

INTER-AGENCY REGIONAL ANALYSTS NETWORK

AN ACF AND IRIS INITIATIVE

SOCIO-ECONOMY OF CHRONIC MALNUTRITION IN THE PHILIPPINES: A preliminary key trends analysis by 2030

March 2016

Asia Report





Key Points

1. Challenging the theoretical model, the Philippine steady economic growth does not translate into significant achievements in poverty and stunting reduction in the country.
2. Health and nutrition national policies, in line with international best practices, have not yet managed to accelerate the annual rate of stunting reduction.
3. The analysis of the macro underlying determinants of stunting shows that the phenomenon is unlikely to decline by 2030, especially among the most economically vulnerable populations.

EXECUTIVE SUMMARY

The Philippines, a lower-middle income country, is among the fastest-growing economies in Southeast Asia. However, sustained economic development has not manifested in a significant reduction of high stunting prevalence: 33.4% of children under-5 years old nationwide in 2015¹. Failure to achieve optimum foetal and child growth and development is attributed to the interplay of several proximal factors (dietary, behavioural, and health determinants). Poverty has also long been associated with the various forms of malnutrition. This report contextualizes the underlying determinants of stunting to delineate the background picture of the complex socio-economy in which the phenomenon is embedded. As a result, attention is drawn on a number of increasing challenges (growing urban informal settlements, earlier pregnancies, increasing female participation to the labour force, changes in diet diversity, and insufficient public investment in education) that are likely to play a key role in perpetuating the cycle of stunting in the Philippines.

¹ National Nutrition Summit (2016), Food and Nutrition Research Institute (FNRI)

INTRODUCTION

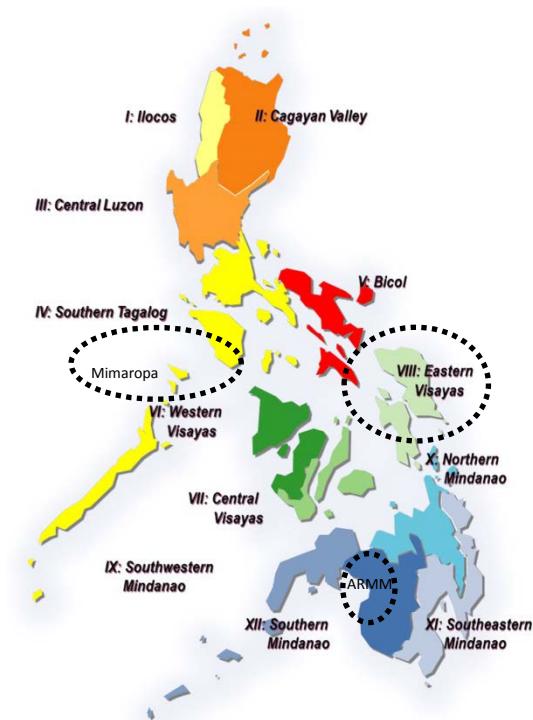
Stunting indicates a failure to achieve one's innate potential for height. It usually reflects the persistent, cumulative effects of poor nutrition that often span across generations. It is caused by a failure to receive adequate food intake (in quantity, regularity, and quality) and is also affected by recurrent and chronic illness. Inadequate nutrient intake during the first two years of life not only affects growth, but also negatively impacts brain development and the immune system. The 'stunting syndrome'² is therefore associated with reduced physical, neurodevelopmental and economic capacity and an elevated risk of metabolic disease into adulthood. It creates an intergenerational cycle of poverty and reduced human capital that is difficult to break.

In the Philippines, which ranks 9th among countries with the highest number of stunted children,³ [there is modest progress on stunting](#). Government-led nutrition initiatives do not meet expected results and the situation is being given greater attention. This report has been requested to provide an overview of the socio-economy of chronic malnutrition in the country with a foresight perspective by 2030. The analysis is meant to support ACF International country office strategic decision-making, and strengthen its positioning as a lead actor in the field of nutrition.

² Prendergast, A. J., & Humphrey, J. H. (2014). The stunting syndrome in developing countries. *Paediatrics and International Child Health*, 34(4), 250–265

³ Save the Children (2015). Sizing Up. The Stunting and Child Malnutrition Problem in the Philippines

STUNTING IN THE PHILIPPINES: A NATIONAL SNAPSHOT PUT IN A REGIONAL PERSPECTIVE



Key National Figures⁴

- Stunting has gone up from 30.3% in 2013 to 33.4% in 2015 ($p < 0.05$), showing no substantial progress since the early 2000's.
- In 2015, stunting rates overall remain high, especially in rural areas (38.1%) and in the lowest (poorest) quintile (49.2%).
- In 2015, the 3 regions with the highest prevalence of stunting are ARMM (Autonomous Region in Muslim Mindanao), Eastern Visayas and Mimaropa.
- The country is far from the 3.9% AARR target.⁵
- The Philippines has a strong system of government-led responses, including a wide range of nutrition-focused interventions. Policies, such as the Philippine Plan of Action for Nutrition (PPAN 2011 2016) are in line with best international practices. In particular, the country adopted the first '1,000 days' approach⁶, which focuses on pregnant and lactating women (PLW)'s health, care and feeding practices.

The Philippines has experienced steady economic growth in the last few decades (as reflected in a consistently growing GDP per capita) which raised the classification of the country to the lower-middle income category in 2009. Its economy withstood the global financial crisis much better than other countries in the region. Furthermore, in 2015 the Philippines ranked second - globally - as home to the world's most confident consumers,⁷ one of the top 10 indicators of economic development.

Macro theories have established a strong relationship between economic and social development, and the last half century tells a largely positive story about how economic development (observed in terms of rising incomes as well as increases in consumption, savings and investments) can drive social progress. Social progress in that context includes longer life expectancy, better access to education, poverty reduction, and decrease of malnutrition prevalence. The principle that higher incomes automatically improve the access to food and positively impact on the health status is constitutive of that conceptual model.

⁴ National Nutrition Summit (2016), FNRI

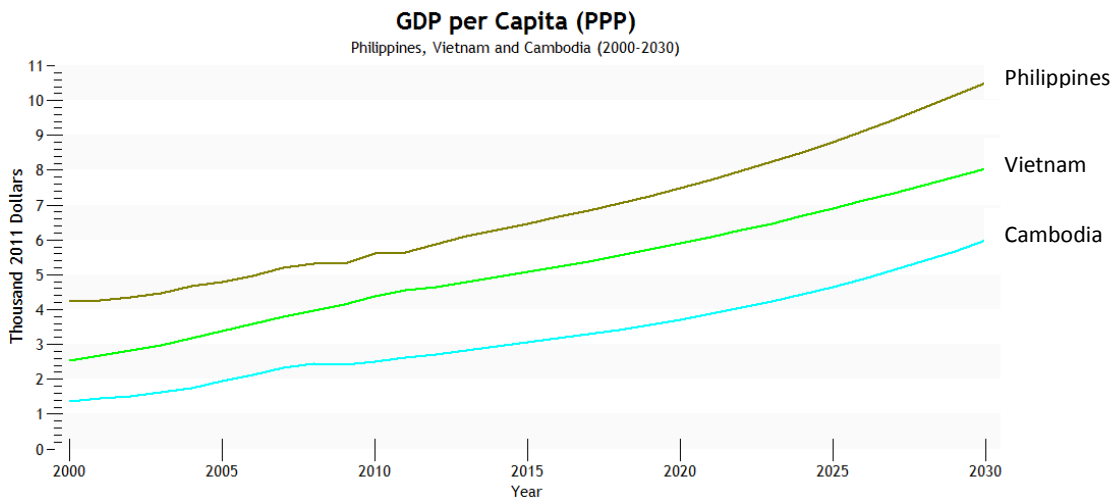
⁵ Average Annual Rate of Reduction (AARR) – The World Health Assembly (WHA) target was set at 3.9% by 2025.

⁶ The crucial development period from conception to the child's 2nd birthday

⁷ Nielsen Survey (2015). N.B. Results in this index can vary significantly from one source to another.

Lagging figures of stunting reduction in the Philippines challenge the standard theoretical model. The question is thus: why economic development does not manifest in the country in better achievements in reducing chronic malnutrition?

The question is all the more pertinent when the situation in the Philippines is viewed in comparison to other countries in the region. Vietnam is also a lower-middle income country, while Cambodia is ranked among low income economies. The three countries present parallel trends in terms of growth of GDP per capita (based on purchasing power parity), with the Philippines showing the highest performances.

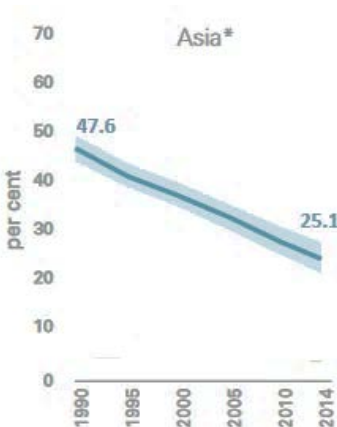


Source: IFs, Pardee Center Denver University – Graph created on March 29, 2016

Yet, the latest figures of national stunting rate show a relatively better situation in both Vietnam and Cambodia, unlike one could expect based on their respective economic wealth:

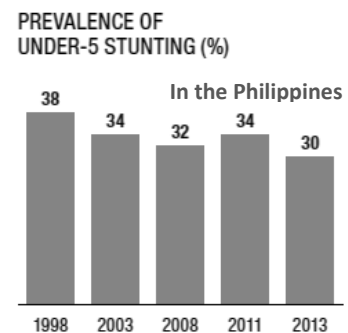
	Philippines	Vietnam	Cambodia
Under-5 stunting rate	33.4 % (in 2015)	23.0 % (in 2011)	32.9 % (in 2014)

It is noteworthy that progress in reducing stunting in the Philippines has been particularly slow.



Asia as a whole has cut stunting by almost 50% since 1990. Eastern Asia has even achieved much higher results (-80%).

However, the Philippines displayed irregular and small improvement over time in stunting reduction.



* (Excluding Japan)

Source: UNICEF/WHO/WB 2014.

Source: UNICEF/WHO/WB Joint child malnutrition estimates, 2014

It is estimated that 1 percent loss in adult height due to stunting leads to 1.4 percent loss in economic productivity. Reducing the stunting prevalence in the country is therefore not only urgent to tackle the problem itself, but also to ensure that economic growth remains high and can, ultimately, be converted into social progress.

The performance of the Philippines in improving other human development indicators underlines the potential specificity of the problem of stunting in the country:

*“Between 1980 and 2012, Philippines’ life expectancy at birth increased by 5.8 years, mean years of schooling increased by 2.8 years and expected years of schooling increased by 1.3 years. Similarly, the Philippines’ GNI per capita increased by about 35 percent from 2,786 in 1980 to 3,752 in 2012, thus signifying a relatively strong capacity for leveraging its incomes for human development outcomes”.*⁸

⁸ UNDP website “About the Philippines”

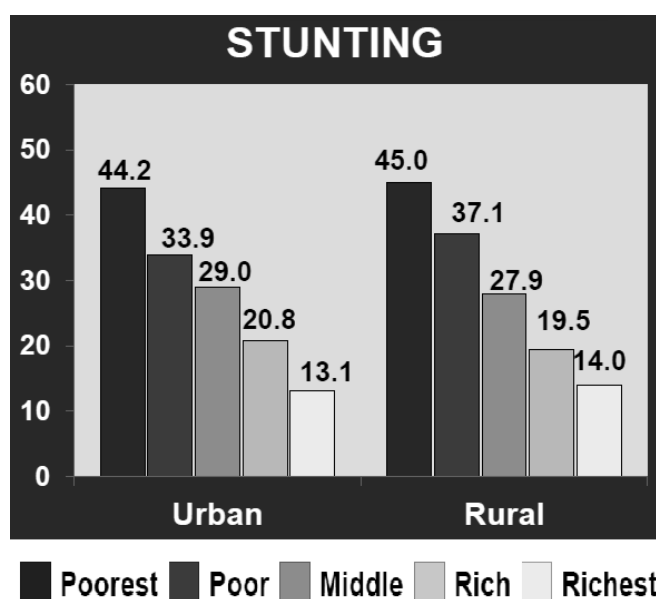
CONTEXTUALIZING THE UNDERLYING DETERMINANTS OF STUNTING IN THE PHILIPPINES

Given the developmental success in other areas, it is necessary to focus on the specific underlying determinants of chronic malnutrition, while analysing how far economic growth has more broadly contributed to poverty reduction, which is strongly associated with stunting rates.

There are six widely recognized underlying determinants of chronic malnutrition.

- | | | |
|----------------------------------|--|---|
| 1. Access to safe water | • 92% of the population has access to improved drinking water (2012) | ↗ |
| 2. Access to improved sanitation | • 90% of the population has access to improved sanitation (2012) | ↗ |

Sanitation and hygiene directly impact the incidence of stunting. National indicators show consistent improvement over time in both urban and rural environments (Annex 1). However, the situation is far from being homogeneous, especially in urban areas. The Philippines is one of the most rapidly urbanizing countries in Asia, with half its population living in urban centres in 2015. This trend has been driven since the 1950s by Metro Manila, where one in five Filipino lives (22 million inhabitants) and which ranks among the largest cities in the world. The agglomeration contributes most to the country's economy, largely benefitting from considerable rural-urban migration. This population influx also results in one of the largest slum populations in the world (over 4 million people, including 1.7 million children).⁹ Most informal settler families live in chronic urban poverty, confronted by physical, economic, social, legal and environmental risks on a day-to-day basis. They have limited or no access to security of tenure, capital, social networks, environmental safety and legal security. *Rapid urbanization, which is forecasted to steadily continue by 2030, is therefore intertwined with deepening urban poverty.*



In 2013, under-5 stunting prevalence among the lowest quintile of the population was as high in urban (44.2%) and rural (45%) areas. Considering the huge disparity of access to infrastructure, basic services, and economic opportunities between urban formal and informal settlements,¹⁰ poverty is likely to remain a key driver of stunting in particular among urban informal settlers.

A factor for stunting is the child's low birth weight (LBW). For babies carried to term, LBW usually results from poor health and nutritional status of mothers before and during pregnancy. Among measured cases in 2013,

Source: 8th National Nutrition Survey, FNRI (2014)

⁹ The number of informal settlement families is also estimated at about 1.5 million or about 15% of the Philippines' total urban population. Cf. ICF International (2014). National Informal Settlements Upgrading Strategy

¹⁰ For which there is no specific data on stunting

the share of LBW is also almost equal in urban and rural settings (21.1% and 21.8%).¹¹

LBW, when resulting in U-5 stunting or low height-for-age, can be seen as a proxy for the impact of poverty on vulnerable households, and highlights the cyclic dimension of chronic malnutrition. As the absolute number of families in poverty in the urban areas of the Philippines is forecasted to increase by 2030, together with the share of urban overall poverty and malnutrition, [the locus of poverty will continue to move to the cities](#), a process which has already been recognized as the ‘urbanization of poverty’.¹²

Despite the fact that the Filipino government intends to improve the situation of informal settlers in the country over the next 10 years, the path of improvement will hardly meet the speed of the migration flux themselves¹³. For instance, secure tenure is at the very centre of slum upgrading, and has been found a secondary underlying problem in close link with poverty that also affects rural areas in the Philippines¹⁴. A precondition to the provision of basic services, the regularization process is nevertheless long and uncertain.

Paradoxically, an improved access to health facilities appears to generate another secondary factor for slow progress in stunting reduction in the country. There has been a remarkable increase in the percentage of births delivered in a health facility.¹⁵ The decline in home deliveries¹⁶ is likely to continue falling by 2030 as more households can meet the costs associated with delivering in health facilities. However, health practitioners pointed out conflicting priorities in post-natal care given to the mothers in Filipino health facilities. A great focus is given to post-partum mothers in fear of complications, and this would be prioritized over the physical bonding between mother and child (skin-to-skin contact, which is given to support early breastfeeding initiation), challenging the “Mag-Ina” relationship.¹⁷

3. Female secondary school enrolment	<ul style="list-style-type: none"> 66% of girls were found to be enrolled in public secondary schools (2010) →
4. Gender equality	<ul style="list-style-type: none"> Index of inequality = 0.42 (2014) / rank 89 in 2014 (78 in 2013, 77 in 2012) ↘

Lower maternal education is significantly associated with stunting, as well as with LBW.¹⁸ A greater number of Filipino girls were found to be enrolled in public secondary schools as compared to boys (for which the rate drops just above 50%). The Filipino Department of Education estimated that they are still 4.2 million Out of School Youths (OSYs) nationwide in 2014. The continuous increase of the level of girls’ access to education forecasted by 2030 should in theory mechanically contribute to reduce stunting prevalence in the outlook. However, two concurrent dimensions need to be incorporated in this projection.

¹¹ National Demographic and Health Survey (NDHS, 2013). It notably found that the LBW rates are relatively close among wealth quintiles (Annex 2), which means that with similar mothers’ health and nutritional deficiencies, wealthier households manage better to reduce the risks of stunting in the child’s first five years.

¹² ICF International (2014). National Informal Settlements Upgrading Strategy

¹³ The urban population is expected to grow by as much as 67% by 2030 (adding an additional 34.8 million inhabitants to the country’s urban areas. ADB (2014). The Philippines National Urban Assessment

¹⁴ Joint Agency Briefing Paper (2014). Beyond Safe Land

¹⁵ From 44% in the 2008 NDHS, to 61% reported in 2013

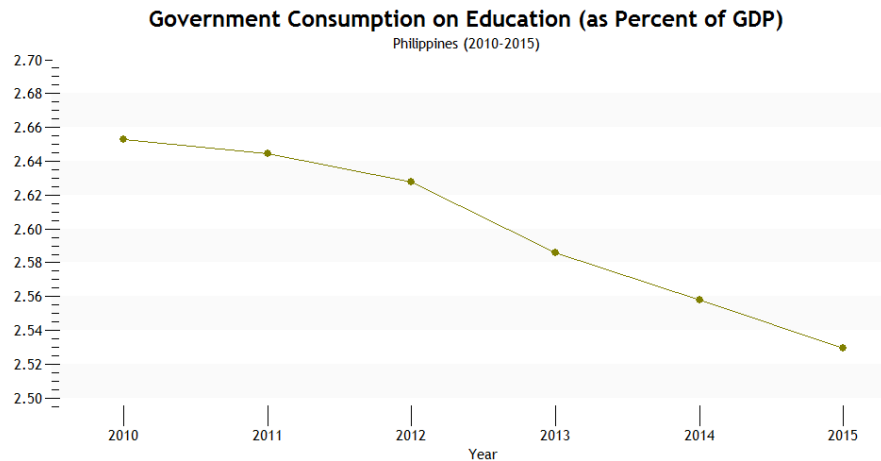
¹⁶ From 56% in 2008 to 38% in 2013 (Ibid.)

¹⁷ Mother and child in Tagalog

¹⁸ For the association with stunting, cf. Prendergast, A. J., & Humphrey, J. H. (2014). The stunting syndrome in developing countries. *Paediatrics and International Child Health*, 34(4), 250–265. The association with LWB can be demonstrated through the NDHS (2013) findings.

Among ASEAN lower-middle income countries, the Filipino female secondary school enrolment rate only exceeds the one in Laos, and in comparison this rate increases much faster both in Laos and in Vietnam.

One explanation for this is the education expenditure to GDP ratio, which has been declining over time in the country, reaching just above 2.5% in 2015 (far from the UN-prescribed 6%).



Source: IFs, Pardee Center Denver University

While key nutritional messages are included in governmental curriculum guides,¹⁹ a noticeable progress due to the strong education-oriented approach under President Aquino III, out-dated learning materials (when available at all), poorly-trained teachers, and under-budgeted schools concretely result from the low investments in education and put serious doubt on the efficiency of the delivery of these messages in the outlook.

In addition, there is growing concern over the rise of teenage pregnancies in the country, a phenomenon which can be interrelated with a failing education system.²⁰ Between 2000 and 2013, the proportion of teenage childbearing has doubled, from 6.3% to 13.6%.²¹ The Philippines has the highest rate of adolescent pregnancies among ASEAN countries, and is the only one where the rate is increasing. Knowing that one child out of 4 born from a-less-than-20 mother has a birth weight of less than 2.5 kg (the highest percentage as compared to all age groups), that teenage maternal deaths are increasing, and that most teenage mothers (mainly residing in rural areas with low educational background) have no source of income, a growing category of adolescent mothers will be kept in the vicious cycle of undernourishment and escalating poverty by 2030.

Despite that girls have a better chance to attend secondary school wide gender inequality - which has also been identified as constraint in stunting reduction²² - persists in the labour market. Female labour force participation rate in 2014 was just 50.5%, which is very low compared to a male participation rate of 78.4%.²³ In other words, women's participation in paid work in the Philippines is still heavily constrained by unpaid domestic and care work. The fast growth since 2008 in the paid labour force of women (+13.6%)²⁴ is a key trend, especially as between 2015 and 2030 the total labour is forecasted to increase by 14.9 million, implying the need for nearly one million new jobs each year.²⁵

¹⁹ See the "K to 12 Curriculum - Health" issued by the Department of Education in December 2013.

²⁰ Among other factors contributing to this trend (family and peers, media, marginalization, etc.). Cf. UNFPA (2015)

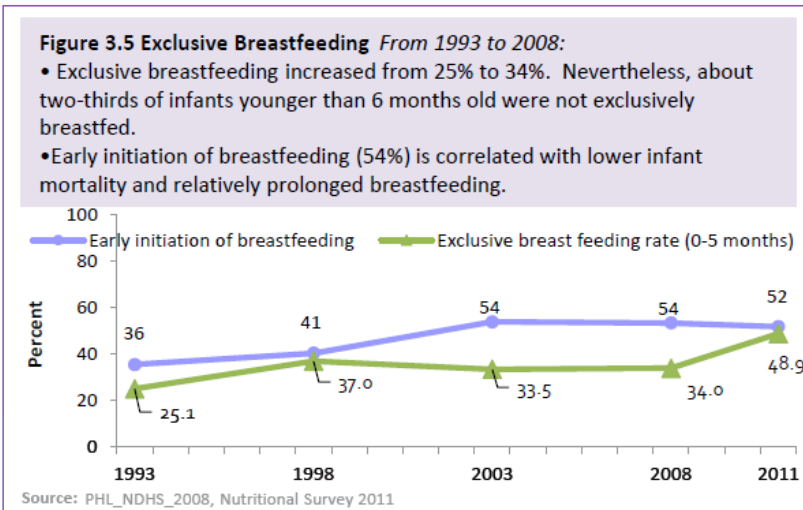
²¹ UP Population Institute (2015). Young Adult Fertility and Sexuality Study 2013

²² Global Nutrition Report (2014)

²³ International Labour Organization (2015). Employment Trends in the Philippines

²⁴ Ibid.

²⁵ Ibid.

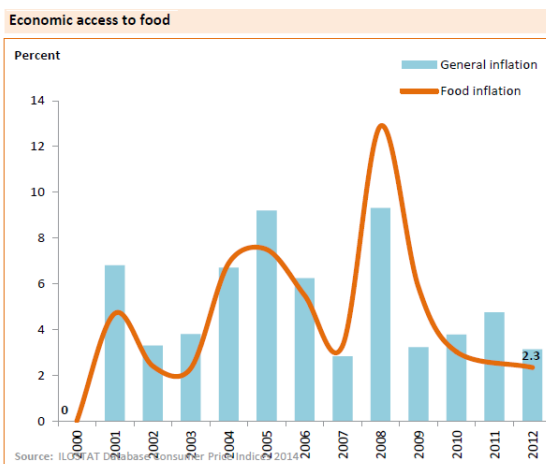


Maternal employment exerts a strong influence over infant and child feeding practices.²⁶ Long distances to work and irregular working shifts thus tend to be associated with suboptimal feeding practices. The type of food that will be given has notably proven to be a sensitive determinant to maternal work, and infants with mothers that are concomitantly working are less likely to be exclusively breastfed.²⁷ While exclusive breastfeeding has shown

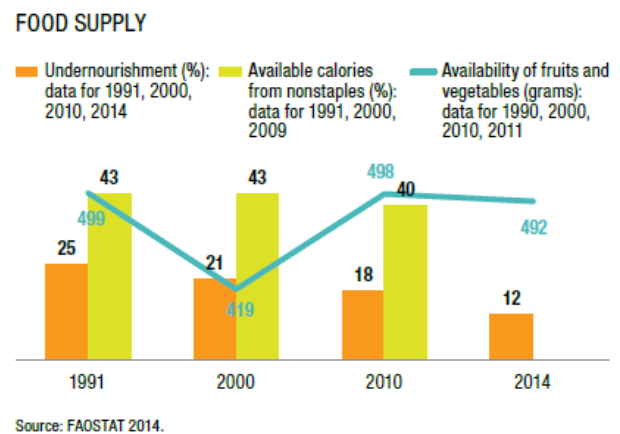
little progress in the Philippines until the 2010's, the increase in the female participation to the formal labour force in the Philippines will impact to an uncertain extent the diffusion of this recommended practice by 2030.

In that context, labour migrations could also play an important role in the outlook. 1.8 million Filipinos left the country to work abroad in 2013²⁸ and the trend based on the last 10 years shows a constant augmentation. In 2010, over 50% of all overseas Filipino workers were women. A growing number of overseas Filipino women would tend to naturally increase the delegation of the caretaking role to other members of the family (grand-parents, older siblings, fathers), likely to have different knowledge and representations towards care and feeding practices. The consequences on under-5 stunting prevalence in the country has yet to be further investigated.

5. Consistent access to food



6. Share of dietary energy supply derived from non-staple food



The statistical relationship between poverty and stunting has long been demonstrated: households' economic status (i.e. access to food) is strongly associated with high stunting rates. While the overall food security outlook is positive, a significant proportion of Filipinos are likely to

²⁶ Demonstrated in a number of case studies, but not specifically in the context of the Philippines

²⁷ Yarnoff, B., Allaire, B., & Detzel, P. (2014). Mother, Infant, and Household Factors Associated with the Type of Food Infants Receive in Developing Countries. *Frontiers in Pediatrics*, 2, 14.

²⁸ International Labour Organization (2015). Employment Trends in the Philippines

remain food insecure and not in the condition to fulfil the FNRI recommendation for a healthy meal²⁹. As important as access is the dietary energy supply. Although cereals remain the most important source of food energy, animal fats have more than doubled their availability and meat consumption increased by 51% in the Philippines.³⁰ While the increase in meat consumption is considered positively in terms of coverage of nutritional needs, is regarded an indicator of a transitioning economy and is also linked to urbanization, diet diversity remains determinant to reduce the risk of stunting.

The breakdown of most consumed food by age category³¹ revealed that soft drinks and snack food (chips and curls) have been heavily introduced to younger generations. Besides, the list of most commonly consumed food by adults ranks the following items in the top 5, by order of importance: rice, sugar, cooking oil, salt and instant coffee. The ubiquity of sugary, fried, and salted snack foods is a global serious concern. On the other hand, Filipinos' food habits as regards to Malunggay, an edible traditional plant recognised for its medicinal properties,³² also tends to evolve with potentially less benefits from its consumption. While inadequate food practices have been widely identified as a direct cause of chronic malnutrition, changes in the foodways in the country are under-documented. Interestingly, both economic growth and the evolving family structure could explain that collective practices - in urban as well as rural areas - are reportedly tending to progressively replace food cooking by food buying (from the omnipresent *carinderias*). This might have a significant and lasting impact on the population nutritional status, thus also adversely affecting stunting prevalence by 2030.

Concurrently, given its strong reliance on consumer recall and awareness to increase its sales, the milk industry stands as the main opposition to the implementation of the 'Milk Code' (1986) in the country. The baby food industry is a healthy sector in the Philippines which grew by 5% in 2015. It was slightly faster compared to its performance in 2014. The persistent efforts by companies to promote milk formula as beneficial to a child's intelligence and development help sustain its consumption.³³ This blurs the message that breastfeeding is the best way to ensure a rapid and fulfilling development.³⁴ This is of particular concern knowing that poverty has long been found to negatively impact breastfeeding practices both directly and indirectly,³⁵ making the poorest households more vulnerable to the inadequate use of infant substitute products. By 2030, the trends previously described of urban pauperisation, increasing female employment rates (nationally and abroad), and a growing number of unprepared teens becoming mothers will altogether constitute the fertile ground in which sophisticated and aggressive sale practices from the Milk industry can continue to grow.

Private financial interests are said to have well penetrated the Filipino political sphere, and in particular to be at play in both the promotion of infant formula products and in the educational sector. Many aspects of the political agenda are commonly considered to be indexed to economic

²⁹ Food and Nutrition Research Institute, which established that the ideal plate should include a cup of rice, a cup of vegetable, one portion of meat and one of fruits.

³⁰ UNICEF/ASEAN (2016). Regional Report on Nutrition Security. Unfortunately, while the 7th National Nutrition Survey of 2008 included a section on food consumption among the Filipinos, the 8th NNS (2013) did not.

³¹ 7th National Nutrition Survey 2008

³² Young leaves are a rich source of calcium, iron, phosphorus and vitamins A, B and C. However, they lose their properties when cooked.

³³ As an example, Promil Pre-School associates the brand with gifted children in its TV commercials.

³⁴ This echoes global concern as regards the role of the Milk Industry. Cf. Access to Nutrition Index Report (2016)

³⁵ For an early article on the matter, see: Beasley, A., & Amir, L. H. (2007). Infant feeding, poverty and human development. *International Breastfeeding Journal*, 2, 14

incentives, in particular at times of elections, and this has little chance to change in the outlook. With a strong presidential political system, but high decentralisation, the overall implementation of national health and nutrition policies will likely further challenge stunting reduction by 2030.

CONCLUSION

High national prevalence rates in the Philippines, along with very modest progress in stunting reduction over time, makes chronic malnutrition one of the biggest challenges the country faces as it economically develops. The institutional measures in place in 2016, while overall complying with global best practices, proved to have had limited impact so far.

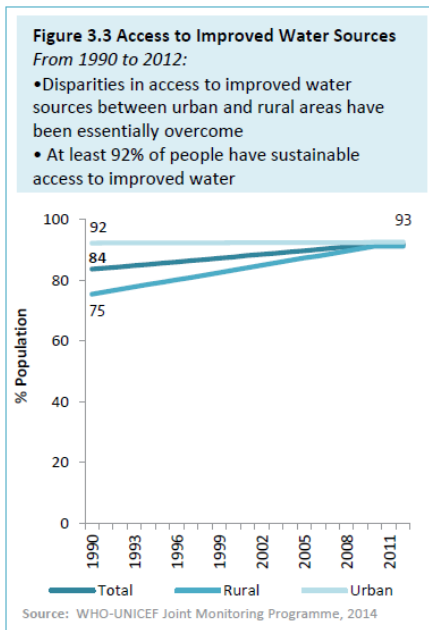
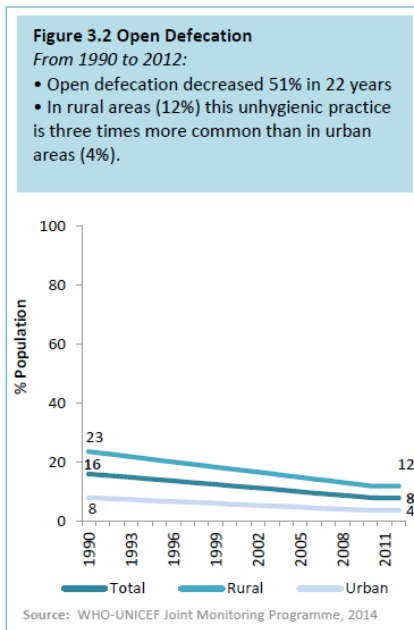
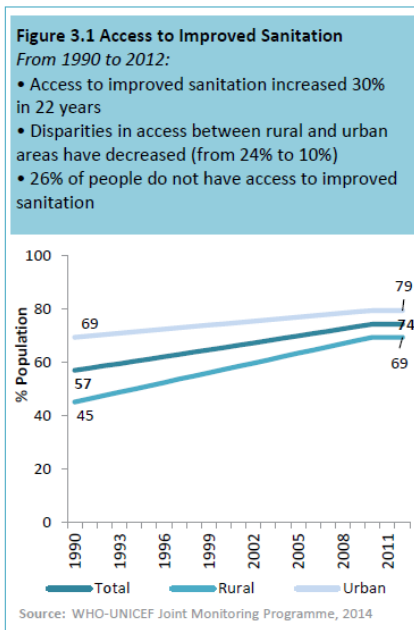
The association between economic and social development will continue to prevail in the way human development is conceptualized globally. The Social Progress Index created in 2014 represents this relationship as non-linear (Annex 3). This confirms that, at lower levels of human development, a relatively modest increase in GDP per capita could - or should - significantly improve a range of social progress indicators. Besides, strong evidence exist that investments in nutrition have high returns. Stunting prevalence in the Philippines is nevertheless unlikely to significantly reduce as long as the economic development of the country seems to thrive, and even create, indirect factors of the problem. ■

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ANNEX

Annex 1



Annex 2

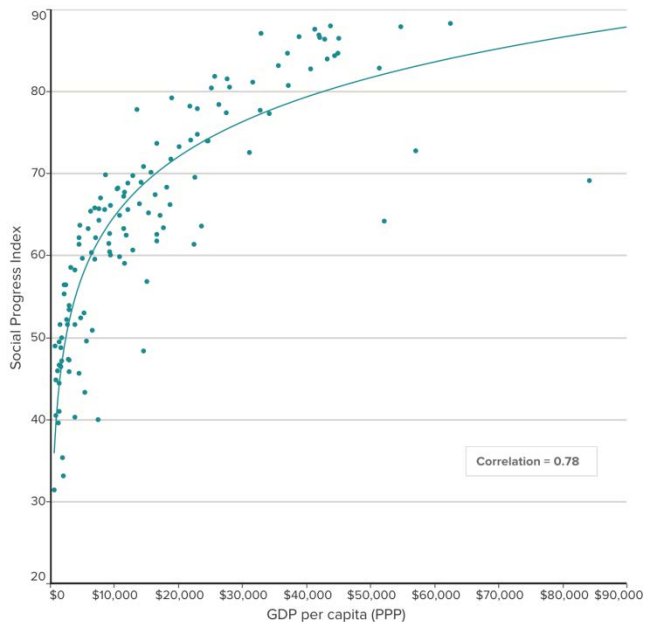
Table 1. Child's weight at birth

Percentage of live births in the five years preceding the survey that have a reported birth weight, and among live births in the five years preceding the survey with a reported birth weight, percentage less than 2.5 kg, according to background characteristics, Philippines 2013

Background characteristic	Percentage of all births that have a reported birth weight ¹	Number of births	Births with a reported birth weight ¹	
			Percentage less than 2.5 kg	Number of births
Mother's age at birth				
<20	80.9	871	25.1	705
20-34	81.7	4,919	20.2	4,021
35-49	76.1	1,192	24.2	907
Residence				
Urban	90.1	3,261	21.1	2,936
Rural	72.5	3,721	21.8	2,697
Mother's education				
No education	27.6	112	(35.3)	31
Elementary	61.8	1,496	25.2	925
High school	83.4	3,523	22.1	2,938
College	94.0	1,851	18.1	1,740
Wealth quintile				
Lowest	59.5	1,916	22.0	1,139
Second	79.1	1,525	23.1	1,206
Middle	89.3	1,395	20.9	1,246
Fourth	94.8	1,214	23.6	1,151
Highest	95.6	932	16.3	891

Source: Philippines National Demographic and Health Survey, 2013

Annex 3



Source: The Social Progress Index

Asia Report:

SOCIO-ECONOMY OF CHRONIC MALNUTRITION IN THE PHILIPPINES: A preliminary key trends analysis by 2030

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