Country Nutrition Paper

Inputs from the Food and Agriculture Sector

Philippines

English version

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21 years later - ICN + 21

Table of Contents

List of Annexes

List of Figures

List of Tables

Foreword

This country paper provides an overview of key changes in the Philippines 21 years after the first International Conference on Nutrition (ICN) in 1992. It describes changes in the food and nutrition situation in the Philippines and the changes in agricultural production, demography, and socio-economic level of the country that contributed to its current situation.

Data used for the paper were based primarily on official sources of statistics in the Philippines. However, when such is not available, alternative sources, e.g. Nutrition Country Profile (NCP) submitted by the Philippines in 2001, MDG indicators, and World Bank sources were used.

Some of the data required for the country paper are not generated in exactly the same way by the Philippine Statistical System, e.g. nutrition situation of women 15-49 years old. In such cases, the closest available information was used.

The paper will eventually be used in the mid-term assessment of the Philippine Plan of Action for Nutrition 2011-2016. It is hoped that the paper and the discussions in ICN2 will spur further in-country, regional, and global discussions that will strengthen not only the implementation of key nutrition interventions but also the integration of nutrition and nutrition concerns in sectoral policies, plans, and programs.

Acknowledgements

The National Nutrition Council (NNC) Secretariat would like to thank the Food and Agriculture Organization and the World Health Organization for once again convening all nations of the world to revisit the 1992 International Conference on Nutrition, building on the renewed interest and focus on nutrition as one of the key inputs for development. This is indeed a timely move as nutrition problems have become more complex as both undernutrition and overnutrition exist side by side with each other in many countries including the Philippines.

The NNC Secretariat likewise acknowledges the efforts of the government agencies that are charged with generating data to guide development actions in the country, specifically the National Statistics Office, the National Statistical Coordination Board, the Bureau of Agricultural Statistics and the Food and Nutrition Research Institute for not only generating needed statistics but more so in ensuring that the statistics are readily accessible by users. The effort of the Social Weather Stations to generate statistics on hunger on a quarterly basis is also acknowledged.

The NNC Secretariat likewise acknowledges the efforts of the NNC Governing Board, the NNC Technical Committee, technical working groups, all those in member agencies of the NNC as well as the NGO community, the academe, the local government units and their functionaries, especially community-based nutrition volunteers called barangay nutrition scholars for the dedication to work together in identifying and pursuing actions to address hunger and malnutrition.

The NNC Secretariat also acknowledges the United Nations and its agencies, specifically the Food and Agriculture Organization, International Labor Organization, United Nations Children's Fund, World Food Programme and the World Health Organization; the European Union, and the United States Agency for International Development for standing by the Philippines through all these years, providing technical, financial, and material support for implementing nutrition and nutrition-sensitive programs and projects.

Summary

The Philippines is one of the middle-income countries of Southeast Asia. Its population growth rate has slowed down to about 1.9 for the period 2000-2010, lower than the 2.34 recorded for the previous decade. It has experienced a 5-6% growth in its economy based on measures of gross domestic product and gross national income. However, it continues to grapple with hunger and malnutrition as about 66.9% of its household population continue to consume less than the energy requirement. Furthermore, child (0-60 months old) malnutrition, particularly underweight-for-age and stunting continues to be a concern, notwithstanding observed reductions from 34.7% in 1990 to 20.2% in 2011. Wasting has likewise remained to hover around the 5-7% level. On the other hand, overweight and obesity is a growing problem, especially among adults 20 years and over.

With the recognition that malnutrition (both undernutrition and overnutrition) are associated with a host of factors that are related to each other, the Philippines continues to pursue actions that will address the immediate, intermediate, and underlying causes of malnutrition.

It continues to integrate and coordinate actions for nutrition improvement through the inter-agency National Nutrition Council chaired by the Department of Health, with the Departments of Agriculture, and the Interior and Local Government as vice-chairs, and the following as members: Departments of Budget and Management, Education, Labor and Employment, Science and Technology, Social Welfare and Development, Trade and Industry, and the National Economic and Development Authority, and three representatives from the private sector appointed by the President for a term of two years.

Local government units through inter-agency local nutrition committees have also provided the mechanism for nutrition program management at the local level.

The Philippines continues to formulate the Philippine Plan of Action for Nutrition as a component of the Philippine Development Plan. The current planning cycle (2011-2016) focuses on the first 1000 days of life and as such priorities are along strengthening the nutrition component of prenatal care (nutrition counseling, iron folic acid supplementation and food supplementation), and the promotion of optimum infant and young child feeding. Priorities also include managing wasting according to prescribed standards; addressing micronutrient malnutrition through vitamin and iron supplementation, food fortification, and dietary diversification. These efforts will be pursued side by

side with those that will improve the availability of food and the physical and economic access to food.

A key challenge is to find the appropriate mix of strategies that will push levels of child stunting downward (as this has almost plateaued the past years). Among others, this will call for strengthening the promotion of complementary feeding, building on the recipe trials model developed by the Food and Agriculture Organization. Furthermore, strengthening the nutrition perspective of development policies and programs through the use of nutrition indicators in selecting priority areas as well as integrating nutrition education in these programs, among others are actions to pursue. These will be pursued in both "normal" and disaster or emergency situations.

Capacity building should continue to focus on capacities for policy formulation within the "direct" nutrition community as well as on building a nutrition mindset in other development sectors. It should likewise continue to build capacities of local governments and the communities in assessing their respective nutrition situation, in identifying, designing, implementing, monitoring, and evaluating appropriate interventions.

In pursuing all these actions, an underlying principle would be a human rights perspective, a participative approach, and a multisectoral approach that views nutrition as both an input and output of development.

Table 1. Summary Table

General Indicators	Most recent n/%	Sources / Year Covered	n/% in 1992	Sources 1992[i]
Total population	92,337,852	NSCB based on the 2010 census conducted by the NSO	60,703,206	NSCB based on the 1990 census conducted by the NSO
National birth rate	25.68%	World Bank, 2012/ 2010	31%	World Bank, 2012/1995
Total number of live births	1,782,981	NSCB based on data from the NSO/2010	1,684,395	NSCB based on data from the NSO/1992
National life expectancy (males, females)	69 years	Human Development Report 2013/2012	64.2	Human Development Report 1992/1990
Human Development Index Rank	114	Human Development Report 2013/2012	80	Human Development Report 1992/1990

General Indicators	Most recent n/%	Sources / Year Covered	n/% in 1992	Sources 1992[i]
Population % below international poverty line	26.5	NSCB MDG Indicators/2009	33.1	NSCB MDG Indicators/1991
Under-five mortality rate (per 1,000 live births)	30	NSCB MDG Indicators/2011	80	NSCB MDG Indicators/1990
Infant mortality rate (per 1,000 live births)	22	NSCB MDG Indicators/2011	57	NSCB MDG Indicators/1990
Maternal mortality ratio per 100,000 live births (based on proportion of maternal deaths to female deaths in the reproductive age groups (PMDF)	95-163	NSCB MDG Indicators/2011	121-207	NSCB MDG Indicators/1990
Primary school net enrolment or attendance ratio (participation rate), %	91.2	DepEd/ 2012 [2011-2012]	84.6	DepEd/ 2012 [2007-2008]
Primary school net enrolment - ratio of girls/boys in primary education	1.1	NSCB MDG Indicators/ 2011	1.0	NSCB MDG Indicators/ 1996
Access to improved drinking water in rural areas - %	92	MDG Indicators 2013/ 2011	79	MDG Indicators 2013/ 1992
Access to improved sanitation in rural areas - %	69	MDG Indicators 2013/ 2011	47	MDG Indicators 2013/ 1992
Food availability				
Arable land area – % of total farm area	50.7	NSO/2002	55.0 18.2	NSO/1991 World Bank 2013/1992
Average dietary energy requirement – Kcal	2,220	FAOSTAT 2010/ 2006-2008	2,108 2,150	Nutrition Country Profile 2001/1995 FAOSTAT 2010/1990-1992
Dietary energy supply (DES) – Kcal	2,580	FAOSTAT 2010/ 2006-2008	2,389 2,230	Nutrition Country Profile 2001/1996-1998 FAOSTAT 2010/1990-1992
Total protein share in DES - %	9.4	FAOSTAT 2010/ 2006-2008	9.8 9.36	Nutrition Country Profile 2001/1996-1998 FAOSTAT 2010/1990-1992

General Indicators	Most recent n/%	Sources / Year Covered	n/% in 1992	Sources 1992[i]
Fat share in DES - %	17.4	FAOSTAT 2010/2006-2008	16.6	Nutrition Country Profile 2001/1996-1998
Average daily consumption of calories per person – Kcal	1,867	FNRI 2010/2008	1,684	FNRI 2010/1993
Calories from protein - %	12.1	FNRI 2010/2008	12	FNRI 2006/1993
Calories from fat - %	17.3	FNRI 2010/2008	15	FNRI 2006/1993
Average daily fruit consumption, excluding wine, g per capita per day	54	FNRI 2010/2008	77	FNRI 2001/1993
Average daily vegetable consumption, g per capita per day	110	FNRI 2010/2008	106	FNRI 2001/1993
Nutritional Anthropometry (WHO Child Growth Standards)				
Prevalence of stunting in children (0-60 months old)	33.6%	FNRI 2012/ 2011	40.6	FNRI 2012/ 1992
Prevalence of wasting in children (0-60 months old)	7.3%	FNRI 2012/ 2011	7.5%	FNRI 2012/ 1992
Prevalence of underweight children (0-60 months old)	20.2%	FNRI 2012/ 2011	26.6%	FNRI 2012/ 1992
Prevalence of overweight-for-height children (0-60 months old)	4.3%	FNRI 2012/ 2011	1.1%	FNRI 2012/ 1992
Prevalence of overweight/ obesity (based on BMI-age) among children 61-120 months old	7.5%	FNRI 2012/ 2011	5.8%	FNRI 2012/1992
Prevalence of obesity >30 BMI, % - Adults (20 years and over)	6.1	FNRI 2012/ 2011	3.3	FNRI 2001/ 1998
Women (20 years and over) with BMI < 18.5	10.7	FNRI 2012/ 2011	13.9	FNRI 2012/ 1993
Infant and young child feeding, by age				
Exclusive breastfeeding under 6 months, %	34.0 46.7	NDHS/2008 FNRI/ 2011	25.1 29.7	NDHS/1993 FNRI/ 2003

General Indicators	Most recent n/%	Sources / Year Covered	n/% in 1992	Sources 1992[i]
		(based on usual feeding at the time of the survey)		(based on usual feeding at the time of the survey)
Breastfeeding with complementary foods (6-9 months), %	58.0 61.1	NDHS/2008 FNRI/2011 (covers infants 6-11 months old)	57.9 39.4	NDHS/2003 FNRI/ 2008 (covers infants 6-11 months old)
Micronutrients				
Households consuming adequately iodized salt (>15ppm) -%	54.5	FNRI/ 2011	25.2	FNRI/ 2008
Vitamin A supplementation coverage rate for children	91.6	FNRI/ 2011	84.5	FNRI/ 1998
Percentage of children with anemia - 6- <12 months old - 1-5 years old	 55.7 20.9	 FNRI 2010/ 2008 FNRI 2010/ 2008	 49.2 25.7	 FNRI 2010/1993 FNRI 2010/1993
Percentage of women with anemia:				
- Adolescents, 13-19 years old	18.2	FNRI 2010/ 2008	33.2	FNRI 2001/1998
- Pregnant women	42.5	FNRI 2010/ 2008	43.6	FNRI 2010/ 1993
- Lactating women	31.6	FNRI 2010/ 2008	43.0	FNRI 2010/ 1993

Acronyms

1.	**AFMA**	-	Agriculture and Fisheries Modernization Act
2.	**DA – BAS**	-	Department of Agriculture-Bureau of Agricultural Statistics
3.	**DepED**	-	Department of Education
4.	**DOH**	-	Department of Health
5.	**ICN**	-	International Conference on Nutrition
6.	**FAOSTAT**	-	Food and Agriculture Organization Statistics
7.	**FNRI**	-	Food and Nutrition Research Institute
8.	**GDP**	-	Gross Domestic Product
9.	**GNP**	-	Gross National Product
10.	**HDI**	-	Human Development Index
11.	**IDD**	-	Iodine Deficiency Disorders
12.	**LGU**	-	Local Government Unit
13.	**MDG**	-	Millennium Development Goals
14.	**MDGI**	-	Millennium Development Goals Indicator
15.	**NCP**	-	Nutrition Country Profile
16.	**NNC**	-	National Nutrition Council
17.	**NSCB**	-	National Statistical Coordination Board
18.	**NSO**	-	National Statistics Office
19.	**RA**	-	Republic Act
20.	**SWS**	-	Social Weather Stations
21.	**UNDP**	-	United Nations Development Program
22.	**UNICEF**	-	United Nations Children's Fund
23.	**UNSTAT**	-	United Nations Statistics
24.	**VAD**	-	Vitamin A deficiency
25.	**WFP**	-	World Food Programme
26.	**WHO**	-	World Health Organization

1. Country context since 1992

1.1 Geographic information

The Philippines is an archipelago of 7,107 islands, divided into three main island groupings: Luzon, Visayas and Mindanao (Figure 1). It has a total land area of 300,000 square kilometers, 18.2% of which is arable land (World Bank, 2011). Luzon is considered as the largest of these three island groupings followed by Mindanao and then the Visayas.

Figure 1. Philippines Map

The Philippines is located 600 miles off the southeastern coast of the Asian mainland and is located between Taiwan and Borneo. Topographically, it is broken up by the sea. It is bounded

on the north and west by the South China Sea, on the east by the Pacific Ocean and on the south by the Celebes Sea.

The Philippines is also part of the Pacific Ring of Fire characterized by active volcanoes. It has a tropical climate dominated by a wet and dry season. All of its islands are prone to typhoons, earthquakes and other natural disasters.

The Philippines has a presidential form of government. It has three branches of government—the executive, legislative, and judiciary.

Its basic geo-administrative unit is the barangay or village, while a group of contiguous barangays make up a city or municipality. A group of municipalities make up a province. Chartered cities are independent of provinces, while component cities are considered part of the province. To date, the country has 80 provinces, 143 cities, 1,491 municipalities and about 42,027 barangays. It also has 17 administrative regions which are composed of provinces and cities, but with no separate local government except for the Autonomous Region in Muslim Mindanao (ARMM). National government agencies have field offices in each region (except for the ARMM).

1.2 What are the main socio and economic developments since 1992?

Changes in agriculture

The latest Census of Agriculture and Fisheries (2002) reported that the agricultural land area of the country was about 9.671 M hectares or about 32% of the country's total land area. This represents a 3% reduction over the reported agricultural land area in 1991. Furthermore, arable land also decreased from 5.5 M hectares in 1991 to 4.9 M hectares in 2002, or a decrease from 55.7% of total agricultural land area in 1991 to 50% in 2002. In addition, the average farm size decreased from 2.6 hectares in 1991 to 2.01 hectares in 2002. This decrease can be attributed to the conversion of agricultural lands to settlements, housing and industrial uses.

Nonetheless, agriculture production increased between 1994 and 2012 (Table 2). Palay or unhusked rice grain continued to be the major crop produced in the country.

Table 2. Volume of production of agricultural products, Philippines, 1992, 1994 and 2012

Agricultural Products	Volume of Production			Rate of Increase/ Decrease (%)
	1992	1994	2012	
CROPS[1]		15,057,300	25,439,252	68.9
1. Palay		10,538,054	18,032,422	2.31
2. Corn		4,519,246	7,406,830	2.17
LIVESTOCK[2]	2315.93		4438.55	91.65
1. Carabao	108.60		142.73	1.20
2. Cattle	166.91		253.98	1.71

Agricultural Products	Volume of Production			Rate of Increase/ Decrease (%)
	1992	1994	2012	
3. Hog	1,056.98		1,973.63	2.32
4. Goat	59.67		75.66	1.06
5. Dairy	15.42		18.45	0.82
6. Chicken	651.99		1,479.44	2.8
7. Duck	39.09		33.85	-0.78
8. Chicken Eggs	180.52		421.06	2.86
9. Duck Eggs	36.75		39.75	0.38

Data Source: Bureau of Agricultural Statistics
[1] Data are in metric tons
[2] Data are in thousand metric tons

A major post-ICN 1992 development was the enactment of the Agriculture and Fisheries Modernization Act (or AFMA) of 1997. The law aims to "transform the agriculture and fisheries sector to technology-based, advanced and competitive industry; ensure that small farmers and fisherfolk have equal access to assets, resources and services; and guarantee food security (Aquino et al 2013)", among others. Its underlying principle is to "improve the living conditions of farmers and fisherfolk and increase their productivity amidst the growing needs" of the local and international markets.

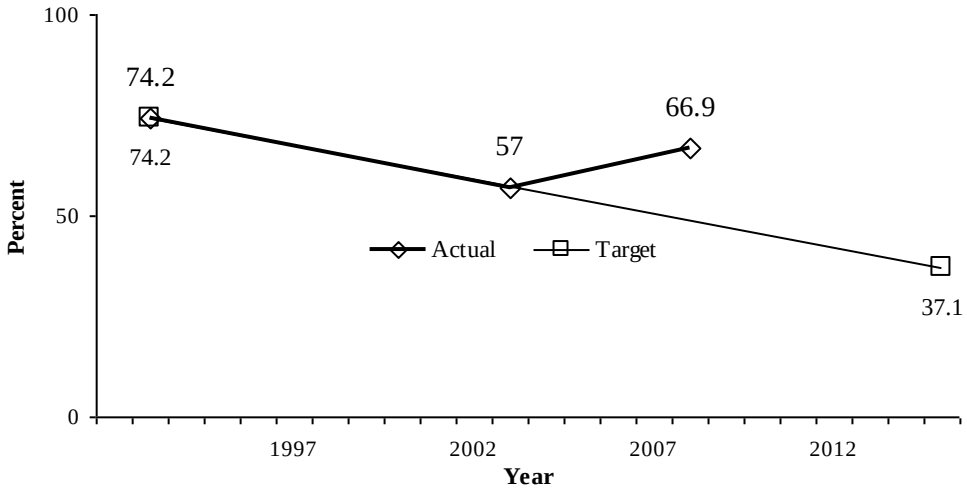
In addition, the country has adopted a food self-sufficiency policy starting 2011, with self-sufficiency in rice as a first priority. Along this concern, 2013 was declared as the National Year of Rice and the month of November of every year as the National Rice Awareness Month.

Changes in food security

Food security is said to exist when "all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life" (WHO). Various data sources suggest that food insecurity continues to be a concern in the Philippines as many Filipinos continue to suffer from hunger.

Results of the national nutrition survey indicate that more than half of Filipino households consumed less than 100% of the recommended energy intake (Figure 2). While the percentage of Filipino households with inadequate energy intake decreased from 74.2% in 1993 to 66.9% in 2008, the 2008 level is higher than that reported in 2003 (57.0%). Furthermore, the 2008 level is way off the MDG target of halving the 1990 level of Filipino households with inadequate calorie intake.

Figure 2. Proportion of Filipino households with per capita intake below 100% dietary energy requirement: 1993, 2003 and 2008

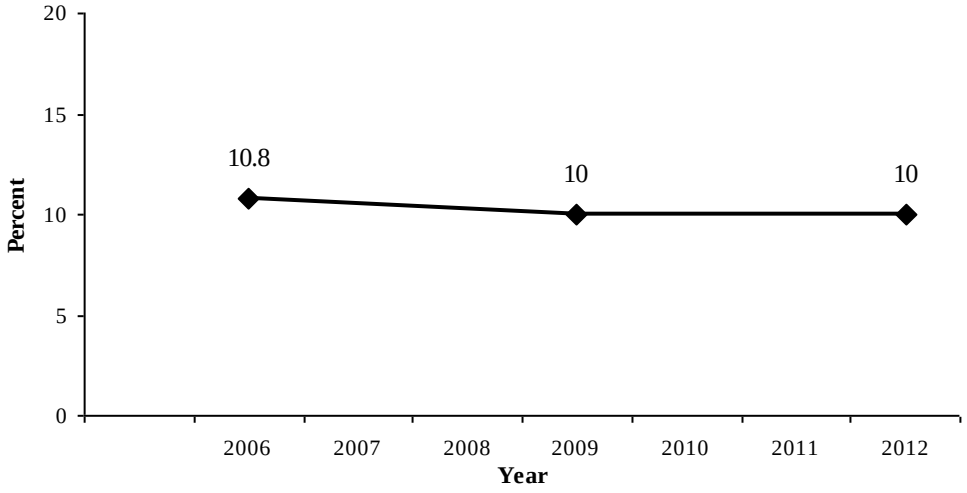


Source: National Nutrition Surveys, Food and Nutrition Research Institute

Note: The target line is based on the MDG target of halving the 1990 level of Filipino households with inadequate energy intake by 2015.

Official poverty statistics indicate that subsistence incidence for the first semester of 2006, 2009, and 2012 was at about 10%. Subsistence incidence is the percentage of Filipino households with incomes below the food threshold between 1991 and 2009. The food threshold is, in turn, "the minimum income/expenditure required for a family/individual to meet the basic food needs, which satisfies the nutritional requirements for economically necessary and socially desirable physical activities" (NSCB).

Figure 3. Subsistence incidence[1] among Filipino households first semester 2006, 2009, 2012

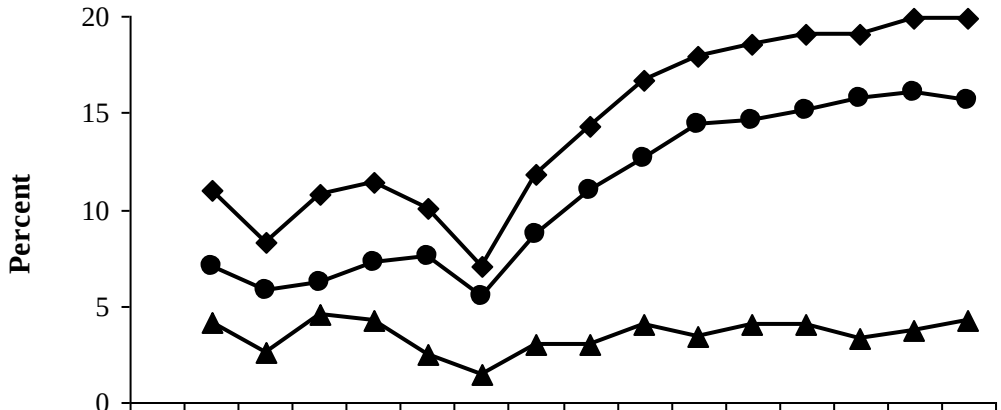


Source: National Statistical Coordination Board

[1] Subsistence incidence is the proportion of families/individuals with per capita income/expenditure less than the per capita food threshold to the total number of families/ individual

On the other hand, surveys on self-rated hunger[1] done by the Social Weather Stations (SWS) indicate an increasing incidence of hunger since 1998 (Figure 4).

Figure 4. Percentage of Filipino households rating themselves as hungry[1], 1998-2013



	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12
Total	11.0	8.3	10.8	11.4	10.1	7.0	11.8	14.3	16.7	17.9	18.5	19.1	19.1	19.9	19.9
Moderate	7.0	5.8	6.2	7.3	7.6	5.5	8.7	11.0	12.6	14.4	14.6	15.1	15.8	16.1	15.6
Severe	4.1	2.6	4.6	4.2	2.5	1.5	3.0	3.0	4.0	3.4	4.0	4.0	3.3	3.7	4.3

Source: Social Weather Stations

A closer look at the data (Annex 1) shows that hunger incidence, in general, increases between the third and four quarters and decreases between the fourth and first quarters.

Also, a study showed that increases in hunger incidence were associated with underemployment and increase in food prices (Mapa et al 2010). Furthermore, the impact of an increase in hunger in one quarter will be felt in subsequent quarters, i.e. 5 quarters more if increase was due to underemployment and two quarters more if increase was due to food inflation or increase in food prices (Mapa et al 2010). It is to be noted that in some instances the increase in food prices was precipitated by a major natural disaster.

Based on the global hunger index[2], the Philippines has one of the highest indices compared to selected Asian countries, notwithstanding the decline from 21.8 in 1992 to 17.6 in 2012 (Table 3). The 2012 hunger index of the country is almost at the same level as that of Thailand and Indonesia a decade before.

[1] Self-rated hunger is based on responses to the question, "In the past three months, did you or any member of your family experience hunger because you did not have food to eat? If yes, how often? Once? Often? Always?" "Once" responses are considered as moderate hunger and "often" and "always" responses as severe hunger.

[2] Global hunger index Is a composite measure based on equally weighted indicators, namely: a) proportion of the undernourished to the total population; b) the prevalence of underweight children under the age of five; and c) the mortality rate of children under the age of five.

Table 3. Global hunger index of selected countries

Rank in 2003	Country	1992	1997	2003
47	China	12 6	8 6	8 2
59	Indonesia	18 5	15 6	12 5
40	Malaysia	10 2	7 7	7 2
72	Philippines	21 8	19 6	17 6
58	Thailand	17 8	13 8	12 4
75	Vietnam	25 9	22 4	18 4

In the Philippines, causes of hunger include unemployment, price volatility, structural factors, and of course, poverty. Farmers often cannot afford to buy seeds to plant the crops that would provide for their families. Craftsmen lack the means to pay for the tools to ply their trade. Others have no land or water or education to lay the foundations for a secure future. In short, majority of the poor are hungry, and this constrains them from rising from poverty. And so, the vicious cycle of poverty and hunger continues.

In addition, emergencies and disasters that the country has experienced, such as Typhoons Ketsana, Parma, Washi, Bopha to name a few, threaten food security among affected households[3] (Israel and Briones 2012).

Changes in the economy

The Philippine economy has shown considerable gains as reflected in the per capita Gross National Product (GNP) from 934 US$ in 1998 to 2,299.08 US$ in 2010 (NSCB). This was more than double the country's per capita income (GNI) a decade ago.

Gross national income increased at an annual average of about 5.5 between 1992 (Php 2.8M million pesos) and 2012 (Php 8.3 M million pesos), with a high of 8.2 in 2010 (From Php 7.0 M million pesos in 2009 to Php 7.6M million pesos in 2010).

The main contributor to both GDP and GNI continues to be "Services" (mean contribution of about 44.3% from 1992-2012; followed by "Industry" (mean contribution of about 28.5%). The share of agriculture decreased from 15% to 8.5% in 2012 (mean of 11.6%). Net primary income increased from 4.4% in 1992 to 23.5% in 2012 (mean of 15%).

[3] The study was based on the effects of Typhoons Ketsana and Parma

1.3 What are the main population, health and human development issues since 1992?

Changes in Population

As can be seen from Table 4, the Philippine population increased from 60.7 M in 1990 to 92.3M in 2010. This is equivalent to an annual growth rate of about 1.9 between 2000 and 2010, lower than the 2.34% annual growth rate from 1990 to 2000 (NSO, 2012).

Table 4. Philippine population, census years 1960, 1970, 1980, 1990, 1995, 2000, 2007 and 2010

Census Year	Population	Average Annual Growth Rate*
1960	27,087,685	2.89
1970	36,684,486	3.08
1980	48,098,460	2.71
1990 [a/]	60,703,206	2.35
1995 [b/]	68,616,536	2.32
2000 [c/]	76,506,928	2.34 (1990 – 2000 growth rate)
2007 [d/]	88,548,366	2.04
2010 [e/]	92,337,852	1.90 (2000 - 2010 growth rate)
1960 – 2010		2.48

Source: National Statistics Office, 2012

*compounded average growth rate

[a/] Includes 2,876 homeless population and 2,336 Filipinos in Philippine Embassies, Consulates and Missions abroad.

[b/] Includes 2,830 Filipinos in Philippine Embassies, Consulates and Missions abroad.

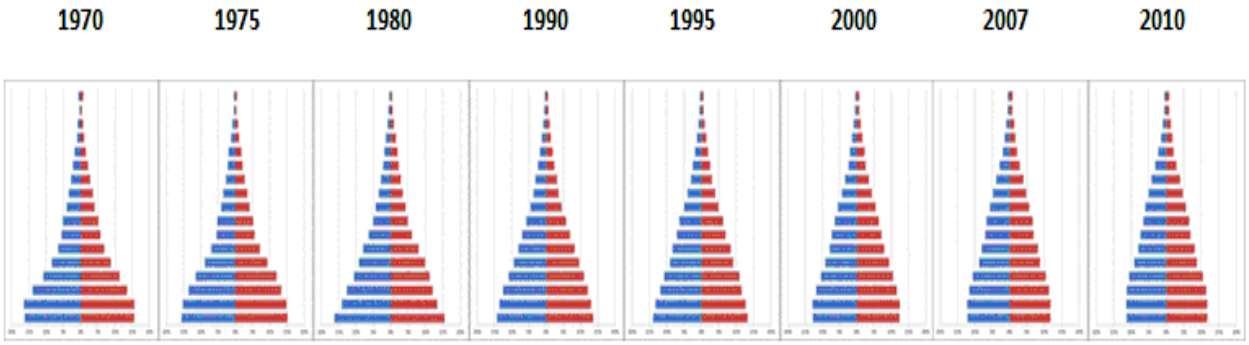
[c/] Includes 18,989 persons residing in the areas disputed by City of Pasig (NCR) and the province of Rizal (Region IVA); and 192 persons in the areas disputed by the province of Mountain Province (CAR) and Ilocos Sur (Region I); 11,814 persons in the barangays disputed by the province of Camarines Norte (Region V) and Quezon (Region IVA); and 150 persons residing in the areas disputed by the province of Bukidnon and Misamis Oriental and 2,851 Filipinos in Philippine Embassies, Consulates and Missions abroad.

[d/] Includes 2,279 336 Filipinos in Philippine Embassies, Consulates and Missions abroad.

[e/] Includes 2,739 Filipinos in Philippine Embassies, Consulates and Missions abroad

As shown in Figure 4, the Philippine population is still characterized as being “fairly young despite a narrowing base” (Albert 2012).

Figure 4. Population Pyramids: Philippines Census Years 1970, 1975, 1980, 1990, 1995, 2000, 2007 and 2010



Source: NSCB, 2012

The median age of the population of the country has also continuously increased from 19 years in 1990 to 23 years in 2010, but is still one of the lowest in Southeast Asia (Annex 2).

Furthermore, there has been a "growing proportion in the working ages and a slightly increasing elderly population" (Albert 2012).

Fertility rate in the country also decreased from 4.3 in 1990 to 3.1 in 2010, but is still the highest among ASEAN countries (Annex 3).

Urbanization

The level of urbanization (or percent of the population living in areas that are classified as urban areas) in 2010 was 45.3% (NSO, 2013), a little lower than the 48.7% recorded in the 1990 census.

Nutrition Transition

Based on the Popkin (2003) characterization or stages in the nutrition situation, the Philippines lies between stage 1 or receding famine (characterized by a diet that is monotonous and primarily derived from plant-based food sources) and stage 2 degenerative diseases (characterized by a diet that generally include more animal source foods, higher intakes of fats, increased use of sugar, and higher reliance on food produced and processed outside the home or immediate community).

Based on the food consumption component of national nutrition surveys (the last of which was done in 2008), the Filipino diet can still be characterized as high in carbohydrates, marginal in protein and low in fat (FNRI 2010). About 70% of foods consumed came from plant sources in 2008, a little lower than 72.4% reported in 2003. On the other hand, animal consumption was at 29% of total food consumed, higher than the 25.3% reported in 2003.

Changes in Causes of Mortality and Morbidity

Life expectancy at birth increased from 67.4 in 1995 to 69 in 2011. Also, child mortality decreased from 80 per 1,000 live births in 1990 to 30 per 1,000 live births in 2011. However, maternal mortality rate continues to be high at 95-163 per 100,000 live births in 2011 but is lower than the 121-207 recorded in 1990.

Diseases of the heart remain to be the leading cause of mortality from the 1990s up to the 21st century (Annex 4). On the other hand, illnesses pertaining to the respiratory system remain to be the leading causes of morbidity (Annex 5).

Water and sanitation

The percentage of Filipinos in rural areas with access to safe drinking water increased from 79% in 1992 to 92% in 2011. In addition, the percentage of the population with access to sanitary toilet facilities increased from 47% in 1992 to 69% in 2011. Increasing the percent of the population with access to safe drinking water and sanitary toilet facilities is a key action to prevent and reduce undernutrition.

2. Comparison of the current food and nutrition situation with that of 1992

2.1 Analysis and comparison of the current food and nutrition situation with that in 1992 to determine the progress made since the last ICN.

Availability of Food

The total per capita energy supply in the country increased from 2,389 kcal in 1996-1998 to 2,580 kcal in 2006-2008, equivalent to about 113% and 116%, respectively of the estimated per capita calorie requirements. Thus, there is enough food supply to provide for the energy needs of the Filipino population. However, mean per capita calorie intake reported by national nutrition surveys (1,684 kcal in 1993 and 1,867 in 2008) is less than the available calorie supply, suggesting that there is a segment of the Philippine population that is not able to access the available calorie supply.

Nutritional Outcomes

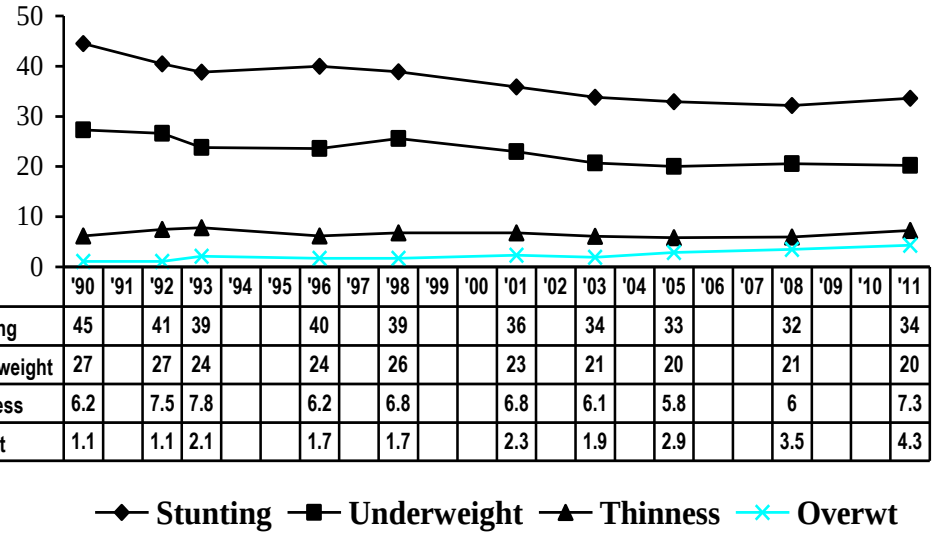
Malnutrition

Children 0-5 years old

The prevalence of underweight-for-age and stunting among children 0-5 years old decreased between 1990 and 2011 (Figure 5). However, the prevalence rate of both underweight-for-age and stunting has almost plateaued at the 33% and 20% level, respectively, since 2005. Wasting on the other hand has remained within the 6-8% level, with an increase from 6% in 2008 to

7.3% in 2011. The prevalence of overweight and obesity, while relatively low, has increased four-fold from 1.1% in 1990 to 4.3% in 2011.

Figure 5. Trends in the prevalence of malnutrition among children, 0-5 years *old*



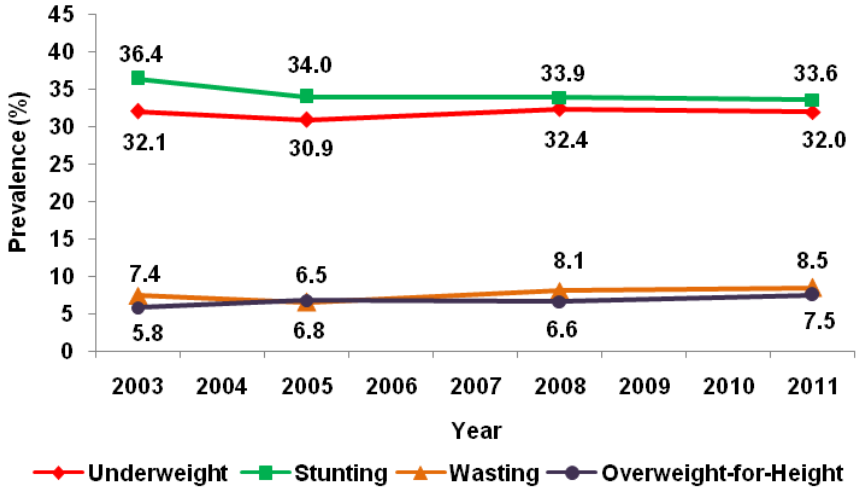
	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11
Stunting	45		41	39			40		39			36		34		33			32			34
Underweight	27		27	24			24		26			23		21		20			21			20
Thinness	6.2		7.5	7.8			6.2		6.8			6.8		6.1		5.8			6			7.3
Overwt	1.1		1.1	2.1			1.7		1.7			2.3		1.9		2.9			3.5			4.3

Source: FNRI-DOST

Children 61 -120 months old, adolescents, adults

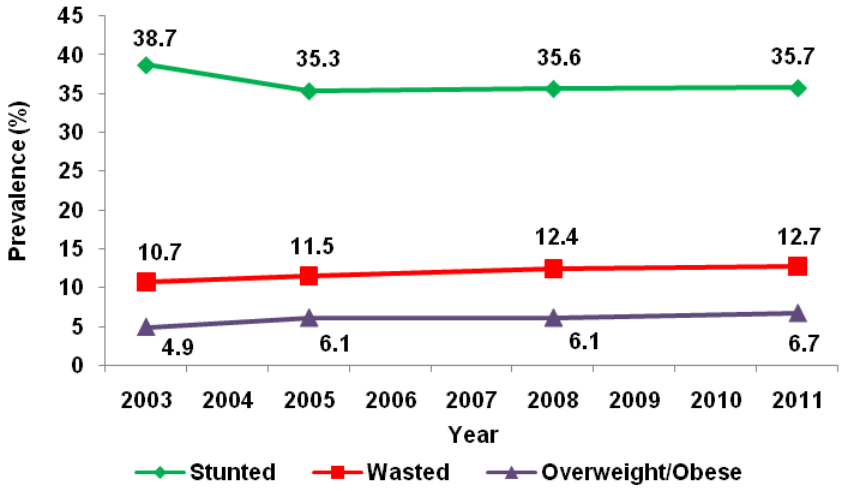
The prevalence of underweight, stunting, wasting, and overweight-for-height among children 5.08-10 years old has been almost steady from 2003 to 2011, although the prevalence rate of underweight and stunting decreased slightly while wasting and overweight-for-height also increased slightly. (Figure 6). A similar trend has been observed for the age group 10.08-19 years old (Figure 7). Among adults, there has been a more marked increase in overweight between 1993 and 2011 and a slight decrease in chronic energy deficiency (Figure 8)

Figure 6. Trends in the prevalence of malnutrition among children, 61-120 months old, 2003-11



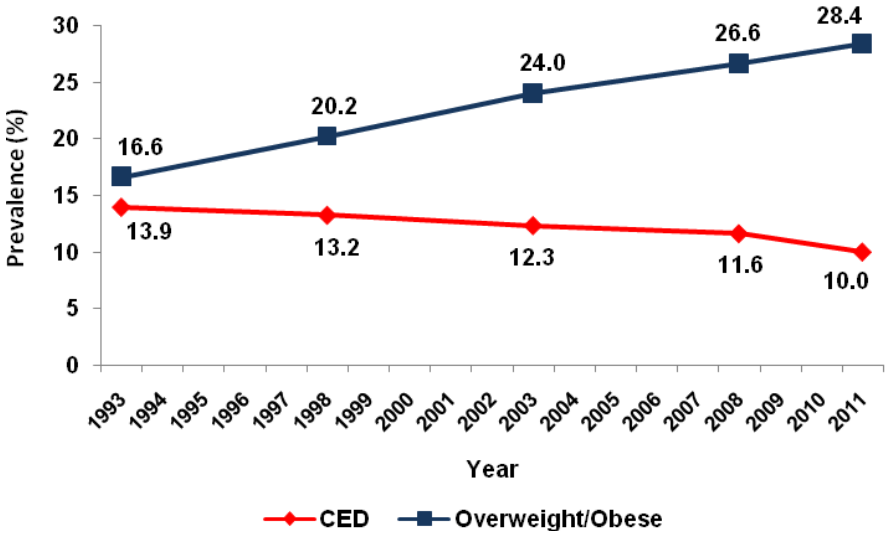
Source: FNRI-DOST

Figure 7. Trends in the prevalence of malnutrition among the population 10.08- 19 years old, 2003-11



Source: FNRI-DOST

Figure 8. Trends in the prevalence of malnutrition among adults, 20 years and more, 1993-2011



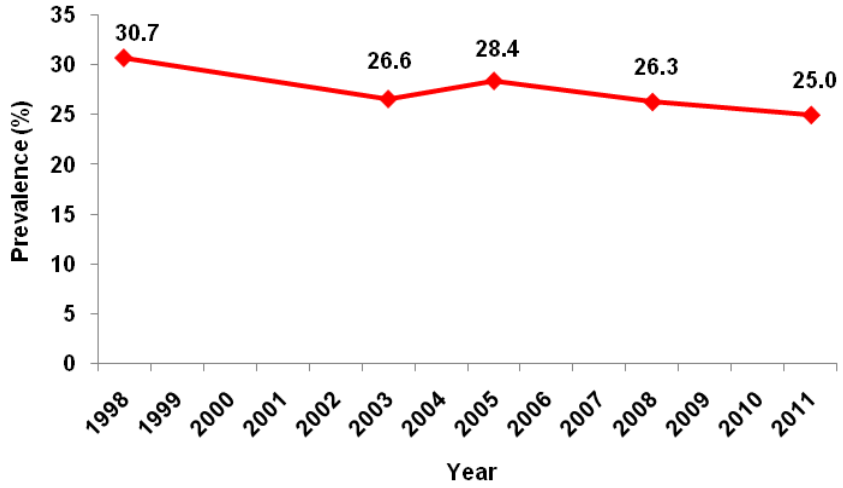
Source: FNRI-DOST

Pregnant, and lactating women

The prevalence of nutritionally-at-risk pregnant women less than 20 years old was higher than that among pregnant women 20 years and older (FNRI, 2012). The prevalence of nutritionally-at-risk (based on weight-for-height) pregnant women decreased from 30.7% in 1998 to 25.0% in 2011 (Figure 9).

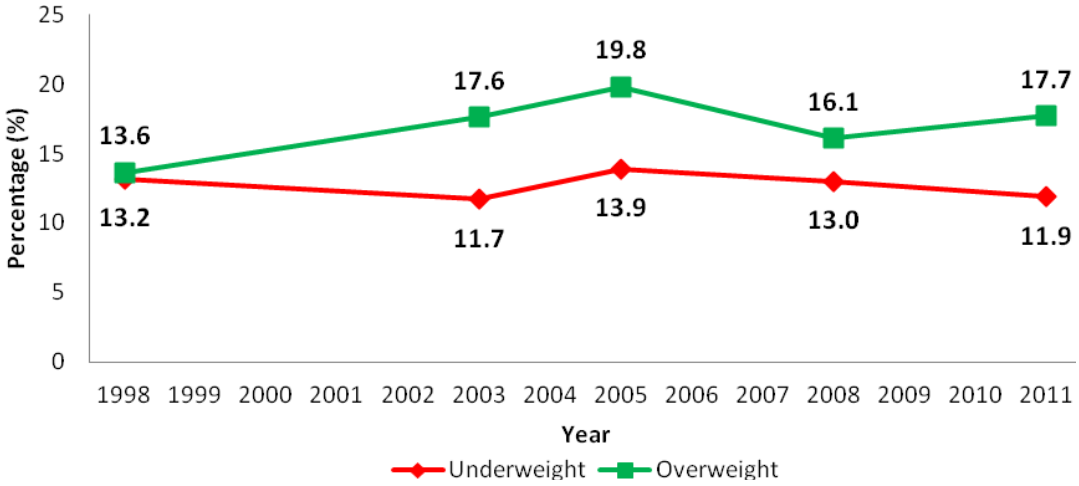
Overweight prevalence is higher among lactating women 20 years and older (18.8%) when compared to lactating women less than 20 years old (6.7%). Furthermore, the prevalence of underweight lactating women decreased from 13.2% in 1998 to 11.9% in 2011; while the prevalence of overweight lactating women has been increasing from 13.6% in 1998 to 17.7% in 2011 (Figure 10).

Figure 9. Trends in the prevalence of nutritionally-at-risk pregnant women



Source: FNRI-DOST

Figure 10. Trends in the prevalence of underweight and overweight lactating women



Source: FNRI-DOST

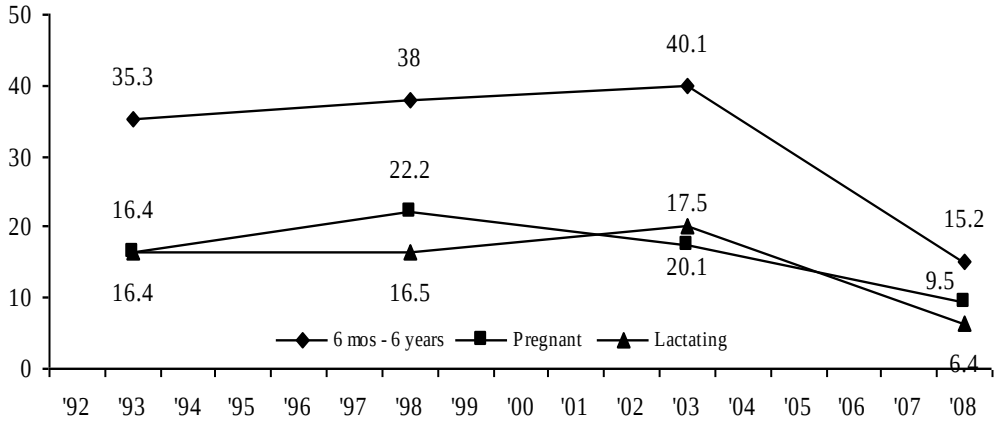
Micronutrient deficiencies

The 2008 National Nutrition Survey also identified vitamin A deficiency (VAD), iodine deficiency disorders (IDD) and anemia as the major micronutrient deficiencies affecting the Philippine population especially young children, and pregnant and lactating women.

Vitamin A deficiency (VAD)

The 2008 national nutrition survey reported gains in the reduction of the prevalence of vitamin A deficiency (VAD) among children 6 months-6 years old, pregnant women as well as lactating women (Figure 11). In terms of severity, the prevalence rate of VAD among pregnant women (9.5%) and lactating women (6.4%) is classified as mild, while the prevalence of VAD among children 6 months – 6 years old is classified as moderate (15.2%).

Figure 11. Trends in the prevalence of VAD among children 6 months – 6 years, pregnant women, and lactating women



Source: FNRI-DOST, 7th NNS 2008

Anemia

Anemia remained to be a significant and severe public health problem among infants (55.7%), pregnant women (42.5%), and one-year old children (41%). Nonetheless, anemia prevalence recorded significant decreases between specific population groups (Table 5).

Table 5. Prevalence of anemia among various age groups in the Philippines, 1998 and 2008

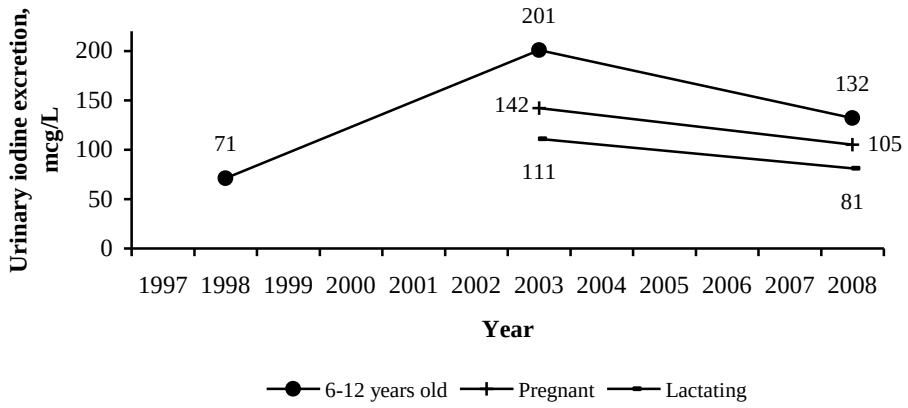
Age/ Physiologic State	Total Subjects		Prevalence (%)		Increase/ (Decrease) 1998 vs. 2008
	1998	2008	1998	2008	
Philippines	36,364	22,412	30.6	19.5	(11.1)**
6 months < 1 y	2,990	205	56.6	55.7	(0.9) NS
1 - 5 y	12,089	2,279	29.6	20.9	(8.7)**
6 - 12 y	1,542	3,869	35.6	19.8	(15.8)**
Pregnant	3,103	1,516	50.7	42.5	(8.2)**
Lactating	3,260	891	45.7	31.6	(14.1)**

Source: FNRI-DOST, 7^{t} NNS 2008
*** Significant at 0.01*
NS Not significant

Iodine Deficiency Disorders (IDD)

The situation for iodine deficiency disorders has improved since 1998 based on median urinary iodine among children 6-12 years old, a marker group for the total population (Figure 12). Furthermore, the percent of those 6-12 years old with UIE less than 50 mcg/L also decreased. However, the situation can be described as shaky as this percentage almost breached the 20% cut-off for a public health problem. Furthermore, the median UIE among pregnant (105 mcg/L) and lactating women (81 ug/L) was below the recommended 150 mcg/L and 100 mcg/L, respectively.

Figure 12. Trends in iodine deficiency disorders



Source: FNRI-DOST, 7^{t} NNS 2008

Infant and Young Child Feeding Practices

Infant and young child feeding practices remain far from optimal as the percent of infants less than 6 months old who were exclusively breastfed was at a low 34% in 2008 (NDHS, 2008). Furthermore, only 58% of infants 6-9 months old received complementary foods with continued breastfeeding. In addition, only 33.5% of infants 6-8 months old were reported to have appropriate feeding practices that include food consumption from 4 of the 7 food groups and the recommended frequency of consumption.

Access and Stability Issues

As shown in the earlier section on food security, there are issues on access to the available food or energy supply as the mean per capita calorie consumption (1,867 kcal) was lower than the available calorie supply (2,580 kcal). Economic access could be considered an issue among about 10% of the population with incomes that are below the food threshold.

Physical access to the available food supply is an issue among communities that are isolated, e.g. communities with no or poor access roads, communities in small islands, among others.

Food Consumption Trends

Results of the 2008 national nutrition survey conducted by the Food and Nutrition Research Institute of the Department of Science and Technology (FNRI-DOST) showed that the typical Filipino diet remains to be rice, fish and vegetables (Annex 6). Majority (70%) of the foods consumed came from plant sources and the remaining 29% came from animal sources.

Consumption of animal foods has been increasing though, although fruit and vegetable consumption continued to be relatively low compared to recommended intakes (Annex 6)

About 1/3 of the households had an energy intake of 100% or more (Table 6). More than 50% of the households met the estimated requirement (80% of the RENI) for protein while less than 20% met the requirement for iron, calcium, and riboflavin. Among the nutrients, niacin had the highest proportion of households with adequate intake due to the high consumption of rice.

Table 6. Proportion of households that meet recommended energy and nutrient intake, Philippines, 2008

Energy and nutrients	Intake (average per capita per day)	% of households that meet the Recommended Energy and Nutrient Intake (RENI)
Energy, kcal*	1,867	33.1
Protein, g**	57.1	56.7
Iron, mg**	9.7	13.5
Calcium, g**	0.42	11.5
Vitamin A (mcg, retinol equivalent) **	451.6	21.5
Thiamin, mg**	0.85	34.5

Energy and nutrients	Intake (average per capita per day)	% of households that meet the Recommended Energy and Nutrient Intake (RENI)
Riboflavin, mg **	0.73	19.7
Niacin, mg**	21.3	89.0
Ascorbic acid, mg**	47.1	30.2

Source: FNRI-DOST, 7th NNS 2008

* 100% of RENI

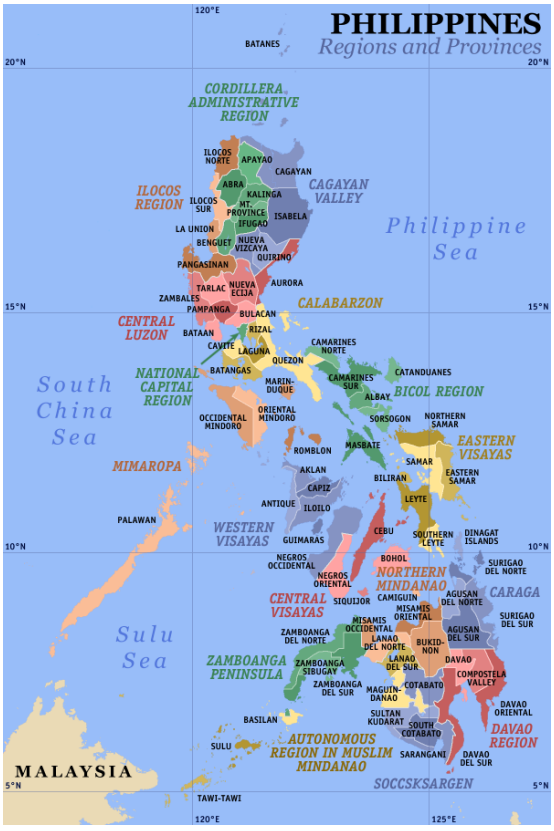
**80% of RENI

The Millennium Development Goal on the eradication of extreme poverty and hunger targets a reduction by 50% of the proportion of population below the minimum level of dietary consumption of energy by 2015 (34.1%) from the 1993 levels (74.2%). However, with the increase in the proportion of households that are energy deficient in 2008 (66.9%), a 5%-point reduction per year is needed from 2008 until 2015 in order to meet this particular goal.

The mean-one day energy intake of the different population groups ranged from 843 to 1,915 kcal. Across population groups, less than 30% attained the recommended energy intake for energy, except for adults with about 35% meeting their RENI for energy. This reveals that about 70% across population groups were energy deficient.

2.2 Regional analysis of malnutrition and food insecurity

A review of data on malnutrition by region (Annex 8) shows that almost all the regions of the country have levels of malnutrition that are considered high based on WHO standards or guidelines.



All regions except for the National Capital Region (main urban center of the country), Central Luzon (a region close to the National Capital Region, northward), Southern Tagalog (also relatively close to the National Capital Region, southward), and Northwestern Luzon or the Ilocos Region, have stunting rates that are considered high (greater than 30%).

Only the Cordillera Administrative Region (a largely mountainous area) has levels of wasting less than 5%. All the other regions have levels of wasting that are higher than 5%.

Adult obesity is lower than the national prevalence for Northeastern Mindanao, CARAGA Region (in Mindanao), Central Luzon, the National Capital Region, and Southern Luzon.

All regions have anemia rates among children 6 months-5 years old and pregnant women that are higher than 10%; while all regions have low median urinary iodine levels for pregnant and lactating women except for the Cagayan Valley (Northeastern Luzon) for both pregnant and lactating women and the National Capital Region and Ilocos Region for lactating women.

Thus, all regions should be targeted for nutrition and related interventions. However, there is a need to further identify priority cities and municipalities within each region.

2.3 Identify major constraints to implement the 1992 National Plan of Action for Nutrition and identify challenges and opportunities for improving food and nutrition security.

Changes in the political leadership present challenges as new political leaders could bring new priorities that could halt or slow down nutrition and related accomplishments already achieved. Furthermore, political considerations, e.g. a current political leader may not wish to pursue nutrition and related initiatives of a non-political ally of a previous administration, could also threaten sustained efforts to address malnutrition. The frequency and severity of disasters, both natural and human-induced, add to the burden of addressing hunger and malnutrition which is already challenging in "normal" conditions.

The considerable increase in sectoral budgets at the national level presents opportunities for leveraging more funds for nutrition and related programs and projects.

At the local level, the presence of young political leaders who are more progressive and developmental in orientation present opportunities for positioning nutrition as an important input for development and for advocating the integration of nutrition in agriculture and other sectoral or development programs. This could also lead to inter-sectoral participation and collaboration from the national down to the sub-national levels.

3. Current nutrition policy framework for addressing nutrition problems in your country

3.1 Describe the existing policy framework for addressing nutrition problems in your country

The Philippine Development Plan 2011-2016 provides overall directions in addressing development challenges in the country in the context of inclusive growth, specifically through:

1. Attainment of high and sustained economic growth that provides productive employment opportunities;

2. Promotion of equal access to development opportunities through better education, primary health care and nutrition and other basic social services, equal access to infrastructure, credit, land, technology, and other productive inputs;

3. Upholding of good governance and strong institutions to encourage competition; and

4. Establishment of effective and responsive social safety nets to assist those who are less capable of participating in economic activities.

At the same time, the PDP 2011-2016 also identifies the goals of the agriculture sector to be *1)* Improved food security and increased incomes; *2)* Increased resilience to climate change, and *3)* Enhanced policy environment and governance. These goals will be pursued within the framework of the Agriculture and Fisheries Modernization Act as described earlier.

Various plans and programs have been formulated to pursue sectoral development targets. The Philippine Plan of Action for Nutrition, a component of the Philippine Development Plan continues to provide the overall policy framework for addressing the nutrition problems in the Philippines. The current plan identifies targets in terms of changes in the nutrition situation as well as the priorities for action to achieve the set targets. Among others, the plan focuses on the first 1,000 days of life to achieve targets on reducing underweight-for-age and stunting among children under five years old. At the same time, the plan includes priorities that address the immediate, intermediate and underlying causes of malnutrition. Other related details on the plan are shown in Annex 7.

In addition, the country has laws that are promotive of good nutrition. These include laws on mandatory salt iodization (Republic Act (RA) 8172), mandatory fortification of staples (rice with iron, flour with iron and vitamin A, sugar and cooking oil with vitamin A - RA 8976), the regulation of the marketing of breastmilk substitutes (Executive Order 58), the promotion of breastfeeding in the workplace and public places through among others, lactation stations and lactation breaks (RA 10028).

The National Objectives of Health integrate health-related concerns of the PPAN 2011-2016, particularly those on promoting infant and young child feeding, micronutrient supplementation, and prevention and control of non-communicable diseases that includes related nutrition interventions.

3.2 Describe food and agriculture programmes and interventions being implemented to improve nutrition. These could include agriculture production programmes, processing, storage, preservation, dietary diversification, or food fortification programmes to improve food and nutrition security. You may also make reference to ecosystems, food biodiversity, land rights, gender, trade issues, fiscal policies including food subsidies/ taxes, input subsidies, tariffs etc.

Food Staples Self-Sufficiency is a key direction for agriculture in the current Administration. It aims to reduce and eventually eliminate rice importation. This will be achieved through interventions that will: improve production (improved irrigation, increased farmer access to high-quality seeds, research and development to improve and promote appropriate technologies, development of upland rice farming systems, extension and farming education, enabling mechanisms to improve production response from farmers), farm mechanization and reduction of post-harvest losses (improve farm mechanization, provision of multi-purpose drying pavement, modified MPDP, and flatbed dryers to eligible farmer associations, and the modernization of rice mills); and manage consumption by maintaining per capita rice

consumption at 120 kg/year (promotion of the consumption of brown rice, reduction of table rice waste, and diversification of staples).

National Organic Agriculture Program is mandated by the Organic Agriculture Act of 2010 (RA 10068) which aims to promote, propagate and further develop the practice of organic farming in the Philippines. The policy is expected to increase farm productivity; reduce environmental degradation and prevent the depletion of natural resources; further protect the health of farmers, consumers and the general public; and help cut expenses on imported farm inputs. The program established by the law will promote organic-farming methods through farmers' and consumers' education, and the extension of assistance to local government units, peoples' organizations, nongovernment organizations (NGOs), and other stakeholders.

Gulayan sa Paaralan is a program of the Department of Agriculture in collaboration with the Department of Education that involves the provision of seeds and garden tools to public elementary schools for vegetable gardens. The produce of these gardens are envisioned to provide food for school supplementary feeding programs.

Infant and Young Child Feeding Strategic Plan for 2011-2016 of the Department of Health that includes targets and activity milestones along promoting breastfeeding in various settings that include the community, health facility, workplace, public place; and complementary feeding.

Promotion of Early Newborn Care that involves building capacities of health professionals in the application of proper care of the newborn. The proper care includes the skin-to-skin contact that has been found to be promotive of breastfeeding.

Promotion of Good Nutrition of the National Nutrition Council involves activities along building capacities of health and nutrition workers at the city/municipal and barangay levels along counseling on breastfeeding and complementary feeding; and promoting the Nutritional Guidelines for Filipinos or the set of recommended dietary actions to ensure good nutrition. Messages are on eating a variety of foods, appropriate infant and young child feeding, achieving desirable weight, increased consumption of vegetables and fruits, consumption of animal foods including those that are high in calcium but not those that are high in fat, use of iodized salt, ensuring food safety, healthy lifestyle through proper diets, no smoking and no alcohol. The promotion of the Nutritional Guidelines for Filipinos uses all available media (radio, tv, print), the social media, and special events.

Micronutrient Supplementation Program of the Department of Health involves the administration of high-dose vitamin A supplements to all children 6 months-5 years old twice a year in April and October; of iron-folic acid supplements to pregnant and lactating women and infants; and of multiple micronutrient powder to young children 6 – 23 months old.

Mandatory Food Fortification Program whose scope includes mandatory food fortification of rice with iron, flour with vitamin A and iron, sugar and cooking oil with vitamin A. The program involves direct fortification done by the private sector primarily the food industry, regulation by the designated government agency, technology development, and promotion, among others.

National Salt Iodization Program that involves iodization of salt by the salt industry, regulation by the Food and Drug Administration, capacity building for appropriate iodization, promotion of the use and consumption of iodized salt, among others.

Supplementary feeding programs that are done as part of the services for day care centers; also done in public elementary schools on a limited scale; and implemented by some local government units using local funds. As a rule, the targeted supplementation level is 1/3 of the requirement for energy and protein daily, five days a week for 90-120 days. Related to supplementary feeding programs is the development of food formulations that can be used in feeding programs as well as the transfer of technology for the developed food products. In some cases, the local government produces its own food supplement, e.g. ground rice, vegetable powder and fish.

Nutrition services in emergencies involve the delivery of various services in areas affected by disasters. Services include the administration of high-dose vitamin A supplements, counseling on infant and young child feeding to protect breastfeeding in evacuation camps or centers among others; and assessment of the nutritional status of affected populations. In some instances, high-energy biscuits are distributed to affected populations. Also in some instances, cases of severe and moderate acute malnutrition participate in a supplementary feeding program that provides ready-to-use therapeutic and supplementary foods. These services are part of a package of services delivered to the affected population, i.e. camp management, health, water sanitation and hygiene, psychosocial care, education, among others.

Cash for work is a program usually done after a disaster through which affected populations participate in community activities, e.g. repair of damaged facilities and infrastructure for which they receive cash at a percentage of the prevailing minimum wage rates

Conditional cash transfer program. The program involves the provision of a cash subsidy to poor families provided they comply with conditionalities related to health and school attendance. In some instances, the conditionality on health includes subjecting young children to growth monitoring.

3.3 Describe the policy and programme implementation mechanisms in your country for improving food and nutrition security.

The National Nutrition Council (NNC) provides the basic structure for nutrition policy formulation and coordination.

By law, the NNC refers to the NNC Governing Board and the NNC Secretariat. The NNC Governing Board is presently chaired by the Department of Health, with the Departments of Agriculture and the Interior and Local Government as vice-chairs. Members include the Departments of Budget and Management, Education, Labor and Employment, Science and Technology, Social Welfare and Development, and Trade and Industry, and the National Economic and Development Authority. The NNC Governing Board includes three private sector representatives appointed by the President for a two-year term. At present, the private sector representatives include the organization of rural women (Rural Improvement Clubs of

the Philippines), an aggrupation of corporate foundations (League of Corporate Foundations), and the Union of Local Authorities of the Philippines, that includes organizations of local government units.

Assisting the NNC Governing Board is the NNC Technical Committee that reviews policy recommendations. The NNC Technical Committee also provides the facility for intra- and inter-agency coordination and collaboration. In several instances, inter-agency technical working groups are organized for more in-depth review of policy and program concerns.

The NNC Secretariat implements the decisions of the NNC Governing Board. It also provides technical secretariat services to the NNC Governing Board, NNC Technical Committee, and NNC-initiated technical working groups. The Secretariat has its own structure separate from the NNC member agencies, and annual budgetary appropriations for its operations.

At the local level, interagency local nutrition committees that mirror national structure, with more members depending on the situation of the local government, have been organized. These local nutrition committees are chaired by the local chief executive (an elective position). The local chief executive also designates a nutrition action officer to attend to the day-to-day operations of coordinating nutrition action. In some instances, the nutrition action officer is full-time. In other instances, the nutrition action officer is designated from among heads of offices, usually the local health officer.

Local government units are primarily in charge of implementing nutrition programs and projects because of the Local Government Code (1991) that devolved the delivery of basic services, including agriculture, health and nutrition, to local government units. The national government provides support along the issuance of relevant policies, capacity building, and limited funding and logistics support, e.g. vitamin A supplements, multiple micronutrient powder, iron-folic acid supplements, weighing scales, height board, among others.

At the community level, there are community-based nutrition volunteers (called barangay nutrition scholars) that link the nutritionally at-risk with service providers at the city/municipal/provincial level.

Non-government organizations (NGOs) also implement nutrition and related programs. The Philippines has a coalition of NGOs working on nutrition and related concerns. NGOs are encouraged to work closely with local nutrition committees to ensure coherence and complementation of actions.

4. Analysis of past and current nutrition actions in the country

4.1 What progress has been made in terms of political commitment since the 1992 International Conference on Nutrition (ICN)?

4.2 What progress has been made in terms of operational capacity since the 1992 ICN?

4.3 Managerial capacities of line ministry staff at the national, provincial and district levels?

4.4 Technical capacities of Ministry staff, agriculture service providers and R&D sector?

Political commitment since the 1992 International Conference of Nutrition has been sustained in general. Considerable additional resources at the national level have been made available for the Promote Good Nutrition Program and for micronutrient supplementation, among others. At the local level, political commitment has been varied but on the whole, there is more support for nutrition and related efforts now than thirty years ago.

Operational capacity at the national level has changed due to key organizational changes.

For instance, the Department of Health no longer has a separate Nutrition Service but nutrition concerns are part of the concerns of the National Center for Disease Prevention and Control. On the upside, this allows for the integration of nutrition concerns in the overall health policies, e.g. policy on Maternal, Newborn, and Child Health and Nutrition. At the same time, DOH involvement in key nutrition strategies has remained about the same.

At the local level, it is assumed that local governments have become more skilled and able to plan, implement, coordinate, monitor and evaluate their local nutrition programs and projects since devolution has been implemented for almost two decades. However, this should be validated further.

Technical capacities for nutrition policy formulation, planning, monitoring and evaluation at the national level continue to be strengthened primarily through experience. An area for strengthening is on evidence-based policy formulation and planning. In this regard, a skill to be developed is on integrating the results of the various evidences and the discernment of the appropriate policy and program responses. Furthermore, nutrition research should be strengthened as an effective source of the evidence that will guide policy and program decisions.

At the sectoral level, a need is to develop and strengthen a nutrition mindset in the various sectors, e.g. a mindset that will consider potential positive and negative nutrition consequences of sectoral (health, agriculture, trade and industry, labor and employment) policies and programs.

4.5 What monitoring and evaluation mechanisms exist for assessing impact on nutrition of food and agriculture related policies, programmes and interventions? For ensuring nutrition objectives are integrated into national development processes? How long have they been in place? What indicators are collected and used?

The national nutrition surveys (NNS) of the Food and Nutrition Research Institute continue to be the main mechanism for assessing the impact of not only food and agriculture related

policies but of overall actions for development. However, there is a need to do more in-depth analysis of data generated by the NNS for a deeper understanding of the dynamics of factors affecting the nutrition situation. This in turn will be helpful in determining appropriate policy and program responses.

Indicators generated are on anthropometry (extent of underweight and overweight among various population groups), biochemical (proportion of the population/population groups with deficiencies in vitamin A, iron, iodine, zinc, B-vitamins, among others), clinical signs of risk factors for non-communicable diseases (hypertension, diabetes, and others), dietary (food and nutrient consumption). The surveys also generate information on the socio-economic profile and participation in government programs of the survey sample households.

Other related mechanisms are the Family Income and Expenditure Surveys through which levels of food poverty and poverty are generated.

4.6 Consideration of sustainability issues (.g. environmental degradation, food biodiversity loss, intensification of production and monoculture agriculture)

Sustainable development is an expressed concern in the Philippine Development Plan. Thus, sectoral policies have been adopted to ensure that the land and water resources for producing food are protected and continue to be sources of food for the population of today and tomorrow.

4.7 To what extent are nutrition objectives integrated into and agriculture programmes or projects?

The integration of nutrition objectives in agriculture programmes and projects is not explicit. Instead, agriculture objectives contribute to factors that could affect nutrition. For instance, agriculture programs aim to increase productivity to ensure the availability of affordable food for the population. Agriculture programs also aim to increase incomes of marginalized farmers and fisherfolk whose families usually have malnourished children as well.

4.8 Targeting: Who is currently being targeted for nutrition action in the country? Who has been targeted in the past? Are nutrition actions currently reaching the intended target population groups throughout the country? How do current coverage rates compare to the past?

Nutrition action interventions are now focused on infants and young children 0-24 months old, pregnant and lactating mothers. Related interventions in this regard are iron-folic acid supplementation and nutrition education and counseling as part of antenatal care services; counseling of mothers on infant and young child feeding, vitamin A supplementation, and use of multiple micronutrient powders. However, families with infants, young children, pregnant women, malnourished children are also expressed targets for related interventions, e.g. home, school and community food production, nutrition education, livelihood assistance, among others.

5. Developing a strategy for improving nutrition

5.1 Given the current food and nutrition situation, what is required to scale up and accelerate action within the food and agriculture sector and across sectors to improve nutrition?

Actions as indicated in the Philippine Plan of Action for Nutrition (which are also consistent with those identified by global experts to be effective in addressing nutrition problems) should continue to be pursued. However, in addition, specific actions could be pursued as follows.

1. The system for peer counseling in infant and young child feeding should be strengthened through a strong mentoring supervision scheme.

2. There is a need to develop strategies and models to improve complementary feeding practices considering the differing nuances of an urban and rural setting. This can build on past experiences, including the use of recipe trials that is based on the trials for improved practices approach.

3. Home and community food production should also be strengthened, again building on past models already developed. An overall campaign could be on enjoining all Filipino households to have their own kitchen gardens, and to the extent possible, to add small animals like chicken in these gardens. A key concern would be on addressing issues on limited space for kitchen gardens especially in urban areas. Sustainability should also be a concern especially if program design requires the distribution of seeds and seedlings. This could be achieved with agreements on passing forward seeds for next-level beneficiaries.

4. Nutrition education should also be adopted as an integral component of all agriculture, health, social welfare (among others) programs. For instance, trainings for farmers on production technologies should have a module on nutrition, its importance to development, and the key role of the agriculture sector in helping ensure good nutrition in the community.

5. Nutrition indicators, particularly prevalence of underweight children, could be used as a main-stay indicator in decisions on areas to be covered by agriculture programs. For instance, priorities for farm-to-market roads could be based on various indicators that should include the prevalence of underweight children. Priorities for constructing or rehabilitating irrigation systems should also include this indicator. A similar scheme could be used for other sectoral programs, e.g. generation of decent and quality/permanent jobs.

6. There should be a purposive research agenda that will continually analyze the evolving nutrition situation to understand its evolution and causality; evaluate nutrition and related interventions to assess effectiveness and determine adjustments to be done to ensure effectiveness.

7. The nutrition information system should also have mechanisms to assess the contribution of sectors to the evolving nutrition situation, among others. There should also be a scheme for detecting an impending worsening in both the hunger situation and malnutrition so that appropriate preventive measures could be undertaken. Along this concern, initiatives developed by NNC that are related to the Integrated Phase Classification for Food Security, the Food Insecurity and Vulnerability Information Mapping Systems, and the Nutrition Early Warning System could be built upon.

8. Finally, there should be purposive efforts to continually inform key policy makers on the evolving nutrition situation, status and results of food and nutrition programs and projects, among others. The intention is to put nutrition in the consciousness of key policy makers and the public as well.

5.2 Within food and agriculture, what can be done at policy, programme, operational or financial levels to improve food and nutrition security?

The policies and programs of agriculture, specifically those that relate to irrigation; access to high-quality seeds; credit; extension services; roads and transport system; post-harvest facilities; access to markets, and research and development linked with policies, programs and extension services are in place in the country. What is needed is adequate funding to ensure that food and agriculture programs go to the scale needed and actually reach and benefit the marginalized farmers and fisherfolk.

5.3 Who needs to be involved in scaling up action in nutrition? What is the role of other sectors e.g. social protection, education and employment?

Various sectors should continue to be involved in scaling up nutrition action as follows:

1. Health – strengthen the nutrition component of prenatal care; ensuring that health facilities are promotive of breastfeeding, complementary feeding, and of good nutrition including concerns related to personal hygiene especially hand washing, ensuring that health personnel at all levels ably support mothers to adopt optimum infant and young child feeding practices, ensuring that other health-related nutrition services, including those on improving access to safe drinking water supply and sanitary toilet facilities, are delivered appropriately.

2. Agriculture – ensuring the availability of food supply to provide for the calorie and nutrient needs of the population through appropriate production and distribution strategies; ensuring that small farmers and fisherfolk are primarily benefited by agricultural programs (e.g. credit, agriculture subsidies, seeds, extension and others).

3. Social protection – complementary safety nets for the nutritionally at risk and affected and their families.

4. Education – effective integration of nutrition messages in the curriculum of the primary, secondary and tertiary education.

5. Employment – Environment that will help generate decent and permanent jobs.

6. Local governments should continue to be engaged actively in developing, implementing and financing their own nutrition programs according to their unique situations.

7. NGOs including international NGOs should likewise continue to be mobilized to participate in efforts for nutrition improvement but in close coordination with the government at national and local levels.

8. Academic institutions at the tertiary level should likewise be involved in generating and integrating evidence that can help in decision on appropriate policies and programs.

9. UN bodies, bilateral and multilateral organizations and other development partners should continue to provide technical and funding support to the country, especially along the identification of appropriate strategies that will improve food security and nutrition.

5.4 What kind of capacity-strengthening support is most urgently needed, in which sectors, and at what levels of government?

Capacity strengthening support on formulating nutrition-friendly policies in various sectors is needed at the national level. Priority sectors to target could include agriculture, social welfare, and labor and employment.

Strengthening technical and organizational competencies for nutrition management in time of disasters, as well as preparedness to cope with natural and man-made disasters, and behavior change communication at the city/ municipal and barangay levels is also needed. This should also go along with effective monitoring, networking, resource generation, and program management for those at the provincial and regional levels.

Definitions

Arable land: land that can be used for growing crops (FAO).

Barangay: The smallest political unit into which cities and municipalities in the Philippines are divided. It is the basic unit of the Philippine political system.

City: There are three classes of cities in the Philippines: the highly urbanized, the independent component cities which are independent of the province, and the component cities which are part of the provinces where they are located and subject to their administrative supervision.

Double Burden of Malnutrition: refers to the dual burden of under- and over-nutrition occurring simultaneously within a population

Food Security: exists when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.

Food Threshold: minimum income/expenditure required for a family/individual to meet the basic food needs, which satisfies the nutritional requirements for economically necessary and socially desirable physical activities.

Gross Domestic Product: refers to the value of all goods and services produced domestically; the sum of gross value added of all resident institutional units engaged in production (plus any taxes, and minus any subsidies, on products not included in the values of their outputs.

Gross National Product/Income: measures the market value of all products and services produced during a certain period of time by labor and property supplied by the residents of a country.

Human Development Index: A tool developed by the United Nations to measure and rank countries' levels of social and economic development based on four criteria: Life expectancy at birth, mean years of schooling, expected years of schooling and gross national income per capita.

ICN: an inclusive inter-governmental meeting on nutrition jointly organized by the Food and Agriculture Organization (FAO) of the United Nations and the World Health Organization (WHO).

Land Degradation: a decrease in land quality caused by human activities.

Marginality: a condition of poor access to political and policy decision-making and to natural and other livelihood resources.

Millennium Development Goals: are the eight international development goals that were officially established during the Millennium Summit of the United Nations in 2000 with the adoption of the United Nations Millennium Declaration.

Moderate Hunger (per SWS survey): referring to those who experienced hunger "Only Once" or "A Few Times" in the last three months

Municipality: Is a political corporate body which is endowed with the facilities of a municipal corporation, exercised by and through the municipal government in conformity with law.

National Nutrition Council: the country's highest policy-making and coordinating body on nutrition.

NNC Governing Board: the policy-making body of the NNC.

NNC Technical Committee: composed of heads of major department bureaus and agencies involved in nutrition and appropriate NGOs. It provides technical assistance to the Board and NNC Secretariat, and facilitates inter- and intra-agency coordination, supervision and monitoring, and implementation of nutrition policies and programs.

NNC Secretariat: serves as the executive arm of the NNC Governing Board.

Nutrition Transition: refers to changes in the composition of the diet, usually accompanied by changes in physical activity levels.

Pacific Ring of Fire: an area where a large number of earthquakes and volcanic eruptions occur in the basin of the Pacific Ocean.

Province: The largest unit in the political structure of the Philippines. It consists, in varying numbers, of municipalities and, in some cases, of component cities.

Region: A sub-national administrative unit comprising of several provinces having more or less homogenous characteristics, such as ethnic origin of inhabitants, dialect spoken, agricultural produce, etc.

Severe Hunger (per SWS survey): referring to those who experienced hunger "Often" or "Always" in the last three months.

Subsistence Poor: families or individual with per capita income/ expenditure less than the per capita food threshold.

Underemployed: are persons who work less than 40 hours during the reference period and expressed the desire for an additional work (NSO, 2010).

Underemployment Rate: the proportion of underemployed persons to the total population 15 years old and up.

Urbanization: proportion of population living in areas classified as urban

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Annexes

Annex 1. Results of surveys on self-rated hunger conducted by the Social Weather Stations by Quarter, Philippines, 1998-2013

Year	Hunger incidence[1] in percent of households by quarter			
	Jan-Mar	*Apr-June*	*July-Sept*	*Oct-Dec*
1998		8.9	9.7	14.5
1999	7.7	8.1	8.5	11
2000	10.5	11.2	8.8	12.7
2001	16.1	9.8	9.3	10.4
2002	11.1	11.5	9.8	9.0
2003	6.7	6.6	5.1	9.4
2004	7.4	13.0	15.1	11.5
2005	13.0	12.0	15.5	16.7
2006	16.9	13.9	16.9	19.0
2007	19.0	14.7	21.5	16.2
2008	15.7	16.3	18.4	23.7
2009	15.5	20.3	17.5	23.4
2010	21.2	21.1	15.9	18.1
2011	20.5	15.1	21.5	22.5
2012	23.8	18.4	21.0	16.3
2013	19.2	22.7		
Mean annual percent increase or decrease[2]	-0.7	0.6	0.9	1.1

Source: Social Weather Stations

[1] Determined from responses to the question, "In the past three months, did you or any members of your family experience hunger because you did not have food to eat? If yes, how often? Once? Often? Always? "Once" responses are considered as moderate hunger and "often" and "always" responses as severe hunger.

[2] A positive sign indicates an increase while a negative sign a decrease

Annex 2. Median age of ASEAN member states in years 1960, 1970, 1980, 1990, 1995, 2000, 2005, 2010, 2030 and 2050

Year	Philippines	Thailand	Viet Nam	Malaysia	Indonesia	Singapore	Cambodia	Myanmar	Lao PDR
1960	17	18	22	18	20	19	19	21	19
1970	17	18	18	17	19	20	18	19	19
1980	18	20	18	20	19	24	18	20	18
1990	19	25	20	21	22	29	18	21	18
1995	20	27	21	22	23	32	17	23	18
2000	21	30	23	24	25	35	18	25	18
2005	22	31	26	25	26	38	20	26	19
2010	23	33	29	26	28	41	22	28	21
2030	29	39	37	33	35	48	29	35	27
2050	35	41	42	38	41	54	35	40	33

Source: United Nations

Annex 3. Total fertility rates of ASEAN member states and Japan 1960, 1970, 1980, 1990, 2000, 2010 (in %)

Year	1960	1970	1980	1990	2000	2010
Cambodia	6.3	5.9	5.9	5.7	3.8	2.6
Indonesia	5.7	5.5	4.4	3.1	2.5	2.1
Japan	2.0	2.1	1.8	1.6	1.3	1.4
Laos	6.0	6.0	6.3	6.2	4.2	2.8
Malaysia	6.3	4.9	3.8	3.5	3.1	2.6
Myanmar	6.1	6.1	4.6	3.5	2.4	2.0
Philippines	7.2	6.3	5.1	4.3	3.8	3.1
Singapore	5.5	3.0	1.8	1.8	1.6	1.3
Thailand	6.2	5.6	3.4	2.1	1.7	1.6
Vietnam	7.1	7.4	5.4	3.6	2.0	1.8

Source: United Nations

Annex 4. Ten leading causes of mortality, Philippines 2004 – 2009, number and rate per 100,000 population, 2009

CAUSES	5-Year Average (2004-2008)		2009*		5-Year Average (1990-1994)		1995	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Diseases of the Heart	82,290	94.5	100,908	109.4	48,113	73.7	50,252	73.2
Diseases of the Vascular System	55,999	64.3	65,489	71.0	35,735	54.7	38,592	56.2
Malignant Neoplasms	43,185	49.6	47,732	51.8	24,404	37.4	28,487	41.5
Pneumonia	35,756	41.1	42,642	46.2	36,746	56.3	33,637	49.0
Accidents**	34,704	39.9	35,990	39.0	10,895	16.7	15,786	23.0
Tuberculosis, all forms	25,376	29.2	25,470	27.6	24,470	37.5	27,053	39.4
Chronic lower respiratory diseases	20,830	24.0	22,755	24.7	10,650	16.3	11,309	16.5
Diabetes Mellitus	19,805	22.7	22,345	24.2	6,105	9.3	6,724	9.8
Nephritis, nephrotic syndrome and nephrosis	11,612	13.4	13,799	15.0	5,400	8.3	6,600	9.6
Other diseases of the respiratory system					7,435	11.4	6,747	9.8
Certain conditions originating in the perinatal period	12,590	14.5	11,514	12.5				

Note: Excludes ill-defined and unknown causes of mortality
* reference year
** External causes of mortality

Source: Department of Health

Annex 5. Ten leading causes of morbidity, rate per 100,000 population

Diseases	5-Year Average (2004-2008)	2009*	Diseases	5-Year Average (1990-1994)	1999
1. Acute respiratory infection **	-	1203.0	1. Bronchitis	1436.9	1618.3
2. Acute lower respiratory tract infection and pneumonia	840.00	612.6	2. Diarrheal diseases	1763.2	1384.5
3. Bronchitis/Bronchiolitis	694.40	380.7	3. Influenza	908.7	1181.8
4. Hypertension	486.00	366.3	4. Pneumonias	610.4	1048.1
5. Acute watery diarrhea	652.50	354.5	5. Accidents	216.0	269.7
6. Influenza	441.20	297.7	6. Diseases of the heart	149.4	208.0
7. Urinary tract infection	-	91.0	7. Tuberculosis, all forms	227.9	189.5
8. TB respiratory	135.40	80.9	8. Malaria	84.8	88.5
9. Injuries **	-	38.9	9. Chicken pox	87.7	80.2
10. Acute febrile illness ***	18.40	22.2	10. Malignant neoplasms	87.7	80.2

* Reference year

** ARI was included in the list of notifiable diseases in 2008 only while UTI and injury are new in the list

*** Acute febrile illness was included in the list of notifiable diseases in 2008 only, 3-year average only

Source: Department of Health

Annex 6. Trends in food consumption, Philippines

Food Group/ Sub-group	1993		2003		2008	
	g/ day	% of total	g/ day	% of total	g/ day	% of total
Cereals and Cereal Products	**340**	**42.3**	**364**	**41.1**	**361**	**41.9**
Rice and Products	282	35.1	303	34.2	317	36.8
Corn and Products	36	4.5	31	3.5	21	2.4
Other Cereals and Products	22	2.7	30	3.4	23	2.7
Starchy Roots and Tubers	**17**	**2.1**	**19**	**2.2**	**17**	**2**
Sugars and Syrups	**19**	**2.4**	**24**	**2.7**	**17**	**2**
Fats and Oils	**12**	**1.5**	**18**	**2**	**15**	**1.7**
Fish, Meat, and Poultry	**147**	**18.3**	**185**	**20.9**	**193**	**22.4**
Fish and Products	99	12.3	104	11.7	110	12.8
Meat and Products	34	4.2	61	6.9	58	6.7
arPoultry	14	1.7	20	2.3	25	2.9
Eggs	**12**	**1.5**	**13**	**1.5**	**14**	**1.6**
Milk and Milk Products	**44**	**5.5**	**49**	**5.6**	**42**	**4.9**
Whole Milk	35	4.4	35	4	32	3.7
Milk Products	9	1.1	14	1.6	10	1.2
Dried Beans, Nuts, and Seeds	**10**	**1.2**	**10**	**1.1**	**9**	**1**
Vegetables	**106**	**13.2**	**111**	**12.5**	**110**	**12.8**
Green Leafy and Yellow Vegetables	30	3.7	31	3.5	34	3.9
Other Vegetables	76	9.5	80	9	76	8.8
Fruits	**77**	**9.6**	**54**	**6.1**	**54**	**6.3**
Vitamin C-rich fruits	21	2.6	12	1.4	10	1.2
Other fruits	56	7	42	4.7	44	5.1
Miscellaneous	**19**	**2.5**	**39**	**4.4**	**29**	**3.4**
Beverage	9	1.1	26	2.9	16	1.9
Condiments and Spices	11	1.4	13	1.5	10	1.2
Others					3	0.3
All Foods	**803**		**886**	**100**	**861**	**100**

Source: Food and Nutrition Research Institute

Annex 7. Priorities for action of the Philippine Plan of Action for Nutrition 2011-2016

To reduce levels of underweight-for-age and stunting. Promotion of optimum infant and young child feeding practices in various settings

To reduce wasting. Adoption and implementation of appropriate guidelines for the community-based management of acute malnutrition

To reduce the prevalence of nutritionally-at-risk pregnant women. Integration and strengthening of nutrition services (nutrition counseling, iron-folic acid supplementation, food supplementation) in ante-natal care services

To reduce undernutrition among school-age children. Delivery of an integrated package of nutrition services in the school and alternative school system

To reduce vitamin A deficiency, anemia, and iodine deficiency disorders. Micronutrient supplementation, food fortification, dietary diversification

To reduce the percent of households with inadequate calorie intake. Increase food supply at the community level and physical and economic access to the available food supply

To prevent an increase in overweight and obesity. Promote a healthy lifestyle (healthy eating and increased physical activity)

Cross-cutting strategies

- Prevention and management of infections
- Promotion of desirable nutrition and lifestyle behaviors
- Monitoring weight and height of preschool and school-age children
- Manage population size, growth, and distribution, including appropriate birth spacing
- Coordination and integration of efforts for addressing hunger and malnutrition
- Nutrition in overall development and sectoral policies, plans, programs, and projects
- Capacity building for nutrition program management
- Deployment, training, continuing education, and mentoring supervision of nutrition volunteer workers called Barangay Nutrition Scholars
- Adoption of key policies at national and local levels
- Research for informed decision-making

Annex 8. Regions with high levels of malnutrition (shaded cell) based on various indicators, Philippines

Region	Under-five children			Anemia in %		Median UIE		% Obesity among Adults
	% Underweight-for-age	% Stunting	% Wasting	6 mos.- 5 y	Pregnant	Pregnant	Lactating	
1	19.8	29.0	9.9	29.4	33.3	82	112	5.1
2	23.2	32.1	10.5	39.3	60.0	157	161	4.1
CAR	11.9	34.3	4.7	12.4	22.6	107	99	5.0
3	15.8	22.3	7.0	21.4	**40.7**	143	94	6.6
NCR	14.7	26.8	6.6	23.7	**48.0**	135	128	9.0
4-A	14.8	27.4	6.5	22.9	37.8	111	97	6.7
4-B	24.9	37.2	10.5	25.4	**49.6**	75	67	3.4
5	25.3	36.8	8.4	24.9	**51.1**	125	97	4.3
6	23.9	41.0	5.8	29.1	**61.5**	111	74	4.1
7	21.6	38.6	5.3	20.4	**40.4**	82	63	6.1
8	25.7	41.7	7.8	16.1	39.5	83	58	5.9
9	25.2	42.2	7.1	20.5	34.1	68	48	4.6
10	21.9	37.2	7.3	16.0	35.7	38	55	6.4
11	20.2	35.2	7.2	15.4	22.6	62	50	6.1
12	25.1	42.6	7.1	34.8	**49.8**	105	72	5.8
CARAGA	23.0	37.3	6.6	29.0	34.3	94	49	6.5
ARMM	26.2	43.5	10.0	22.7	**47.3**	85	88	3.7

[1] Regions with high level of underweight-for-age are those with prevalence rates of 20% or higher

[2] Regions with high level of stunting are those with prevalence rates of 30% or higher

[3] Regions with high level of wasting are those with prevalence rates greater than 5%

[4] Regions with high prevalence rate of anemia are those with anemia prevalence of 10% or more.

[5] Regions with high prevalence of IDD are those with UIE less than 150 mcg/ L for pregnant women and 100 mcg/ L for lactating women

[6] Regions with high level of obesity are those with prevalence rates higher than the national level prevalence for adults 20 years old and above (6.1%)