

# **Challenges in Measuring Poverty in ESCWA Region**

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## **1. Introduction**

Since the onset of the nineties, the international community has witnessed a multitude of global conventions portraying a handful of issues and concerns that the majority of nations were facing. One of the most eminent documents that these conventions engendered is the **Practical Plan to Achieve the Millennium Development Goals (MDG)** which gave a detailed picture of the existing situation as well as a first hand enumeration of strategies that aim to achieve certain commitments that the member countries agreed upon. One of these commitments is the full eradication of poverty and deprivation.

The millennium development goals materialized into 8 objectives which were adapted by United Nations (191 countries) on the 8<sup>th</sup> of July of the year 2000. These objectives are to be reached by the year 2015, drawing on the year 1990 as a start-up point of assessment.

Along these lines, the agreed-upon millennium objectives serve as a means to detect social and economic developments at the level of each country. It is a tool that helps educational institutions as well as researchers, at the national level, to provide primary data for the computation of MDG indicators that can serve lead the way for further in-depth studies.

At a broader level, the ensuing MDG indicators serve as a tool for international comparison thus facilitating the decision-making processes in the fields of global economics and finances as well as a means to solve external debts.

What is more, the MDG –having a concrete and quantifiable feature- have been placed at the core of international as well as national development plans of action.

On the other hand, the commitment of the Arab member countries to achieve the mentioned above goals led to the betterment in the collection, the quality and the timing of related statistics. Also, many Arab countries, which never acknowledged the presence of poverty among their people as a reality, started focusing on the problem.

In addition, the MDG focused on poverty in all its aspects, be it income scarcity or illiteracy, gender equality or reproductive and children health. Also, the other issues or objectives dealt indirectly with poverty. For instance, the increase in school enrolment, especially that of girls, can alleviate poverty and hence mortality.

Moreover, the enhancement in primary health care can have an indirect positive effect on neediness.

Poverty, additionally, if not alleviated can form a barrier for sustainable development and the improvement of the economic development measures. Also, it can put at risk the countries' stability be it political, economic or social. On the other hand, it serves as a fertile ground for the proliferation of many social ills like deviation, fanaticism and extremism that can shake the state as a whole.

In view of that, the alleviation of poverty engulfs many methodological approaches that should deal with institutions as a whole and that should tailor to certain groups. To cite an instance, basic services like education and health care might be made public, however many groups can still not have access to them due to miscellaneous expenses that they can not come to turn with.

Based on this and regardless of the abundance in the compilation of studies and national plans of action to reduce poverty in the Arab world, there is a pressing need in the development of a framework to define and measure poverty and thus to delineate its association with other social indicators.

Factually, it was found that 19 % of the Arab world population subsists with less than 2 dollars a day (Ravallion and Chen, 2008), with the knowledge that figures differ internally and at the countries level. Moreover, given the unstable political situations in Algeria, Sudan and Iraq as well as the on-going struggle for peace namely in Syria, Lebanon and Palestine from on side and Israel on the other, added to that the striking poverty in Egypt which is, by and large, exceedingly overpopulated (where 40 % of the population was reported to live beneath the poverty line in 1995), it is estimated that one fifth of the Arab nation lived in absolute poverty at the dawn of the twentieth-first century.

Having all this in mind, the chief objective of this paper is to reinforce the capacities of the ESCWA member countries in the development of poverty statistics and hence making them comparable at a broader level. Likewise, the study exposes a methodological framework serving as a tool for poverty measurement and it sheds light on the basic principles in the collection of appropriate data that can form the base for the computation of the required MDG first objective indicators.

The study is, hence, made of 4 major parts other than the introduction which is the first. The second part deals with the concept of poverty and sheds light on the methodology of poverty measurement as well as the poverty mapping with a focus on

the ESCWA region. The third part depicts the need for the set-up of a framework for poverty measurement and exposes the data sets used in the estimation of poverty while highlighting differences in its exploitation in the region as a whole. The fourth section depicts the present gap in the statistical capacities of the ESCWA member countries and outlines the processes that should be taken in to build-up these capacities. Also, it exposes the multiple efforts that the international organizations have undertaken to reinforce data collection processes and to even out certain related concepts. The final part presents a set of recommendations and processes to be adopted by member countries to enhance the production of poverty statistics and to draw national strategies to relief deprivation in general.

## **Part 2: poverty concept and measuring methods**

Poverty is known for being a state of deprivation of a decent life that a person or a society is supposed to enjoy. Poverty doesn't only mean lacking what is necessary for the physical welfare of a person; it also means the deprivation from basic opportunities and choices such as living a long healthy and creative life, with a decent income, enjoying freedom, dignity, self-respect and respect for others. In addition to the physical deprivation, poverty has many other facets, namely isolation and alienation as a result of social and political marginalisation and discrimination; the loss of communication capability; incapability to face external and internal shocks; the feeling of insecurity in face of physical violence linked to low social standards or weak physical capacities, and to gender, religion or race.

It is clear that income is but one of the choices that people want to enjoy. Though it is an important choice, it is not the essential part of their lives, given that the limited choices and opportunities can be in many instances more closely linked to their welfare than the poor income. For the limited choices and opportunities are linked to the roots of poverty and can lead directly to empowerment strategies and other measures of promoting opportunities and making them available to everyone. The capability concept focuses on the choices available to individuals; they might benefit or choose not to benefit from them. A person's living standard in its generic meaning is measured by a person's possession of socio-economic, political or environmental assets.

1. **Economic assets:** including land, livestock, housing, skills, good health, labour and other physical elements providing an income-generating and

production basis in the present or the future. The human assets include skills and talents; thus the individuals' capability of improving their standards of living can be increased through education and training, which open the door to more opportunities. As for those with no formal education, they have other skills such as traditional knowledge and other physical and intellectual skills that can be used for that purpose. With the exception of the poor capability to work, other economic assets are often lacking or rarely acquired. Land is crucial for rural inhabitants and for three quarters of the poor income in the world who depend on agriculture for their living. Around one quarter of the world's rural poor in the developing countries are extremely poor who do not own a land nor have enough land tenure or ownership security. Even those who own a land, their land is often too small or not productive enough to ensure a living.

As for urban citizens, housing – and the right to housing- is one of the assets that are as important as the land for a farmer. It is often within the house that the self-employed start their business. But housing rights are rarely protected; the threat of eviction is a reality for many of the rural population.

As for the capital, which can be obtained through credits and savings, it is one of the essential assets that allow the poor to undertake income-generating activities – such as investments in small businesses or exploiting agricultural input. Families also use credits and savings to overcome crisis – such as draught, recession and diseases- without recourse to such measures as selling other assets or forcing their kids to drop-out of school.

2. **Socio-economic assets:** people's capability to rely on relationships with others especially on the basis of trust and reciprocity is another type of asset – it is the social capital. In times of hardship, family members or other local community members are usually the first resort for help. In poor areas, in times of sickness, women share cooking and child care burdens. People borrow from each other to fulfill basic urgent needs related to food, water, electricity or health care. In some cases, the household is made up of two or more nuclear families which increase its shock resilience facing poverty.

At the same time, this mutual relationship of trust and reciprocity constitutes the basis for the local community organizations that can negotiate with the governmental authorities for better services such as schools, dispensaries and water supply. Groups can also be formed to take collective political measures, which can lead in many instances to creating alliances outside the local community framework.

Nonetheless, social assets can decrease as result of the pressures of social relations, particularly violence and other destructive behavior patterns, and of the lack of time to invest in social relations. Therefore, promoting and enhancing socio-political assets are an integral part of one's possessions to enjoy a decent living standard.

3. **Environmental and infrastructure assets:** people depend on natural resources and infrastructure for their health and living. The availability of roads and transportation provides access to markets and jobs which limits the state of isolation. Infrastructure strengthens the health and knowledge status. Thus the reduction of public expenditures for infrastructure limits people's assets considerably. The access to these assets is highly irregular; rural communities often lack access to basic social services. But even in urban areas, lower income households pay more for their services. Water is supplied to rich areas via pipes but is supplied to poor areas by trucks – where the poor pay more money.

These assets are interconnected. Social assets can contribute to the establishment of economic assets. The solidarity between local communities could lead to a joint political action such as calling for school improvement and to the improvement of economic conditions by increasing job opportunities. The more assets are made available to individuals the less vulnerable they'll become and the more capable they'll be to deal with poverty issues. On the other hand, the decrease of these assets will make these individuals more prone to poverty issues. The loss of income exerts pressure on the human relations and could lead to the loss of socio-political assets- and then to conflicts and violence. Economic pressures can pit fathers against their children because of the heavy reliance on child labor. Children can also revolt against the additional responsibility they have to bare – fathers may not have the time or the

energy to supervise their children which could have difficulties in remembering their studies; they might refrain from helping with the chores, surrender to alcoholism, commit petty crimes or follow other destructive behavior.

**The level of welfare is determined by the economic, social and environmental assets available to a person; therefore poverty can be defined as the absence of the opportunities to access these assets.**

Thus, poverty in a broad sense is divided into two parts: first, the absence of physical opportunities due to insufficient education and nutrition, weak health, lack of training or the incapability to find a suitable job. It also means the absence of credits, roads, electricity, market outlets for their products, water, sanitation, health services on which health and very important work skills are based and the comprehensive economic growth that is very crucial for the creation of opportunities. This requires governmental measures to support building human capability, land and basic infrastructure assets of the poor or those at their disposal. **Second:** weakness, low security and safety and increased exposure to external shocks and risks such as health ailment, impotence, physical violence and the lack of adequate resources to without suffering huge losses. Improving security is considered an essential part of the process of improving welfare and it encourages investments in the human capital. Security improvement also requires building the poor assets, diversification of household activities and providing a number of insurance mechanisms to face shocks – from public services to programs promoting school enrolment to health insurance.

The different types of poverty can thus be distinguished according to the type of deprivation; there is the physical poverty, participation poverty, independence poverty, security poverty, human poverty and capability poverty; poverty can also be classified by its durability; there is the temporary or seasonal poverty, permanent poverty, potential poverty (vulnerability), or by measuring methods such as relative poverty, absolute poverty, severe poverty and subjective poverty.

The basic needs input is suitable to measure poverty in developing countries since poverty comparisons are made based on specified products and resources “ of food or other” that are considered essential to preserve the minimum standard of living in a specific community. Upon careful consideration, this could mean the incapability of people to have the minimum or sufficient level of nutrition, clothing, shelter, drinking water, education and health; and the non-physical needs such as the right to



participation, human freedom and social justice. It is worth noting that the basic needs could differ between countries and between periods within the same country. More generally, it encompasses the elements that fulfill individual's wishes superseding resources such as education and good health. Poverty in that sense could be capability deprivation as measured by the human poverty indicator which we'll clarify later on.

## 2-1 The concept of physical or income poverty

Physical poverty is known as the material incapability of securing a decent living standard (providing basic needs) based on which individual's status is defined as poor or not. Determining who is poor requires a definition of poverty and the poor. For that we need to answer two questions: first, what is the living standard indicator to be used to measure the standard of living? Second, how can we differentiate the poor and the non-poor? In other words, the definition of poverty calls for choosing a criterion to measure the standard of living and defining the poverty line which divides the society into the poor and the non-poor. In this regard, the classification of individuals as poor and non-poor must not depend on the individual's class. According to Ravallion, 1991, the diagnosis of poverty and the poor characteristics must be coherent. By coherent he means that **the poverty line must have a fixed value through time or between regions or the different social categories. Therefore, the coherent comparison between individuals means that any two persons of the same real consumption level are being classified as poor or non-poor regardless of time or space.**

The measuring of this type of poverty necessitates detailed income and consumption data of each household for all products during a specific base period such as income or expenditure surveys or standard of living surveys undertaken by many Arab countries.

### 2-1-1 Welfare measurement

There are many approaches to measure welfare (Ravallion, 1995). Poverty exists – in a society – if a person (or a family) cannot access minimum acceptable living conditions in society. But what are the factors or the indicators that reflect welfare and how can they be measured? There are many living standards indices that can be used, for example: total household income or consumption, per capita income or consumption, per capita food consumption, food expenditures to total expenditure ratio per household etc. We notice that there are many other factors that determine the

standard of living and impact welfare but they are not explicitly measured physically such as the capability to access health and education services, education quality, access to pure drinking water and suitable sanitation, in addition to some other social factors such as security and empowerment.

One of the most important and common approaches is welfare measuring in a physical measurement determined based on the amount of money required – at certain level of prices and with the assumption of maximizing benefits – to insure a certain level of benefit. Therefore we can compare and assess the level of household welfare by comparing their expenditure levels. In this case, the adopted approach at consumption levels is suitable for measuring poverty in developing countries – in particular – since it adopts the comparison of levels of deprivation of some essential goods and services (food and non-food) to reach a decent living condition in a certain society. But as mentioned above, there are many other factors that determine the level of living standards which affect welfare and which cannot be merged in one physical measurement. For example: access to education and health services and their quality. Consequently, the physical poverty measuring must be completed by a number of other social and human indicators such as infant mortality, life expectancy at birth and school enrolment rate etc.

What reinforces using physical poverty or income as a standard of living index is the use of the participation input for measuring poverty (EHDR, 1996). This input provides additional information that reflects directly the real expertise of the poor, their conception of poverty and their own poverty concepts. This input has shown that most people conceive poverty as a state of low living conditions, insufficient income and high probability of borrowing or begging while a limited number of surveyed said that there are other poverty characteristics such as supporting a big number of children, the incapability of attaining adequate education level or to be forced to recourse to child labor.

### **2-1-2 Is it preferable to use income or expenditures?**

There are many conceptual and practical considerations which make it preferable to use the expenditures – as welfare index – instead of income, particularly in developing countries:

First: income may not be consumed in total – when the family starts saving – and consumption is not fully covered by the income – the family may borrow money or

sell some of its possessions to fulfill its needs; it might even get aids in cash or in kind – hence, consumption reflects most suitably the real welfare. Consumption reflects what a household may acquire based on the current income and on previous savings.

Second: income, particularly the poor income, could be seasonal with disparities between the different months, while consumption is relatively stable.

Third: Determining the per capita income for small business owners could be very hard.

Finally, the surveyed may refrain from revealing their real income and are usually more honest about their expenditures.

**Therefore it is preferable to use expenditures or consumptions as a welfare index.**

### **2-1-3 Unit of measurement**

Household budget surveys are an important source of data for measuring poverty. The surveys register data-related per capita or household income, as well as goods and services consumption expenditures; thus, they are considered an important source of information related to welfare distribution in society. Nonetheless, when using household surveys it is very important to take into consideration an important factor, i.e. the unit of measurement.

Household surveys register total household expenditures or consumptions and not per capita expenditures for each member of the family alone. Consequently, when measuring poverty we may use the household and not the individual as a unit of measurement. However, using the annual total household expenditures could overestimate the welfare level of large households, given that consumed goods and services are divided upon a bigger number of persons. Whereas our main concern is the individual welfare, the alternative input is to use per capita poverty line based on the per capita share of the household expenditure to determine the household status above or below the defined poverty level (the minimum level of decent living conditions). But that reduces the household welfare level given that using the per capita share of the household expenditure as a welfare indicator presumes that all the family members are receiving an equal share of the expenditures and that they have the same level of needs, which is obviously not true. Households have a completely different age and gender structure. Children have different food and non-food needs

than the adults. Some goods are also used – shared – among the same household members, therefore adding a member to the family may not increase the household expenditure on that same good. To rectify this situation, we can calculate what is known as the household consumption units, where weights ranging between zero and the whole one for each family member; by computing them, we calculate the household size by consumption units. Children are therefore given a lesser weight than the whole one, the same applies to female. Calculating these weights is highly complicated; they might also change between times and regions and even within the same country. Many of the studies undertaken by the World Bank (such as Glewwe, 1987 and 1995) use the weight 0.3 for children less than 13 years old, 0.5 for children between 13 and 18 years old and a whole one for those older. It is worth noting that these weights were arbitrary and they might not apply to all countries so they are subject to severe criticism. For that reason, in case of availability of raw data (i.e. data for each individual household), it is preferable to use the household as a unit of measurement, taking into consideration the household age and gender structure; if that is not possible, the suitable alternative would be to use the household member.

#### **2-1-4 Poverty line**

Selecting poverty lines is an important step; the use of different methods could lead to a disparity in poverty levels which could reverse the ranking of the different sub-groups and the different time frames. When the objective is to monitor the progress level in reducing absolute poverty – known as the capability to fulfill the basic consumption needs – we should not consider individuals choosing to buy less with higher calories poorer than another person spending the same amount on more goods but with less calories, for these two individuals can enjoy the same standard of living (Ravallion, 1992).

Poverty line is known to be the amount of expenditure that should be reached for an individual to be considered not poor. Many literatures dealt with the absolute or relative measure – as clarified below – of poverty and the usefulness of the concept of absolute poverty whereby what is considered poor in one society and at a specific timing may not be considered as such in another society. The nature of poverty relies on the timing, the community, and the prevailing beliefs at the time of the study. Therefore, poverty is always considered as a relative and not an absolute concept.

### **Absolute poverty line**

Most common poverty measurements are related to those living in absolute poverty. This is the case when the per capita or household expenditure is below the level defined as the poverty line (the minimum value of basic needs). This line is fixed by real units through time as individuals below this line are considered poor. In this regard, for the purpose of international comparisons or even inter-regional comparisons within the same country, the PPP of different currencies through time and space must be taken into consideration upon measuring the poverty line. **Accordingly, at the absolute poverty line, the classification of two individuals at the same level of real expenditure must be the same for the poor or non-poor regardless of space and time.** We must also distinguish between the different regions of the same country, and not just between urban and rural areas; for different areas have different price levels and resources available, whether natural or human. Public services provided, such as health and educational services, and their quality also differ; thus, we should determine regional poverty lines – in each region within the same country – that reflect price disparities between regions, in addition to the different standards such as household members' age and gender, and the household economies. We shall explain all this in detail when we explain how to calculate the absolute poverty line.

How to choose the poverty lines is highly important. Poverty estimations depend on the used poverty line, and the most common method in this regard is the basic needs approach. Poverty line – via this approach – is determined by choosing the goods and services basket representing the basic needs for each time and space. The food basic needs cost is known as the food poverty line. If we add to that the non-food basic needs costs, we determine what is known as the absolute poverty line. The problem here is how to determine the basic needs.

Most of the Arab countries adopt the basic needs approach upon estimating the poverty line. Most of these countries have adopted the household or per capita line estimation and used expenditures as a standard of living measurement.

However, we have recently realized that most of the estimated poverty lines suffer one or many of the following shortcomings: (1) they are determined for the whole country neglecting therefore the essential differences in the consumption patterns and prices existing between different regions; (2) they do not take into consideration the different conditions of “basic needs” of the different family members, children versus adults and male versus female; (3) they use dummy food cost for the poor instead of real food; (4) they ignore “economies of scope” within the household – such as non-food items that can be shared between different family members, i.e. electricity or rent value which are considered as “non-competitive items” within each household, for any member using this item does not reduce the consumption of the other members. For that reason, living in large households can reduce the mean per capita expenditures to preserve a certain standard of living.

### **Determining the food poverty line**

The main component of basic needs is often food which provides a required level of calories. Accordingly, the food basket is selected to fulfill the basic calorie needs, determined by nutritionists and this basket coincides with the poor consumption pattern. This basket is assessed by using the dominant prices in different regions throughout different years – this is known as the food poverty line. Thus, we can consider food poverty lines as Laspeyres cost-of-living index. Ravallion, 1996, has clarified that the main advantage of the basic method is that it deletes the PPP disparities between the different regions or years. Therefore, we guarantee the coherent comparison of the living standards.

Some may object the use of calories only as an indicator for food basic needs; however, Lipton, 1993, stated that food shortage is often linked to calories deficiency or other factors that are not related to an income increase. The protein deficiency can be treated upon treating calorie deficiency. As for vitamin, iron and other mineral salts deficiency, it is not related directly to income and cannot be treated by raising food awareness or through public awareness campaigns.

*The other alternative* is to determine the cheapest ideal nutrition system to acquire the necessary food needs and estimate their value. But acquiring the basic food needs is not the only motive of human conduct or food consumption. The real household

consumption behavior depends on many factors, in addition to the food factor such as taste, nutritional habits and availability of food items and their relative prices. The computation of the proposed food basket cost is done according to the proposed food pattern based on the lowest prices for each food product, which is unrealistic for no household can buy sufficient food products for the lower prices. **Therefore, using the poor food pattern to identify the basic needs is the most suitable method.**

Food poverty line is often used to estimate severe poverty in a given country. The severely poor are thus known as the individuals who cannot satisfy even their food needs.

Most of the Arab countries follow now the latest proposed methodology to assess poverty line that overcomes most of the criticism which targeted the previous estimation methods. This methodology depends basically on raw data – *i.e. particular to each household*. It has been applied in the recent poor study in Egypt, Syria, Qatar, Jordan and Yemen.

**This methodology can be summarized as follows:**

The basic needs method is used to assess the household and regional poverty lines. The food poverty line varies between households and regions. Therefore, poverty lines reflect the disparities between food and non-food product prices between various regions; they also reflect the different household sizes, age and gender structures and their food and non-food consumption patterns.

**Step 1:** the basic step upon defining the food poverty line is to choose the food basket that achieves the basic food needs agreed upon. We should note that each household – according to the age and gender structure – has a minimum level of caloric requirements. Based on the height, weight, age and gender of individuals, we can identify what is known as the Basal Metabolic Rate (BMR), and then identify the caloric requirements of each age and gender category; Table 1 shows the equation used to calculate BMR while Table 2 clarifies the caloric requirements set by the WHO which states that males in urban areas need 1.78 fold the mean metabolic rate, while females need 1.64 fold. The equivalent number in rural areas is 2.1 for males and 1.82 for females. Accordingly, we can identify the individual or household caloric requirements based on his place of residence and on the age and gender of the family

members. It is worthwhile noting that this has been applied upon calculating poverty lines in some Arab countries.

**Table 1: The equation used to predict BMR as length H, weight W and age groups**

	Age range (years)	BMR
Men	10–18	$(16.6W + 77H + 572)$
	18–30	$(15.4W - 27H + 717)$
	30–60	$(11.3W + 16H + 901)$
	> 60	$(8.8W + 1\,128H - 1\,071)$
Women	10–18	$(7.4W + 482H + 217)$
	18–30	$(13.3W + 334H + 35)$
	30–60	$(8.7W - 25H + 865)$
	> 60	$(9.2W + 637H - 302)$

**Table 2: caloric needs depending on the type of professional work**

	Light	Moderate	Heavy
Men	$1.55 \times \text{BMR}$	$1.78 \times \text{BMR}$	$2.10 \times \text{BMR}$
Women	$1.56 \times \text{BMR}$	$1.64 \times \text{BMR}$	$1.82 \times \text{BMR}$

**Step 2:** after identifying the basic needs, Step 2 includes:

- 1- Identifying the food basket – quantities – that provides one calorie for an individual. There are thousands of methods that allow an individual to acquire these calories and the calorie cost increases with the increasing standard of living. The proposed method relies on identifying the quantities coinciding with the poor food behavior; it has been agreed upon that the referential food pattern is identified according to the quantities consumed by 20% to 40% of the poorest population – these quantities represent the “reference food basket” used to estimate the food poverty line.



- 2- Assessing the calories of each measuring unit (Kg or liter for instance) for each food product.
- 3- The calories generated by the existing quantities in a food basket are calculated, i.e. the calories generated by a reference food basket.
- 4- Defining the value of the food basket quantities by using the mean dominant prices in each region (rural, urban or district) or during the years of the study.
- 5- Computing the cost of one calorie of this food basket for each region.
- 6- If it is impossible to use the consumed quantities, we can use the number of calories estimated by the Ministry of Agriculture, but the caloric cost is calculated for the least 20% consuming households.
- 7- By multiplying the caloric cost by the required quantity of calories of each household, we calculate what is known as the household food poverty line, taking into consideration the household size, age and gender structure as well as the price disparities between the different regions.
- 8- The food poverty line is used as the threshold to identify the severe poverty.

This method can be described mathematically as follows: if  $Z_r$  represents the consumed quantity vector of the reference group (the 20% least consuming individuals), and if the calorie vector for each type of food is  $k$ , the total quantity acquired by the reference group is  $k_z = Z_r.k$ , and if we know that the caloric requirements of household  $h$  is  $k_h$ , the food basket representing the household  $h$  food poverty line basis is  $z_h = k_h/k_z \cdot Z_r$

Once the food basket quantities are identified, the calculation of their amount is done by multiplying the dominant product price in the region or year of study, according to the proposed quantities, thus we get the food poverty line value for each household.

### **Identifying the value of the non-food basic needs and the absolute poverty line**

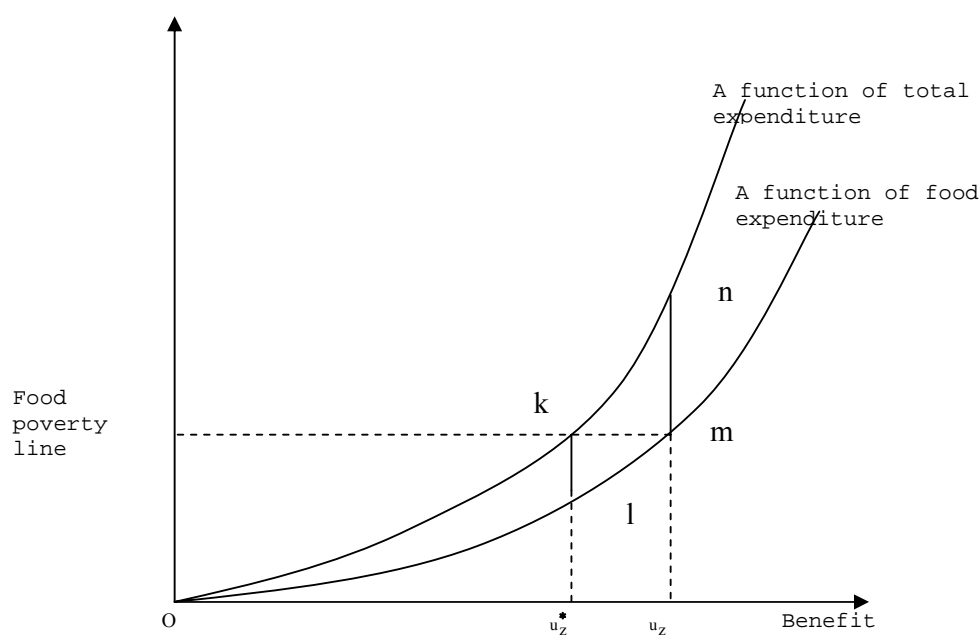
While food needs are determined on the basis of individual physiological need, there is no ideal method to determine the non-food needs. That is done by observing what is dominant in the society included in the study. Usually, two basic non-food needs are estimated to produce what is known as the lowest and highest poverty line. Thus, two levels of non-food basic needs are determined:

- 1- Determining the value of these needs for households which annual expenditures are equal to the food poverty line value; these households have been forced to relinquish their food needs to spend on non-food needs;

therefore, their non-food expenditure is equal to the minimum level of non-food basic needs. This method results in what is known as the lowest non-food poverty line (k l value as follows).

- 2- Estimating the non-food expenditures for households which food expenditure equals the food poverty line value. Consequently, their non-food expenditure is considered the value of the minimum level of non-food basic needs. This method results in what is known as the highest non-food poverty line (n m value as follows).

That can be clarified as follows:



The previous form clarifies the per capita benefit as a result of food expenditures (the lowest curve) and total expenditure (highest curve).

The n m value represents the amount of household non-food expenditure which annual expenditure is equivalent to the food poverty line value.

The food poverty line value is added to the non-food poverty line value (lower or upper) to obtain the total line (lower or upper).

The n m or k l value is defined by two right methods and are often use in poverty estimations in most of the developing countries.

First method: uses Engel's law, whereby the curve line can be estimated clarifying the relationship between food expenditure ratio as an indicator of the total expenditure and some other demographic factors.

$$s_i = \pm +'' \log(x_i / z^f) + \geq h_i$$

Where  $s_i$  is the percentage of food expenditure to total expenditure ratio;  $x_i$  is the annual consumption,  $z^f$  is the food poverty line and  $h_i$  is the vector of other demographic factors, such as the household size, children percentage, and adult male and female percentage.

The curve line is used in estimating the non-food necessary expenditure level for households. This method has been used in the World Bank reports on poverty in Egypt and Yemen and in the UNDP reports in Syria and Lebanon. This method allows to identify a poverty line for each household and region (households living in the same region which have the same age and gender structure have the same poverty line). This method also takes into consideration the household place of residence, size and age and gender structure, as well as the participation to the consumption of some goods where the percentage of the non-food goods and services expenditures depends on the household size and age and gender structure; therefore, the discrepancies in food expenditure ratios is related to the differences in the household size and its members age and gender. That also takes into consideration the participation of the household members to the consumption of some goods.

The second method: known as the Kakwani method (2005); by which the non-food basic needs are estimated by identifying the non-food expenditure for households that actually spend on food the equivalent of 90% to 110% (known as the base households) of the per capita food poverty line, then the food expenditure to total expenditure ratio for these reference households; the absolute poverty line aggregated by multiplying the food poverty line value by the inverse of this percentage. This method was used in Tunisia, Morocco and Jordan.

The idealist method of Kakwani's to estimate the non-food basic need taking into consideration the principle of participation is the deflation of non-food expenditures whereby the principle of participation the household expenditures is taken into account by multiplying the non-food expenditure by the participation coefficient. For example, we assume that 80% of the housing expenditures do not depend on the size of the household, while the remaining 20% depends on the number of family members. The value of 80% is called the participation coefficient. Then, participation

coefficients are imposed to each group of products, identifying accordingly the household expenditures on non-food products, including the principle of participation and the household size. But this method is criticized for not using an objective method to determine the participation coefficient; it relies heavily on personal judgments. In Jordan for example, the non-food expenditure was multiplied by the coefficient 0.92. Estimating the poverty line based on the food behavior pattern of the poor requires breakdown data of the consumption quantities and values of each staple food for each surveyed household.

### **Relative poverty line**

The relative poverty lines are often adopted in the developed countries. They define poverty according to a percentage of the national mean or average. For instance, the poverty line can be described as representing 50% of the national mean. Poverty line would only be in this context sensitive to changes in the welfare relative distribution, on the basis of the Lorenz curve variations (Ravallion 1992). Developed countries with high living standards study poverty according to the definition of the relative poverty line; for economic conditions in such countries allow identifying categories of people living below socially acceptable levels, but who do not find any difficulty in fulfilling minimum living requirements. This relative concept shows that poverty has totally different meanings in societies with high levels of income and consumption, compared to societies with relatively low levels of welfare.

The relative poverty concept was widely criticized and described as an inequality measurement and an inefficient approach to study poverty. While inequality is a concept more accepted politically and morally, relative poverty measurements do not have the same credibility as absolute poverty concepts.

### **Subjective poverty line**

Subjective poverty line defines poverty based on individuals' assessment of the minimum acceptable living standard in a society. This approach often relies on reactions to the traditional survey question: "*what income level do you personally consider as minimum?*" (Ravallion, 1992). As for poverty measurements based on the subjective approach, they rely greatly on income. The higher the per capita income, the higher will be the individual perception of the supposed minimum living standard. Besides, subjective approach to poverty includes individual judgment to reach a consensus regarding the definition of poverty, as objective poverty line can for

instance be defined based upon individual assessment of the income necessary to face living requirements, or based on his assessment of the minimum income. The survey elaborated specifically to study subjective poverty includes these two types of questions.

Asking about the individual perception of the minimum acceptable income has political significance: if all the people feel that they are poor, it is expected that they will not support the government's socio-economic policies.

However and as mentioned earlier, there is a sort of social bias and specificity regarding the "basic needs" concept, including the food needs; for basic needs are different across time and space. Accordingly, "the line between basics and luxuries is not an objective fixed line; it is defined according to the social context and is constantly changing. Some have adopted and developed this vision and have completely stopped trying to analyze poverty on a quantitative basis"; for the analyses of poverty (especially but not limited to developing countries) have become subject to a strong duality between the "objective-quantitative" methodology and the "subjective-qualitative" methodology (Ravallion, 2001).

As for the intermediate approach between these two poles, it was reflected in some literature about poverty in the developing countries, where a "subjective poverty line" is established based upon answers of the surveyed people to questions related to "the minimum income".

It is then possible to identify any individual whose income is below the level defined according to the answers given as poor. However, that will definitely lead to some inconsistencies within resulting poverty measurements, as people who have the same income or any other identified economic welfare measurement will be treated differently; for people of the same income category might respond differently to the questions concerning the minimum income, but they should all be identified as poor to avoid any inconsistency. On the other hand, the previous field work concluded that the value of the answers to the questions concerning the minimum income rely heavily on the income. The poverty line can thus be established based upon the answers to the questions on the minimum income through the intersection method, created by Gustafsson et al. (2002). Poverty line is calculated as the poverty level, through the following equation:

$$\text{Log}(Y_{\min}) = a_0 + a_1 \log(Y).$$

$Y_{\min}$  indicates the answer to the question on the minimum income, while  $Y$  indicates the household current income. The intersection is chosen along with the absolute poverty line value, according to the belief that individuals whose real income is close to the minimum income have a realistic perception of this minimum level. Indeed, individuals who have an income less than the minimum income tend to decrease it, while individuals with higher income tend to overstate the minimum income level.

Meanwhile, some literature have identified other economic welfare determining factors that drive the subjective poverty line, such as the household size, location, the educational attainment of the head of the household and the household demographic structure. Indeed, the answers to the questions on the minimum income are often used as points of the consumption costs axis (where minimum expenditure is defined to ensure a certain level of entitlements) at the “minimum entitlements” point, defined as the poverty line in the area of benefits. According to this explanation, the subjective welfare assessments provide a mechanism to overcome the common problem of identifying benefits based on the demand behavior only, while household specifications and components differ (Ravallion, 2001).

However, the subjective poverty line approach faces also methodological problems, as explained in many literatures; it relies mainly on the formulation of the question asked to the targeted person and on the income and the household consumption measurement which is one of the elements of the previous equation.

### **Poverty line in international comparisons**

For international comparison purposes, the World Bank issues poverty estimations for the developing countries considering that severe poverty line is equal to spending one dollar per person a day and two dollars a day, the dollar is assessed based on the PPP. In this regard, societies are divided for those with expenditures below poverty line (the poor) and above poverty line (non-poor). The World Bank (International Comparison Program ICP) publishes and updates national currency assessment data for most of the countries worldwide, equivalent to the PPP dollar using food and non-food product basket computed and evaluated between 1993 and 1996 and then calibrated to the 1993 prices.

The World Bank updated poverty lines used in international comparisons to be equal to 1.25 dollar and 2 dollars per person a day (for the year 2005 by using PPPs). This line has been estimated using the most recent data of the 2005 ICP round and the poverty line estimated at 1.25 dollar a day in 2005 which is the mean national poverty lines for the 10 to 20 poorest countries in the world according to the PPP dollar.

There are many reserves concerning the use of 1.25 dollar per person a day as a poverty line: since **first** it does not reflect the different concepts of poverty related to each country or region; in addition, poverty estimations based on this poverty line do not reflect the different countries specificities and growth level; poverty in different countries is often estimated by using the national poverty line. **Second**, it does not take into consideration the differences in living standards and prices between different regions within the same country, particularly between rural and urban areas. **Third**, as is the case with all poverty lines based on the individual measuring unit, it does not take into consideration the different needs of individuals according to their age and gender, for a child's needs certainly differ from the needs of an adult; nor the principle of participation between household members. **Finally**, although the PPP is calculated on a food and non-food product basket basis, this basket does not reflect the real consumption pattern of the poor.

## 2-2 Poverty measurements

Once the poverty line is estimated, a measurement should be chosen to reflect the status of poverty in a society or in a part of society by knowing the percentage of the poor and the intensity of poverty. One of the most common poverty measurements is the Foster-Greer-Thorbeck Index which encompasses all the specificities of a good measurement which are:

- 1- Fixed scope: i.e. the measurement does not change while everything remains the same if the total population doubles for example.
- 2- It is specifically related to individuals' welfare below poverty line and not to the non-poor; i.e. changes in the rich welfare level do not impact the poverty measurements.
- 3- Flexibility: when the expenditure level of one of the poor decreases – while other factors remain constant – the poverty measurement will increase.

- 4- Transfer: when a part of a poor person consumption is transferred to a less poor person – while other factors remain constant – the poverty measurement will increase. To the contrary, poverty measurement will decrease if a part of a poor person expenditure is transferred to a poorer person.

Foster-Greer-Thorbeck proposed in 1984 a comprehensive poverty measurement:

$$P_{\alpha} = 1/n \sum_{i=1}^q [(z - y_i)/z]^{\alpha}$$

Where  $y_i$  is the individual  $i$  expenditure,  $z$  is the poverty line,  $q$  is the number of individuals spending less than the set poverty line per year,  $n$  is the number of individuals in a society. For more details, see Ravallion, 1992.

The **poverty rate index** (when  $\alpha$  equals zero) is considered a measure of the poverty prevalence. It reflects the number of poor individuals or households – as identified by the poverty line – as a percentage of the total population. But this index is not sensitive to the poor distribution below poverty line. This shortcoming has been avoided by the two following indices: **the poverty gap index** (when  $\alpha$  equals one) is considered an index of the poverty intensity; it is the gap between the observed expenditure levels of poor households and the poverty line. With the assumption of similar objectives, the poverty gap index refers to the size of the required “transfer” resources to raise a poor household above poverty line.

As for **the poverty severity index** (when  $\alpha$  equals two), it calculates the distribution inequality level below the poverty line and gives and gives a bigger weight for the households at the bottom of the income or “expenditure” distribution level.

To clarify the mentioned above, we suppose that – as a result of policy changing – 10% of the income has been redistributed from a poor household with an income that place it amongst the 30% below poverty line to one that is at 50% below poverty line. The index of number of individuals in this case will not change given that the volume of redistribution does not allow to any of the households to cross the poverty line. The poverty gap index also will not change since the redistribution took place at below poverty line levels. But the impact of the redistribution policy will be measured by the poverty severity index whereby the position of the lowest distribution ranking household will improve.



**Example: 3 communities composed of 10 members of poverty line 100 units. There are 3 individuals in each community is spending less than the poverty line.**

Item	First Community	Second community	Third community
Expenditure of the first individual	80	90	85
Expenditure of the 2 <sup>nd</sup> individual	80	80	80
Expenditure of the 3 <sup>rd</sup> individual	80	70	65
No of poor	3	3	3
% of poor	$3/10=30\%$	$\%30=10/3$	$\%30=10/3$
The value of the poverty gap	60	60	70
Measure the poverty gap	$(60/100)/10*100$ =6%	$(60/100)/10*100$ =6%	$(70/100)/10*100$ =7%
Square value of the poverty gap	1200	1400	1850
Measure of the severity of poverty	$(1200/100/100)/100$ =1.2%	$(1400/100/100)/100$ =1.4 %	$(1850/100/100)/100$ = 1.85 %

### **2-3 Human and capability poverty concept (poverty in human development)**

Since the publishing of the Human Development Report in 1990, human development has been defined as the process of widening people's choices; the most important choices are to live a long and healthy life, education and a decent standard of living. There are additional choices that include political freedom, other guaranteed human rights and different components of self-respect – including what Adam Smith called

the capability to mingle with others “without being ashamed of appearing in public”. These are some of the basic choices which absence can obstruct many other opportunities. Hence, human development is the process of widening people’s choices and improving their welfare level.

If human development is related to widening the scope of choices, human poverty is synonymous to the lack of essential opportunities and choices for human development, i.e. to live a long, healthy and creative life, to enjoy a decent standard of living, freedom, dignity and self-respect and the respect of others.

Comparisons between human development and human poverty are two different methods to assess development. One of these methods is the “integration perspective” which concentrates on progress aspects achieved by the society as a whole, poor and rich. An alternative point of view to this method is the “deprivation perspective” by which development is judged based on the poor and underprivileged way of life in society. Any considerable progress – of any size – achieved by the rich in a society which will increase the human development index for the whole society but it does not necessarily signify an improvement in reducing deprivation amongst the underprivileged categories.

The focus on the development process includes these two perspectives. At the macro level, the focus should be on the life and success of the whole population. It would be wrong – in our understanding of the development process – not to fully grasp the gains and losses of those more fortunate than others. That will be in contradiction with the right of each citizen to be taken into account; it also contradicts with the overall considerations of public ethics. Nonetheless, the general concern in the progress achieved by any country is focused specifically on the status of underprivileged categories.

The link between the human development index and human poverty index should be similarly considered; they both use the abundant information categories related to human development – human life specificities and the quality of life which exceeds the scope provided by income-related information. While the human development index uses these specificities from a general perspective, the human poverty index should use them from a deprivation-related perspective. The availability of GDP-related measurements does not mean neglecting the need to an income-based poverty index and the human development index should not dismiss the need to the human

poverty index. If the human development focuses on the progress of a society as a whole, human poverty focuses on the status and progress of most of the underprivileged categories of this society. The difference between the two is similar to the difference between the GDP and the income-related poverty index. From the income perspective, there is a need to know the poverty prevalence to monitor poverty eradication progress. Identically, there is a need to know the human poverty index to assess poverty levels in a country and monitor its prevalence.

### **2-3-1 Human poverty index**

The human poverty index measures deprivation in essential human development dimensions similarly to the human development index, i.e. survival, literacy and decent standard of living. The used variables are the percentage of population with a life expectancy under forty years, the adult illiteracy percentage, the percentage of population with no access to safe water and the percentage of underweight children under five years. Although interest in nutrition and malnutrition is at the heart of the poverty measurement process whether it is human or income poverty, it allows us to use information related to the nutrition status; that is one of the personal income-related elements, by using malnutrition estimates, although these estimates are affected by a number of variables such as croplands, climate conditions, activity patterns and epidemics.

Since our main concern is the potential life of individuals, it is therefore logical to tackle directly malnutrition prevalence rate, applied in the human poverty index, which focuses mainly on child malnutrition that is relatively easy to measure with pertinent useable data available more regularly.

Regarding public services, the index of access to health and safe water services has been selected. By computing these two variables related to service access opportunities and malnutrition prevalence rate, we can get a clearer general image on the availability of economic services – private and public – to complete survival and literacy related information. But the health services access index has been dismissed for absence of a precise definition of health services and their quality. Access to safe water and malnutrition prevalence rate are the only components used to reflect a decent living standard.

These are the main information components included in the human poverty index. It is worth noting that there is no escaping subjective estimation in any choice. Choices were made based on balancing pertinent considerations and data availability and quality. However, the variables with high quality data for each country were chosen. There has been an attempt by these choices to set a balance between convenience requirements and the need for useable data.

These indices are criticized for focusing on country status and not individual status, therefore the poor cannot be directly targeted. They cannot be used to assess the status of small communities or districts either; nonetheless, they remain a useful measuring method to increase our knowledge as to the global socio-economic development situation and to make country comparisons. This index adopts some dimensions that clarify the dominant living standard in the countries included in the study. One of the disadvantages of this index is that it does not adopt any income measurement and the worst is that there is no clear definition to a main component of this index, i.e. the percentage of the population with access to safe water. For example, what is the definition of “safe water”? In addition, as a complex measurement, it cannot be used to measure progress in human poverty, since a progress could be achieved in the health sector of a certain country without any decrease in the illiteracy rate. There are also various dimensions to the concept of poverty that are difficult to measure. It is difficult to cover them by measuring the human poverty component. There are some important human poverty dimensions that have been neglected in the human poverty measurement such as the absence of political freedom, the incapacity to participate in the decision making, the absence of personal security and the incapacity to take part in the local community life (UNDP, 1997). As all other indices, the human poverty index has its weaknesses, in data and concept. Like all other indices, it cannot target human poverty in groups. However, the human poverty index combines in one number aspects that are often neglected when the focus is on income alone. Hence, human poverty index is a useful addition to poverty measurement. This index combines poverty basic elements and reveals contradictions or complementarities with income poverty.

### **Human poverty index -1**

Human poverty index focuses on deprivation from three main human life dimensions that are also reflected in the human development index, i.e. life expectancy,

knowledge and decent living standards. Deprivation of the first dimension is related to survival – i.e. death at a relatively age, measured by percentage of persons not expected to live beyond forty years and we will refer to it as ( $h_1$ ). Deprivation of the second dimension is related to knowledge – denied access to literacy and communications, measured by the percentage of illiterate adults and we will refer to it as ( $h_2$ ). While the deprivation of a decent living standard is represented by a component of three variables – the percentage of people with no access to safe water, the percentage of those with no access to health services and the percentage of children under five years, severely or medium underweight. This last component encompasses the simple mean of previous variables and we will refer to it as ( $h_3$ ).

The human poverty index is calculated according to the following equation:

$$\text{Human poverty index-1} = \left\{ (1/3) * [(h_1)^\alpha + (h_2)^\alpha + (h_3)^\alpha] \right\}^{(1/\alpha)}$$

### **Human poverty index-2**

There is another measurement for human poverty usually used when measuring poverty status in developed countries. It is composed of four indicators: the rate of individuals expected to die before 60 years  $l_1$ , illiteracy rate  $l_2$ , income poverty rate  $l_3$ , the poverty line is defined here on the basis of half of the average per capita expenditure, and the long-term unemployment rate  $l_4$ .

$$\text{Human poverty index-2} = (1/4) * [(l_1)^\alpha + (l_2)^\alpha + (l_3)^\alpha + (l_4)^\alpha]^{(1/\alpha)}$$

The **compilation process** might be affected by the overlapping of the different dimensions of the human poverty index; let us consider for example that 30% of the population of each of the three deprivation categories is not fulfilling the minimum level of requirements, because the same 30% is not fulfilling the requirements related to the three combined fields. The same situation could apply if another 30% of the population does not fulfill the requirements of each category. We could combine these two contradictions; on one side we have only 30% of people affected by poverty but they do not suffer of deprivation on the three dimensions. On the other side, we have around 90% of the total deprived population, but each group suffers from deprivation in one of the dimension only. Although it is not easy to acquire information related to this overlapping (the common coefficient of variation), and given that the various coefficient of variation related data are taken from different sources, these differences could be highly significant in describing the poor and could also be highly crucial in

the causality analysis, for one type of deprivation often affects other types of deprivation.

Nonetheless, when setting an index, it is never easy to decide whether 20% of the population suffering from shortages in all three dimensions represents group poverty more than the 90% of the population suffering from one type of the three deprivation dimensions. It is a question related to the importance given to the severity versus prevalence. For the purpose of setting the human poverty index, the two cases have been treated equally whereby severity and prevalence were equally taken into consideration.

Another matter however, needs to be tackled upon deducing a compilation index, which is the possibility to substitute any of the three elements of the human poverty index by another. That has been done through a clear procedure using an additional weight. When  $\alpha$  is equal to 1, it should be totally substitutable. The total can be deducted by simply calculating the mean of the three deprivation status; the opposite situation where substitutability considers  $\alpha$  as infinite. In this case, the highest percentage of deprivation cases will dominate. For example, if the 30% does not fulfill the requirement of the first dimension, 50% for the second and 45% for the third, the total poverty scope in this case is simply 50%.

The total substitutability is an overrated assumption that contradicts with the logical supposition that if deprivation in one of the dimensions becomes relatively more severe, we must increase the objective weight to eradicate this deprivation. The other antipode, the non-substitutability, cannot be supported as long as it means that any deprivation increase within any of the categories except with the highest percentage of deprivation must not introduce any change to the total poverty measurement. Both antipodes should be avoided by choosing a mean value of  $\alpha=3$ .

### **2-3-2 Capability poverty**

The measurement of capability poverty relies on three basic indicators: health-food indicator reflecting the rate of underweight children under five years. This rate reflects the incapacity of providing good food and the resulting good health, knowing that children are the most affected category in particular – they suffer pathological malnutrition at the time when their brains and bodies are developing. A reproductive health indicator reflecting the percentage of birth without trained healthcare attendants. This percentage reflects approximately the deprivation level of providing

reproductive health capacity. The third indicator is the education and knowledge representing female illiteracy rate which reflects the deprivation level in education and knowledge attainment. The capability poverty measurement encompasses the simple arithmetic mean of the abovementioned indicator. The advantage of this index (capability poverty measurement) is that it is focused on estimating female deprivation level. There is no doubt that this deprivation has a negative impact on the household and community welfare.

## **2-4 Poverty and vulnerability**

Vulnerability is a state of weakness (for lack of sufficient assets) facing sudden widespread economic shocks or even individual shocks, such as a simple worker losing his capacity to provide a living. Poverty is also considered as the incapacity to change the socio-economic forces that sustain the state of weakness facing shocks. It is usually closely linked to income decrease or expenditure vulnerability although the latter encompasses the loss of mechanisms to face difficult circumstances such as disease, disability, unemployment, disasters and crises.

The vulnerability concept confirms the household incapacity to sustain its current welfare position in case of a shock or a crisis. While poverty and vulnerability are closely interlinked, they represent however two different welfare dimensions. The first describes the static household situation at a certain moment in time, while the second shows the dynamic household situation that clarifies how a household situation can change as a result of a shock. Thus, vulnerability is known as the possibility of a household to fall into the poverty cycle in the future. Similar to the poverty concept, the “vulnerability” concept is complex and multi-dimensional and cannot be summarized in one measurement.

For that reason, poverty studies in the last years have shifted from studying the current situation of the poor to the poor dynamics, the impact of crisis on falling into the poverty cycle and the mechanisms adopted by households when facing a shock. Accordingly, detecting households that are more prone to fall into the poverty cycle as a result of facing shocks and the strategies adopted to overcome crisis is the corner stone of household assistance policies which lead to better public interference policies to assist individuals, households and societies, and to develop better social risk

management tools. Many of the social protection and insurance programs (such as unemployment insurance, disability compensations and health insurance) are attempts to limit income level fluctuations; therefore, they reduce the possibility of households falling into poverty; in that sense, these programs are considered as a “safety net”. This methodological framework focuses on the potential poverty situation of households that might face crises and might contribute either to the sustainability of the poverty status or falling into the poverty cycle for lack of assets that might help them overcome these crises.

## **2-5 Child poverty**

Child poverty is the environment that limits the mental, physical, moral and spiritual development. UNICEF has given particular attention to widening the traditional concept of poverty, such as low income or consumption. The UNICEF program provides a child poverty concept where child poverty differs from adult poverty since there are different reasons and factors impacting it and since poverty impact during childhood is permanent. Children depend particularly on their parents; consequently, the father, mother, family and in general the close community situation has a powerful and direct impact on children welfare. However, public policies and services have a direct influence on child poverty. Children are not isolated from society; therefore, special policies related to children’s rights must be linked to female, household and the whole society policies.

Measuring child poverty is not only done within the context of income reduction since some non-poor households, according to the financial measurement, can suffer from deprivation of some services and capabilities. Therefore, the child poverty measurement is related to deprivation measurement, by which a series of basic services and capabilities can be determined and the number of children with no access to these services and capabilities is then measured.

Child poverty indicators are based on eight types of deprivation; they use internationally approved definitions based on children’s right. These indicators are the following:

- 1- Severe depravation of sufficient food:** the percentage of children under five years with a height and weight below the international average by more than - 3 standard deviation.



- 2- **Severe deprivation of safe drinking water:** the percentage of children accessing surface water (e.g. rivers) to provide drinking water or those living in families more than fifteen minutes away from the closest source of water.
- 3- **Severe deprivation of sanitation:** percentage of children with no access to any kind of latrines near their houses, for example private or public latrines.
- 4- **Severe deprivation of health services:** the percentage of children that have not been vaccinated against any disease or the young children who suffered from diarrhea and did not receive any treatment or medical consultation.
- 5- **Severe deprivation of a suitable shelter:** the percentage of children living in houses with more five persons in one room (high congestion) or with clay floors.
- 6- **Severe deprivation of education:** the percentage of children between 7 and 18 years who have never been to school or currently do not go to school.
- 7- **Severe deprivation of culture:** percentage of children between 3 and 18 years with no access to radio, television, telephones and newspapers at home.

The emergence and persistence of poverty are due to many economic, social, cultural, environmental and political factors. Many factors have indeed led to the creation and persistence of poverty such as economic policies related to economic reforms and the incumbent government expenditure reduction, while the bigger focus is on market economies and other measures which might lead to the deprivation of low-income individuals of any support and protection. We add to that the internal and international conflicts that are considered as main factors contributing to the creation of poverty in many Arab countries. Some of the most important factors contributing to the creation and persistence of poverty are: bad income and wealth distribution, bad resource management, environmental degradation, overpopulation and the marginalization of the role of important social categories such as women.

Poverty alleviation policies have witnessed important developments in the past decades. During the 1960s, the common belief was that economic growth is the way to eradicate poverty; however, many country's experiences have proven this belief to be wrong, for economic growth was accompanied by an increase of the poverty level and intensity. As a result, the focus was shifted towards the fair distribution of the economic growth benefits. There was an increasing interest in satisfying basic human needs by investing in human resources, to contribute to increasing income and decreasing poverty. Investment in humans mitigates the exposure of individuals to

shock and increases their capacity to overcome them. The perception of addressing the issue of poverty also changed, since it was considered as a social problem targeted at assisting the poor and be charitable towards them. It is now viewed as a socio-economic issue aiming at achieving a better exploitation of the unused energies of the poor. By increasing the poor productivity, their income and living standards improve as well; at the same time, the economic growth is strengthened, a better fair distribution and a higher social integration are achieved. Dr. Georges Kosseifi considers that the identification of the poverty influencing factors must be addressed at the national and international levels based on five main areas: political, economic, social, environmental and cultural; and the need to analyze the reciprocal effect between all of these areas and between them and poverty. He considers that it is necessary to reach a comprehensive analysis exceeding the economic aspect and allocating to the international level the deserved importance. Dr. Kosseifi believes that this international level, which explains the impoverishment process based on foreign factors, which is the most neglected aspect in the poverty limitation-related literature.

Given the complexity of the deeply rooted and intricate poverty issue, eradicating poverty requires huge scientific efforts on several phases, as well as setting the priorities and necessary programs to implement the pertinent policies and thus securing access of the beneficiaries to these programs – i.e. targeting the poor. Poverty studies are based on four main phases: the first is to define who the poor are and determining their relative percentage, the severity and depth of their suffering due to poverty. That requires poverty standards and measurements based on which the diagnosis of the poor and the measurement of the poverty level and severity are done. The second phase is to determine the basic characteristic of the poor, their geographic distribution, their demographic specificities, educational level, economic activities and housing, health and food conditions. This phase also encompasses testing the compliance of some known poverty aspects such as womanized poverty, rural concentrated poverty or within specific social categories. The third phase is to study the roots of poverty, determine its causes, analyze the impact of the different policies and programs on the poor and to determine the connection between poverty and some socio-economic aspects such as economic growth, fair income and wealth distribution, population growth, migration, social transformations, religious and

political extremism and crimes and drugs, etc. The fourth phase is to determine the methods to address poverty and adopt the adequate short and medium term policies; finally, we reach the phase of effective implementation of poverty eradication policies and programs.

Of course each of the above mentioned phases rely on the previous phases and they all rely on the first one. Poverty characteristics cannot be defined, nor its reasons studied, neither its solutions determined and applied unless poverty and poverty severity measurements and indicators are first determined. Very few countries in Western Asia provide such measurements, although in general poverty measurements in the ESCWA region lack comprehensiveness, a unified methodology and a time reference.

#### **Framework 1: Establishing a comprehensive poverty indicator**

Many attempts were undertaken to deduce the measurement of one component by aggregating several indicators reflecting the different dimensions of the poverty phenomenon. We need to understand the difficulty of merging a big number of indicators in one measurement. It is preferable to merge maximum four or five indicators. Amongst the several attempts, a poverty map of Lebanon in 1997 and the household standards of living report for Lebanon in 2004. It is worthwhile noting that the aggregation of some aspects of poverty in its general meaning requires some control. It requires selecting some obvious poverty dimensions while neglecting others; there was also a degree of control in selecting indicators reflecting each one of these dimensions.

In general, the required steps can be summarized as follows:

- 1- Selecting a group of indicators that reflect this phenomenon. In this regard, changing the indicators must be in the same direction. For example, the reduced value of each indicator should reflect the poverty increase.
- 2- Expressing these indicators and compiling them in one measurement reflect the standard of living, i.e. choosing the weights allocated for each indicator. One of the choices is to select weights arbitrarily according to experience as to the importance of each indicator. The other choice is to use the factor analysis method which can simplify the description of a group of interrelated indicators and reduce their number by computing them to a lesser number of non-related measurements without ignoring

the information contained in the original variables. The factor analysis provides a new series of non-related variables, each having a linear function in the original variables; i.e. the complex measurement of the standard of living is a linear function in the previously chosen indicators, therefore the standard of living can be expressed as follows:

$$\text{Standard of living} = B_1S_1 + B_2S_2 + B_3S_3 + B_4S_4 \dots$$

Where  $B_1, B_2, B_3, B_4 \dots$  symbolize the factor analysis derivate coefficient; and  $S_1, S_2, S_3, S_4$  are the selected indicators.

3- The coefficients are modified whereby the indicator value varies between zero and whole one, this step is necessary during comparisons.

## **2.6 Poverty mapping methodology**

The poverty map is known to be the geographic representation of the welfare levels with high spatial breakdown (e.g. at the village level) which are widely used in the local development programs and particularly the geographic targeting of limited resources.

The main sources of consumption information in any country are the “income and expenditure surveys”. But these surveys provide only area welfare estimations – used statistically – only at the regional level, and not at more detailed levels. As for the population census which can provide us with more detailed data, it does not contain any consumption information. Therefore, the first method used to deduce poverty maps is based on a statistical procedure developed by Elbers et al. in 2002, combines household survey and population census data. This technique uses the strength of the living standard detailed information, available in the household budget surveys and the more detailed coverage of the population census to reach more detailed poverty area estimations based on the welfare consumption indicator. The poverty mapping leads to welfare estimates at the regional, administrative districts and the census regions level. Estimates at the regional and village level could be useful in geographic targeting. Amongst the main hypothesis to conduct this estimate, the two databases should cover the same population and time point.

Small area estimation poverty maps

The key of using poverty mapping to provide more detailed information in an adequate manner to cover population diversity and plurality (Elbers and Lanjouw, 2002). Small area estimation is a statistical technique that allows conducting estimation for very small areas by combining census and household survey information. A team of researchers in the Development Research Group, Poverty Cluster (DECRG-PO), at the World Bank provided several free software tools for poverty mapping. The team also prepared a guidebook for poverty mapping. These software tools are used for poverty mapping in some Arab countries (Morocco, Palestine, Egypt and Syria). For further information, see [Poverty Research: Small Area Estimation Poverty Maps](#).

The poverty mapping methodology includes a detailed analysis of two main data sources: household surveys and population census. At the first phase of analysis, the two sources undergo a very detailed scrutiny in order to identify a series of common variables. At the second phase, the survey is used to develop a series of statistical patterns linking the household or individual consumption value to a series of common variables identified in the previous step. At the final analysis stage, standard estimations (coefficient or weights) deduced from the previous phase are applied to population census and used to predict the consumption of each of the population census household. Once the consumption measurement of each household of the population census is available, poverty measurements (or inequality) can be estimated to a group of the census households. Statistical tests can be conducted to assess the reliability of the obtained poverty estimations.

The three analysis phases are executed respectively. *The first phase* of poverty mapping includes a detailed comparison of the common variables between household surveys and population census. The idea is to identify the variables at the household level identified similarly in each of the household surveys and population census. It is important to define this sub-group of common variables identically in the two data sources. That can be reviewed precisely and regularly on the basis of statistical tests of differences or disparities, or informally by simply conducting visual comparisons. In parallel to the abovementioned method, one of the equivalent method that could be used is the establishment of a macro database superseding the household level (i.e. at the village or small geographic area level), which can be introduced to the database of the household surveys and population census. One of the methodological interests

related to poverty mapping is that the household common variables group is not sufficient to cover the unobserved geographic impacts, such as the soil conditions, climatic conditions and the types of local government administrations, etc. that might be extremely important to predict the household consumption levels. In order to take these unobserved factors into consideration, it is useful to combine neighborhood and village data collected separately in the census and the household surveys. The sub-neighborhood level data could present a wide scope of variables.

If this large group, relatively suitable as to the common variables at the household level, was established, supported by a series of additional variables at a higher level (village level), then we can move towards *analyzing the second phase*. This phase includes the economic estimation of the consumption patterns by using variables at the household and village level.

The pattern will be the following:

$$\ln y_{ch} = \mathbf{x}_{ch}'\boldsymbol{\beta} + u_{ch}$$

Where  $c$  is the village or the spatial compound and  $h$  is the household number within the village while  $y_{ch}$  is the per capita or household expenditure level and  $\mathbf{x}_{ch}$  are the characteristics of household number  $h$  in village  $c$ .

The remaining part of the total is:

$$u_{ch} = \eta_c + \varepsilon_{ch}$$

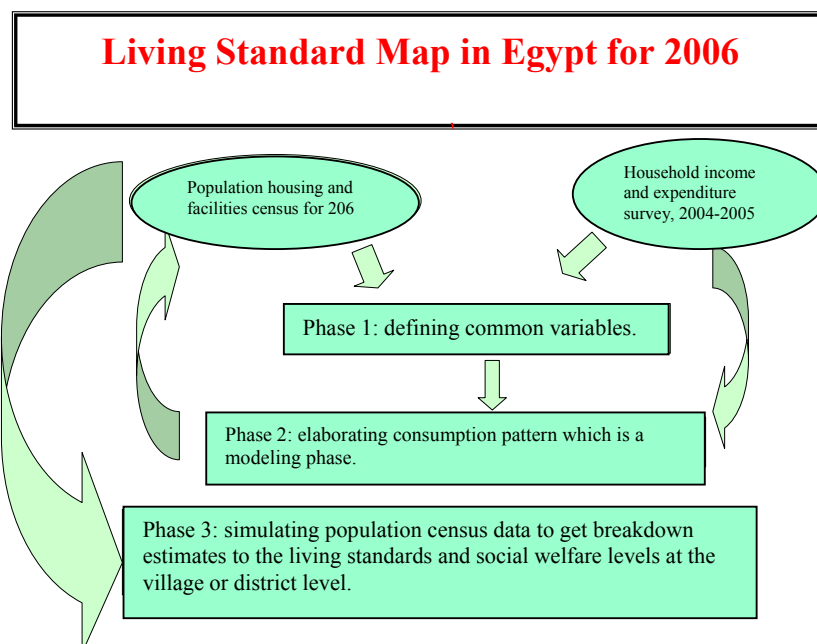
Where  $\eta_c$  is the village impact and  $\varepsilon_{ch}$  is the impact of household number  $h$  in village  $c$ .

For further details see:

(Users Manual for PovMap; The World Bank, Development Research Group)

Several separate patterns of rural and urban areas are estimated for each category of the household surveys. The successful completion of the *second phase* analysis will allow the transition of information estimates and statistical results towards *phase 3*. At this phase, the prediction of each household consumption levels exists in the census data, in addition to estimating poverty and inequality measurements at many of the detailed geographic levels. The statistical precision of welfare estimates are also tested at this phase.

Once the poverty estimates for each region within the country are completed, we would have poverty and inequality estimates databases (in addition to standard deviations, at several levels of geographic breakdown that can be reversed on *geographic maps* by using GIS mapping techniques, requiring GIS software applications, such as ARCVIEW, which combines geographic information of the local communities, such as the neighborhood or the region as well as poverty and inequality estimations resulting from the poverty mapping methodology.



### Geographic Information System (GIS)

The general definition of GIS is a computer system used to collect, store, modify, demonstrate and plan geographic referential data. Computer-aided mapping is an alternative to the traditional mapping process; it can reduce considerably the production time and cost. In GIS, the database comprises information-related to the individual indicators value, their position and spatial classification. This information, known as “the study of data symbols” or “the science of data individual models”, is not limited to the abstract description and structure of a given location; it also includes information on how to link the different regions and determines the neighboring regions, etc.

Framework 2: why do we need poverty maps?

- Highlight the geographic diversity: poverty maps reveal breakdown information related to poverty and the pertinent indicators at the smallest local administrative unit. It provides complex information in a visual easy to understand form. It can also summarize multiple dimensions in a simplified manner, which is hard to achieve in any other case. Geographic partition could be used for example to show one or two indicators at the same time – for example, by presenting poverty levels or employment characteristics. Maps promote visual comparisons which facilitate searching for area directions or blocks or any other pattern.
- Understanding poverty influencing factors: poverty maps can be used to present low income, disease prevalence or educational reasons, etc. and their influencing factors such as a school, infrastructure, healthcare centers or natural resources locations and the easy access to input and output markets, etc. at the same time. That allows deepening our understanding of poverty influencing factors. Combining data from different sources via GIS reveals the multi-dimensional angles of poverty; it also allows us to define with bigger precision the suitable elements to design efficient programs for poverty eradication with limited budgets.
- Selecting and designing interventions: poverty maps can be used to determine regions with low development levels, which could greatly benefit with any additional resources, such as additional infrastructure or financial transfer programs like subsidized loans or allocated sums for public works. They can also be used to inform policy makers of any intervention to be selected (while choosing from many political options possible) and of breakdowns related to any potential design. Poverty maps also help in improving public expenditure targets and other development efforts by identifying the locations of the neediest population as well as their needs at the level of the smallest local administrative unit. Once the intervention method is determined, poverty maps can also help through the effective design.
- Better targeting mechanisms: we can combine between the location standard and other standards based on the per capita or household characteristics in order to determine entitlements and improve the targeting. Amongst the other targeting mechanisms that can be combined with geographic targeting, direct targeting methodologies, characteristic and subjective targeting. Examples of this combination include school students programs in rural areas, lunch coupons for pregnant and nursing women in some fixed areas within a district or a country, as well as public work programs limited to the poorest regions, etc. Geographic targeting program tools can also include direct income transfer of the targeted population, as well as a variety of other mechanisms aiming at increasing the population income.
- Decentralization: poverty maps help in achieving decentralization, they can for example assist in identifying the best level for managing intervention or services, by highlighting the beneficiary region. They can also be used to determine the amount of financial transfers related to decentralization.
- Supporting participation at the local level: at the local level, poverty maps can also play an important role in conveying information. For all stakeholders, including the non specialized ones, to understand them easily, poverty maps are considered important tools for the participatory identification of priorities and interventions.



- The production and dissemination of poverty maps lead to more transparency in public decisions.
- Poverty maps can be used as a basic line of information; therefore, they are useful in measuring progress in addressing regional poverty and discrepancies issues.

For the Arab countries, geographic targeting provides additional features compared to the other targeting methods. First, it provides a clearer criterion to identify the targeted population category and avoids IT restrictions which impede most of the other targeting programs. Second, it is relatively easier from an administration and monitoring point of view; its application could be done through the assistance of local administrative and non-governmental institutions. Third, the geographic targeting has a relatively weak impact on household behaviors since it is difficult and costly to change the place of residence. Fourth, it is possible to combine the location criterion with any other criteria based on the individual or household characteristics, to identify entitlements, and thus improve targeting. Examples of this combination included programs and lunch coupons for pregnant and nursing women in some districts, public work programs limited to the poor neighborhoods only, etc. Fifth, geographic targeting program tools can also include financial transfer of the targeted population, as well as a variety of other criteria aiming at increasing the population income. Development procedures include amongst other encouraging growth through infrastructure investments and public and financial services provision. As for the targeted regions development procedures, they might be particularly important at the village level or urban suburbs where the infrastructure can constitute a major obstacle. Hence, the geographic targeting could provide guidelines for each of the advantages distribution within the framework of welfare programs, in addition to the resource distribution within the framework of State development programs.

### **Poverty maps in the Arab countries**

Recently, in some Arab countries such as Syria, Egypt and Yemen, poverty maps with good resolution are being produced using the previously mentioned methodology. The household survey data were thus used to estimate the economic relation between poverty (or the household expenditure) and a series of the household characteristics including the household size, structure, educational attainment, the employment of the head of the household, the housing characteristics, utility availability, and the

possession of consumption goods such as television and bicycles. During the second step, this relation was applied to the same household specifications in the census data to compute the poverty prevalence estimations for some small geographic units. Some poverty standards and other indicators of unfair income distribution have also been computed.

The census year in Egypt, Syria and Yemen coincided with the income and expenditure surveys which allowed the production of high-quality poverty maps, which have been used in regional planning and intensive targeting in Egypt and Syria.

## **2-7 Employment and unemployment concept**

It was agreed during the Copenhagen World Social Development Summit in 1995, that the ultimate priority should be given to alleviate poverty and social marginalization. The 24<sup>th</sup> extraordinary session of the UN General Assembly stressed on the need to draft and coordinate suitable employment strategies in a sustainable development environment. The MDGs were reviewed and a third objective was added to the first goal related to achieving full and productive employment and decent work for all, including women and the youth. **The ILO** responded to these international community directives by launching **the “International Employment Forum”** initiative which called for a new employment policy perspective right from the start. This perspective is related to the **“decent work”** concept which is at the core of the ILO agenda, and considers labour rights, freedom of choice and productive work in a comprehensive and coherent perception which components cannot be separated. The **“International Employment Forum”** contributed to the development of the UN axes related to employment and labour policies.

### **Framework 3: Employment shortage**

The unemployment picture in our Arab world could be much worse, if the **employment shortage indicators** are taken into consideration, although the matter has not received enough attention by the unemployment data authorities so far. In addition, the Arab world is still suffering from a chronic dilemma related to the **weak labour market databases and systems**; it is one of the recurrent problems encountered by the researcher of the Arab labour market structure although various authorities have been calling for a solution. The outcome is unemployment data and

averages of poor credibility particularly those issued by the official authorities; they are also imprecise therefore their failure possibilities will be high. We should see reality as is, in an objective and scientific manner, to be able to change it. The major lesson to be drawn from the different employment programs in the Arab world is that, due to the weak labour market information system and the absence of a scientific mechanism to collate and classify this information, the assessment of these programs success or failure remains at the heart of an ongoing controversial and sterile discussions of the public opinion. **The adoption of a “manpower statistical survey sampling” on a periodic and regular basis has become an urgent and pressing need in all countries that have not adopted it yet.**

Decent work is a productive work in which all rights are protected, and which provide a sufficient income, in addition to a sufficient social protection. It also means sufficient work, i.e. full access to income earning opportunities for all. Decent work paves the road for socio-economic development, where labor, income and social protection can be ensured without violating workers rights and social standards. There are four indicators to measure decent work: 1) Right to work, labour standards and basic principles; 2) job opportunities for all; 3) social protection and 4) social dialogue.

People of working age (15-65 years) can be classified according to the following employment status:

- **The employed:** is the individual who performs a work of economic value or is associated with such a job but has not been able to perform it due to a temporary emergency such as disease, leave or bad weather conditions, etc. The definition of the employed includes the following categories: the wage worker – business owner or self-employed – worker in a family enterprise or farm, even without a wage – a temporary sick leave or vacation; the student is considered as employed if he has a job, even if he is a full-time student. It is worth noting that a person working one hour in a base week is considered as employed.
- **The unemployed:** is an individual capable, willing and looking for work but is unable to find a job. A person is considered unemployed if he was

contracted to start a job at a later date from the interview. There are two categories of unemployed: an unemployed with a former job - an individual who has already practiced a specific job and stopped for some reason, and an unemployed who has never had a previous job – an individual capable, willing and looking for work but has never practiced any particular job.

- **Outside the labour force:** it includes students without a job, housekeepers, retired, self-sufficient and finally incapable of working.

**Individuals' classification according to the employment status** results in a series of indicators describing the employment status of the whole society or for specific age or gender categories, etc.

Amongst the main important indicators:

**Labor force rate**= labour force volume/number of individuals in working age,

**Unemployment rate**=number of unemployed/labor force volume.

These indicators can be calculated by age category, gender, main economic activity, educational attainment or place of residence.

One of the indicators directly related to poverty is the child labour rate known as follows:

**Child labour rate**=number of working children (6-15 years)/number of children (6-15 years).

The Arab region faces a wide number of intricate challenges related to creating adequate and sufficient job opportunities due to high population growth – high illiteracy rate – high unemployment rates and employment shortage – limited regional cooperation, not up to the current challenges.

The ILO report for 2007 considers youth unemployment the main challenge for the MENA region. The youth unemployment rate reaches 25.6% which is the highest rate in the world. Women suffer more than men from unemployment; female unemployment rate reached 31.7% while male unemployment rate reached 22.7%.

According to the World Bank estimates, the MENA region will face in the coming two decades “an unprecedented challenge”. In 2000, the total labour force in the region was 104 million persons. This number is expected to reach 146 million in 2020. That means that the region economies will have to provide 80 million new job opportunities during the two coming decades.

According to the ILO (2007), the unemployment rate in the Arab countries reached around 13.0% and 12.2% respectively in 2005 and 2006, while the worldwide unemployment rate reached 6.3%. In addition, unemployment rates vary hugely throughout the region; they vary between 1% in Qatar to 32% in the West Bank and Gaza Strip. The Arab region has one of the lowest labour to total population ratio which reached 47.3% in 2006 (increasing from 47.0% in 2005). It also has the lowest labour force participation rate (53.9% in 2006 and 53.6% in 2005). The region still depends on labour in the public sector; data indicates that the public sector labour represents 33% of the total labour in the region, exceeding 50% in the medium income Arab countries such as Egypt and Syria (ILO, 2005). Nonetheless, public sector labour growth slowed down considerably in the mid-1990s in most of the countries. Hence, the private sector contribution to job opportunities creation considerably surpassed the public sector contribution during the past decade (the World Bank, 2007: 72-79). Nonetheless, there were some important country experiences, which could be optimistic. Many of the countries reacted to the global trends and the local requirements to find new and innovative methods to limit the exacerbating problem. The youth issue was at the center of official and non-official leadership interests in these countries which was interpreted concretely in many of the programs and projects, namely: “Injaz” program in Jordan, “Sanad” project in Oman, “Dacom” project linking education outputs to the labour market in Kuwait, “Hariri vocational school” in Lebanon and “the National Employment and Training Program” in Bahrain. In Egypt, a wide and important number of Programs and projects were launched to create job opportunities for the youth, particularly the graduates in all governmental and private sectors, with special attention for launching and supporting small enterprises for the youth.

## **2-8 ESCWA member countries’ experiences in measuring poverty**

Poverty issues were not often explicitly addressed at the governmental level in many of the Arab countries. Many of them did not even admit that the problem existed. However, with the countries commitment to monitor progress in MDGs, all ESCWA member countries started monitoring poverty. Efforts deployed by many entities interested in measuring poverty in the Arab countries throughout the last two decades, with support from many international organizations in particular UNDP, the World Bank and some UN specialized agencies, were successful in developing a number of poverty measurement indices that coincide with the internationally approved concepts and methods. These indices had many specificities compared to others, which contributed to their adoption and implementation not only at the national level but also for international comparisons. However, in-depth measurements are limited to a very small number of Arab countries in the region, i.e. Jordan, Syria, Iraq, Palestine, Lebanon, Egypt and Yemen. Nevertheless, all ESCWA member countries have plans, programs and projects to assist limited income individuals and vulnerable classes (women providing for their families, the disabled and rural women). These programs include product subsidy programs, providing financial assistance as well as free services particularly in health, education and employment fields. Regardless of the progress achieved, in health, education and employment industries, as well as income and consumption levels, that progress was not up to the required level, even upon comparison with other developing countries. Most of the Arab countries still suffer from poverty whether income or human. Dr. Georges Kosseifi (1998) considers that the lack of real political commitment to eradicate poverty in the Arab countries is evident in the scarcity of poverty information availability.

Most of the Arab countries with poverty indicators have adopted a poverty concept by which poverty is **income poverty** and the incapability to satisfy the basic needs (food, clothing, housing, etc.), based only on income, expenditure and consumption indicators. All ESCWA member countries measuring poverty – as mentioned in national reports – used the per capita or household income or expenditure share as a living standard measurement. They used financial estimations for the basic needs to determine what is known as the poverty line, the line separating the poor from the non-poor. The absolute poverty line reflects the minimum required basic needs for human life, as well as the sufficient income or expenditure level estimates that each individual should have; e.g., the required income to ensure the minimum quantity of

food to provide the sufficient and required calories for an adult per day. The method adopted to measure the poverty index often relies, upon application, on the available data, the data quality, comprehensiveness, detailed level, time reference and other specifications, as well as credibility and periodicity. Countries relied on national income, expenditure and consumption surveys often undertaken by the country official statistical body. These surveys are usually undertaken on a periodic basis, which allows comparing the living standards across time. In Egypt for instance, the first household budget survey was undertaken in 1958.

Although measuring poverty is not –in most cases – the main drive force of these surveys, for they are usually used to define weights to establish price indices and to identify consumption patterns, they are however considered the main tool for measuring poverty in the region.

The Arab countries have the specificity of including six oil exporting countries and are classified, according to the World Bank, as high-income countries. They also include four countries classified by the UNDP as countries with high human development index. Three Arab countries are classified as low-income countries with low human development index. The rest falls within the average human development index group and they represent more than two third of the Arab population. Given that all Arab countries ranking as to the per capita GDP derived from the PPP dollar is higher than their ranking as to the human development index (in KSA, the difference is equal to 33 ranks), which means that these countries achievements in human development is inferior to their income capacity. We can exclude here Lebanon, Palestine, Jordan and Yemen (Global Human Development Report, 2007).

Palestine, one of the region countries, is suffering from Israeli occupation for more than fifty years. Iraq suffers economic sanctions since 1991, in addition to the American occupation. Although sanctions are imposed first and foremost on the authorities in power, the politically connected and the wealthy have the capacity to overcome of the income of these sanctions, so the poor suffer even further from these sanctions. Figures are the best evidence reflecting the suffering endured and still being endured by the Iraqi people. The life expectancy during these sanctions decreased 65 years in 1990 to 57 years in 1994. Therefore, the human deprivation level and degree in Palestine and Iraq reach their peak under the occupation as highlighted by Hanane Achrawi in the Arab Human Development Report for 2001.

This report also shows that the continuous occupation of Arab lands, security instability and the incumbent political chaos raise serious obstacles to the human development process, particularly with regards to the non-physical aspects of human welfare. In addition to the occupation burden, millions have lost their lives and income. Conflicts in the region caused for the mobilization of huge resources to acquire and develop military skills and import weapons, notwithstanding the impact of instability in the region on investment and tourism.

Although, the severe physical poverty level in Arab countries is less than the global average (4.17%), one out of five citizens still lives with less than two US dollars a day (Ravallion and Chen, 2008). All of the Arab countries are heading rapidly towards achieving the MDGs by promoting education and health services. Female education rate, particularly for young girls, increased notably. Women today in the Arab world are better equipped to help themselves in escaping the poverty trap. The fact that income poverty is relatively low in the Arab countries should not be considered satisfactory, while other poverty dimensions are worsening. The global human development report for 2007-08 reveals that the Arab region is only higher in rank to the Sub-Saharan Africa and South Asia as to the human development index; the overall health indicators (life expectancy at birth); and education attainment (measured by adult illiteracy). These are the countries where the GDP per capita share is less than half of the dominant level in the Arab countries. The Arab world is still far behind East Asia (China included or not). When comparing the Arab countries as a group to other regions worldwide as to the human development measure trends through time, we notice that the region is in a better position compared to Sub-Saharan Africa and South Asia. The Arab world has also narrowed the gap with ECLAC, but the gap is still there.

The deprivation rate, according to the human development standard, in all of the Arab countries combined is equal to 26% measured in the human poverty index, which defines deprivation by short life, illiteracy rate and shortage of basic services. The comparison of the human poverty index and the human development index reveals paradoxes in many countries. These differences must alert the policy makers to the necessity of a better distribution of the human development, more favorable to the poor. The human development index measures progress achieved by a country in general in the field human development. Distribution disparities could be solved and



human poverty remains widely spread. All of the oil countries (Bahrain, Kuwait, Oman, Qatar, KSA and UAE) have a higher ranking according to the human development index than the human poverty index which reflects the need to focus more on the human development of most of the underprivileged categories. A country such as the UAE, according to the human development measurement, ranks between Argentina and Chile; however, its human poverty index is twice higher than that of Argentina and Chile (Global Human Development Report, 2007-08, Table 3). There are some other countries with much higher ranks – on the human poverty index list – than their rank on the human development index, i.e. Jordan, Lebanon and Syria, particularly Jordan where the difference is equal to seven ranks.

## **2-9 Challenges and restrictions to poverty measuring**

Although most of the Arab countries conduct household surveys measuring household income and expenditure, the lack of data restricts their use or even dissemination. Table 3 shows that out of 17 Arab countries, the Human Development Report for 2007-08 monitors poverty and inequality in seven countries only. The case of Syria raises some questions for the global report does not include any poverty index for Syria, although a report on poverty in Syria was issued by the UNDP in 2005!

There is another problem related to the GCC countries characterized by a high percentage of foreign labor: how to calculate the development indices, and whether they apply to the whole society or to the nationals only.

When attempting to measure poverty, many differences and similarities appear in the measurement methods. The ESCWA countries have agreed to use the expenditure or the consumption as a living standard measurement; however, they did not agree on a unit of measurement (household or individual) nor on how to calculate the national poverty lines particularly the non-food component of poverty lines.

Many questions arise when attempting to measure poverty indices based on national accounts or socio-economic variables which are very common in international reports. There is also another important problem that should be noted related to the method of data collection in conflict regions: Iraq and Palestine.

**Table 4: Indicators of human and material poverty in the Arab States**

		MDG	MDG			The probability of dying before the age of forty (% Of cohort) 2000-05			
Population below the poverty line %									
The national poverty line 1990-2004 <sup>d</sup>	\$ 2/day 1990-2004 <sup>d</sup>	\$ 2/day 1990-2004 <sup>d</sup>	The proportion of children of low weight - less than 5 years 1996-2006	People who do not have access to clean drinking water (%) 2004	The illiteracy rate for adults (%) 1995-2005		Human Poverty Index,% (HPI-1)		Level according to the Human Development Index
..	..	..	10	..	6.7	2.7	..	Kuwait	33
..	..	..	6	0	11.0	3.7	7.8	Qatar	35
..	..	..	14	0	11.3	2.1	8.4	UAE	39
..	..	..	9	..	13.5	3.4	..	Bahrain	41
..	..	..	18	..	18.6	3.7	..	Oman	58
..	..	..	14	..	17.1	5.7	..	SA	61
14.2	7.0	<2	4	3	8.9	6.4	6.9	Jordan	86
..	..	..	4	0	..	6.3	8.5	Lebanon	88
..	..	..	5	8	7.6	5.2	6.6	Palestine	106
..	..	..	7	7	19.2	4.6	13.6	Syria	108
16.7	43.9	3.1	6	2	28.6	7.5	20.0	Egypt	112
41.8	45.2	15.7	46	33	45.9	18.6	38.0	Yemen	153

**We conclude from this section that there are many highly imported rules and procedures to be agreed upon and harmonized before undertaking any study related to poverty aggravation throughout the different years for a specific country, or any comparison of poverty between ESCWA countries:**

1- Poverty measuring by using expenditure databases instead of income data.

2- Unit of Measurement (UoM): household budget surveys are considered as the most important data source to measure the poverty phenomenon. These surveys register household or per capita income-related data, as well as consumption expenditures on goods and services; therefore, they are considered an important source of information related to welfare distribution in society.

Household surveys register household expenditure or consumption as one unit; therefore, upon measuring poverty we might use the household and not the individual as UoM. But the use of annual total household consumption could exaggerate the welfare level of a big household since the consumed goods and services are divided on a bigger number of individuals. Given that our main concern is per capita welfare, the alternative option is to use per capita poverty lines based on the per capita share of the household expenditure to determine the household position above or below the determined poverty level. Although this would reduce the household welfare level, for using the per capita share of the household expenditure as a welfare index supposed that all the family members are having an equal share of the expenditures, which is obviously not true. Households have a completely different age and gender structure. Children have different food and non-food needs than the adults. Some goods are also shared among the same household members, therefore adding a member to the family may not increase the household expenditure on that same good. Thus, it would be better to estimate the poverty line of each household taking into consideration its size, age and gender structure and the place of residence. This method has been adopted in Egypt, Syria, Yemen and Lebanon.

3- Using breakdown data at the household level and not the classified data by household internal or expenditure categories. The classified data, although more

available and easier to use, the poverty line often falls within one household category underneath it; therefore, its estimation requires adopting approximate methods, such as the linear completion which could include approximation. We should not that all national and international reports use breakdown data and not table data.

4- The consistency of the methodological frame and basic principles with the national poverty lines, which includes determining a method to estimate the food and non-food basic needs based on the real practices of the poor, and the need to take into consideration the household place of residence and the age and gender category as well as the principle of household members participation (affluent economies) when estimating the national poverty lines.

5- Setting guidelines for consumption data collection from household surveys (diaries and the base period).

6- Setting unified methods to remediate to the missing data: the use of breakdown data at the household level, with the all huge effort it requires, will still face some problems. Some household expenditures on specific items could be equal to zero or could be irregularly high which will lead to prejudices in some estimations which will require defining methods to remediate to the missing data or the anomalies.

**TABLE NO 5 IS MISSING; WILL BE INSERTED SOON.**

## **Part 3: Statistical Framework for Poverty Data Collection and Dissemination**

### **3-1 The need for poverty statistics collection, processing and correction**

In a rapidly changing world, due to giant scientific revolutions and technological process, the importance of data, particularly data with social indicators, becomes evident to contribute to the achievement of human development for the real wealth of a society, i.e. the human beings. The official statistics are increasingly considered as a public good that should be available to all the society stakeholders; therefore, efforts should be made to facilitate accessing and benefiting from them. However, a big number of those is still inaccessible for the research society. Although, access to data by the researchers will diversify and promote the analysis quality, will maximize the use of available data and will increase investment revenues through data collection. Many factors, including technical, financial, legal, psychological and political factors, limit sometimes data availability. For example, the result-oriented management could put the statistical bodies (which are part of the central government administration under pressure to reduce expenditures and costs, and at the same time improve competence; they also undergo reviews by political leaderships. Usually, politicians, economists and journalists use the same numbers to prove widely different hypothesis. As a result, many of the statistical systems suffer from limited public trust in the information credibility and safety. In many instances, the lack and non-availability of data and statistical information does not constitute the main problem or difficulty rather the contradicting data, particularly in countries lacking a comprehensive and organized statistical system of data and statistical information production.

The raw data and statistical information collection phase is the first step in poverty measurement followed by the compilation and the elaboration of indicators, statistics and advanced mathematical models. The updated and efficient data and statistics will allow the parties in charge of poverty study and elaborating strategies to fight poverty in the early phases of detection of the real dimensions of the problem. The more similarly diversified and qualitative data are available, the more decision makers will be capable of understanding the different analytical aspects of the issue of poverty and its dimensions. For instance, the poverty measurements can provide a picture of the

living standards that reflects demographic, economic and geographic situations which the decision makers and politicians might not be aware of. On the other hand, the decision makers may not always have the capacity to access detailed statistics and indicators reflecting the poverty phenomenon at the right time; or they might have access to conflicting data which would confuse the decision making process leading to huge economic and human catastrophes. This justifies the countries' need to a national statistical system to monitor poverty, which will allow limiting the dangers and margins of error in statistics and indicators supporting decisions.

Given the countries' needs to good statistics in general, each country has established specialized entities to collect, analyze and disseminate official statistics. However, the problem is that in many countries, particularly developing countries, the effort of these entities are not sufficiently appreciated so statistical systems suffer from the lack of financing and bad performance.

Human development-related statistics have improved considerably in the last years in coverage, quality and timeliness. The countries' agreement on MDGs and the monitoring of progress accomplished as to the MDGs implementation have had a huge impact on the development of their statistical databases and on the increase of demand on breakdown data at the household level. It is not possible to monitor the progress achieved in alleviating poverty or in implementing the MDGs without data collected at the household level and revised that allow reaching living standards indicators. There is no alternative to household data: it is not possible to measure ten indicators (such as those related to the first MDG) within the 48 MDGs indicators without using household data; there are also 60 other indicators that can be measured through household surveys.

Although the status of the Arab countries is far from being perfect, we cannot overlook the huge progress achieved, and must admit that the challenge ahead started to shift increasingly from a challenge of data collection to the challenge of managing the hugely increasing quantity of available data, integrate them in the planning and development process, make the best use of resources and monitor and compare the progress achieved at the national and international level.

### **3-2 Data and data sources**

All indicators use four main categories of data sources: administrative, census, survey and monitoring data. Some of the MDGs indicators can be calculated by using more than one data source. The different sources can sometimes lead to different values; and comparing results obtained by using different sources is a good method for the verification of the values. Poverty indices depend basically on household survey data and sometimes on population census.

#### **3-2-1 Census data**

Census is a good tool for collecting data from each individual in a given community. Whether targeting all of the inhabitants of a given country (population census) or business institutions (facilities census), these censuses require a lot of time, are highly costly and require trained personnel for collecting data on each population unit. In this regard, data collection usually targets limited subjects.

Prior to undertaking any census, we should full identify the population's location and set a series of questions. To ensure the follow-up of changes in the basic characteristics of the population through time, a limited set of basic questions is repeated and every time special sections related to specific subjects could be added.

Population census in most countries is conducted once every ten years; the preliminary results are published after one to two years from the data collection process. Estimates are conducted between the censuses to monitor changes in population at a specific period of time. Given that censuses are conducted irregularly, the estimations could be imprecise, especially when external factors, such as natural or human disasters lead to sudden big changes or movements amongst the population.

The main advantage of a census, at least from a theoretical point of view, is that it encompasses everyone (comprehensiveness). This means that a census provides a more comprehensive picture of specific population characteristics. In addition, it establishes a framework to monitor the future household surveys with enough space to calculate many of the indicators exceeding the census framework itself.

The statistics administration and databases of the General Secretariat of the League of Arab States, in cooperation with ESCWA, exerted huge efforts to lay strong foundations to the harmonization of methodology, definitions and used terminologies

in censuses, household surveys and population registries in the Arab countries. However, there remain some differences in the definition of the surveyed households.

### **3-2-2 Surveys**

A survey is based on the identification and collection of data from an arbitrary subgroup (sample) chosen from the examined population. The sample is taken from a national sampling framework based on the last census. Contrary to the administrative systems, the main objective of surveys is to collect data. Surveys can also be considered as a less costing and more suitable alternative to census. Since surveys require a much lesser number of surveyed individuals than the census, it is easy to conduct surveys more frequently. They might also allow reaching quicker results, even when they cover a wider number of subjects.

Surveys subjects could be highly defined, such as household income and expenditure surveys, or more comprehensive, including a number of sections covering several areas such as education, health, social utilities and infrastructures. *Additional efforts are being undertaken by the League of Arab States and ESCWA to guarantee a coherent use of definitions, guaranteeing common standards that allow undertaking comparisons.* In the following, a brief description of the most common surveys in the Arab countries, with a clarification of the similarities and differences between them:

#### **Household surveys**

Household surveys are multi-purpose surveys, undertaken by national statistical institutes and/or international organizations to collect information from individuals living in specific households. The most common subjects covered by surveys are house ownerships, household dwellings, labour, education, health and sanitation, income and consumption.

Demand on household data has increased. It is not possible to monitor progress in poverty alleviation or in MDGs implementation without revised household data to deduce living standard indicators. Household surveys are the main source of poverty indicators; since poverty studies in the last years have shifted from studying the current status of poverty to the dynamics of poverty, as well as the impact of crisis on the poverty cycle and the mechanisms adopted by households when encountering shocks, these surveys allow the detection of the most prone households to fall into the



poverty cycle due to shocks and the adopted strategies to overcome crises. Therefore, many of the household surveys included a specific model of collecting data related to shocks encountered by households and how they dealt with them.

**Multi Indicator Cluster Survey:** is a household survey elaborated by UNESCO to assist countries in detecting children and women status in accordance with the International Children's Conference recommendations in 1990. They include standard sections covering health, education and demographic issues, applied in each country but for different years. Therefore, it is difficult to compare or extract computed indicators at the level of the Arab world as whole.

**Demographic and Health Surveys (DHS):** they are large sampling household surveys that include a special section on reproductive health. These surveys provide a wide range of data related to population, health and food. They use a main standard questionnaire to which can be added specific sections. The standard survey is usually composed of a household-oriented questionnaire, and a women-oriented questionnaire. This type of surveys is adopted by Egypt, Jordan and Morocco.

Many countries launch national surveys similar to the DHS, within the measuring project managed by "Macro International". In Egypt, DHS has been conducted since 1988 almost bi-annually. As for Jordan, it conducted DHS in 1990 and 1993. Through this survey, data related to households, reproductive health, maternity and child health and child nutrition status. This type of surveys is considered a main source of data for poverty measuring, especially human and child poverty. Similarly, in the early 1990s, six Arab countries, three of them in the ESCWA region conducted the PAPCHILD survey by an initiative of the League of Arab States: Egypt in 1991, Syria in 1993 and Yemen in 1991-92. This survey has to be emulated since the same definitions, concepts, methodologies and the same form have been used, leading to a rich and comparable database. Therefore, this experience should be duplicated not only for health and population but also for income, expenditures and education etc.

**Living Standard Measurement Surveys (LSMS):** surveys adopted by the World Bank to improve the household data quality collected by the developing countries national statistical offices. LSMS are considered the essential reference for multi-purpose household surveys. Its main objectives were to establish new methods to

monitor progress achieved in living standards, with the aim of assessing the impact of public policies on household welfare. In addition to income, education, health and labor, these surveys aim at collecting information related to prices and utilities and to cover the seasonal patterns of income and expenditure; usually surveys are conducted throughout the years.

Recent proposals for LSMS do not only include consumption and expenditure measurements but also other welfare dimensions, such as disability, migration and gender. LSMS are the main data source for poverty indices; many of household surveys included a special specimen for data collection related to shocks encountered by households and how they dealt with them.

Comprehensive surveys include two types of questionnaire forms: household questionnaires whereby detailed information are collected regarding the household members and community questionnaires that collect information from local leaderships on the society infrastructure. A third questionnaire on education and health services can be added.

The household questionnaires include detailed information about:

- 1- Monetary spending, self-consumption, gifts in kind, house ownership and expenditure, and durable goods, their lifespan and characteristics.
- 2- A special form regarding information related to income, in kind and cash wages, and primary and secondary labor. Detailed information about agricultural activities, agricultural and non-agricultural net income, as well as income generated from private and governmental transfers and deposits and loans interests.
- 3- The household questionnaire includes detailed information about the health and educational status of the household members and all the variables that highlight the life quality such as the father's educational attainment, the child nutritional status and the maternity health.
- 4- Labor and employment status for all family members.
- 5- Household economic assets, savings and loans.

As for the community questionnaire, it includes information related to the infrastructure and the local community; it includes a detailed description of the availability of health and educational services and quality, in addition to the status of roads, safe water, sanitation, communication and the type of agricultural land.

**Household Budget/Income and Expenditure Surveys:** they are usually conducted by national statistical offices to compute national accounts and generate consumer price indices (CPI) weights and measure poverty and welfare. These surveys have gradually attempted to become multi-purpose household surveys in several countries. All ESCWA countries organize household expenditure and income surveys for various purposes, mainly generating the required weights for CPI, to identify the consumption patterns of a society and estimate the household expenditure volume required for national accounts. ESCWA countries developed survey tools which purpose includes amongst others, obtaining national estimations for income poverty including poverty line estimations. It is worth noting that acquiring income poverty estimations requires the availability of household data and that it is highly difficult to get raw data from the different statistical bodies.

**Labour Force Surveys (LFSs):** they aim at collecting labour market information. The survey collects information related to the personal conditions of the surveyed and their position in the labour market (e.g. industry, profession, working hours, wages, and size of the workplace) at a specific base period set before the interview. LFSs are very common in industrial countries and less common in developing countries. Countries with large informal labour markets can cover this phenomenon and promote the importance of the surveys by adding a number of relevant questions. However, it could be often more efficient to conduct an independent survey for the informal sector.

Usually, the researcher of the Arab labour market structure encounters the problem of weak labour market databases and systems, which leads to the weak credibility of unemployment data and unemployment rates, especially when issued by official authorities, as well as the problem of unreliable data, which leads to speculation. The adoption of LFSs by sample on a periodic basis has become an urgent and pressing necessity in all the countries that have not adopted it yet.

It is advisable to add a series of revealing questions related to employment and unemployment to the LFSs. Questions related for example to the procedures followed by an individual looking for a job, the unemployment period, the nature of the job he

is looking for and wanting, his willingness to start working if a job opportunity arises, the working hours and his net monthly wage.

Most of the Arab countries apply one or some of the previous surveys but probably on an irregular basis depending on budget availability. Table 3 reveals that the region does not suffer from a shortage of information and data collection but rather from data elaboration and dissemination, the non-accessibility of data or their accessibility in a compiled manner making it difficult to use it for research purposes; it also suffers from the lack of comparable and updated data which makes it difficult to make consistent comparisons between countries which forces the researchers to use sometimes international data sources that have relied on speculations to reach regional indicators.

Household data collection is a highly restricted process in the Arab countries, due to legal and administrative measures; the same goes for the data collection of social indicators pertaining in particular to the living standards. In Egypt for example, the researcher must get the approval of the Central Agency for Public Mobilization and Statistics (CapMas) and he must present the questionnaire form to be reviewed by the national security forces to make sure that no information related to the country security is being collected. With the exception of the macro-economic data required by international institutions, statistical data is very rare and not of adequate quality. Comparisons between Arab countries cannot be easily achieved due to the absence of unified definitions and used methodologies. Data collection in this region is not the only problem. There is also the issue of data dissemination that is often subject to the political will, especially in the fields of unemployment and poverty, in addition to data accessibility and timeliness. Therefore, data quality, updating and comparability even within the same country and the use of the appropriate methods are some of the main obstacles to development measuring in the Arab region. **There is also another important problem that should be noted related to the method of data collection in conflict regions: Iraq and Palestine.**

**TABLE NO 6 IS MISSING; WILL BE INSERTED SOON.**

### **3-3 Using household surveys in measuring poverty**

Household consumption is used to assess poverty and its prevalence and to measure inequality in most of the Arab countries. Consumption data based on household surveys can also help in measuring poverty worldwide by using international poverty lines such as a dollar or two dollars per person a day. Nonetheless, data provided by these surveys are rarely comparable between countries. In addition, these surveys design could allow determining expenditure and weight averages used in elaborating indices that cannot be used to measure living standards unless processed to become comparable. Hereinafter some discrepancies that need to be consistent to allow sound comparisons between surveys conducted over different years in one country or between several Arab countries:

- 1- The sample representativity for all regions within the same country.
- 2- Sample design and households number represented by the preliminary sampling unit.
- 3- The number of house visits and their spreading over the year.
- 4- Although consumption is the indicator used in measuring living standards, and although the Arab countries use the “diary tables” for all food data, they use different methods to collect other consumption items: in Egypt, memorization is used to record non-food consumption items while in Yemen they record the perishable non-food goods in the diary tables; in Syria, the recording system was different in the surveys of 2003-04 and 2006-07. In the first survey, household expenditure over 10 days is recorded in diary tables, whether they were food or non food goods, perishable or durable non-food goods. This required highly complex processing based on many assumptions to reach the real household consumption estimates. In Lebanon, food expenditure was recorded in two diaries, one for the household and the second for the individual (over 15 years).
- 5- Consumption as an indicator of measuring household living standards, includes market goods, family produced products and gifts. It is worth noting that no separation was made in all of the Arab countries survey between household expenditures for buying goods during the base period and what was really consumed during that same period, with the exception of the 2006 survey in Yemen.

- 6- Recording or not recording the imputed rent of self-owned dwellings and how to estimate that rent. In Egypt, families living in houses register the estimate of similar dwellings rent values, while Lebanon and Yemen depend on the econometric way of estimation.
- 7- Recording expenditure on durable goods or the value of using these goods (the service provided). In Lebanon for example, car purchase value was not recorded, they only recorded the estimate of the service value enjoyed by a household as a result of owning car.
- 8- Consumption, particularly food consumption, is seasonal; therefore, a base period is adopted (one month in Egypt), then widened to suit a somewhat faulty annual consumption, particularly with the rapid price changes currently witnessed. Usually data is collected from households during several visits conducted during a limited period of time (one month in Egypt, 10 days in Syria), while using base reminder periods according to the product nature; these data are then merged to establish the survey database that will be registered as an annual survey. The households which data have been collected during the first month will be integrated with households which data have been collected during the last month although these households have had totally different price vector.

**We conclude:** that although most of the Arab countries apply different types of household surveys, the irregularity in conducting these surveys, as well as the inconsistent timing, different definition, sample volume and country representativity could limit the possibility to use them in international comparisons or within the same country through time. It is worth noting that these differences do not question the surveys credibility but each survey requires special processing to ensure that the living standard measurement used is comparable between countries and within the same country for different years. Therefore, statistic administrations should unify survey standards and concepts, and the Arab countries should agree and coordinate amongst each other with regards to the used standards and concepts, whenever possible, taken into consideration the specificities of each time period and country.

Standards to be achieved are:

- 1- Dissemination of all data collection methodologies and methods, as well as definitions and sample design.

- 2- Using a representative sample for all the country regions (at least rural and urban), of the right size.
- 3- Food data collection method (diary tables) for the household and adults, when eating outside.
- 4- Non-food product data collection method (reminder period) by unifying the base period when possible.
- 5- Consumption and expenditure data collection method (market products, family products and gifts).
- 6- Data collection for expenditures on new and used durable product purchases.
- 7- Data collection on durable goods owned by the households, their estimated price and lifespan (production date).
- 8- Data collection on house ownership, specificities and imputed rent.
- 9- Consumption computing method (effective consumption, regardless of the price spent by the household for the product), processing the imputed rent and consistent use of durable goods.

### **3-4 Data and Metadata dissemination methods**

The monitoring system in many countries is still at its early phases; institutional infrastructures are often not fully developed and are affected by the resource shortages. Many countries have different monitoring systems that fall under a group of institutions; these systems are often not totally linked to each other. Considerable efforts are being currently undertaken in many countries to coordinate different data collection systems, analyze and disseminate them. Amongst these efforts, establishing steering committees or monitoring networks gathering all those in charge of data elaboration and data users to discuss means of improving the current systems and to better satisfy the users' needs. These efforts also include establishing central databases for indicators regrouping a number of development strategy monitoring indicators for a given country.

These indicators should be reliable; definitions should include data sources and computation methods. Also, disparity measurements and bias practices descriptions should be included to assist data users in measuring, when possible, the relevant data precision.

But first and foremost, indicators should be coherent with the available data and the capability to collect them. It is much preferable to have a small number of well-chosen indicators that are coherent with the planned timetable for data collection than to have many unreliable and incoherent indicators.

### **3-4-1 Development information system**

The development information system is a data-based system that targets collecting, disseminating and presenting human development indicators. This technology has been specifically design to support governments in monitoring the MDGs. It can be of great use once adapted to include additional indicators and definitions coinciding with a country's dominant development level. More than 60 countries and organizations have adapted and implemented a special version of the development information system – the UNSD has established MDGINFO which is a version encompassing the official global millennium development goals.

For instance, many countries use their own poverty line to measure the population rate living below the poverty line, instead of the international poverty line of 1.08 dollar a day according to the international prices of 1993. This is a common example of adaptation processes. The national authorities could decide in other circumstances to adopt the locally defined indicators that are unregistered on the global list. Even in cases where international definitions are used, the national objectives could differ from the global objectives. In some countries, it may not be possible to reach the global objectives, while in other countries these objectives may not be ambitious enough or they might have already been reached. Countries should consider objectives that are suitable for their specificities and the restrictions imposed on their resources to amend their objectives accordingly.

*However, international organizations were interested in developing the indicators presentation methods and facilitating access to them, rather than being interested in developing the national statistical capacities to extract indicators included in the development information system.*

### **3-4-2 Metadata**



The metadata provide information related to the context of a series of data, its quality and other specifications; they should:

- 1- Define the used data collection tool (e.g. survey, census);
- 2- Show precisely where and when the collection process was done (e.g. country “x” 2003, household survey);
- 3- The sample size and sampling method;
- 4- Definitions for each collected item;
- 5- The party which conducted the data collection and its manager.

The metadata could refer to the relevant documents, determine the methods used to calculate the missing values or describe the applied methods for data analysis.

The metadata are highly useful if they are sufficiently identified. They reduce the ambiguity and facilitate the comparison. For example, two sets of data for two countries could include estimates of the net elementary enrolment average. Let us suppose that one of the two countries uses the annual enrolment data extracted from administrative sources while the second uses data collected via household surveys. Obviously in this case the two sets of data should be carefully compared.

## **Part 4: Statistically Capacity Building**

The first step towards developing national statistical administrations and building their staff capacity is to identify the statistical capacity of the country. The World Bank presents, in the country statistical database, information related to the national statistical systems, the systems for monitoring the statistical capacities progress and the statistical indicators of the developing countries. The database encompasses information related to the different aspect of national statistical systems and their operating methods such as statistical laws, national statistical strategies, statistical practices and national statistical data collection activities, institutions and publications.

### **4-1 Gaps and needs**

#### **4-1-1 Statistical capacity indicator**

The World Bank presents a complex indicator for statistical capacities at the country level; this indicator is based on a series of standards that coincide with the international recommendations.

The statistical capacity indicator determines the statistical capacity of 144 developing countries, thirteen of which are Arab countries, determining and measuring accordingly the country statistical capacity and allowing comparisons between countries and over time periods. This indicator relies on statistical capacity measurement from three different aspects (statistical practices, data collection activities and accessibility). Usually, it is calculated by computing ten standards of the three aspects with equal importance to each one of them. The resulting value varies between 0 and 100, 100 referring to the country with ideal capacity in all three aspects of the statistical capacity.

***First aspect, statistical practice:*** it aims at measuring the capacity of satisfying internationally recommended standards, as well as reporting methods and practices in macro-economic data and social statistics. The base year standards include national account estimates, the latest IMF Balance of Payments Manual, the latest reports of external debt data, IMF data dissemination standards, latest reports on school enrolments and reporting them to UNESCO and reporting the measles vaccination age coverage to the WHO.

***Second aspect, data measuring and collection:*** it aims at measuring a country's capacity to collect relevant data, according to appropriate intervals. The standards used are the population census and agricultural surveys periodicity, poverty measurement and relevant health surveys periodicity and the extent of the comprehensive coverage and the vital registration system.

***Third aspect, the capacity to adopt data availability and users' accessibility measures:*** main socio-economic indicators availability, periodicity, extraction and dissemination through the international databases content. The used indicators include income poverty, maternity and child health, HIV/AIDS, elementary school attainment, gender equality in education, access to water and GDP growth.

**TABLE NO 7 IS MISSING; WILL BE INSERTED SOON.**

The results of the 13 Arab countries, 6 of which are in the ESCWA region (with available data), as shown in Table 6, that the average statistical capacity indicator in the Arab countries is lower than “all the developing countries” and other regions as to “data collection” indicator and “data availability indicator” with the exception of Sub-Saharan Africa. The statistical capacities decrease considerably in Somalia, Libya, Djibouti, Sudan, Iraq and Lebanon, respectively.

There is accordingly a weak statistical basis available for the Arab decision makers. Even total indicators related to poverty alleviation progress in the region, trade, labour, GDP and financial statistics are untimely, unavailable or unreliable. Even the available data is inconsistent and use confusing definitions (particularly the least developed countries in the region, where household income and expenditure surveys are scarce).

While the purchasing power differs considerably between the Arab countries, most of them face the same or some of the same challenges and limitations encountered during the statistical process. **The gaps between the Arab countries can be summarized as follows:**

- Labour force, employment, poverty and income distribution data are very limited, and the definitions and methodologies are incoherent and inconsistent, particularly with regards to long-term chronological data.
- Seven countries only updated their national poverty line: Egypt, Syria, Jordan, Morocco, Lebanon, Yemen and Tunisia.
- Very few Arab countries conduct periodic household and employment questionnaires.
- SMEs data are very limited, and their definitions are incoherent at the regional level and inconsistent with the international standards, especially as to the detailed classifications. In Yemen for instance, SMEs refer to the companies with less than ten employees.
- Existing data are not always fully exploited.
- Weak capacities/interests of the data producers.
- The data are not always accessible to the secondary users or researchers.
- The lack of information related to the survey methodologies and statistical practices leads to difficulties or risks in using the data.
- Inconsistent methodologies and concepts.
- The generated indicators are not always comparable and the results are sometimes contradicting and confusing.
- The survey frequency and timing are not always idealist.
- The survey programs are often guided by the donors.
- The existence of data gaps in some cases and repeated activities in others.

## **4-2 Capacity building and promoting programs**

### **4-2-1 Income poverty statistics quality assessment framework**

Due to the importance of official statistics, a number of international initiatives were launched to improve data quality, the most important being the World Bank General Data Dissemination Standards. The UN deployed a lot of efforts, through its various statistical committees to set a series of principles related to the national statistical bodies and their activities as well as the products and services they provide. These

principles aim at stressing the importance of strong official statistics of high quality, comprehensiveness and reliability and at highlighting the professional and ethical practices of the different bodies and authorities dealing with statistics and information.

The World Bank (2006) presented a framework for income poverty statistics quality. The object of this framework is to provide a flexible structure for the qualitative assessment of income poverty statistics. The framework covers all the statistical environment aspects or the basic structure where the data collection, preparation and dissemination take place.

The framework includes the basic statistical quality principles and five quality dimensions:

**First: the basic statistical quality principles**

Although these are not in themselves a quality dimension, they include the elements and indicators that play the role of essential or institutional prerequisites for the statistical quality. The agencies in charge of official statistics should collect the statistical data which practical usefulness has been proven and make them accessible to the citizens in a credible and neutral manner, in respect of their right to information knowledge.

**The basic statistical quality principles** encompass the following elements:

1. The statistical agencies should define the statistical data collection methods and procedures, their preparation, storing and presentation according to precise technical considerations which encompass the scientific principles and professional ethics to preserve confidence in the official statistics.
2. For the sound data interpretation, the statistical agencies will present the methodologies related to the statistical sources and the adopted methods and procedures, according to the scientific standards.
3. The statistical agencies can comment on any statistics misinterpretation or misuse. They can also adopt the adequate measures to deal with any identified problem at the different phases of collection, preparation or dissemination.

4. It is possible to obtain data for statistical purposes from various sources, surveys or administrative records; the statistical agencies should, upon selecting the source, take into consideration the quality, timing, charges and burdens assumed by the surveyed.<sup>1</sup>
5. Data related to individuals, collected by statistical agencies for the statistics preparation, should be totally confidential. The individual responses confidentiality should be explicitly stated, whereby they cannot be disclosed nor used for any other non-statistical purpose. The surveyed should be aware of the areas of the data use. Rules and systems should be established to forbid data disclosure, including sanctions against the misuse of confidential data.
6. The rules, measures and procedures by which the statistical systems are governed should be fully transparent.
7. Coordination between the statistical agencies of one country is essential for the consistency and efficiency of the statistical system. Procedures and measures should be adopted to facilitate the data exchange and cooperation between the agencies entrusted mainly with the collection of income and poverty statistics and the other data producing agencies to ensure the right understanding of the data requirements in order to avoid duplicity and reduce the surveyed burden.
8. If the statistical agencies in each country use the international concepts, classifications and methods, this will promote the consistency of statistical systems and their competence at all the official levels.
9. The bilateral and multilateral international cooperation in statistics contribute to the improvement of official statistical systems in all countries.
10. The resources should be adapted to the program statistical needs; adopting the relevant measures to guarantee the competent use of resources.
11. Quality importance awareness, quality is the cornerstone of statistics; and building confidence between the surveyed and the data collectors.

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<sup>1</sup> The surveyed are the individuals or households delivering the data.

## **Second: the statistical quality dimensions**

1. Independence: independence means that the data collection should be on a neutral and guaranteed independent basis; choices of sources and statistical techniques are based on statistical considerations only. The statistical agencies independence is a must for their credibility and competent performance and for the efficient availability of high quality information to each citizen and policy maker. Without this credibility, users could lose their confidence in the precision and objectiveness of statistics and the information resulting from the statistical agencies; in addition to the unwillingness of data providers to cooperate with the agencies demands, policies and statistical practices. It is also essential for the compliance with professional principles.
2. Relevance and consistency: the statistical agencies should constantly aim at improving their data systems to provide detailed and timely information and to provide statistics that are relevant and adequate to the users' needs. For example, they should make sure that income poverty data collected coincide adequately with the users' needs and that the collected information is sufficient to estimate the poverty rate, size and distribution; therefore, it is not sufficient to collect income and expenditure-related data, they must collect data related to the demographic, economic and social household specificities. The data collection frequency and dissemination should comply with the international standards (every three to five years according to the best practices).

The survey data should be consistent domestically (e.g. to ensure consistency between geographic regions), in time and with other relevant data. Any change in the data collection methodologies or methods in comparison with previous surveys should be revealed, as well as the possibility of undertaking comparisons. The data review policy should be declared with full transparency and in accordance with limited timetables, and to provide the users with the editing reasons.

3. Credibility: the statistical agency must work hard to promote credibility by enforcing strong standards related to data collection, processing methods and reaching outcomes. In addition, the agency should install in its staff the importance of complying with quality criteria; which will deepen the feeling that the statistical agencies product and services are emanating from good production and monitoring methods.

The statistical data method and source should be suitable for the final objective of data collection. Data collection takes place through comprehensive data collection programs that take into consideration each country's special circumstances. The survey design should also be suitable; to study income poverty for example, collected data should include information related to income and expenditure, consumption and prices, and household specificities. The convenient units of measurement should be used (e.g. individual, household, society) in accordance with the study objective. Administrative and census data are used to complete the data source and ensure data consistency, immediate data follow-up and solving any error, careless mistake or other data problems.

4. Building confidentiality: building on the surveyed ethics to get them to cooperate and assuring them that the information will not be misused are important elements in the statistical agency work. Since the personal information confidentiality is the main concern of the surveyed; the statistical agencies that do not succeed in convincing the surveyed of the absolute confidentiality of the information they provide, will produce unreliable information. Therefore, these agencies should deploy extra effort to convince the surveyed that their information is very valuable and to improve their responsiveness. It should also be clear the low responsiveness is a huge flaw in statistics as much as neglecting the data review and design.

Therefore, it is necessary to provide a specialized unit that will interact with the surveyed; its objective is to assist the surveyed responsiveness and make sure they provide sound information. For this unit to fulfill its mission, training must be provided for the staff to answer information-related questions, to be fair and coherent in dealing with businesses and



households. In case of any problem in the relationship with the surveys, the senior statistician should personally interfere to solve the crisis.

5. Transparency: one of the main basic principles of the statistical agencies work is the transparency methodology. These agencies can be truly successful in building trust with the clients – the users of the statistics and indicators they produce. Transparency requires that the statistical agencies should disclose the main concepts and methodologies adopted in the collection and compilation of the data, statistics and indicators they produce.
6. Accessibility: it has become necessary for the statistical agencies to be aware of information accessibility measures, whether hard copies through periodic newsletters addressed to the media, specialists, interested parties and researchers, or electronically through websites, e-newsletters. For example, disseminating income poverty data in compliance with the users' needs according to a defined timetable.

Among the information that should be made accessible, comprehensive information from statistical methodologies, such as: concepts and definitions, classification, target populations, framework, sample design, sample size, stratified sample, survey form, data collection method, data preparation and analysis. The statistics should be accessible to all users at the same time. The revenues, expenditure, consumption and prices sub-aggregates should not be published and should be made accessible on demand. Furthermore, it is necessary to provide quick assistance to users and determine the contact person for information on any statistical field.

#### **4-2-2 Capacity Building and Promoting Programs**

It is necessary to create statistical capacity building programs through the role of statistical bodies that produce data and indicators, and through their capacity to build databases in a sound systematic, updated and quick manner, which is necessary for timely decision making. The various statistical bodies should specialize in providing and producing data – which could be specific to a particular economic or business sector within the state. This will avoid data publishing by more than one authority, which will lead to conflicting data. Furthermore, these bodies –in charge of producing the data – have branches located near the decentralized data centers, which facilitates

the data collection process. In addition, the data collection process is not the specialty of decision makers even though it is one of their priorities.

Many regional and international organizations (such as the Arab Monetary Fund, the UNDP, the World Bank, ESCWA, the GCC and the Arab League) have tried to provide statistical capacity building and promoting programs. Despite their enormous efforts, the available regional data remain very limited; it is neither updated nor consistent and historically incomparable. This is largely due to obstacles and limitations at the State level.

### **First: The Arab League Efforts**

#### **a- Standardizing the methodologies, definitions, and the terminology of the censuses, household surveys and population registries**

The statistics and database administration at the Arab League's General Secretariat has made real efforts in setting up strong bases towards achieving a comprehensive methodology for data and social indicators that aims eventually at creating a standardized development system for the Arab countries. The statistics and database administration has formed a task force to standardize the methodologies, definitions and terminology used in censuses, household surveys and population registries. This task force included Jordan, Tunisia, Palestine, Egypt, Yemen, the Arab League's General Secretariat with the assistance of ESCWA's expertise in this field.

In order to achieve this objective, four workshops were organized for censuses and surveys specialists and experts titled (standardizing methodologies, definitions, and terminology used in censuses, household surveys and population registries) during 2005, 2006, 2007 and 2008.

#### **b- The Pan Arab Project for Family Health (PAPFAM)**

The Arab League has been implementing the Pan Arab Project for Family Health since 1999 with the support of the Gulf Program, the UNDP, the United Nations Population Fund (UNFPA), the World Health Organization (WHO), the UNICEF, the International Planned Parenthood Federation (IPPF), the Islamic Organization for Medical Sciences (IOMS), the OPEC Fund for International Development (OFID), and ESCWA.

This project is a continuity of the pioneering experience of partnership and cooperation between the Arab League, UNFPA, the Gulf Program for the support of UNDP, UNICEF, WHO, IPPF, UN Statistical Office and ESCWA for executing the Pan Arab Project for Child Development between 1989-1999, joined later on by the OFID and the IOMS.

**The Pan Arab Project for Family Health aims at: -**

- Providing the Ministries of Health and Social Affairs, the national child and women centers, research centers, and the relevant local and international civil society organizations with accurate and updated information necessary for the planning, execution, follow-up and evaluation of women and child care programs and primary health care programs.
- Assisting in building and developing an integrated family health information system and providing it with the data obtained from the Pan Arab Family Health Survey which was the main basis for the project that was implemented in 7 Arab countries and is still ongoing in 3 other Arab countries.
- Strengthening national capacities in the fields of planning, coordination and management of family-related integrated programs within the framework of development plans by organising seminars, trainings and workshops.
- Strengthening the staff technical skills in the agencies dealing with the situation of population and family health in general and the situation of women and children in particular through training on statistical analysis, project evaluation and management, computer skills in analyzing and using data, as well as using the results obtained in designing and planning health policies.
- Assisting in determining prevalence rates of chronic and child diseases as well as pregnancy and birth related diseases.
- Providing a series of indicators that will help measure the progress in achieving development goals.
- Contributing in raising awareness to family and reproductive health issues among the various categories of the society especially women and youth.
- Contributing to the development of a scientific methodology to evaluate the family and reproductive health programs and status in the Arab world and documenting this methodology.

## **Second: The International Comparison Program ICP**

It is the world's largest statistical initiative. It produces internationally comparable price levels, economic aggregates in real terms, and Purchasing Power Parity (PPP) estimates, which is a form of exchange rate usually expressed in US dollars. Purchasing Power Parity is a conversion that eliminates differences in prices levels between countries. A PPP is defined as the number of local currency units in a certain country required to purchase the amount of goods and services equivalent to what can be bought with a dollar in the United States. It is based on the data obtained from a series of household surveys that are usually held once every three to five years and sometimes even longer. Statistically, PPPs are expenditures of relative prices preferable average of a large number of goods.

PPP conversion allows national accounts aggregates in national currencies to be compared on the basis of the purchasing powers of the currencies in their respective domestic markets free from disparities in price levels across countries, similarly to the method used upon comparison of the real values of locally produced goods and services, free from price disparities over time.

The use of PPPs has led to GDP comparisons, to the measurement of the relative social and economic well-being progress in a certain country over the years and between countries, to monitoring poverty, and tracking progress towards the Millennium Development Goals, effectively. PPPs also assist international markets by identifying the relative productivity and investment potential of different countries. The ICP involves many players from national, regional and international agencies and is overseen by the Global Office housed in the World Bank. National Statistical Offices implement the program on the ground, under the general guidance and coordination of regional agencies.

For the purpose of comparing levels of poverty across countries, the World Bank uses consumption estimates converted to US dollars using purchasing power parity (PPP) rather than exchange rates. Over the past 35 years or so, the ICP was a means of data collection to obtain PPPs. Historically, surveys have been conducted in around 120 countries at one time or another, and have been repeated in some of them. Around 160 countries participated to the 2004 round including EU and OECD. The large quantity of data was collected during these surveys constitutes the basis for PPP calculations.

The latest World Bank PPP estimates are based on 1993-96 round which included 117 countries.

### **4-3 Institutional arrangements and coordination at the national, regional and international levels**

The national and international communities have realized the importance of introducing long term sustainable improvements to the statistical capacity. Therefore, the need for data at the national and international levels requires some short term improvements regarding the availability and quality of data.

#### **4-3-1 Partnership in statistics for development in the 21<sup>st</sup> century (Paris 21)**

The Partnership in Statistics for Development in the 21st Century (PARIS21) was established in November 1999 in response to the directions of the UN Economic and Social Council which called the international community to strengthen the statistical capacity of developing countries to enable them to improve their planning capacities and offer them the opportunity to set up a policymaking process based on credible statistical indicators. The Paris 21 partnership has set a series of goals which aim at promoting a culture of evidence-based policymaking and monitoring in all countries, especially in developing countries. The Paris 21 Consortium is a partnership of policymakers, analysts, and statisticians from all over the world. It focuses on promoting high-quality statistics to be used in designing sound policies. It also focuses on fostering an effective dialogue among those who produce statistics and those who use them, through facilitating regional and international events, supporting country-based activities, regional workshops, and subject matter task teams.

The consortium has a limited number of employees (the Paris 21 Secretariat) and relies largely on the work of task teams comprising a number of experts from developing countries and countries of the South in fields related to the work of the consortium. The Paris 21 secretariat is committed to providing the necessary assistance to statistical bodies in developing countries to allow them to continue designing and implementing policies aimed at reducing poverty and monitoring its consequences while paying special attention to the Millennium Development Goals. The consortium aims through its role to promote policymaking and monitoring based on accurate information in all countries, especially in developing countries, which in turn will improve transparency, accountability and governance.

Since its establishment in 1999, the consortium held a large number of important activities at the national, regional and international levels and produced a number of specialized materials to promote a culture of statistical use, strategic statistical planning, and measurement of the capacities of national statistical systems, as well as strategies to reduce the costs of statistical work (especially population and housing censuses). The consortium's webpage provides numerous reports on the work done in developing countries to support the use of statistics. It also provides further information and other products.

DECDG 2006 identifies a number of issues and obstacles that prevent some countries from conducting statistical improvements, which limits the World Bank's capacity to develop and support these improvements. These obstacles include: low levels of financing, weak incentives to improve statistical capacities and technical expertise, and the lack of accurate evaluation of the quality of statistical data as well as the lack of evaluation of development statistics capacities.

The Marrakesh Action Plan provided the basic framework for the World Bank's program to improve national and international statistical systems which determines the 6 main measures adopted by the WB. These include 3 national objectives: integrating the statistical systems' strategic planning in national development processes, guaranteeing full participation in the 2010 population census, and increasing financing from countries and partners supporting statistical capacity building. The 3 remaining objective focus on measures at the international level: establishing an international household survey network (IHSN) to improve the efficiency of international household survey programs, improving the data necessary for monitoring the Millennium Development Goals, and improving accountability in international statistics.

The International Household Survey Network (IHSN) was established in late 2004 with the aim of improving international cooperation and development in designing and publishing household surveys. IHSN currently includes documents related to more than 2500 household and more than 700 data groups that are available to World Bank staff. The surveys that will assist national agencies in planning have been collected and published within a system, and they will showcase the plans by country.

The planning and sequence of internationally supported surveys will help provide comparable estimates and achieve priority needs. An important part of the strategies that was agreed upon is to improve the utility of existing data, especially household data and administrative registries. Starting 2006 a number of IHSN activities will be supported by the Paris 21 Secretariat through one of the available development grants.

The World Bank institute has implemented a capacity building program to improve household surveys, analyze the data and use them to diagnose poverty. The IHSN has an archive of household surveys data and metadata. One of its main achievements was the creation of a series of tools (manual) to manage household data which determines a simple way to document and save the surveys electronically, index data and make them accessible to users. Work is currently ongoing to help surveyors preserve the confidentiality of the information related to the surveyed by providing best practices, tools and methods. Many countries have welcomed this initiative, especially those who have limited capacities and expertise in the face of these technical challenges.

**4-3-2 Forum for Statistical Capacity Building for the Arab Region:** This Arab statistical forum aims at examining statistical issues in the Arab world, in particular the efforts aimed at designing, implementing and financing national statistical strategies in Arab countries.

This part of the study highlights the importance of the adoption by statistical bodies of the standards that were agreed upon in order to improve the quality of statistical data. Statistical agencies should determine the methods and procedures for collecting statistical data as well as preparing, storing and presenting them. They should also demonstrate the methodologies related to statistics sources, used methods and procedures; and preserve the confidentiality of the data related to individuals, collected by statistical bodies for survey purposes. It also considers coordination between statistical bodies within a country to be a necessity in order to achieve consistency and increase the efficiency of the statistical system. It touches upon the procedures and arrangements aimed at facilitating data exchange and cooperation between the agencies that are in charge of collecting income and poverty related statistics and other data producing agencies in order to guarantee a better

understanding of data requirements. The use of international concepts, classifications and methods by statistical bodies will improve the consistency and efficiency of statistical systems at all official levels.

Statistical administrations should also commit to quality, i.e. independence, consistency, credibility, transparency and accessibility of data in a timely manner to those who need it. At the same time they commit to a policy of building confidentiality between them and the surveyed and between them and data users.

Countries should improve the programs and procedures that aim at implementing these standards and participate to relevant regional and international programs in this regard.

In recent years awareness of the importance of statistics has increased, and in particularly in the context of poverty reduction strategies and achieving the Millennium Development Goals. However, this was not accompanied by an increase in resources and effort to build sustainable statistical capacity.

Despite the fact that most of the Arab countries conduct household surveys to measure the income and expenditure, but data is not available to be used or published. Among 17 Arab countries listed in the 2007/2008 Human Development Report, poverty and inequality were measured in only 7 Arab countries. It is worth to mention here Syrian case which raised a number of questions as UNDP produced a report on the status of poverty in Syria in 2005,

The Statistics on Human Development has improved significantly in recent years in terms of coverage, quality and timeliness. Countries expenditure on MDG and on monitoring progress made towards implementation of these goals has a significant impact on developing statistical database. As a result demand to detailed data at the level of household has been increased. There are 10 indicators, such as the ones related to Goal 1, out of the 48 MDG, can only be measured by using the household data, also there are 16 other indicators which can be measured through the household surveys.

Although most of the Arab countries have some sort of household surveys, however lack of regularity and time variation in conducting these surveys, the difference in definitions, sample size and the degree of representation of the country may limit the potential for using data in international comparisons and within the same country. It should be noted that these differences did not question the credibility of the surveys, but there must be a special treatment for each survey in order to ensure that the standard of living measure is used for comparison between countries and even in the same country for various years

**Gaps in the Arab countries can be summarized as follows:**



- Data on the labour force, employment, poverty, income distribution is extremely limited. Methodologies and definitions are inconsistent specifically in the long term time series data;
- Only 7 countries have defined their national poverty line: Egypt, Syria, Jordan, Morocco, Lebanon, Yemen and Tunisia;
- Data is not always available for secondary users, or researchers;
- Lack of information on surveys' methodologies and lack of uniformity in the methodologies and concepts create difficulties/ risks in using the data;
- Surveys programs are often directed by the donors.

International organizations have showed more interest in upgrading the method of displaying the indicators and making them more accessible. This interest didn't follow by developing national statistical capabilities to include these indicators in the system of development information.

The report recommends a number of principles and procedures that should be agreed upon to ensure consistency before conducting any study to assess the evolution of poverty in different years in a country or making comparison of poverty among ESCWA member countries.

### **5.1 Specific Procedures to determine poverty line and measure the indicators**

- 1- Poverty measurement using expenditures databases instead of income data.
- 2- Use of household as a measurement unit taking into consideration age and sex distribution.
- 3- Use of detailed data at household level.
- 4- Harmonization of the methodological framework and the main principles for the calculation of national poverty lines. This includes a need assessment to determine how the basic food and non-food derived from the actual practices of the poor. In addition to the necessity to take into account the place of residence of the family, its age and sex as well as sharing principle among family members in estimating the national poverty lines.
- 5- Establishing guidelines for the collection of consumption data from household surveys (Diary and reference period).
- 6- The establishment of uniform methods for dealing with missing data.

### **5-2 Specific recommendations on standards of data collection**

Statistical administrations should unify the standards and concepts of surveys in order to make a comparison between poverty indicators throughout the different years. They are also responsible of unifying different data collection methodologies and consistency of definitions in accordance with international standards. Arab countries should agree and coordinate among themselves on the standards and concepts used - whenever possible, taking into account the specificity of each time period and each country.

The Standards to be achieved are:

1. Dissemination of all methodologies and data collection methods and definitions used as well as sample design techniques;
2. Using a representative sample of all regions of the country (at least in urban areas and rural areas) with an appropriate size;
3. Identifying method of the collection of data on food (daily program) for families and adult individuals in the case of taking foods outside the home;
4. Identifying method of data collection on a non-food commodities (the recall period), with the unifying the reference period, whenever possible;
- 5- Identifying method of data collection on consumption and expenditure (bought from markets and from the family production and donated goods)
- 6- Collect data on what has been spent for the purchase of durable goods, new and used ;
- 7- Collect data on what the household has of durable goods and its estimated price and age (date of manufacture);
- 8- Collect data on house ownership, specification and the calculated rent;
- 9- Identifying method of calculating the consumption (actual consumption regardless what the family spent on the commodity) and treatment of the calculated housing rent and the use of durable goods in a consistent manner;
- 10- Perform confidentiality of data on individuals, collected by statistical agencies.

### **5.3- Specific recommendations to achieve statistical quality**

1- Commitment to coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system. It is also very important to have arrangements/ procedures between the agencies with primary responsibility for compiling statistics of income/ poverty and other data-producing agencies to facilitate data exchange and cooperation in order to ensure proper understanding of data required by various users. Adoption of international concepts classifications and methods by national statistical agencies will enhance the international consistency and efficiency of statistical systems.

2- The statistical administrations should make a commitment to assure data quality dimensions including credibility, transparency and availability of data that accessible to various users in a timely manner. The statistical administrations should also commit to build confidence between researchers, data users and themselves.

3- Countries should activate the programs and procedures that would assist for the implementation of standards and support their participation in the regional and international relevant programs.

4- Coordination and cooperation between government agencies involved in development, education, health, information, and social affairs is essential in order to respond to different needs of the family individuals to the of the sectors mentioned above according to a national complete and comprehensive vision and strategies. Political support has its significant impact on this.

5- Coordination among donors will assist in avoiding repetition, duplication of efforts and contradiction to achieve the ultimate benefits from the available resources.

6- Improve cooperation between the studies/ research centers and the institutions assigned to the collection of data and production of indicators.

7- Remove the constraints from accessibility and usage of data by researchers. This will have impact in understanding problems and identifying the limitations which will assist in defining methods to overcome them through the in-depth analysis and comparison of the results. Each country may take specific measures to ensure data confidentiality.

8- Updating and developing information systems and databases, as well as benefiting from other countries' experiences. Making efforts to create a unified and sophisticated mechanism at the level of the Arab countries to raise the efficiency of databases and facilitate its usage nationally and regionally.

9- Creating and developing methodologies for data collection in the areas of conflict and develop the best means to that.

10- The donor parties should assist the countries in designing and implementing training programs that are more compatible with the survey methodologies and clearly identified priorities and the application of the proposed framework of the fundamental principles on data quality.

Finally, there is a strong need for identifying the importance of statistics and data being collected not only through data compilers but also through the data respondent. Therefore statistical awareness should be raised among all nationals. Strengthening the statistical capabilities for the nationals working in the different statistical offices is also an important issue.

#### **5.4 Possible actions to be taken by ESCWA:**

ESCWA can play an important role in assisting in the implementation of previous recommendations or measures especially the following:

1- Organizing training workshops and sessions in order to improve capabilities of staff working in the governmental statistical department in general and specifically in the statistical offices.

2- Assisting the member countries in developing a national strategy of Statistics, to :

- a- include programs to measure and produce poverty indicators;
- b- incorporate statistical activity within the framework of the overall strategy for economic and social development of the country;
- c- be a mechanism for statistical coordination;
- d- facilitate dialogue and consultation between producers and users of statistical information;
- e- improve the human resources. This includes all workers in the statistical field as well as the supporting workers, and strengthen

- and provide good level of human resources in the statistics area;
- f- use the modern technology in media and communication (for dissemination and internet);
- g- develop and improve the quality of data by upgrading staffs' capabilities in analysis, program of capacity building in the area of surveys, training in sampling techniques and develop and improve producing statistical indicators;
- h- Make available the logistics opportunities, financial and budgetary opportunities.

3 - Assist in the development of statistical infrastructure

4 - Restructuring and institutional strengthening, include:

- a- institutional reform for the development of statistical capacity;
- b- Review and modernize the law in force for the statistical system, taking into account the fundamental principles of official statistics;
- c- Provide effective mechanisms for the coordination and management of statistical system;
- d- Clear distribution of the statistical tasks in the statistics offices from one side and between the ministries and associations and enterprises from another side.

5- Awareness-raising campaigns for citizens to advise them of the importance of statistics and the benefits that would accrue to them when cooperating with national statistical offices in providing the correct information.