

# Statistics Division

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*K*

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

*k=1*

# Monitoring MDG and WFS targets: *Latin America and the Caribbean*

## 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. Latin America and the Caribbean (LAC) 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 must accelerate efforts to ensure reaching the MDG target by 2015. In LAC, hunger may not be a problem in one country (less than 2.5% of the population are chronically hungry). Four countries have already reached the MDG target and more than 10 countries are making progress towards the target, although many of them will need to step up the pace occurred during the 1990's from now onto 2015. Still, two countries have made no progress in their hunger situation and three countries have deteriorated.*

*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 (undernourishment). Preliminary results from a Central American country depict progress in hunger reduction at sub-national levels and identify food insecure population groups utilizing data from LSMS surveys.*

## Contents

- I. Introduction**
- II. Latin America and the Caribbean global trends in hunger reduction**
- III. Progress in hunger reduction at country level towards the MDG target**
- IV. Progress in hunger reduction at sub-national levels: Nicaragua**
- V. Conclusions and remarks**

## 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 2005). 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 (FAO, 2003) is available in the Web.

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 analysis 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) surveys and so forth. The procedures for estimating a battery of food security statistics at sub-national derived from household surveys are described elsewhere (FAO 2002). Estimates using these procedures are applied to Nicaraguan LSMS 1993, 1998 and 2001 food consumption data.

## II. Latin America and the Caribbean global trends in hunger reduction

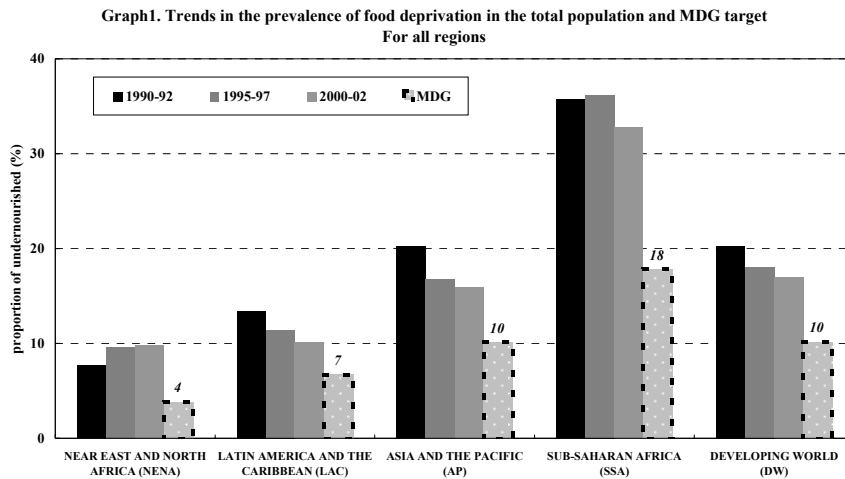
### *Progress towards the MDG target*

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 DW as a whole, the prevalence of food deprivation decreased during the 1990’s from a high<sup>1</sup> to a moderate level; however, the decrease observed during the

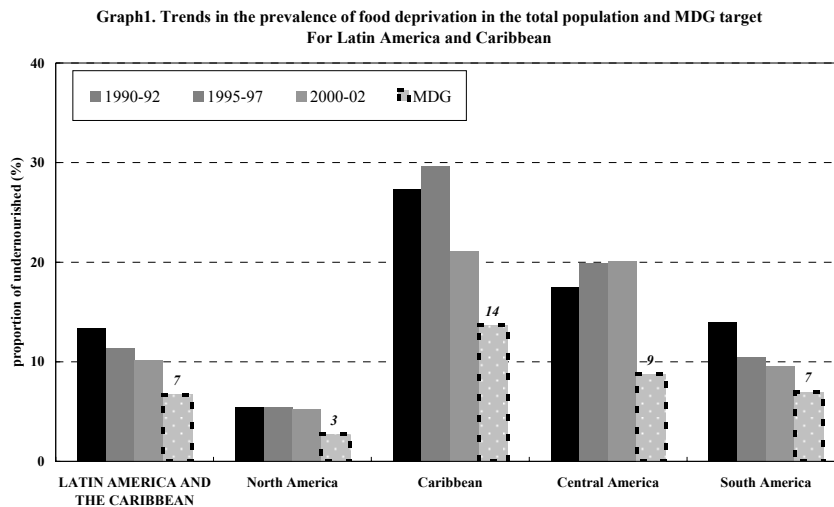
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<u>Prevalence</u>	<u>Category</u>
35% & above	very high
20-34%	high
10-19%	moderate
5-9%	low
2.5-4%	very low

second half on the decade was slower than that observed in the first half. LAC started from a moderate level of food deprivation (10-19%) and it experienced hunger reduction throughout all the decade.



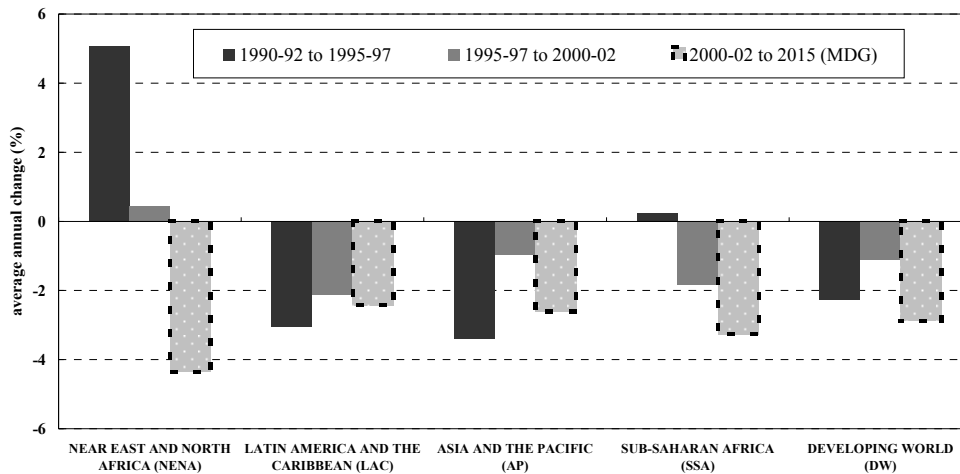
At sub regional levels North America (Mexico) showed the lowest level of prevalence in all assessed periods. South America presented almost the same level of prevalence as LAC. The situation in Central America, has continuously worsened since the beginning of the nineties, even though the increase in prevalence of food deprivation has slightly slowed down during the second half of the decade. In North America and the Caribbean the increase observed during the first half of the nineties, reversed in the second half. South America is the only sub region to show very encouraging progresses towards MDG target.



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, however, the progress was considerably slower than in the first half. Latin America and the Caribbean (LAC) contributed significantly to the overall decrease in the prevalence of food deprivation. Only Asia and the Pacific (AP) experienced a more rapid reduction in the proportion of food deprivation than LAC in the first half of the decade. It decreased hunger from a high (20-34%) to a moderate level. This reduction decelerated resulting in the very slow progress in the following years, slower than in LAC.

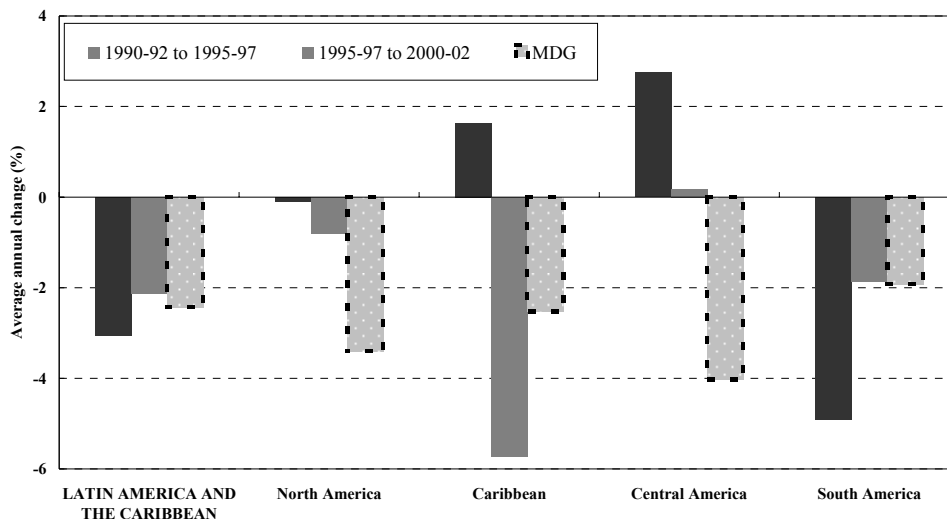
In other two regions, namely Sub-Saharan Africa (SSA) and Near East and North Africa (NENA), there has been increase in the proportion of food deprivation during first half on the 1990's. SSA has managed to reverse the rising trend observed in the first half, while NENA is moving in the same direction 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.

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



At sub regional level, situation in countries from Central America has got worse as trend in food deprivation is still increasing even though at a slower pace than during the first half of the nineties. The rate at which prevalence of food deprivation should decline to reach MDG target by 2015 would be of about 4 per cent per year, which does not seem to be realistic according to the increasing trend observed in this sub region since the beginning of the 90's. On reverse, if food deprivation decreases at the same pace, Caribbean should reach MDG target well before 2015. Countries of South America are showing the most consistent pattern/behaviour in reducing hunger, and the MDG target could be reasonably reached if food deprivation continues to decrease at the same pace in those countries.

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



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 LAC, 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. Slight acceleration can assure that LAC will reach the MDG target by 2015 at the regional level. Therefore, in the context of all developing regions, LAC has the biggest chance to reach MDG target by 2015.

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.**

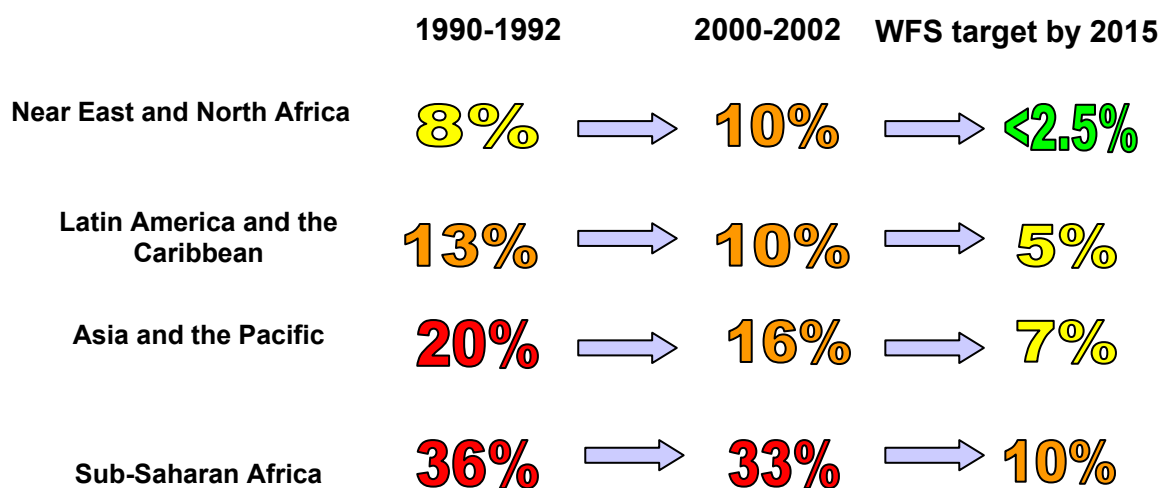


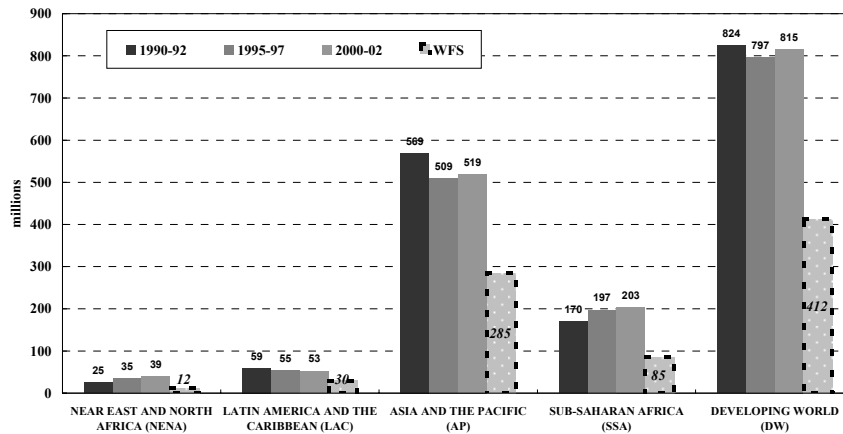
Chart 1 shows the comparison between the current situation and the target in 2015 expressed as a 50% reduction in the number of food deprived people. It can be seen that the WFS target is stricter. It calls for eliminating food deprivation in NENA. It asks SSA a drastic reduction but still would be facing a significant level of food deprivation. It requests AP and LAC a significant reduction but they would still experienced intermediate prevalence of food deprivation. Therefore in all regions except NENA, further improvement would be still needed. LAC will still need to halve its proportion of food deprivation in order to eliminate hunger.

### ***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 Graphs 3 and 4, respectively. 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. Moreover, AP has contributed

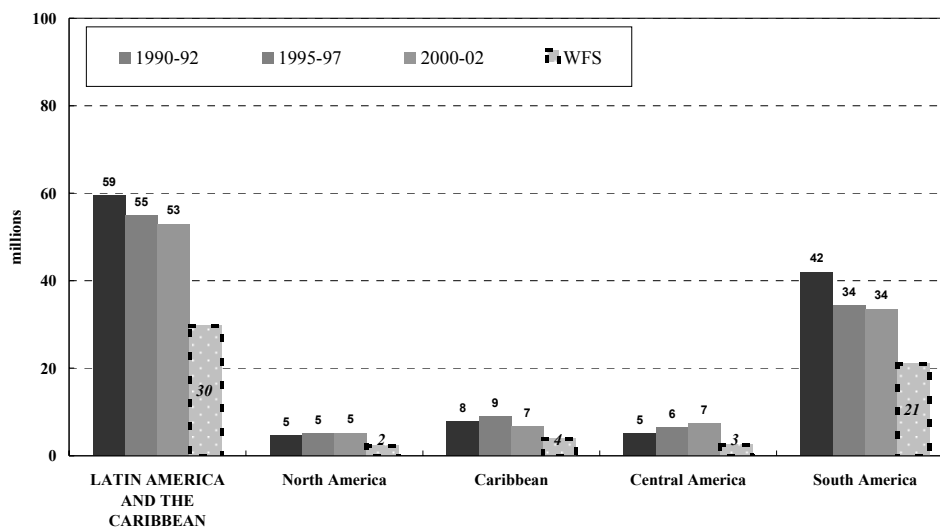
significantly to the overall progress in the first half of the 1990's as well as to the increase observed in the second half. NENA and SSA increased the number of undernourished during whole decade. AP has progressed, but only in the first part of the decade. NENA and SSA, during the entire decade of the 1990's, and AP, during second half of the decade, have increased the number of food deprived. 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. LAC has progressed towards the WFS target during 1990's, however the progress was faster in the first half of decade than in the second one. Therefore, only LAC is heading in good direction, but the process must be accelerated significantly to reach the WFS target by 2015.

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

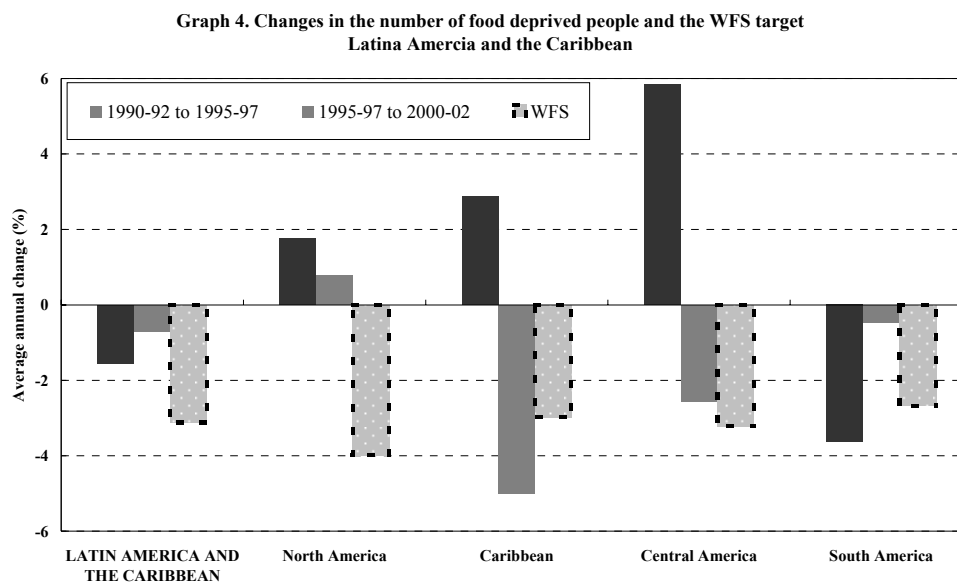
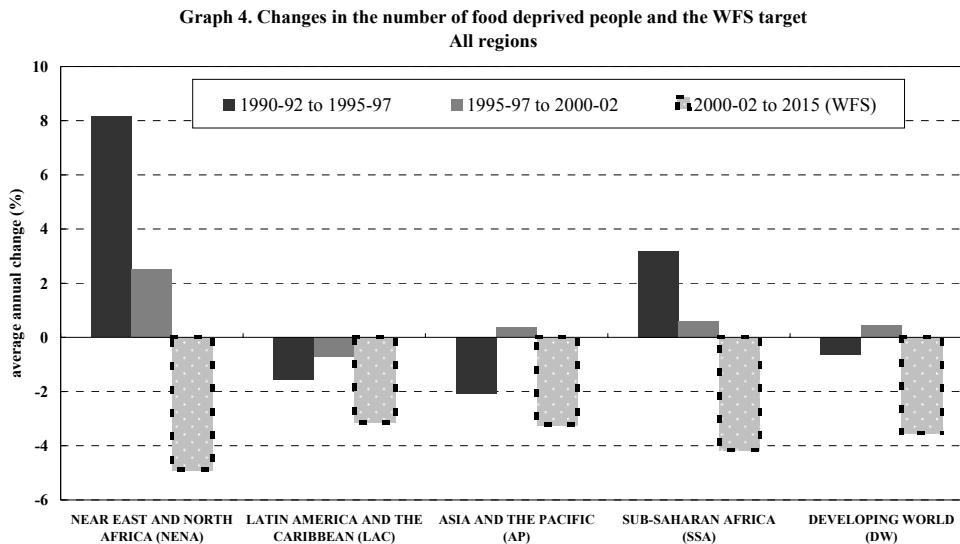


Caribbean is the only sub region that shows real progresses in reducing number of hungry people. On reverse, in Central America the situation is getting worse and countries from this sub region are far from reaching WFS target of halving number of hungry people by 2015. In South America, the absence of improvement in reducing the number of hungry people is mainly driven by the deterioration of the situation in Venezuela and Colombia. In these two countries number of hungry people has increased during the second half of the nineties.

Graph3. Trends in the number of food deprived people and the WFS target  
Latin America and the Caribbean



When looking at graph of changes in prevalence (Graph 2) versus graph of changes in number (Graph 4) 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**. 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, while prevalence decreased (see Graph 4). 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.



The trend pattern in reducing both number and prevalence is the same in South America and the Caribbean but it reverts for North and Central America. In the case of Central America, the very encouraging results in reducing the number of hungry people, experienced during the second half of the nineties, were undermined by the higher increase in population.



The trends shown above are obviously regional averages and they hide significant differences among individual country performances. Despite the good overall performance of LAC, there are countries in this region where hunger is still an immense problem. Therefore, the differences between the countries and how far they are from the hunger reduction targets are examined in the next section.

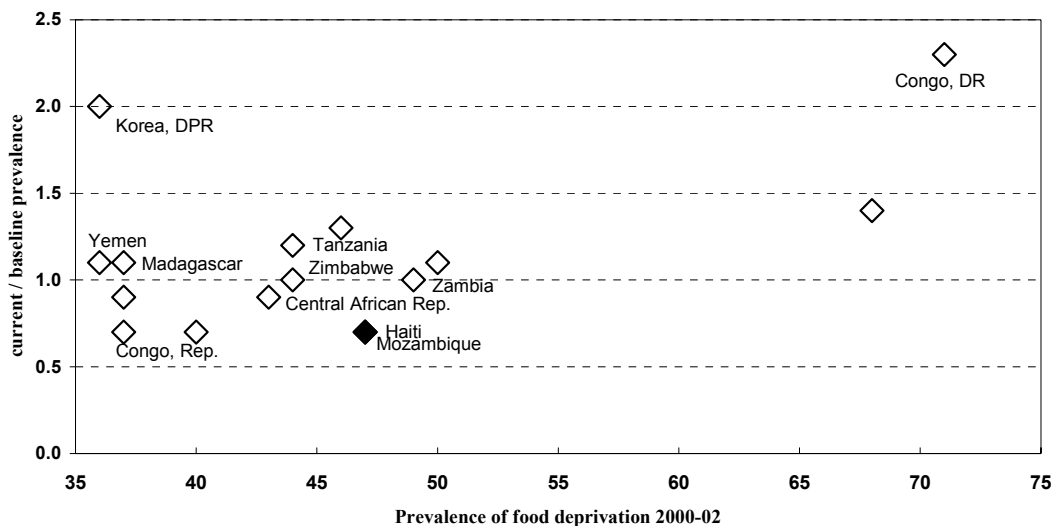
### III. Progress in hunger reduction at country level towards the MDG target

Assuming that the MDG target should be reached by each individual country, it is useful to have a look at each country distance to the target, measured by the ratio of current (2000-02) to baseline (1990-92) proportion of food deprived in a given country<sup>2</sup>.

Graphs 5a-5e portray five different country groups: a) with current proportion of 35% and above (very high prevalence), b) from 20 to 34% (high prevalence), c) from 10 to 19% (moderate prevalence), d) from 5 to 9% (low prevalence), and e) from 2.5 to 4% (very low prevalence).

Figures for LAC countries are shown as black diamonds for easy cross-country comparison with countries from other regions. Countries where hunger is not a nationwide problem, i.e. where prevalence of food deprivation is below 2.5%, are excluded. There is one such country in LAC (Argentina) and five countries from other regions (Libya, Malaysia, Republic of Korea, Tunisia and United Arab Emirates).

**Graph 5a. Towards MDGs: current situation and the MDG target**



\* Ethiopia and Eritrea showed a proportion of food deprived greater than 35% in 2000-02. Those countries are excluded since they were not separate entities in 1990-92.

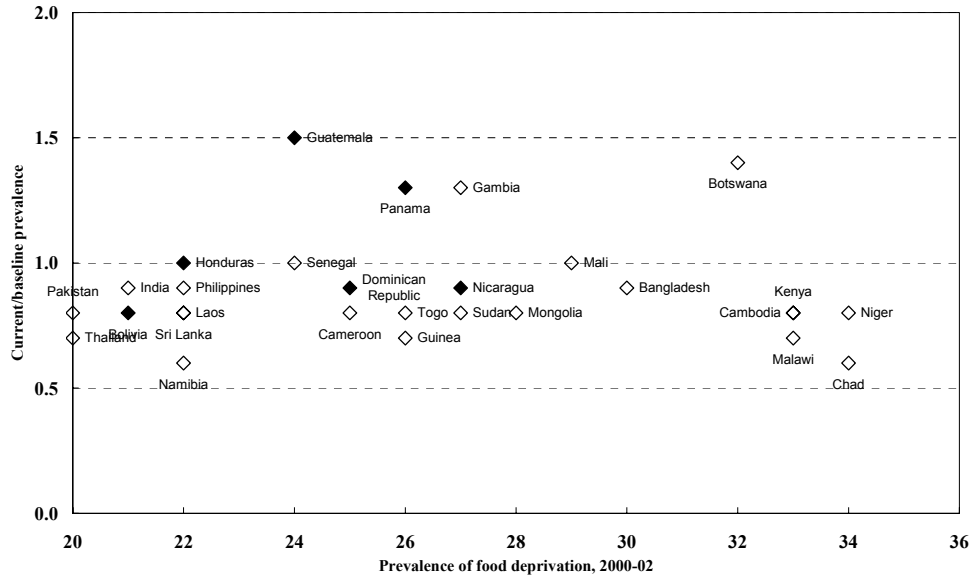
The first group shown in Graph 5a is facing very high levels of proportion of food deprivation (35% or more). It includes 16 countries among which only one is from LAC (Haiti). Since this country group is an open interval (35% or more of food deprived), there are countries experiencing high levels of food deprivation. In fact, Haiti is facing a prevalence level greater

<sup>2</sup> Ethiopia and Eritrea were excluded since they were not separate entities at the baseline period of 1990-92.

than 45% of its population. Even though this country is progressing towards MDG target, even if it reaches it by 2015, it will need to further progress to reach low level of hunger.

Twenty-eight countries in the second group of Graph 5b are facing high levels of food deprivation (from 20 to 34 percent). In this group there are six LAC countries.

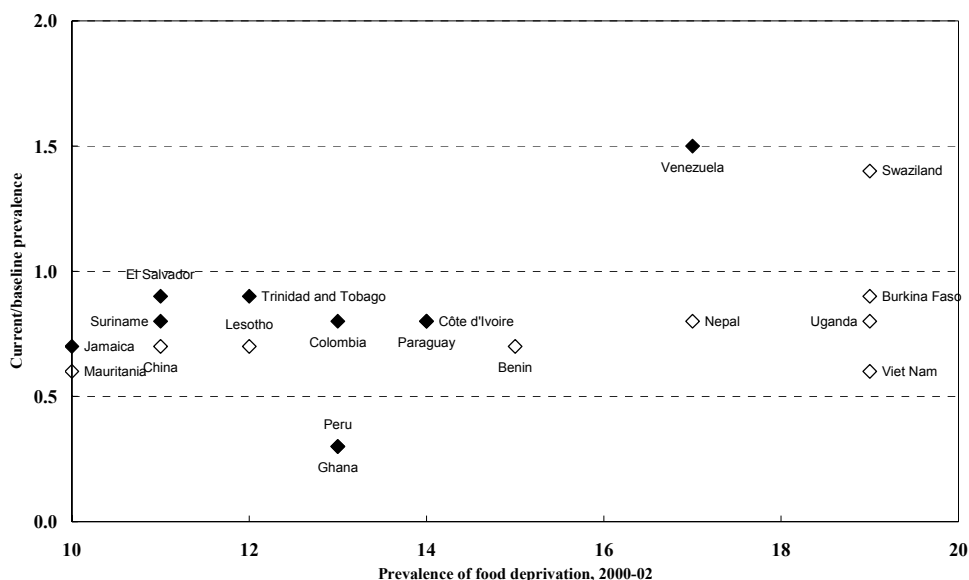
**Graph 5b. Towards MDGs: current situation and the MDG target (cont.).**



No country has reached a 50% reduction in the proportion of food deprivation. However, four LAC countries are progressing towards a 50% reduction (Bolivia, Dominican Republic, Honduras and Nicaragua), while other two (Guatemala and Panama) are increasing the proportion of food deprivation. Also these countries need to put more efforts to decrease the hunger, because it will not be enough to reach the MDG target by 2015 to eliminate hunger there.

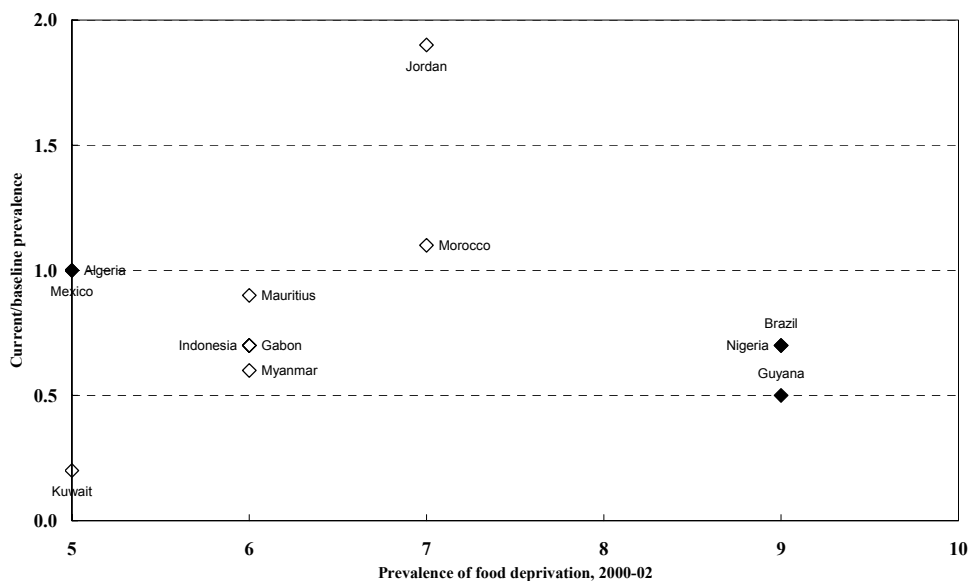
In the third group of 19 countries (10-19 percent of food deprived), there are eight countries from LAC (see Graph 5c). One of these countries (Peru) has already reached the MDG target by halving its proportion of food deprivation. Four countries (Colombia, Paraguay, Suriname and Jamaica) are progressing towards a 50% reduction. Two countries have experienced little change (El Salvador and Trinidad and Tobago) and one country increased the proportion of food deprivation (Venezuela). Even if all the countries reach the MDG target, further progress will need to be made to reach low level of food deprivation (i.e. below 5%).

**Graph 5c. Towards MDGs: current situation and the MDG target (cont.)**



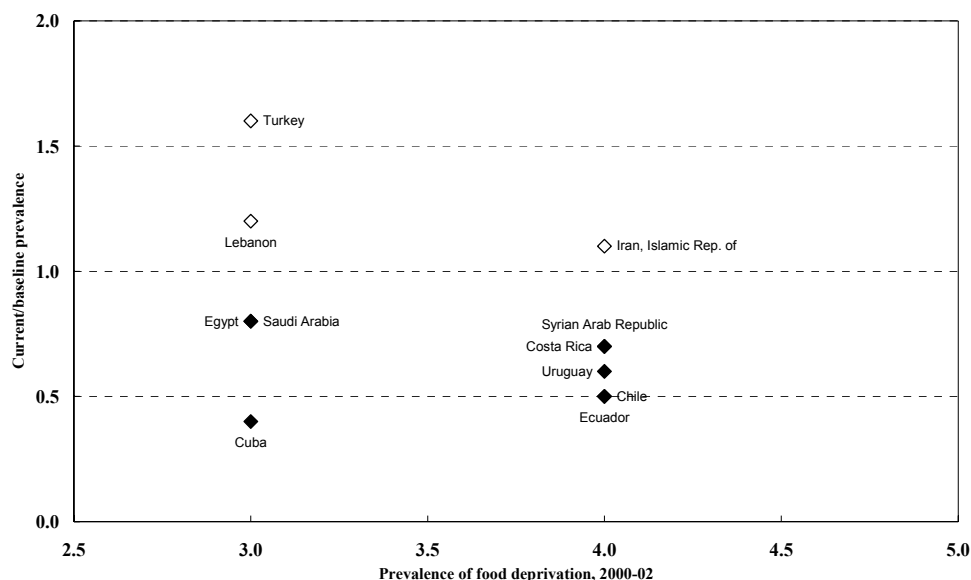
In the fourth group of 12 countries, with 5-9% prevalence levels, there are three countries from LAC (see Graph 5d). In one country the proportion of food deprivation is unchanged (Mexico). One country is progressing (Brazil) and one (Guyana) has already succeeded in halving its proportion of food deprivation. However, there is still a need for further progress to reach a low level of prevalence.

**Graph 5d. Towards MDG: current situation and the MDG target (cont.)**



In the fifth group there are 11 countries, where the prevalence varies from 2.5 to 4% of food deprivation in total population (see Graph 5e). Three of five countries are from LAC (Chile, Cuba and Ecuador). They have already managed to halve the proportion of food deprivation and other two countries are close to it (Costa Rica and Uruguay). All these countries have fairly low levels of proportion of food deprivation, thus even if they do not manage to halve the number of food deprived people by 2015, the problem of hunger, in this situation, will be of less concern than in the previous groups.

**Graph 5e. Towards MDG: current situation and the MDG target (cont.)**



#### IV. Progress in hunger reduction at sub-national levels: *Nicaragua*

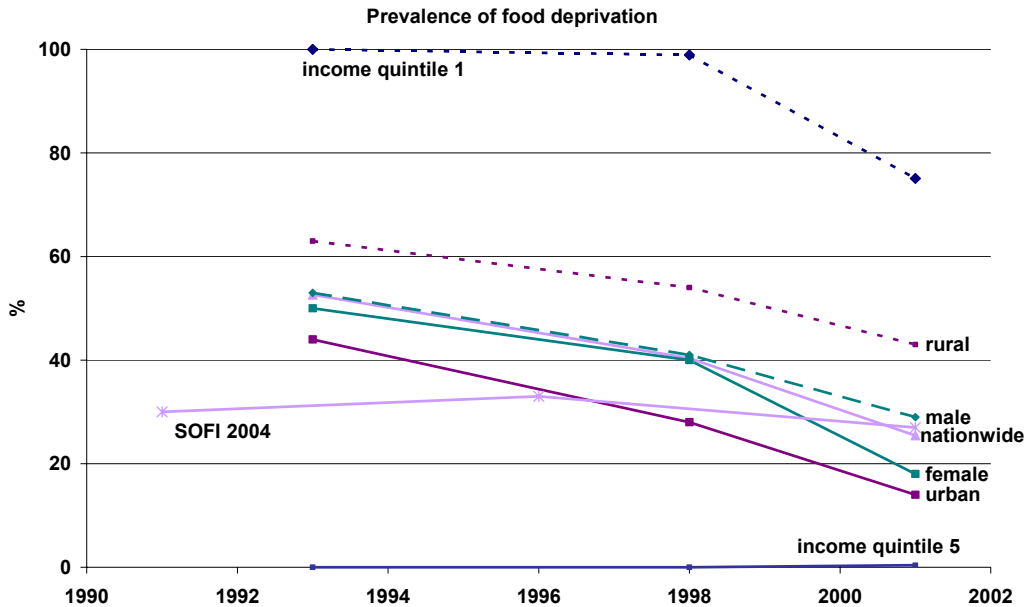
The trends shown for individual countries above are aggregates of sub-national population groups. These groups may be defined based on geographical or functional basis, for example, by ecological or development regions, or by main economic activity or by other social dimension of interest in planning actions. In countries performing well at nationwide level may have population groups in which food deprivation is still a burden. The differences among sub-national population groups are illustrated below for Nicaragua.

The trends shown for Nicaragua are preliminary results (**not to be quoted**) based on 1993, 1998 and 2001 LSMS surveys available in the LSMS World Bank database (World Bank 2005). The documentation of these surveys has warned analysts that the 1993 LSMS cannot be compared to the others (1998 and 2001) due to methodological differences. FAO has re-processed food consumption data collected in these LSMS surveys which are limited to private consumption during a short period of time during the year as compared to food consumption derived from food balance sheets (private and public for one full year). FAO has estimated preliminary food security statistics for documenting trends. These preliminary results show that sub-national population groups in Nicaragua have experienced different trends in food security. The analysis allowed the identification of food insecure population groups through the different food security statistics trends and levels.

##### *A. Food deprivation*

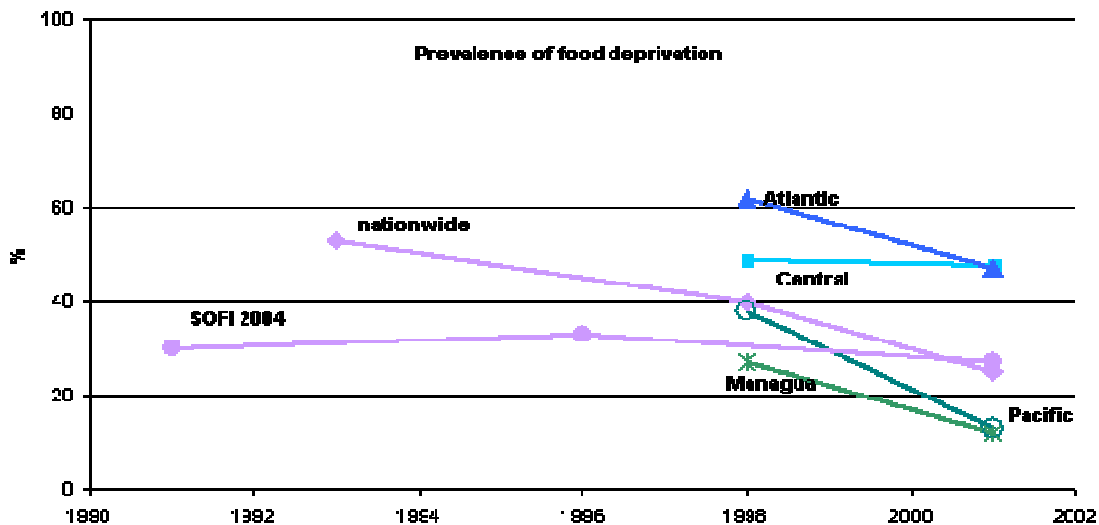
The food deprivation trend in Nicaragua has decreased in recent years based on both, global figures (SOFI 2004) and estimates derived from LSMS surveys (see Graph 6a). The decline is observed in populations of less income regardless of the residential area (urban or rural). It has decreased more in households female headed than in male headed. However the magnitude of food deprivation was still high for most population groups in 2001. The highest prevalence of food deprivation occurred in the lowest income population in which about three out of five persons were food deprived. One quarter of the lowest income population was not food deprived but poor. Food deprivation was higher in rural areas than in urban populations and male-headed households had a higher food deprivation than female-headed households.

**Graph 6a. Food deprivation by population groups**



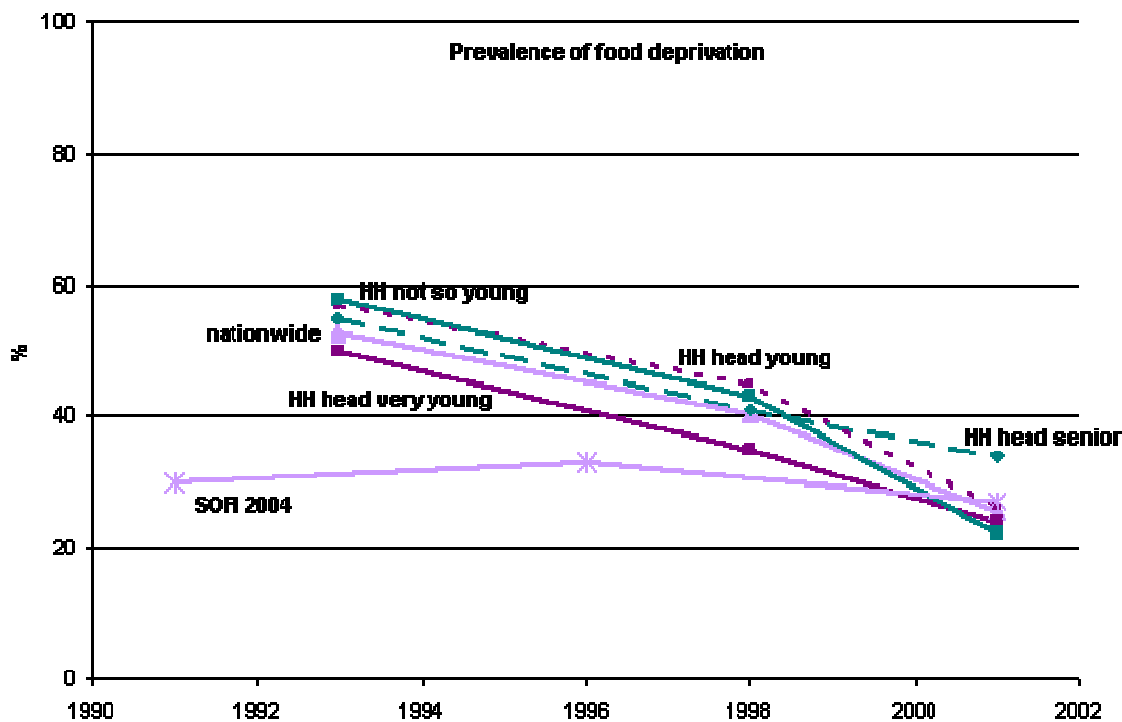
The food deprivation trends have been heterogeneous in the different regions of Nicaragua (see Graph 6b). From 1998 to 2001 region in the Pacific coast experienced the higher reduction followed by the regions in the Atlantic coast and Managua (Capital City).

**Graph 6b. Food deprivation by region**



The region in the Central part of the country did not reduce the level of food deprivation during this period. By 2001, both Atlantic and Central regions showed the highest prevalence of food deprivation. More than two persons out of five were food deprived in these regions. The populations in the Pacific coast and Managua showed a better situation.

**Graph 6c. Food deprivation by other population groups**



In graph 6c the trends of food deprivation by age category of the household head are shown. The lowest reduction in food deprivation was experienced by households with “senior” age heads. By 2001 this population group showed the highest food deprivation level.

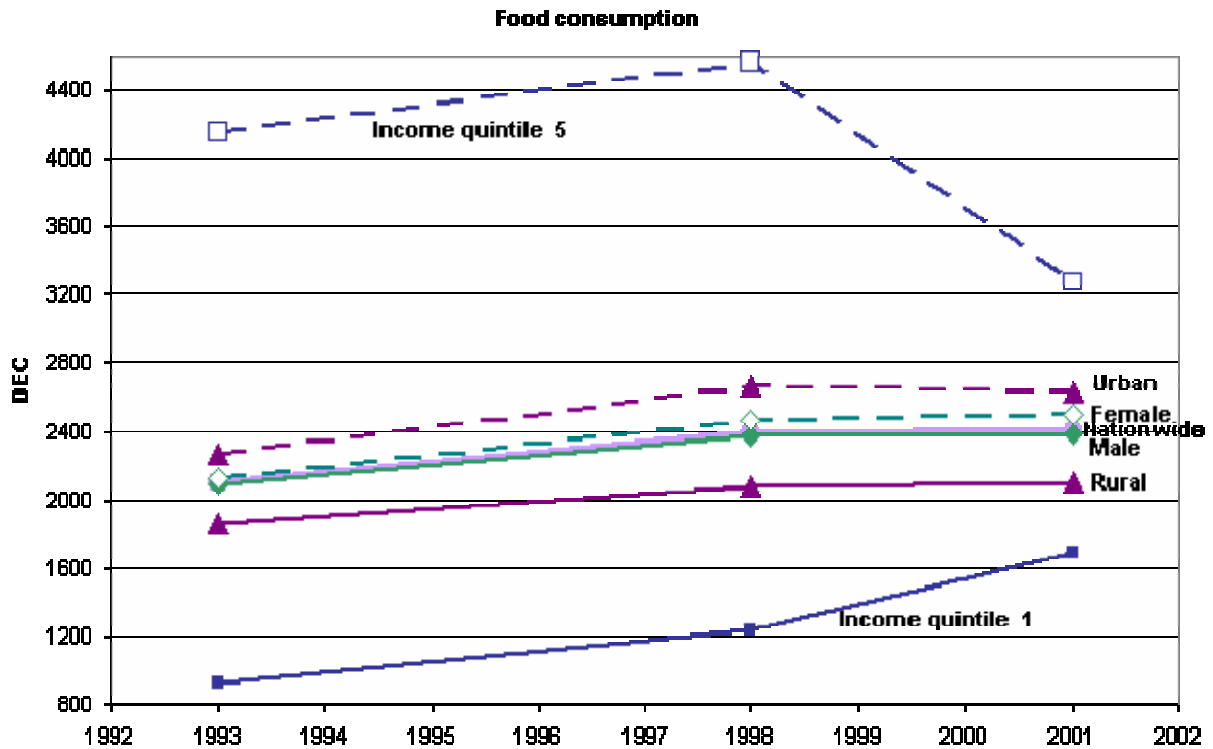
### ***B. Food consumption***

The prevalence of food deprivation described in the previous section depends on three components. First, the amount of dietary energy contained in the food consumed; second, the inequality in access to food mediated mainly by income; and three, the minimum dietary energy consumption for a low acceptable weight being healthy and performing light physical activity. The last one varies very little as the sex and age population structure remains stable in a short period of time.

The main sources for reducing food deprivation are: the amount of dietary energy contained in the food consumed and how equal or unequal was the access to food. The graphs 7a-7c address the level of dietary energy consumed.

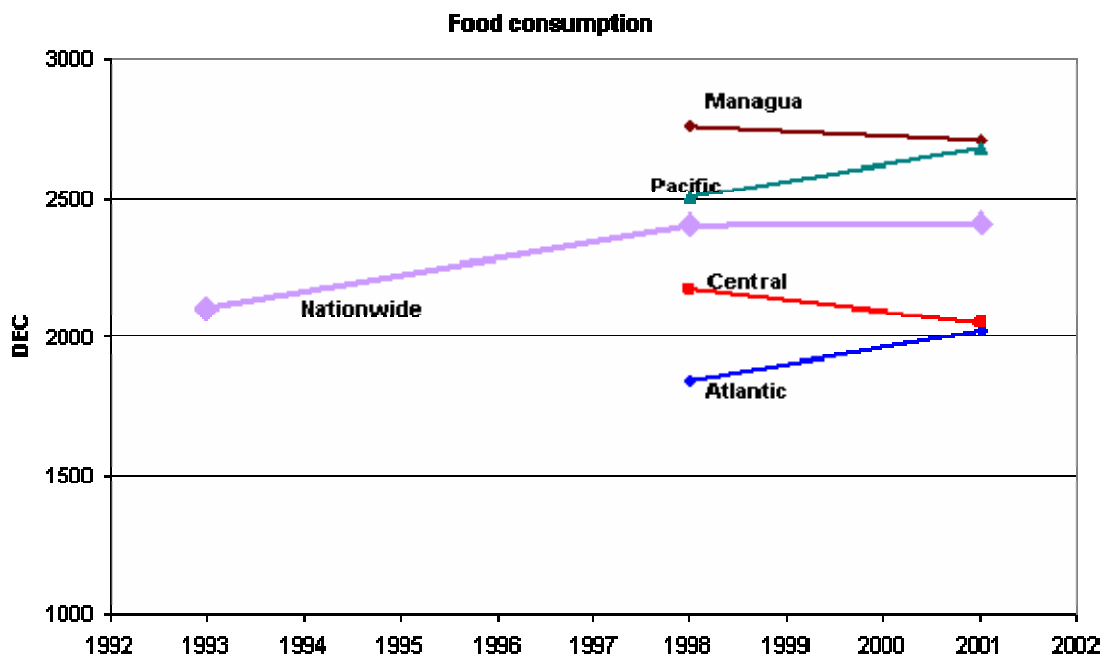
While the population group of the highest income decreased food consumption the population group of the lowest income increased. The food consumption trends of the other depicted population groups followed the nationwide trend during the 1998-2001 period. In 2001 the food consumption levels by the different sub-national population groups depicted in graph 7a are in line with the level of food deprivation (in reverse order) shown previously.

**Graph 7a. Food consumption in terms of dietary energy by population groups**

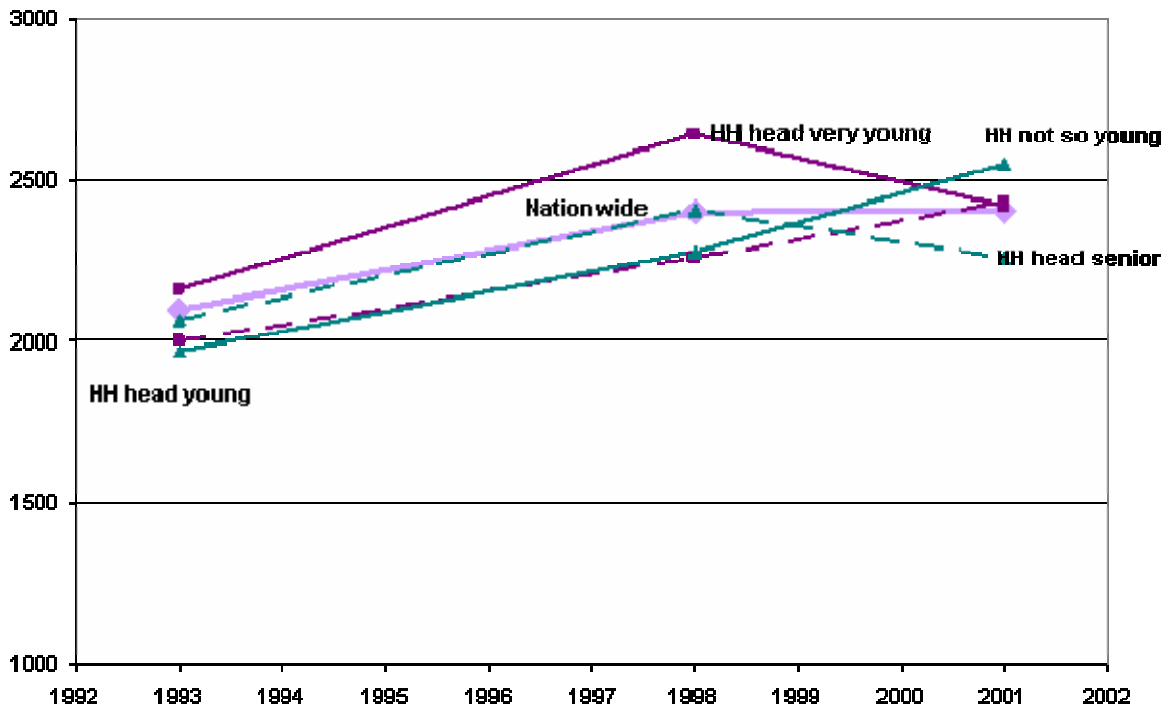


However, as described in graph 7b and 7c, the trends of food consumption levels were not as those of the corresponding food deprivation levels. The explanation needs to be completed with the trends of the inequality of food consumption due to income in the different population groups in the next section. The food consumption level increased in the Atlantic and Pacific coasts while decreased slightly in Managua and the Central region. It decreased in the youngest and oldest household head age category while increased in the other household groups.

**Graph 7b. Food consumption (DEC) by region**

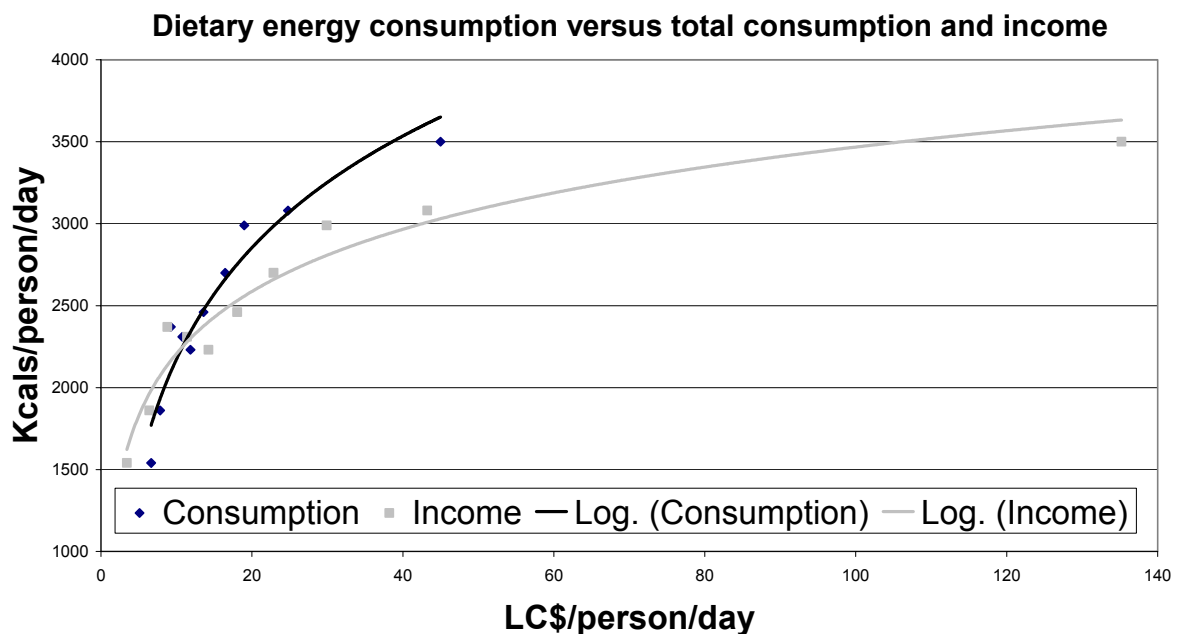


**Graph 7c. Food consumption (DEC) by other population groups**



The food consumption behaviour in terms of dietary energy consumption (DEC) with respect to total consumption (TC) and income (INC) is shown in Graph 7d at nationwide level for 2001. The DEC, TC and INC values correspond to deciles of INC.

**Graph 7d. Food consumption (DEC) by total consumption and income, nationwide 2001**

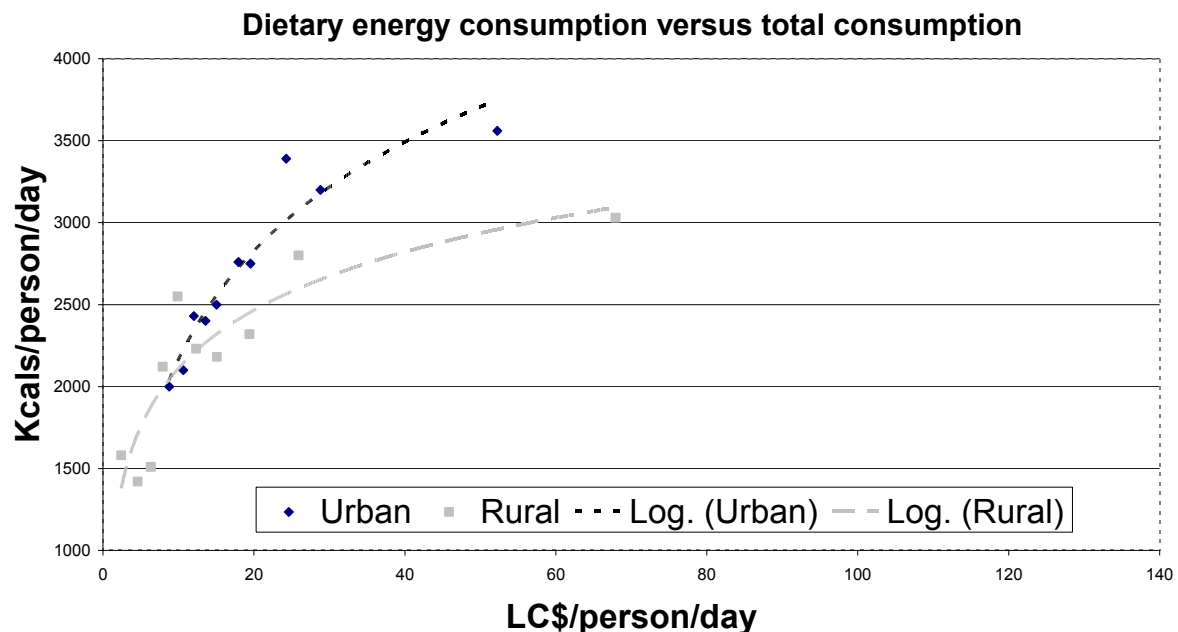


It is clear that DEC depends more on TC than on INC. Both separate relationships, between DEC and TC and between DEC and INC are of log linear nature; however the elasticity of DEC with respect to TC is greater than the elasticity of DEC with respect to INC. The food



consumption behaviour of DEC with respect to TC by income deciles for urban and rural populations is shown in Graph 7e. DEC depends on TC more in urban areas than in rural areas.

**Graph 7e. Food consumption (DEC) by total consumption in urban and rural areas 2001**



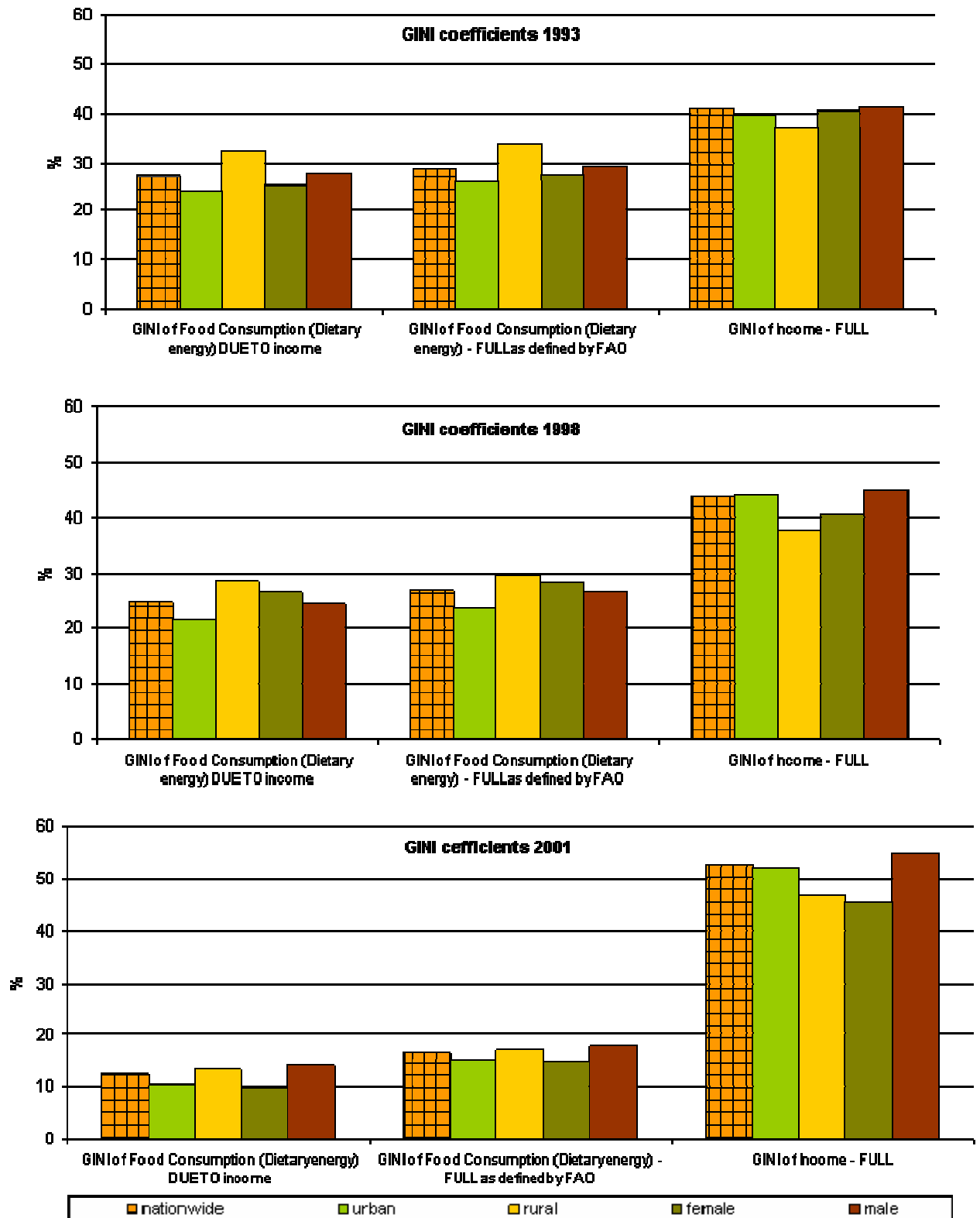
***C. Trends of inequality of food consumption due to income and income (full)***

Graph 8a shows Gini coefficients due to income of dietary energy consumption (DEC) and food monetary value (FMV) as well as Gini coefficients of income (full).

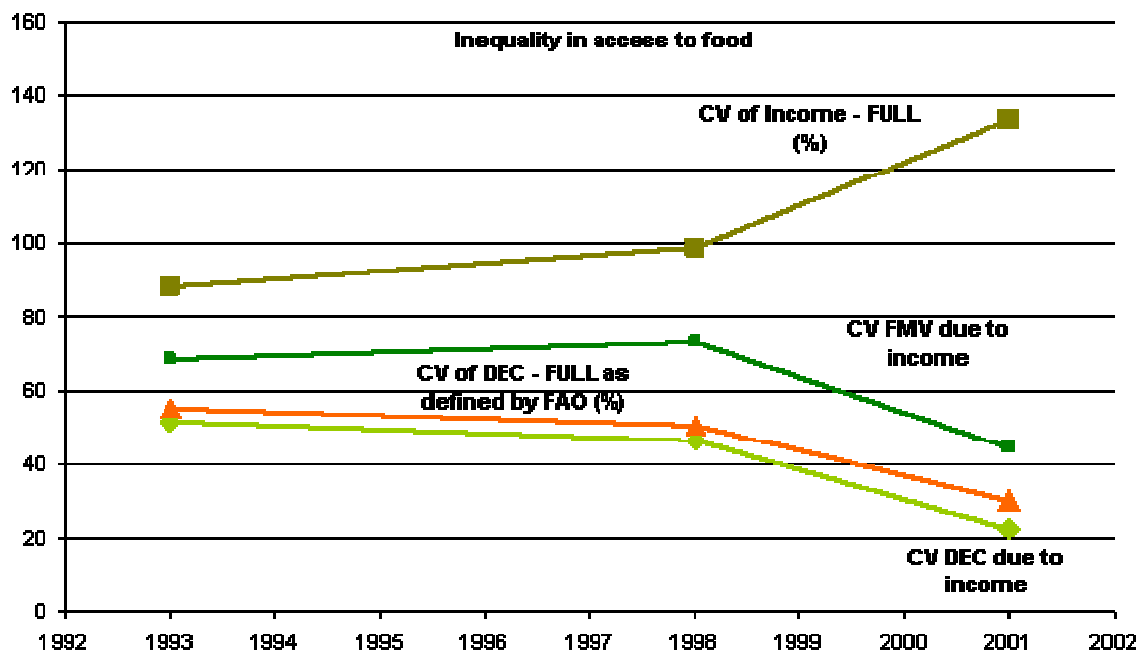
While income inequality trend has increased, inequality of food consumption due to income has decreased. Inequality due to income of food monetary value is higher than in dietary energy value. Graph 8b depicts inequality in terms of the coefficient of variation (CV); the situation is similar to that shown using Gini coefficients.

The trend of inequality in dietary energy consumption due to income is decreasing and it is decreasing faster in rural areas than in urban areas. The decrease is lower in the Central region as compared to Managua and the other regions (see Graph 8c).

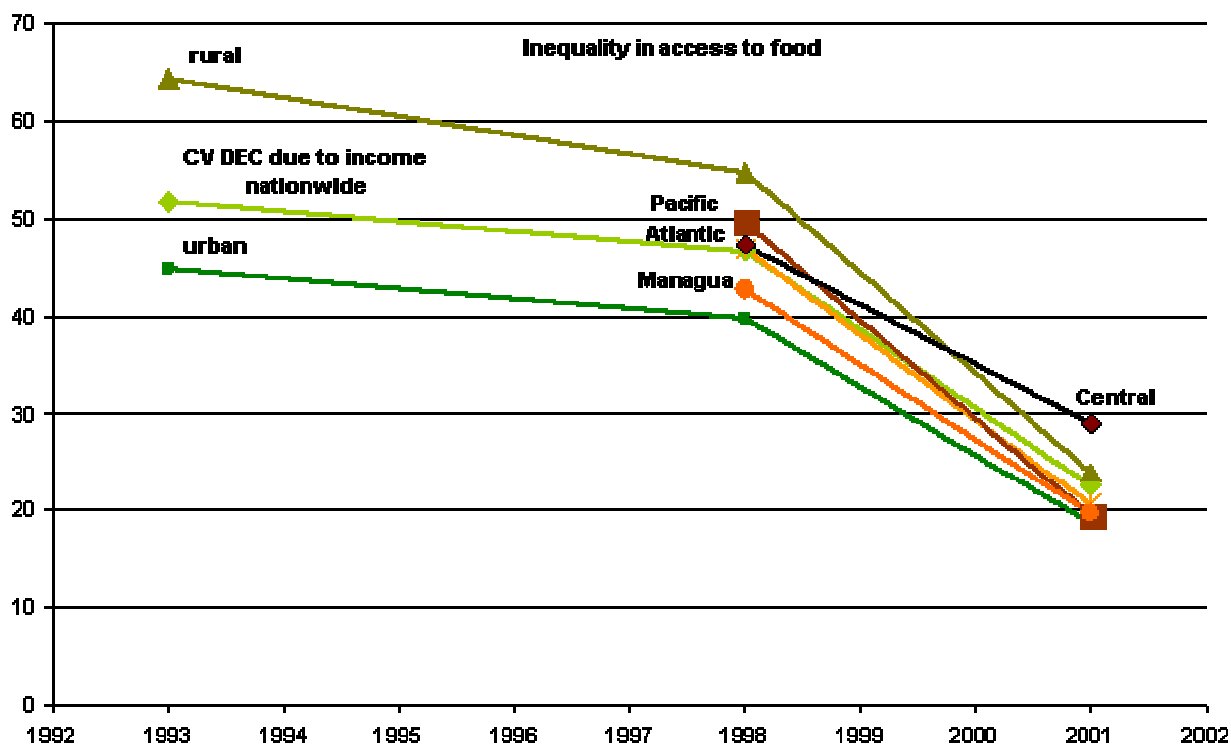
Graph 8a. Gini coefficients



**Graph 8b. CV of variation on food consumption (DEC and value) and income (full)**



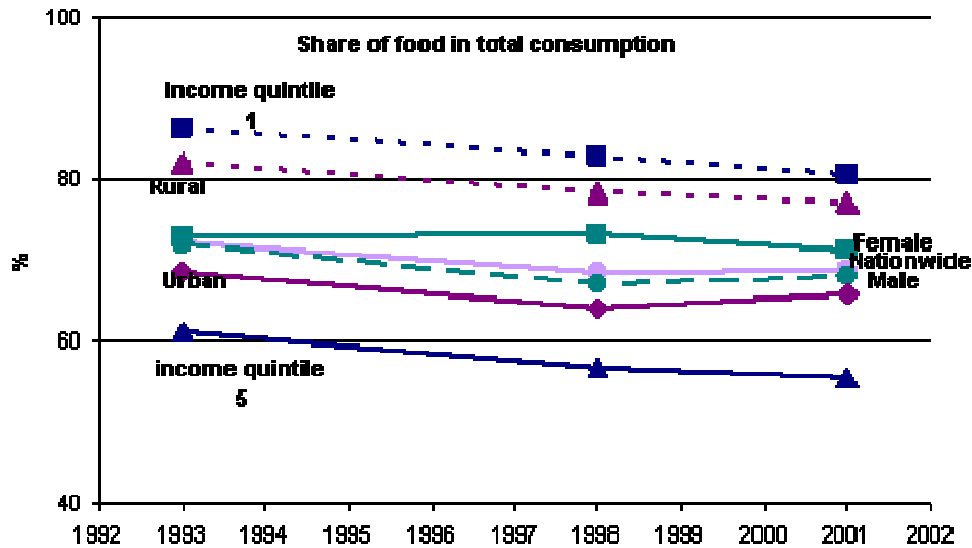
**Graph 8c. CV of dietary energy consumption (DEC) due to income**



***D. Share of food in total consumption***

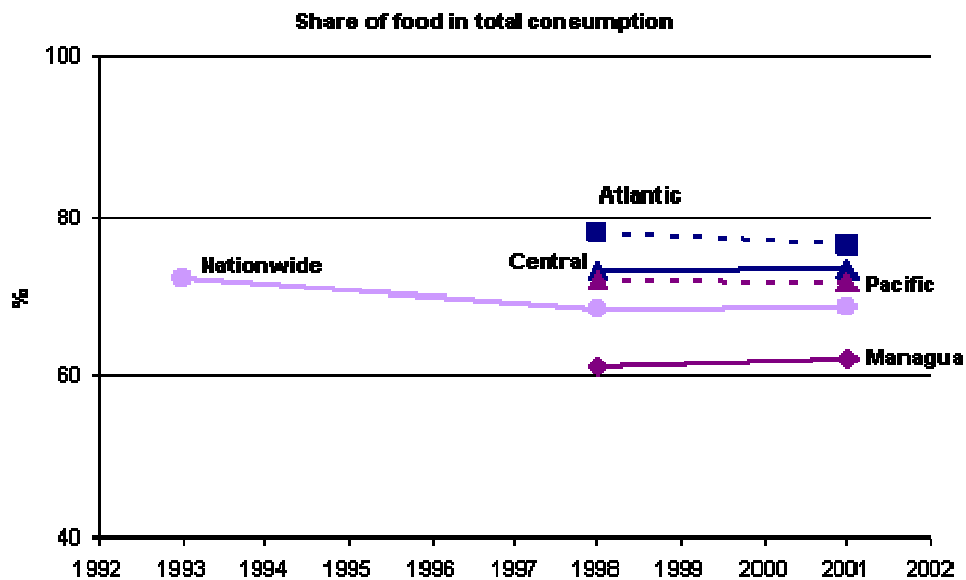
The trends of the share of the monetary value of food consumed with respect to the total consumption, also known as Engel ratio, have been very stable at a very high level nationwide and for all population groups (see Graph 9a).

**Graph 9a. Share of food in total consumption by population groups**



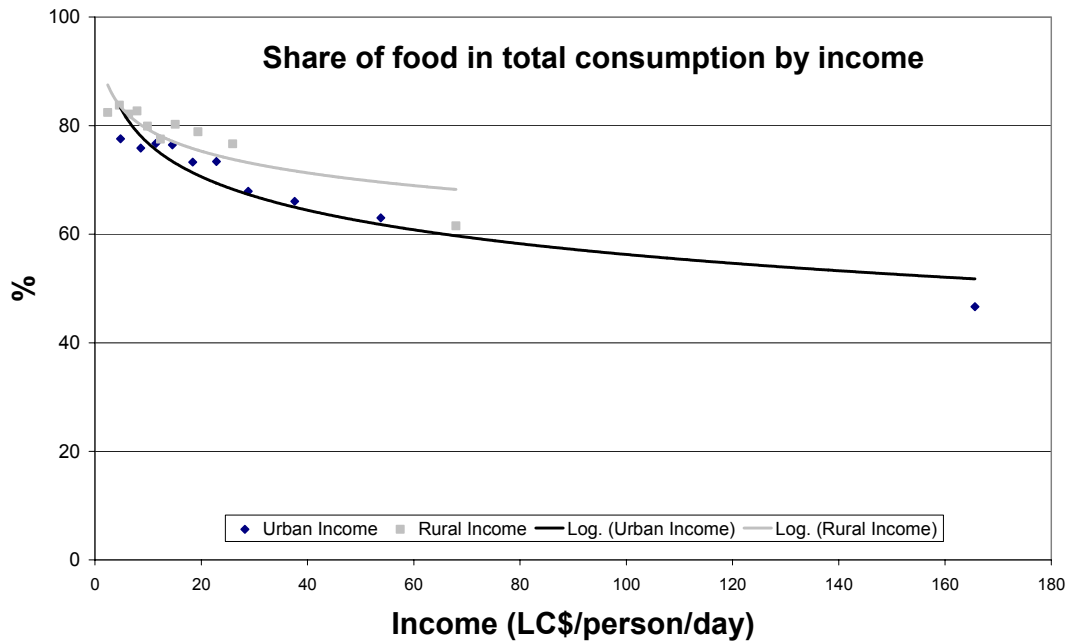
All population groups spend more than one half the value of total consumption. The highest share devoted to food occurred in the population of lowest income and the lowest share in the population of highest income. In all assessed years, higher shares of food to total consumption were observed in rural versus urban populations and in female-headed versus male-headed households. In all assessed years, the lowest shares of food to total consumption were observed in Managua while in all Atlantic, Central and Pacific regions the shares were high (see Graph 9b).

**Graph 9b. Share of food in total consumption by region**



The share of food in total consumption varies very little as income increases in both rural and urban areas. Even the highest income group (10<sup>th</sup> decile) in both areas expenditures on food are important shares of total consumption.

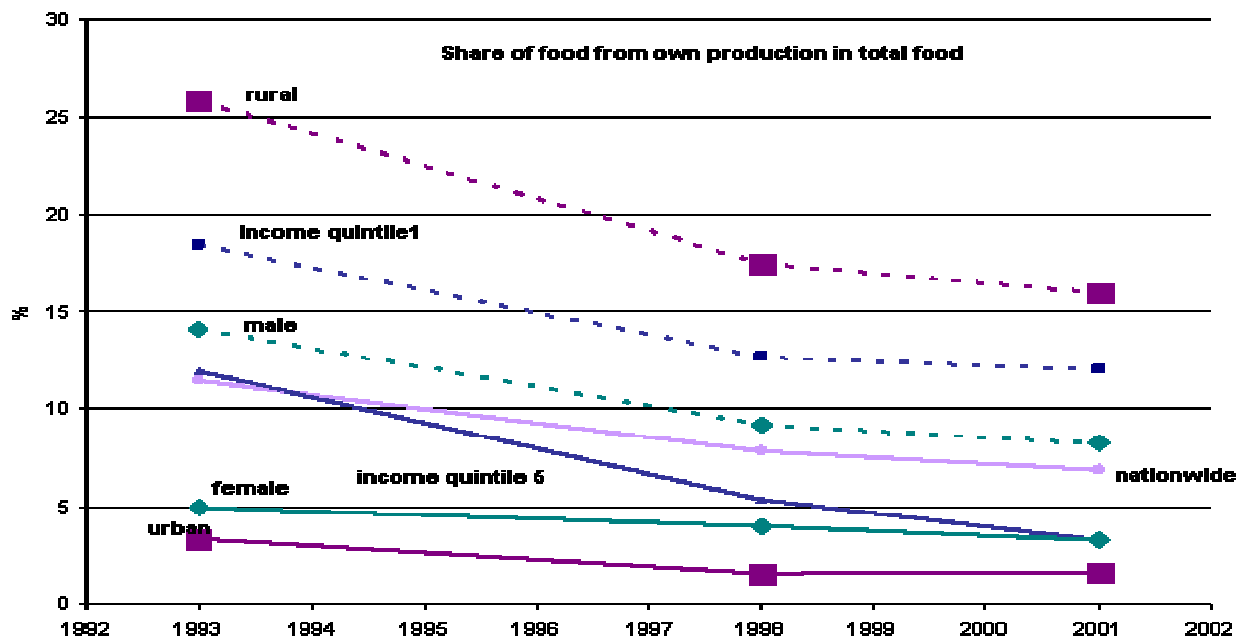
**Graph 9c. Share of food in total consumption by area 2001**



**E. Share of food from own production in total food**

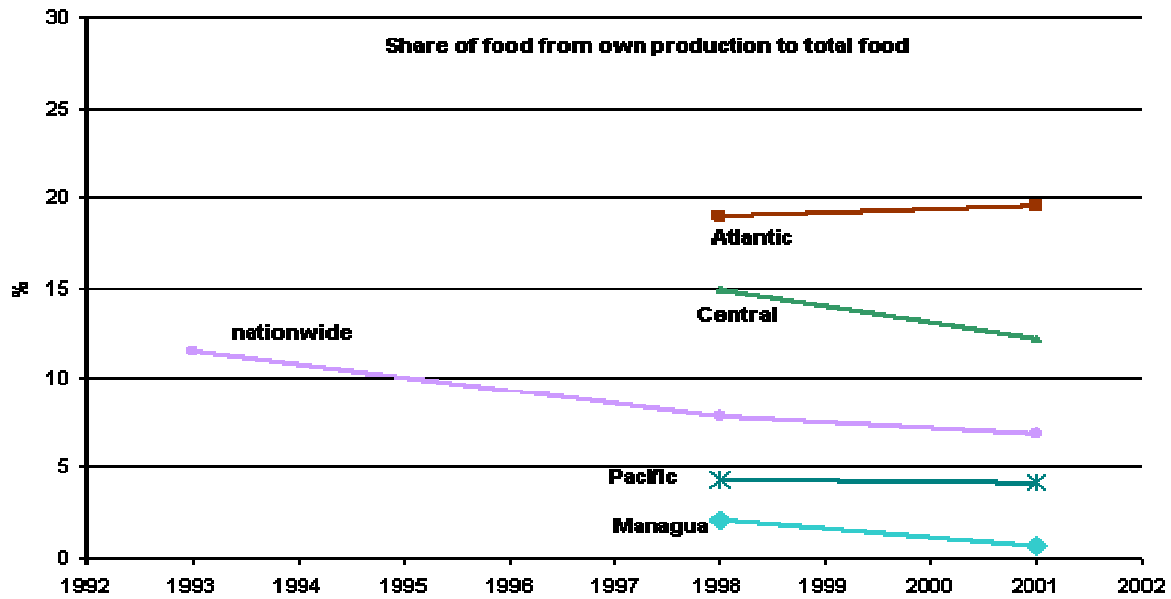
The trend of the share of food from own production (self-consumption) with respect to total food consumption in terms of dietary energy has decreased during the assessed years. The largest share occurred in rural areas, in lowest income households (quintile) and in male-headed households (see Graph 10 a).

**Graph 10a. Share of food from own production in total food by population groups**



The trend of the share of dietary energy from own production (self-consumption) with respect to total dietary energy has decreased in the Central region and in Managua (see Graph 10b).

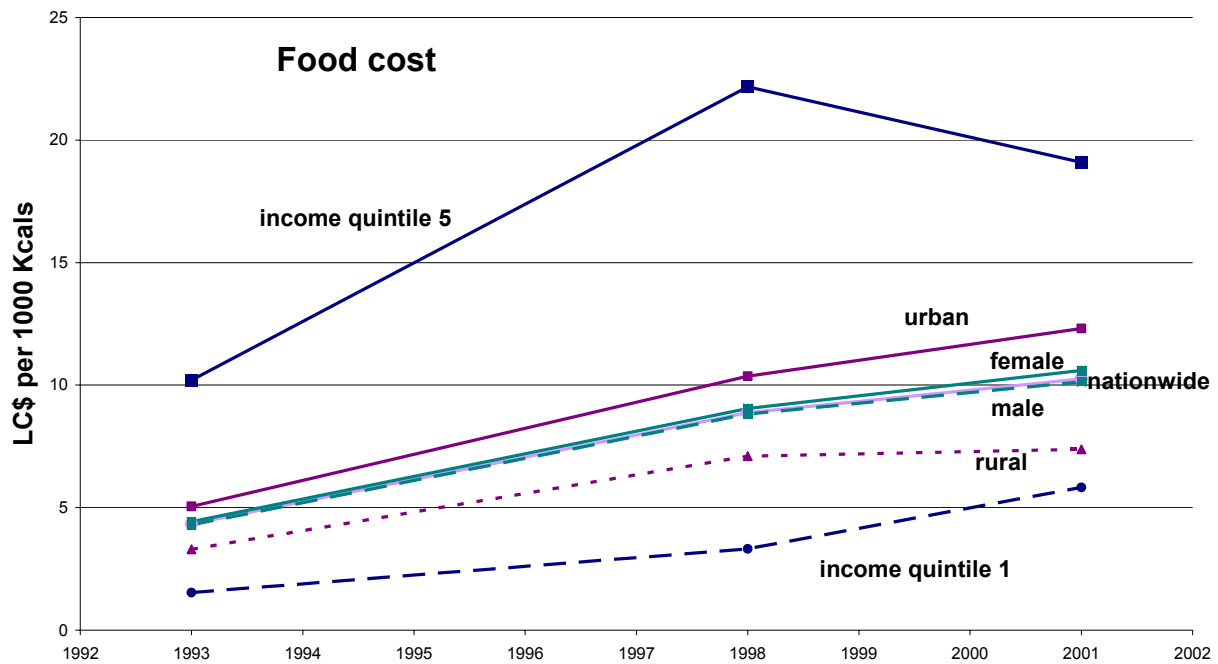
**Graph 10b. Share of food from own production in total food by region**



**F. Food cost**

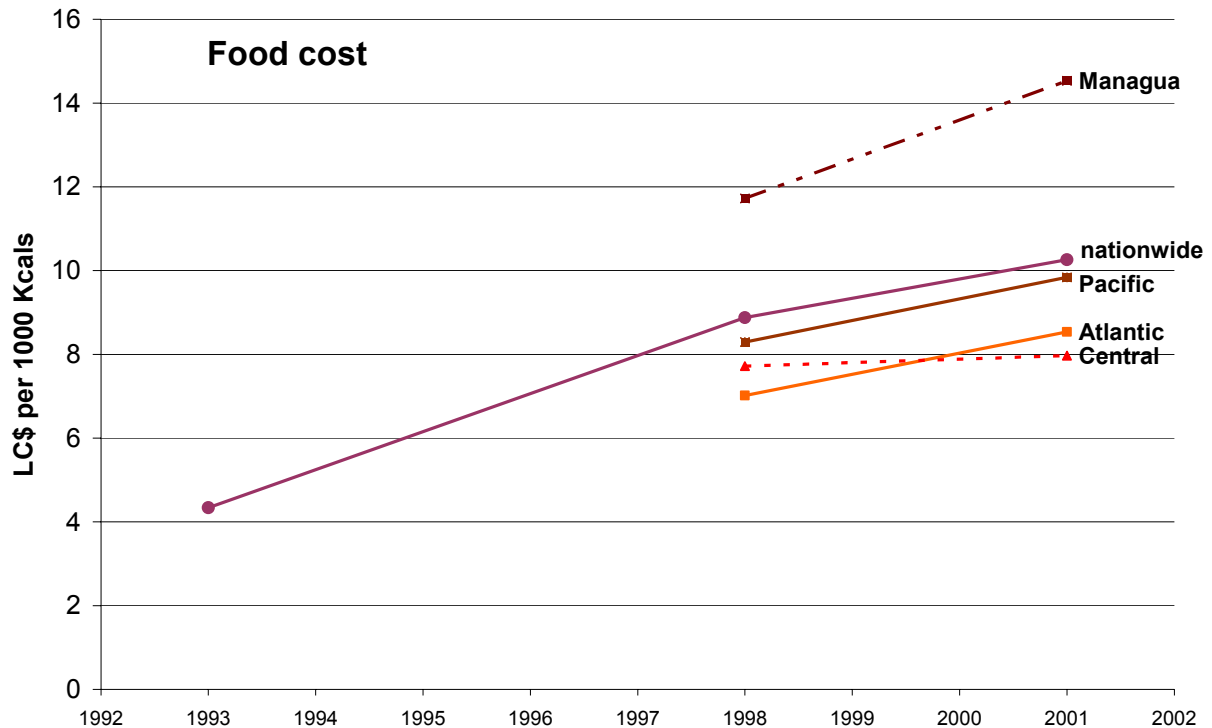
The trend of the dietary energy unit (1000 kilocalories) value has increased during the assessed years nationwide. It has increased more among household of the lowest income; in contrast it has decreased in households of the highest income (see Graph 11 a).

**Graph 11a. Food cost by population groups**



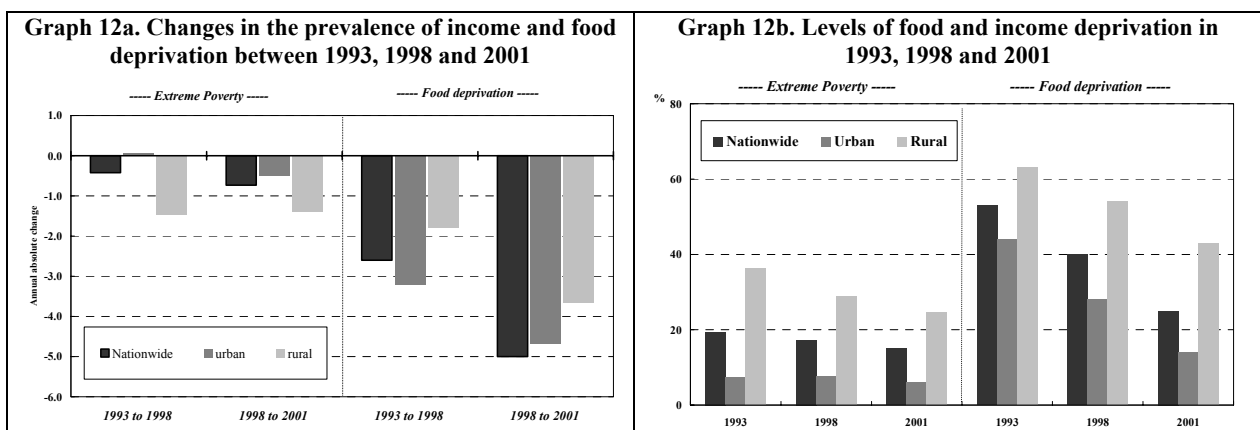
The dietary energy cost has increased more in Managua than in the Pacific and Atlantic coasts, while remained almost unchanged in the Central region (see Graph 11b).

**Graph 11b. Food cost by region**



**g. income deprivation versus food deprivation**

From the graphs 12a and 12b, that compare changes or levels in food deprivation and extreme poverty<sup>3</sup> between 1993, 1998 and 2001, it appears that food deprivation has decreased in Nicaragua at a faster rate than extreme poverty. Indeed, according to World Bank estimates, the progress in reducing extreme poverty at national level was very slow as number of persons



<sup>3</sup> Extreme poverty is based on the “food poverty line” that is defined as the per capita cost of purchasing a specific basket of food items, which in case of Nicaragua corresponds to a benchmark of per capita calorie requirement of 2187 calories per day. Overall poverty as estimated by World Bank is based on a “final poverty line” that adds to the “food poverty line” an amount that is deemed necessary to cover non-food consumption requirements. Note that the benchmark adopted by World Bank differs from the 1900 kcal used by FAO as minimum energy requirement to estimate number of undernourished in Nicaragua.

living under the food poverty line went from 4 over 20 in 1993 to 3 over 20 in 2001, while according to FAO estimates the proportion of people undernourished halved between 1993 and 2001 from 1 person undernourished over 2 to 1 person over 4. At regional level, extreme poverty was lower in urban areas but the fight against poverty proved to be far more successful in rural areas, while food deprivation decreased almost at the same pace in both rural and urban areas, even though rural areas still experience high rates of food deprivation as 3 persons over 7 are still suffering from hunger in rural areas against 1 person over 7 in urban areas.

This comparison between trends in fighting hunger or poverty is interesting as it raises the issue of the choice of the benchmarks used to estimate food deprivation or extreme poverty and the differences in methodology used to measure these two indicators of national well being. One is based on the cost of an average representative food basket and the other one on the actual distribution of food in dietary energy consumption amongst households.

Note also that the pace at which prevalence of income and food deprivation is evolving over time is not necessarily the same for all countries. For instance, a study based on 1992/93 and 1997/98 LSMS found that Vietnam was more successful in fighting extreme poverty than hunger.

## V. Conclusions and remarks

- Overall Latin America and the Caribbean (LAC) is the best-performing region in the developing world. It decreased its hunger both, in terms of prevalence and number of undernourished.
- During the first half of 1990's only Asia and the Pacific was performing better; however, in the second half of 1990's LAC experienced the highest reduction in the proportion of food deprivation and managed to decrease the number of undernourished in the total population.
- Even though significant progress in hunger reduction achieved so far, the hunger reduction must be accelerated to reach by 2015 the MDG target and not to say the more ambitious WFS goal.
- The progress in fighting hunger by individual countries is heterogeneous and few countries have already reached the MDG target (Chile, Cuba, Ecuador, Guyana and Peru), while others are striving for success (Bolivia, Brazil, Colombia, Costa Rica, Dominican Rep., El Salvador, Haiti, Jamaica, Nicaragua, Paraguay, Suriname, Trinidad and Tobago and Uruguay). At the other extreme there are still countries where hunger is a concern (Guatemala, Panama and Venezuela) and where there is a stand still situation (Honduras and Mexico).
- Food consumption, inequality of accessing to food, share of food to total consumption, share of food from own production to total food consumption and food cost contribute to the different situations of food security in sub-national population groups as illustrated in the case of Nicaragua.
- Even using preliminary results the progress in hunger reduction has been heterogeneous at sub-national levels in the case of Nicaragua and actions aiming to reduce food insecurity need to be reviewed in light of the various trends depicted by different food security statistics.
- An analysis of the context at national and sub-national population group levels as well as of the implications suggested by the trends of food security statistics by main stakeholders and



decision makers would provide elements to identify actions with short and long term effects in the fight against hunger.

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