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THE SCN FOUR COUNTRY CASE STUDIES

INTEGRATING FOOD AND NUTRITION INTERVENTIONS IN NATIONAL DEVELOPMENT PLANS IN ORDER TO ACCELERATE THE ACHIEVEMENT OF THE MDGS IN THE CONTEXT OF REALIZING THE HUMAN RIGHT TO ADEQUATE FOOD:

A SYNTHESIS OF FINDINGS AND RECOMMENDATIONS

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Preface

This "working paper" has been progressively drafted and commented on by the consultant team and by the SCN Steering Committee. In the first instance it is the consultant team that assumes the responsibility for the content of this "Synthesis" report. The intention is that this process of discussion should continue during the 32nd Session of the SCN and as wide an agreement as possible be reached on its content, its conclusions and recommendations.

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This work was supported at the country level by many of the UN agencies members of SCN, but the support of UNICEF in all four countries was critically important, as was the support of PAHO in Brazil. The contribution of the governments in each country is also appreciated, especially the massive support from the Brazilian government. GTZ also provided support to the SCN Secretariat to carry out this work.

Executive Summary

In preparation for its 32nd Session the SCN has carried out Country Case Studies (CCS) in Brazil, Bolivia, Angola and Mozambique looking at how adequately food and nutrition programmes are included in national development plans in order to help meet the Millennium Development Goals (MDGs) and how to strengthen them in the context of realizing the Human Right to Adequate Food (HRAF). The objectives of the CCS exercise were directed at both process and outcome, with the intention not to just arrive at a diagnosis of the situation in each country, but also to create a capacity to better understand the issues involved among a group of national development actors. A workshop was held in Brazil in August to launch the process and another one in November to review the results and experience gained. This report is a synthesis of the lessons learnt by the consultant team in carrying out the CCS exercise.

In each country a three step process was followed, consisting of assessment; analysis and recommendations for action. The assessment was done by a small core group of nutrition professionals that collected and assembled all the relevant information ready for analysis. The second stage of analysis was carried out by a wider group of development actors through participatory group work facilitated by the core group. The analysis focussed on how to strengthen food and nutrition content of national development and poverty reduction plans aimed at achieving the MDGs. The wider group of development actors that performed the analysis and agreed on the recommendations in the CCSs were the ones involved in managing and delivering those programmes with food and nutrition capable of contributing to the achievement of the MDGs, as well as members of civil society that are involved in or affected by the issues concerned.

In order to achieve a common understanding among the broader set of development actors a series of information material and lectures were shared during the inter-sectoral analysis workshop. This common understanding covered the importance of nutrition for achieving the MDGs, the concept of food and nutrition security (which includes the three elements: availability, access, and utilization), the importance of protecting foetal and infant growth in the context of the life cycle, and examples of the terms respect, protect and fulfil (facilitate, provide), used to describe governments' obligations for realizing the right to adequate food.

The assessments revealed that there is an enormous amount of "noise" around nearly all the key food and nutrition indicators. The terms hunger and malnutrition are not always used with the same meaning by different actors. Consequently the key messages often lack consistency and are contradictory. The focus that the first MDG puts on hunger as defined by adequacy of energy intake and malnutrition as defined by child underweight, is counter productive in this sense, since these terms exclude hidden hunger which affects a far greater proportion of the population, and obfuscates the problem of overweight and obesity, which in all four case study countries increasingly co-exists with stunting, especially in poor urban populations. Food and nutrition professionals need to re-appropriate the words "hunger" and "malnutrition" and try to re-educate the rest of the development community to use the indicators appropriately. The right to adequate food must be equated with being free from hunger and malnutrition (including overt and hidden hunger and undernutrition and overnutrition). In all CCSs the problem definition was presented in terms of the proportion of the population whose needs were being met, not as the proportion of the population whose right to adequate food was being violated.

There is also a lack of common understanding across food and nutrition in development actors around issues of vulnerability. Discussions of vulnerability issues tended to concentrate on population groups that are socially and economically vulnerable, with little reference to biological vulnerability. There is also little common understanding of the importance of maternal nutritional status and its links to suboptimal foetal growth and development and henceforth the potential for stunting, for impairing child development potential, for reducing adult earning capacity, or for increasing the risks of obesity and chronic disease later in the life cycle. There was no notion in any of the Case Studies that the pursuit of food security (increased energy intakes as per the MDG on hunger), was likely to generate increased risks of chronic non-communicable diet related diseases in the future unless due attention was paid to nutrition security (improved maternal nutrition and infant feeding) and to diet quality not just quantity.

The capacity building objectives of the country case study exercise were only partially met. The participatory analysis did help a cross sectoral group of food and nutrition in development actors in each country to better understand the importance of food and nutrition interventions for achieving the MDGs. However it did not clarify what food and nutrition inputs are. In fact, on the contrary, the organization of all the food and nutrition inputs in webs of causality related to the MDGs made it harder to categorize and classify these food and nutrition inputs. Despite these limitations the exercise was still considered to be extremely useful for revealing the gaps, showing areas of overlap and similarity and for better understanding the general lack of coordination between food security and nutrition security activities. The exploration of the human rights aspects of food and nutrition programmes served more for participants to become familiar with the new concepts, and to identify the need for further more in-depth work, than to generate a clear understanding of whether such programmes contributed to respecting, protecting, and/or fulfilling the right to adequate food and to be free from hunger and malnutrition.

The case study exercise reveals that while poverty reduction and MDG achievement are high priority in all four countries, food and nutrition interventions to reduce hunger and malnutrition are not well developed in the national development plans for achieving the MDGs. The dominant "nutrition in development paradigm" operating in all countries seems to be that hunger and malnutrition are caused by poverty and ignorance, and that they will improve if livelihoods (economic growth and incomes) and education services improve. There is a generalized lack of appreciation of the synergies to be gained by keeping food security and nutrition security actions linked together. Little or no priority is given in any of the national development plans to the periods of high biological vulnerability, or for maternal nutrition in particular.

The idea that the proactive solution of hunger and malnutrition can be a platform for accelerating development is not commonly understood by the development actors. The exception perhaps is that of Brazil where the Zero Hunger programme, which has enormous political priority, has shown a demonstrable effect on reducing poverty which may have additional effects on hunger and malnutrition. The Zero Hunger programme could be considerably strengthened if it's linkages with food and nutrition security related activities were better articulated, as part of a more decentralized approach. It would seem that a process of strengthening Zero Hunger has been sparked by the CCS exercise, and this process is ongoing.

In order to try to organize the various food and nutrition interventions in a logical fashion, a food and nutrition policy framework was developed, organized by life cycle stages. All four country

case studies revealed that there was no common understanding about what programme components are needed to ensure the achievement of both food and nutrition security. In recognition that a policy is what it does not just what it plans to do, these policy areas were further exemplified as their lowest level activities, arranged in accordance with their importance at different stages of the life cycle. These direct food and nutrition interventions are those that should be developed by the state in addition to creating a propitious macroeconomic environment, in order not only that the right to adequate food and to be free from hunger and malnutrition can be realized, but also so that MDG achievement can be accelerated. The five food and nutrition intervention policy areas are: food production; food processing and fortification; food supplementation; micronutrient supplementation; and education for dietary change. These are the “direct" food and nutrition actions that are related to ensuring the adequate supply and consumption of energy and nutrients to the population. They are consistent with the "availability", "access" and "utilization" aspects of food and nutrition security used in all four case countries.

The institutional and legal frameworks for realizing the right to adequate food are best developed in Brazil, although it still has a long way to go for the right to be realized by all. Although all four countries are signatories to human rights covenants that include the right to food, and three of the case study countries have incorporated some provision related to the right to adequate food into their constitution, the actual respect, protection and fulfilment of this right remains elusive in all four countries. There is still a lack of clear definition and understanding of the content of this right at the national level, let alone clear justiciable provisions on the right to food as such at the district and community level. In order for the right to adequate food and freedom from malnutrition to be realized then the clear definition of what these entitlements are is a fundamental first step. The creation of a comprehensive food and nutrition policy framework as proposed in this synthesis should contribute towards this. Once these component parts are established, and responsibilities apportioned, the attribution of obligations should become an easier task.

The Brazilian experience with its National Food and Nutrition Council is one that the other three countries would do well to try to emulate, with recent events in Bolivia opening a window of opportunity in this regard. Without such a high level national coordinating body it will be difficult to create a sufficiently articulated set of food and nutrition policies and programmes that will allow the realization of the right to adequate food (i.e. to be free from hunger and malnutrition in all their forms) as well as accelerating achievement of the MDGs.

The realization of the right to adequate food will also depend on how community participation and mobilization aspects of this overarching policy framework are orchestrated at municipal level through a decentralized approach. Without such community participation the coverage of any of the food and nutrition interventions will preclude that the poorest of the poor and the most socially discriminated are reached and their rights realized. In order for this to happen there is an urgent need to revisit the concepts of hunger and malnutrition and to establish a common vision and language across all relevant sectors and actors. As part of such a thrust the use of child growth measurements also needs to be revisited looking at both overnutrition and undernutrition aspects. In parallel a meaningful set of messages needs to be developed that are capable of mobilizing the poorest of the poor to participate in their own development and to realize the right to adequate food, including the institution of a recourse mechanism in case of violations of this right.

The challenge for the SCN and the CCS teams is how to build on the momentum gained and to sustain it. The process started by the CCSs has indeed been a very rich one, and is ongoing in all four countries. The international nature of the "SCN" presence has certainly raised the profile of food and nutrition issues, and the participatory capacity building approach adopted has opened up many new discussions and provoked much cross fertilization of ideas between the multisectoral groups that participated. The SCNs Strategic Plan outlines the intention of working though the UNDG to strengthen the capacity of UN country teams to be able to develop more adequate CCA and UNDAF processes. The idea then being that in this way there would be some further input into the development of the CDF and the PRSP processes, such that their food and nutrition content would be strengthened. However, this intention never materialized, and PRSPs continue to have poor food and nutrition components in most countries across the globe. The SCN needs to try to address these problems and seek ways to strengthen the food and nutrition content and conceptualization of these various UN assessment and planning exercises. Perhaps a start could be made with the four Case Study countries. The question is "how"?

The recommendations for priority follow-up actions of each of the four country studies provide a basis for exploring requirements and opportunities for SCN support at the country level. The Bolivian study, for example, identifies the formulation of a coherent rights-based food and nutrition policy and strategic implementation plan, in the context of consolidating the institutionalisation of the food and nutrition council, as a key priority. Mozambique and Angola have similar priorities, but the urgency of their cases is compounded by two factors: firstly the severity of their hunger and malnutrition problems; secondly their serious lack of human resources with training in food and nutrition sciences. Brazil's challenges are different and relate to how to promote the decentralization of food and nutrition security interventions, as well as the explicitation of the various dimensions of the HRAF, so that it becomes justiciable. How could the SCN, collectively and through its individual members support such undertakings if such requests were made? How could SCN working groups be effectively mobilized for that purpose? How can the SCN contribute to maintaining and carrying forward the momentum generated by the CCS exercise? These are some of the key issues in the four countries, on which the symposium and subsequent working groups are invited to initiate further discussions, with the understanding that they will be carried forward after the 32nd session.

More generally, beyond the CCS examples described in this CCS synthesis, the UN agencies involved in promoting food and nutrition activities, both acting alone and together through the SCN, can take a lead role in trying to help governments create the overarching policy and legal frameworks for realizing the right to adequate food as described in this report. No single agency may have the breadth of expertise or mandate to cover such a broad spread of programme areas, while the SCN mandate may suite it to such a task. In addition a UN system wide communication and partnership building strategy is urgently needed to create a common vision among the UN agencies on how to promote the realization of the right to adequate food. In addition agreement needs to be brokered on the appropriate terminology and language to be used to describe a single set of monitoring and evaluation indicators for measuring progress towards the realization of the right to adequate food. The SCN and all of its constituents should seize upon the opportunity provided by the approval of the Voluntary Guidelines for realizing the right to adequate food and make their realization the backbone of future efforts to realize a world that is free from hunger and malnutrition.

Finally, the lack of adequate human resources trained in food and nutrition is perhaps the most serious problem encountered by the CCS exercise. The situation is a serious constraint in Mozambique and Angola. The training of food and nutrition development actors in order to help orchestrate and facilitate such an approach will require considerable attention in order to ensure that curricula used are not out of date and intrinsically clinical and dietetic in orientation. Even Brazil, despite having a large contingent of nutrition professional and many degree courses in food and nutrition related subjects, still does has not got enough public nutrition professionals working in the system. The SCN should explore ways through it membership to contribute to the continued capacity building efforts in all four of the case study countries, with emphasis on capacity building in public health nutrition and in realizing the right to adequate food.

INTRODUCTION

In preparation for its 32nd Session the SCN has embarked on a process of elaborating country case studies to look at how adequately food and nutrition programmes are inserted into national development plans in order to help meet the Millennium Development Goals (MDGs) in the context of realizing the Human Right to Adequate Food (HRAF). The case studies were developed in consequence of the 31st Session, which focussed on dissecting out the importance of nutrition for achieving the MDGs[1]. The 5th Report on the World Nutrition Situation[2] launched at the 31st Session, made the case for the importance of nutrition for improved development outcomes, including helping to achieve the MDGs. Recommendations from the 31st Session were that food and nutrition interventions were important components for achieving all the MDGs, but that the strengthening of the food and nutrition content of programmes aimed at achieving the MDGs must be placed in the context of the Millennium Declaration, which emphasizes that the process of achieving the MDGs should be consistent with the realization of Human Rights. It is also realized however, that what is needed more than anything else is action, i.e. concrete examples of how to do it.

The objective of the Country Case Study exercise was to stimulate a set of countries to acquire abilities and accumulate experience on the challenges faced and potential to be achieved by including food and nutrition objectives, priorities and goals in national development plans for reducing poverty, and eradicating hunger and malnutrition in the context of realizing the HRAF. Such processes were developed in Brazil, Bolivia, Angola and Mozambique during the period of August to November. A workshop held in Brazil at the end of November reviewed all of this work and made a series of recommendations not only on the Country Case Study Report contents, but also on the processes of doing the studies.

This synthesis draws on the Country Case Study reports, and on the conclusions and recommendations made during the workshop in Brasilia. The reports for each Country Case Study[3] [4] [5] [6]are available for consultation. The contents of this synthesis report are the reflections, ideas and observations of the consultant team, and in addition to the workshop discussions, and the case study reports, draws on the consultants' experiences as well as other relevant information available in the literature. The synthesis highlights the achievements and best practices observed in the four country case study reports, but also identifies the major constraints and challenges facing the governments of each of the four countries on how to strengthen food and nutrition actions in order to accelerate the achievement of the MDGs, in the context of realizing the right to adequate food. Based on this analysis the authors make proposals and recommendations to both the UN agencies and the national governments concerned about how to strengthen their support to food and nutrition policy and programme development.

BACKGROUND

While the poverty reduction targets of the first MDG are likely to be met, the hunger and malnutrition reduction targets are not unless some special effort is developed. If projected growth remains on track, global poverty rates will fall to 12.7 percent – less than half the 1990 level of 27.9 percent of all people in low and middle income economies - and so the poverty dimension of the first MDG would be met. Global progress in reducing the numbers of hungry people in the world has stagnated however and the hunger targets of the first MDG will not be met at current rates of progress. Whereas at the time of the first World Food Conference of 1974, a third of people in developing countries were undernourished, today the figure has fallen to just 18%. There has been

an increase in the number of people affected, from 800 to 810 million in the last five years, and the situation is growing worse in the poorest countries. The child underweight dimension of the first MDG is also off track, and although prevalence rates of underweight children have been falling in most regions, the fall is not sharp enough to achieve the 2015 target, and in Africa rates are rising. The message is clear that poverty reduction alone will not reduce hunger and undernutrition rates sufficiently to achieve the MDG 1 targets and other special food and nutrition interventions are needed.

As reported in the 5th Report on the World Nutrition Situation, lack of progress in hunger and malnutrition reduction (as reflected by child underweight) will seriously undermine the chances of achieving the other MDGS. There are critical interactions between the food and nutrition situation and the goals for child mortality (MDG 4), maternal health (MDG 5) and the diseases HIV/AIDS and malaria (MDG 6). Unless special efforts are made to tackle the problems of hunger and malnutrition, then achievement of all of these other MDGs is seriously threatened.

Many recent exercises trying to identify priority areas for global action have pointed to the importance of food and nutrition, both for reducing the global burden of disease and for speeding economic development[7]. The potential benefits of resolving both undernutrition and overnutrition are considerable, both in terms of disease and life lost as well as financial return from increased productivity and decreased expenditures on health. Despite this, the level of investment in food and nutrition interventions by UN agencies and national governments, outside of humanitarian operations, remains amazingly modest[8].

The hosting of the 32nd Session by the Government of Brazil is consistent with and a consequence of the national and international priority given to the elimination of hunger by Brazil under the leadership of President Lula[1]. In the beginning of this year, the Presidents of France, Chile and Brazil created a commission to identify innovative public and private mechanisms of international funding, directed to social development and eradication of poverty as manifested in the Millennium Development Goals. The results of the commission work, which also had the contribution of Spain and the support of the UN, were presented to heads of State and Governments of 59 countries, in addition to representatives of other 50 nations, in the meeting 'Action Against Hunger and Poverty', the day before the United Nations' Assembly, in New York on September 20th 2004. One hundred and seven countries, from all continents, signed the final declaration[2] which agrees in principle with the need to implement innovative mechanisms to fight hunger and poverty. The proposal does not establish the creation of a new fund, but raising new resources and channelling them to existing funds, in an effort coordinated by the United Nations. The aim of the SCN in realizing this 32nd Session in Brazil is to see how it can contribute to this thrust.

THE CASE STUDY EXERCISE

The overall objective of the SCN Country Case Study (CCS) exercise, was to achieve a consensus agreement among a significant body of country level development actors on how food

[1] In his first speech in the United Nations Assembly, in September 2003, President Lula eagerly invited all nations and the international civil society to engage in a fight to end hunger throughout the world.

[2] Declaration of New York September 2004.

and nutrition objectives, priorities and goals can be effectively integrated into national development plans in order to meet the MDGs and realize the human right to adequate food. In consonance with the adoption of a rights based approach, the CCS had both outcome and process objectives.

Specific outcome objectives were:

- To carry out an analysis of the national development plans, identifying elements of food and nutrition programmes that are related to the achievement of the eight MDGs.
- To assess the contribution of each element to meeting the MDGs and to ensuring that the right to food and nutrition is respected, protected and fulfilled, and formulate proposals for improvements.
- To assess the adequacy of the existing policy, institutional and legal framework for the realization of the human right to adequate food, using human rights standards as a point of reference.
- To make an overall assessment of the level of prioritization of efforts to ensure that the most vulnerable groups are adequately covered, that foetal and infant growth is protected and that malnutrition (both over- and under nutrition) is progressively prevented and eventually eliminated throughout the life cycle.
- On the basis of the above, to prepare a report highlighting best practices and lessons learned, gaps and major constraints and challenges, and recommendations for strategies to strengthen the integration of nutrition and human rights in national plans towards the realization of the MDG.

Specific process objectives were:

- To get a wide group of development actors, from different government sectors and from civil society, with a stake in the outcome expected, i.e. the realization of the right to adequate food, and achievement of relevant MDGs, to participate in the assessment and analysis process and to feel that they own the different outcomes or products produced by the process.
- To familiarize the wider group of development actors with the importance of food and nutrition concepts and the contribution food and nutrition programme components can make, for achieving the MDGs.
- To familiarize the wider group of development actors with the concepts of human rights based programming, and for them to be enabled to make recommendations to government on how to meet its obligations for respecting protecting and fulfilling the right to adequate food.

The process followed in each country had three steps: assessment, analysis, and recommendations for action. The assessment was done by a small core group of nutrition professionals that collected and assembled all the relevant information ready for analysis. The second stage of analysis was carried out by a wider group of development actors through participatory group work facilitated by the core group of nutrition experts. The results of this exercise were then reported back in plenary sessions. The process of summarizing and drawing conclusions from all of the recommendations by the development actors was captured and summarized by the core group before feeding back to the broader group of development actors for validation purposes. The wider group of development actors that performed the analysis and agreed on the recommendations in the Country Case Studies were the ones involved in managing

and delivering those programmes with the strongest food and nutrition content that will contribute to achieving the MDGs, and included members of civil society that are involved in or affected by the issues concerned.

In order to achieve a common understanding among the broader set of development actors a series of material was shared during the intersectoral analysis workshop. This common vision was first communicated to a smaller core group of facilitators, who then transmitted it to the larger group of development actors. All participants of the intersectoral workshop received a power point presentation explaining the overall vision of the problem and the ways that it could and should be solved. The shared materials included the 5th Report on the World Nutrition Situation[9] and the SCN "Nutrition: Basis for Development"[10] series of pamphlets and the General Comment No 12[11]. The countries invited to participate in the Country Case Study exercise were deliberately chosen to be Spanish or Portuguese speaking countries, and in as much as possible all material was translated and made available to all participants in either Spanish and/or Portuguese.

The common vision communicated to all participants through the power point presentation covered: the importance of nutrition for achieving the MDG; the concept of food and nutrition security[12], (including the dimensions of availability, access, and utilization); the importance of protecting foetal and infant growth in the context of the life cycle[13]; and, examples of the terms respect, protect and fulfil (facilitate, provide), used to describe governments obligations for realizing the right to adequate food[14]. The concept of food and nutrition security is consistent with the idea that simply pursuing poverty (as reflected in the prevalence of population earning <$1 a day) and hunger (as reflected in the prevalence of the population eating less than energy needs) reduction without ensuring nutritional security, was likely to solve one problem and create another. Increasing food availability and access will not necessarily solve the problem of child malnutrition as measured by stunting, and if child stunting was not prevented then the increased food availability would instead increase the risks of developing chronic non-communicable diet related diseases in the future. The linkage of both undernutrition (stunting and wasting) and overnutrition (obesity and the related chronic non-communicable diet related diseases) to inadequate growth and development during the period of foetal and infant growth and development, means that this critical period needs to be prioritized by food and nutrition programme interventions. Food and nutrition security programmes that deal with availability, access and utilization can not only accelerate the achievement of poverty and hunger goals, but also reduce the risk of chronic non-communicable diet related disease in the future. When such programmes are constructed in a human right based perspective, food and nutrition security entitlements can be better defined and legal frameworks constructed to ensure the sustainability of such provision.

COUNTRY CASE STUDY FINDINGS

The findings described here are based on the content of the first draft reports and on the discussion held at the International Workshop in Brasilia in late November, which looked at the experience gained by each country team in carrying out the exercise. The findings are analysed and interpreted, drawing on the experience of the consultant team, and from the published literature, including that produced by the IGWG with six case studies looking at how the right to adequate food is implemented[15], an information paper on safety nets and the right to food[16], together with an examination of how the right to food is dealt with in country laws and legislation[17].

CROSS COUNTRY COMPARISONS.

As is shown in Table 1, the contrast and diversity presented by the four countries are great, in consonance with the differences inherent in their Latin American and Sub-Saharan Africa localizations. The sizes of the four countries are strikingly different, with Brazil larger than the other three combined. The degree of urbanization of the populations is also very different, with Bolivia and Brazil already two thirds or more urban and Mozambique and Angola two thirds rural but urbanizing fast. Life expectancies are a third greater in Brazil and Bolivia, largely reflecting the infant mortality rates which are three to four times greater in Mozambique and Angola. The total fertility rates are two to three times higher in Mozambique and Angola than in Brazil and Bolivia, and the child marriage rates are also double, with over a half of young women marrying before age 18 in Mozambique as compared to just a quarter in Brazil and Bolivia. The populations of Brazil and Bolivia are better provided for in terms of water and sanitation services and have higher primary school attendance rates.

The economies of the four countries are also very different, with those of Brazil and Bolivia more developed than those of Angola and Mozambique. Mozambique is among the poorest nations of the world in terms of Gross National Income per capita, which is less than one tenth of that of Brazil and a fifth of that of Bolivia. The economies of Mozambique and Angola are growing rapidly however, while those of Bolivia and Brazil are growing very slowly. The distribution of the income has least equity in Brazil; with the poorest 40% of the Brazilian population earning just 8% of the national income. Brazil has one of the highest Gini Coefficients in the world. The dependence of the economies on external aid is also very different with Mozambique very highly dependent, but the others very little or not dependent on external aid. All four countries have high external debts, which for Brazil and Angola are half or more of their gross national annual income. The importance of the agricultural sector and of food production to the economies of the four countries is also different, with Angola and Mozambique very little dependent on the agricultural sector for their export earning, whereas for Brazil and Bolivia these are between a quarter and a third of all exports. The proportion of those economically active that are working in the agricultural sector is also very different, with rates in Angola four times, and in Mozambique and Bolivia twice that of Brazil.

The expenditure patterns of the national governments are also very different. The governments of Mozambique and Angola are spending a third of their total expenditures on their military capacity, as compared to just 3% in Brazil for instance. The joint expenditures on education and health are highest in Bolivia (33%) and lowest in Brazil (12%). The servicing of the external debt eats up a third of Bolivia's annual export earnings and over a half of Brazil's. The two African countries also spend money to import food, whereas Brazil and Bolivia export more food than they import.

ASSESSMENT AND DEFINITION OF FOOD AND NUTRITION PROBLEMS

The size and trends of the food and nutrition problems are very different across the four countries, but in all of them they represent a serious challenge for national development and MDG achievement as shown in Table 2. There are large differences in the extent of poverty in the four countries. But perhaps the biggest problem is in the differences in the use of terminology for defining the food and nutrition problem. As the Brazilian Case Study points out, the definitions of poverty and hunger are problematical. The internationally recognized cut off of less than a dollar a day can have different implications in different settings, and most countries have their own

definition of poverty. These are mainly based on the costs of buying a basic food basket, and are really therefore expressions of hunger. As shown in Table 2, in the four country case studies, the % suffering from "<1$/day" poverty is not the same as those suffering from "locally defined" poverty.

"Hunger" is perhaps the term that is least commonly understood by everybody. This emotive word has many possible dimensions, but these are rarely made explicit and each uses their own interpretation. For many and the lay community in particular, the words "hunger", "starvation" and "famine" are synonymous. However, to the nutrition community hunger is not just about filling one's belly. To them the term "hunger" includes "hidden hunger", or having inadequate amounts of micronutrients in the body, i.e. iodine deficiency, iron deficiency, zinc deficiency, vitamin A deficiency, etc. Hunger is thus best portrayed as a spectrum of situations, including the following three categories: 1) famine and starvation with not enough food of any sort to eat; 2) having enough food to eat but that is of inadequate quality; 3) having enough food to eat that is adequate in quantity and quality, but with inadequate amounts of nutrients in the body. The absence of hunger is therefore having adequate amounts of food in both quantity and quality, and an optimal concentration of all nutrients in the body. The absence of hunger thus must also depend on the absence of debilitating infections, such as malaria and gastro-intestinal parasites which drain nutrients from the body.

These dimensions of "hunger" are compatible with "availability", "access" and "utilization" dimensions of food and nutrition security used in all four country case studies. The "availability" of food depends on there being enough food produced to feed everybody. The "access" to food depends on a variety of issues, including food processing, food distribution systems, and income and/cash transfer through social safety nets. The utilization issues relate to appropriate caring behaviours in order to be able to prepare adequate foods for eating, to ensure the absence of infection, availability of safe water and unpolluted air. The problem is that there is no common definition of hunger across the cast of food and nutrition actors, let alone by the wider community of development actors in any of the four countries.

The food and nutrition professionals need to re-appropriate the term "hunger" and try to educate the rest of the development community to use other indicators than just adequacy of energy consumption. The MDG hunger goal measurement indicators (population below minimum dietary energy requirement) are incomplete and not fully coherent with the food and nutrition problems that require solution. Besides the adequacy of energy consumption, the quality of the food being consumed should also be assessed. There is a growing consensus that the quality of food is as important, if not more important than the quantity of food from a public nutrition perspective[18]. Few developing countries have information on the adequacy of food patterns among different segments of the population, and or the adequacy of nutrition intakes, although the methodologies for assessing and evaluating these exist and are commonly utilized in developed country settings.

Some additional dimensions of hunger measurement are shown in Table 2. In the State of the World Food Insecurity (SOFI) report for 2004 FAO[19] has included an indicator of national diet diversity, which estimates the percentage of energy coming from foods other than the "staple foods". This is a gross indicator of the quality of the diet, since diets with little variety are more likely to have multiple micronutrient deficiencies even when sufficient quantity is eaten and energy requirements are met. As shown in Table 2, whereas in Brazil two thirds of the energy already

comes from non-staple sources, in Mozambique only a quarter of dietary energy is so derived. Two other existing indicators of adequacy of dietary patterns and of nutrient intakes that could be used to help better define the "hunger" situation in a country are that of exclusive breast feeding to six months of age and the % of households consuming iodized salt. The negative consequences of non-exclusive breastfeeding are proven to be considerable in both developed and developing country settings, such that the infants that are not fed this way are at far greater risk of not being adequately nourished and have their development negatively affected [20]. Brazil leads the way with exclusive breastfeeding rates, and Angola has the worst situation. The adequacy of complementary feeding is also a commonly available indicator, but was only presented for Mozambique, where the majority of infants suffer hunger during the period of transition from breastmilk to the family pot. The risks of iodine deficiency are considered to be universal, and the universal solution is to iodize all household salt. The lack of adequately iodized household salt is therefore an indicator of hunger, and whereas Brazil and Bolivia have already achieved much in this area, Mozambique and Angola still have some way to go.

Another set of communication problems that the development actors, including food and nutrition professionals, have to wrestle with is the plethora of anthropometric indicators used to define malnutrition. A common understanding of what these indicators mean is lacking, and this makes it difficult to understand the sorts of actions that are needed either to prevent them and/or to ameliorate their consequences. The terminology used to describe abnormal growth patterns has evolved over the years, gaining in complexity. A more detailed discussion of these issues is found in Annex 1. All four country case studies use the three main categories for undernutrition of underweight (insufficient weight for age - W/A) stunting (insufficient length for age - H/A), and wasting (insufficient weight for length - W/H). Acute malnutrition was related to inadequate weight for age in one country case study report, and to weight for length in three others. Weight for age was called the indicator of global nutritional status in another case study. The most common error was to call inadequate height/length for age, or stunting an indicator of chronic or long lasting malnutrition. The current WHO recommendation is that the terms stunting and wasting are preferred to those of acute and chronic malnutrition[21]. The notion that malnutrition includes both under nutrition and over nutrition was also not consistently expressed across the CCS reports.

The nutrition transition or coexistence of over and under nutrition is evident in all four countries. It is common in countries that are "in transition" and that no longer have problems of starvation (as evidence by high rates of wasting), to paradoxically have high rates of obesity in adults occurring together with high rates of stunting in preschool children. Indeed it is common in countries without problems of starvation, such as all four CCS countries, to have pre-school children that are underweight in the same household with an older mother who is obese. Stunting rates are generally greater than underweight rates in all four country case studies, and two countries (Brazil and Bolivia) show evidence that although stunting is still common, wasting is much less so, and overweight is increasingly a problem in their preschool children. Bolivia has a third of its children stunted while a half of women are overweight and/or obese. In Mozambique the prevalence of overweight in women is already greater then the prevalence of thinness or excessive underweight at the national level, and in the capital Maputo over a third of women of reproductive age are already over weight and/or obese. Another malnutrition indicator that is remarkable in terms of the proportions affected is anaemia in women and children. Commonly in all four countries, a third to a half of women and a half to three quarters of preschool children are anaemic. Almost none of the CCS gives any priority or mention the size of this "hunger and malnutrition" problem.

Few have any representative national statistics properly defining the problem, and quote small scale surveys.

The case studies demonstrate that the complexities of food and nutrition problem definition represent a core communication challenge with an enormous need to simplify and harmonize concepts of food and nutrition security, and achieve a broader, communitywide understanding of these concepts. The definition of poverty, hunger and malnutrition are crucially important for achieving an over arching clarity at the policy level. But unfortunately each of these have a plethora of sub category definitions that include: poor, hungry, starving, undernourished, malnourished, malnutrition, under nutrition and over nutrition, underweight, overweight, stunted, wasted, and obese, that may then be further categorized as being either acute or chronic. In all four country case studies, the problem descriptions often use these words interchangeably without really explaining what they mean and in an inconsistent fashion. To the less well informed, broader development community actors, this is confusing to say the least. The realization of the right to adequate food and freedom from hunger and malnutrition becomes a difficult task if these concepts are not adequately defined and understood by everybody.

Human rights principles mean that the right to food is universal, i.e. if you are not able to get access to what you need, then your rights are being violated. In all first drafts of the reports however, the problem definition was presented in terms of the proportion of the population whose needs were being met, not as the proportion of the population whose right to adequate food was being violated. As an example, the rate of exclusive breast feeding of infants up to six months of age is reported as 46% in Brazil, instead of as 54% of infants aged up to six months of age, are having their right to adequate food violated. In Angola, adequately iodized salt is reported to be consumed in 35% of households, instead of reporting that 65% of the population is having their right to adequate food violated.

UNDERSTANDING VULNERABILITY

The term vulnerable is also much used across the studies, but often without a clear and consistent understanding of what sort of vulnerability is being discussed. There are three types of population groups that are commonly called "vulnerable." The first are those that are considered to be the economically vulnerable, i.e. the poorest of the poor. Then there are those that are socially vulnerable because of the way that their race or gender is treated or discriminated against in society, e.g. indigenous groups. The third population group are those that are biologically more vulnerable because of high growth rates, such as the mother and child dyad during pregnancy and lactation, and infants and adolescents during the peak of their growth spurts.

The universality of human rights means that that there should be no discrimination in terms of availability, access and utilization of food and nutrition resources, based on income, gender, ethnicity, religion, or other socio-economic descriptor, i.e. there should be both equity and equality. All of the Country Case Study reports point to the lack of desegregation of information on food and nutrition problems that would allow a better understanding concerning the discrimination or not of particular population groups, be it based on social vulnerability (gender, race) or economic vulnerability (income, assets). The presentation of national averages can hide evidence that certain population groups are being discriminated against. As an example Brazil has only 9% of its population as undernourished, or eating inadequate amounts of food, which doesn't seem as bad

as Bolivia with 21% or Angola with 49% or Mozambique with 53%. However because of the size of Brazil that means that it has 16 million people that are quantitatively undernourished, almost as great as the total number of undernourished in the three other countries together (18.4 million undernourished). But there is a differential in the proportion of undernourished by location in Brazil, which is much more prevalent in the North and North East. There is also clearly an effect of income group on the proportion of undernourished. What is less clear is if there is discrimination based on ethnic or racial differences, since these dimensions are less commonly analysed and/or reported on.

The universality of biological vulnerability from a life cycle perspective was not consistently understood and/or communicated in the reports. The discussions of vulnerable groups tended to concentrate on population groups that are social and economically vulnerable. Across the Country Case Studies, there is a lack of understanding of the importance of maternal nutrition for many birth outcomes and other manifestations later in life's course. These aspects of maternal nutrition's importance are further discussed in Annex 3. Although as shown in Table 1, a quarter of girls in Brazil and Bolivia, and over a half of girls in Mozambique are married while they are still children (i.e. <18 years of age), with greatly increased risk of negative birth outcomes both for themselves and their babies if they get pregnant, no mention was made of this being a problem. There is no clear understanding in the case study reports that stunting and the propensity to become obese have common origins in the inadequacy of foetal and infant growth and development, and are therefore likely to be related to maternal nutritional status[22].

Although rights are universal, their realization is necessarily a progressive one[23]. Choices are often necessary for governments, especially when resources are scarce, in order to decide which problems to tackle first. For the maximum return on investment of public funds, the right to adequate food should be progressively realized beginning with women of reproductive age, and especially those that are expecting or planning to get pregnant. This means that as a minimum the state should be trying to ensure that no mother is an adolescent, and/or is anaemic, and/or too thin or too fat, and/or undernourished in anyway. In Brazil for instance, because 80% of the population is urban, the largest concentration of mothers that are anaemic, i.e. have hidden hunger rather than overt hunger, is in the poor urban communities. In order for a balanced approach at realizing the right to adequate food, a more "food security" type approach aimed at the rural poor would need to be complemented with a more "nutrition security" type approach aimed at the urban poor.

There is an urgent need to revisit the language used to describe hunger and malnutrition problems among vulnerable population groups, and to create a set of descriptors that are consistent with the set of preventive and curative actions that need to be put in place to ensure availability, access, and utilization dimensions of food and nutrition security are respected, protected and fulfilled at different stages in the life cycle for all, independent of race, ethnicity or sex.

FOOD AND NUTRITION PROGRAMMES IN NATIONAL DEVELOPMENT PLANS

The desk top analysis exercises carried out in all four countries revealed that the food and nutrition content of the national poverty reduction or national development plans were not that strongly developed, especially in terms of their comprehensiveness. The majority of development programme effort seems to go into increasing national income in order to reduce poverty, and much less effort goes into dealing with hunger, and even less into malnutrition reduction. The dominant "nutrition in development paradigm" operating in all countries seems to be that hunger and malnutrition are caused by poverty and ignorance, and that they will improve if livelihoods

(economic growth and incomes) and education services improve. In other words the reigning development narrative is that hunger and malnutrition improves as a result of development, and the idea that the proactive solution of hunger and malnutrition can be a platform for accelerating development is not commonly understood by the development actors. These observations are in line with previous reports that have shown food and nutrition activities to be given a very low profile in national poverty reduction plans[24]. Bolivia spends US$135 million a year on direct food and nutrition programmes, and the majority of this is donor funded. Of this total only 10% is directed at the biologically vulnerable[25]. The Profiles study in Bolivia estimated that malnutrition is costing US$100 million a year in lost human capital and income. In Mozambique a Profiles study suggests that the cost of growth faltering alone is around US$100 million a year, or 2-3% of the GDP. In Brazil, which is firmly committed to trying to eradicate hunger, it is estimated that less than one fifth of public spending is directed at those that are economically vulnerable[26]. The part that is directed at those that are biologically vulnerable will therefore be a much smaller percentage than this. In Angola, Bolivia and Brazil the ability to direct more public funds at the poor is very much constrained by the need to repay and service external debts and loans. In Mozambique the ability to direct funds is very dependent on donor support, since that is where most funds for development come from.

The participatory exercises carried out with the broad segment of development actors working in programmes with links to food and nutrition did produce a broader understanding of how food and nutrition programme inputs could improve the prospects and rates of progress towards achieving the MDGs, and also pointed to gaps in programmes and problems of coordination and integration. Perhaps the greatest gap revealed in all country case studies, is the lack of linkages and coordination between those working on utilization aspects and those working on access and availability dimension of food and nutrition security. Even in Brazil which has the strongest history for food and nutrition programming together with great political will to solve these problems, there are still some frailties in the overall conceptualization of the government response, especially in the linkages between food and nutrition security. The Zero Hunger programme has made a measurable impact on income distribution and poverty reduction in Brazil[27]. In relation to hunger and malnutrition, a follow up system is being elaborated with a view to guaranteeing nutrition education and monitoring of these issues is being elaborated.

All four country case studies revealed that there was no common understanding about what the programme components needed to achieve both food and nutrition security. The mapping out of the causality trees for the various MDGs goals, and placing the various food and nutrition interventions in the causality trees certainly allowed the participants to gain a better understanding of how their programme inputs were complementary to other programme efforts and how they might accelerate achievement of MDGs if they were more integrated and/or coordinated. But the participatory nature of these exercises also meant the outcomes were very much limited by the programmes that the participants represented. Furthermore the nature of the exercise lends itself to food and nutrition interventions being associated with anything and everything, and tended to create even more confusion about what food and nutrition programmes are. Thus there seems to be a great need for an overarching policy framework that helps define for all those involved, and perhaps more importantly for those outside the food and nutrition area, what are the component programmes that are necessary for achieving food and nutrition security.

The focus that the first MDG puts on poverty as measured by income and hunger as defined by adequacy of energy intake contributes to the further confusion of the "hunger" terminology. The concept of hunger used in poverty reduction programmes should be enlarged to include qualitative not just quantitative aspects of dietary inadequacy. Similarly the use of child underweight as a measure of hunger is counterproductive in this sense, since it obfuscates the problem of overweight and obesity, which increasingly co-exists with stunting, especially in urban populations. There is an urgent need for the food and nutrition actors to try to resolve these conceptual problems. Stunting rates are generally greater than underweight rates in all four country case studies, and two countries (Brazil and Bolivia) show evidence that although stunting is still common, wasting is much less so, and overweight is increasingly a problem in their preschool children. Even in Mozambique overweight is already raising its head as a problem in the urban areas.

The discussions on the human rights dimensions of the food and nutrition programmes were limited by the placing of such discussions in the context of reaching the various Millennium Development Goals. The exercise served to achieve its capacity building exercise objectives in terms of exposing the various food and nutrition sectors development actors to the concepts of food and nutrition in development in the context of human rights. But these discussions became almost hypothetical because of the way that participants were selected and organized into groups by MDG. Even so the discussions revealed that in all four countries the food and nutrition programmes that existed, mostly dealt with the fulfil dimensions of the right to adequate food, i.e. to facilitate and provide. Very little consideration or provision is given by food and nutrition programmes of governments to the respect dimension of the right to adequate food.

There is no single UN source that defines the constituent parts of a food and nutrition security policy framework and provides guidance on how to implement the various parts from human rights based perspective. Such a food and nutrition policy framework would need to contemplate the various global food and nutrition policies and strategies such as those for infant and young child feeding[28], for diet and physical activity[29], for food safety[30], for food security[31] and for food fortification[32] for example. These different global UN food and nutrition policy documents are in themselves often overlapping and/or leave various areas not covered however, and as such do not really make up a policy framework. Reaching agreement on what the component parts of an over arching policy framework for realizing food and nutrition security, is something the SCN could help to achieve. Such a resource would be essential In order to help orient the development of the Common Country Assessment (CCA), the development of the Development Assistance Framework (UNDAF), or the Comprehensive Development Framework (CDF) of the World Bank/IMF which is supposed to guide the elaboration of Poverty Reduction Strategy Papers (PRSPs).

A FOOD AND NUTRITION POLICY FRAMEWORK

In order to try to organize some of the lessons learned in the country case study exercise, we decided to try to organize them according to some sort of logical policy framework. We thus set out what the basic elements that we think a food and nutrition policy framework should contain by reviewing previous efforts to develop them. The proposal should be seen as a minimum set of component parts that could and should be varied depending on local circumstance. In developing the framework, we have kept in mind the broad parameters stipulated by General Comment 12, according to which action is needed on four fronts:

- adopt a *national strategy* to ensure food and nutrition security for all, *compliant with human rights principles*
- set *verifiable targets and benchmarks* for subsequent monitoring and accountability evaluation
- adopt *framework legislation* and corresponding accountability and *remedy mechanisms* as key instruments in the implementation of the national strategy
- develop and maintain *monitoring mechanisms* to gauge the progress towards targets and benchmarks and the compliance with obligations, and to facilitate the corrective legislation and administrative measures.

Within these parameters, we considered that ideally a national food and nutrition policy framework should have at least five basic parts:
1) It should assess the nature of the non-realization or violations of the HRAF, (i.e. the "WHY" something needs to be done).
2) There should be a clear and practical definition of policy objectives towards the progressive realization of HRAF (i.e. WHAT outcomes are we trying to achieve).
3) The main HRAF obligations in terms of actions and decisions need mapping out for each policy (i.e. WHAT actions are needed).
4) Minimum standards to be met by duty bearers as participants in the policy process should be defined (i.e. the "HOW" these actions will get put in place and the desired outcomes achieved).
5) Mechanisms for assessing progress should be provided, (i.e. HOW will we know if the policies are being implemented and the desired goals and targets are being achieved?).

The first part on the why has been dealt with in the first part of this report about the problems of defining food and nutrition problems. In the remainder of this report we will concentrate on defining the WHAT and the HOW. In order to better illustrate the issues involved we will first describe the WHAT part in terms of the sorts of interventions that constitute "food and nutrition" actions. The HOW aspects will then be dealt with in the last two sections of the report, which are on institutional arrangements and on the monitoring and evaluation of goals and objectives.

Even if the history of overarching food and nutrition policies and planning is not a totally positive one[33] the experiences gained from these efforts provide insight on what the essential elements of such policy frameworks should be. The International Conference on Nutrition (ICN) held in 1992 developed a plan of action for nutrition that included nine action oriented themes, namely: incorporating nutrition objectives into national development policies and programmes; improving household food security; protecting consumers through improved food quality and safety; preventing and managing infectious diseases; promoting breastfeeding; caring for the socio-economically deprived and nutritionally vulnerable; preventing and controlling specific micronutrient deficiencies; promoting healthy diets and healthy lifestyles; and assessing analysing and monitoring nutrition situations. The American Dietetic Association Nutrition Policy Task Force notes in its discussion paper on food, nutrition and health policy[34], that comprehensive and focused efforts in food, nutrition and health policy should contemplate food safety and technology, preventing hunger, promoting food security, nutrition monitoring, dietary guidance, food labeling, and nutrition education. A review of experience gained in developing national food and nutrition plans in Europe makes the case for developing integrated and comprehensive national food and nutrition policies that address three areas: nutrition, food safety, and sustainable food security[35].

These three dimensions are in part consistent with the "availability", access and utilization aspects of food and nutrition security used in each of the country case studies. According to the GC 12, a national strategy to implement the right to food should address critical issues and take measures relating to all aspects of the food system, including the production, processing, distribution, marketing and consumption of safe food, as well as parallel measures in the fields of health, education, employment and social security. The Voluntary Guidelines for realizing the right to adequate food offer an important opportunity to revitalize the development of food and nutrition policy frameworks.

We have classified food and nutrition interventions into five policy/programme areas. These are the “direct" food and nutrition actions that are related to ensuring the supply and consumption of energy and nutrients coming from food. These five policy areas are: food production; food processing and fortification nutrition; food supplementation; micronutrient supplementation; and education for dietary change. They are consistent with the "availability", "access" and "utilization" dimensions of food and nutrition security used in all four case countries.

These "direct" food and nutrition actions are of course still subject to the influence of and should not be instead of those more "indirect" upstream determinants of food and nutrition situation, which includes areas of macro-economic policy such as employment, minimum wage and labour policies, land distribution policies, as well as agricultural subsidies, as indicated in the Voluntary Guidelines. Such an approach entails, inter-alia, direct and immediate measures to ensure access to adequate food as part of social safety nets, as well as the more conducive macroeconomic environment. However, it is these direct food and nutrition intervention areas that the state can use to intervene in order that market forces are not the only ones operating, in order to ensure that the hunger and malnutrition targets of the first MDG are met, that the right to adequate food and to be free from hunger malnutrition in all of their forms can be realized.

A policy is what it does not just what it plans to do, thus the emphasis in policy definition should be on the lowest level activities, i.e. the actions the policy is supposed to make happen. In order to exemplify what we mean, the "what" of these various dimensions of food and nutrition policy is further exemplified in Table 3, arranged in accordance with their importance at different stages of the life cycle. These broad action areas are indicative for the obligations that, in a rights-based approach, duty bearers have to promote for the progressive realization of the right to adequate food. Among the actions considered in the table, we have also included the control of infections with medications for example, since it is recognized that these are important components of the utilization dimensions of food and nutrition security. These curative interventions become necessary in order to break the downward thrust of the nutrition infection spiral. For each one of these food and nutrition policy areas the way in which they are dealt with in the country case studies for helping to achieve the MDGs and the implications of this for realizing the right to adequate food are further discussed. The discussion of these policy areas will keep in mind the GC 12 requirement that a number of human rights principles should guide the formulation and implementation of national strategies for the right to food, including: accountability; transparency; people's participation; non-discrimination; decentralization; legislative capacity and the independence of the judiciary; good governance, essential to the realization of human rights, including the elimination of poverty and ensuring a satisfactory livelihood for all.

The first policy area is food production. All four country case studies include increased food production as an important part of poverty reduction strategies. There is a tension between the production of food for export on large scale farms and the production of food for internal consumption by small holders that is evident from the literature, but doesn't really emerge from the CCS reports. In order to achieve both poverty and hunger reduction targets, there is a need to achieve a balance between investments in export oriented agriculture to earn revenues, and local oriented agriculture to guarantee food production for local consumption. It is increasingly recognized that poverty reduction strategies in the least developed counties, especially those with more than 60% of the population on less than a dollar a day, should first concentrate on engaging the poor in the production of foods for sale in the local market before investing in more intensive export oriented agriculture[36].The former will not only create localized income, but also contribute to assuring the quality of the diet available for local consumption. Improving the productivity of small farmers has a ripple effect that spreads benefits throughout poor rural communities. When small farmers have more money to spend, they tend to spend it locally on labour-intensive goods and services that come from the rural non-farm sector, boosting the incomes of the rural population as a whole, including landless labourers who make up a large proportion of the hungry and poor in many countries[37]. In Brazil the pursuit of export earnings from intensive large scale agriculture is largely supported by the rural extension and research agency (EMBRAPA) while the pursuit of family agriculture for production of fruits and vegetables (PRONAF) for local consumption is promoted more by the Ministry of Rural Development. The problem of access to land and land redistribution is a thorny issue, which limits the large scale development of family agriculture to reduce rural poverty in Brazil[38], and one that all four case studies countries are still grappling with. Efforts to promote food production in the poorest rural areas, should also consider issues of biological vulnerability of women and especially the mother to be. While the provision of rural credits should favour women, and land right entitlements should not discriminate by gender, race or social class, actions should also be taken to ensure that women that work in agricultural production are protected from excessive stress and from pesticides, especially during their period of pregnancy and lactation. The right to adequate food also includes the dimensions of sustainability, such that the sorts of agricultural production methods being adopted and their impact on environmental degradation, especially in the poorest areas and the most fragile environments are carefully evaluated and monitored. Intensive agriculture practice can lead to increased amounts of pesticides that remain on crops as residues. Populations that live around agricultural land where pesticides and/or fertilizers are not adequately applied are also in danger. Industrialization can lead to the introduction into the food chain of heavy metals through water tables and inadequate waste solutions. Measures need to be put in place to guarantee that the human right to food, adequate in quantity and quality, free of noxious substances, and in a sustainable manner is not being violated as per GC12. These sustainability and safety dimensions of food production were very little touched upon in the country case studies.

The second policy area is food processing and fortification. With the increasing intensification of agricultural practices, and the increased trade in food associated with urbanization, there is a growing need for governments to be vigilant with the quality of processed foods produce both for domestic consumption and for export. The industrialization of the food chain in the industrialized countries has allowed an increasingly smaller cadre of agricultural workers, together with the food processing industry, to feed the great majority of people now located in urban areas[39]. In parallel the increasingly intensive farming methods, together with economies of scale brought about by the globalization of the food chain, have led to cheaper and cheaper staple foods, of

fewer and fewer types, being made into an increasing myriad of new processed foods. The processing of food for human consumption affords the opportunity to fortify them with nutrients that may be lacking in the diet. Fortified foods are not really targeted at any particular age group in the life cycle, unless they are special foods. The foods most often fortified are centrally processed and eaten by the large segments of the population, and these include all salt, which should already be fortified with iodine in all counties. In many countries milk is fortified with vitamin D, and this is one of the reasons why rickets has ceased to be public health problem. Few of the Country Case studies touch on this area of food and nutrition policy, except when mentioning the iodization of salt. Brazil alone has made the fortification of wheat and corn flour with iron and folic acid obligatory from April 2004. Foods that are planned to be fortified in developing countries through the GAIN initiative for example include wheat flour, cooking oil, and soy sauce[40]. One of the consequences of populations in urban areas becoming increasingly if not totally dependent on the processed foods available in the market is that the potential to consume an imbalanced diet is considerably increased. Processed foods contribute to higher intakes of sugar, fat and salt. The nature of the fat in the food chain is also easily modified, with the cheaper fats tending to be less healthy. With the pressure of developed economies to create a global market, there is increasing attention being paid to the quality assurance aspects of such global trade in food products. In collaboration with the World Trade Organization, both WHO and FAO are leading international efforts to set up such standards. These standards are then becoming the minimum standards required for foods to be able to pass over national borders, in the setting up of free trade areas. Thus the rules for fortification of foods are likely to be influenced by these minimum global standards. The process of establishing international standards is being developed through the Codex Alimentarius, guided by FAO and WHO[41]. These standards cover the composition and content of foods, the biological and toxicological safety, and the labelling requirements. The resulting standards achieve the status of international law.

The third policy area is food supplementation, or the provision of food to families or individuals by the State. The obligation to fulfil the right to adequate food includes an obligation to provide food directly or the means for its purchase, when individuals are unable for reasons beyond their control to provide for themselves and their families. The provision of these supplements can be in various forms, either as food itself, or as food coupons. In many developed countries, even where there is no overt or "starvation type hunger" as defined by underweight in adults, there are food distribution and/or social security programmes, which guard people from short term deprivation. These "social safety net" programmes exist not just to ensure that those most at risk don't suffer from short term starvation, but also to maintain peace and order. Increasingly such programmes exist because governments are assuming the obligations they have to respect, protect and fulfil the human right to adequate food. If adequately designed, safety nets can make an important contribution to poverty reduction and development, through linkages with health education and local economic activities. Given their important role in increasing productivity and thus economic growth, food safety nets should be considered investments and contribution to long term development, not just as welfare[42]. The types of food supplements appropriate at different stages in the life cycle are described further in Table 3. The provision of food supplements and health care to poorer mothers (i.e. economically vulnerable) is common during pregnancy and lactation (i.e. periods of biological vulnerability) in many countries. One of the biggest programmes globally is the Women, Infants and Children (WIC) programme in the USA, which benefits poor mothers (15% of all pregnancies) with a package of interventions including food stamps and antenatal medical care[43]. Food supplements in the form of breast milk substitutes shouldn't be

provided to infants aged less than 6 months of age however, since this will erode exclusive breastfeeding practices. Instead it is preferable that their mothers should be supplemented to protect them from the extra nutritional stress that breast feeding imposes on the mother. The Baby Friendly Hospital Initiative is an example of how government can take measures to ensure that its own actions don't violate the right to adequate food, by respecting that right with its own actions. The provision of free samples and promotion of consumption of breastmilk substitutes through health clinics is regulated by the International Code of marketing of breastmilk substitutes, and in 2004, twenty three years after its adoption some 62 countries have included most or many of the provisions of the code in national legislation or other legal measures[44]. Brazil is among these countries, while Bolivia, Mozambique and Angola are not. Food is not usually provided free in schools, unless children's parents have proven economic constraints. Brazil has one of the largest school meal programmes in the world and provides free meals in all public schools across Brazil, perhaps in recognition of the enormous inequality in income distribution. Brazil is increasingly trying to link the provision of school meals with the local production of fruits and vegetables, in accordance with the Global strategy on diet and physical activity. The Mozambique case study describes how in the areas most affected, the school system is being used as a channel to reach poor families, by providing food supplements to the girl child in particular to stop her leaving school early, and also the provision of a take home ration to pupils who have siblings with HIV/AIDS at home that need help.

The fourth policy area is micronutrient supplementation. If all of the population has access to and consumes a balanced diet, micronutrient supplements should not be needed. In special circumstances however, such as in illness, and in times of extra needs due to rapid growth or recovery from surgery, and in those that are too poor to purchase good quality diets, then supplements are indicated as the short term solution to the problem[45]. Micronutrient supplements are perhaps best provided through the health system, although they are commonly purchased and consumed by large segments of the population in both developed and developing country settings. Those who are anaemic certainly do need micronutrient supplements since it is very difficult if not impossible to recover from anaemia without taking pharmacological doses of iron. The availability and access to iron folate supplements by anaemic subjects could be linked to the respect and fulfil (facilitate/provide) dimensions of the right to adequate food and to be free of hunger and malnutrition. This discussion reached polemic proportions in several country case study exercises, where food security programme actors from the agricultural sector, found it very hard to accept micronutrient supplementation as a hunger and poverty intervention, and or as part of the right to adequate food, whereas for the health sector nutrition programme actors this was very logical. As a component of food and nutrition programmes, the provision of iron supplements do not figure very prominently in any of the country case studies, even though anaemia is affecting the majority of the population in all four countries. Brazil plans to institute universal iron supplementation for pregnant women and children 6-24 months of age in 2005. Angola, Mozambique and Bolivia all report high coverage of vitamin A capsules among children aged 6-59 months, achieved through periodic campaigns. There is no single source policy guidance on the use of micronutrient supplements, since most such orientation is available on a nutrient by nutrient basis (i.e. iron supplements, vitamin A supplements). As mentioned elsewhere, anaemia is a marker for multiple micronutrient deficiencies, and not just iron deficiency. Ongoing experimental efficacy and effectiveness studies are looking at the comparative benefits of multiple micronutrient supplements instead of iron folate supplements, for subjects that are either anaemic or are likely to get anaemic.

The fifth policy area is nutrition education for dietary and life style change. These inputs and guidance are required at all stages of the life cycle, for both under nutrition and over nutrition. Changing dietary practice is best achieved through a two-pronged approach, one being face to face and the other through media channels that attempt to influence "public opinion" and provide support for the face-to-face messages. The face-to-face aspects are detailed in Table 3 by stage of the life cycle. Dietary practices are culture and location specific and education packages will require local development in local languages and with local foods. Thus each province or local region should develop and implement culturally appropriate nutrition education activities for all age groups. The main policy guidance for the nutrition education actions at various stages of the life cycle, are covered in the Global strategy on infant and young child feeding, and the Global strategy on diet and physical activity for the prevention of chronic non-communicable diet related diseases. Dietary counselling for mothers is especially needed during pregnancy and lactation, and during infancy. Many countries have developed food based dietary guidelines that illustrate the proportions of different food groups that ideally should be eaten each day to achieve a balanced diet. These food-based dietary guidelines considerations should influence the way food and nutrition issues are developed in the school curriculum, and should also be reflected in what foods are provided in the school as part of the school lunch. Such guidelines are already developed in Bolivia, Brazil and Mozambique, but not yet in Angola. The obligation of the government to ensure that they facilitate the correct choice of foods by the population lies in controlling the marketing of foods and ensuring that false claims are not made in labels. The code of marketing of breastmilk substitutes is an example of how governments can meet these obligation and ensure that the right to adequate food is protected, i.e. not violated by a third party.

One over arching issue that is not covered in this policy framework relates to food and nutrition policies in disaster situations. The provision of food to the whole population needs to be guaranteed in situations of emergency, and each country should have an emergency plan as part of its national food and nutrition plan, which covers this contingency. The provision of food in emergency situations has considerable literature available on how to do it and what sort of food to provide, as well as the other services to be provided[46]. All four country case studies have included in their food and nutrition actions, the improved management of severe malnutrition rehabilitation. The Angola CCS describes well how the food and nutrition dimensions of the humanitarian crisis were managed and coordinated by the Angolan Government and the UN agencies during the period of civil war and in the process of resettlement in the post war period. Otherwise, little mention is made of national plans for emergency food and nutrition contingency provision.

INSTITUTIONAL ARRANGEMENTS

The institutional arrangements are the parts of the policy framework, which describe "how" the food and nutrition interventions (i.e. the WHAT as described above) are to be achieved. This concerns those things that have to be put in place at national and provincial level to ensure that these activities related to the five policy areas are realized. For each policy area a national policy should be established, which should have sufficient flexibility to allow variation by sub-national level in accordance with the needs dictated by local circumstance. The "minimum standards" besides the definition of the package of interventions, should also include such aspects as the formulation of policies, the provision of a legal basis through legislation, the development of budgets, the creation of inter-sectoral cooperation mechanisms, management strengthening, training and capacity building, communications plans, and a clear definition of professional roles and capabilities.

At the national level some form of inter-ministerial council is required in order for each of these areas of direct food and nutrition action be developed in a coordinated way as part of a common vision, across the various ministries involved. Nutrition education for example, should involve both the Ministry of Health and the Ministry of Education. The micronutrient supplementation policy should also involve the Ministries of Health and Education. The food processing and food fortification policies should be in the Ministry of Industry and Commerce or its equivalent. Food supplementation could be in the Ministry of Social Welfare. Food production policies would involve the Ministries of Agriculture and Rural Development and/ or Environment. Attempts to establish national nutrition plans in the seventies largely failed due to the difficulties of coordinating multisectoral approaches at the national level[47]. Very often the coordinating mechanisms were not at a high enough level to be able to coordinate however, and very often the agency responsible for coordination was also involved in implementation. A comprehensive review of the ICN effort has not been reported, but a workshop was held in 1999 to look at key elements of for success, constraints, and future plans for National Plans of Action (NPAs) for Nutrition in the Western Pacific Region. The NPAs were usually multisectoral, and the constraints related to the political and socio-economic environment, resource scarcity, control and management processes, and factors related to sustainability[48]. Certainly in the four country case studies, NPAs were developed but they never really penetrated into the main stream of development thinking and nor were they incorporated into national development plans. In Europe the development of comprehensive national food and nutrition plans is advancing fastest in countries where high level coordinating bodies or food and nutrition councils, have been created[49]. Surely the renewed interest in the importance of food and nutrition, not just to conquer hunger and poverty, but also to prevent malnutrition in both of its forms, i.e. overnutrition and undernutrition, and to ensure the safety of the food chain from "farm to plate" creates a far greater imperative than was conceived previously[50].

Brazil is the best equipped of the four country case studies to be able to effectively coordinate a comprehensive food and nutrition policy framework. The National Food and Nutrition Council (CONSEA) has sixty members, of which 60% are civil society. The Council sits above the council of ministers and is housed inside the Casa Civil of the Presidency. It is a consultative, deliberative body not an implementing one, that makes recommendations to the Presidency. Mozambique created a food security secretariat some five years ago, which is housed in the Ministry of Agriculture, and as the Country Case Study reveals, is largely marginalized from influencing any mainstream policies of relevance to food and nutrition security. In Angola the food security secretariat has only recently been created in the Ministry of Agriculture. In Bolivia the recent establishment of the National Food and Nutrition Council (CONAN), has created an opportunity for moving food and nutrition into the mainstream policy and programme arena, and this opportunity must now be seized by consolidating the institutionalisation of CONAN at national and departmental levels.

The Voluntary Guidelines developed by FAO member governments to orient their efforts to realize the right to adequate food envisage the establishment of a framework law that will allow the realization of the right to adequate food as a set of justiciable claims. Most countries are already state parties to the various human rights treaties that contain provisions related to food and nutrition, and have incorporated in their constitutions some elements that consider different dimensions of the right to adequate food[51]. Of the four case study countries all have ratified the

CEDAW and CRC, and all except Mozambique have ratified the ICESCR. Only Brazil has constitutional provisions making a direct mention of the right to food, applicable to the whole population. Angola and Bolivia have included in the constitution the right to social security. However, the actual respect, protect and fulfilment of this right remains elusive in all four countries. There is a lack of clear definition and understanding of the content of these rights at the national level, let alone clear justiciable provisions on the right to food as such. In order for the right to adequate food and to be free from hunger and malnutrition to be realized then the clear definition of what these entitlements are becomes a fundamental first step. The creation of a comprehensive food and nutrition policy framework is surely a large part of this first step. Once these component parts are established, and responsibilities apportioned, the attribution of obligations should become an easier task.

At sub national level, each province or region will require a different set of food and nutrition actions depending on the local situation, and so the creation of a provincial/regional plan based on an assessment of the local situation becomes a requisite for the realization of a local specific food and nutrition plan of action. The solution of these "How" problems is increasingly possible given the trends in decentralization and devolution, where district or municipal authorities are increasingly given the responsibility for delivery of basic social services. The problem is more in deciding who should take the lead in drawing up this plan at the local level, and how to ensure that the preventive food and nutrition priorities are maintained. Decentralization of social services to local government often leads to the dilution of priority given to preventive health and nutrition interventions. It is postulated that this is because food and nutrition interventions are largely preventive and need to be applied to whole populations very early in the life cycle and these don't have a voice, whereas curative interventions are demanded by adults who are sick much later in the life cycle and who do have a voice and a vote. The role of the state in ensuring that the decentralized action package includes the essential preventive actions is thus essential[52].

However, current trends in development assistance do not favour integrated multisectoral approaches. Increasingly the bilateral donors, in support of national ownership of the PRSP process, the Bretton Woods Institutions, UN agencies and developing country governments are moving towards sector wide approaches (SWAPS). The SWAP approach place all donor funds for development into the budgets of single sectors of national government, such as health and education. The intention being to discourage donors from having their own projects. The problem however, is that food and nutrition security issues tend to fall across these sectors, and the articulation of these various parts at the local level is not a priority for either sector. This inevitably leads to food and nutrition activities becoming separated and/or falling through the cracks. Furthermore the PRSP processes do not seem to have had local governance, decentralization and devolution high on the agenda – at least there seems an absence of discussion of the practical issues involved. Integrated approaches may materialise at the local level, if local agencies (democratically elected) are constitutionally mandated to take responsibility of development plans, and provided sufficient capacity and resources are available at that level[53].To effectively mobilize the poor to improve the quality of governance, there is a need to focus on the enabling environment provided by government. This will include the tolerance of local government for poor people's voice, the credibility of public officials, the predictability of government programs, and respect for poor people's rights[54], i.e. good governance.

Community participation is an essential element of a human rights based approach. A concept of community participation is required that embraces social mobilization, i.e. has both top down and bottom up aspects of preventive food and nutrition actions. In conjunction with the top down service delivery element, a bottom up community-based approach is needed that is supporting and facilitating, helping communities discover how to resolve their problems[55]. The preventive community based actions described by Tontisirin and Gillespie is very much how it should be done[56]. Successful nutrition programmes have all employed community workers, or mobilizers, from the neighbourhood of the target families to carry out mobilization tasks. The ideal ratio is one mobilizer to twenty families. Facilitators, who provide initial training and then continuous supportive supervision, in turn support the mobilizers. The ideal ratio is one facilitator to twenty mobilizers. It is not uncommon in community based approaches that use facilitators and mobilizers to have too few facilitators for the number of moibilizers and to few mobilizers for the number of homes and families to be visited. The result is insufficient intensity and coverage of action and no measurable impact[57]. The biggest problem in developing such an approach is not on getting agreement on the "What", although that is in itself important. The greater problem is on agreeing "Who" is responsible for working out the "How". Very often, the many different government service delivery sectors, such as education, agriculture, health and social services, have their own "community based" activities. More often than not, they are in fact more "community oriented" than community based, and they are concerned with their own service delivery outreach and coverage. The challenge for developing such approaches at sufficient scale is in being able to ensure an "adaptation and learning" approach rather than a "replication" approach[58].

None of the Case Studies covers the territory of how much it costs to establish community based outreach approaches. Successful community based nutrition programmes, costing between $2 and $10 per beneficiary per year, have achieved reductions in child malnutrition rates of at least 2 percentage points a year, at least four times that attributable to economic development alone[59]. Certainly the economic costs of carrying the health burden of low birth weight and/or anaemia are substantial and far greater than the cost of investing in programmes to prevent either one[60]

The country case studies all allude to the difficulties of articulating these sub-national dimensions of food and nutrition security programmes. None of the case study describes the position of food and nutrition activities in national plans for decentralization. The Brazilian Case study describes the need to better articulate at the municipal level the family health programme, which delivers preventive health care to poor families through a network of community based health agents, with the Zero Hunger programme which provides income transfers to poor families. The family health programme was initiated in the north east of Brazil over a decade ago, and the presence of the community health agents and shown to be associated with reduced infant mortality rates in the communities that they serve. Several States in Brazil, such as Sao Paolo, are creating municipal food and nutrition councils, which in theory could begin to help with the articulations of such health outreach mechanisms and food and income transfer schemes.

Neither the Brazilian nor the Bolivian case study describes the incredibly strong influence of civil society in the realization of such activities in these two countries. In Brazil for example the "Pastoral da Crianca" (Child Pastorate) which promotes community based maternal and child health and nutrition activities through community mobilizers, is orchestrated in poor communities across Brazil through the Roman Catholic Church. These sorts of civil society movements in favour of hunger and malnutrition reduction are still incipient in Mozambique and Angola.

One of the biggest institutional problems that is not adequately described in the country case studies but that emerged during the workshop is that of adequate human resources with skills in the food and nutrition area. Although Brazil and Bolivia are relatively well endowed with both professionals and training establishments for food and nutrition sciences, Mozambique and Angola don't have such provision. There are no university level courses training food and nutrition professionals either in Angola or Mozambique. The whole area of professionalization of food and nutrition service delivery for the five policy areas described above, is one that requires attention. Even in Brazil, which has a strong body of food and nutrition professionals the skill base is more in curative nutrition (or therapeutic dietetics) and institutional catering than public health and community nutrition. Without the presence of adequately trained professionals in public institutions at the municipal level, it will be difficult to ensure that in the decentralized delivery of social services, food and nutrition issues are not everybody's business but nobody's responsibility. Mozambique has started trying to fill this vacuum by training nutrition workers for their health system. So far two groups of thirty public nutrition technicians have been trained and are working at the provincial level of the system.

THE SETTING OF GOALS AND OBJECTIVES AND THEIR MONITORING AND EVALUATION

The food and nutrition goals and objectives established in national development plans of all the CCS are poor and incomplete. Most of the CCS has set goals for their national poverty reduction strategies, and included hunger and malnutrition (child underweight) reduction targets. Few of them however have a consistent and comprehensive set of food and nutrition programme interventions consistent with achieving those targets. None of the CCS has set themselves objectives, and or started to develop programmes for the prevention and cure of overweight and obesity. In the European experience of developing food and nutrition policy frameworks most European countries have not only set outcome objectives like reducing the degree of obesity, but have also set food pattern and nutrient intake objectives, including the reduction of sugar and salt in the diet, the reduction of total fat, and also the proportions of different types of fat in the diet. None of the case study countries have adopted such objectives. Anaemia reduction objectives also seem to be non-existent, despite the almost universal nature of the problem. Brazil has established international commitments to tackle its anaemia problems, and is setting ambitious anaemia control targets in the national anaemia control programme under development.

Monitoring and evaluation mechanisms are in theory the easiest part of the equation to solve, but the biggest challenge is ensuring their funding by the State. Regular surveys are needed which look at nutritional status (obesity, stunting, wasting, anaemia,etc) together with an assessment of the situation with regard to nutrition education and dietary change, micronutrient supplementation, food supplementation, food processing and fortification, food production are needed that are representative to the province level. These are not regularly funded in any of the Country case studies. Perhaps paradoxically, Mozambique seems to have the best set of food and nutrition surveys of all, and Brazil the least adequate. This is probably because the realization of such surveys is very often funded by donors.

It is perhaps amazing that little or no mention is made in any of the case studies of growth monitoring/promotion (GMP). During the eighties the child growth chart was implemented at scale in the health services of most countries in the world, and to this day most children in the four case study countries have growth charts and are periodically weighed. Those large scale growth

monitoring programmes considered to have been successful, whether in Thailand, Indonesia, or Tanzania, all promoted the discussion of malnutrition rates among family members and community leaders in order to mobilize local resources and find collective solutions[61]. However, the end decade review of the achievements of the World Summit for Children goals concluded that although a majority of developing countries have adopted GMP activities, a major difficulty at all levels has been linking the information generated from the regular weighing of children with decision-making about child malnutrition[62]. The Child Pastorate programme of the Brazilian Council of Bishops regularly weighs more than a million children under five years of age across Brazil each month. The CNBB-Child Pastorate information system shows that for the last decade or more, while some 30% of children haven't grown in the last month only 7% of children are actually underweight[63]. The Ministry of Health in Mozambique has been using failure to thrive or insufficient growth of children weighed in health clinics as a nutritional surveillance indicator since 1985. In the period 1994-5 the average percentage of children failing to grow since the last weighing was around 10-13% each month[64]. The relevance of this sort of information for decision making purposes is questionable however. An analysis of the growth faltering rates in California, Guatemala and Tamil Nadu showed that the frequency of faltering (no weight gain in previous 3 months) in children aged 12-24 months while greater in Guatemala (45%) and Tamil Nadu (42%) was still common even in California (18%). This suggests that the criteria used to select children in GMP activities identify too many children for special attention and often more than can be handled by most programmes[65]. It is obviously difficult to draw any conclusions from these sorts of information systems since they don't inform how many children are stunted, wasted or overweight. There is an obvious need to revisit the use of anthropometric indicators for decision making purposes at all levels of society, and this is an area that WHO together with other UN agencies active in food and nutrition need to consider how to do so as soon as possible.

Increasing efforts are needed to make stunting, not underweight, the principal evaluative indicator for poverty reduction efforts at the population level. The biggest argument given for using underweight is because it is the most universally available of anthropometric indicators. At the beginning of the seventies only 25 community or population based anthropometric surveys had been carried out on more than a 1000 children in only 17 countries and none were representative nationally [66]. Today the nutritional status of children is known for most countries of the world, and a global database exists at WHO containing the data from over 370 national surveys from 133 countries[67]. Far more of these surveys have weight for age than height for age data, because very often the quality of the weight/length for age data is difficult to guarantee. There is a need to improve and expand the quality of length/height data collected in national DHS and MICS surveys, in order that stunting can replace underweight as the evaluative indicator for poverty reduction programmes.

A human rights based approach requires ample discussion and participation on the agreement of goals and targets at sub-national level[68]. The right to adequate food will require that the various dimensions of hunger and malnutrition are made quantifiable so that they can be assessed, and analysis can be facilitated, before priorities and choices can be made at the local level in deciding what actions to take first. Such a process requires that groups of facilitators acquire the capacity to lead such discussions at the community and municipal level across the nation. The contribution of such an effort to improved governance and increased democratization of information and participation in community decision making should not be diminished. The role of civil society and NGO actors in these processes is essential. These are the sorts of pedagogic

processes that Paulo Freire pioneered in Brazil and then gave to the world[69]. Through such participatory processes the true dimension of what the right to adequate food and to be free of hunger and malnutrition will hopefully become clearer to everybody.

The realization of the right to adequate food and to be free from hunger and malnutrition will require the development of simple set of indicators that will allow citizens to know when these rights are being violated. It will also require that processes are created for citizens to complain if these rights are not realized, i.e. the right to adequate food has to become justiciable. The municipalization of the right to adequate food that Brazil is now embarking on provides promising perspective for all of the country case study countries to be able to follow and learn from.

MOVING FROM STUDY TO ACTION: NEXT STEPS IN CASE-STUDY COUNTRIES AND BEYOND

The closing session of the workshop in Brasilia led to a series of proposals being made by the consultant team to each country team on how to further elaborate the Case Study reports, and many of these comments have been included in this report as part of the lessons learnt. In addition, various other proposals and request were made by the different participants. Each country team reported on what they hoped to achieve in the next 2-3 years within their own country scenarios, and what they would like in terms of help from the other country teams present at the meeting. They also expressed their expectations of help from the SCN, as being something above and beyond that which is provided by the UN agencies in each country. These recommendations included the following:

- the request of assistance across countries (south to south) for exchange of experiences in establishing national food and nutrition councils (CONSEAS);
- assistance in creating organic laws and policy frameworks;
- help in carrying out capacity building on HRAF;
- help in creating human resources in food and nutrition since there are no such courses in Mozambique or Angola and Brazil has an abundance of such resources;
- exchange of information on academic curriculum, and on job descriptions and qualifications of nutrition professionals, and courses available in Brazil

Each country considered it important to have a "high level" political meeting to "validate" the findings and recommendations of the CCS, and to help get political acceptance and commitment. A multi-agency UN "presence" such as SCN at such meetings, was considered important for generating such commitment.

With regard to the 32nd Session of the SCN to be held in Brasilia 14-18 March 2005, the group considered that a proposal be made recommending that the SCN should:

1) Take on the task of helping governments to realize the right to adequate food in a broad multisectoral way, in accordance with the Voluntary Guidelines,

2) Help develop capacity for monitoring and evaluation of such efforts;

3) Elaborate an orientation guide for governments, on human rights based programming for realizing the right to adequate food;

4) Explore the Human Right to Adequate Food dimension of the substantive area of each SCN Working Group.

5) Work with the various UN committees at the Office of the High Commissioner on Human Rights, to define indicators for realizing the right to adequate food.

CONCLUSIONS AND RECOMMENDATIONS

The case study exercise reveals that while poverty reduction and MDG achievement are high priority in all four countries, food and nutrition interventions to reduce hunger and malnutrition are not well developed in the national development plans for achieving the MDGs. The dominant "nutrition in development paradigm" operating in all countries seems to be that hunger and malnutrition are caused by poverty and ignorance, and that they will improve if livelihoods (economic growth and incomes) and education services improve. In other words the reigning development narrative is that hunger and malnutrition improves as a result of development, and the idea that the proactive solution of hunger and malnutrition can be a platform for accelerating development is not commonly understood by the development actors. The exception perhaps is that of Brazil where the Zero Hunger programme, which has enormous political priority, has shown a demonstrable effect on reducing poverty which may have additional effects on hunger and malnutrition, but these linkages are not assured. The Zero Hunger programme could be considerably strengthened, if its linkages with food and nutrition security related activities were better articulated as part of a more decentralized approach. It would seem that the process of strengthening Zero Hunger that has been sparked by the Country Case Study process is ongoing.

Strengthening the food and nutrition content of national development plans to achieve the MDGs in the four countries will still be an enormous challenge in most of the countries. There is a generalized lack of understanding of the potential contribution of food and nutrition interventions for accelerating human development outcomes, and also of the importance of keeping food security and nutrition security actions linked together. Part of this problem is undoubtedly that the "food-and-nutrition-in-development" actors across the different sectors do not have a common vision of the problem and use different concepts and terminology for defining hunger and malnutrition.

There is an enormous amount of "noise" around nearly all of the key food and nutrition indicators and consequently the key messages lack consistency and are often contradictory. The focus that the first MDG puts on hunger as defined by inadequacy of energy intake and malnutrition defined as child underweight is counter productive in this sense, since these terms exclude hidden hunger which affects a far greater proportion of the population, and obfuscates the problem of overweight and obesity, which in all four case study countries increasingly co-exists with stunting, especially in poor urban populations. The right to adequate food must be equated with being free from hunger, including overt hunger and hidden hunger, and also being free from malnutrition including both overnutrition and undernutrition.

There is a lack of common understanding across food and nutrition in development actors around issues of vulnerability. The discussions of vulnerable groups often tend to concentrate on population groups that are socially and economically vulnerable. There is little or no common understanding of biological vulnerability, and the population wide consequences of suboptimal maternal nutrition, especially during the early phases of foetal growth, be it for generating stunting, for impairing child development potential, for reducing adult earning capacity, or for increasing the risks of obesity and chronic disease later in the life cycle. Perhaps in consequence, little or no priority is given in national food and nutrition programming to the periods of high biological vulnerability, or for maternal nutrition in particular.

The institutional and legal frameworks for realizing the right to adequate food are best developed in Brazil, although it still has a long way to go for the right to be realized by all. Although all four countries are signatories to human rights covenants that include the right to food, and three of the case study countries have incorporated some provision related to the right to adequate food into their constitution, the actual respect, protect and fulfilment of this right remains elusive in all four countries. There is still a lack of clear definition and understanding of the content of these rights at the national level, let alone clear justiciable provisions on the right to food as such at the district and community level. In order for the right to adequate food and to be free from malnutrition to be realized then the clear definition of what these entitlements are becomes a fundamental first step. The creation of a comprehensive food and nutrition policy framework as proposed in this synthesis could surely be a large first step in this direction. Once these component parts are established, and responsibilities apportioned, the attribution of obligations should become an easier task.

The Brazilian experience with its national food and nutrition council is one that the other three case study countries would do well to try to emulate. Without such a high level coordinating body it will be difficult to create a sufficiently articulated set of food and nutrition policies and programmes that will allow the realization of the right to adequate food (i.e. to be free from hunger and malnutrition in all their forms) as well as accelerating achievement of the MDGs.

The realization of the right to adequate food will also depend on how the community participation and mobilization dimensions of these over arching policy framework are orchestrated at municipal level through a decentralized approach. Without such community participation the coverage of any of the food and nutrition interventions will preclude that the poorest of the poor and the most socially discriminated are reached and their rights realized. In order for this to happen there is an urgent need to revisit the concepts of hunger and malnutrition and to establish a common vision and language across all relevant sectors and actors. As part of such a thrust the use of child growth measures also needs to be revisited looking at both over and under nutrition. In parallel a meaningful set of messages needs to be developed that are capable of mobilizing the poorest of the poor to become actors in their own development and in realizing the right to adequate food. The training of the food and nutrition in development actors in order to help orchestrate and facilitate such an approach will require considerable attention in order to ensure that curriculum used are not overtly out of date and intrinsically clinical and dietetic in orientation.

The process started by the Country Case Studies has indeed been a very rich one, and is ongoing. In all countries the international nature of the "SCN" presence and the participatory capacity building approach adopted has opened up many new discussions provoked lots of cross fertilization. The capacity building objectives of the country case study exercise were only partially met however. The participatory analysis did help a cross sectoral group of food and nutrition in development actors in each country to better understand the importance of food and nutrition interventions for achieving the MDGs. However it did not help clarify what food and nutrition inputs are. In fact, to the contrary, the organizing of all the food and nutrition inputs in webs of causality related to the MDGs made it harder to categorize and organize these food and nutrition inputs. Despite these limitations the exercise was still considered to be a useful one for revealing the gaps, showing areas of overlap and similarity and for better understanding the generalized lack of coordination between food security and nutrition security activities. The exploration of the human rights dimensions of food and nutrition programmes served more to familiarize the participants with

the concepts than to generate a clear categorization of whether such programmes contributed to respecting, protecting, and/or fulfilling the right to adequate food and to be free from hunger and malnutrition. The challenge for the SCN and the case study country teams is how to build on the momentum gained and to maintain it.

The SCN Strategic Plan outlines the intention of working though the UNDG to try to strengthen the capacity of UN country teams to be able to develop more adequate CCA and UNDAF processes. The idea then being that in this way there would be some further input into the development of the CDF and the PRSP processes. This intention never materialized however, and PRSPs continue to have poor food and nutrition components for reducing hunger and malnutrition. The SCN needs to try to address these problems and seek ways to strengthen the food and nutrition content and conceptualization of these various assessment and planning exercises. Perhaps a start could be made with the 4 Case Study countries. The question is "how"?

The UN agencies involved in promoting food and nutrition activities, both acting alone and acting together through the SCN can and should take a leading role in trying to help governments create the overarching policy and legal frameworks for realizing the right to adequate food as described in this report. No single agency may have the breadth to cover such a broad spread of programme areas, and the SCN mandate suites it to such a task. A system wide communication and partnership building strategy to create a common vision as well as agreeing on a single set of monitoring and evaluation indicators for the realization of the right to adequate food are both critically important. If this could be achieved it would contribute enormously to realizing these ends. The SCN and all of its constituents should seize upon the opportunity provided by the approval of the voluntary guidelines for realizing the right to adequate food and make their realization the central focus of future efforts to realize a world that is free from hunger and malnutrition.

In relation to the four specific CCSs, the recommendations for priority follow-up actions of each of the four studies provide a basis for exploring requirements and opportunities for SCN support at the country level. The Symposium and subsequent working group sessions are invited to initiate further discussions on these, with the understanding that they will be carried forward after the 32nd Session.

Annex 1. ON THE DEFINITION OF MALNUTRITION

The terminology used to describe abnormal growth patterns or malnutrition, has evolved over the years, and gained in complexity. The use of underweight, based on adequacy of weight for age compared to a growth reference, was one of the earliest methods of classifying malnutrition in children proposed by Gomez in the seventies[1]. A two-way functional classification was later developed by Waterlow which included wasting or inadequate weight for height (W/H) and stunting or inadequate height for age (H/A) classifications[2]. Waterlow proposed that wasted children are acutely malnourished and thus need immediate treatment as they are at great risk of dying. On the other hand those stunted but not wasted were considered to be suffering from chronic malnutrition and as such didn't need any special treatment since their malnutrition largely occurred in the past and/or that they have adapted to this lower plane of nutrition. These observations still orient the targeting of food and nutrition interventions in emergency situations, where wasted or severely underweight children are targeted to receive food supplementation. In most nutrition assessments, all three indicators are still commonly used, even though there is obvious overlap between the three, with underweight being a reflection of the other two indicators.

The faltering of weight growth and length growth appear to be separate processes of limited duration that are largely over by two years of age[3]. Mean monthly weight growth is the same in most populations of the world after 12 months of age, the major difference in weight for age indicators after the first year of life are due to differences in weight at birth. Weight growth is largely normal during the first six months and faltering occurs only between 6 and twelve months, or during the period of weaning. Length growth faltering starts at births and is continuous during the first two years of life, and differences in length at birth seem to have little influence on length at two years of age. It seems that the length growth trajectory, or the potential to grow in length, is set before birth. Thus the process of becoming stunted or length growth failure is a progressive one that probably starts in uterus and is largely complete by two years of age.

The description of stunting as being something "chronic" or a reflection of something that happened in the past is also very misleading, since stunted children are more likely to get sick and to contract malaria than either wasted or underweight children for example[4] [5]. It seems that the process of becoming stunted is associated with a negative effect on the development of the immune system that persists for the rest of life. Retrospective studies in the Philippines have found the adequacy of thymic function in adolescents to be related to the adequacy of their foetal and infant growth[6]. Observations in the Gambia have shown that babies born during the "hunger season" when LBW rates are highest have a markedly higher risk of dying in early adult hood, and that they die from infectious disease[7] Thus although food and nutrition interventions in older children may not impact on length growth, they are still likely to be important for other outcomes, such as survival and mental development. Indeed the importance of young child growth monitoring programmes is likely to be more for child survival than for child growth per se[8]. Also, interventions to prevent stunting need to be targeted much more at the period before birth than the period after.

It is also common in countries that are "in transition" and that no longer have problems of starvation (as evidence by high rates of wasting), to paradoxically have high rates of obesity in adults occurring together with high rates of stunting-underweight in preschool children. Indeed it is common in countries without problems of starvation, such as all four CCS countries, to have pre-school children that are underweight in households with an older mother who is obese[9]. Bolivia has a third of its children stunted while a half of women are overweight and/or obese. In Mozambique the prevalence of overweight in women is already greater then the prevalence of thinness or excessive

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underweight at the national level, and in the capital Maputo over a third of women of reproductive age are already over weight and/or obese. Perhaps even more paradoxically, in developed country settings such as the USA, obesity is more common among women that are food insecure than among those that are food secure[1,2].

In reality the use of underweight indicators, or weight for age, is redundant and confusing from a population perspective and every effort should be made to switch the focus of attention to stunting and its prevention. While stunting is difficult to reverse after birth, being underweight or wasted is not. Underweight preschool children (all under-five year olds) typically have adequate weight for the height that they have, i.e. they are not wasted, but have inadequate height for their age. Thus the "underweight" problem, as reflected by weight for age of children under five years of age, is more commonly because of not growing properly in length during the first two years of life, or of being short for the age they have. But this lack of weight can of course be cancelled out by children getting fatter, since weight can be recovered later in life's course. Stunting rates are generally greater than underweight rates in all four country case studies, and two countries (Brazil and Bolivia) show evidence that although stunting is still common, wasting is much less so, and overweight is increasingly a problem in their preschool children.

Another malnutrition indicator that is remarkable in terms of the proportions affected is anaemia in women and children. Commonly in all four countries, a third to a half of women and a half to three quarters of preschool children are anaemic. Almost none of the CCS gives any priority or mention the size of this "hunger and malnutrition" problem. Few have any representative national statistics properly defining the problem, and quote small scale surveys. This condition is also commonly called "iron deficiency" anaemia, which is a misnomer, for although iron deficiency is one of the commonest causes of anaemia, it is not the only cause. Indeed anaemia is better recognized as a marker for multiple micronutrient deficiencies, including zinc deficiency for example, not just iron[3]. A global review of anaemia causality revealed that perhaps only a half of anaemia is solely due to iron deficiency, with other micronutrients such as Vitamin A, and Vitamin C implicated in addition to infection and blood loss[4]. Trials are ongoing of the efficacy of a multiple micronutrient supplement compared with iron supplements during pregnancy[5].

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ANNEX 2. MATERNAL NUTRITION AND A LIFE CYCLE PERSPECTIVE ON MALNUTRITION

It is important to understand that the power of food and nutrition interventions for increasing the achievement of the MDGs is in prevention rather than in cure. In order to be preventive the target of interventions needs to shift to a different part of the life cycle, when vulnerability is highest. The need for the nutrients from which the body is built, is greatest during times of rapid tissue growth. These are during the growth of the fetus in uterus, during infancy and during puberty. It is now recognized that in order to get the greatest return on food and nutrition investments, ensuring that the preconceptional female is well nourished (i.e. has adequate food, air and water, both in terms of quantity and quality) will yield enormous benefits in other parts of the life cycle[1]. Stunting and the propensity to become obese have common origins in the inadequacy of foetal and infant growth and development, and are therefore seem likely to be related to maternal nutritional status[2].

Maternal malnutrition status, as reflected in body weight and height, is known to be strongly associated with birth weight[3]. Maternal anaemia, especially severe anaemia, predisposes mothers to haemorrhage and sepsis during delivery and has been implicated in at least 20% of maternal deaths in Asia[4]. Low birth weight has a strong association with neonatal mortality[5] . All of these problems have similar clusters of immediate causes related to inadequate intake of nutrients and infections at the individual level. Poor intakes of iron/folate lead to anaemia and giving iron/folate supplements is efficacious in curing cases of anaemia in pregnancy[6]. Poor intakes of food (protein/energy) also lead to increased low birth weight rates and balanced protein/energy supplements are efficacious in reducing low birth weigh rates[7]. Vitamin A supplementation has been shown to be efficacious in reducing maternal mortality[8], and also in improving anaemia[9]. Malaria and gastrointestinal parasites such as hookworm are both strongly associated with maternal anaemia[10], intermittent presumptive treatment of malaria during pregnancy has been shown to reduce the occurrence of sever anaemia and improve birth weight in Kenya[11] and deworming during pregnancy to improve birth weight in Nepal[12] . The sexually transmitted diseases that cause gynaecological infection in mothers have also been shown to be associated with low birth weight and their treatment to reduce preterm births[13].

Another little recognized issue that is of relevance here is teenage pregnancies[14]. If the period of fetal growth is superimposed on the period of pubertal growth (i.e. the mother is a child (<18y), the growth of the mother is prioritized and fetal growth suffers[15]. In many developed and developing country settings teenage pregnancy is likely to be among the major causes of babies being born low birth weight. Over a half of young women marry before age 18 in Mozambique and a quarter in Brazil and Bolivia.

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TABLES

Table 1 population characteristics of the four country case studies

Indicators		Bolivia	Brazil	Latin America and Caribbean	Angola	Mozambique	Sub-Saharan Africa
Population	Total (millions)	8.8	178.5	537.8	13.6	18.9	665.5
	% population rural	37	18	24	65	67	65
	Net Primary school attendance (%)	92	97	93	58	60	58
	Adequate sanitation	45	75	75	30	27	36
	Improved water	85	89	89	50	42	57
	Life Expectancy	64	68	70	40	38	46
	Infant Mortality	53	33	27	154	109	104
	Child marriage	21	24	-	-	57	-
	Total fertility rate	3.8	2.2	2.5	7.2	5.6	5.4
	HDI						
Income	GNI ($ per capita per year)	890	2850	3311	740	210	496
	Growth in GDP per capita (%)	0.4	0.3	-1.9	13.8	7.7	0.9
	Share of poorest two quintiles in national income	13	8	10	-	17	11
	Gini Coefficient	44.7	59.1	-	-	39.6	-
	Inflow of ODA as % of GNI	9	0	0	5	58	5
	External debt as % of GNI	23	48	-	120	27	-
	Agriculture exports as % of total exports	33	26.5	19.2	0.1	12.5	13.6
	% economically active working in agricultural sector	44	16	19	72	44	62
Expenditure	Health	9	6	6	6	5	-
	Education	24	6	16	15	10	-
	Defence	6	3	4	34	35	-
	Debt service as % of export earnings	26	61	29	10	5	10
	Net food imports ($ millions)	-77.5	-7340.0	-15960.0	227.6	128.8	-232.7

Table 2 Poverty hunger and malnutrition indicators from the four country case studies

Indicators		Bolivia	Brazil	Latin America and Caribbean	Angola	Mozambique	Sub-Saharan Africa
Poverty	% population <$1 a day	14	8	10	-	38	43
	% below national poverty line	62.7	17.4	-	-	69.4	-
Hunger	Average Energy Availability	2141	2811	2707	1903	1945	2255
	% undernourished	21	9	10	49	53	33
	Diet Diversification	50	66	-	32	25	-
	% Infants exclusive breastfeeding until 6 months	39	46	-	11	30	28
	% adequate complementary feeding 6-11 months					20	
	% households using adequately iodized salt	90	88	86	35	62	71
Malnutrition	Low birth weight	9	10	10	12	14 (24)	14
	U5 Underweight	8	6	7	31	24	29
	U5 Wasted	1	2	2	6	4	9
	U5 Stunted	27	11	16	45	41	38
	Adult thinness men/women	-/0.9	3/5	-	-	10.9	-
	Adult overweight men/women	-/46	50/53	-	-	-/9.5	-
	Anaemia % women/children	33 / 51	? 30-40			48/75	

Table 3 Five dimensions of a food and nutrition policy framework, with actions explained for different stages of the life cycle

Nutrition Policy Area	Stages of the life cycle					
	Pregnant and lactating women	Infants and young children	School aged children	Adolescents	Non-pregnant women of reproductive age	Old aged people
1. Food Production	Food production in the poorest rural areas, should consider the role of the women and the mother to be in the production of food. Credits should favour women, and land right entitlements should not discriminate by gender. The need to rest during pregnancy, to not be exposed to pesticides during pregnancy, to be able to breastfeed, and the provision of childcare facilities for women agricultural workers need to be ensured.		+The provision of school meals should be linked to the provision of funds to ensure the production of healthy foods locally for consumption in the local schools.	+Food production support should be balanced with respect to support of "export oriented" agriculture aimed at increasing local wealth as opposed to the development of subsistence agriculture for producing fruits and vegetables for sale in the local market. +Poverty reduction strategies through food production, should first concentrate on engaging the poor in the production of foods that will contribute to assuring the quality of the diet available for local consumption by the local population.		
2. Food Processing and fortification	+The fortification of supplementary foods that are provided to women in during pregnancy and lactation is one consideration in areas of extreme poverty, and in situations of emergency. +There are international regulations that provide guidance on the levels of fortification appropriate in such situations. + the pregnant and lactating mother is specially vulnerable and needs protecting form noxious substances in the food supply.	+Complementary foods for infant over six months of age should be appropriately fortified.	+If processed food supplements are provided through school meals then they should be fortified.	+ food fortification is one of the best ways to reach the mother before she gets pregnant and ensure that the foetus is not conceived in a deficient environment. Examples are iodized salt and folate fortification in wheat flour.		

Nutrition Policy Area	Stages of the life cycle					
	Pregnant and lactating women	Infants and young children	School aged children	Adolescents	Non-pregnant women of reproductive age	Old aged people
3. Food supplementation	+in areas with high low birth weight and/or poverty rates, food supplements should be provided to mothers from poor families in order to improve birth outcomes	+From 0-6 months the infant should only receive breastmilk, and if supplementary food is to be provided it is best given to the lactating mother. + the provision of special complementary foods among infants age 6-11 months of age, should be supported in the poor segments of society.	+ in poverty-stricken areas and/or in areas where attendance is low the provision of free school meals, besides increasing attendance and completion rates also contributes to improving household food security. -If processed food supplements are provided through school meals then they should be fortified. -food supplements should be wholesome and supportive of food based dietary guidelines considerations	+During adolescences and adulthood, the free provision of food may also be considered for special groups, such as the poorest of the poor in poverty-stricken areas. Very often this is done as food for work in public works situations. +In addition to food supplements, there are other social security safety nets that are considered as "minimal entitlements" and are provided through social security arrangements, not as food necessarily but as cash. These are commonly provided in most industrialized societies as part of un-employment policies.		+During old age food supplements may need to be provided if the people are no longer able to care for themselves, and/or as an old age pension in cash

Nutrition Policy Area	Stages of the life cycle					
	Pregnant and lactating women	Infants and young children	School aged children	Adolescents	Non-pregnant women of reproductive age	Old aged people
4. Micronutrient supplementation	+ Anaemia once established cannot be cured through diet alone and requires supplementation to cure the illness. - all mothers found to be anaemic should take iron/folate tablets daily during the course of pregnancy; - In areas where more than 30% of mothers are anaemic then all mothers should receive iron/folate supplements during pregnancy. +Mothers that are anaemic are likely to be deficient in others nutrient besides just iron, and in many countries mothers are now prescribed a multiple micronutrient supplement during pregnancy. + In areas where vitamin A deficiency is a problem, mothers should also be given a massive dose capsule of vitamin A when their child is born. +all infections, especially malaria and gastrointestinal parasites need treating	+If a child gets an illness, such as chronic or persistent diarrhoea then zinc supplements should be provided to the child. +if a child has measles then a massive dose vitamin A supplement should be provided. +In areas where the infant mortality rates are greater than 50/1000 live births, then vitamin A capsules should be provided twice a year to all children aged 6-59 months either through immunization activities, and/or through campaigns. +If the mothers are anaemic then the child will likely be anaemic and iron supplements are required to prevent and to cure the anaemia of infancy. + Infants that are anaemic are likely to be deficient in other nutrients besides just iron, and multiple micronutrient supplements are also commonly used.	+If students are anaemic they should be treated with iron supplements, as they will not learn as well as if they are not anaemic. +In order to prevent anaemia, if there is no appropriate school feeding programme and the local diet is poor in iron and no fortified food is available then anaemia can be prevented using weekly iron supplements. +The weekly iron supplement schedule needn't be maintained for all the year, and could be just during one term. +Supplements six-monthly deworming of all students if infestation with intestinal parasites is common.	During adolescence and adulthood: the possibilities for supplementation are much more limited. If the adolescent is still in school then they can be reached. But is they are outside the school then it is difficult to reach them. +Adolescents are at special risk of developing anaemia, especially girls.	+It is important to cure anaemia before getting pregnant. -Weekly iron supplements can cure anaemia before pregnancy, but not afterwards. -The health service should include anaemia control as part of the preparation for getting pregnant.	+micronutrient supplements can help to meet the micronutrient needs that the reduced energy intake of old age cannot meet.

Nutrition Policy Area	Stages of the life cycle					
	Pregnant and lactating women	Infants and young children	School aged children	Adolescents	Non-pregnant women of reproductive age	Old aged people
5. Nutrition education for dietary change	+As part of antenatal health care, all mothers should receive counselling on: -What they should eat; - How much weight they should gain; How to breastfeed after birth, and the importance of exclusive breastfeeding. +Each mother should gain a pamphlet with this dietary advice, together with other health and hygiene advice.	+Through child health clinics (IMCI) every mother should receive counselling on: -how to exclusive breastfeed to 6 months of age; - How to provide adequate complementary food from 6 months onwards.	+ Children should receive a holistic food and nutrition education in school: -The curriculum should teach what an adequate diet is at each stage of the life cycle using the food based dietary guidelines; -Food provided in school should be wholesome, in accordance with the food based dietary guidelines principles. - The provision of appropriate exercise should support the control of obesity and prevention of cardiovascular disease.	+Adolescents outside of school should also receive dietary counselling as appropriate, through the health service if they get sick and are considered to have poor dietary habits. +Those that are overweight should be put on dietary regimes to loose weight, and enrolled in exercise programmes. +adolescents need to be counselled on the dangers of becoming pregnant during childhood and helped to prevent this happening	+Mothers wanting to have a child should also be counselled on what to eat as part of an appropriate diet besides not smoking and not drinking alcohol, in order to help prepare for pregnancy.	+Dietary advice for the elderly can also improve the quality of old age and should be part of appropriate care for the elderly.

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