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$$\pi_n = \sum_{k=1}^{K} \left(\frac{y_n^k}{y_n} \right) \left(\frac{p_n^k}{p^k} \right)$$

Monitoring MDG and WFS targets:
Asia and Pacific

SUMMARY

Worldwide developing countries have reduced hunger as measured by the food security statistics known as Millennium Development Goals (MDG) indicator 5 and the indicator of the World Food Summit (WFS) during the 1990's, but the reduction has slowed down during the most recent five-year period. Asia and the Pacific (AP) has contributed to the overall decrease in hunger in a similar pattern as the developing world; its pace has been fast enough up to now, but the efforts have to be intensified to reach the MDG target by 2015. In AP, hunger may not be a problem in two countries (less than 2.5% of the population are chronically hungry) but yet remains a concern for one country (more than 35% of the population are chronically hungry). All the other countries are very close to reach the MDG target, although most of the south Asian countries need to step up the pace occurred during the second half of the 1990's from now onto 2015.

At the country level, the monitoring of progress in hunger reduction can help to target food insecure population groups for policy design and implementation. Most, if not all of the countries, have been conducting household surveys such as Household Budget Surveys (HBS), Household Income and Expenditures Surveys (HIES), Living Standard Measurement Studies (LSMS) and other surveys which collect data on food consumption, income and expenditure. These data may be utilized for estimating reliable food security statistics such as the prevalence of food deprivation (under nourishment). Preliminary results from a Southeast Asian country depict progress in hunger reduction at sub-national levels and identify food insecure population groups utilizing data from LSMS surveys.

Contents

I. Introduction

The understanding of the food deprivation trends in the context of the MDG and the WFS targets requires an analysis of changes over time in the **proportion** of food deprivation (**people** who suffer from hunger) and in the **number** of food deprived. The WFS target, adopted in

1996, set to halve, between 1990 and 2015, the **number** of people who suffer from hunger. The MDG which was adopted later in 2000 set a target to halve, between 1990 and 2015, the **proportion** of people who suffer from hunger. In this sense, a hunger reduction expressed as the MDG-5 indicator of "proportion of population below minimum level of dietary energy consumption" (proportion of food deprivation) reflects a reduction of the number of food deprived (FAO 2004). However, it might be the case that the population grows faster than the speed of reduction in the proportion of food deprivation and the latter is accompanied by an increase in the number of food deprived. For this reason the analysis is done using both, the proportion of food deprivation and the number of food deprived. The documentation on the FAO methodology for estimating food deprivation is available in the Web (FAO, 2005).

Most countries have conducted household surveys in which food consumption data are collected during the 1990's so that trend analyses can be performed on food insecurity. In most technical reports based on these household survey data, the analysis of food consumption is limited to food consumption in monetary terms, in particular the share of food to total consumption. In this sense reports on food consumption are incomplete by covering only the economic viewpoint and ignoring the actual food consumption in terms of quantities and hence the nutrient consumption.

The FAO methodology for estimating food deprivation used for global monitoring can be used for estimating sub-national food deprivation utilizing quantity data of food consumed and income collected in household surveys such as household budget surveys (HBS), household income and expenditure surveys (HIES), living standard measurement studies (LSMS) and so forth. The procedures for estimating a battery of food security statistics at sub-national level derived from household surveys are described elsewhere (FAO 2002). Estimates using these procedures are applied to Vietnam LSMS 1992/93 and 1997/98 food consumption data.
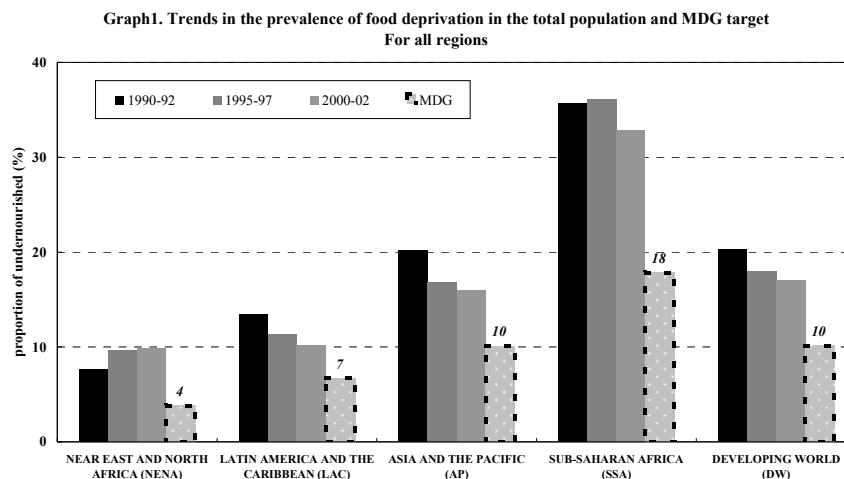
II. Global trends in hunger reduction in Asia and the Pacific

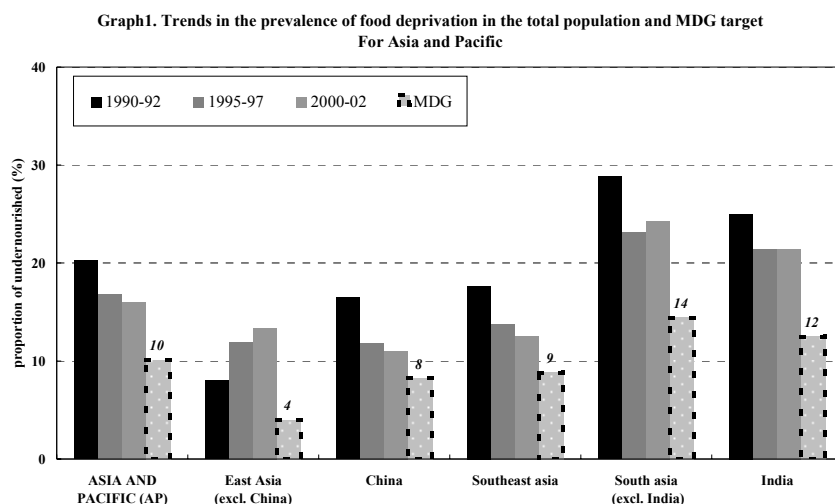### *Progress towards the MDG target*

Worldwide and regional long-term trends of the **proportion** of food deprivation during the last decade in the Developing World (DW) are shown in graphs 1 and 2. The regional trends are shown under the assumption that the MDG target applies to regional levels. Graph 1 depicts the proportion of food deprivation for the three-year average periods of 1990-92, 1995-97 and 2000-02 as well as the proportion of food deprivation that has been set by MDG to be reached by 2015. It shows that in the Developing World (DW) as a whole, the prevalence of food deprivation decreased during the 1990's from a high[1] to a moderate level; however, the decrease observed during the second half on the decade was slower than that observed in the first half. The region of Asia and the Pacific (AP) started from a high level of food deprivation (20-34%) and experienced hunger reduction throughout all the decade even though the target of food deprivation of 10% is far from being reached.

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[1] <u>Prevalence</u>   <u>Category</u>
  35% & above   over very high
  20-34%   high
  10-19%   moderate
  5-9%   low
  2.5-4%   very low

Graph1. Trends in the prevalence of food deprivation in the total population and MDG target
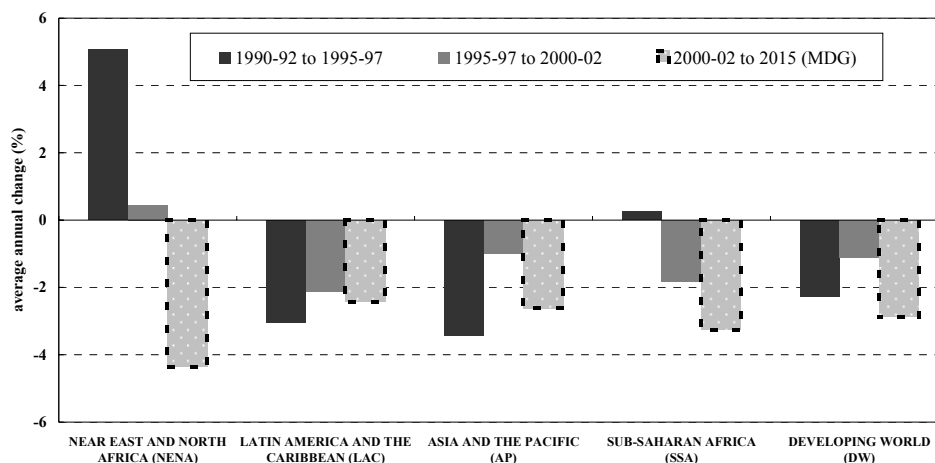**For all regions**

Disparities between sub regions in terms of level of food deprivation are quite high with China and India being the main driving countries due to the size of their population (these two countries represent together almost 50% of total population of the developing world and more than 70% of the population in the region of Asia and Pacific). Given that, a slight improvement in food deprivation in China or India can have an immediate impact on the overall situation of food deprivation in the region, these two countries have been excluded from the sub regions they belong to be analysed separately. From the graph below that presents the trends in the prevalence of food deprivation by sub regions of AP it appears that food deprivation in South asian countries (including or excluding India) is the highest and is the lowest in East Asia (excluding China). At the same time East Asia is the only sub region that has performed the worst over the period. India and China are both showing declining trends in food deprivation with China very close to reach MDG target and India far behind. As Oceania weighs less than 0.2% in overall population of the region (and about 0.1% of undernourished in the region), data for this sub region are not shown in graphs nor commented in the context of this general analyse.

Graph1. Trends in the prevalence of food deprivation in the total population and MDG target
For Asia and Pacific

Graph 2, displays the progresses and setbacks in hunger reduction experienced in the 1990's and the progress required to reach the MDG target. In the second half of the 1990's, the progress was considerably slower than in the first half. The regions of Asia and the Pacific (AP) and Latin America and the Caribbean (LAC) contributed significantly to the overall decrease in the prevalence of food deprivation with the major decrease occurring during the first half of the decade. AP as a whole decreased hunger from a high (20%) to a moderate level (17%). This reduction decelerated resulting in the very slow progress in the following years.
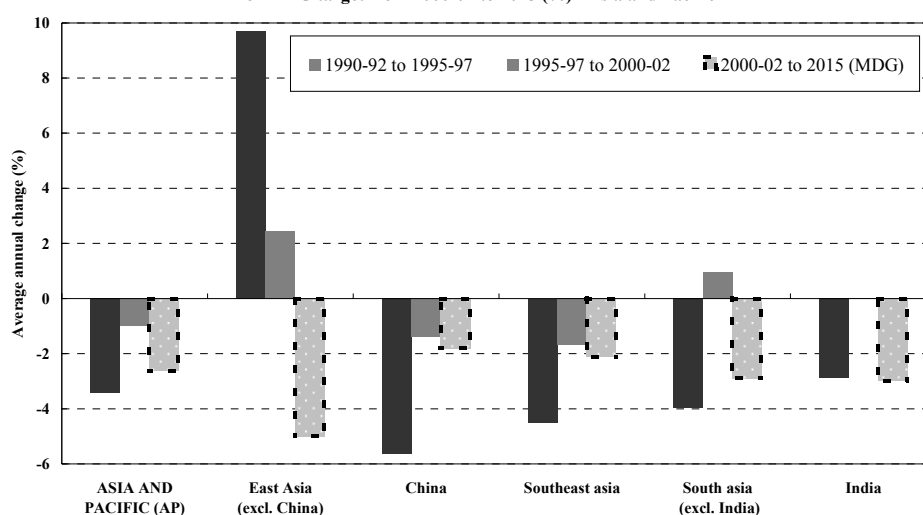
**Graph2. Changes in the prevalence of food deprivation during last decade and change required
for MDG target from 2000-02 to 2015 (%) - All Regions**

In other two regions, namely Sub-Saharan Africa (SSA) and Near East and North Africa (NENA), there has been increase in the proportion of food deprivation during first half of the 1990's. SSA has managed to reverse the rising trend observed in the first half, while NENA is moving in the same direction but not yet stopped the rising trend. It is important to point out that, in one hand, SSA had a high level of hunger at the beginning of 1990's, however despite the progress in hunger reduction during the second half of the 1990's, the prevalence of food deprivation is still at high level. On the other hand, even though hunger increased in NENA during the decade, the prevalence of food deprivation is still at low level.

The MDGs adopted in 2000, set a target to halve, between 1990 and 2015, the **proportion** of people who suffer from hunger. Although significant progress has been made towards the MDG target in AP, the pace needs to be accelerated to make sure that the region will reach the goal by 2015, because the progress had been slowing down since 1995-97.

**Graph2. Changes in the prevalence of food deprivation during last decade and change required
for MDG target from 2000-02 to 2015 (%) - Asia and Pacific**

At sub regional level, China and Southeast Asia have shown the fastest rate of decline of food deprivation and if the situation in China continues to improve at the same pace, this country could possibly reach the MDG target by 2015. Food deprivation in India continues to be of great concern as no improvement in hunger reduction has been noticed during the second half of the 1990's. East Asia when not benefiting from the considerable progress from China shows instead a worsening of the situation. This means countries as Mongolia and Democratic

People's republic of Korea need to take actions to reverse the increasing trend in food deprivation.

The target established by the WFS in 1996 was more ambitious than the one formulated by the MDGs in 2000. The WFS goal is to halve the **number** of undernourished over the same period. In fact, the WFS target, expressed in terms of the **proportion** of food deprivation, is stricter than the MDG target. That is because the world population is expected to grow by around two billion people between the baseline period of 1990-92 and 2015. So even if the proportion of that larger population who suffer from hunger is reduced by half, nearly 600 million people in the developing world will still suffer from chronic hunger. To reach the WFS target of 400 million, the proportion of food deprived people would need to be reduced further not by half but by two thirds.

Chart 1. WFS target in terms of prevalence of food deprivation at the regional level
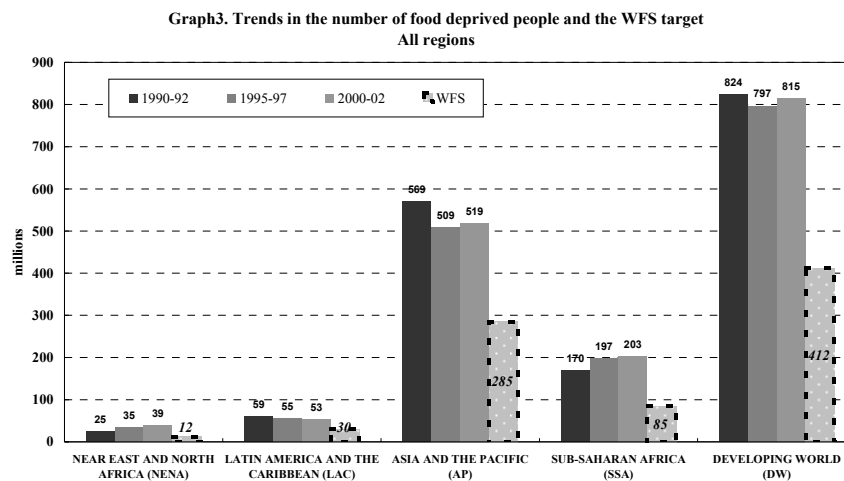
	1990-1992	2000-2002	WFS (MDG) targets by 2015
Near East and North Africa	8% ⟹	10% ⟹	<2.5% (4%)
Latin America and the Caribbean	13% ⟹	10% ⟹	5% (6.5%)
Asia and the Pacific	20% ⟹	16% ⟹	7% (10%)
Sub-Saharan Africa	36% ⟹	33% ⟹	10% (18%)

Chart 1 shows the comparison between the current situation and the target in 2015 expressed as a 50% reduction in the number of food deprived people. It can be seen that the WFS target is stricter. It calls for eliminating food deprivation in NENA. Drastic reduction would be required for SSA, but this region would still be facing a significant level of food deprivation. It requests AP and LAC a significant reduction but they would still experience intermediate prevalence of food deprivation. Therefore in all regions except NENA, further improvement would be still needed. In halving its proportion of food deprivation, AP would reach by far the MDG target but yet would still not meet the WFS target of 7% food deprivation by 2015.
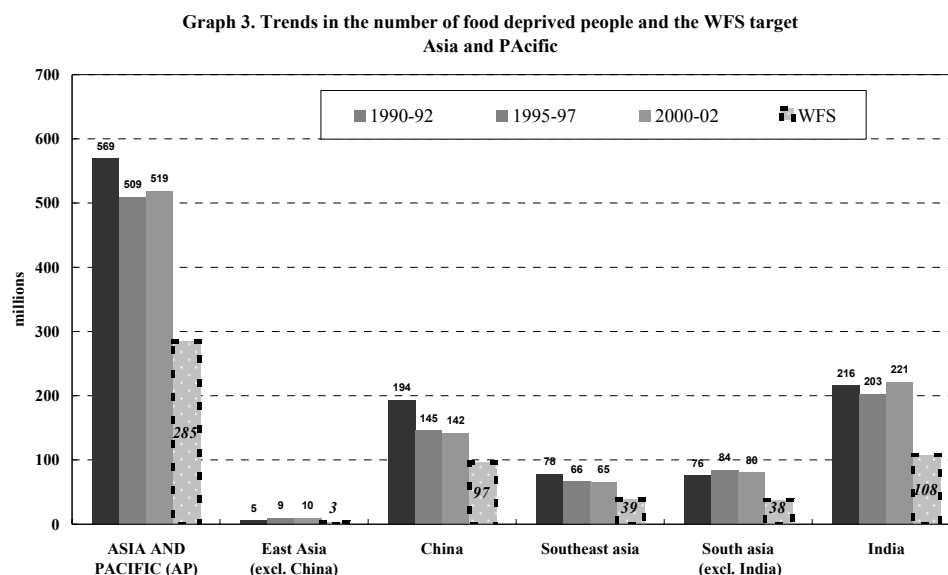
Progress towards WFS target

The worldwide and regional long-term trends of food deprivation, expressed in terms of the number of food deprived people, are shown in Graph 3 below.
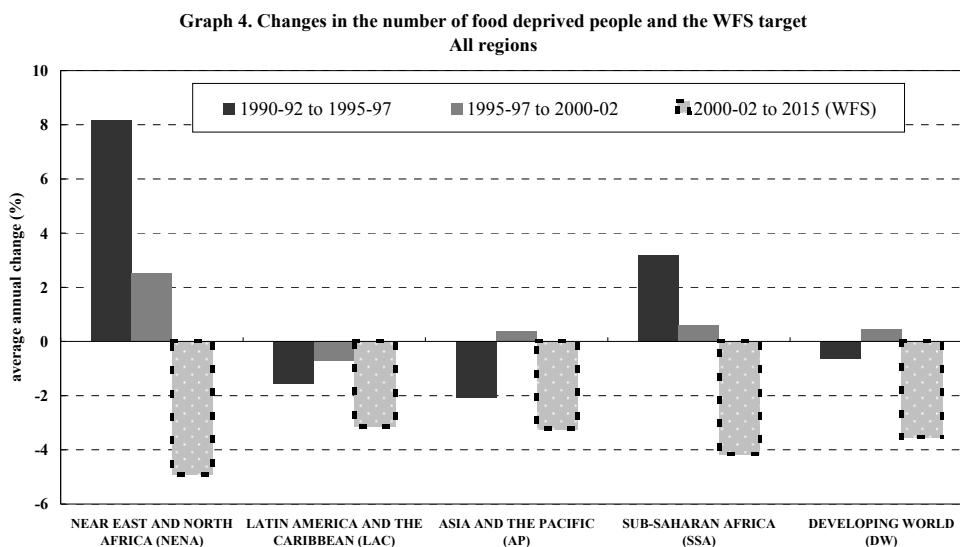
As in the prevalence of food deprivation trend, in the DW on average there was hunger reduction in developing countries as a whole. In contrast, in the first half of the decade hunger decreased significantly, but in the second half it actually increased. AP has contributed significantly to the overall progress in the first half of the 1990's but also to the increase observed in the second half. NENA and SSA increased the number of undernourished during whole decade. LAC is the only region that has managed to decrease the number of hungry people throughout the decade, but this decrease has been quite low.

Graph3. Trends in the number of food deprived people and the WFS target
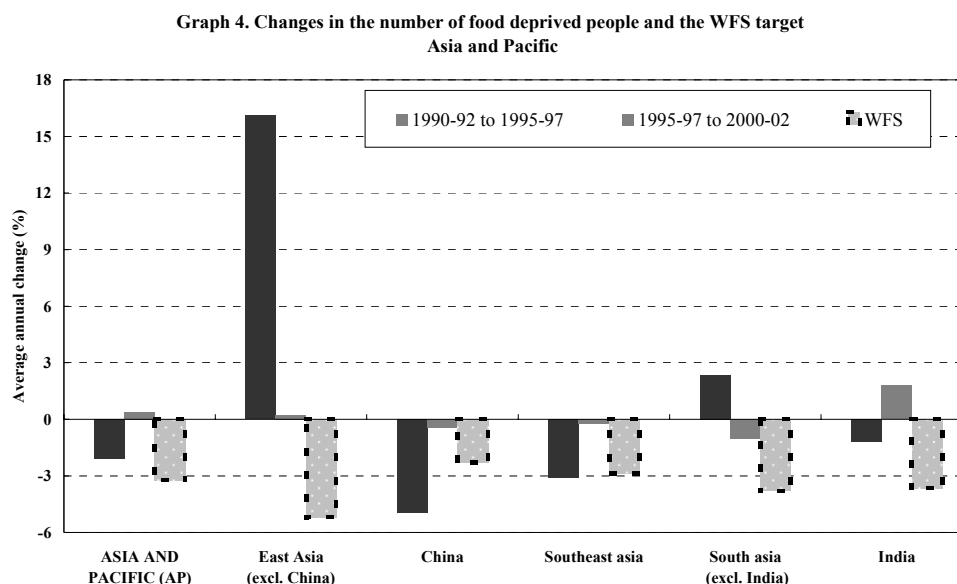**All regions**

When looking at numbers of undernourished at sub regional level, it is obvious that the worsening of the situation for the region of AP is almost entirely due to the significant increase in people undernoushed in India during the second half of the 1990's. On reverse, China has proved very successful in fighting hunger as number of undernourished has been decreasing constantly during the 1990's, eventhough the rate of decrease has slightly decelerated during the second half of the decade (see graph 4).

Graph 3. Trends in the number of food deprived people and the WFS target
Asia and PAcific

It can be seen that the picture of food deprivation trends portrayed by changes in **prevalence** is not necessarily the same as the one depicted by changes in the **number** (Graph 4). In LAC and NENA, changes in **prevalence** were in line with changes in **number**. However, in AP and SSA, the changes in prevalence (see Graph 2), **were not** the same as in the number; actually they were in opposite directions and the number of food-deprived people was actually increasing during the second half, while prevalence decreased. These differences in the trend of prevalence and number of food-deprived people in these regions are due to higher population growth than the reduction of the prevalence of food deprivation. Hence, it results in a higher number of food-deprived people, despite the reduction in prevalence.

Graph 4. Changes in the number of food deprived people and the WFS target
All regions

At sub regional level, it is clear that if the situation in India does not improve at all and number of undernousihed continues to grow at the same rate, then the entire region is at risk of failing in reaching the WFS target by 2015 despite the progress experienced by China and the other countries of South Asia.

Graph 4. Changes in the number of food deprived people and the WFS target
Asia and Pacific

Finally, the trends shown above are obviously regional or sub regional averages (except in case of India and China) and they hide significant differences among individual country

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