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USAID/INDONESIA NUTRITION ASSESSMENT FOR 2010 NEW PROJECT DESIGN

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ACRONYMS

ADB	Asian Development Bank
ANC	Antenatal care
ARI	Acute respiratory infection
BMI	Body mass index
BMS	Breast milk substitutes
BPS	Central Statistics Bureau, Indonesia (*Badan Pusat Statistik*)
CBGP	Community-based growth promotion
CMAM	Community management of acute malnutrition
DHS	Demographic and Health Survey
EBF	Exclusive breast feeding
ENA	Essential nutrition actions
GH Tech	Global Health Technical Assistance Project
HFA	Height for age
HKI	Helen Keller International
IDHS	Indonesia Demographic and Health Survey
IYCF	Infant and young child feeding
KADARZI	Keluarga Sadar Gizi (Nutritionally Aware Family program)
LAMAT	Local Area Monitoring and Tracking System
LBW	Low birth weight
MDG	Millennium Development Goal
MOH	Ministry of Health
NGG	Nusa Tenggara Timur
ORS	Oral Rehydration Solution
USAID	U.S. Agency for International Development
VAD	Vitamin A deficiency
WFA	Weight for age
WFH	Weight for height
WHO	World Health Organization

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EXECUTIVE SUMMARY

According to UNICEF, Indonesia has the fifth highest number of stunted children in the world—more than 7.6 million children. The number of wasted children is 2.8 million, and 3.8 million more are underweight. Concomitantly, there is a growing percentage of children who are overweight (12.2% nationally). Micronutrient deficiencies like anemia are alarmingly high, especially among the poorest. The immediate causes of maternal and child undernutrition are poor dietary intake and frequent illness.

Underlying the issue of poor intake are declining rates of breastfeeding; poor complementary feeding practices, including overreliance on cereals and lack of consumption of micronutrients; growing dependence on street foods and unhealthy processed foods; and lack of fortified and healthy food options. Frequent bouts of diarrhea and respiratory infections are caused by poor hygiene, water, and sanitation practices. Mothers are anemic and underweight before becoming pregnant, and these unresolved deficiencies contribute to the suboptimal development of babies in utero.

The quality of nutrition services is poor, and public health systems are inadequate. Private health providers, who are playing a large role, are not regulated. Public and private health providers are not given proper nutrition education and counseling, and few staff other than those with the title of nutritionist take responsibility for ensuring that women and children are given the information they need to eat properly. The capacity of government staff to design and implement effective nutrition programs decreases the closer they are to the client, but even at the national level there is little known about what to do to address maternal malnutrition and complementary feeding.

Interventions are in any case mostly sporadic and therefore have little measureable impact on the population as a whole.

Public health services are not well-managed, and improvements in service provision based on evidence are rare due to a lack of data collection, analysis, and planning at the local level.

There are evidence-based interventions that address maternal and child undernutrition, and the Ministry of Health (MOH) has decided to implement them as a package and at scale, but implementation in the districts is lagging behind due to resource and capacity constraints. Funding is tied up in procurement and distribution of supplementary foods that have been proven to be ineffective in addressing malnutrition.

As donor and government interests in reducing stunting in Indonesia coalesce, there are exciting opportunities to work with local academic and nonprofit organizations and the private sector to scale up evidence-based interventions. The World Health Organization (WHO) and UNICEF have recently completed a landscape analysis of Indonesia's readiness to accelerate action to address undernutrition and delivered concrete suggestions to the MOH and the National Planning Agency, BAPPENAS. Those suggestions are included in this report.

USAID should prioritize improving the quality of nutrition services by building the capacity of the health system, formal and informal, to manage and provide professional services, use data for action, and put in place a complete package of evidence-based interventions both through health services and at the community level. USAID should encourage documenting and communicating the impact of the intervention package and how it is best implemented in Indonesia in order to galvanize the nutrition community and provide clarity and direction to government, partners, and other donor agencies as they move forward.

I. OVERVIEW

Although Indonesia has made progress in reducing under-5 mortality and malnutrition, significant numbers of Indonesian children still suffer from malnutrition, both chronic and acute. Periodic shocks—from food and financial crises to natural disasters—regularly jeopardize tenuous improvements in health and nutrition. Some argue that reducing poverty further will remedy the nutrition problem, but this is only partially true. A 2003 World Bank study reported that the Millennium Development Goal of halving the prevalence of underweight children by 2015 is unlikely to be met through income growth alone. The authors suggest that to accelerate reductions in malnutrition, a balanced strategy of income growth and investment in more direct nutrition and health interventions is required (Haddad et al., 2003). Indonesia faces the double burden of under- and overnutrition, with growing rates of child and adult overweight and obesity—a form of malnutrition that threatens coming generations with increasing risk for chronic diseases, the management of which will further burden an already inadequate health system.

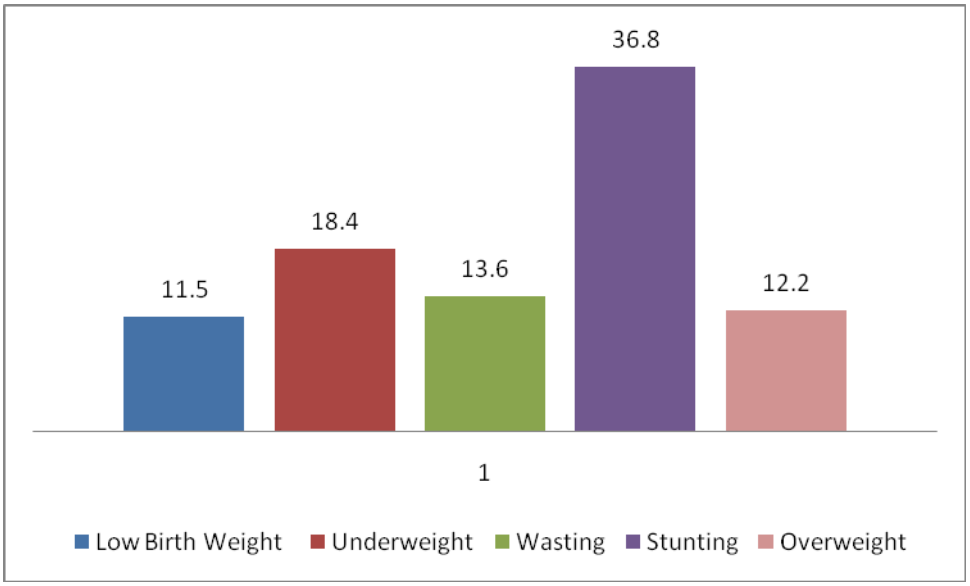
The 2008 *Lancet* series on maternal and child undernutrition concluded that several effective interventions, taken to scale, can significantly reduce undernutrition and subsequent mortality (Bhutta et al., 1998). Counseling about breastfeeding and fortification or supplementation with vitamin A and zinc have the highest potential to reduce the burden of child morbidity and mortality. Better complementary feeding is one of the leading strategies for addressing stunting.

The purpose of this report is to describe how the current situation in Indonesia relates to maternal and child nutritional status, including causes, what is being done, lingering challenges, and recommendations to inform the design of a new USAID project.

II. SITUATION ANALYSIS

The scale of the nutrition problem in Indonesia is overwhelming (see Figure 1). Indonesia has the fifth highest number of stunted children in the world – more than 7.6 million children (UNICEF, 2009b). The number of wasted children is 2.8 million, and 3.8 million are underweight. At the same time, a growing percentage of children are overweight (12.2% nationally).

Figure 1. Nutritional Issues of Children Under 5 in Indonesia

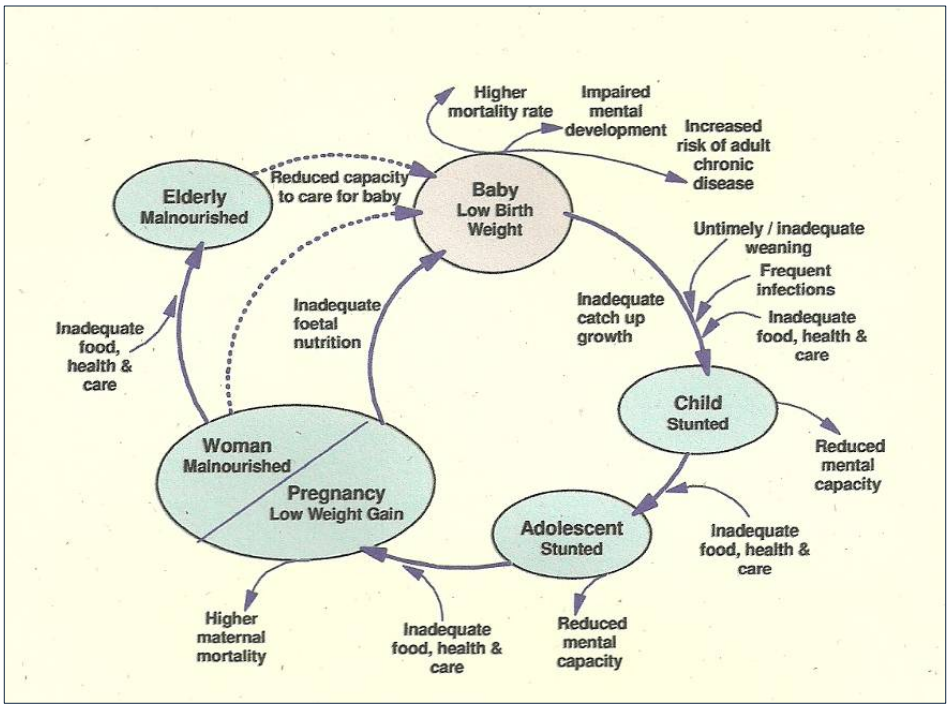


Micronutrient deficiencies, which are more common during times of rapid growth, such as adolescence, pregnancy, and infancy, have both long-term consequences, such as decreased productivity and cognitive ability, and immediate consequences, such as illness or death. The nutrition situation here described is that of women during pregnancy and lactation and children during the first 24 months of life, the window of opportunity when preventive, promotive, and timely curative care have the best chance of reversing deficits in growth and development.

WOMEN OF REPRODUCTIVE AGE, PREGNANT WOMEN, AND LACTATING MOTHERS

A newborn's nutrition is dependent on maternal nutritional status before conception and during pregnancy. Maternal stunting, underweight, vitamin A deficiency (VAD), and anemia put a woman at risk for pregnancy and labor complications that can endanger the lives of both herself and her newborn. In Indonesia, where maternal and neonatal mortality are still relatively high, maternal nutritional status is an important consideration not only for the future health of children but for reducing maternal mortality, which is 3.85 times higher among women who are deficient in vitamin A. Despite the critical importance of maternal nutrition, there is very little information on the subject available in Indonesia, which points up the lack of attention paid to this critical period. Figure 2 illustrates how deficiencies at critical times can impact a generation. The most important nutritional problems among women in Indonesia are micronutrient deficiencies preconception and pregnancy and lactation and suboptimal calorie intake during pregnancy.

Figure 2. Nutrition Throughout the Life Cycle



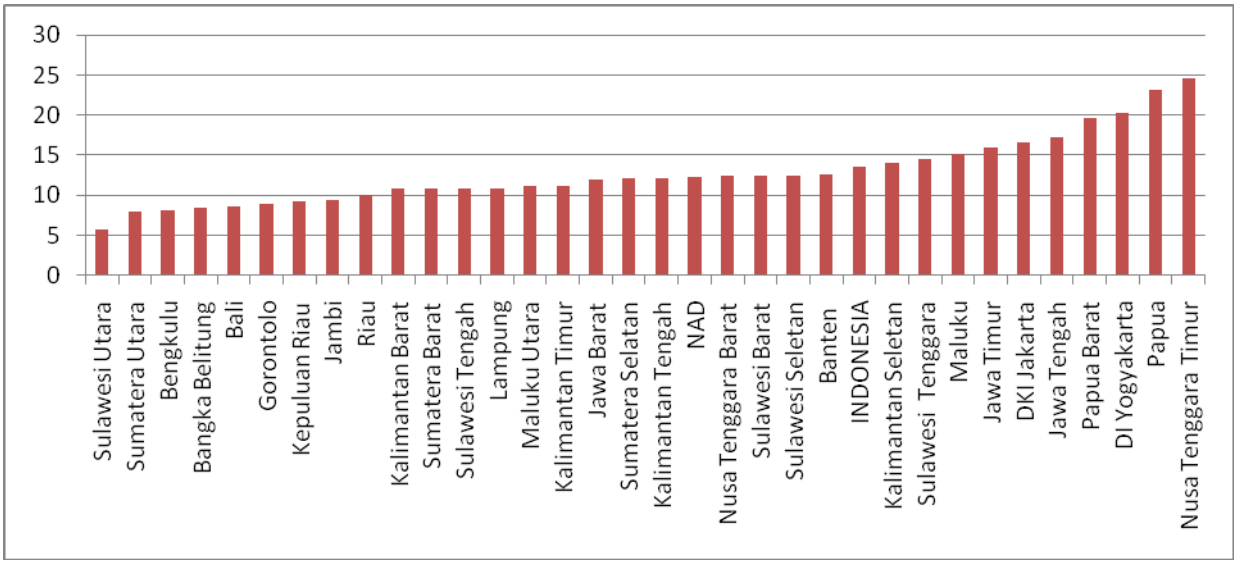
Source: IFPRI-UNSSCN

Maternal Underweight

Among women 15 years and older in Indonesia, 23% are undernourished (BMI < 18.5) (Department of Health, Government of Indonesia). The highest rates of underweight are among women in North Maluku and Gorontolo, the most remote areas of Indonesia, and among those from the poorest economic quintile with the least education. Besides being associated with poor education about nutrition, inadequate food security, and poor health care, undernutrition, especially in these remote locations, is likely associated with the high physical demands of agricultural work and unequal distribution of food.

It is well understood that birth size is a function of a mother's prepregnancy size and micronutrient status. Maternal nutritional factors, both before and during pregnancy, account for >50% of cases of low birth weight (LBW) in many developing countries (Kramer, 1987). Therefore, LBW is in part a reflection of maternal nutritional status. LBW for Indonesia as a whole is 11.5%; it is highest in Papua (27%), Papua Barat (23.8%), Nusa Tenggara Timur (NTT) (20.3%), Maluku (15.7%), Yogyakarta (14.9%) and South Kalimantan (12.4%). Over 13% of pregnant Indonesian women are undernourished (Mid Upper Arm Circumference less than 23.5 cm). Highest rates are in NTT (24.6%), Papua (23.1%), Yogyakarta (20.2%), Papua Barat (19.6%), and Central Java (17.2%). The exact causes of maternal underweight in Indonesia are not well documented due to a general lack of attention to maternal nutrition, but worldwide maternal undernutrition is due to poor intake, poor health care, repeated pregnancy, and lack of reductions in workload during pregnancy and lactation. In some Indonesian cultures, such as Java, there is a fear of giving birth to a large baby, so mothers restrict intake of both the quantity and quality of foods (Griffiths and Favin, 1999). At the same time, 29.0% of women have central obesity (waist circumference over 80 cm), which is also associated with a higher risk of LBW and chronic disease.

Figure 3. Prevalence of Underweight Nonpregnant Women by Province

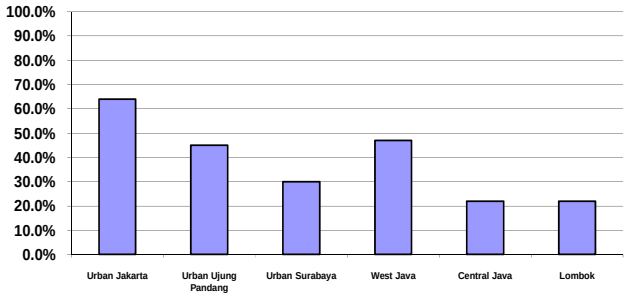


Maternal Anemia

Anemia has been found responsible for 13.8% of maternal deaths (Ross, 2003). It has also been estimated that a 1% reduction in iron status results in a 1% reduction in productivity (Haddad and Bouis, 1991). In addition to the underlying risk of pregnancy complications, anemic mothers struggle to care for themselves and their children properly. According to the WHO, anemia among non-pregnant women is 33% and among pregnant women 44%, which represents a serious public health problem (UNICEF). Because Indonesian Demographic and Health Surveys (DHSs) do not collect anemia rates and anemia was not included with statistical relevance in the most recent national survey, reporting trends in anemia status is difficult. The MOH reported that in 1995, 50.9% of pregnant women were anemic but by 2001 the percentage had decreased to 40.1% (Atmarita, 2005). However, data are not only scarce but inconsistent. A World Bank brief reported that anemia among pregnant Indonesian women was 63% in 2005, much higher than the MOH 2001 statistic.

Despite the lack of data to identify trends, it is clear that the problem is lingering and serious. Interestingly, anemia among pregnant women living in urban slums is worse than in rural areas. According to a study after the 1998 economic crisis, of all areas studied, pregnant women living in the slums of Jakarta had the highest rates of anemia (64%) (HKI, 1999).

Figure 4. Prevalence of Anemia Among Pregnant Women, 1999



Source: HKI.

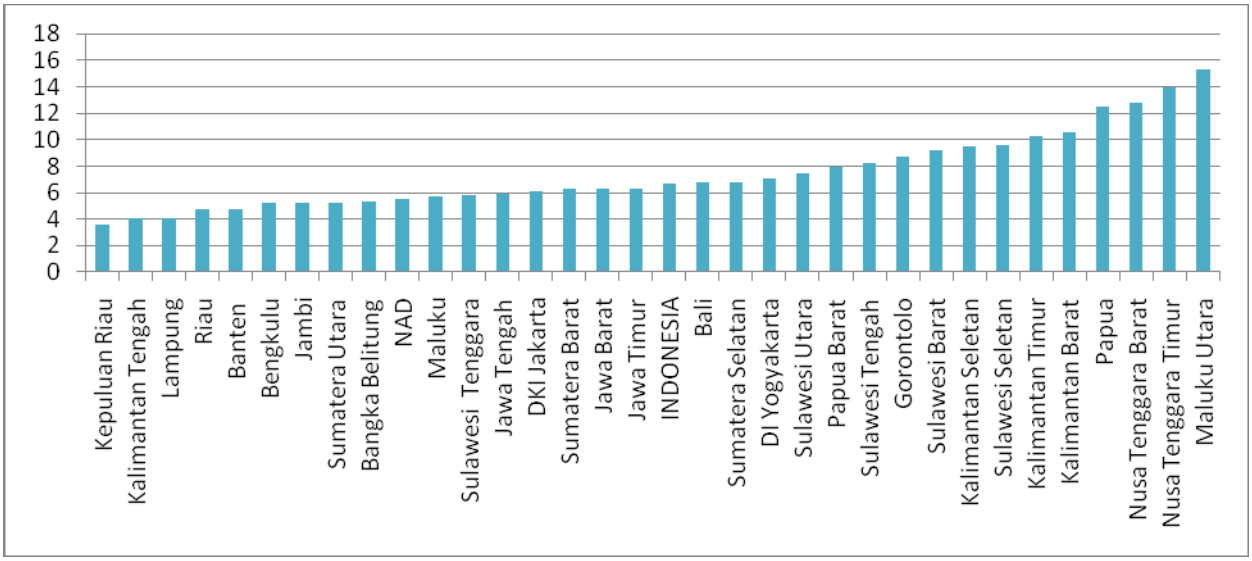
Maternal Vitamin A Deficiency

VAD during pregnancy increases maternal mortality, contributes to anemia, and decreases immune function, thus contributing to more frequent and long-lasting infections. Micronutrient deficiencies like VAD are forms of "hidden hunger" because their effects are rarely seen except in extreme cases. In pregnancy VAD manifests itself as night blindness, which was reported to be 2.4% in 2007 (BPS [Central Statistics Bureau], Macro, 2007). The reality is that an unknown number of mothers are suffering from subclinical vitamin A deficiency that affects their own health and the health of their babies. Vitamin A levels in breast milk are also affected by maternal intake, so poor vitamin status during pregnancy affects a breastfed child's status as well. VAD among newborns and infants is a critical problem because their immune systems are immature, heightening the risks of infection.

INFANT MALNUTRITION

More than 11% of Indonesian infants are born with LBW, a marker of maternal malnutrition and a predictor of the child's future growth. There are large disparities between provinces.

Figure 5. Low Birth Weight by Province (Percent)



Among children under 5, 18.4% are underweight (weight for age [WFA]), 36.8% are stunted (height for age [HFA]), and 13.6% are wasted (weight for height [WFH]). Experts consider such wasting and stunting rates to be major public health problems. Juxtaposed against these striking undernutrition statistics is a growing problem of overweight children: over 12% of children under 5 (Department of Health, Government of Indonesia). While these data may exaggerate the reality because high rates of stunting mean children are shorter than expected for their age and thus heavier than expected for their height, it is still a trend to monitor, especially considering the growing rate of overweight among Indonesian adults. The prevalence of overweight among adult women is expected to increase from 28% in 2005 to 38% in 2015 (WHO, n.d.).

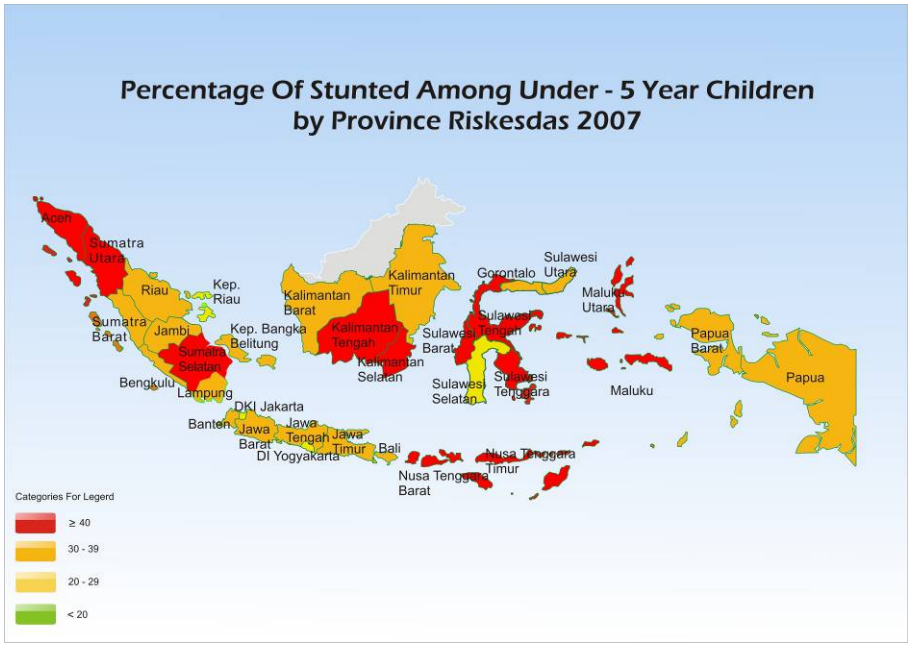
The country-wide data mask great disparities across the archipelago. Underweight in NTT is 33.6%—more than three times higher than in the province with the lowest percentage, Yogyakata, which has 10.9% underweight. NTT has the highest fertility rate, 4.2, and the greatest proportion of households in the lowest wealth quintile, 65.8% (BPS, ORC Macro, 2007). However, while the greatest *percentage* of underweight children live in Eastern Indonesia, the greatest *numbers* live in the most populated islands, Sumatra and Java.

Figure 6. Map: Underweight Among Under-5 Children by Province, 2007 (Percent)

Source: Riskesdas, 2007.

Underweight is used as an indicator to measure progress toward Millennium Development Goal (MDG) 1: "Eradicate extreme poverty and hunger." While Indonesia has already achieved the goal of reducing underweight to 20% nationally, within the country there are still 17 provinces with rates higher than 20%.

Figure 7. Map: Stunted Under-5 Children by Province (Percent)

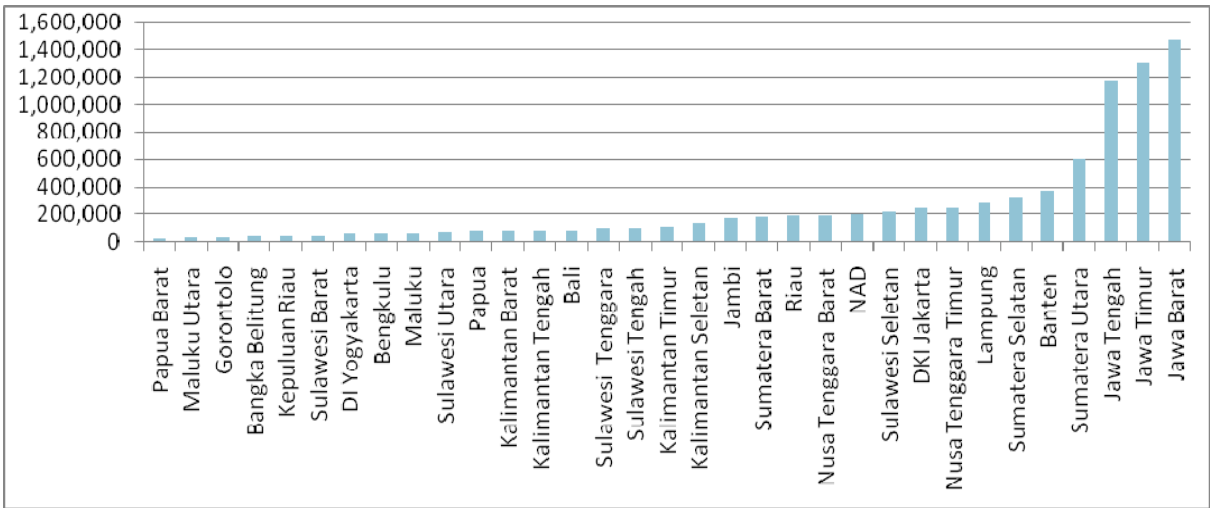


Source: Riskesdas, 2007.

Stunting, the result of chronic and often intergenerational undernutrition coupled with frequent illness, is the hallmark of endemic poverty. It is associated with lower cognitive development and poor productivity. A 1% decrease in height is equal to a 1.4% decrease in productivity (Haddad and Bouis, 1991). Mothers who themselves suffered from growth restriction as children have limited physical capacity for nurturing a child in utero. LBW infants struggle and often fail to make up for deficiencies in a resource-poor environment. Stunting is a major public health problem in nearly all provinces of Indonesia, and the alarm has been sounded by the President of the Republic, who has challenged the country to reduce stunting.

More than 50% of Indonesia's stunted children live in the four provinces of East, West, and Central Java and North Sumatra. While stunting is often associated with poverty, there are interventions that brought to scale have been proven to reduce stunting even in resource-poor environments. They will be discussed later in this report.

Figure 8. Number of Stunted Children in Indonesia by Province



While there may be serious questions about the reliability of the data, it is important to acknowledge the high rates of wasting reported in Indonesia. Nationally, wasting is 13.9%, ranging from 9% in Yogyakarta to 22.1% in Riau. These figures suggest a serious emergency for which blanket supplemental feeding is recommended in certain areas. More investigation is required to verify the data and respond effectively.

Considering the great disparities in Indonesia, Table 1 ranks provinces by both percentage and numbers.

TABLE 1. NUTRITION STATISTICS RANKING: WORST FIVE PROVINCES			
RANK	**STUNTING**	**WASTING**	**UNDERWEIGHT**
	Province (%)	**Province (%)**	**Province (%)**
33	NTT (46.8)	Riau (22.1)	NTT (33.6)
32	Maluku (45.8)	NTT (20)	Maluku (27.8)
31	Sumatra Selatan (44.7)	Jambi (19.2)	Sulawesi Tengah (27.6))
30	NAD (Aceh) (44.6)	NAD (18.3)	Kalimantan Selatan (26.6)
29	Sulawesi Barat (44.5)	Kalimantan Barat (17.4)	NAD (26.5)
	Province (#)[1]	**Province (#)**	**Province (#)**
33	West Java (1,472,672)	East Java (573,459)	East Java (652,130)
32	East Java (1,304,260)	Central Java (379,724)	West Java (622,255)
31	Central Java (1,174,570)	West Java (373,354)	Central Java (514,880)
30	North Sumatra (603,141)	North Sumatra (237,898)	North Sumatra (319,663)
29	Banten (374,495)	DKI Jakarta (155,485)	NTT (176,199)

[1]These figures are estimates based on the percentage of children affected and the age-specific population for the most recent BPS statistics that could be accessed online, usually 2008 or more recent.

In addition to the problem of undernutrition, the numbers of overweight children and adults are increasing. According to a recent national survey, among adults 19.1% are overweight or obese. "This double burden [of under- and overweight] is caused by inadequate prenatal, infant, and young child nutrition followed by exposure to high-fat, energy-dense, micronutrient-poor foods and lack of physical activity" (Haddad, Alderman, and Appleton, 2003). Poor maternal nutrition, stunting, urbanization, and dietary changes are all contributing to a transition to chronic nutritional and health problems.

Childhood Micronutrient Deficiencies

Anemia in childhood, most often caused by iron deficiency in developing countries, is associated with poor growth and lower cognitive achievement. Anemic children are also less able to fight infection, which causes further deterioration of their nutritional status. In Indonesia, 27.7% of children aged 1–4 are anemic (MOH, 2007). However, rates of anemia as high as 50–85% have been reported among children 12–23 months in the poorest urban and rural areas (HKI, 2000).

TABLE 2. MICRONUTRIENT DEFICIENCIES: CAUSES AND STRATEGIES

DEFICIENCY	PERCENT	CAUSES	EFFECTIVE STRATEGIES TO IMPROVE IT
Maternal anemia	40%[1]	Poor prepregnancy iron stores, increased demand during pregnancy, poor dietary intake of iron	Screening and treatment for anemia, improved dietary intake, iron tablets, iron fortification
Maternal vitamin A deficiency (% who did not received postpartum vitamin A)	55.4%[2]	Poor intake of vitamin A	Improved intake of vitamin A–rich foods, postpartum vitamin A supplementation
Child anemia 1–4 years (nationwide) 0–24 months 12–23 months poor urban and rural areas	27.7%[3] 55%[4] 50-85%[5]	Preterm birth, born to anemic mother (low iron stores at birth); lack of exclusive breastfeeding (6 months); poor intake of iron from complementary foods	Iron supplementation for pregnant women, prevention of LBW and preterm birth, exclusive breastfeeding, improved intake of iron-rich and iron-fortified foods, dietary supplements
Child vitamin A deficiency (% who did not receive 2 doses of vitamin A)	28.5[6]	Lack of exclusive breastfeeding, poor dietary intake of vitamin A	Exclusive breastfeeding, vitamin A supplementation, consumption of vitamin A-rich foods, food fortification
Iodine deficiency (households without adequately fortified salt); goiter increase in endemic goiter districts	37.7%[7] 11%[8]	Poor dietary intake of iodine	Salt fortification with iodine

[1]Tatang Atmarita, "Nutrition Problems in Indonesia," article prepared for an Integrated International Seminar and Workshop on Lifestyle-Related Diseases, Gajah Mada University, 19–20 March 2005.
[2]IDHS, 2007.
[3]RISKESDAS, 2007.
[4]Atmartita, 2005.
[5]Helen Keller International, 2000.
[6]Interview with HKI staff.
[7]RISKESDAS, 2007.
[8]11% in 2003. Atmartita, 2005.

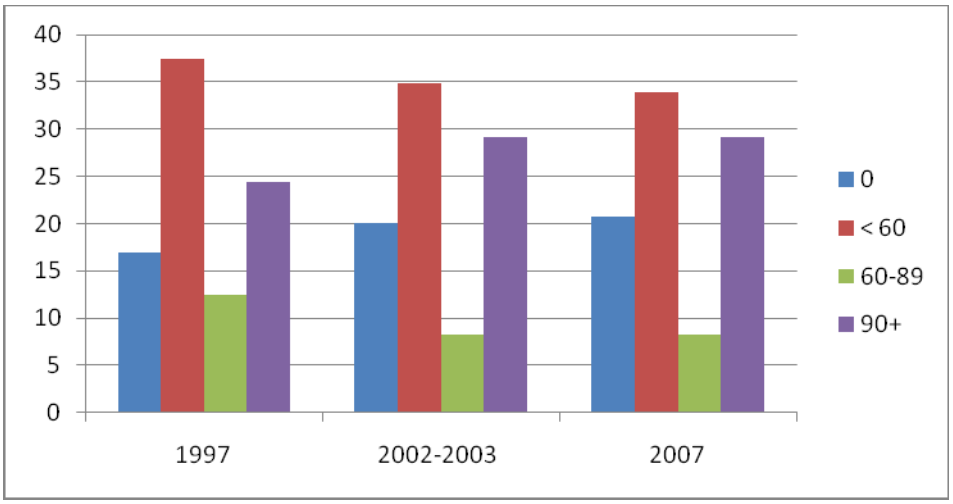
CAUSES OF MALNUTRITION

Maternal Nutritional Status, Dietary Intake, and Physical Demands

Indonesians tend to get more than 50% of their calories from cereals that are not fortified and add small amounts of vegetables and animal protein; thus they consume very little iron, zinc, and vitamin A on a daily basis. Add to this the increased nutritional requirements of pregnancy and it becomes clear why women find it hard to meet the high demands for iron during pregnancy; therefore, the MOH recommends 90 days of supplementation with iron, with or without other micronutrients, for all pregnant women. According to the 2007 Indonesian DHS, less than a third of women reported taking the full course of iron supplementation during their last pregnancy. More than 20% of women did not take any. Since 1997, the percentage of women neglecting to take any iron pills at all has risen, while the numbers who consume at least the recommended amount has not changed. According to Helen Keller International (HKI, 2004), a key lesson learned during the multi-micronutrient trial conducted on Lombok was the innovation to wrap supplements in individual daily packs. Women complained in the past that 90 days worth of iron and folate tablets quickly became unpleasant to take because of the smell and change in color once the bottle was opened in the humid climate.

Iodine deficiency also has serious consequences for fetal and child development and future productivity. Some have been led to believe that because salt is iodized in Indonesia, the problem has been isolated to a few areas; however, data from as far back as 2004 show that household consumption of iodized salt is inconsistent across the archipelago. While 57–90% of households surveyed in Central Java had iodized salt, rates were a mere 12–27% on Lombok and 43–72% in South Sulawesi (HKI, 2004). It has been suggested that implementation has been carelessly monitored and manufacturers are trying to get away with less or no salt fortification (HKI).

Figure 9. Iron Tablet Consumption by Pregnant Indonesian Women



Source: IDHS 1997, 2002–2003, 2007.

A mother's nutritional status during pregnancy not only affects how her child will grow in utero. There is evidence that children whose intrauterine growth is retarded are also more likely to grow up stunted. Anemic mothers are also much more likely to have anemic infants. Multiple logistic regression analysis revealed that normal birth weight infants (>2500 g) of anemic mothers were 1.8 times more likely to be anemic than normal weight infants born to nonanemic mothers. LBW infants born to nonanemic mothers were 1.15 more likely to be anemic, and those with both LBW and anemic mothers were 3.68 times more likely to be anemic. Other risk factors include stunting

(OR 1.70 [0.97–2.95]); a young mother (<20 yrs, OR 1.54 [0.95–2.49]); less maternal education; and living in West or East Java.

> An infant needs almost as much iron as an adult male, but traditional weaning foods contain less than 20–30% of these needs.
> *Helen Keller International Crisis Bull. Y2.Iss.1, January 2000*

Where the prevalence of anemia is less than 50%, there is likely to be one case of iron deficiency per case of anemia. Where anemia is greater than 50%, iron deficiency is likely to be 100%. Thus, Indonesia is confronted with a serious and generalized iron deficiency problem. Iron deficiency among infants, adolescents, and pregnant women in Indonesia is probably attributable to a diet with low to intermediate absorption of iron; increased demands related to certain life phases, such as infancy, adolescence, and pregnancy; iron absorption inhibitors in the diet, such as coffee, tea, excessive milk, and phytates in soy; and little consumption of fruits and raw or lightly cooked vegetables.

In controlled situations where compliance is high, daily supplementation has been effective in improving or maintaining hemoglobin levels if started early enough in pregnancy. The key to effectively reducing anemia is thus close monitoring of compliance and supplementation before pregnancy.

Figure 10. Causes of Iron Deficiency

DIETARY	LIFECYCLE
Low levels of iron in diet	Repeated pregnancies
Low bioavailability of iron in the diet due to consumption of coffee, tea, excessive milk, poor intake of animal products, and few vitamin C- and A-rich foods	Bleeding associated with intrauterine devices
	Excessive menstrual bleeding
Low iron intake relative to demands during certain life phases (infancy, pregnancy and adolescence)	Elevated needs for iron during pregnancy and times of rapid growth during infancy, adolescence
Deficiencies of nutrients linked to iron metabolism	Deficiency during infancy linked to maternal anemia during pregnancy

Practices in some traditional cultures limit the diet or dietary diversity of pregnant or lactating mothers. For example in TTS district, *Action Contre la Faim* found that mothers eat only boiled corn for the first 40 days after birth. Generally, healthy foods like vegetables and beans are sold to buy rice, which adds little to the nutritional value of the diet. Securing health services also continues to be a challenge in hard-to-reach rural areas.

Increased needs for nutrients during pregnancy and lactation coupled with continuation of heavy physical work make it difficult for some women to maintain good health and nutritional status even when intake is adequate.

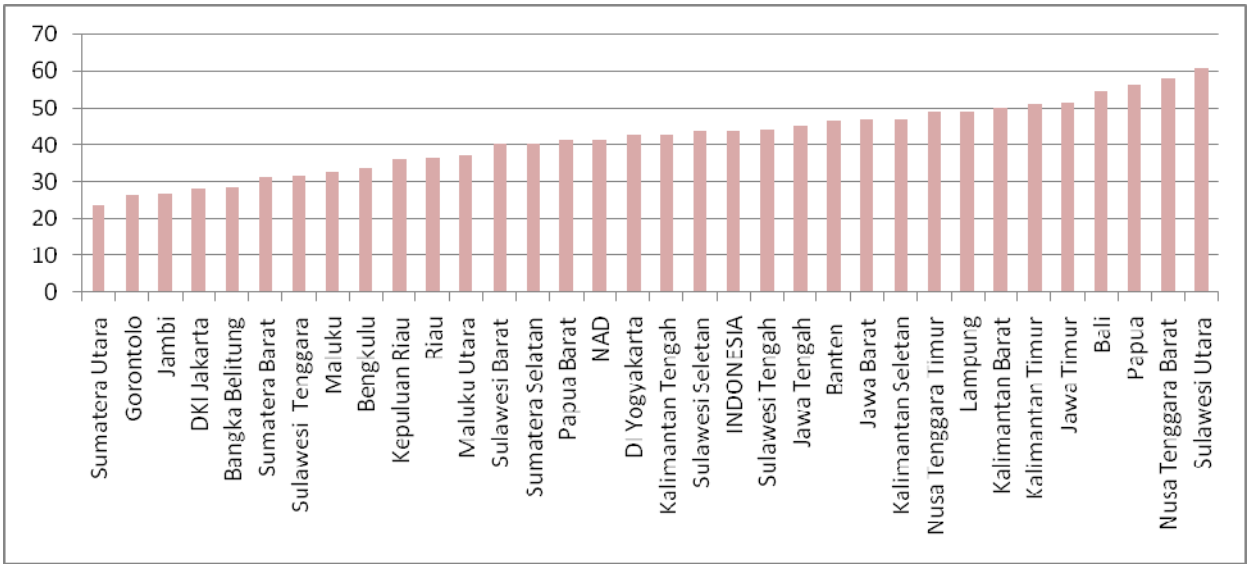
Infant Dietary Intake

Nutrients from food are used for the growth, maintenance, and repair of the body. Requirements for the various nutrients vary by age and activity level, among other factors. Infancy, a period of rapid growth, in particular demands high levels of nutrient intake though gastric capacity is low. Feeding at this age requires the right balance of energy and body-building nutrients densely packaged and patiently and actively fed.

Breastfeeding

Immediate breastfeeding is defined as breastfeeding a newborn within one hour after birth. According to the most recent DHS, 43.9% of Indonesian babies were immediately breastfed. The survey defined exclusive breastfeeding (EBF) as giving only breast milk in the 24 hours before the interview. EBF was reported as 32.4%. Rates are slightly higher in rural than in urban areas, and there is an inverse relationship with mother's education, socioeconomic status, and skilled birth attendance. Among mothers with no education, EBF is 56%, compared to 40.2% among mothers with more than high school education. Among mothers who had no attendant at birth, 54.4% exclusively breastfed their baby, while among those who were assisted by a trained health professional 42.7% practiced EBF (BPS, ORC Macro, 2007).

Figure 11. Immediate Breastfeeding by Province



Several smaller studies of specific populations demonstrate both regional differences and the complexity of measuring these behaviors. Documenting immediate breastfeeding relies on the mother's recall, and different surveys interpret EBF interpreted differently. Some, as in the survey in North Jakarta conducted by Mercy Corps, added the indicator of "no prelacteal feeding" and reported a much lower percentage of EBF, thus highlighting the pervasiveness of prelacteal feeding and the rarity of true EBF from birth through six months.

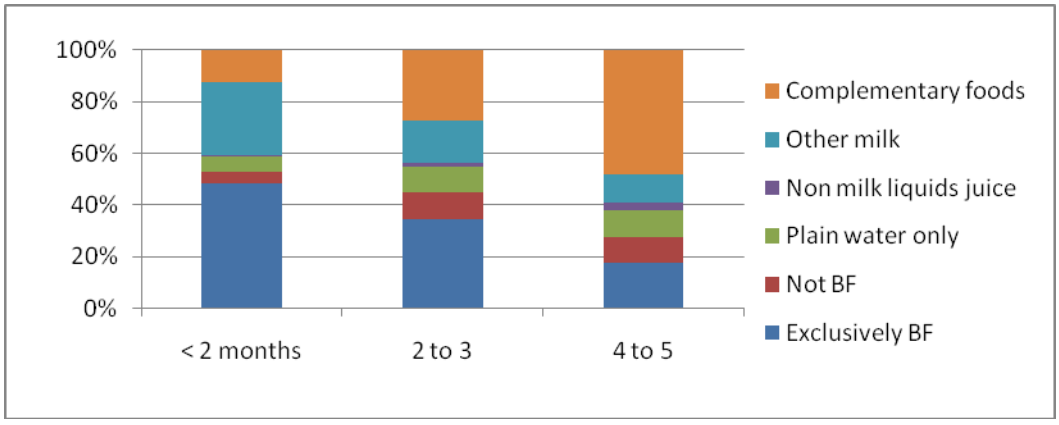
TABLE 3. IMMEDIATE AND EXCLUSIVE BREASTFEEDING REPORTED IN RECENT SURVEYS IN INDONESIA

Survey, Location, Year	Immediate Breastfeeding	Exclusive Breastfeeding
Demographic and Health Survey, all provinces, 2007	43.9%	32.4%
Basic Human Services, North Sumatra and East, West and Central Java, 2006	9.3%	15.1%
Mercy Corps Healthy Start Baseline Survey, Urban North Jakarta, 2006	27.7%	4%
Kraft Project Baseline: Bekasi, Karawang, West Bandung, 2009	--	7.5%
Save the Children Endline Survey, North Sumatra, 2008 (after intervention)	18.8%	40.2%

Prelacteal feeding—giving food or drink other than breast milk during the first three days after birth—is a common practice in Indonesia (65%) and is associated with higher socioeconomic status, education, and trained birth assistance (IDHS, 2007). According to a study by Mercy Corps in urban Jakarta, 64% of mothers gave food or drink besides breast milk in the first three days after birth. Among children given prelacteal feeding, the majority received formula (66.5%) or animal milk (18.9%). Giving honey was also common (28.6%). The people most likely to suggest additional food or drink are private midwives (26.2%), followed by mothers making the choice themselves (16.5%), nurses (15.5%), parents (13.1%), and public clinic midwives (12.6%). The most common reasons for giving food or drink in the first three days included milk not coming out (51.1%), baby would not stop crying (23.3%), and the perception that the mother did not have enough breast milk to satisfy the baby (11.2%).

Even after mature milk comes in, mothers continue to supplement breast milk with additional foods and drinks. After 3 months of age complementary foods are given most often, second only to infant formula, milk, or water. "Mixed feeding" (some breast milk and some formula) reduces absorption of iron and zinc and increases the risk of diarrhea (WHO, 1998).

Figure 12. Food and Liquids Given to Breastfed Babies < 6 Months Old



Source: IDHS, 2007.

MILK: There is a common perception in Indonesia that "milk is nutrition" and a complete food that can substitute for the micronutrients children are not getting from fruits and vegetables. Children are fed from bottles well beyond the first and second year of life, and nearly all children in poor communities suffer from painful cavities due to consumption of milk from bottles and poor oral hygiene. In some cases bottles contain diluted sweetened condensed milk with very high sugar content. Painful teeth lead to poor appetite and a preference for more milk. The calcium in milk inhibits absorption of iron, exacerbating the problem of iron deficiency anemia.

Analysis of Nutrition and Health Surveillance System data collected between December 2001 and May 2002 among rural populations in West Sumatra, Lampung, Banten, West Java, Central Java, East Java, Lombok, and South Sulawesi and the urban poor in four large cities (Jakarta, Surabaya, Semarang, and Makassar) revealed that during the first seven days of life, 20–53% of infants received formula milk, mainly when delivery was a hospital, midwife's house, or maternity clinic. Samples of formula milk were either given out free or sold. Less than 9% of mothers who delivered at home received or purchased formula. Of infants younger than 2 months, 27–42% were exclusively breastfed and 37–41% already received solids in addition to breast milk and other liquids.

Only 11% of mothers thought that complementary food should be introduced before the age of 2 months; however, 31% in rural and 38% in urban areas had already done so, highlighting the disconnect between knowledge and behavior.

At 4–5 months less than 10% of children were exclusively breastfed, and 60% of mothers had introduced complementary food (de Pee, 2008).

Complementary Feeding

Good feeding practices for children 6–24 months include continued breastfeeding for up to two years, consumption of semisolid foods 2–3 times a day, and sufficient dietary diversity. The weaning period is a time when growth faltering becomes apparent, and children are exposed to more infectious agents and at risk for nutritional deficiencies due to inadequate care.

Breastfeeding continues to be important during the weaning period. Because most foods offered to young infants are less nutritious than breast milk, if displacement occurs infants may be at risk of illness or inadequate intake even if foods are prepared hygienically. Breast milk gets 40–55% of its energy from fat. Traditional diets contain substantially less than this. After 6 months, children should get at least 30% of their calories from fat. This is essential both to ensure adequate calories and to enable absorption and utilization of fat-soluble vitamins and consumption of fatty acids (WHO, 1998). In general, local diets tend to be low in energy density, micronutrients, fatty acids (fat), and amino acids (protein) and contain properties like phytates that inhibit absorption of nutrients. To correct this, micronutrient sprinkles, oil, sugar, and enzymes can be added to food (de Pee, 2008). Supplemental foods intended for young children have also been found to be deficient. To be effective, food supplements such as fortified blended flours need to be improved by increasing energy density, adding dairy products, dehulling soybeans, possibly removing cereal germ, changing the proportion of energy from fat, and improving micronutrient profiles (WHO, 1998).

Formative research conducted in Indonesia in the early 1990s by the Manoff Group during the Weaning Project revealed that by 9 months the typical weaning diet meets only about 50% of energy and protein needs. One reason for this is that families do not measure food quantity. Children are fed until they lose interest, so that often they do not eat very much. At any given time about one-third of Indonesian children are ill, which exacerbates the effects of poor intake.

Permissive parenting: In an effort to not displease the child and keep it quiet, mothers in Indonesia will often allow children to eat unhealthy foods and snacks even though they know it is not good for them. Active feeding of healthy food is a key nutrition behavior for increasing consumption of food and thus promoting good growth.

According to a study conducted in Jakarta's poor communities, only 9.5% of children were fed according to best practice. Most children lacked proper variety in their diet and thus had low micronutrient intake (University of Indonesia). Data analysis revealed no correlation between bad eating practices and specific income groups—bad eating habits were pervasive across all income groups in these poor communities.

One example of poor eating habits that spans economic groups is frequent and unhealthy snacking. Families in poor communities in Jakarta spend between 5,000RP (US$0.05) and 20,000 RP (US$2.00) per child per day on ready-to-eat snacks sold by street vendors. These snacks satisfy a child's desire for fat, salt, and sugar but not their requirements for nutrients, especially vitamins and minerals. Mothers often complain of their child's disinterest in eating or lack of appetite. At times appetites are suppressed by infection but some of the disinterest could arise from a preference for milk and the tempting but not nutritious snacks that are ubiquitous in both urban and rural communities. Children who snack throughout the day will refuse to eat more

complete, nutritious meals and instead demand more snacks. More research is needed into the role that lack of appetite plays in malnutrition and the link to zinc deficiency.

The use of commercial instant baby food is very common in Indonesia, especially for young infants. According to a study by HKI, 45–70% of children aged 4–5 months consumed instant baby food. Though rates are higher in urban areas, the practice spans the country. Instant baby food, although sometimes fortified, often contains high amounts of sugar, little or no fat, and little or no protein, thus putting a child at risk for deficiency if other foods are not added.

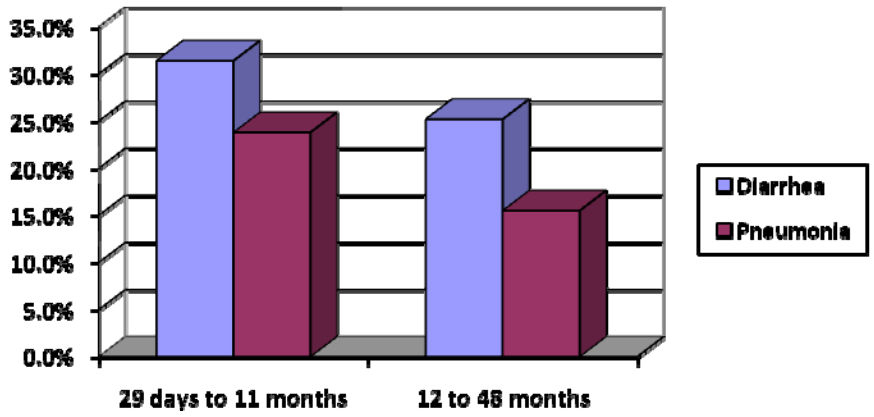
The children of mothers who work from home or outside the home less than half time are fed less often and have lower weight for age z score than those who work longer hours outside the home and entrust the care of their children to someone else.

Infection

The link between infectious disease and malnutrition is clearly documented. Diarrhea affects nutritional status in four ways: (1) reduced dietary intake due to lack of appetite; (2) increased fecal loss and loss of nutrients; (3) poor absorption of macro- and micronutrients due to decreased intestinal transit time; and (4) increased protein catabolism caused by acceleration in the basal metabolic rate (Lutter et al., 1992). These phenomena associated with diarrhea act to steal macro- and micronutrients from a child's body, reducing the energy available at the cellular level. Over time, having fewer nutrients available results in stunted growth, intellectual impairment, and diminished productive capacity.

The leading causes of illness of children under 5 in Indonesia are acute respiratory infection (ARI), pneumonia, and diarrhea. There are over six million cases of pneumonia every year. Nationwide, diarrhea rates have increased from 11% in 2003 to 13.7% in 2007 (DHS). The highest rates of diarrhea are among children 12–23 months old (20.7%) and children 6–11 months old (17.6%), which are the most critical times for child development.

Figure 13. Leading Causes of Death Among Young Children



Malnutrition cannot be reduced without prevention and treatment of infectious disease. Lack of infrastructure, inadequate hygiene facilities, and unsanitary living conditions are among the many barriers to healthy living in poor areas of Indonesia.

According to the IDHS, 11.3% of Indonesia children had symptoms of ARI and 13.7% had diarrhea in the two weeks before the survey. Knowledge of Oral Rehydration Solution (ORS) is high (over 90%), but its use is low (34.7%). More than 47% of children were given pills or syrup—a practice not recommended for most cases of nonbloody diarrhea. Only 30% of children were given more fluids than usual during the diarrhea episode, and only 8% were given more

food than usual. Use of ORS and additional food and liquids during diarrhea were all much higher in the 1997 DHS, signaling that awareness of these important behaviors has declined. This could be the result of a shift to more private health care, where patients are more likely to be prescribed antidiarrheal medications and antibiotics.

Zinc given during acute episodes of watery diarrhea shortens its duration and severity and prevents future cases. Fewer, shorter, and less severe cases of diarrhea will have a direct effect on the nutritional status of children, and zinc may heighten a child's appetite, thus increasing food intake. Some studies also suggest that supplementation with zinc can increase growth (height) among children who are stunted.

Water and Sanitation

To prevent diarrhea and ARIs, basic hygiene, water, and sanitation practices are required, but often, because of limited access, families are not practicing recommended behaviors. Over 24% of households do not have a toilet. Much larger percentages lack access to sanitation facilities in NTB (49.1%), Suawesi Barat (47.9%), Sulawesi Tengah (42.8%), and Gorontolo (42.2%) (Department of Health, Government of Indonesia). Improved water is available to 65% of households, but more urban (80.4%) than rural households have such access (BPS, Macro, 2007).

Handwashing with soap at critical times helps to prevent the spread of enteric and respiratory pathogens. Only 23.2% of respondents in a national survey washed hands at all critical times. Handwashing rates were higher for urban than rural residents and those with more education and in for a higher economic quintile, but rates of handwashing are too low even among these groups to effectively prevent illness (MOH).

Health Services

Clinics

In some parts of Indonesia, families still struggle with access to health facilities. While 90% of households are within 5 kilometers or 30 minutes of health care services (Department of Health, Government of Indonesia), patients in some areas report there is no one at the health facility to serve them. In most parts of Indonesia the gap in service delivery lies in poor utilization and quality of the services provided, not the facility's proximity to households. Perhaps because of this gap in coverage, private health services have an important role in the health care system, but they are even harder to regulate than the public services. A larger *proportion* of births were delivered in private health facilities (9.7 versus 36.4), but the greatest *number* of births were delivered at home (52.7%). Use of private services increased with mother's education, urban residence, and wealth quintile and is associated with more antenatal care (ANC) visits. A large proportion of high-risk births (mother younger than 20 years or with a large number of children) take place at home (BPS, Macro, 2007).

> In a health center in South Sumatra, when midwives and the center nutritionist was asked who counsels mothers who have questions about feeding infants, the midwife proudly explained that a formula company representative sitting at a sponsored booth in the waiting area provided infant and young child feeding counseling—an obvious strategy to promote the use of their products. These salespeople disguised as health professionals were given free access to mothers in a place they trusted to provide care for their children.

Nutrition services in public health clinics are limited. Primary care doctors and midwives have little or no training in nutrition or counseling. Nutritionists who have a basic theoretical understanding of malnutrition do coordinate nutrition services, but often these are limited to filling out reports and managing the logistics of supplemental feeding.

Malnourished children are provided biscuits, milk, and sometimes eggs. Those interviewed by the assessment team at one clinic were unable to articulate a referral system, which suggested to team that there is none (although it may be that a doctor makes this determination, and there were no doctors present that day).

Just over 20% of Indonesian households use the birthing post or village midwife services—15.6% in urban areas and 25.8% in rural. "The midwife is not available" is the leading reason for not using these services, followed by distance (8.9%), and incomplete services (7.9%). Interestingly, midwives are used more for antenatal and curative services than birthing and postpartum and neonatal care. It is still common for mothers to deliver at home (urban 43.9%; rural 84.9%). Some of these births are assisted by trained midwives.

The first two weeks postpartum is a critical time to monitor the health of babies and facilitate the establishment of breastfeeding. Only about 50% of newborns received a health check in the first week, and only 33% were attended by a medical professional in the second week.

Community-based

The integrated services of the monthly *posyandu* program are immunization, ANC, growth monitoring, counseling, and supplemental feeding or a cooking demonstration. The reality is that many posyandu, staffed by gracious volunteers (*kaders*) from the community who often have little or no training in anthropometry, counseling, infant and young child feeding, and malnutrition, function simply as weighing posts and data collection points. Due to the great number of posts, in some areas there are not enough trained health center staff to attend all sessions.

When possible the village midwife assists the health volunteers, but midwives receive very little practical education in nutrition. Discussions with representatives of both the public midwife academy and the Indonesian Midwives Association revealed that midwives, despite being expected to assist in the care of newborns and young children, are not trained in infant and young child feeding. Due to their poor quality, lack of understanding of the benefits of growth monitoring, and growing preference for private services, only 45.4% of households utilize posyandu services regularly.

Poor posyandu attendance is sometimes reported as a reason more children are malnourished. The assumption is that if children are weighed regularly they will have better nutritional status. Yogyakarta has the highest percentage of children weighed regularly and is among the provinces with the lowest rates of stunting, underweight, and wasting. However, NTT, the province with the second greatest percentage of children being weighed regularly, also has the highest percentage of underweight and stunted and the second highest percentage of wasted children.

Weighing children does not improve their nutritional status unless problems are detected and followed up with clear and practical counseling and action. Counseling is rarely if ever provided at the posyandu. Growth monitoring has become decoupled from promotion, making it ineffective. This validates the finding of the *Lancet* study group that concluded that monitoring growth in the absence of promotion is not effective. Authors of the study even go as far as to recommend that resources for growth monitoring be diverted to more effective programming.

Though nutrition health volunteers are not recognized as people to consult about child care or feeding, traditional birth attendants and midwives are, at least for the first few months of life—and their advice is not always sound (Griffiths and Favin, 1999).

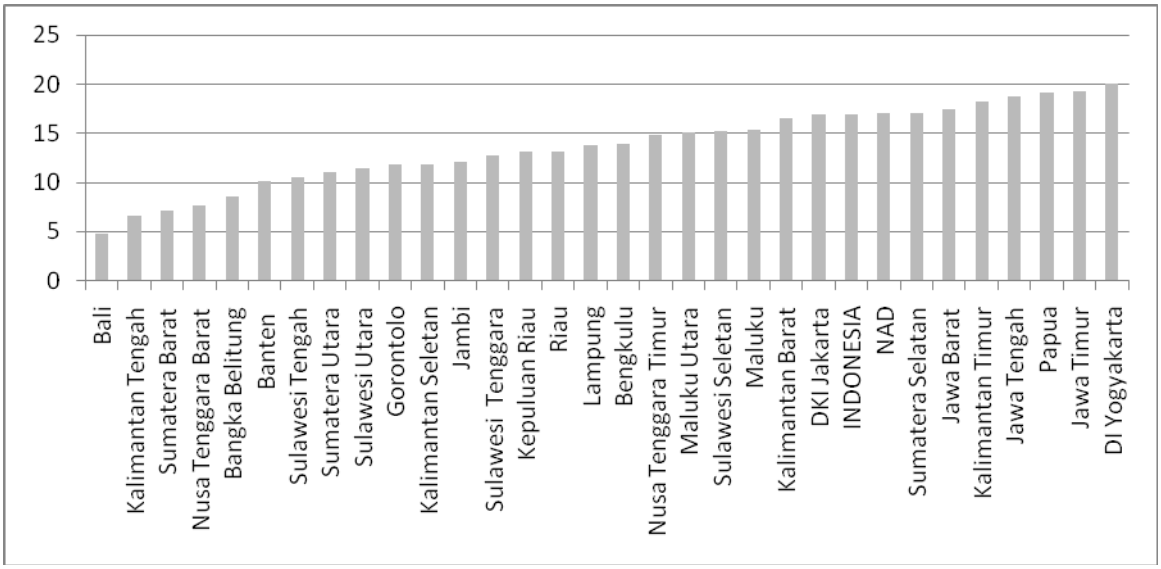
Decentralization

In the past, the central government administered large-scale nutrition projects such as the posyandu and Bidan di Desa programs. Decentralization presents several challenges to the effective delivery of nutrition services. The MOH now acts as an advisor to districts and provinces, but there is a lack of capacity and leadership at the provincial level. At the local level, there are unclear and overlapping responsibilities, lack of in-service training, low coverage of services, limited resources and variations in collaboration outside the government.

Household Food Security

Chronic energy deficiency is a risk for 13% of women aged 15–45. Deficiency is highest in Papua (23.1%), NTT (24.6%), DFI Yogyakarta (20.2%), and Papua Barat (19.6%) (MOH, 2007). Another indicator of food insecurity is energy intake. Approximately 16% of adults daily consume less than 1,700 kilocalories, which represents 80% of the ideal intake for an adult. Adults in urban areas tend to consume less than in rural communities—probably because they are not doing as much physical labor. This under-consumption of calories may signal general food insecurity related to poverty and inefficient farming.

Figure 14. Individuals Consuming Less than 1,700 kcals a day by Province (Percent)



Source: WFP, BPS 2006.

According to a recent study, there is a serious public health problem in Eastern Indonesia, where thinness among nonpregnant women is 20.2–29.3% and anemia is 26.2–48.1%. The proportion of households in the four districts surveyed was 91.4%. In 7% of households, families experienced severe food insecurity with hunger. Belu district had 13.3% severe and 61% moderate food insecurity with hunger (Church World Service, CARE International Indonesia, Helen Keller International).

TABLE 4. HOUSEHOLD FOOD INSECURITY, SELECTED PROVINCES	
PROVINCE	**PERCENT OF FOOD INSECURE HOUSEHOLDS**
East Java	2%
NTT	26%
West Kalimantan	14%
Central Sulawesi	14%

Source: UNICEF, Food and Agriculture Organization, World Food Programme, Government of Indonesia, 2010.

There appear to be pockets of serious food insecurity in Indonesia. These areas tend to have higher rates of wasting and will require food assistance at least during certain times of the year.

SUMMARY OF FINDINGS

Food Security
Availability of food in Indonesia is not an issue. However, household food security, which depends on ability to purchase food and the equal distribution of food within a household, is problematic in traditional cultures that do not prioritize the care of women and children and among poor families, both urban and rural. Across the country, also, access to high-quality foods that provide micronutrients is limited.
Geographic Location
Stunting, anemia, and overweight are critical problems across the country. There are areas with higher percentages of malnutrition, such as provinces in Sumatra, Sulawesi, Kalimantan, and Eastern Indonesia, but greater numbers of affected individuals live on the islands of Java and Sumatra. Papua and NTB have high rates of mortality but relatively lower rates of malnutrition; however, undernutrition is likely a factor contributing factor to many of the maternal and child deaths.
Caring Versus Cultural Practices
Caring and cultural practices that contribute to malnutrition in Indonesia include poor care of mothers during pregnancy and lactation, failure to decrease workload and protect breastfeeding and maternal nutrition, passive food provision versus active feeding, food restrictions, a growing culture of ready-to-eat food, the perception that “milk is nutrition,” giving junk food as a pacifier to quiet noisy children, overreliance on cereals for energy, too little intake of fruits and vegetables, media saturation with unhealthy food and drink ads, working women without an adequate secondary care provider, and increased consumption of sugary, fatty foods by mothers and older children.
Access to Health Care Systems
Access to health care varies across the country but everywhere quality of care, especially nutritional counseling and information, is very poor. Private providers dominate provision of care especially in urban areas, even among the poor. These providers are difficult to regulate and more susceptible to pharmaceutical and infant formula marketing, which contributes to the trend toward more use of antidiarrheals, less ORS use, and use of breast milk substitutes.
Environment, Hygiene, and Water and Sanitation
Infections due to poor hygiene, water and sanitation access, and practices exacerbate malnutrition. Tuberculosis, diarrhea, and ARI are the leading illnesses that have an impact on undernutrition. Any program that aims to decrease malnutrition must have hygiene, water, and sanitation components.

III. STATE-OF-THE-ART INFANT AND YOUNG CHILD FEEDING

NUTRITION DURING PREGNANCY: RECOMMENDATIONS

- Additional green leafy and yellow orange fruits and vegetables and/or vitamin A-fortified oil
- Increased protein intake during pregnancy and lactation, including at least one portion of animal protein per day for extra protein, iron, and zinc
- Daily supplement of iron/folate during pregnancy and the first three months after delivery
- One extra serving of food (about 285 kcal,) per day during pregnancy
- Increased protein intake during pregnancy and lactation, including at least one portion of animal protein per day
- Reduced tea and coffee consumption, especially around mealtimes, as they block absorption of iron
- Treating and preventing malaria
- Deworming during pregnancy in areas where helminths are a determinant of anemia
- Promoting consumption of iodized salt

NUTRITION DURING LACTATION: RECOMMENDATIONS

- Increased vitamin A supplementation for mothers for eight weeks after delivery
- One to two extra servings of food (approx 500 kcal.) a day during lactation
- Additional green leafy and yellow orange fruits and vegetables and/or vitamin A-fortified oil

NEONATAL NUTRITION: RECOMMENDATIONS

- Immediate breastfeeding (skin-to-skin contact and breastfeeding within one hour after birth)
- EBF from birth to six months
- No prelacteal feeding

INFANT NUTRITION 0–6 MONTHS: RECOMMENDATIONS

- EBF from birth to six months.

NUTRITION FOR YOUNG CHILDREN 6–24 MONTHS: RECOMMENDATIONS

At 6 months of age (180 days) introduce complementary foods:

Age in Months	Calories per Day[1]	Quantity	Frequency	Consistency	Density
6–8	200 kcals	30g/kg	2–3 times/day	Pureed, mashed	Energy from fat: 0–34%
9–11	300 kcals	30g/kg	3–4 times/day	Semi-solid, finger foods	Energy from fat: 5–38%
12–23	550 kcals	30g/kg	3–4 times/day	Adapted family foods	Energy from fat: 17–42%

[1]Assuming average breast milk intake.

Meat, poultry, fish or eggs, and vitamin A-rich foods daily. Iron, zinc, calcium-fortified foods or supplements. Frequent on-demand breastfeeding till 2 years or beyond. Responsive feeding. Additional fluids and food during and after illness.

MICRONUTRIENT SUPPLEMENTATION: RECOMMENDATIONS

Iron and Folic Acid Doses for Universal Supplementation in Vulnerable Groups:

Group	Iron-Folic Acid Doses	Duration
Low birth weight infants (<2,500g)	Iron: 12.5 mg iron/day** Folic acid: 50mcg/day	2–24 months of age
Children 6–24 months	Iron:12.5 mg iron/day Folic acid: 50 mcg/day	• 6–12 months of age where anemia prevalence is <40 percent • 6–24 months of age where anemia prevalence is >40 percent
Children 24–59 months	Iron: 20-30mg of iron/day	At least once/week for three months
Adolescents/women of childbearing age*	Iron: 60mg/day Folic acid: 400mcg/day	At least once/week for three months
Pregnant and lactating women	Iron: 60mg/day Folic acid: 400mcg/day	• Six months during pregnancy where anemia prevalence is <40% • Six months during pregnancy and three months postpartum where anemia prevalence is ≥40% • If it is not possible for women to take iron and folic acid for 6 months in pregnancy, supplementation should continue into the postpartum period or the dose should be increased to 120 mg/day.

Source: Table adapted from Galloway, R. (2003) *Anemia Prevention and Control: What Works.* Washington DC: World Bank, UNICEF, WHO, FAO, USAID, CIDA, and the Micronutrient Initiative.

Vitamin A: Twice-yearly supplementation with vitamin A is recommended for children 6–59 months to eliminate vitamin A deficiency and improve mortality and morbidity.

Iodine: Iodine is necessary for development and functioning of the brain and nervous system. Children should consume adequately iodized salt (≥ 15 ppm).

STATE OF THE ART INTERVENTIONS

According to the *Lancet*-published review of nutrition interventions with the greatest impact on mortality and malnutrition, there is sufficient evidence to recommend the following actions:

Maternal and Birth Outcomes	Infants and Children
Iron supplementation	Breastfeeding counseling
Maternal supplementation with multiple micronutrients	Behavior change for improved complementary feeding
Iodized salt	Zinc supplementation
Maternal calcium supplementation	Zinc for management of diarrhea
Interventions to reduce smoking or indoor air pollution	Vitamin A fortification or supplementation
Maternal supplementation of balanced energy and protein**	Universal salt iodization
Maternal deworming in pregnancy	Handwashing with soap interventions
Intermittent preventive treatment of malaria*	Treatment of severe acute malnutrition
Insecticide-treated bednets	
Newborn	
Breastfeeding counseling	
Delayed cord clamping	

The study team concluded that these interventions should be prioritized and that monitoring growth without promotion and school feeding is not effective.

Figure 15. Impact of Evidence-Based Interventions Brought to Scale

	Proportional Reduction in Deaths Before:			Relative Reduction in Stunting Before:		
	12 mos	24 mos	36 mos	12 mos	24 mos	36 mos
99% coverage with balanced energy protein supplementation	3.6%	3.1%	2.9%	1.9%	0.5%	0.3%
99% coverage with intermittent preventive treatment of malaria	2.4%	2.1%	1.9%	1.4%	0.3%	0.1%
99% coverage with multiple micronutrient supplementation in pregnancy	2.0%	1.7%	1.6%	0.9%	0.3%	0.1%
99% coverage with breastfeeding promotion and support	11.6%	9.9%	9.1%	0%	0%	0%
99% coverage with feeding interventions (promotion of complementary feeding and other supportive strategies)	0%	1.1%	1.5%	19.8%	17.2%	15%

	Proportional Reduction in Deaths Before:			Relative Reduction in Stunting Before:		
	12 mos	24 mos	36 mos	12 mos	24 mos	36 mos
99% coverage with vitamin A	6.9%	7.1%	7.2%	0%	0%	0%
99% coverage with zinc supplementation	1.3%	2.8%	3.6%	9.1%	15.5%	17.0%
99% coverage with hygiene interventions	0%	0.1%	0.2%	1.9%	2.4%	2.4%

ESSENTIAL NUTRITION ACTIONS

Essential nutrition actions (ENA) are a set of evidence-based interventions delivered in communities and health facilities to improve the growth and micronutrient status of children. The approach starts with the analysis of behaviors at various levels and aims to address barriers to improving infant and young child feeding (IYCF) behaviors.

The seven essentials are:

- Promotion of optimal breastfeeding during the first 6 months (e.g., timely initiation within one hour of birth and EBF for six months)
- Promotion of optimal complementary feeding starting at 6 months with continued breastfeeding to 2 years of age and beyond
- Promotion of optimal nutritional care of sick and severely malnourished children
- Prevention of vitamin A deficiency in women and children
- Promotion of adequate intake of iron and folic acid and prevention and control of anemia in women and children
- Adequate intake of iodine by all members of the household
- Promotion of optimal nutrition for women

Contact points for communicating messages and developing behavior change activities are ANC, reproductive health counseling, postpartum care, growth monitoring and promotion, well-child care, immunizations, and sick-child care.

IV. CURRENT POLICIES AND PROGRAMS

GOVERNMENT OF INDONESIA NUTRITION POLICIES

Infant and Young Child Feeding Strategy

The MOH developed the IYCF strategy in collaboration with UNICEF based on the WHO Global Strategy on Infant and Young Child Feeding (2002). The strategy includes best practices in IYCF and activities to improve behavior, such as:

- Improving policies and regulations related to IYCF;
- Drafting a code of ethics and standards for production of infant formula and baby food;
- Enhancing the number and quality of maternity and child health services by implementing the 10 steps for successful breastfeeding;
- Improving the capacity of all health providers who are in contact with children 0–24 months to enable them to provide counseling and promotion of proper IYCF;
- Advocating that stakeholders commit to improving IYCF; advocating and campaigning for breastfeeding-friendly workplaces;
- Facilitating development of community-based support groups for IYCF;
- Behavior change activities in the community, such as including IYCF counseling as part of premarital counseling;
- Supporting best emergency and HIV practices in IYCF;
- Improving data collection and dissemination of IYCF practices;
- Conducting research into behavioral barriers to breastfeeding; and
- Use of local foods in the development of complementary foods.

The strategy also lays out roles and responsibilities of various actors, from legal to health to professional and community-based organizations.

Breastfeeding-Related Regulations

The Minister of Health's decree about marketing of breast milk substitutes was issued in 1985 and revised in 1997 based on the Breast Milk Substitutes [BMS] Code of Marketing. The decree on EBF through 6 months was issued in 2004. Both decrees were considered inadequate, especially in light of decentralization, and needed to be improved by being made government regulations, which is considered the implementation of a law. Several regulations support and promote breastfeeding, but most of them lack implementation guidance and carry no sanctions for noncompliance. Health Law 36, passed in 2009, attempts to provide clearer guidance. For example, Article 128 states that:

1. Every baby has the right to be exclusively breastfed up to 6 months unless there is medical contraindication.
2. During the infant's first 6 months, family, government, and community have to fully support mother and baby and provide time and special facilities for breastfeeding.
3. The special facilities should be provided at public and work places.

Article 200 states that a person who hinders the second point can be sued and punished by a maximum of one year in jail and a penalty of Rp 100,000,000.00 (100 million rupiah).

The law goes beyond community and government action to attempt to regulate the practices of the private sector in Article 201, which states:

1. In the case of any action by a private company that hinders optimal breastfeeding, in addition to the above sanction to the manager, a three-fold penalty will also be given to the company in question.

2. Besides the above sanction (1), the company will be subject to revocation of trade license, and/or corporate legal status.

Breastfeeding advocacy groups are working with the MOH to further develop guidance for this legislation.

Before Health Law 36, there were several other regulations, which are described in Table 5.

TABLE 5. GOVERNMENT REGULATIONS RELATED TO BREASTFEEDING

Law/Regulation	Description
Permenkes 237/1997	On marketing of breast milk substitutes (BMS) (adopted from the WHO/UNICEF code), including a ban on advertisement of baby formula up to the time the child is 1 year old (no follow-on advertisement). The food and drug regulator, BPOM, is supposed to monitor and report to MOH, but this is rarely done and no follow-up actions are taken. The collaboration of BMS producers with health workers, facilities, and professional associations through training, education, and other programs continues.
PP 69/1999	Labeling and advertisement of BMS. Mandates that any food for children under 1 year should not be advertised.
Permenkes 450/2004	Promotes "10 Steps to Successful Breastfeeding" and EBF for all Indonesian newborns unless there is medical contraindication.
Ministry of Women Empowerment -> no. 48/2008 Min of Manpower -> 27/2008 Mon of Health -> 1177/2008	Ministries of Health, Manpower, and Women Empowerment on protection and support to lactating mothers in the workplace. Minimum requirements are a breastfeeding room/breast milk expression room, refrigerators, etc.).
Presidential Decree No. 36/1990	Endorsement of Child Rights Convention. This includes a child's right to be fed according to international standards, including EBF for six months.
Government Regulation No. 28/2004	Security, quality, and nutritive value of food.
Kepmenkes 1177/2008	Improvement of BF practice during working hours in the workplace.
Kepmenkes 203/2008	National Teamwork of Kangaroo Method Service
Kepmenkes 603/2008	Promoting mother and baby-friendly hospitals. A revision of the "10 Steps to Successful Breastfeeding," which omits some of the steps for breastfeeding and adds some practices that are "mother-friendly."

Iodine: A joint Ministerial decree regulates and recommends the appointment of an iodized salt working group in every level from the city up. The Ministry of Industry and BPOM regulate and monitor production quality. The Ministries of Home Affairs and Cooperation regulate and monitor trade and distribution, and the MOH with partner organizations (PKK, etc.) provide health education and monitor household consumption. The national standard of salt fortification is 30–80 ppm iodine. Local regulations (district PERDA) are still being promoted; currently only about 30% of districts and cities have them.

CURRENT NUTRITION PROGRAMS

There are several initiatives to promote nutrition improvements among children under 5 (see Appendix C). They are almost exclusively related to breastfeeding; there is almost no maternal nutrition or complementary feeding programming, although in various districts mothers' group models are being tested that will include lessons on maternal nutrition. The MOH nutrition director expressed his interest in receiving technical assistance to create maternal nutrition programming for adolescent girls, pregnant women, and lactating mothers.

Maternal nutrition: Beyond the provision of iron/folate supplements during ANC, which is underutilized, and vitamin A supplementation postpartum, which is also low, there is very little activity in maternal nutrition as part of government, UN, or NGO programs.

Breastfeeding: Most breastfeeding activities are focused on training health staff in lactation management or midwives in advanced lifesaving skills and immediate breastfeeding. There is considerable awareness about the importance of skin-to-skin contact and immediate breastfeeding but it is not clear if they are consistently promoted after training, although there are very positive indications that they are. Some health staff trained in lactation management complain that they cannot implement what they were taught because it requires too much time. This indicates both a general resistance to changing current practices, due possibly to low self-esteem but also to a lack of understanding of how counseling can be integrated into conversations with mothers during ANC, postpartum care, and sick and well child visits without need to set aside special time for formal counseling.

Complementary feeding is promoted through the government's KADARZI (*Keluarga Sadar Gizi,* Nutritionally Aware Family) program but is limited to minimal communications efforts. The UN and NGOs are experimenting with various approaches but only in small geographic areas in West Java, NTT, and Central Java. Pilot projects of note are the Kraft-funded Save the Children program working through posyandu in West Java and Bekasi; CARE's efforts to improve complementary feeding and breastfeeding in NTT as part of its Window of Opportunity program; and the Mercy Corps microenterprise model to improve access to healthy and age-appropriate food for children under 5. Mercy Corps has created a healthy street foods business. Entrepreneurs from the community cook and sell health foods and keep the profit (up to US$200 a month), and children who would normal eat junk food have access to a nutrient-rich meal.

Micronutrient programming: The Micronutrient Initiative, Koalisi Fortifikasi Indonesia, the Asian Development Bank (ADB), and HKI are working to improve or set up programs in collaboration with the private sector to fortify flour with multi-micronutrients, oil with vitamin A, and salt with iodine. Jhpiego is piloting supplementation of mothers with calcium to help as prevent preeclampsia. In North Jakarta the MOH is piloting the distribution and evaluating the efficacy of micronutrient sprinkles, Taburia, originally developed by HKI.

The MOH also conducts twice-yearly vitamin A supplementation days at the posyandu during which women and children receive supplements free. The program, which was originally designed and marketed in collaboration with HKI, had great early success but coverage is now declining.

The USAID-funded POUZN project is educating providers, government, and professional organizations about the latest best practices in diarrhea treatment: low osmolarity oral rehydration, a 10-day course of zinc supplementation, continued breastfeeding and antibiotics only for bloody diarrhea and cholera, and educating families to bring children back to their health provider if a child has fever, vomiting, bloody diarrhea, or diarrhea that is not relieved in three days. The project is working with the private sector to increase the availability of zinc supplements in public and private health centers to comply with the new government regulation that diarrhea treatment should include ORS and zinc.

Management of Malnutrition: Community management of acute malnutrition (CMAM) is the government's strategy for addressing malnutrition, but implementation has been slow and guidelines are still being finalized by UNICEF and MOH.

In most areas, local health centers provide supplemental food for 90 days to children who present with wasting, sometimes fortified cookies and milk or sometimes sachets of packaged, fortified complementary foods. There is no evidence that these strategies are working, and government health staff and providers we talked to are skeptical about the efficacy of the supplements.

Supplemental Feeding for the Poor: The government of Indonesia has a program to distribute 20kg of rice to 9 million poor households across Indonesia but does not have the resources to ensure this level of distribution, and the program is not well-targeted. Families receive only 6–10 kilograms of rice, and because significant numbers of non-poor households receive the benefit, many poor households are not served.

The government's strategy to improve the food intake of poor children under 5 is focused on the MP ASI program: sachets of processed complementary foods distributed to children under 5. Coverage is low and poorly targeted and has shown no evidence of reducing malnutrition (World Bank).

Ministry of Health

The MOH has set the following targets in its 2010–14 plan:

TARGET	2010	2014 GOAL
Increase life expectancy	70.7	72.0
Decrease maternal mortality per 100,000 live births	228	118
Decrease infant mortality per 1,000 live births	34	24
Decrease neonatal mortality per 1,000 live births	19	15
Decrease underweight (moderate and severe) among children under 5	18.4%	< 15.0%
Decrease prevalence of stunting among children under 5	36.8%	< 32.0%
Decrease tuberculosis cases per 100,000 population	235	224
Decrease cases of malaria (Annual Parasite Index) per 1.000 population	2	1
Control HIV prevalence among adult population	0.2%	< 0.5%
Increase full immunization coverage for children 0–11 months	80%	90%

To achieve these objectives, the national government plans the following:

- Target poor communities.
- Focus interventions on the "window of opportunity"—pregnant women and infants up to 2 years old.
- Improve behaviors related to ANC and IYCF.
- Conduct nutritional supplementation and fortification, supplying iron/folate tablets for pregnant women and Taburia micronutrient sprinkles for children.
- Empower communities through posyandu, support groups, and counseling specific to the local context.
- Target supplemental feeding to underweight pregnant women (500 kcals)
- Target supplemental feeding to 6–23 bulan (poor, emergency situations)
- Develop fortified oil and rice for the poor.
- Develop lo-cal RUSF and RUTF.
- Target supplemental feeding for wasted poor children using local food/RUSF.
- Develop therapeutic feeding centers for treatment of malnutrition in selected hospitals.
- Develop CMAM programs in selected health posts.
- Place nutrition personnel to activate the KADARZI (see explanation below), posyandu, and nutrition surveillance systems in certain villages.
- Revitalize the posyandu using the revised road to health (KMS) care for boys and girls to detect malnutrition early and refer as needed.
- Facilitate intersectoral collaboration with agriculture, village development, water and sanitation, education, gender, and community development programs.
- Improve breastfeeding by working with *Peningkatan pemberian ASI eksklusif* to
  - Promote baby- and mother-friendly hospitals.
  - Appoint breastfeeding counselors to health centers (*puskesmas*) and outreach clinics.
  - Regulate formula promotion.
  - Implement *SKB 3 Menteri* (breastfeeding-friendly workplace).
  - Organize mothers support groups.

V. CHALLENGES TO APPROPRIATE INFANT AND YOUNG CHILD FEEDING

The *Lancet* series on maternal and child undernutrition (Bhutta, et al., 2008) identified the following as challenges to addressing undernutrition worldwide:

- Getting nutrition on the national agenda
- Doing the right things (most effective interventions) at scale
- Not doing the wrong things—school feeding and growth monitoring without promotion are not effective and waste resources and attention
- Acting at scale—country-specific strategies that simultaneously scale up delivery and strengthen health systems
- Reaching those most in need—women, children under 2, the poor

The challenges mentioned by the *Lancet* study group are all apparent in Indonesia. There are also others, as this section explains.

LAWS, POLICIES, AND REGULATIONS

- The national government has policies and regulations, but local health departments are not aware of them, or they are not issued with implementation and sanction guidelines and enforcement mechanisms.
- Due to a lack of clear guidelines for IYCF in emergencies at the local level, infant formula companies capitalize on emergency situations to gain new customers. After the earthquake in Yogyakarta, formula use doubled (from 12% to 25%) due to free donations of infant formula, and diarrhea cases quadrupled (Asefa, et al., 2006).
- Maternity leave is not adequate to support EBF. Indonesian law allows three months maternity leave, but some companies insist that the leave start a month or more before delivery, which cuts the postnatal term short.
- A new regulation calls for support of breastfeeding or breast milk expression (pumping) in the workplace, but there is no clear guidance for enforcement and a current lack of breastfeeding-friendly workplaces (place to pump milk and store it safely, facility for bringing infants to work).
- Although new Health Law 36 attempts to legalize the recommendations of the Code of Marketing of Breast Milk Substitutes by regulating promotion in health facilities and mandating support for breastfeeding—a positive step—as yet there are no legal guidelines for enforcement.

NATIONAL AND LOCAL CAPACITY

- There is a general lack of understanding of what causes malnutrition, as evidenced by government blanket distribution of packaged complementary foods to combat malnutrition. This distribution has not been targeted and has been shown to have no impact. In fact as distributions increased, so did malnutrition. In addition, only food security actors, no nutrition actors, are involved in MDG1 discussions.

- There is a failure to address the real barriers to proper nutrition and behavior change. Provision of commodities and print and other materials gives the impression that the problem is solved, and then people are confused and frustrated when rates of malnutrition do not decrease. Government and providers still assume that improving the knowledge of mothers will change behavior.
- The quality of pre-service training is poor. The style of teaching is based on rote memorization, not a competence-based or problem-solving approach. There are very few teacher training schools, and midwives, nutritionists, and doctors are graduating with very little training in nutrition. Because the number of midwifery schools, both public and private, is very high, it is difficult to control the quality of the education, especially in private schools, though the MOH regulates the schools.
- Trainings on nutrition are conducted vertically, in isolation according to the individual issue (VAD, breastfeeding, etc.). People in the same institution do not have the same information.
- Primary health care staff receive very little training in IYCF, counseling, and treatment of malnutrition. There is a perception that IYCF counseling is a separate activity that requires extra time and resources.
- There is little understanding of what CMAM is, even though it is the MOH strategy for addressing severe acute malnutrition. UNICEF and MOH are now revising the training modules.
- Deworming is rare, even though it is recommended for pregnant women in the second trimester and for children under 5 where prevalence is high.
- There is little awareness at the local level of the Code of Marketing of Breast Milk Substitutes and the risks of formula feeding.
- Health center staff do not take responsibility for maternal and young child nutrition beyond posyandu growth monitoring (without promotion) and provision of supplemental food for malnourished children. Non-nutrition staff feel they are not responsible or qualified to give nutrition advice or to proactively ask about nutrition, breastfeeding, and complementary feeding practices. The role of the nutritionist at puskesmas has been reduced to coordination, filling in forms, and managing logistics.
- The fact that formula company sales representatives frequently visit health facilities to promote their products puts breastfeeding at risk. Health center staff welcome the companies and do not perceive the risks of promoting formula in their facilities.

HEALTH AND NUTRITION SERVICES IMPLEMENTATION ISSUES

- There is a lack of coordination and leadership among the various nutrition actors within government, NGOs, UN agencies, academia, and the private sector.
- Nutrition programming has been project-focused; there is no long-term planning, budgeting, and implementation.
- There is a scarcity of education materials on proper infant feeding that are not sponsored by infant formula companies. The government has little capacity to draft and communicate nutrition messages based on formative research to address barriers to proper nutrition.
- The supply of materials to support programs is inconsistent; e.g., there are not enough growth monitoring cards, mother and child health handbooks, record books, and reporting forms. Many materials being produced by the MOH do not reach the local level. There seems to be

no system to monitor whether the local institutions have enough materials and whether they are distributed and utilized.

- Youth and adolescent issues are neglected; there is no promotion of nutrition or special programming for this age group.
- There are few or no efforts to partner with other local entities (NGOs, private sector, etc.).
- Local programs are implemented quickly, and the results are poor in part because money for them does not reach them until nearly the end of the program year.
- Local health centers and district health offices lack true autonomy. Programming is still dependent on a menu of options handed down from the MOH.
- Coverage is inadequate. Strategies to improve nutrition are effective only when they are implemented well and to scale, with high rates of coverage. The small noise created by dispersed pilot projects cannot be heard above the cacophony of marketers of infant formula and instant cereal.
- Maternal nutrition activities are very few, aside from iron supplementation, which has low compliance.
- There is a fear of reporting malnutrition because of government embarrassment about it.
- Midwives are expected to do all community level activities, but they are undertrained, overburdened, and undersupervised.
- The *Antenatal Care Book (Buku KIA*), which is one of the central government's major programs, is a book of information that follows mother and child, provides important health and nutrition information, and stores immunization, pregnancy, and growth monitoring information. However, families do not read the book, and because the information is already provided in written format, there is little counseling by health providers.
- The lack of counseling and communication skills means that opportunities are missed for communicating important IYCF information to mothers during ANC, postpartum care, immunization, growth monitoring, and sick child care.
- There is no continuum of care from household to posyandu to puskesma.
- Decision making is not evidence-based due to poor data quality and slow reporting systems. Information is not flowing well within the district health system (WHO, 2005), and the information flow between public and private health systems is even worse. Lack of demand for data for use in decision making at any level is a dangerous barrier to good health care. According to the World Bank, the health information system is so inadequate that less is known now about the health situation than in 2001 (World Bank, 2005b). Aside from limited, slow, and sometimes inaccurate data collection, there is limited capacity for analysis. Only a few health centers are able to analyze data. Health center data are analyzed by the District Health Office, which has minimal analytical capacity, and health centers passively receive the results, usually once a year. District hospitals also analyze their data once a year for their annual reports.

COMMUNITY NORMS AND INDIVIDUAL BEHAVIORS

- Community norms are based on perceptions about the superiority of "mixed feeding." Mothers lack confidence that breast milk is adequate. Families are bombarded by messages about the nutritive value of infant formula.

- Milk is frequently advertised on television and billboards.
- There is a perception that mothers who do not give at least some infant formula are poor. Mothers report that they are embarrassed if they cannot give infant formula because their peers will think they cannot afford it.
- Parenting style is permissive. Families give in to children's pleas for unhealthy foods and pacify them with junk food.
- Despite adequate access to formal health services in Jakarta, they are underutilized. Families consider puskesmas to be expensive and the midwife to be scary: midwives are not always known for giving the most gentle counseling.
- People do not understand their rights to subsidized or free health care, such as JAMKESMAS.
- There is an over-reliance on cereals for complementary feeding, and a lack of vegetables, fruits, animal products, and other proteins and fats in the average diet.
- Complementary feeding is introduced before six months, which reduces breast milk intake and decreases absorption of key nutrients for growth, like iron and zinc.
- Monthly growth monitoring (posyandu) activities take place outside in the hot sun and are of poor quality, so mothers do not perceive their benefit. This is a missed opportunity for counseling, growth promotion, and other services. Growth monitoring was intended to follow children's growth over time but instead has become a data collection system to determine growth status based on WFA. The KMS card, intended as a tool to help mothers track changes over time, is now incorrectly used for determining nutritional status.
- Street foods and store-purchased junk foods are a major part of the diet, though in most cases they are not appropriate for children under 5. Families prefer "instant food," which is not always nutritious.

VI. OPPORTUNITIES TO IMPROVE MATERNAL, INFANT, AND YOUNG CHILD MALNUTRITION

Indonesia presents a multitude of exciting opportunities for USAID to facilitate improvements in maternal, infant, and young child nutrition by capitalizing on the abundance of resources.

Opportunity 1: Capitalize on existing technical resources in Indonesia and on "friends of Indonesia" who currently or have previously worked in nutrition. There are a tremendous number of well-qualified health professionals at various levels of government and in academic institutions and international and local NGOs. Reportedly, these were once well-organized as a group and shared a great deal more, but coordination has waned with decreasing funding, and a lack of mandate has left them fragmented.

Opportunity 2: Use the momentum of President Yudhoyono's call to action to reduce stunting in Indonesia to leverage major resources, both locally and through embassy affiliations internationally.

Opportunity 3: Harness the energy and eagerness of the next generation of health providers by offering opportunities for service to communities for doctors, midwives, nurses, and nutrition students to fill gaps in service provision now and build their capacity to serve clients in the future.

Opportunity 4: Take advantage of a shift in government priorities and personnel to co-develop priorities for action. The new Minister of Health has a very different approach to issues like protecting, promoting, and supporting breastfeeding and is more open to regulating infant formula and pharmaceutical marketing, and the MOH is being reorganized in a way that is more conducive to a lifecycle approach to tackling the problem of undernutrition.

Opportunity 5: Join the thriving Indonesian breastfeeding movement and make the most of the incredible momentum generated by this group of activists, consumer rights groups, mothers' groups, champions, and parents who are bringing protection and promotion of breastfeeding in Indonesia to a tipping point. This group may also be interested in joining the effort to improve maternal nutrition and complementary feeding.

Opportunity 6: Become a leader in the new trend of social entrepreneurism related to health and nutrition. Support development of local enterprises that make a profit from products and of that improve health. A healthy climate exists for microenterprise due to the vast resources and microfinance institutions.

Opportunity 7: Profit from Indonesia's for-profit sector by facilitating greater investment of local and international companies in improving health through corporate social responsibility investments.

Opportunity 8: Join other donors in funding fortification of flour and oil. There are gaps in funding for vitamin A-fortified oil and flour fortification modifications based on new WHO guidelines. Fortification is the most cost-effective nutrition intervention with the possibility for the greatest level of scale. Major improvements could be made in maternal and child mortality and nutrition with this intervention, and there is already capacity, regulation, and momentum in Indonesia.

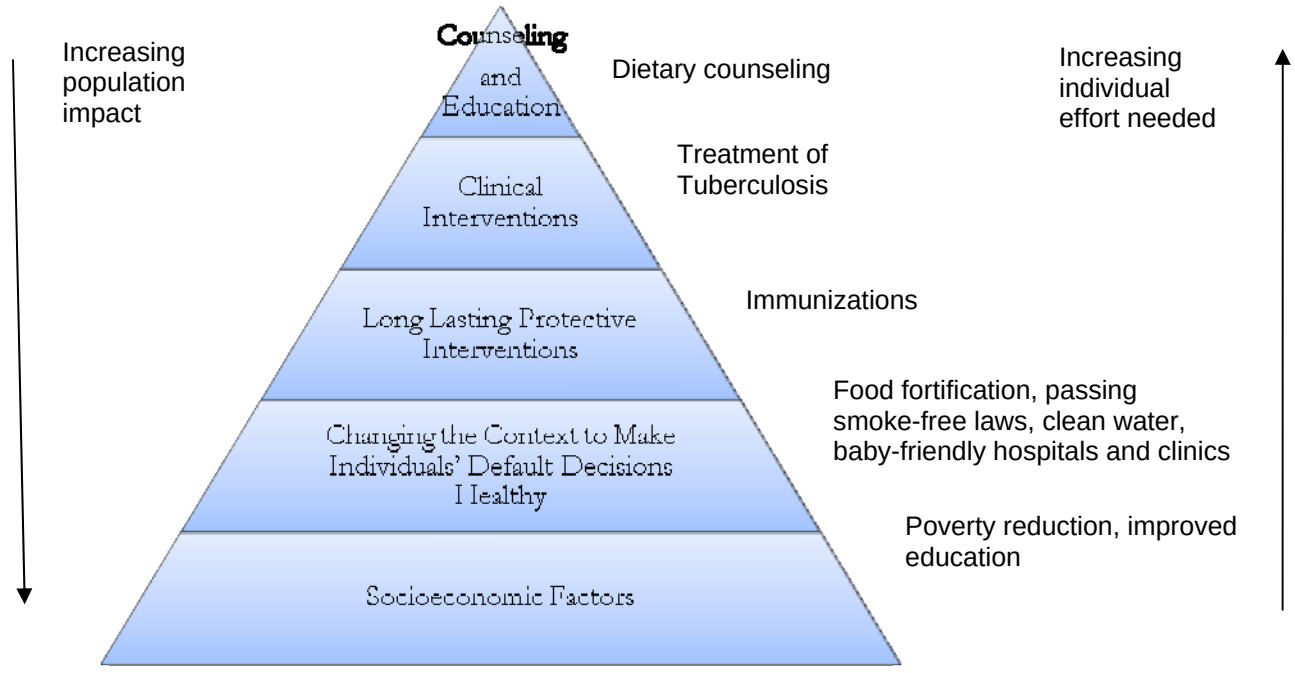
Opportunity 9: Facilitate public-private partnerships to improve maternal and child nutrition. Work with the MOH and the private sector to develop and market individually wrapped micronutrient supplements and sprinkles for pregnant women and women who are interested in becoming pregnant. Promote and where possible mandate maternal health and nutrition and breastfeeding programs through the workplace, including government offices, USAID partners, and local factories. Work with local telecommunications companies on mobile health programming using SMS for data collection and analysis, reminders, health alerts, etc. The World Bank is working on a feasibility study scheduled for publication in April 2010.

VII. RECOMMENDATIONS FOR PRIORITY ACTIONS

Priorities for improving nutrition in Indonesia based on an analysis of evidence-based interventions and gaps in current service provision should be maternal nutrition; immediate, exclusive and continued breastfeeding; and adequate complementary feeding and micronutrient intake.

- Recognizing the intergenerational effects of undernutrition, target maternal as well as child nutrition rather than child nutrition in isolation.
- Focus on evidence-based interventions like those highlighted in the *Lancet* nutrition series.
- Implement a package of interventions to address the entire array of causes of malnutrition.
- Implementation should be brought to scale, where possible as high as 99% coverage.
- Investing in pre-service education and training and in-service training to improve the capacity of all staff, not just nutritionists. While midwives and certain others should have priority, all health staff should be trained in practical counseling on basic nutrition messages.
- Encourage programming that focuses on the continuum of care from preconception to pregnancy to children under 2.
- Implement programs that will enhance the overall management of puskesmas activities.
- Do a thorough behavioral analysis to address the barriers to practicing healthy behavior.
- Implement programs that change the context so that default choices are healthy ones. Interventions to improve nutritional status rely on the daily choices of individuals living in complex environments with competing demands for time and attention. The more public health interventions can be designed to be easy or even nearly effortless, the greater the possibility for consistent action. In a recent review of public health actions, Frieden (2010) presented the pyramid shown in Figure 16 for changing the context. Second to improving socioeconomic factors, changing the context has a high probability of increasing population impact with minimal effort on the part of the individual.

Figure 16. The Health Impact Pyramid



- Especially in urban areas, make available healthy ready-to-eat foods to compete with the ubiquitous unhealthy options for children. Make it fun, easy, and cheap for mothers to make good choices for their children based on locally available foods.
- Invest in local monitoring and use of data.
- Publish results to build a body of evidence and literature unique to the Indonesian context.
- Support the formulation of implementation guidelines for policies and regulations to support the 10 steps to successful breastfeeding and appropriate complementary feeding.

VIII. RECOMMENDATIONS FOR SIGNIFICANT INVESTMENT

The main nutritional problems in Indonesia are stunting, wasting in some areas, maternal and child anemia, and promoting balanced nutrition to slow the rate of the nutrition transition (prevalence of overweight). WHO and UNICEF recently completed a landscape analysis to document Indonesia's readiness to accelerate its nutrition programming (see Appendix D for their recommendations.)

There are three areas where USAID investment would have the biggest payoff: (1) quality of health services; (2) coverage of behavior change activities (mainstreaming and geographic coverage); and (3) better management of health services.

QUALITY OF HEALTH SERVICES

- Issue a call to action for all health care providers who have contact with women of reproductive age, pregnant women, and children under 5. Nutrition should not be a stand-alone activity but the responsibility of all health providers. The President of Indonesia has launched a challenge to reduce stunting. This will not be achieved unless there is a concerted effort.
- Provide appropriate pre-service training for midwives, nurses, and doctors on IYCF, general nutrition, and counseling and negotiation techniques. The World Bank is currently looking at regulation of pre-service education and will concentrate first on improving medical, nursing, and midwifery schools. Nutrition pre-service training will not be a priority for several years.
- Implement and integrated package of nutrition messages and interventions, such as ENA**.**
- Change the current treatment of malnutrition with biscuits, milk, and eggs. These rations are not useful given the complex causes of malnutrition. Ensure CMAM in areas of severe acute malnutrition.
- Continue training to professionalize health volunteers. They have the most contact with mothers and are responsible for monthly growth monitoring data but have little or no training in anthropometrics and IYCF counseling.
- Prioritize working with the poorest families and explore nutrition interventions that are linked to livelihood improvements, such as homestead farming (HKI), social microenterprise development (healthy street foods, water and sanitation projects), and conditional cash transfers.
- Promote innovations to rethink—not revitalize—posyandu. It is time for a new posyandu that is appropriate for today's lifestyle. Some ideas are to
  - Explore partnerships both with private providers to provide sick child care and support health volunteers and with local private companies. One idea would be to ask the local leader to insist that private companies provide space for posyandu activities that are more comfortable, fun, and convenient for families. Alfa Mart, for example, is present in many communities and has parking lots that could be shaded. Owners could offer discounts for families who can prove they have weighed their child. KMS cards—always in short supply—could be sold there or subsidized by local businesses.
  - Instead of training health volunteers, use funds to train mentors who will go to the posyandu and help health volunteers implement growth monitoring according to best practices.

- Replace the current "weighing post" model with a community-based growth promotion (CBGP) model. Unlike traditional growth monitoring approaches, CBGP attempts to prevent malnutrition using adequacy of monthly weight gain to identify children with feeding or health problems; traditional growth monitoring attempts to respond to malnutrition using current weight to identify children who are already malnourished. The trigger for action in CBGP is inadequate monthly weight gain, a sign of growth faltering and a precursor to malnutrition.

- Give priority to pregnant women and children under 2 for nutrition and malnutrition prevention messages, including weighing at posyandu. Experiment with different approaches. Children under 1 should be weighed every month but children over 1 could be weighed every three months, as is done in Thailand.

- Support the use of zinc for treatment of diarrhea and as a supplement for children under 5 to decrease stunting and decrease the incidence of ARI.

- Given Indonesia's vulnerability to natural disaster, support implementation of IYCF in emergency guidelines.

- Support MOH and UNICEF in establishing a nutrition institute—a local authoritative body with members from universities, the public and private sectors, health, agriculture, and NGOs to harmonize messages about the state of the art and share lessons learned.

COVERAGE

Change is facilitated when numerous activities and channels are communicating the same messages and when behaviors and determinants are well understood and barriers addressed.

- Select one or two provinces and implement all elements of the program there. This will strengthen the role of the province, referral systems, accountability, and data use and will saturate the area with evidence-based messages to dispel myths and combat misinformation.

- Integrate nutrition into all elements of health care using ENA.[1] Nutrition should be the thread that runs through all programs. All staff should be trained in basic nutrition and how to deliver basic messages. Only complicated cases or cases requiring rehabilitation should require involvement of a trained nutritionist.

- Implement an evidence-based behavior change strategy at the community level to improve individual behaviors. Lessons from the LINKAGES project have shown this can be successful if good formative research is done and barriers are addressed.

- Coordinate the efforts of professional associations, government, NGOs, etc.

- Communicate regularly within the project area and to areas outside to build awareness and demand.

- Invest in an area that is working on improvements in water and sanitation or already has done so. Malnutrition cannot be alleviated if infection rates do not also decrease.

[1] ENA covers maternal nutrition, breastfeeding, complementary feeding, Vitamin A, iron, iodine, and feeding of the sick child.

HEALTH SYSTEMS MANAGEMENT

Poor delivery of nutrition services is merely a symptom of local leadership and management challenges. In some cases these weaknesses lead families to prefer private services. To make the puskesmas and other community health services more professional and responsive to the needs of their clients, the following improvements are recommended:

- Improve pre-service orientation for puskesmas doctors, including education in program management, leadership, budgeting and planning, data collection, analysis and reporting and state of the art technical information.
- Develop a local area monitoring system that will enable puskesmas staff and communities to advocate for funds, respond to emergencies, plan, and budget. One model developed by UNICEF that could be adapted for this purpose is the Local Area Monitoring and Tracking system (LAMAT). It is a management tool to assist district health offices, midwives, and community-based health volunteers to identify and address problems among mothers and newborns in health facilities and communities. LAMAT includes a computerized monitoring and tracking system for facility-based maternal and child health activities. The software is installed in a computer in a community health center where an assigned staff member is trained to enter data and generate simple analysis based on users' requests. Village midwives both provide and use data. Each month, analyzed data are discussed during a planning meeting at the health center. Midwives, doctors, and community members collectively review the results and formulate plans for addressing identified gaps.

APPENDIX A. SCOPE OF WORK

Global Health Technical Assistance Project
GH Tech
Contract No. GHS-I-00-05-00005-00

USAID/Indonesia Nutrition Assessment for 2010 New Project Design

SCOPE OF WORK

(Revised: 1-19-10)

I. Title

Activity: Situation Analysis of Policies and Programs Addressing the Nutritional Needs of Mothers, Infants, and Young Children in Indonesia

Contract: Global Health Technical Assistance Project (GH Tech), Task Order No. 01

II. Performance Period

The anticipated period of performance for the assignment is on or about January 15–March 01, 2010. This timeline may be adjusted depending on consultant's availability.

III. Funding Source

USAID/Indonesia

IV. Purpose and Objective of the Assessment

The assignment under this scope of work (SOW) is to assist USAID/Indonesia to plan for the new bilateral project through an assessment and gap analysis of existing nutrition policies, programs, and statistics. The GH Tech Project will conduct a situation analysis of organizations—including the government, development partners, and the private sector— implementing programs to address nutritional needs of mothers and infants in Indonesia. Potential public-private partnerships will also be investigated as possible channels for addressing under- or malnutrition. The focus will be to gather information on existing nutrition policies and types of maternal health and young child nutrition programs currently being implemented, identify gaps in coverage (quantity and reach), examine existing human resources and capacity needs, and identify opportunities for increased nutrition impact in maternal, infant and young child nutrition.

The primary objectives of the assessment are to:

1. Review the nutrition situation for mothers, infants, and young children, including nutritional status, primary nutrition problems, and causes of malnutrition.
2. Review current nutrition programming supported by the Ministry of Health, development partners, and the private sector. Develop a map of nutrition interventions identifying who is doing what and where.
3. Recommend priority actions for improving maternal, infant, and young child nutrition.
4. Identify, from these priority actions, opportunities for potential investment by USAID to achieve significant impact or to leverage inputs from the government or other partners. Provide recommendations on the content of a future nutrition program in order to assist the

Indonesia Mission in promoting improved maternal and infant nutrition as a major goal of their overall program.

Specifically, the assessment seeks to answer the following questions:

AREA	QUESTIONS
Maternal nutrition	• What are the primary nutritional problems in Indonesia, and what are the causes of undernutrition in women and young children? • What is needed to enable services to better reach and serve pregnant women, infants, and young children? • Analyze malnutrition from angles to include -Food security -Geographical location -Caring versus cultural practices -Access to health care systems -Environment, hygiene, and water and sanitation
Infant and young child feeding practices	• How do health workers, families, and mothers define early initiation of and exclusive breastfeeding? • What are the perceived challenges to early initiation of breastfeeding? • What are the perceived challenges to exclusive breastfeeding? • What are perceived challenges to initiating timely introduction of complementary foods?
Map of nutrition policies and interventions	• Which organizations are doing what in each province? • Assess urban markets for the introduction of fortified complementary food, and for other private sector strategies, such as selling nutritional supplements, to improve undernutrition.
Nutrition policies	• What national policies and guidelines exist on nutrition, especially for programs targeting pregnant women, infants, and young children?
Opportunities to improve nutrition programs	• What gaps need to be filled to ensure adequate coverage of interventions? • What are the challenges to improving maternal and child undernutrition? And what are opportunities for overcoming these challenges? • How can USAID/Indonesia's nutrition program be best positioned to address country and global nutrition issues, keeping in mind synergies with other partners and the government's priority areas? • In light of these findings, how should the USAID Mission structure its program to promote improved maternal, infant, and young child nutrition as a major goal of its overall maternal and child health program?

V. Background

Nutritional status in Indonesia has improved markedly over the past decades. In addition, Indonesia is one of the first developing countries to identify micronutrient deficiency problems and launch successful micronutrient intervention programs. However, Indonesia still faces many challenges. Continuing improvement in nutrition has been threatened by the economic crisis in 1997/98, declining resources for nutrition, and increasing diversity in food intake. More than a quarter of children are still underweight, and about 33% are stunted or wasted (World Bank 2006).

Disparity is still very high in several regions, especially in eastern Indonesia. Underlying poor nutrient intake and disease are issues of insufficient access to food, inadequate health care, and poor caring practices that inhibit growth and health (Global Report 2009). Undernutrition encompasses stunting, wasting, and deficiencies of essential vitamins and minerals (collectively referred to as micronutrients) as one form of the condition known as malnutrition, with obesity or over-consumption of specific nutrients as another form. (*Lancet*, 2008).

The government of Indonesia completed its 2009–2014 Nutrition Strategic Planning to address the nutritional problems by prioritizing the following: 1. Build on previous nutritional programs; 2. increase early breastfeeding initiative in hospitals and health centers to support regulations on breastfeeding, require offices to provide breastfeeding rooms for mothers, improve IEC material to support exclusive breastfeeding and complementary feeding; and 3. nutritional supplementation and fortification in the form of

a. Supplemental micronutrients for pregnant women
b. Increased access to nutritional counseling for pregnant women and lactating mothers
c. Complementary feeding for children 6–23 months emergency cases
d. Develop fortified cooking oil for the poor
e. Develop local high energy protein food products
f. Create care facilities for malnourished children under 5 by creating TFC in health centers
g. Placement of nutrition officers in the village
h. Revitalize posyandu and utilize KMS (health cards) designed gender specific. (GOI 2009)

VI. Audience

The audience for this assessment includes USAID/Indonesia health staff and staff in the Bureau for Global Health. Recommendations made by the assessment team will be considered in the new MNCH flagship project design.

VII. Methodology

The assessment team will use a combination of techniques including document reviews, key informant interviews and survey of selected partners to assess program effectiveness and outcomes. The assessment team will review documents provided by USAID/Indonesia.

Document Review

Prior to arriving in country and conducting field work, the team will review various project documents and reports, including but not limited to annual project workplans, progress reports, and results reports; national health strategy and nutrition reports; Government and other

monitoring data; and project documentation of accomplishments, including process documentation and USAID strategy documents.

Team Planning Meetings

A two-day planning meeting will be held, with the team members only, prior to official onset of meetings and work with USAID and others. This time will be used to clarify team roles and responsibilities, deliverables, development of tools and approach to the assessment and redesign, and refinement of agenda. In the TPM the team will:

- Share background, experience, and expectations for the assignment
- Formulate a common understanding of the assignment, clarifying team members' roles and responsibilities
- Agree on the objectives and desired outcomes of the assignment
- Establish a team atmosphere, share individual working styles, and agree on procedures for resolving differences of opinion
- Develop data collection methods, instruments, tools and guidelines, and methodology and develop an assessment timeline and strategy for achieving deliverables to be presented and approved by USAID and implementing partner at the end of the TPM

Debriefings

An oral briefing meeting will be approved by USAID/Indonesia and held with USAID/Indonesia and other key stakeholders after the site visit work is completed and prior to the departure of the team from the country. The objective of the debriefing would be to share the draft findings and recommendations, solicit comments and inputs, and clarify any remaining questions or issues upon team arrival and before departure.

Field Visits/Key Informant Interviews

The evaluation team will conduct key informant interviews with USAID and key stakeholders, including but not limited to:

1. GOI – Ministry of Health Indonesia Nutrition Section
2. Department of Nutrition Faculty of Medicine University of Indonesia
3. World Bank
4. Helen Keller International
5. Micronutrient Initiative
6. Mercy Corps (please provide a list of interviewees)
7. UN Agencies, including UNICEF, WFP, etc.
8. Other donors/development partners, including GTZ, etc.

Data sources and collection methodologies should also be noted in the final assessment report.

Proposed workplan and methodology will require approval from USAID.

VIII. Scope of Work

Data Collection

A desk review will be conducted of nutritional status in Indonesia and current and past policies and programs for nutrition. Technical documents such as Indonesia Health Policy Guidelines, USAID reports, UNICEF/WHO guidelines, project documents, and published and unpublished documents should be reviewed to obtain relevant information on state-of-the-art in nutrition and trends in nutritional status, dietary intake of pregnant women, and infant feeding practices. A literature review will be conducted to source information on past and current nutrition programs on the ground.

Field visits will be conducted in select areas where nutrition programs are being implemented. During field visits, the consultants will interview key stakeholders on the nutrition activities they are currently implementing, their focus areas, and plans for scale up. These will include the Ministry of Health, UN agencies, partner organizations, the private sector, and beneficiaries.

- Department of Health/DepKes
- Partner organizations:
    i. UN Agencies, including UNICEF, WFP, etc.
    ii. USAID-funded programs, including HSP, Mercy Corps, HKI
    iii. Other donors/development partners, including GTZ, etc.
- Universities, nutrition institutions, and research organizations

A mapping exercise will also be conducted of current programs and services addressing nutritional needs of women and children, based on the focus areas of organizations, types of services delivered, the location of these services, and geographical coverage.

Data Analysis and Reporting

Following data collection, the consultants will review and analyze the data. They will prepare an initial draft report highlighting key findings, conclusions, and recommendations to the USAID Mission. Subsequent drafts will also be provided for review and comments. A debriefing session on the assessment findings will be held in Indonesia with the USAID Mission. Finally, the consultants will prepare a final report not exceeding 30 pages that will be submitted to the Indonesia Mission.

The report should be organized under the following major content areas:

- Overview
- Situation Analysis
    i. Maternal nutrition for pregnant and lactating mothers
    ii. Infant malnutrition rates (stunting, underweight, and micronutrient deficiencies)
- State-of-the-Art in Infant and Young Child Feeding (breastfeeding and complementary feeding)
- Current Policies and Programs
    i. GOI nutrition policies

ii. Current nutrition programs

- Department of health
- Donors/partners
- Private sector

iii. Map of nutrition services

- National programs and coverage; pilot or noteworthy smaller programs
  a. implementing organizations
  b. focus areas, program areas
  c. geographical coverage

- Challenges—Perceived challenges to early initiation of breastfeeding, exclusive breastfeeding, and timely introduction of complementary feeding
- Opportunities—Potential opportunities to improve maternal, infant, and young child undernutrition
- Recommendations of priority actions to improve maternal, infant, and young child nutrition in Indonesia
- Recommendations of areas for potential investment by USAID to achieve significant impact

IX. Logistics

All logistical support for the nutrition assessment will be provided through GH Tech. Activities that will be covered include recruitment of the assessment team; payment of team members for six-day work weeks; support for all expenses related to the assessment; logistical support ; and limited distribution of the draft and final report.

Specifically, GH Tech will:

1. Carry out the necessary preparatory actions for the nutrition assessment, including identifying appropriate consultants for USAID's review and consent.
2. Organize the assessment team planning meeting with the chosen consultants and USAID.
3. Organize a meeting(s)/briefings with Mission staff.
4. Manage and support the team.
5. Submit a draft of the assessment report to USAID for comments.
6. Organize a debriefing of the assessment to USAID.
7. Edit final report before submission to USAID.
8. Submit the completed assessment report to USAID.

X. Team Composition, Skills, and Level of Effort

Assessment Team

Two Indonesia-based consultants will be hired to conduct the assessment with one international nutrition expert and possibly a USAID/Washington Nutrition Advisor. One consultant will act as the team leader who will have overall oversight of the assessment. The **team leader** will be responsible for providing leadership and coordination and facilitation of all assessment activities. The team leader, in consultation with other team members, will develop tools for the assessment, a timeline, and a design plan to be shared with USAID for their feedback and comments. S/he will be required to ensure quality of work and provide direction and coordination to the other team members. S/he would be responsible for the assessment and reporting on areas not covered by other members of the team. The team leader will coordinate the development of the outline for the draft report, present the report, and after incorporating the comments submit the final report to the GH Tech Project within the prescribed timeline. The team leader is also expected to provide recommendations for future directions.

Skills/Experience: The team leader will be a senior person having more than 15 years' experience working in international public health, particularly in the areas of maternal, infant, and young child nutrition. S/he should have a good understanding of project administration, and financing and management skills, including a thorough understanding of USAID program management. S/he should have excellent writing and communication skills. S/he should have past experience of leading a team for health project evaluations or related assignments.

The **additional team members** will assist in the design of assessment instruments and will be responsible for reviewing progress in accomplishing the planned results and outcomes per their assigned roles and responsibilities. The team members will be responsible for drafting portions of the assessment report and for preparing the assessment brief. The two local members will contribute as follow:

1. One team member will be able to provide a **historical perspective on USAID programs and priorities,** as well as **bilateral/GOI partnerships.**
2. One team member will be able to provide an **academic and clinical nutrition perspective** and contribute to an **understanding of national-level activities, strategies, and evidence-based interventions.**

One of the team members will also act as the **assignment coordinator**. This individual will be responsible for consolidating critical information gathered, coordination, and facilitation aspects of this task, ensuring that the work moves forward swiftly and smoothly. This includes coordinating meetings and key interviews, obtaining documents, supporting the development of tools, performing critical follow-up, and supporting the preparation of the final report and briefings/debriefings with USAID. The assignment coordinator will be charged with managing many of the tasks related to bringing the team and information together.

Skills/Experience: The team members will have a mixture of the following expertise, qualifications, and experiences:

- Individual(s) with significant technical expertise in designing and implementing programs to improve infant and young child nutritional status, and reduce maternal and child mortality.
- Individual(s) with strategic thinking and planning experience.
- Project monitoring and evaluation experience is desirable.
- Individual(s) with an understanding of USAID and its procedures.

- Individual(s) should have a first-hand understanding of the challenges of working to achieve objectives of USAID Missions, ministries of health, and other partners.

All team members will

- Participate in the team planning meeting and all interviews and site visits
- Foster productive team working relationships
- Facilitate the preparation of all deliverables
- Maintain records and notes of all interviews and meetings

ACTIVITY	WHO	ESTIMATED LOE
Document collection	Assignment Coordinator Local Team Member	2 2
Background reading	International Team Leader Assignment Coordinator Local Team Member USAID Nutrition Advisor	4 4 4 4
Travel to Jakarta	International Team Leader USAID Nutrition Advisor	2 2
Preparations and Team Planning Meeting	International Team Leader Assignment Coordinator Local Team Member USAID Nutrition Advisor	2 2 2 2
USAID Meeting	International Team Leader Assignment Coordinator Local Team Member USAID Nutrition Advisor	1 1 1 1
Interview with Key Stakeholders	International Team Leader Assignment Coordinator Local Team Member USAID Nutrition Advisor	3 3 3 3
Field Visits (including travel) How many partners are they planning to meet with? **1 field visit, 2 partners (TBD)**	International Team Leader Assignment Coordinator Local Team Member USAID Nutrition Advisor	4 4 4 4
Meetings & Report Drafting	International Team Leader Assignment Coordinator Local Team Member USAID Nutrition Advisor	5 5 5 3
Debriefings with USAID and others (including preparation)	International Team Leader Assignment Coordinator	1 1

ACTIVITY	WHO	ESTIMATED LOE
	Local Team Member USAID Nutrition Advisor	1 1
Return travel	International Team Leader USAID Nutrition Advisor	2 2
USAID/Indonesia reviews draft report and comments	USAID/Indonesia	10
Report finalization	International Team Leader Assignment Coordinator Local Team Member USAID Nutrition Advisor	5 2 2 2
USAID reviews and approves report	USAID/Indonesia	5
GH Tech edits report	GH Tech	3-4 weeks
TOTAL LOEs	International Team Leader Assignment Coordinator Local Team Member USAID Nutrition Advisor	**29 day est.** **24 days est.** **24 days est.** **24 days est.**

XI. Deliverables

The deliverables are:

A. **Briefings:** The assessment team will provide regular in-country briefs to USAID/Indonesia on progress and discuss problems and issues on a bi-weekly basis. Additional debriefings will be convened as required by either party. The assessment team will make an in-country presentation to USAID on the main findings at the end of the in-country reviews and analysis.

B. **Workplan:** The assessment team will provide a detailed workplan to USAID at the conclusion of the TPM and before commencing the assessment work. The workplan will outline how the assessment will be undertaken and the methods to be used. It will be approved by USAID before interviews are conducted.

C. **Methodology:** The methodology for collecting and analyzing the data will be prepared during the TPM and reviewed/approved by USAID before commencing the interviews.

D. **Draft report:** The first draft of the assessment report will be submitted before the assessment team departs Indonesia and after the final debriefing so that comments can be incorporated into the draft report.

   The report (not including attachments) will be no longer than XX pages with an Executive Summary, Introduction, Methodology, Findings, Lessons Learned, Strengths, Weaknesses, Opportunities and Conclusions, and Recommendations in English (not including Appendices). USAID/Indonesia will circulate the draft within USAID and partners as deemed necessary to review the draft, and provide one set of comments to the draft report within 5 working days upon receipt.

E. **Final report:** The final **draft** assessment report will be due at USAID/Indonesia within 5 working days after the team receives comments from USAID/Indonesia.

Upon final approval of the content by USAID/Indonesia, GH Tech will have the report edited and formatted. This process takes approximately 3–4 weeks. The final report will be submitted electronically. Ten hard copies of the report will be provided to USAID/Indonesia.

XII. Relationships and Responsibilities

In addition to providing consultants for the nutrition assessment, GH Tech will provide all administrative and secretarial support for the completion of the SOW. GH/HIDN/NUT and USAID/Indonesia will provide some background and reference materials to GH Tech consultants in advance of assignment initiation. Local team members are expected to compile updated documents and information. Technical direction for the nutrition assessment will be provided by:

Tara O'Day
USAID/Indonesia
Maternal and Child Health Advisor
Tel: +62-21-3435-9354
Fax: +62-21-380-6694

XIII. Cost Estimate: TBD

XIV. References

Black.R, Allen L et al "Maternal and child undernutrition: global and regional exposures and health consequences." Lancet 2008; 5-18.

Prioritas Program Perbaikan Gizi Masyarakat 2010-2014 (Prioritized Program to Improve Community Nutrition) Ina Hernawati DepKes, Government of Indonesia, Jakarta, October 6, 2009

United Call For Action 2009. Investing in the future: A united call to action on vitamin and mineral deficiencies. www.unitedcalltoaction.org

World Bank. 2006. Health Sector Decentralization of Indonesia's Nutrition Program: Opportunities and Challenges. World Bank Document. Health, Nutrition, and Population Unit, East Asia and Pacific Region Washington D.C.

APPENDIX B. PERSONS CONTACTED

Community Health Directorate, Ministry of Health

Bambang, Chief of Section

Hospital Service Directorate, Ministry of Health

Andi Wahyuningsih Attas, MD, SpAn, Director

Health Promotion Directorate, Ministry o Health

Kodrat Pramudho, SKM, MKM, DR, Head of Administration

Maternal Health Directorate, Ministry of Health

Ina Hernawati, MD, MPH, Director

Center for Data and Epidemiological Surveillance, Ministry of Health

Jane Soepardi, MD, MPH, DSc, Head of the Center

Bappenas (Badan Perencanaan Pembangunan Nasional/National Bureau for Development Planning)

Dr. Arum Atmawikarta, MPH, Head of Health and Nutrition Unit

Child Health Directorate, Ministry of Health

Dr. Kirana Pritasari

Dr. Erna Mulati

Community Nutrition Directorate, Ministry of Health

Dr. Minarto, Director

NICE Project, Ministry of Health

Rachman

Afrizal

Center for Nutrition Research and Development, Ministry of Health

Abas Basuni

Susilowati Herman

Sanjaya, Researcher

Human Nutrition Faculty of Agriculture University

Prof. Hardinsyah, PhD

Bureau for Health Research and Development Center, Ministry of Health

Prof. Dr. Agus Purwadianto, MD, Head of the Bureau

BPOM (Badan Pengawasan Obat-Makanan/Bureau for Food and Drug Administration)

Tetty Helfery Sihombing , Director of Food Product Standardization

Poltekkesbidan Jakarta (Midwifery School)

Indra Supradewi, SKM, MKM, Headmaster

IBI (Ikatan Bidan Indonesia/Indonesian Midwifery Association)

Dra. Harni Kasno, MKM, President

Sentra Laktasi

Dr. Utami Roesli, MD

HKI (Helen Keller Indonesia)

John Palmer, Country Director
Elviyanti Martini, Senior Nutrition Advisor

Mercy Corps

Fransiska E.Mardiananingsih, MD, MPH, IBCLC, Senior Health Advisor

Micronutrient Initiatives

Elvina Karyadi, MD, MSc, PhD, Director, Indonesia

Health Office of Palembang and Puskesmas Staff

Gema Asiani, MD
Staff members

HSP (Health Service Program)

Reginald Gipson, MD, Chief of Party

Pita Putih (APPI)

Dr. Sunitri Widodo
Mien Dahlan Ranuwihardjo
Mulyeti Anwar

Aisyiyah (Muhammadiyah)

Dr. Atikah M Zaki

Muslimat (NU)

Imas Masrifah

Yayasan Kesehatan Perempuan

Dr. Ninuk Widyantoro

Pramuka

Dr. Yoedianingsih

Desi Ampurini

Septembri Yanti

WHO (World Health Organization)

Dr. Martin Weber, Dr. med. Habil., PhD, SpA(K), DTM&H

Sugeng Eko Irianto, PhD

UNICEF

Anne Vincent, Head of Health and Nutrition Unit
Sonia Blaney, Nutrition Unit
Anna Winoto, Nutrition Unit

World Bank

Claudia Rokx, Lead Health Specialist

CARE

Abidgail, Nutrition Advisor, Window of Opportunity Project

Tani, Senior Health and Nutrition Advisor

APPENDIX C. MAPPING OF NUTRITION SERVICES AND PROGRAMS

	Maternal Nutrition	Newborn Nutrition (IBF)	Exclusive Breastfeeding	Complementary Feeding	Micronutrients	Detection and Treatment of Malnutrition	Location
Government							
Nutrition Directorate	KADARZI Research	KADARZI	KADARZI	KADARZI	KADARZI	KADARZI Local area monitoring	All provinces
Maternal Health Directorate	Kelas Ibu ANC				Kelas Ibu promotes sprinkles		Sumatra Utara, Sumatra Selatan, NTB, NTT, Sulawesi Selatan
Child Health Directorate		IMCI				Early detection of child under-development	All provinces
Donors							
ADB-NICE **2008–2012**	KADARZI	KADARZI	KADARZI Lactation management	KADARZI Posyandu cooking demonstrations	KADARZI Flour Fortification Micronutrient sprinkles (Taburia)	KADARZI CMAM	North Sumatra, South Sumatra, NTB, NTT, West Kalimantan, and South Sulawesi
World Bank	Pilot anemia project (West Java)				Vitamin A Fortified Oil (with ADB)	Study - SMS for Nutrition monitoring (SKDN) Family Life Survey	West Java, Nationwide
United Nations							
WFP	Biscuit, noodle distributions for pregnant and lactating women					Biscuit, noodle distributions to 12–59 mos Food security and Vulnerability Atlas will identify 'hot spot districts'	NTT, NTB, East Java

	Maternal Nutrition	Newborn Nutrition (IBF)	Exclusive Breastfeeding	Complementary Feeding	Micronutrients	Detection and Treatment of Malnutrition	Location
WHO		Promotion of 3-in-1 breastfeeding, complementary feeding, and BF /HIV training	3-in-1 training	3-in-1 training		Development of treatment protocols for malnutrition treated in hospital	Nationwide
UNICEF	Micro-nutrient supplementation for pregnant women	Legal Support to legalize "Code of Marketing of BMS"	Emergency IYCF toolkit	IYCF	Vitamin A with micronutrient Initiative Iodine	Developing national guidelines for CMAM	Aceh, Central Java, NTT, Papua
NGOs and Contractors							
WVI		Lactation management (LM) training for health staff	Lactation management training for health staff				Aceh, Surabaya
Mercy Corps		Lactation management training for health staff Mothers support groups 10 Steps to Successful Breastfeeding	Lactation management training for health staff Mothers support groups 10 Steps to Successful Breastfeeding	Microenterprise selling healthy, ready to eat complementary foods (food vendors)			Jakarta, Yogyakarta, Aceh
Helen Keller International			Breastfeeding in the workplace		Vitamin A for unreached population (West Java) Working with KFI and MI on fortification (oil, flour)		West Java
Save the Children		KRAFT project MCHIP	KRAFT	KRAFT project			West Java, Aceh

	Maternal Nutrition	Newborn Nutrition (IBF)	Exclusive Breastfeeding	Complementary Feeding	Micronutrients	Detection and Treatment of Malnutrition	Location
CARE	WOP	Window of Opportunity (WOP) Project	WOP	WOP		IYCF-CMAM integrated training	NTT
JHPIEGO (MCHIP)	Calcium supplementation	MCHIP				PWS software for LAMAT monitoring	Aceh, West Java, Kalimantan
KFI					Flour fortification Vitamin A-fortified cooking oil		Nationwide
Muslimat				Complementary food support to posyandu for 0–3-year-old children		Campaign for Healthy Behavior and posyandu Utilization	
Sentra Laktasi		Lactation management training (LM) for health providers, health volunteers Advocacy and communication to support early initiation & EBF	LM for health providers, health volunteers Advocacy and communication to support early initiation and EBF				Nationwide based on request
BK.PP-ASI		Advocacy: to develop regulations Advocacy & training: baby-friendly hospital Assist GOI with new Mother & Baby Friendly Indonesia Guidelines	Monitoring & evaluation: formula and bottle feeding attitude Training: lactation management				Nationwide based on request

	Maternal Nutrition	Newborn Nutrition (IBF)	Exclusive Breastfeeding	Complementary Feeding	Micronutrients	Detection and Treatment of Malnutrition	Location
YKAI		Radio program on nutrition				Revitalization of posyandu support	
Yayasan Orang Tua Peduli		Breastfeeding classes, for middle income families Listserv Website	Mothers Support Group	CF feeding classes			Jakarta, West Java
AISYIYAH		Desa Siaga/ P4K, which includes early initiation		Complementary food demonstrations Community education on nutrition			
YLKI		Code monitoring					
AIMI		Breastfeeding classes (Jkt, Bogor, Bandung) Listserv Hotline Websites	AIMI goes to offices: education and advocacy World BF trend initiative report Hosting IBFAN BF Regional Meeting 2010				Jakarta, Surabaya, West Java
Saraswati		Lactation management training					
PKK					Vitamin A distribution at posyandu (February and August) Iron tablet distribution at posyandu	Supplementary food distribution at posyandu Growth monitoring	Nationwide

	Maternal Nutrition	Newborn Nutrition (IBF)	Exclusive Breastfeeding	Complementary Feeding	Micronutrients	Detection and Treatment of Malnutrition	Location
Private Sector							
Indofoods				Complementary feeding education and demonstrations			

KADARZI

Keluarga sadar gizi (Kadarzi = Family with good nutrition awareness):

A campaign to improve nutrition behaviors that has the following five objectives:

1. Every family should regularly monitor the growth of children under 5 and the weight and health of pregnant women. Target: 80%.
2. Babies should be exclusively breastfeed up to 6 months old, and continue to 2 years. Target: 80% of infants.
3. All families should try to consume a variety of food in adequate amounts using the food pyramid as a guide.
4. All family members should consume iodized salt. Target: 90% of population.
5. All families should receive and consume the government nutrition supplementation programs (high dose vitamin A twice a year and 90-day course of iron-folate pills for pregnant women)

Community-based surveillance system is part of the program.

Nutrition Research

MOH Nutrition Directorate

- Fortified cooking oil study.
- Promoting the need for infant iron supplement (drops) starting at 3 months
- Vitamin A survey
- Maternal nutrition e.g. pregnant women weight gain

Kelas Ibu (Mothers Support Group)

- The concept of maternal classes and PD approach to educate mothers on nutrition

Integrated Management of Child Illness (IMCI)

- District team problem-solving guidelines
- Improve support to IMCI services and encourage more for HC staff attitude in proper practices using the revised newborn care component guide.

IYCF in Emergencies:

UNICEF-WHO-IDAI has issued a joint recommendation letter on how to manage feeding of children under 2 in emergency situations. The recommendation is to protect the practice of breastfeeding and encourage relactation; and limits the use of formula milk only to specific situations.

Vitamin A Supplementation:

Since 1988, distribution of 200,000 IU vitamin A capsules to 1–5 year-olds every 6 months (February and August) has been implemented; to which later in 2004 was lower-dose capsules (100,000 IU) for infants above 6 months old. As recommended by WHO the policy provides every postpartum woman with 2 x 200,000 IU vitamin A capsules.

NUTRITION ACTIVITIES OF PROFESSIONAL ASSOCIATIONS

	ORGANIZATION	ACTIVITY	TARGET	PARTNERS
1.	IDI 2010 - 2013	Improve capacity of private practice general practitioners on child & maternal health & nutrition service	Member	Govt (central/local), POGI, IDAI, PDGKI
2.	IDAI 2011-2015	MCH Handbook distribution, IMCI orientation, URO corner for diarrhea treatment (low osm ORS) Infant feeding practice training Therapeutic Feeding Centre/Community based center	Members health workers Members & midwives	Private and public Hospitals IBI, PPNI, IDI Local govt, private practice Local govt: all possible facilities IBI, PPNI, IDI
3.	POGI 2010-2015	Propose the concept of baby and mother-friendly village/sub-district/district Competence-based basic obstetric training	Central & local govt Puskesmas & district hospital	 Local govt
4.	IBI 2010–2015	Community mobilization and health-nutrition promotion Reducing women with anemia by food-based campaign & iron tab coverage improvement Community empowering by midwife (retired midwife)	Community leaders, members & kaders WRA, community Surrounding community	Local govt, IDI, IDAI, PERSAGI, PPNI Local govt, kaders Private sectors
5.	PPNI 2010–2014	IMCI, child nutrition problems, training, child development screening Training of baby & mother friendly facilities Improvement in nutrition and health status by revitalization of PHN approach	Nurse at puskesmas and hospitals	Where PPNI has branches
6.	LAKMI 2011–2014	Improving capacity of regions to assist	PHO, DHO	Interested provinces and districts
7.	PERINASIA 2011–2015	Improving coverage of no. pof lactation clinics, early initiation & kangaroo method for LBWs BF counseling service improvement Establish infant feeding mother support groups	Hospitals (public/private) Health workers Women's organization & hospitals	IDAI, POGI, PERSI, IBI, PPNI

APPENDIX D. PRELIMINARY RECOMMENDATIONS—LANDSCAPE ANALYSIS INDONESIA (WHO, UNICEF, APRIL 2010)

To accelerate the reduction of maternal and child undernutrition and contribute to the achievement of MDGs 1, 4, and 5

NUTRITION COORDINATION AND RESPONSIBILITIES

- Develop District Food and Nutrition Action Plans based on the National and Province Food and Nutrition Action Plans.
- Strengthen maternal and child nutrition in National Food Security Council and suggest to amend the title to include "Nutrition."
- Build capacity for district level micro-planning for achieving high coverage of essential nutrition interventions.
- Organize under the Bupati/Governor a district/province Food and Nutrition Coordination Council where all stakeholders would meet to define priorities, establish budgets, coordinate nutrition-related activities, and develop strategies for nutrition and nutrition-related programs backed by a national decree.
- Develop a subdistrict coordination team involving all stakeholders in nutrition-related activities.
- Approve Government regulations to control Marketing of Breast Milk Substitutes and develop a monitoring and enforcement mechanism.

BUDGET AND PLANNING

- Work at central level with MOH, BAPPENAS to set guidelines for calculating proportion of budget to be dedicated to nutrition based on Maternal and Child Undernutrition Index (i.e., using stunting and anemia in pregnant women as indicators for the Index).
- Increase cost-effectiveness of funding by choosing evidence-based interventions targeted at vulnerable groups of women and children.
- Implement a process to identify ways to strengthen poverty reduction programs for increased impact on child and maternal undernutrition (e.g., create a coordinating PNPM multi-sectoral task force under the chair of Community Empowerment to support facilitators in subdistricts).
- Provide guidance on use of BOK funds to puskesmas to ensure implementation of the package of essential nutrition interventions with high coverage.

PLANNING AND DESIGN OF PROGRAMS

- With fewer resources, and in the interest of increasing the time the kader has for counseling of mothers and pregnant women, and to focus on the window of opportunity, target nutrition programs at (1) all pregnant women and (2) infants and young children 0–2 years old.
- Measure length of all children <2 years of age every six months during vitamin A distribution months, measurement to be done by subdistrict teams from the puskesmas trained in anthropometry.

- Measure anemia in pregnant women as part of ANC. Consider distribution of HemoCue to each puskesma.
- Continue measuring weight of children <2 as a regular activity of the posyandu. Children older than 2 will be involved in ECD activities.
- Develop and implement a strategy for reaching prepregnant women in the age group 20–24 with a package of health and nutrition services by working with staff involved in family planning, community religious leaders during premarital visits, etc.
- Strengthen national food fortification programs by updating fortification standards for wheat, making oil fortification mandatory, and improving enforcement of the salt fortification law
- Focus the objectives of school feeding programs on enrollment and retention and, if resources are a limiting factor, prioritize the program to secondary schools in poorer areas as an incentive for girls to stay in school
- Develop a continuum of care approach by aggregating various evidence-based nutrition interventions into an integrated package.
- Develop materials on the importance of nutrition for social, economic, cognitive, and physical development and for advocacy with members of non-heath sectors at all levels (including parliament).
- [Work with] MOH/MOHA to develop advocacy material that focuses key nutrition messages to influence the campaigns of bupatis running for election.

HUMAN RESOURCES: STAFF MEMBERS AND CAPACITY

- Develop a human resource map for nutrition to identify deployment gaps to be used for advocacy with senior level decision makers.
- Expand incentives now being offered to doctors for working in underserved areas to include nutritionists.
- Add nutrition to pre-service training on nutrition to all doctors, bidans, and nurses.
- Use high achievements in reducing stunting, reducing anemia in pregnancy, and improvements in early and exclusive breastfeeding as basis for additional performance rewards to puskesmas and posyandus.
- Update existing job descriptions and include new program directions for all staff involved in nutrition in each ministry/department.
- Establish accreditation requirements and procedures to be recognized and implemented by the Association of Public Health Nutritionists (PERSAGI).
- [Work with] nutrition academics and universities to provide in-service nutrition training for public health nutritionists.
- Provide technical assistance in the development of distance learning modules for in-service training of nutrition staff linked to accreditation and performance requirements for achievement of higher scores.
- [Work with] MOH and MOE to arrange regular meetings between ministries and nutrition academies at national and province levels to make sure all are in agreement on nutrition policies, strategies, and actions.

- [Encourage] nutrition academies and universities to standardize and update curricula, competencies, and accreditation for pre-service and in-service training, including emphasis on stunting and maternal nutrition.

NUTRITION INFORMATION SYSTEM

- Use the NIS to measure indicators listed in the Food and Nutrition Action Plan.
- Update the SPM to reflect new program focus and relevant indicators.
- Ensure that future national surveys collect data on key nutrition indicators of the Food and Nutrition Action Plan, including maternal and child anemia.
- Develop innovative means to simplify and rationalize the routine recording and reporting responsibilities of posyandu kaders and midwives; reduce workload to focus on key indicators that can be collected accurately at the village level and that are necessary for program monitoring.
- Use information collected through the NIS system to assess performance and for supervision.
- As a longer-term objective, create a working group, chaired by BPS, to consider how the number of national surveys (e.g., RISKESDAS, DHS, IFLS) can be reduced and rationalized
- Add a HemoCue machine and length board to the list of essential equipment at the puskesmas for measuring anemia and child length.

APPENDIX E. REFERENCES

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