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### **Abbreviations**

A&T Alive & Thrive

Appropriate complementary food ACF

Antenatal care ANC

**BCC** Behavior change communication Baby-friendly Hospital Initiative **BFHI** Chronic energy deficiency CED

Commune health center **CHC** 

DOH Provincial Department of Health

Department of Science, Technology and Training **DSTT** 

**EBF** Exclusive breastfeeding

Food and Agriculture Organization of the United Nations FAO **HIV/AIDS** Human immunodeficiency virus/acquired immune deficiency

syndrome

**IDA** Iron deficiency anemia

**IEC** Information, education, and counseling International nongovernmental organization **INGO** 

Infant and young child feeding **IYCF** 

POA Plan of Action

Protein-energy malnutrition **PEM** 

Ministry of Agriculture and Rural Development **MARD** 

Ministry of Education and Training **MOET** 

Ministry of Health MOH

Ministry of Labor, Invalids, and Social Affairs **MOLISA** 

National Institute of Nutrition NIN National Nutrition Strategy **NNS** 

National Plan of Action for Nutrition **NPAN** Reproductive Healthcare Program **RHC** 

**VWU** Viet Nam Women Union VYU Viet Nam Youth Union WHO World Health Organization

## NATIONAL PLAN OF ACTION FOR INFANT AND YOUNG CHILD FEEDING PERIOD 2012 – 2015

(Accompanied by Decision No.304 /QĐ-BYT dated 28/01/2013 of the Ministry of Health)

## **Chapter I - Overview**

As stated in WHO's *Global Strategy on Infant and Young Child Feeding*, mothers and babies form an inseparable biological and social unit from conception: the health and nutrition of one cannot be divorced from the health and nutrition of the other. The first 1000 days—starting at conception, through pregnancy, until the child is 24 months old—is known as the 'window of opportunity' for preventing stunting and other lifelong physical and cognitive impairments. Marked reductions in child undernutrition can be achieved through improvements in women's nutrition before and during pregnancy, early and exclusive breastfeeding, and good quality complementary feeding for infants and young children, with appropriate micronutrient interventions.

A systematic review of studies from low- and middle-income countries showed that poor fetal growth or stunting in the first two years of life leads to reduced economic productivity in adulthood. Children who do not get adequate nutrition during their first 1,000 days—between their mother's pregnancy and their second birthday—are at greater risk of stunting, which has implications for cognitive development, school performance, and educational achievement. This, in turn, can hinder a nation's economic development. The evidence also shows that nutrition investments focused in this 1,000 day window have extraordinary returns for a nation's long-term health and prosperity.

Based on the Decision No. 226/QD-TTg dated February 22, 2012 of the Prime Minister to approve the National Nutrition Strategy for 2011-2020 with a vision toward 2030, and the *National Plan of Action for Nutrition, 2012—2015, the Plan of Action for Infant and Young Child Feeding (POA for IYCF)* is developed in order to offer solutions and specific deployment approach on IYCF and will focus on three key interventions: policy development and coordination of resource allocation; interventions at health facilities and in the community; and, strengthening behavior change communication for improved infant and young child feeding IYCF.

This Plan of Action describes essential interventions to protect, promote and support appropriate IYCF. The Plan of Action is based on scientific evidence to prove the importance of the nutritional intervention of the early months and years of life, with a positive impact for child growth and development.

It focuses on the importance of investing in this crucial area to ensure that children develop to their full potential, free from the adverse consequences of compromised nutritional status and preventable illnesses, contribute to achieve aims and objectives of the *National Nutrition Strategy for 2011-2020 and vision toward 2030; National Strategy on Population and Reproductive Health for 2010 - 2020.* 

# Chapter II - Current Situation and Challenges of Infant and Young Child Feeding I. Achievements in Infant and Young Child Feeding

The Plan of Action for Infant and Young Child Feeding 2006 - 2010 was approved on December 27, 2006 with the general objectives of improving nutritional status, health and development of young children aged 0 - 3 years. In order to implement optimal IYCF, the solutions have been made were activities such as IEC to improve knowledge and practices on IYCF; promote early antenatal care for pregnant women; consolidate and improve quality of nutrition care for young children; provide guidance, technical counseling and support of IYCF in extremely disadvantaged circumstances; supplement and strengthen development of legal documents on IYCF; conduct research on IYCF; and develop and consolidate the information system and monitoring of IYCF.

Over the 5 years of implementation of the National Plan of Action for Infant and Young Child Feeding 2006 - 2010, nutritional status of mothers and children under 5 years of age were improved significantly, contribute to the achievement of targets of National Strategy on Nutrition 2001 - 2010. Malnutrition of children under 5 years of age has been decreased sustainably. The prevalence of underweight (weight-for-age) in children under 5 years of age reduced from 31.9 percent in 2001 to 17.5 percent in 2010. Stunting (height-for-age) in children under 5 reduced from 43.4 percent in 2000 to 29.3 percent in 20102.

IYCF knowledge and practice of mothers and caregivers has been improved through IEC campaign integrated IYCF messages into their health and nutrition communication activities from national to sub-national level. Through funding from PEM and other nutrition programs, provinces and districts organized trainings and interventions to improve knowledge and practice on breastfeeding and appropriate complementary feeding; training offered to nutrition program officers in 63 provinces/cities, 620 districts, and nutrition collaborators in more than 100,000 commune/precincts across the country. Thanks to that, the rate of mothers have knowledge and appropriate practices on nutrition for sick children increased from 44.5 percent in 2005 to 67 percent in 2009, the rate of young women trained on nutrition and maternal knowledge increased from 28 percent in 2005 and 44 percent in 2010. Most mothers breastfeed their babies on demand and approximately 80 percent of mothers breastfeed at one year. BF practices at health facilities have partially improved. Most mothers after giving birth can stay with their babies to practice BF on demand.

Achievements have also been made thanks to the Ministry of Health for actively developing policies to support the legal framework for implementing IYCF interventions. Several legal documents on IYCF were developed and approved, such as: Decree No. 21/2006/NĐ-CP dated on February 27, 2006 on trading and use of nutritional products for children in order to protect and promote breastfeeding through limiting the excessive and incorrect advertisement of nutritional products including breastmilk substitutes; Joint circular No. 10/2006/TTLT/BYT-BTM-BVHTT-UBDSGDTE dated August 25, 2006 guiding the implementation of Decree No. 21/2006/NĐ-CP. Law on Food Safety in 2010. In June 2012, the Congress has approved the amendment of the Labor Law which allows female workers to take 6-month maternity leave, has effect in May 2013 in order to suite

with recommendation of WHO on exclusively breastfeed for six months, support the mother to exclusively breastfeed for six months and better care for their children. Moreover, the Congress has approved the Advertisement Law, which prohibit the advertisement of breastmilk substitutes for children under 24 months of age, complementary food for young children under 6 months of age.

Intersectoral collaboration for IYCF activities has been strengthened: With the technical support of Ministry of Health (MOH), the Ministry of Education and Training has developed standards for nutrition care in daycare centers and kindergartens. The Viet Nam Women's Union cooperates with the MOH in disseminating health and nutritional knowledge to its members, from the national to sub-national level. The Ministry of Labor, Invalids and Social Affairs (MOLISA) cooperates with the MOH to develop and submit the amendment of Labor Law to the Congress for approval. For children in disadvantages conditions, MOLISA is responsible for reporting to competent authority to allow the implementation of interventions of improving nutritional status of young children. The Ministry of Agriculture and Rural development (MARD) holds a decisive role in assuring food security, promoting quality of food processing, and promoting safe water supply in rural areas. The Ministry of Industry and Trade (MOIT) plays a role in coordinating and promoting production, trade and distribution of iodized salt.

# II. Challenges of Infant and Young Child Feeding

### 1. Maternal nutrition status

Maternal nutritional status is closely linked to the child nutritional status. Many studies have shown that nutrition status of pregnant mothers is among key factors leading to preterm, low birth weight and increased perinatal and neonatal mortality. Therefore, it can be said that nutrition care for future mothers, especially pregnant women is early nutrition care for children.

Data from the National Nutrition Surveillance in 2010 shows a high prevalence of chronic energy deficiency (CED) among women of childbearing age —over one-quarter of women aged 15 to 24 years and one-fifth of women aged 25 to 34 years suffer from CED. The prevalence of chronic energy deficiency in reproductive age women in 2005 was 22.7 percent, and 21.2 percent in 2010—this means that the prevalence of CED remained nearly unchanged after 5 years (National Institute of Nutrition, 2012). Moreover, the prevalence of postpartum women taking vitamin A supplementation postpartum has been on the decline. Surprisingly, although 88 percent of women know the benefits of using vitamin A, only 58.7 percent consume vitamin A postpartum3. Data on iron supplementation is also of concern. While 57.6 percent of women initiated iron supplementation in the first trimester of their last pregnancy, approximately one-quarter did so in the second or third trimester, and 14.7 percent did not use iron at all during pregnancy. Additionally, only 10 percent of reproductive aged women, 19 percent of lactating women, and 47.3 percent of pregnant women used iron supplements in the last 6 months of pregnancy.

The percentage of pregnant women with anemia was still high (36.5 percent in 2008) although it had been decreasing over the years. In particular, the percentage of

reproductive-age women with anemia did not decrease but increased rapidly to over 1 percent a year.

Moreover, Vietnamese women are experiencing a double burden of malnutrition—the prevalence of overweight and obesity in reproductive-age women also increased rapidly between 2005 and 2010. In 2005, the rate of overweight and obesity among this group was 3 percent, in 2010 the prevalence increased to 8.2 percent in 2010, which represents an increase of more than 1 percent a year4.

Nutrition care for pregnant mothers, therefore, still needs more concern. It is required to have more effective interventions integrated in maternal health care programs in order to improve maternal health and nutrition status.

### 2. Child nutrition status

Although child malnutrition has reduced considerably in Viet Nam over the last decade, declines in the prevalence of stunting have stagnated. Viet Nam remains one of the countries with the highest prevalence of child stunting. In 2010, nearly one-third of children under 5 years of age were stunted<sub>5</sub>. The prevalence of wasting among children under 5 years of age is 7.1 percent<sub>6</sub>. The rates of stunting and underweight (weight-forage) increase gradually between 6 and 36 months of age, and show little change thereafter. The prevalence of undernutrition among children under 5 years is 17.5 percent7.

In Viet Nam, child malnutrition is associated with the following socioeconomic and demographic factors8:

- Rural vs. urban. Children living in rural and poor areas suffer a greater proportion of stunting, underweight and wasting than those children living in urban areas. Only 15.4 percent of children in non-poor communes are underweight, whereas 23.8 percent of children in poor communes are underweight.
- **Maternal education.** Children whose mothers have the lowest level of education are three times more likely to be stunted and four times more likely to be underweight than children whose mothers have the highest level of education.
- **Maternal occupation.** Maternal occupation is related to child malnutrition. One-third of farmers' children are stunted compared to one-fifth of children whose mothers are not farmers are stunted. Nearly twice as many farmers' children are underweight compared to other children.
- **Ethnicity.** Ethnic minority children are more likely to be stunted, underweight and wasted than Kinh children.
- **Gender.** Malnutrition rates are fairly similar across gender, with slightly higher rates among boys than girls.

<sup>4</sup> National Institute of Nutrition - 2012

<sup>5</sup> National Institute of Nutrition - 2010

<sup>6</sup> National Institute of Nutrition - 2010

<sup>7</sup> National Nutrition Surveillance - 2010

<sup>8</sup> National Institute of Nutrition - 2012

# 3. Situation of infant and young child feeding and appropriate complementary feeding

In addition to above achievements, there remain a lot of barriers and challenges that need to be addressed in the coming time. Only sixty-two percent of newborns in Viet Nam are breastfed within an hour of birth. About 1.5 million children are born every year in Vietnam – that means about 600,000 children are not breastfed within the first hour after birth. It can be clearly seen that colostrum in the first hour – a precious vaccine for children is wasted.

Exclusive breastfeeding (EBF) for the first 6 months play a key role in reducing morbidity and mortality in children under 1 year. However, EBF rate in Vietnam has not been improved significantly by year. Only 19.6 percent of children under 6 months old are exclusively breastfeed to. Currently, 1 out of 5 mothers exclusively breastfeed their children in the first 6 months and 3 out of 10 mothers (31%) predominantly breastfeed their children (breastmilk + other drinks) in the first 6 months. Moreover, data from the NNS 2010 show that 20 percent of mothers dispose of the colostrum in their milk before feeding it to their newborn.

According to a quantitative study carried out by A&T in 2011 on IYCF, the most frequently reported barriers to early initiation of breastfeeding is the widely accepted idea that mothers have insufficient amount of breastmilk immediately after delivery. Another barrier is that mothers had not received appropriate counseling regarding the importance of early breastfeeding. In addition, the high rate of caesarean section- especially in Ha Noi, Ho Chi Minh City and private hospitals- may also contribute to later initiation of breastfeeding, since the mother is often separated from the child after birth and in a weak condition.

Despite many efforts in terms of BF activities, many agencies in health sector themselves have not implemented all BF promoting activities. For many reasons, a major of health workers do not show their determination and spend their time to support mothers in BF as well as do not have adequate knowledge and necessary BF counseling skills. In the community, few people believe that mothers have enough milk to exclusively breastfeed their infants in 6 months while many of them believe that early complementary feeding can help infants become sturdier.

Viet Nam has implemented the Baby Friendly Hospital Initiative since 1992 in Ob-Ped facilities. This initiative aim is to implement practices that protect, promote and support Breastfeeding. At the present, less than 1 percent of all hospitals in Viet Nam have achieved certification of BFHI- 59 central and provincial hospitals out of a total of 12,146 hospitals. In 2009, WHO and UNICEF collaborated to update the BFHI's materials and promote the initiative in the context of the *Global Strategy for Infant and Young Child Feeding*. The updated materials integrate the 10 steps of successful breastfeeding application with the Code and Decree No. 21 implementation, mother-friendliness, care of pregnant women and mothers in the context of HIV, emergencies as

well as expansion towards other type of health facilities and the community. The updated curriculum will be rolled-out under implementation of the POA for IYCF and will be used to strengthen IYCF and BFHI-related training courses. The retention and expansion of this initiative is limited due to lack of financial and technical support from other international organizations. Moreover, there has been a lack of funding and commitment by Provincial Departments of Health to monitor BFHI quality and accreditation status. As a result, the scale-up of BFHI has stagnated for years.

Capacity of health workers to provide IYCF counseling at all levels remained limitation. An approved IYCF curriculum for in-service and pre-service has developed and delivered at medical schools, however, they need to be regularly updated. A national retraining on BF for health workers at all levels has not being developed. IYCF counseling capacity of village health workers and communal health workers also remained limitation.

In the implementation of Decree No. 21/2006/NĐ-CP dated February 27, 2006 of the Government regarding the trade and use of nutritious products for infants, there remain a lot of gaps. Some regulations and penalties for violations are stated unclearly, resulting in difficulties in dealing with violations. In addition, the supervision of Decree No. 21 dated February 27, 2006 of the Government on the trade and use of nutritious products for infants still has a lot of disadvantages. Therefore, the excessive marketing and attractive gifts of formula companies have significant effects on mothers' belief to select breastmilk substitutes instead of breastfeeding. Findings of the 2011 Research in 10 provinces of the Alive and Thrive project showed that Viet Nam has high TV coverage (approximately 99 percent of mothers), and while more than 80 percent of mothers watch formula advertisements at least once a week, only 40 percent of mothers are exposed to breastfeeding promotion.

Breastfeeding practices vary across geographic area, poverty level, mother's occupation and ethnic group. Key differences in trends include the following:

- **Rural vs. urban.** Mothers living in rural areas compared to other areas are more likely to initiate breastfeeding within an hour of birth and exclusively or predominantly breastfeed their infants for the first 6 months of life.
- Maternal occupation. A greater percentage of farmers engage in optimal breastfeeding practices compared to mothers in other occupations (e.g., office worker, laborer). For example, while the rate of early initiation of breastfeeding among farmers is 73.3 percent, that among women in other occupations is only 59.9 percent.
- Socioeconomic status. Commune poverty level is negatively associated with breastfeeding practices—that is, mothers in poorer communes have lower prevalence of early initiation of breastfeeding, exclusive breastfeeding, and predominant breastfeeding.
- **Ethnicity.** Mothers belonging to an ethnic minority group are more likely to adopt recommended breastfeeding practices than mothers in the Kinh ethnic group. For example, only 9.1 percent of mothers in the Kinh ethnic group exclusively breastfeed their infants, whereas 20.4 percent of ethnic minority mothers do so.

The prevalence of young children use breastmilk substitutes has increased dramatically. As many as 35 percent of children under 2 years of age are fed breast milk substitutes. In the first three months of life, EBF is displaced primarily by plain water, breastmilk substitutes, and solid to semi-solid foods. From three months of age on, introduction of solid to semi-solid foods increases rapidly. By the time a child is 6 months, over 90 percent of children are fed solid to semi-solid food. The reasons for the early introduction of complementary foods include lack of knowledge of the benefits of breastfeeding, lack of practical skills regarding breastfeeding, the need to return to work after the four months' maternity leave, and the effective advertising and marketing campaigns of food and milk companies.

Early introduction of complementary food (starting at the second months of age) is a widespread norm in Viet Nam. The main reason for early weaning is the mother's belief that since other foods have been introduced to the baby's diet, the child no longer required breastmilk. Mothers' return to work was also an important factor<sub>12</sub>. The introduction of complementary foods is not only too early but also inappropriate for the needs of infants—deficient in both quantity and quality. Complementary foods in Vietnam often lacknutrient density and dietary diversity (National Institute of Nutrition, 2010). According to 2010 data, the prevalence of appropriate complementary feeding of children 6 to 8 months old is very low at 51.7 percent—leaving nearly half of infants at risk for malnutrition. Moreover, only 55 percent of children under 2 years old are fed with appropriately. Approximately 16 percent of children do not have adequate meals, 28 percent of children do not have sufficient caloric intake, and 18 percent of children do not have enough foods from iron-rich source<sub>13</sub>.

The quality of diets of children 6 to 24 months varies according to geographical area, poverty level, maternal occupation, and ethnicity 14.

- **Rural vs. urban.**Children living in urban areas are more likely than those living in rural areas to achieve minimum dietary diversity—75 percent versus 67.9 percent, respectively. The same trend is seen for the indicators receiving minimum meal frequency and acceptable diets.
- Socioeconomic status. Families living in non-poor communes are more likely to have a greater proportion of children who receive the minimum dietary diversity compared to those in poor communes. The prevalence of minimum dietary diversity in non-poor communes is 71.9 percent compared to 59.5 percent in poor communes.
- **Maternal occupation.** A larger percentage of children whose mothers are not farmers consume complementary foods that meet requirements for minimum diversity, meal frequency and acceptable diets.
- Ethnicity. Ethnic minority children consume lower quality diets than their Kinh counterparts—only 41.3 percent of ethnic minority children receive

<sup>11</sup> National Institue of Nutrition - 2010; Alive & Thrive - 2012

<sup>12</sup> Alive & Thrive, 2012

<sup>13</sup> National Institute of Nutrition - 2010

<sup>14</sup> National Institute of Nutrition - 2010

minimum acceptable diets compared to 52.1 percent of children in the Kinh ethnic group.

Addressing the special circumstances of children in emergency conditions and among children in vulnerable conditions also needs to be regularly assessed and prioritized. Children that are in vulnerable to malnutrition include orphans, children living with HIV and AIDS, children living in disaster-stricken areas, children at-risk or vulnerable, children of migrants and mobile populations, among many others.

Infant feeding practices are especially critical for HIV-positive mothers and their children to reduce the risk of HIV transmission through breast milk and the risk of diarrhea and malnutrition from unhygienic replacement feeding. A mother's decision whether to breastfeed and take antiretroviral drugs or to avoid all breastfeeding needs to balance the risk of HIV transmission through breast milk and the risk of death from infections such as diarrhea and respiratory disease. The World Health Organization recommends that HIVpositive mothers stop breastfeeding only when they can provide a nutritionally adequate and safe diet without breast milk and replacement feed infants who are HIV negative or of unknown status only when specific conditions are met (WHO, UNAIDS, UNFPA, and UNICEF, 2010). A 2009 FANTA-2 study of infant and young child feeding practices among HIV-positive women in two Vietnamese cities of high HIV prevalence found important challenges for safe replacement feeding 15.

## Chapter III. Orientations of priority interventions, target groups

### I. Orientations of priority interventions

From the real situation of the IYCF in Viet Nam in the past as well as proven interventions that have a positive impact on the problem of malnutrition of mothers and children, some interventions need to be implemented in the coming period include:

# 1. For nutritional improvement of pregnant and lactating women and women of reproductive age16

Iron folate or multiple micronutrients supplementation. Advise weekly iron supplementation for women of reproductive age to reduce iron deficiency anemia and to assure good iron stores during pregnancy. Counsel pregnant and lactating women and adolescent girls to consume fortified and iron rich foods to reduce wasting and micronutrient deficiencies and to contribute to reducing the prevalence of low birth weight babies. Advise on consuming multiple micronutrients and iron folate for pregnant and lactating women to reduce consume iron folate or multiple micronutrients in order to reduce micronutrient deficiency, pregnancy complications, maternal mortality and low birthweight; prevents neural tube defects. More important, it is necessary to improve knowledge and practices of malnutrition prevention for the above targets, in order for them to know how to prevent diseases themselves. Provide vitamin A

<sup>15</sup> Sethuraman - 2011

<sup>16</sup> Bhutta, et al., 2008; UNICEF, 2009 Implementation approaches based on UNICEF, WHO, and other UN agencies' publications and the Lancet series Maternal and Child Undernutrition Series, Vol 378, January 2008.

supplement in first 8 weeks after delivery to assure vitamin A content of breastmilk. In addition, supplementation of vitamin A for mothers contributes to reduce vitamin A deficiency in infants as well as reduce childhood infections.

- Maternal iodine through iodized salt supplementation. Advise on consumption of iodized salt for pregnant women and all family members. Iodized salt improves fetal development, cognition and intelligence in infants; reduces risks of complications during pregnancy and delivery; prevents goiter, miscarriages, stillbirth and cretinism.
- **Maternal calcium supplementation.** Calcium supplementation has been shown to reduce pre-eclampsia, especially for women with hypertensive disorders for pregnancy.
- Interventions to reduce tobacco consumption or indoor air pollution. Both maternal tobacco consumption and maternal exposure to second hand or indoor air pollution are associated with low birthweight infants, stillbirths, and sudden infant death syndrome. Interventions should target both pregnant women and young children from second hand smoke and other forms of indoor air pollution.

# 2. For nutritional improvement of newborns17

- **Promotion of breastfeeding.** Initiate breastfeeding within one hour—including colostrum feeding—to reduce neonatal deaths and improve overall immunity of the child. Both individual and group counseling have proven effective.
- Counsel mothers to EBF for six months, and complementary feeding after six months, continues to breastfeed to 24 months or longer to optimal nutrition, prevent diseases and children mortality.

## 3. For nutritional improvement of infants and children aged 6 to 23 months 18

- Behaviour change communication for improved complementary feeding. Assure community BCC activities for increasing promotion of continued breastfeeding and improved complementary feeding. Assure timely, adequate, safe and appropriate complementary feeding (including improved use of local foods, multi-micronutrient supplementation, lipid-based nutrient supplements, and fortified complementary foods) to prevent and decrease underweight, stunting, wasting and micronutrient deficiency; to contribute to survival and development; and, also to contribute to reducing childhood obesity. Provide mothers and caregivers with practical sessions on how to prepare appropriate complementary foods showing proper amount and consistency of complementary foods.
- **Zinc supplementation.** Zinc supplementation of young children has shown to have a positive effect on growth in children—improving both weight and height. Especially, when the child suffers from diarrhea, advise mothers and caregivers to give zinc during management of diarrhea to reduce severity.

- Vitamin A fortification and supplementation. Assure biannual vitamin A supplementation to contribute to reducing vitamin A deficiency and undernutrition, and to reducing child mortality.
- **Universal salt iodization.** Advise mothers and caregivers to prepare complementary foods with iodized salt consumed as table salt and/or as foodgrade salt to improve brain development and to prevent motor and hearing deficiencies.
- **Handwashing or hygiene interventions.** Advise mothers and caregivers to wash their hands and the hands of their children with soap frequently to reduce diarrhea and associated undernutrition in the child.
- Treatment of severe acute malnutrition. Ensure there are facility-based and community-based programs and commodities (i.e., ready-to-use therapeutic food, F-100, BP100) to monitor and manage treatment of severe acute malnutrition to contribute to reducing child mortality.

## II. Target groups

### 1. Pregnant and lactating women, and caregivers of children aged 0 to 24 months

Data from the National Nutritional Surveillance show that 22 percent of women of reproductive age have chronic energy deficiency. The increased nutritional needs of pregnant and lactating women make them vulnerable to nutritional deficiencies. Malnutrition in pregnant women—or lack of adequate weight gain—can result in poor nutritional status of the fetus and newborn. Iron deficiency anemia and chronic energy malnutrition during pregnancy increases risk of maternal mortality, poor birth outcomes, and reduces productivity of the mother. Parents and other caregivers are most directly responsible for feeding children. This it is critically important to ensure that they have accurate information to make appropriate feeding choices. Studies from Viet Nam have shown that lack of knowledge on optimal infant feeding practices among mothers and caregivers is a factor that has resulted in inappropriate feeding of infants and young children, especially in rural and remote areas and among ethnic minorities 19.

## 2. Infants and young children aged 0 to 24 months

The period from birth to a child's second birthday constitutes the time of fastest growth—it is also the period where children are at their most vulnerable. The rates of stunting steadily rise from birth up to 24 months<sub>20</sub>. Malnutrition in this period-that inappropriate feeding is the main culprit- will cause long-term effects for the health and development in adulthood.

### 3. Policy makers

Developing, strengthening, and updating policies and other legal documents of ministries, mass organizations, and provinces are important to assure the implementation of IYCF interventions.

#### 4. Healthcare workers at all levels

Healthcare workers - from the central level to the commune level - are the main actors who deliver IYCF interventions and monitor their enforcement. Therefore, it is critical that healthcare workers and allied professionals have the right incentives as well as the appropriate training and tools to be effective implementers of IYCF interventions.

### 5. Other priority groups

Other priority groups for targeted IYCF interventions include vulnerable groups (i.e., orphans and vulnerable children, children living with HIV & AIDS, mothers and children living in disaster-stricken areas), ethnic minorities in the mountainous areas and highlands, and migrants and mobile populations.

### Chapter IV. Objectives

## I. General objective

To improve knowledge and practice on IYCF and maternal nutrition to contribute to a reduction of stunting malnutrition and improved development of children aged 0 to 2 years.

## II. Specific objectives

# 1. Objective 1— Strengthen advocacy, development and implementation of policies supporting infant and young child feeding

Monitoring/evaluating indicators by 2015:

- The National Plan of Action and Provincial Plan of Action including IYCF interventions have been implemented.
- Policies supporting 6-month maternity leave for mothers under the provision of the Labor Code 2012 as well as mothers who are not under the regulations of the Code has been finalized and implemented.
- The Decree to replace for Decree No. 21/2006/NĐ-CP dated February 27, 2012 of the Government on the trade and use of nutritious products for infants (Decree No. 21) has been revised, widespread and implemented nationwide. Monitoring and supervision of the implementation of the revised Decree No. 21 has been implemented effectively.
- The National guideline on integrated management of acute malnutrition and technical regulations on food fortification with micronutrients has been developed, approved, disseminated and implemented.

# $\hbox{\bf 2. Objective 2---Improve infant and young child feeding knowledge and practices among child caregivers }$

Monitoring/evaluating indicators by 2015:

- 80% of mothers practice early breastfeeding and 27% of mothers practice exclusive breastfeeding in the first 6 months.
- 60% of mothers continue to breastfeed until 24 months of age or longer
- 80% of mothers practice appropriate complementary feeding for their children from 6 24 months.

### 3. Objective 3— Improve maternal and children nutritional status:

Monitoring/evaluating indicators by 2015:

- Reduce the rate of chronic energy deficiency in women in reproductive age to 15%
- Reduce the rate of anemia among pregnant women to 28%
- Reduce the rate of birth underweight (<2500g) to under 10%

- Reduce the rate of stunting malnutrition of children under 5 years of age to
- Reduce the rate of underweight malnutrition of children under 5 years of age to 15%

# 4. Objective 4—Improve Capacity and effectiveness of health service provision system on IYCF

Monitoring/evaluating indicators by 2015:

- Activities of IYCF manage board at all levels are strengthened.
- 75% of provincial health staff and 50% of district health staff have been trained on IYCF counseling.
- 60% nutrition focal persons and nutrition collaborators at commune level have been trained, provided with up-to-date knowledge on IYCF.
- The number of general hospitals at national/provincial/district level and obstetric/pediatric hospitals achieving and maintaining the BFHI standards has doubled in comparison to that of 2012.
- 30% of commune health centers are able to provide counseling services on IYCF.

# 5. Objective 5—Improve monitoring and evaluation system for IYCF interventions Monitoring/evaluating indicators by 2015:

- Over 95 % of provinces integrated IYCF activities into plan of action on nutrition at locality.
- 100% of provinces have reported on integrated IYCF activities in activity report of units.
- Monitor and evaluate results of IYCF activities integrated in annual nutrition surveillance system.
- Have at least 1 report or research to evaluate basic indicators of plan of action on IYCF.

# Chapter V - Solutions

# I. Strengthen the political commitment of the authorities at national and provincial levels to implement Infant and Young Child Feeding and other maternal nutritionrelated policies.

Review, revise, supplement and update the policies, legislation documents related to IYCF and maternal nutrition. Develop coordination and cooperation mechanism to make use of human resources, share information and create favorable conditions for IYCF. Ensure that IYCF interventions are integrated into relevant policies, plans and programs such as into the implementation of the National Strategy on Reproductive Healthcare and the Plan of Action for Child Survival.

# II. Develop and implementation prioritized IYCF intervention packages for each province, district and vulnerable group in order to centralize resources and strengthen the effectiveness of interventions.

Develop and implementation the prioritized interventions for different geographical regions and vulnerable groups. Identify the prioritized target groups and intervention regions based on the following criteria: a) stunting rate; b) stunting level; c) maternal nutrition indicators; and d) economic conditions

Priorities given to vulnerable groups/disadvantaged backgrounds/high risk. These
priorities are not only given to geographical regions with high rate of malnutrition,
but also to populations in high risk of malnutrition, e.g. orphans, vulnerable children,
HIV-infected children, migrants as well as mothers and children in the settings
affected by natural disasters.

# III. Enhance behavior change communication on infant and young child feeding and maternal health

- Enhance mobilizing the policy makers at all levels in IYCF activities. Use different communication channels suitable with each region, each target in order to raise awareness and change behavior on IYCF.
- Promote information, communication and education activities as well as behavior change communication on health and nutrition care for children via individual and group counseling services, integrate into healthcare campaign for pregnant women, expanded vaccination and reproductive healthcare. Update, support information and provide IEC materials for health workers, nutrition collaborators, and community-based support groups. Strengthen the roles of community-based support groups in IYCF counseling, create a close link between these groups and health facilities and hospitals.

# IV. Strengthen the human resources and building capacity of health workers at all levels

• Develop the trainings of trainers and re-training courses for health workers at all levels on IYCF, make use of the support and participation of the national nutrition network as well as of relevant ministries/sectors when possible.

# V. Accelerate the cooperation and coordination between government agencies, social and political organizations, mass media and international organizations

- Integrate IYCF interventions in the Provincial Plan of Action on Nutrition, ensuring provincial funding sources to be properly allocated to implement the annual plan.
- Ensure the POA for IYCF integrated in programs/activities plans of organizations and relevant departments.
- Provide sufficient and accurate information on IYCF for the mass media in order to raise awareness, create a favorable social environment for IYCF works.
- Mobilize the technical and financial support from international organizations on IYCF, resources from programs and projects related to IYCF, maternal and child health and newborn care.

## VI. Strengthen the supervision system to monitor the progress, quality and impacts

- Consolidate the existing supervision system in order to evaluate the implementing progress of POA for Nutrition, including indicators of IYCF activities and its impacts.
- Integrate nutrition and IYCF indicators into regular reporting system of the MOH as well as the M&E system of the relevant ministries such as MARD, MOLISA, WVU and VYU...
- Enhance the effects of supervising, monitoring the implementation of IYCF-related policies.

## VII. Funding

- State budget. Funds will be mobilized from state budget including funds allocated from Central and local governments, and integrated into interventions programs addressing child malnutrition, reproductive health care and other related programs and projects.
- Financial support from the international cooperation. Funds will be mobilized from the international organizations such as WHO, UNICEF and other international non governmental organizations through their annual work planning and support to programs related to nutrition and health care for mothers and children.
- Other financial support. Funds will be mobilized from the private enterprises, social enterprises and other legitimate sources of funding.

# Chapter VI. Work Plan

I. Objective 1 - Strengthen advocacy, development and implementation of policies supporting infant and young child feeding

Output 1.1: Policies supporting infant and young child feeding are developed, disseminated and effectively implemented

#### **Activities:**

- Develop new decree to replace for the Decree No. 21/2006/NĐ-CP dated February 27, 2006 on the trade and use of nutritious products for infants and the Circular guidance on the implementation of the new decree.
- Develop plan and implement the technical regulations on food fortification with micronutrients.
- Organize workshops to advocate supported policies for exclusive breastfeeding mothers in the first 6 months.
- Develop and implement policies supporting pregnant women in rural areas, disadvantaged areas and minority ethnic groups.
- Develop and implement the National Guideline on integrated management of acute malnutrition, Guideline on supplementing essential vitamins and minerals.
- Develop and implement the National Guideline on infant and young child feeding in special conditions (HIV-infected, abandoned children, etc.) and in disadvantaged areas as well as children of minority ethnic groups.
- Add the IYCF counseling and payment for acute malnutrition into health insurance, add iron/folic tablets, multi-micronutrient tablets in social insurance policy for pregnant women and women at high risk areas
- Organize training course for health workers at all levels on supervising the implementation of new decree on the trade and use of nutritious products for voung children.
- Support supervising and inspecting the implementation of new decree on the trade and use of nutritious products for young children.
- Establish and maintain a network to uncover violations of new decree on the trade and use of nutritious products for young children.

# Output 1.2: Infant and young child feeding is prioritized in socio-economic development policies and plans

#### **Activities:**

- Organize workshops to advocate the leaders, policy makers at all levels to intensify their support for IYCF.
- Organize workshops to advocate the donors to support IYCF.

# II. Objective 2 - Improve infant and young child feeding knowledge and practices among child caregivers

# Output 2.1 Communication on infant and young child feeding is enhanced by mass media and communication campaign

#### **Activities:**

- Develop and broadcast on television and radio promotion programs, short TVCs, education and knowledge sharing programs and talk show on IYCF.
- Organize communication campaigns in response to the World Breastfeeding Week, Nutrition and Development Week, Micronutrient Day, press conference and journalist competitions, forum on Breastfeeding and IYCF, etc.
- Organize counseling corners, group discussion, guidelines on appropriate IYCF in the community.

# Output 2.2 Direct communication and behavior change communication on IYCF are also enhanced

#### **Activities:**

- Update, amend, develop and distribute communication materials in various forms, languages for different regions, zones and ethnic minorities to health facilities at all levels.
- Providing trainings on counseling skills for health workers who are responsible for maternal and child health care at all levels, nutrition focal persons at province/district/commune levels and nutrition collaborators.
- Organize community-based communication and counseling (clubs, breastfeeding support groups, home visits and community meetings).

# **III.** Objective 3 - Improve maternal and children nutritional status (The outputs of Objective 3 will be implemented in Plan of Action for Nutrition to 2015).

# Output 3.1 Promotion of iron/folic acid, micronutrient supplement, de-worming, treatment for malaria for pregnant women and women at high risks areas

#### **Activities:**

- Provide iron/folic acid tablets, micronutrient tablets.
- Provide de-worming tablets and medicines for malaria treatment in areas with high rate of worm and malaria under guidance of the MOH.
- Expand the social marketing approaches to enhance the local production and supply in urban and relevant regions.

# Output 3.2 Capacity of health workers at all levels in prevent micronutrient deficiency is strengthened

#### **Activities:**

- Provide trainings for health workers at all levels on preventing malnutrition including preventing micronutrient.
- Develop training and communication materials.
- Conduct integrated supportive supervision.

# IV. Objective 4 - Improve capacity and effectiveness of health service provision system on IYCF

## Output 4.1: Activities of IYCF manage board at all levels are strengthened **Activities:**

- Strengthen the organization of Steering committees from national to subnational level. Strengthen the National Steering Committee. At provinces/cities, it is possible to develop the coordination subcommittee for Breastfeeding and IYCF activities, integrate with Steering Committee of existing Target Program on prevention of child malnutrition at all levels (provincial, district level). Review and add related members and direction of implementation of POA for IYCF.
- Organize regular and periodical meetings between National Steering Committee and Local Coordination Subcommittee.
- Develop the technical working group to support on IYCF at national level.

# Output 4.2: The Baby-Friendly Hospital Initiative is maintained and strengthened **Activities:**

- Develop and implement National guideline on implementation and maintenance of BFHI (10 steps for successful BF).
- Add the standards of BFHI into the standard of annual M&E for hospitals.
- Add the 10 steps for successful BF into the criteria for evaluating quality of hospitals.
- Standardize training materials, provide guidance for evaluation and reevaluation.
- Organize trainings for health workers of Ob/Ped hospitals on BFHI standards.
- Develop pilot model for Commune Health Center that implement 10 steps for successful BF.
- Organize evaluation, re-evaluation and monitoring the maintenance of BFHI standards.

# Output 4.3: The implementation of prioritized IYCF interventions is strengthened at community level.

#### **Activities:**

- Develop National guideline on implementing community-based interventions.
- Standardize training materials on infant and young child feeding for health staff at all levels.
- Evaluate BF support-group model to scale up throughout the country.

# Output 4.4: Infant and Young Child Feeding in emergency and special conditions are strengthened and duplicated

#### **Activities:**

- Evaluate the pilot model of acute malnutrition management for scaling up.
- Develop and implement plan to satisfy nutrition needs in case of emergency for areas frequently faces natural disasters, floods; provide guidelines for acute malnutrition management; prevent micronutrient deficiencies.
- Develop training materials.
- Organize trainings for health workers at all levels.
- Produce and distribute food products to treat acute malnutrition.

# Output 4.5: Infant and young child feeding capacity of health workers at all levels is enhanced

### **Activities:**

- Develop training materials and organize national standard for re-trainings on IYCF
- Develop trainers network at central and provincial levels.
- Provide trainings at all levels.
- Provide monitoring after training.

# V. Objective 5 - Improve monitoring and evaluation system for IYCF interventions Activities:

- Develop reporting and monitoring indicators that are integrated into the existing reporting system.
- Support the integration of monitoring IYCF indicators into the existing nutrition surveillance report.
- Conduct relevant studies to assess the efficiency of IYCF interventions in order to have basis for proposal of adjusting the intervention towards costeffectiveness.

### **Chapter VII - Execution and management of implementation**

### I. Management and coordination

## 1. Responsibilities of MOH-related departments

**Maternal Child Health Department** is the focal point to develop annual plans, implement and monitoring activities of the Plan of action.

**National Institute of Nutrition**. NIN is responsible for (i) technical issues, guidance and coordination in implementing activities of the POA (ii) interventions to improve nutrition status of the community in National Target Program on reproductive health care, and (iii) improve nutrition status (Nutrition contents), M&E for IYCF activities.

**Administration for Medical Services** has responsibility to coordinate in implementing effectively 10 steps for successful breastfeeding and practices of IYCF at Ob/Ped hospitals.

**Department of Legislation** has responsibilities to collaborate with relevant departments to develop legislations and regulations related to mothers and IYCF, especially the new decree to replace for Decree No. 21.

**Health Inspector** develops plan and conducts M&E activities for the implementation of the new decree to replace for the Decree No. 21/2006/NĐ-CP dated February 27, 2006 on the trade and use of nutritious products for infants.

**Department of Health Insurance** is responsible for developing and promulgating the decree on nutrition insurance for children under 6 years that sets forth priorities for nutritional support for children from 0-24 months.

Viet Nam Administration on HIV/AIDS Control (VAAC) is responsible for collecting data on malnutrition and IYCF indicators and ensuring that data is routinely collected, analyzed, and used for developing specific and timely interventions to improve the nutritional status of HIV-exposed children and mothers who are affected by HIV and AIDS.

Department of Science, Technology and Training is responsible for revising and updating nutrition and IYCF pre- and in-service curriculum for healthcare workers. The department also assures that IYCF training curriculum are implemented in medical secondary schools.

**Vietnam Food Administration** is the focal point to develop national technical regulations and receive published standards for nutritious products for infants, fortify food with micronutrients.

2. Responsibilities of Institutes, hospitals, centers and programs Center for Health Education and Communication is responsible for integrating contents and updating knowledge and practice on nutrition, IYCF, especially breastfeeding and complementary feeding into education and communication materials, training workshops in the education and communication system.

National Hospital of Pediatrics, Children Hospital 1 - Ho Chi Minh City, National OB/GYN Hospital, Từ Dũ OB/GYN Hospital - Hồ Chí Minh City. These national pediatric and children's hospitals are responsible for activities to update knowledge and practice on maternal and child nutrition and IYCF—especially breastfeeding and appropriate complementary feeding—into education and communication materials and training workshops of the program. Moreover, these hospitals are to integrate IYCF indicators and into supervision and monitoring systems of the hospital as well as technical assistance outreach systems.

The National Target Program on Reproductive health care and improve nutritional status and programs/projects related to child health: Include contents, update knowledge and practices on nutrition, IYCF, especially breastfeeding and appropriate complementary feeding into IEC materials, training courses of Programs/Projects. Develop, integrate activities related to child care in the health system and implement M&E activities of Programs/Projects for provinces/cities across the country. Allocate

appropriate annual funds for implementing activities, interventions, education communication, M&E activities that related IYCF. Especially, the National Target Program on improving maternal and child status concerns about the activities "develop support group for BF and ACF at commune level" integrate in activities of monitoring development and nutrition counseling in the community.

### 3. Ministries/sectors, agencies, professional associations, mass media

Ministry of Health assigns the Maternal and Child Health Department and National Institute of Nutrition to actively coordinate with the ministries/sectors, organizations, agencies in implementing communication and mobilization for the leaders of the Party, authorities, organizations at all levels, policy makers, people who have good reputation in the community in order to (i) strengthen the support for policy and resources for IYCF activities; (ii) raise the awareness, attitude and behavior of the mothers and caregivers on IYCF on the basis political tasks of agencies.

## 4. Responsibilities of Provincial Department of Health

Based on actual situation as well as capacity, the DOH of provinces develop IYCF Plan of Action and submit to People's committee for approval, mobilize resources for implementation of IYCF plans in the province, report progress of implementation to People's committee and MoH. The MCH center will be the focal point assisting DOH to coordinate and manage activities relating to IYCF.

# 5. Activity reporting, monitoring and evaluation

- Every 6 months, hospitals, institutes and localities take responsibility to submit activity reports and progress of implementation to MOH (MCH Department).
- Department of Health in provinces/centrally-run cities: Giving direction to different centers (RHC center, PPMC, Health IEC center), hospitals (pediatric, Ob/Gyn, Ob/Ped, general hospitals with Ob/Ped departments) to develop plan and implement IYCF activities, especially promotion of BF and ACF, in accordance with their assigned responsibility. Proactively developing annual plan, allocating appropriate funds for implementation of activities. Collecting data on IYCF as guided by MOH. Conducting monitoring and evaluation and reporting periodically on implementation of POA to MOH. Routinely evaluating the POA for IYCF implementation effiency and reporting to MOH.

## **II. Implementation progress**

- **Phase I, 2012:** Develop implementation plans to submit to Leader of MOH for approval; disseminate and guide for implementation in nationwide.
- **Phase II, 2013-2015:** Develop, update the policies, regulations related to IYCF. Strengthen implementation network at all levels and implement activities; monitoring, evaluate, review the implementation; develop new plan for the upcoming years based on lessons learned and a review of the evidence-based.

**Annex 1. Stunting reduction intervention matrix** 

Essential Nutrition Packages by Provincial Priority Groups for the Accelerated Reduction of Stunting						
Province Categorization	Category A	Category B	Category C			
Characteristics	High prevalence and magnitude of stunting and maternal malnutrition. Many provinces also high poverty	High prevalence of stunting and poverty.  Moderate maternal malnutrition	Moderate stunting, moderate to high maternal malnutrition. Little poverty			
Main Objective of Package	Full package to address pre and post-natal causes of stunting.	Package has more emphasis on post-natal causes of stunting.	Basic package of essential services; full package in communities with high stunting			
Funding Prioritization	Priority for central level funding; highest risk provinces and high levels of poverty	Priority for central level funding due to high levels of poverty	Funded through provincial funding and/or out of pocket expenditure			
Reproductive age women 20- 34 years	free weekly iron folate & deworming, central funding	free weekly iron folate & deworming, central funding	social marketed weekly iron folate & deworming			
Pregnant and lactating women	free daily MNSs, deworming, post partum VAS, central funding	free daily iron folate, deworming, post partum VAS, central funding	free daily iron folate, deworming, post partum VAS, provincial funding			
	maternal nutrition and health counseling and behavior change communication including improved diet, rest, reduced workload, prevention of illness					
Young children <2 years	free MNPs, central funding	free MNPs, central funding	private sector fortified complementary food			
	breastfeeding and complementary feeding counseling and behavior change communication					
Young children <5 years	VAS for <5, deworming, central funding	VAS for <5, deworming, central funding	VAS <3, deworming until 2015, provincial funding			
Sick children	VAS, zinc for diarrhea treatment, GMP as part of IMCI, treatment of severe malnutrition					

Families	improved water and sanitation, hygiene education, malaria prevention and control, breastfeeding promotion, preventative health care			
Nationwide	fortified salt and flour, breastfeeding protection, maternity legislation, food safety regulations, anti-smoking legislation			

Annex 2. Proposed provincial categorization for intervention package

Categorization	Category A High prevalence of stunting and maternal malnutrition	Category B High prevalence of stunting and poverty; moderate maternal malnutrition	Category C Moderate stunting, moderate to high maternal malnutrition; little poverty	Category D Provinces with more than 40,000 stunted children
Provinces	Tuyen Quang	Lai Chau	Thai Nguyen	Ha Noi
	Yen Bai	Lao Cai	Phu Tho	Ha Tay
	Lang Son	Ha Giang	Quang Ninh	Hai Phong
	Bac Giang	Cao Bang	Hai Duong	Thai Binh
	Bac Ninh	Bac Kan	Ha Nam	Nam Dinh
	Hung Yen	Dien Bien	Thua Thien - Hue	Dong Nai
	Ninh Binh	Son La	Da Nang	Dong Thap
	Thanh Hoa	Hoa Binh	Khanh Hoa	An Giang
	Nghe An	Quang Binh	Lam Dong	
	Ha Tinh	Kon Tum	Binh Phuoc	
	Quang Tri	Gia Lai	Tay Ninh	
	Quang Nam		Binh Duong	
	Quang Ngai		Ba Ria - Vung Tau	
	Binh Dinh		Ho Chi Minh City	
	Phu Yen		Long An	
	Dak Lak		Ben Tre	
	Dak Nong		Can Tho	
	Binh Thuan		Kien Giang	
	Tien Giang		Soc Trang	
	Vinh Long		Bac Lieu	
	Tra Vinh		Ca Mau	
	Hau Giang		Vinh Phuc	

# Annex 3. Core definitions and indicators for Plan of Action for Infant and Young **Child Feeding**

**Breastmilk substitute:** any food being marketed or otherwise represented as a partial or total replacement for breastmilk, whether or not it is suitable for that purpose.

Complementary feeding: the process starting when breastmilk alone or infant formula alone is no longer sufficient to meet the nutritional requirements of an infant, and therefore other foods and liquids are needed along with breastmilk or a breastmilk substitute. The target range for complementary feeding is generally considered to be 6–23 months.

**Exclusive breastfeeding:** infant receives only breastmilk (including breastmilk that has been expressed or from a wet nurse) and nothing else, even water or tea. Medicines, oral rehydration solution, vitamins and minerals, as recommended by health providers, are allowed during exclusive breastfeeding.

**Low birthweight:** an infant weighing less than 2,500 grams at birth.

**Malnutrition:** a broad term commonly used as an alternative to undernutrition, but technically it also refers to overnutrition. People are malnourished if their diet does not provide adequate nutrients for growth and maintenance or they are unable to fully utilize the food they eat due to illness (undernutrition). They are also malnourished if they consume too many calories (overnutrition).

Micronutrients: essential vitamins and minerals required by the body throughout the lifecycle in miniscule amounts.

Micronutrient deficiency: occurs when the body does not have sufficient amounts of a vitamin or mineral due to insufficient dietary intake and/or insufficient absorption and/or suboptimal utilization of the vitamin or mineral.

Moderate acute malnutrition: defined as weight for height between minus two and minus three standard deviations from the median weight for height of the standard reference population.

Overweight: defined as weight for height above two standard deviations from the median weight for height of the standard reference population.

**Stunting:** defined as height for age below minus two standard deviations from the median height for age of the standard reference population.

Severe acute malnutrition: defined as weight for height below minus three standard deviations from the median weight for height of the standard reference population, midupper arm circumference (MUAC) less than 115 mm, visible severe thinness, or the presence of nutritional oedema.

**Supplementary feeding:** additional foods provided to vulnerable groups, including moderately malnourished children.

**Undernutrition:** the outcome of insufficient food intake, inadequate care and infectious diseases. It includes being underweight for one's age, too short for one's age (stunting), dangerously thin for one's height (wasting) and deficient in vitamins and minerals (micronutrient deficiencies).

**Underweight:** a composite form of undernutrition that includes elements of stunting and wasting and is defined as weight for age below minus two standard deviations from the median weight for age of the standard reference population.

**Wasting:** defined as weight for height below minus two standard deviations from the median weight for height of the standard reference population. A child can be moderately wasted (between minus two and minus three standard deviations from the median weight for height) or severely wasted (below minus three standard deviations from the median weight for height).

## Annex 4. Tables of detailed budget