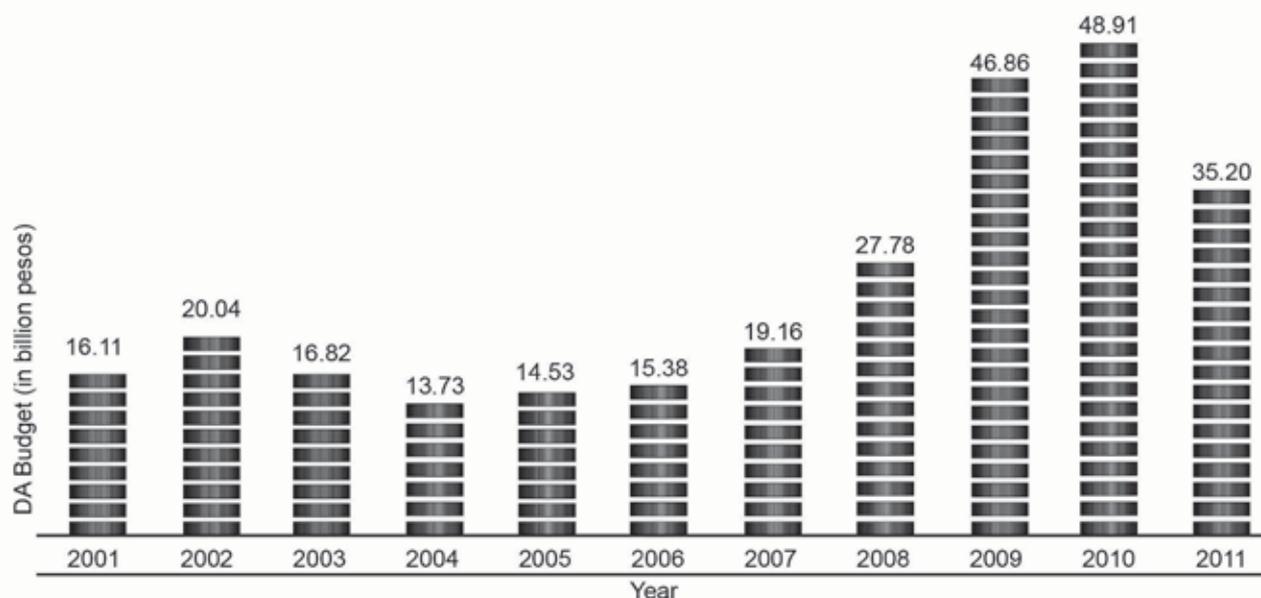
Decreasing investments in agriculture

The 1960s and 1970s saw the gradual but steady decline in the share of agriculture to total GDP. By the 1980s the Philippines was already behind most countries in the region in terms of agricultural gross value-added and agricultural exports.¹¹ Philippine agriculture only grew by an average of 1.7 percent per annum in the years 1981-2003 even though the economy grew by 2.6 percent over the same period.¹² The reasons behind this are explained later in the report.

Opposite: Increasingly, the Philippines has had to rely on imports to fill the country’s depleted food basket. Today, 37% of its cereal needs are imported. It also imports 99% of its milk needs and dairy products and over 50% of coffee. (Photo: Veejay Villafranca)



Table 1. Share of Department of Agriculture (DA) Budget to National Budget in billion pesos



Source: H. Tanchuling (2011) '2012 Philippine Agriculture Budget', a PowerPoint presentation during the meeting of Rice Watch and Action Network (R1) in Adarna Restaurant, 12 May.

From 2000-2009, the Philippines was producing an annual average of 9.5 million metric tons of rice and 5.5 million metric tons of corn, the two staples in the Filipino diet.¹³ Rice production was increasing at an average rate of 3.1 percent per year, lower than the growth rate for 1975-1985, which was 3.5 percent.¹⁴ Corn production rose by 5.6 percent. A slowdown was noted in corn production in 2005, while rice production declined in 2009 (by 3.5 percent) and again in 2010 (by 1.5 percent) due to a combination of flooding in some areas and drought in others. During the growth years, increased production was attributed to an expansion of harvested area, as yield hovered around 4.9 tons per hectare for unmilled rice (*palay*) in irrigated farms and 2.6 tons per hectare in non-irrigated farms.¹⁵ Despite improved yields, local productivity fell short of world average yields.

Increasing dependence on imports for food

Increasingly, the Philippines has had to rely on imports to fill the country's increasingly depleted food basket. Today, 37 percent of cereals in the Philippines are imported. This includes rice and corn. The country also imports over 99 percent of its milk needs and dairy products and over 50 percent of coffee.¹⁶ Although the Philippines is a net exporter of fishery products in terms of value, it is importing more fish by weight than it is exporting.¹⁷

The Philippines has been a consistent net importer of ASEAN (Association of Southeast Asian Nations) products for years and has a negative trade balance with seven out of nine ASEAN co-members. In 2008, for example, the value of Philippine imports

from ASEAN countries stood at USD14.3 bn, while Philippine exports registered only USD7 bn. The Philippine agriculture trade deficit to ASEAN co-members in the same year stood at USD1.9 bn.¹⁸ In 2009, top Philippine agricultural exports earned USD3.135 billion. However, the Philippines spent almost double the amount (USD6.079 billion) on top agricultural imports.¹⁹

The country's negative trade balance could have pernicious effects to our agriculture sector already reeling from underinvestment, thus unable to compete against agricultural products from abroad that are heavily supported by their governments. Thailand's agriculture value added (% of GDP) was 11.6 percent in 2008 while Vietnam's was 22 percent in 2009.²⁰ Moreover, relying on foreign trade for our food supply could place our country in a very precarious position given an increasingly volatile world.

Graft and corruption

Compounding the sector's predicament, limited funds for agriculture are further eroded by graft and corruption-related leakage. Reports of public funds for irrigation and farm-to-market roads handed out to buy political patronage abound.²¹ There is the case of the alleged diversion of 728 million pesos from a national fertilizer fund to finance the election campaign of the Macapagal-Arroyo administration ticket.²² More recently, a government-commissioned audit report revealed that the government's National Food Authority (NFA) lost more than 100 bn pesos in a span of 10 years due to irregular importation practices which involve "buying high, selling low, and storing long".²³



In 2009, typhoon Ketsana (local name Ondoy) came like a thief in the dead of night, surprising residents of a metropolis unused to massive flooding. Relenting only a day later, Ketsana left in its wake millions of pesos in damages to properties and a populace forever scarred by the memory of too much rain too soon. The 2011 Global Climate Risk Index (CRI) of Germanwatch ranked the Philippines 7th in the world in terms of losses and frequency of extreme weather events in the period 1990-2009. (Photo: Danny Victoriano)

The climate crisis

Climate change imposes several severe risks as well to farming communities.

Slow onset climate change impacts are projected to generate considerable pressure on poor rural communities. Rising sea levels will submerge coastal areas, displacing communities. Warming temperatures in some regions are expected to alter soil and crop productivity and negatively affect growing and harvesting practices. Changing rainfall patterns in other regions are projected to inundate farms annually.

There are also episodic impacts such as extreme typhoons and flooding.

In 2009, the Economy and Environment Program for Southeast Asia (EEPSEA) of the International Development Research Centre (IDRC) surveyed the sub-national areas (regions/districts/provinces) of Southeast Asia and found that all regions in the Philippines are among those most vulnerable to climate change impacts.²⁴ In the same year, Typhoons Ketsana and Parma hit the Philippines in rapid succession.

The 2011 Global Climate Risk Index (CRI) of GermanWatch ranked the Philippines 7th in the world in terms of losses and frequency of extreme climatic events in the period 1990-2009. In 2009, the Philippines occupied the third topmost spot in the Germanwatch CRI.²⁵

Unfortunately, funding for climate change adaptation remains woefully inadequate and unpredictable. Financing has come mostly in pledges; the pledged sums are several magnitudes lower than projected

needs. A bigger portion of climate finance from abroad that has entered Philippine coffers has been allocated to climate mitigation projects while funds that have gone to adaptation activities have come in the modality of loans.

Addressing equity, sustainable production and building resilience

The continued conversion of agricultural lands, degradation of ecosystems and impacts of climate change have doubled the burden on agricultural communities that have received diminishing support from the national government. The combination has made the Philippines more vulnerable to future global food price surges. It has created a corrosive effect on the country's ability to secure the food needed by its rapidly growing population.

Even good news on the horizon needs to be tempered with other realities.

The prospect of a bumper rice harvest for 2011—17.4 million metric tons, an increase by 15 percent from the previous year—has placed the government in an upbeat mood.²⁶ Greater transparency in rice procurement and more targeted agriculture support programs can increase production further. Yet the gains might be for naught if other development policy initiatives are not undertaken with a higher sense of urgency.

By 2025, the Philippine population is projected to reach the 120 million mark.²⁷

The journey towards a brighter and more bountiful future for the Philippines must begin now. To do this, we must overcome the challenges—of equity, of sustainable production, and of resilience.

EQUITY CHALLENGE

Food security is central to the notion of food justice.²⁸ Poverty pervades in rural areas, where the means to produce food should flourish. In the countryside, women are the first to go hungry. Their capacity to survive crises is greatly undermined by the pursuit of flawed policies while their ability to contribute to solving fundamental farming sector problems is ignored.²⁹

Where and when there is economic growth, rural women partake of so little, if at all, from the development pie.

A large number of the poor and hungry are found in rural areas, particularly in coastal fishing villages and the uplands. And it is poor rural women, such as this mother from Kalinga, north of the Philippines, who are the first to go hungry. Women often give up meals for their children when food is scarce. (Photo: Lan Mercado)



State of food insecurity

The National Statistical Coordination Board (NSCB) estimates that 1.5 million Filipino families (i.e. at least 7.5 million Filipinos) do not have the income to ensure that basic household nutritional requirements are met.³⁰

Social Weather Stations (SWS), a survey institute, reported that in March 2011, 20.5 percent of Filipino families -- or 4.15 million Filipino families -- went without food at least once or more times in the last three months.³¹

A large number of the poor and hungry are found in rural areas, particularly in coastal fishing villages and the uplands. From year 2000 onwards, three Mindanao regions (Zamboanga Peninsula, Caraga and ARMM) had been among the areas with the highest proportion of people living in poverty. While only one-third of poor Filipinos live in Mindanao, more than half of the provinces in the bottom cluster are located in the Mindanao area. This situation can be attributed to the armed conflict and unsettled peace and order.³²

Jobless growth

In the last few years, the Philippines experienced uninterrupted growth in annual gross national product (GNP), peaking at 7.3 percent in January 2010—the highest ever in over 3 decades.³³

However, growth appears to be occurring without a net increase in employment and without growth in real income, a phenomena called “jobless growth”.³⁴ According to the National Statistics Office (NSO), the jobless rate currently stands at 7.3 percent (2.9 million), a slight increase from the 2.8 million figure registered in 2009.³⁵ Worse, the touted growth does not include the farm and fisheries sectors where around 800,000 jobs were lost by April 2010 compared to the previous year.³⁶

Income gap keeps food out of reach

National average family income increased by almost 20 percent per annum during the period 2000 to 2009. Average family incomes also rose in Mindanao, but at a slower rate.³⁷ When figures are adjusted to take inflation into account, however, a different picture emerges. Though incomes rose very slightly in 2009, national average family incomes fell by 10.5 percent between 2000 and 2006.

Unequal income distribution can skew the share of total income spent on food and the sensitivity of consumers to food price changes, especially poor people. In the Philippines, the richest 20 percent of families control more than half of total income, and the poorest 50 percent get no more than 20 percent.³⁸

The share of food in Filipino household budgets differs dramatically between income classes. The bottom 50 percent of the population spend as much

as 56 percent of their income on food while the upper 20 percent spend less, around 32 percent.³⁹ The changes in food prices also have different impacts on households with different incomes. The food price surge in 2008, for example, saw food shares among the poorer half rise by 1.3 percent; the figure for the richest 20 percent is only half of that.⁴⁰ This means that food price surges squeeze the lower classes more than other groups, depleting their funds for their children's education and other necessities.

Feast and Famine

Class-differentiated access to food has resulted in significant numbers of under-nourished (underweight state; stunted) and over-nourished (overweight for their age) children. The number of underweight children from the lowest income group is four times higher than the number of similarly situated children in the highest income group. Meanwhile, the proportion of overweight children in the 0 to 5 years age group is highest among children in the highest income group, which is about seven times higher than the lowest income group.⁴¹

Over-nutrition and obesity incidence among adults has increased by 20 percent since 1993. In the same period, underweight incidence among adults went down but at a slower rate (10 percent) compared to obesity. Around 4.2 percent of 11-12 year-olds and 3.4 percent of 13-19 year-olds are overweight; the problem is more prevalent among females.⁴²

Obesity does not necessarily imply people are well off and have enough to eat; obesity in the Philippines is linked to bad nutrition, which could also be a public health issue. Drastic changes in consumption patterns bear this out. There has been a gradual increase in consumption of rice from 287 grams in 1993 to 317 grams in 2008 (or 12 percent in 15 years), the highest since 1978. Consumption of ‘other cereals and cereal products’ (breads and bakery products, noodles and snack foods from wheat flour) increased by 36 percent from 22 grams in 1993 and 30 grams in 2003; this increase was arrested, at least temporarily, in 2008. Intake of starchy roots and tubers, a good source of dietary fibre, halved from 37 grams per day in 1973 to 19 grams per day in 2003 and 17 grams in 2008.

There has been a modest rise in the consumption of sugars and syrups, but a dramatic rise, by 150 percent between 1993 and 2003, in the intake of soft drinks; this trend was (temporarily) arrested in 2008 which saw mean one-day per capita food consumption of all sugars and syrups falling from 24 grams to 17 grams. The consumption of meat and meat products increased by 79 percent between 1993 and 2003 but fell slightly in 2008.⁴³

The increasing consumption of high-calorie foods, such as fats (meats), snacks and sugar (including soft drinks) could be traced to several interrelated factors. One factor is rapid urbanization, and access of urban dwellers to cheap, ready-to-eat food. Another is the bombardment of the

populace, particularly children and young people, by advertisements selling hotdogs and other processed meats, snack foods, and soft drinks. When these are paired with increasing money income, changing diets occur.⁴⁴

Increased access to these low-cost, high-calorie foods, coupled with limited physical activity, has been linked to increasing obesity among young people and adults. Research shows that obesity does not only reduce a person's productivity; it could also tax the country's health system.⁴⁵

How do people cope with hunger?

Recent price shocks and periods marked by market volatility have reduced household options to address nutritional needs. People borrowed money or food; did with less, or did without.⁴⁶ Women resorted to poor quality rice and cheap food, stretching available food, 'fortifying' canned sardines or instant noodle by adding *malunggay*, food rationing and, in some cases, doing away with one meal.⁴⁷ Children also left for school without breakfast and/or money for lunch. This phenomenon of rising hunger is captured by the SWS quarterly hunger surveys which climbed up from the first quarter of 2007 and reached its peak in the first quarter of 2011.⁴⁸

As food prices climb, so does the number of people going hungry increase. In 2008, more than 7 in 10 households felt insecure about the availability and adequacy of food, and more than 5 in 10 could not feed their children with adequate, nutritious food.⁴⁹ Meanwhile, at the individual level, more than a fourth of mothers and caregivers and a smaller proportion

of children (18 percent) skipped or missed meals, or were hungry but did not eat. Many women act out gender expectations and willingly keep their food intake to a minimum whenever food crises occur, a sentiment that was shared by urban and rural poor women.⁵⁰

In the midst of the food price crisis there was a decline in the intake of most of the food groups, with the exception of rice, which increased significantly. As a result, there was an increase of around 10 percentage-points in the proportion of households that did not meet the per capita dietary energy requirement. There was an increase in the under-nutrition (underweight for age) rate among children and adolescents, while the rate of over-nutrition (overweight) among them remained the same.⁵¹

To avoid deepening the effects of the crisis, women embarked on whatever enterprises would bring them income. This was especially true for those whose spouses lost their jobs in the midst of the global financial crisis.⁵² Some women (or their daughters) migrated to towns or cities while some others were pushed to take dire measures—trading their body for food.⁵³ Still others resorted to pawning or mortgaging moveable assets, and later selling off productive assets such as land, boats, or fish nets.⁵⁴

To millions of rural households in the Philippines, however, one of the most important safety nets is afforded by remittances of members who are working overseas. As long as the migrant workers were not affected by global crises and/or the peso did not overly appreciate, the households left behind were relatively safe, even from food price surges.





Women farmers like Trinidad Domingo (above) can and will contribute significantly in producing food but they are not getting the support they need to do this. Only 36 percent of women farmers have access to irrigation, only 29 percent have access to seeds, 26 percent to training, 23 percent to extension services, 21 percent to fertilizer and seeds subsidy, 20 percent to pest control management, 20 percent to calamity assistance, and 14 percent to financial assistance. (Photo: Veejay Villafranca)

Women in agriculture – struggling against the odds

As of 2002, more than half a million women worked as farmers or farm managers. Another 2.7 million women from agricultural households worked on their own holding as unremunerated labour (62.4 percent of unpaid workers on their own farms); clearly outnumbering the 1.6 million male household members who were similarly occupied (36.4 percent). More men than women hire themselves out to other holdings.⁵⁵

Women provide crucial labour inputs for planting, weeding, and harvesting. Many participate in deciding on the variety of crops to plant or the breed of livestock kept. They are also charged with marketing the produce, and are instrumental in accessing farm capital (often out of their savings or by borrowing from relatives). Some crops (vegetables) are equally women's and men's crops, while a few (tubers, including onions) are practically women's crops. Many grow their crops intercropped with, or as alternative dry season crop to, rice or corn.⁵⁶

Some women in fishing communities contribute to the capture, sale and/or processing of fishery products, and engage or invest in aquaculture. In 2009, women farmers contributed to the FAO-reported production of 23.3 million tons of rice and corn, 2.98 million tons of starchy roots or tubers (primarily cassava), 22.93 million tons of sugarcane and 5.3 million tons of vegetables. In 2008, women provided labour (and some, the capital) to produce 3.3 million tons of fishery and aquaculture products.⁵⁷

Women farmers and farm workers, and women income earners, face even greater difficulties than men do in growing enough food or earning enough money to feed their families. They are often considered the 'farmer' or 'agricultural holder' only when there is no male adult in the family. This neglects the fact that there may be as many farmers as there are crops cultivated or grown by a household.

Women can and will contribute significantly in raising food outputs but they are not getting the support they need to do this. Only 36 percent of women farmers

Opposite: Recent price shocks and periods marked by market volatility have reduced household options to address nutritional needs. Women resorted to poor quality rice and cheap food, stretching available food, "fortifying" canned sardines or instant noodle by adding malunggay, food rationing and, in some cases, doing away with one meal. (Photo: Veejay Villafranca)

have access to irrigation, only 29 percent have access to seeds, 26 percent to training, 23 percent to extension services, 21 percent to fertilizer and seeds subsidy, 20 percent to pest control management, 20 percent to calamity assistance, and 14 percent to financial assistance.⁵⁸

What will happen if women farmers are given the same level of support as men farmers? Based on FAO and government estimates of the share of women farmers (10.8 percent) to total number of farmers, food production of women will likely increase by 25 percent and total national food production by at least 1.6 percent.⁵⁹ A more realistic estimate of the impact on total food production would probably be in the region of 3 percent.

Ageing farmers, deserted farms

In recent years more and more young Filipinos from rural areas have left the countryside in search of higher and more stable income.⁶⁰ The demographics

bear this out. Since 1980, the country's population has become more and more urbanized, with the share of urban population rising from 37.5 percent in 1980 to 54 percent in 1995, and an estimated 67.4 percent in 2010.⁶¹ A study estimated that a higher proportion of adult sons and daughters migrated than principal males of households.⁶² Outmigration from farms partly explains why the average age of farmers, at least according to one estimate, is 57 years old.⁶³ Outmigration from the farms could potentially lead to labour shortages unless the benefits from more gainful out-farm employment are converted into the improvement of the farm itself—e.g. farm mechanization and improved capacity to buy seeds and inputs.⁶⁴

The seeming lack of enthusiasm in the farms mirrors the declining rate of enrolment in agriculture, forestry, and natural resources (AFNR) courses in the country.⁶⁵ All these point to the need to make the farms more attractive to the young. Increasing farm productivity and profitability is critical.

68 year-old onion grower Ligaya Oria belongs to the ageing population of farmers as more and more rural youths migrate to the cities in search of a better life. Outmigration from farms could potentially lead to labour shortages unless the benefits for more gainful out-farm employment are converted into the improvement of the farm itself. (Photo: Veejay Villafranca)





Intensive agricultural land use without compensating investment in soil conservation and fertility has contributed to the degradation of some 13 million hectares, or 44% of the country's land area. (Photo: Lan Mercado)

“In our town, people are used to not having water during the hot season and too much water during the rainy season. Potable water is getting saltier. Ocean waves now reach 2 meters into the land surface. Many areas reserved for agriculture are currently unutilized for planting because of the intrusion of saltwater.”

Joelyn Biag, Province of Northern Samar

SUSTAINABLE PRODUCTION CHALLENGE

Infertile land, degraded resources

Philippine lowlands make up 48 percent of the nation's total landmass. Large tracts of land have been experiencing declines in productivity despite fertilizer application under modern intensive farming methods. Intensive agricultural land use without compensating investment in soil conservation and fertility has contributed to the degradation of some 13 million hectares, or 44 percent of the country's total land area.⁶⁶

By the late 1990s, logging and land clearing for agriculture had destroyed 66 percent of the nation's natural forest cover, and had contributed to the loss of topsoil of some 5.2 million hectares, of which 2.4 million hectares are in Mindanao.⁶⁷ Reforestation in the past few years and tree plantations have reclaimed 14 percentage points of the forest cover lost.⁶⁸ Unfortunately, there has been little rehabilitation of the 0.32 million hectares of mangrove forests that were destroyed by 1999.⁶⁹

Table 5. Estimates of resource deterioration, Philippines

Item	Most recent data	Year & source
Land degradation (global estimate)	<ul style="list-style-type: none"> • Covering 13 million hectares • Affecting 33 million Filipinos 	1981-2003; GLADA Report No. 4
Land erosion (FAO-LADA exercise in the Phil.)	<ul style="list-style-type: none"> • 5.2 million hectares, of which 2.4 million are in Mindanao 	1993; BSWM, as cited by Carating
Remaining natural forest cover	<ul style="list-style-type: none"> • 5.4 million hectares, or 34% of 'forestland', including 0.114 million hectares of mangrove forest 	1999, 2003; ESSC/Manila Observatory, Kumer (as cited by Ernesto S. Guiang, "Environmental Analysis, USAID/Philippines Strategy for 2004-2009, dated May 2004)
Total forest cover (including tree plantation and permanent, perennial high-value crops)	<ul style="list-style-type: none"> • 7.168 million hectares, or 48.4 of forestland • 0.330 million hectares consist of plantation forest 	2008; DENR
Biodiversity loss (in connection with deforestation)	<ul style="list-style-type: none"> • IUCN has 'red-flagged' the Philippines as one of the most endangered of the world's biodiversity hot spots 	www.sitesources.worldbank.org/INTPHILIPPINES/Resources/DB23-NRMcombined-June23.pdf
Coastal and marine resource degradation	<ul style="list-style-type: none"> • 74 percent of the country's coral reefs are only in fair to poor condition; caused by illegal fishing • Mangrove forests were estimated at 4,500 sq km in 1900, down to 1,300 sq km in 1999 • Seagrass and algae have also declined 	

Water is critical for crops, whether rainfed or irrigated, but at certain times and places, either there is too much water (floods brought by heavy rains) or too little (frequent and prolonged droughts). Degradation of vegetation cover and "critical weaknesses in the management of water distribution systems and inefficiencies in water use" have contributed to the country's water problems.⁷⁰ According to one study, a deficit in water availability will occur in several river basins in Pampanga, Laguna, and Cagayan Valley, all other

regions in Luzon, and in the island of Cebu by 2025.⁷¹

With better water management, the country can increase total rice production by 3 million tons by bringing an additional 1.5 million hectares under irrigation and by using existing irrigation water more efficiently. Rice yields can increase from 3.03 tons/hectare to at least 5.1 tons/hectare by using agroecological practices such as System of Rice Intensification (SRI). This could increase total rice production by another 3 million tons.

**Better ways abound:
System of Rice Intensification in the Philippines**

SRI is “based upon a set of principles and practices for increasing the productivity of irrigated rice by changing the management of plants, soil, water and nutrients. The practices contribute to both more fertile soil and healthier plants supported by greater root growth and the nurturing of soil microbial abundance and diversity.”

Local group SRI-Pilipinas, an Oxfam-assisted organization, records an average of 6.4 tons per hectare, which is a yield gain of around 114 percent over the current national average; and higher returns on investment (as much as 300% in one site). Claims for yield gains of rice hybrids over the best inbreds usually range from 15-20 percent in official publications to 100-200 percent in newspaper accounts.

However, the recommended management practices for hybrid rice include single seedlings per hill and wider spacing between hills, which are SRI practices. This suggests that at least a portion of the yield gains from hybrid rice comes from the management practices and a possible ‘SRI effect’ instead of the genetics.

In many countries, SRI practices of maintaining soil moisture, plant spacing, and, properly timed transplantation have led to an 80-90 percent reduction in seeds; 25-50 percent less water; reduced emissions of methane gas, which is 25 times more harmful than CO₂; and substantial reductions in the use of acid rain-causing nitrogen fertilizer.

Sources: 1) SRI International Network and Resources Center; 2) R. Verzola 'System of Rice Intensification (SRI): Practices and Results in the Philippines'; 3) Africare, Oxfam America, WWF-ICRISAT (2010) 'More Rice for People, More Water for the Planet'



More government funding will be needed to rehabilitate degraded fishing grounds and this does not seem to be forthcoming. Historically low to begin with, the budget for fisheries was further slashed by 35% in 2011.

(Photo: Veejay Villafranca)

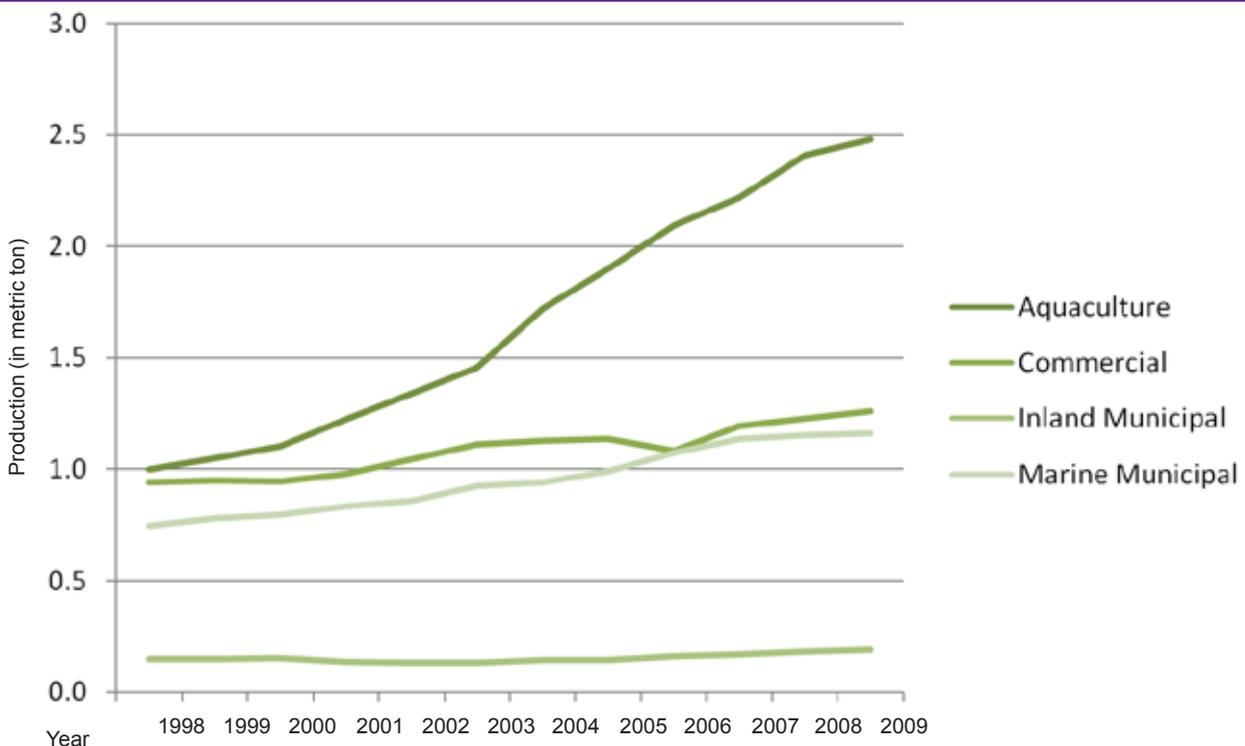
Collapsing fish stocks

As early as the 1990s, the total fish catch seemed to have levelled off despite the continued expansion of the country's commercial fishing fleets.⁷² Around this time, bottom-dwelling fish in major fishing areas had fallen by a range of 65-90 percent compared to their baseline level in the 1940's to 1970's.⁷³ An estimate shows that as early as 2004 capture fisheries have exceeded its maximum sustainable yield or MSY.⁷⁴ This means that the current yield is already a borrowing from future harvests and that no increase in the number of fishing boats and fishing equipment will yield a net increase in output unless the fishing grounds recover their productivity.

finances into aquaculture. However, in doing so, it is also draining money away from what is needed to implement measures to conserve wild fish stocks and rehabilitate the fisheries.

Furthermore, there are grounds for concern that shifts to aquaculture will actually have severe negative impacts on capture fisheries. It is also because aquaculture has intrinsic problems that have raised, time and again, serious issues about its sustainability. Cultured fish depend on stocks from the wild for fish oil and fish meals. It is estimated that 320,000 tons of wild fish per year are wasted for *bangus* (milkfish) and *tilapia* aquaculture alone.⁷⁷

Fishery Production by Fishing type and year/period



Source: Bureau of Agricultural Statistics, in million metric tons

Philippine fisheries are in an unhealthy state. The country's Comprehensive National Fisheries Industry Development Plan (CNFIDP) proposes to close the domestic fish food demand-supply gap by maintaining capture fisheries to its 2004 yield level and through responsible aquaculture.⁷⁵ One can easily see how these propositions could prove to be a big gamble.

For one, more government funding will be needed to rehabilitate degraded fishing grounds and this does not seem to be forthcoming. Historically low to begin with, the budget for fisheries was further slashed by 35% for the year 2011. Most worrisome in some ways is the planned shift from capture fisheries to aquaculture. There are over 1.3 million municipal fishers compared to 226 thousand aquaculture operators.⁷⁶ Given the sorry state of capture fisheries, one can understand why the government is shifting priorities and putting

Wastes in aquaculture ponds and pens have a particularly harmful effect on enclosed areas with slow water exchange rates where they caused algal blooms and low oxygen levels. The recent massive fishkills in Batangas and Pangasinan as well as the many others which occurred beyond the media glare are painful reminders that the country has a long way to go in fixing basic problems associated with the aquaculture industry.⁷⁸

Defective land distribution

The link between high inequality in land distribution and low long-term growth in developing countries is clear. So is the link between the pace of poverty reduction and land distribution.⁸⁰ For decades, the government has invested heavily in distributing lands to farmers through various agrarian reform programs. As of 2006, land distribution under the Voluntary Land Transfer (VLT) mode has been an astonishing

“We fishers are affected by landslides because all of it goes to the shore. Sedimentation covers the seagrass, corals, mangrove areas. This greatly affects us because our fish catch is low to begin with, and with the destruction of breeding grounds, there will be less and less fish for us.”

Melinda Diaz, Province of Sorsogon⁷⁹

achievement, distributing more than double the national target of 288,492 hectares. However, this is because landowners are allowed to select the farmer to whom the land will be transferred. The transfer sometimes happens on paper only, or the landlord reacquires it later, so the eventual recipients are rarely the ones who actually till the land. In stark contrast, land transfer under Compulsory Land Acquisition (CLA) was not as significant (only 18% of the national target of about 1.5 million hectares) because landowners threw a barrage of legal obstacles to be able to hold onto the land.⁸¹

The land distribution program under the Comprehensive Agrarian Reform Law was originally designed to run for 10 years until 1998. Congress has had to extend the program until 2008 but even the extended period did not allow for the completion of the distribution targets. In 2009, Congress passed the Republic Act 9700 or the Comprehensive

Agrarian Reform Program with Extension with Reforms which provides for the budget of 150 billion for distributing 1 million hectares and to finance the extension services to agrarian reform beneficiaries (ARB) for the period of five years. Concerns have been raised whether the new law will be able to deliver the targets. The distribution of the remaining 1.3 million hectares of private lands alone would amount to 195 billion pesos, which is way above the 150 billion pesos budget allotment that includes the DAR operations expenses including the budgets for credit and extension services to ARBs.⁸²

Landgrabs

In fact, despite the land distribution program, land holding trends seem to be going the other way—towards continuing concentration. In many cases, smallholder farmers lease back the lands awarded to them under the agrarian reform program, or



As global prices of staples more than doubled in the last two years, global agribusiness and speculators, and rich but land-poor countries have embarked on ‘land-grabbing’ sprees in the developing world. (Photo: Veejay Villafranca)

sometimes sell them outright. All these lead to the reconsolidation of land in the hands of individual and/or agribusiness corporate investors. Moreover, by granting concessions or permits, national government agencies and local government units have been complicit in the conversion of so-called 'idle' or 'marginal' lands for non-food cultivation. In some areas, they have also opened the way to the virtual privatization of big portions of bays and lakes for fish cages, marshes, and the foreshore for tourism.

During the past six years, three Philippine government agencies (Departments of Agriculture [DA], Agrarian Reform [DAR] and Environment and Natural Resources [DENR]) have been charged to undertake the National Convergence Initiative (NCI).

Under the NCI, they oversee the development of over 1.83 million hectares of land for agribusiness, reportedly generating about 2.67 million jobs between 2005 and 2010.⁸³

More recently, as global prices of staples more than doubled in the space of 30 months, global agribusiness companies and speculators, and rich but land-poor countries have embarked on 'land-grabbing' sprees in the developing world.⁸⁴ The Philippines has become a willing partner in these land ventures. State and private investors from China have been negotiating for land deals with the national and/or local governments. The Gulf countries have also reportedly shown interest in investing in various agricultural ventures in the Philippines. The new and emerging deals involve 3.0 million hectares.

Table 6. Selected agribusiness investments recorded by the Department of Agriculture in the Philippines, 2011

Corporation	Commodity	Hectarage	Investment coverage	Business arrangement
San Miguel Kuok Food Security Inc. ⁸⁴	Rice, corn, cassava, oil palm, feedstock, dairy, mariculture ⁸⁵	1,000,000	Development of green areas into food production areas along with the establishment of logistics, postharvest and processing facilities for the raw crop produce	Supply and purchase agreement, corporate farming, lease and co-management
Government of Qatar	Rice	100,000	Development of green areas into food production areas along with the establishment of logistics, postharvest and processing facilities, logistics support and primary processing plants	Joint Venture, Lease and Corporate farming
Government of Saudi Arabia	Rice, corn, sorghum, barley, alfalfa, red meat	200,000	Development of new areas for rice and corn production with the establishment of the necessary facilities, logistics support and primary processing plants	Joint Venture
Government of Brunei	Rice	10,000	Development of green areas into food production with the establishment of logistics, postharvest and processing facilities for the new crop produce	Corporate Farming, Lease and Co-Management
Government of Oman	Rice	10,000	Development of new areas for food production with the establishment of the necessary postharvest facilities, logistics support and primary processing plants	Joint Venture, Lease
Government of Kuwait	Rice, corn	20,000	Development of new areas for food production with the establishment of the necessary postharvest facilities	Joint Venture and
Government of New Zealand	Livestock	500	Development of new areas for livestock breeding and dairy farming	Corporate Farming Joint Venture and Lease

Source: R. Ravanera, and V. Gorra (2011), 'Commercial Pressures on Land in Asia: An Overview. International Land Coalition and International Fund for Agriculture and Development'

Together with the agribusiness farms under the NCI, some 5.67 million hectares, or over 18 percent of the country's total area have been committed for biofuels and agricultural exports.⁸⁵

What will this do for food security? There are many concerns. Having been declared by national and local governments as 'idle', tracts of land that may have been planted by women with tubers have been leased to foreign or local agribusiness investors. At times, the women have little say on the lease since they may have just 'borrowed' the land from a relative or a neighbour.⁸⁶ Original landowners discover belatedly that the agreed lease payment has been grossly undervalued but they have fallen into a legal trap that will bind them for 25 and sometimes 50 years. Moreover, the promised jobs rarely go to the women and men in the communities that are affected by the land's conversion.⁸⁷ As a result,

agri-business ventures may not only be reducing the capacity of communities to produce food. More damaging perhaps are the adverse effects created on sustainable livelihood opportunities for rural households.

Meanwhile, the private development of coastal or lake foreshore lands has robbed small scale fishers of access to the foreshore for landing boats and limited or denied access to women who need the foreshore for drying fish and seaweed culture. In some areas, they have also lost access to mangrove resources, such as shellfish, juvenile fish and firewood. In other areas, the fishers, many of whom have no secure claims on home lots, have been pushed to encroach on mangrove forests as they try to form informal settlements.⁸⁹

“In Bacoor, fisherfolk houses are being demolished and are being relocated in areas very far from the fishing areas. But fishing is our main livelihood. Dismantling of fish cages is affecting the livelihood of poor aquaculture fishworkers. Pollution in Manila Bay remains unresolved, with rampant disposal of domestic and human wastes, since we do not have sanitation facilities.”

Rosario Mendoza of Bacoor, Cavite⁸⁸



(Photo: Veejay Villafranca)

Some government policies are feeding the frenzy for landgrabs. This is particularly true in the case of the Biofuels Act of 2006 (RA9367) that required a minimum five percent bioethanol blend by 2009 for gasoline sold and two percent biodiesel blend for diesel.

The law offers generous tax incentive packages and loan portfolios to biofuel companies. It is particularly noted for its dilution of key agrarian reform policies because it prioritizes biofuel production sites as development areas for land conversion.⁹⁰ The most problematic aspect of the law is the preferential treatment it provides to biofuels feedstock and blend producers, distributors and sellers where the law is interpreted in their favour should there be conflicts in legal interpretation.⁹¹

Life Gets Harder

“Life is hard,” says Blesilda (real name withheld for security reasons), a resident of Tulunan, North Cotabato. Her family is among those who leased their land to A.C. Garcia Corporation, a company that operates a 700-hectare oil palm plantation in Tulunan, believing that it will help them “cope with the hardships” they are facing.

She agreed to lease her land to the company for 5,000 pesos (approx. USD100) per hectare per year, with a three-year advance payment in rent including provision of title for untitled lands, payment of real property tax and employment in the company. All these promises never materialized. She refused the company’s offer of employment because of low wages.

She now regrets her decision to lease the land because she and her family could have earned more from the land if they cultivated it themselves.

“At present, we have very limited source of livelihood. And my husband is sickly so he can’t anymore work long hours,” laments Blesilda, now aged 45 and the breadwinner to a daughter and a sickly husband.

Source: This case study was lifted from Alternative Forum for Research in Mindanao [AFRIM] (2011) ‘Effects of Land Conversion for Agrofuel Production in Conflict Vulnerable Communities of Mindanao’ an Oxfam-commissioned research, page 22



**Food price surges
heighten vulnerabilities
among households,
as access to food
becomes fragile.**

(Photo: Veejay Villafranca)



THE RESILIENCE CHALLENGE

Global pressures

Poverty and inequality, marginalisation of women, inadequate diets, faltering production of basic grains, land grabs—all these are systemic failures that affect the availability of food. To these are now added sudden and large-scale environmental and economic shocks to the food system.

When the price of nearly every agricultural commodity sharply increased in 2007 and 2008, it created what has been called a 'global food price bubble.'⁹² When prices peaked in the second quarter of 2008, the world price of corn was three times higher than at the beginning of 2003, while that of rice was five times higher.

The impact of the global price hike shook the Philippines as the country's Consumer Price Index (CPI) inflation rose by 6.4 percentage points in 2009 and its real GDP growth fell by 3.2 percentage points. Retail prices of rice continued to be higher in 2009 and 2010 in the aftermath of Typhoons Ketsana (local name: Ondoy) and Parma (local name: Pepeng).

In February 2011, global prices of rice in US dollar terms declined slightly from the recent peaks in some countries. The softening in some countries (such as Thailand and Vietnam) coincided with the arrival of the new harvest of the early season crop.⁹³ However, prices in some importing countries, such as the Philippines and Indonesia, have yet to reflect the downturn seen in other countries and are much higher and have risen faster in recent months than in the exporting countries.⁹⁴ The rosy forecast of a bumper harvest might soften the blow from global pressures, but caution is still required. For example, the Philippine Atmospheric Geophysical and Astronomical Service Administration (PAGASA) has already made a public pronouncement of an "extremely wet" 2011, a two-fold increase in the number of cyclones compared to the 11 recorded in 2010.⁹⁵

In view of the closer links between the food, biofuels and oil markets, volatilities in the last two also affect the price of food, as well as of agricultural inputs, such as fertilizers. In the period 2007-2008, the total per hectare cost of producing rice increased by 20 percent; it has since gone down, but only slightly.⁹⁶

Food prices are important as they eat into the purchasing power of unchanged incomes. Currently, the Philippines ranks in the middle of the 25 economies most vulnerable to the expected surges in food prices.⁹⁷

Inflation in the past years has been driven by food price increases, particularly rice and corn.⁹⁸ The combination of the spike in the global price of rice, the global financial crisis and Typhoons Ketsana and Parma and the earlier Typhoon Frank caused a two-digit inflation rate for rice and corn (28.5 percent and 24.9 percent, respectively). Another factor that is likely to continue to exert an upward pressure on food prices is the increasing diversion of farmland to biofuels and the provisioning of other countries' food requirements.⁹⁹

Food price surges heighten vulnerabilities among households, as access to food becomes fragile. This is especially true among those already living in poverty, where food accounts for over half of their budget.

Rising temperature and its impacts

"There is a local bird called "uhaw", because of the sound it makes. If the bird cries "Uhaw!", you will know that it will be sunny tomorrow. But now, even the bird cannot predict the weather, so the traditional early warning systems are not working anymore."

Zeny Mansiliohan, a woman tribal leader, Province of Agusan del Sur

At the global level, Oxfam warns that "food prices are projected to increase by something in the range of 70 to 90 per cent by 2030 before the effects of climate change, which will roughly double price rises again".¹⁰⁰

The Intergovernmental Panel on Climate Change (IPCC) noted an increase of 0.14°C per decade in mean temperatures in the Philippines. Since the 1980s there has been an increase in annual mean rainfall. Since the 1990s there has also been an increase in the number of rainy days and the inter-annual variability of onset of rainfall.¹⁰¹

Evidence of the impacts of climate change in the Philippines is just as well-noted. The five most devastating typhoons ever recorded in the history of the Philippines occurred from 1990 and onwards, affecting 23 million people.¹⁰² Four of the costliest typhoons in recorded history occurred from 1990 and onwards, with combined damages costing around USD1.13 bn.¹⁰³

Two of the severest droughts ever recorded occurred in the period 1991-92 and 1997-98. The former affected the combined area of 461,800 hectares in Mindanao, Central and Western Visayas, and Cagayan Valley and caused a combined loss amounting to over 4 bn pesos. The latter affected about 292,00 hectares of rice and corn resulting in a loss of 622,106 mt of rice production and 565,240 mt of corn with an estimated value of over 1.5 bn pesos.¹⁰⁴

Projections by PAGASA reveal that the country's increase in mean annual temperature will be about 0.9°C by 2020 and 1.7°C to 2.4°C by 2050. This will threaten the country's ability to produce food unless drastic changes take place soon. Rice yield alone is projected to fall by around 10 percent for each 1°C increase in night temperature during the growing season.¹⁰⁵

Farmers and fisherfolk are well aware of changes in the climate. They feel the repercussions. Oxfam has interviewed numerous fishers who are concerned that fish shoals are not where they should have been and farmers who are unable to predict, as they did, when is the best time to grow and harvest.

The five most devastating typhoons ever recorded in the history of the Philippines occurred from 1990 and onwards, with combined damages costing around USD 1.13 billion.

(Photo: Danny Victoriano)

Typhoons Ondoy and Pepeng, 2009

Damages from Ketsana and Parma were magnified by the fact that these occurred in highly populated economic centres. The damage (direct costs) and losses (indirect costs) incurred during the disasters were estimated to be equivalent to about 2.7 percent of GDP, which is comparable to other major recent disasters across the world (e.g. the 2005 tsunami in Aceh, or 2008 Cyclone Nargis in Myanmar).

Small farmers bore the brunt of the economic losses. Damages to irrigation facilities and other agricultural infrastructures had a negative impact on the next (2010) summer crop. A total of 2.8 bn pesos was required for reconstruction and rehabilitation, of which 85 percent would need to go to restore damaged Level 2 irrigation systems.

A total of 172 million workdays were lost, which resulted in losses amounting to 50.4bn pesos of incomes in 2009, particularly in the retail and wholesale trades (which amounted to 32.6bn pesos, or 64 percent of total incomes lost). Industry and agriculture losses amounted to 13bn pesos and 3.7bn pesos, respectively.

Outside agriculture, the negative impacts were felt most strongly by micro-, small-, and medium-sized enterprises, which normally have limited or no access to formal credit; and informal housing units that had been erected in flood areas, which have resulted in very high reconstruction costs that involve partial re-settlement.

For those living just above the poverty line, disasters such as Typhoons Ondoy and Pepeng are likely to propel them back into poverty.

Source: 'Philippines. Typhoons Ondoy and Pepeng: A Post-Disaster Needs Assessment', Vol. 1, 26 November 2009'



In the face of future climate-related disasters, there is a need for the government and other sectors to invest in preparatory, emergency relief, and rehabilitation measures. As important, however, is an investment in helping everyone, particularly the poor, not only to ride out the disasters, but to adapt their livelihoods to the changing climate as well.

In recent years there has been a strong interest in Weather Index Insurance (WII) as an effective mechanism for transferring weather-related risks that affect the farmers. WII encourages farmers to invest time, money and labour because of the expectation of an automatic payout for damages if a serious weather disturbance occurs. Risks are not rationally spread across current and potential actors. Present policy frameworks do not appear to encourage or incentivize risk sharing with the private sector.

Predictability amid uncertainty: The case for Weather Index Insurance in the Provinces of Isabela, Kalinga and Cagayan

Typhoon Megi (local name Juan) made landfall as a Category 5 typhoon in Northern Philippines on 18 October 2010. The damage to agriculture reached 11.5 bn pesos. The typhoon also caused irreversible land damage on 10 to 15 percent of farms located along river banks and low-lying areas in the worst-affected provinces of Isabela, Cagayan, and Kalinga, which was why Oxfam responded with humanitarian relief in those areas. Prior to Typhoon Megi these areas were also affected by El Niño-associated drought in early 2010 and by Typhoon Parma in October 2009.

Extreme weather events like the droughts in 2010 and the typhoons Parma and Megi have become a familiar fixture in the lives of the farmers in these provinces. The disruptions destroy valuable productive assets, which are the lifeblood of the economy. In the aftermath of a disaster, affected families have been known to sell their remaining assets, often at depressed prices.

Oxfam and MicroEnsure, an international microinsurance company, are looking into Weather Index Insurance (WII), a financial risk transfer mechanism that will pay out to farmers based on certain changes in parameters such as rainfall and drought conditions. WII is a promising means to put affected farmers back on their feet again after a disaster strikes.

Source: Oxfam and MicroEnsure-Philippines, forthcoming

“At the start of each planting season, I’m always in debt because of loans from the traders in the amount of 30,000 pesos, which I use to buy fertilizer, pesticide and other farm needs. When Typhoon Juan struck, it brought with it strong winds and heavy rains. My rice crops, which were about to be harvested, had their stalks bent, wasting them. The roof of my house that was still under construction was blown off. Our hardships became so intense with the total destruction of our crops. I had also harvested some rice but it was meagre and browned and wasn’t enough to settle my loan from the traders.”

Ronald G. Luis of Carmencita village, Delfin Albano town, Province of Isabela

Chaos in climate financing

As early as 1995, the Philippines convened a conference on climate change among Asia-Pacific leaders. The parties came up with the Manila Declaration, signed by 133 countries, which acknowledged the dangers posed by climate change to ‘small island states, and coastal and other nations of the Asia Pacific region’. In 1994, the country ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol in 2003. It was one of the first countries to complete a National Action Plan on Climate Change.

In the wake of Typhoons Ketsana and Parma, the government signed the Climate Change Act into law, which created the Climate Change Commission (CCC) and which established the Commission’s two-fold mandate: mainstream climate change in the government’s planning processes, and coordinate and lead the formulation of the country’s response to climate change. This includes leadership over the formulation of Philippine negotiating positions with regard to the UN Framework Convention on Climate Change talks. The National Framework Strategy on Climate Change had been signed and approved, while the National Climate Change Action Plan

(NCCAP) is already finished. The process related to the Local Climate Change Action Plan (LCCAP) commenced on July 25, 2010.

While climate governance has gathered pace, financing priority projects has not been similarly up-to-speed. In fact, there is chaos in the way the currently available funding is governed and administered.

Climate change financing in the Philippines largely comes from a mix of sources—bilateral, multilateral, NGO and private sources. Of the total funding for adaptation, USD438.6 m is provided by bilateral sources while USD198.76 m comes from multilateral sources. NGOs, private sector groups (including foundations) and the Global Environmental Facility (GEF) account for a combined USD319 m fund for adaptation.¹⁰⁷

Multilateral climate-change funds are often ‘tied loans’ or donor-driven, and that decision-making is top-down. Supported projects lack transformational potential – for example the development of ‘clean coal’ in contrast to the authentically renewable energy sources a developing country like the Philippines needs to have.

Over the period 1992–2018, a total USD2.179 bn has been funneled to, or will be coming down the pipeline into, the country. Of this, USD956m was earmarked for adaptation and USD1.128 bn for mitigation projects. Some USD2.42m was allocated to aid/relief and USD92m for both adaptation and aid/relief.

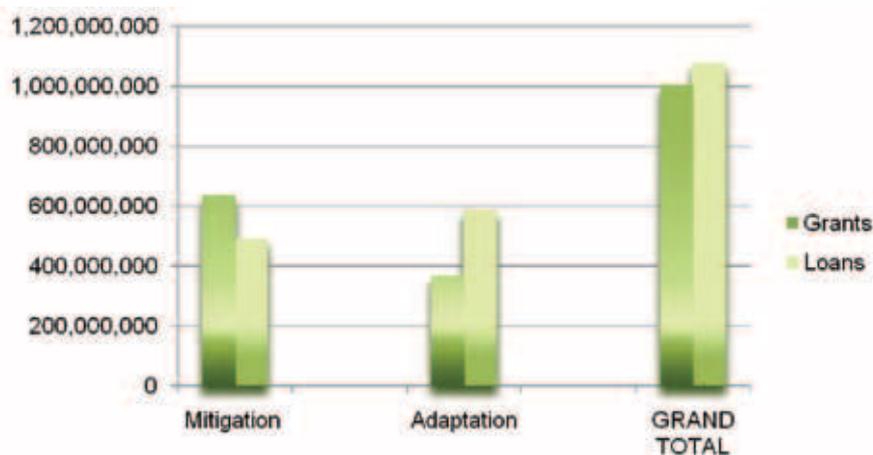
Over half (54.1 percent) of climate-change financing has been earmarked for mitigation which is clearly disproportionate. Decision makers do not see climate-change adaptation as a high priority in the context of national development plans. The interests and expressed needs of people—especially the rural poor and marginalised groups and women are missing in the various climate change-related plans, programs and financing initiatives put forward by the government, international financial institutions and donors.

An earlier study of climate-change financing needs conducted by the Department of Environment and

Natural Resources (DENR) in 2009 revealed that adaptation projects are funded more by loans than by grants. Between 1992 and up to 2018, of total loan funds for direct climate-change mitigation and adaptation amounting to USD1.09 bn, more than half (USD587 m) were, or are scheduled to be, in the form of loans for direct adaptation. Loans for direct mitigation comprised a smaller share of USD492m. Clearly, the so-called adaptation funds are increasing the country’s already huge external debt, pegged at \$55 bn in 2010.

The fact that adaptation funds are predominantly in the form of loans goes against the very principle of compensatory finance, which says that rich countries must bear the greater burden for battling the effects of global warming. It reverses the burden-sharing role, adding new debts to a poor country severely affected by climate change even though it contributed much less to the problem.

Climate change finance: Grants and Loans, Mitigation and Adaptation (in USD)



Source: Institute for Climate Change and Sustainable Cities (ICSC)-Oxfam 2010

Yuha tu Banwa: Indigenous women adapting to climate change

The well-being of the household is always the domain of women. For the women in Ibulan, a community which is predominantly from the Manobo and Mamanwa indigenous cultural communities, this translates to food security, health, and sanitation. Located some 17 kilometers away from the highway and accessible only via an abandoned logging road, Ibulan has little access to health services, limited only to semi-annual visits by the doctors and nurses from the LGU.

Excessive rains, causing landslides, make the road impassable, limiting access to food as well. This also means difficulty in transporting their produce to market, affecting their household income.

Ibulan subsists mainly on camote or sweet potato. But the women say that rains are becoming heavier and temperatures hotter, so most of the camote becomes rotten and cannot be consumed. Despite these trials, the women of Ibulan have struggled to secure even the basic needs of their families. While they play an active role in marketing the household’s agricultural produce,

there is very little they can do with decreasing yields each year due to unpredictable weather patterns.

With the help of Oxfam’s Women@Center Project, the women of Ibulan were able to restore their traditional practice of *yuha*, a communal way of storing food for members of the community for use when food is scarce. They have also embarked on planting *duyaw* or turmeric, which they intercrop with root crops and other vegetables. *Duyaw* not only provides women with income security but herbal medicine as well. The *yuha*, which buys up and sells abaca from the farmers, strengthened their livelihoods by cutting out local traders. Farmers earned 47 pesos (about USD10) per kilo of abaca, compared to the 18 pesos per kilo paid by outside traders before.

The experience of running the food and health bank also increased the women’s self-esteem and confidence. As one women leader said “I used to be so quiet in council meetings, but now, I stand up and speak my mind”.

Source: Rodilyn Abella Bolo, Process Documentation Report, Women@Center Project

RISING TO THE CHALLENGE: A BOUNTIFUL FUTURE IS POSSIBLE

Harvesting the low hanging fruits

Eliminating wastage and losses

In the search for thoroughgoing and far-reaching approaches to complex problems, it is easy to miss simple solutions available today. For instance, some 449,000 tons of rice are lost during harvesting, transshipment and storage per year. These inefficiencies have also unnecessarily increased processing and distribution costs by 20-30 percent, and logistic costs account for 30-40 percent of total marketing costs in developing countries, such as the Philippines.¹⁰⁸

Each year at home, a total of 37,000 tons of rice are spoiled, while 336,000 tons are either classified as leftovers or purposely cooked for animals. In all, 822,000 tons of rice are wasted per year at the farm and household levels.¹⁰⁹ Yet this amount of wastage is more than enough to meet the annual rice-consumption needs of 7.4 m Filipinos (who subsist on an average of 111.4 kilograms per year), which is virtually all those living below the income subsistence threshold. When one counts the leftover and spoiled food in restaurants and other public eating places, the figure would be even more staggering.

Agriculture support systems

Careful use of public expenditure along the supply chain could also do a lot in terms of linking food producers to the market. Without a well-developed and maintained infrastructure and transport system, the cost of moving food supplies from Mindanao to Manila and vice versa makes importing the commodities a more viable proposition. In the past decade, the Philippine government improved the transport system (the 'nautical highway') that facilitated the movement of passengers and cargo from Luzon to Mindanao through a roll on-roll off (RORO) terminal system to link the entire country. The poor quality of ports and roads in many parts has significantly reduced the benefits from the system.

Meanwhile, access of rural households to reliable and cheap electricity directly affects agricultural productivity. Access to electricity could boost productivity and therefore income of agricultural producers.¹¹⁰ Much could be done by supporting off-grid, decentralised renewable energy options that are not dependent on fossil fuels, including micro- or pico-hydro for electricity, biogas for cooking, solar for lighting or ram pumps for irrigation.¹¹¹

Credit facilities should be made available to smallholder farmers and small-scale fishers. Over the last two decades, support for agriculture, including fisheries and forestry, has declined, with the share of agricultural loans to total loans going down from 9.2 per cent in 1980 to 3.2 per cent in 2006. The share of agricultural production loans to total loans also declined, from 6.99 per cent in 1990 to 0.94 per cent in 2006.¹¹²

Agricultural research is another area which could improve agriculture output. Most recent estimates found that in 2002, the Philippines invested USD0.46 for every USD100 of agricultural output. This figure has grown remarkably (by 70

percent) compared to what it was in 1991—but still lower than the 2000 averages reported for Asia and the developing world which were 0.41 and 0.53, respectively.¹¹³

The need for a responsible private sector

Private investment is recognized as a critical driver of rural employment and agriculture productivity. However, private investors have also played a central role in marginalizing local Filipino communities and creating conditions conducive to or actually taking part or leading in land grabs. Mining activities represent the most controversial segment of private investment in rural areas, due to the damaging operations of extractive activities.¹¹⁴ Large-scale agribusiness and various monoculture plantations

are also contributors to the marginalization of poor communities, particularly in Mindanao.¹¹⁵

In a number of cases, local communities have had to give up the land to the private sector since public investment is hard to come by. Invariably, women and men farmers are reduced to supplying labour, oftentimes on a seasonal basis, at low wages, and without the social protection they need.

There is a wide range of opportunities for the private sector to profit from investing in small farming and artisanal fisheries, while at the same time uplifting prevailing living conditions among poor households and communities. Successful business models on private investments in agriculture do exist.¹¹⁶ Effective government regulation and a more inclusive arrangement between companies and farmers, however, are critical to sustaining such models.



Organizing small farmers and fishers empowers them to take part in reducing poverty and in sustaining economic growth in the countryside.

(photo: Veejay Villafranca)

Safe bets: Smallholder agriculture and fisheries

There is certainly a business case to be made for investing in smallholder agriculture and fisheries, not least because of its poverty-reducing effects. To do so would be to free the smallholder producers from the clutches of predatory businessmen who are often their only sources of market information, production inputs and credit. It is not unusual that through their indebtedness to some unscrupulous businessmen, small producers have already pawned their next harvest or catch.

By organizing smallholder producers into viable business units and affording them the technology and financing they need, they have the potential to be vital players in poverty reduction and sustained economic growth in the countryside.

There are valid concerns, especially among agribusiness firms, about the capability of smallholder producers to meet demand on a consistent scale and on time, as well as statutory standards on health, safety and employment guarantees. However, these concerns can only be an argument for upscaling the capability of smallholders to meet the market standards.

Mindanao Fruit Industry Development Council

Mindanao Fruit Industry Development Council (MinFruit) has 32 members comprising of 17 cooperatives, 10 associations and fruit councils as well as 5 corporations emerging from all six different regions of Mindanao. MinFruit is an education, advocacy and business service organization. It conducts technical workshops for its members on pest management and other good agricultural practices and technology-transfer training. It has waged a Mindanao-wide mango off-season production campaign, which hopes to encourage mango farmers to time their harvest for the off-season months so as to enable exporters to supply their markets throughout the year.

Already, MinFruit has been able to penetrate non-traditional markets for Cavendish bananas in China and Hongkong reaching over USD40m.

It has catalyzed the formation of two grower-based mango marketing corporations in Mindanao. These corporations will buy mangoes from their grower-members, consolidate them and sell them directly to exporters, processors and other buyers. Through these operations, mango growers will cut out unnecessary layers in the marketing chain. It also organizes market matching events to bring its members closer to buyers.

Minfruit also has broadened its scope to support growers of other promising exportable fruits such as durian, lanzones, rambutan, lakatan bananas, pomelo, mangosteen and calamansi. By uniting small fruit farmers organized into cooperatives with larger private agribusiness firms, Minfruit has emerged as a pivotal force in ensuring a viable fruit industry.

Source: R. Pascual (2009), Increasing Private Sector Investments in the Philippines: The Case for Inclusion of Agriculture & Fisheries Smallholder Farmer Producers, page 20



The government needs to regulate marketing of food products that are harmful to human health and the environment, on the one hand, while encouraging the growth of food production using sustainable means, on the other.

(photo: Veejay Villafranca)



An enlightened consumer movement

To become viable, smallholder producers must be able to penetrate the wider markets and here, the key to providing strong linkages with the consumers rest with the government. Since 1992, the Consumer Act of the Philippines (R.A. 7394) has been in effect to protect the interest of the consumer and promote his general welfare; to establish standards of conduct for business and industry; and the creation of the National Food Security Council to develop a

comprehensive national food security and food safety program. What is missing is a broad policy that regulates marketing of food products that are harmful to human health and the environment, on one hand; while encouraging the growth of food production using sustainable means, on the other hand. The Philippines is one of the countries in Asia which attaches high value to sustainability—that is to say food grown using 'less resources such as water, fertilizer, pesticide or land to minimise the impact on the environment'. In a five-country study, Philippines ranked higher than China, India, South Korea, and

Japan in the proportion of consumers who give importance to food that 'comes from a food producer enrolled in a scientifically validated sustainable food production program'.¹¹⁷ Companies must heed the call of consumers for sustainably grown foods. The government must provide the right political and business incentives to make this happen.

The dividends of peace in Mindanao

Mindanao is the second largest island in the Philippines (next to Luzon) with a land area of 10.2 million hectares. It represents one third of the national land mass. In 2007, almost a quarter of the Philippine population lived in Mindanao.¹¹⁸ Almost one-third of its land area is devoted to agriculture and more than one-third of its labour force is in agriculture, fisheries and forestry.¹¹⁹

While there are raging, decades-old armed struggles in some areas of the Philippines, conflicts in Mindanao are particularly more widespread and more violent. The 2005 Philippine Human Development Report noted that from 1986 to 2004, 15 of the 21 provinces with the most number of conflicts are in Mindanao.¹²⁰ Over 40 years of communist insurgency and the Moro secessionist movements have claimed the lives of an estimated 120,000 people and have displaced about 2 million more civilians.¹²¹

The causality between the conflict in Mindanao and agricultural production and productivity is well-

noted. Capital flight, an aversion against investing in agriculture by affected communities, disruption of markets, and, the consequent drop in the profitability of crop production are just some of the impacts linked directly and indirectly to the seething conflict in the region. An estimate put the indirect impact of the conflict alone to USD10 bn over the course of 1975-2002.¹²²

Despite the intermittent eruption of violence, Mindanao's economy has shown remarkable resilience as shown by its ability to sustain growth through episodes of armed conflict.¹²³ In fact, in 2009, the growth rate in Mindanao was three times as much as the national economy.¹²⁴ The figure below shows the significant contribution of Mindanao to the economy.

Growth in Mindanao, however, has been highly uneven with Region XI (Davao provinces) at the forefront, while the ARMM and CARAGA have always lagged behind. It is no coincidence that ARMM, CARAGA, and the Zamboanga Peninsula have the highest incidence of poverty, not just in Mindanao, but in the entire country as well. All provinces considered as areas of conflict, except Davao del Sur, have consistently ranked as poor and poverty in these provinces has always remained worse than the national average.

An enduring peace in Mindanao opens up huge possibilities to uplift the lives of its poor farmers and fishers, and thereby increase the country's overall agricultural productivity.

Figure (Comparison of outputs of selected agricultural products)



Source: Bureau of Agricultural Statistics [BAS] (2011) 'Selected Statistics on Agriculture 2011'.



THE TIME FOR CHANGE IS NOW: WHAT MUST BE DONE

Benigno Aquino III captured the presidency by riding on the crest of strong public opinion against years of mal-development, widespread corruption and distorted public policies. Hopes are high that the vicious cycle of poverty will finally come to an end.

President Aquino promises inclusive growth through a more transparent and accountable government. How exactly this will be achieved is spelled out partially in the Philippine Development Plan 2011-2016, an amalgam of social development strategies and economic and political reforms designed to alleviate poverty and prop up the economy.

A number of reform-seeking women and men, many previously active in the civil society organization movement, occupy key positions in the Aquino administration. Many are optimistic that policy gains in recent years will finally find substance in the form of budget commitments and that social development proposals in the pipeline will now move more speedily.

Against this backdrop, it is vital to take advantage of the reform momentum in the executive and to sustain the dialogue among national agencies with civil society groups, communities and the private sector. Both are prerequisites to crafting more effective policies, programs, and practices that in turn will ensure better management of land and water resources -- the predicates of food justice. The effort to manage land, water and climate change is a shared one.

An agenda that prepares communities for the climate crisis, and which will reenergize and revitalize the farm and fisheries sectors, must start with the following:

Policies and programs that promote sustainable livelihoods and climate resilient communities should be prioritized and pursued. Congress should pass a law on land and water use that protects the nation's food sources both in the farms and in the fishing grounds. It should stop land conversion, especially in areas that are critical for food production. Existing legislation should be reviewed in order to secure the needs of women smallholders, as well as the demands of sustainable farming and fishing. Government agencies and their respective mandates need to be rationalized and aligned for the purpose of achieving food self-sufficiency.

Public spending for agriculture -- on a scale that will meet the demands of climate adaptation and food self sufficiency -- should increase. Landmark legislation such as the People's Survival Fund (PSF) bill, which seeks to incentivize early climate change adaptation action by establishing appropriate, adequate and predictable sources of funds that can be accessed by local government units and communities, needs to be passed urgently. National budgetary allocations for sustainable agriculture should be increased. The government should invest heavily on rehabilitating overfished areas. Government should introduce a raft of social protection programs to ensure vulnerable sectors are shielded from economic and climate-related volatilities.

Private sector investment that can build the resilience of rural livelihoods and contribute to social development must be encouraged. Standards for responsible private sector investments

and operations need to be in place to govern the government's public-private sector partnership (PPP) agenda and to define the scope and role of the private sector in the government's adaptation agenda. One area where private sector expertise and resources will be most needed is in the area of developing Philippine risk sharing mechanisms and weather index insurance-based initiatives for farmers and fisherfolk.

A more coherent national agenda that increases the competitiveness of the Philippine agriculture sector and which mitigates the vagaries and volatilities of the international commodities market and the adverse impacts of international trading regimes needs to be agreed. The Philippines needs a blueprint for trade and development, which places the empowerment of small farming shareholders at the centre of the government's development strategy. Anti-smuggling and anti-trust bills need to be passed urgently. Equally important is the jumpstarting of a process that will review all trade agreements entered into by the government or are currently under negotiation. In the context of the climate crisis and the price volatility of agricultural products, it is critical to review tariff schedules and to align trade ambitions with projected climate change impacts on the Philippines. The creation of the Philippine Trade Representative Office (PTRO) will ensure coherence in our bilateral and multilateral trade negotiations so that international trading will aid, not hamper, the development of our domestic food production.

Women's contributions to agriculture production should be strengthened and supported. The government needs to increase women's access to extension services, credit and social protection measures. Women's participation in policy-making processes should be institutionalized.

Consumers, smallholder producers, development NGOs, and social movements should amplify their calls for safe, adequate, and sustainably-grown food. The government needs to provide the right incentive and the regulatory environment for the private sector to be able to heed this call.

IN THE LAST 5 years, the world has lived through devastating shocks. In 2008, 100 million more people went hungry because of the global food price hike. In the last few years, we have also seen the worst weather-related disasters in history—the worst droughts, the most devastating typhoons, tsunamis and hurricanes ever recorded.

The domestic food system is near breaking point. There is still time to change course but the window for action is rapidly closing. Taking action now will help secure a bountiful future where Filipinos will have enough food on the table, particularly Filipino farming communities.

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