Why Invest in Nutrition?

- Of the 24.5 million children under 5 years of age in Indonesia, approximately 9.2 million (37%) are stunted. These undernourished children have an increased risk of mortality, illness and infections, delayed development, cognitive deficits, poorer school performance, and fewer years in school.
- The mortality rate for children under 5 is 40 per 1,000 live births—nearly 45% of these child deaths are attributable to various forms of undernutrition.
- Malnutrition undermines human capital and economic productivity and can limit progress in achieving at least 6 of the 8 Millennium Development Goals and targets set by the World Health Assembly.
- Investing in nutrition in Indonesia is essential for the country’s development. Improved nutrition will significantly reduce child mortality, improve children’s school performance, and result in greater economic productivity for the nation.

Summary of Nutritional Status and Priorities

The proportion of children under 5 who are stunted is 37%, with levels as high as 50% in some regions (according to a 2013 Riskesdas report). Among children in the lowest wealth quintile, 48% are stunted compared to 29% in the highest (poverty affects 11% of the population) (United Nations). Among children under 6 months of age, nearly a quarter are already stunted and nearly 20% are wasted. In addition, low birth weight reaches 24–27% in some regions. These data indicate that both wasting and stunting are influenced by prenatal factors in Indonesia, which are compounded by high rates of disease and poor infant and young child feeding (IYCF) practices, particularly delayed initiation of breastfeeding and low rates of exclusive breastfeeding. To reduce stunting as well as overweight/obesity, which is on the rise in Indonesia, interventions need to focus on prevention of malnutrition during the first 1,000 days (from pregnancy through the first 2 years of life) and in adolescent girls, due to the high rate of adolescent pregnancy. Specific areas of focus include ensuring adequate nutrition during pregnancy, reducing low birth weight, and improving IYCF practices.

Stunting and wasting. 37% of children under 5 years in Indonesia are stunted and 12% are wasted. However, there is large regional variation in stunting and wasting prevalence, for example, 58% of children under 5 are stunted in East Nusa Tenggara (UNICEF Indonesia 2012). Both wasting and stunting are influenced by prenatal factors in Indonesia—of children 0–6 months of age, close to 25% are already stunted and close to 20% are wasted. Suboptimal IYCF practices are another significant contributor to both forms of malnutrition. The 2012 Demographic and Health Survey (DHS) reports that 51% of infants do not begin breastfeeding within the first hour of life (34% do not begin in the first day), 60% of newborns receive other liquids (“prelacteals”) before receiving breast milk, and only 41% of infants under 6 months are exclusively breastfed. Although most infants have begun complementary feeding by 6 to 8 months of age, dietary diversity and frequency of complementary feeding could be improved.

Overweight/obesity among women and children. Indonesia exemplifies a country experiencing the “double burden of malnutrition” as overweight among women, men, and children has been steadily increasing in recent years. As of 2013, a third of women over 18 years of age and a fifth of children 5–12 years of age were overweight or obese; in 2010, 14% of children under 5 were overweight/obese (World Bank 2012). Malnutrition during the first 1,000 days is a major determinant of not only stunting but also subsequent obesity and noncommunicable diseases in adulthood (Black et al. 2013).

Anemia. According to data from the 2013 Riskesdas, more than a quarter of children under 5 and 37% of pregnant women are anemic.¹

¹ In 2005, 28% of women of reproductive age were anemic, levels that declined from 1995 (Atmarita 2005).
Maternal malnutrition and low birth weight. There are scant data on maternal nutritional status. Underweight was estimated to affect 12% of women of reproductive age and 22% of adolescents 15–19 years of age in the late 1990s/early 2000s (Soemantri et al. 2001; Atmarita 2005). The national level of low birth weight of 7% (as reported in the 2012 DHS), masks much higher incidence in certain regions, for example, 27% in Papua and 24% in Papua Barat (Dickey et al. 2010).

Micronutrient deficiencies. Indonesia began vitamin A supplementation in the 1970s to combat vitamin A deficiency (Atmarita 2005), essentially eradicating severe “clinical” deficiency, although “subclinical” deficiency is estimated to affect approximately 21% of children as of 2007 (UNSCN 2010). Nationally, the proportion of school-age children with inadequate iodine intake is low (16%) (WHO 2007) and median urinary iodine concentration for school-age children is 229 ug/L, which is categorized as “more than adequate” according to WHO. However, there are pockets of localized iodine deficiency due to consumption of inadequately iodized salt (Atmarita 2005).

Key Drivers of Maternal and Child Malnutrition in Indonesia

**Immediate and Underlying**
- Suboptimal infant feeding practices, particularly significantly delayed initiation of breastfeeding, use of prelacteals, a short duration of exclusive breastfeeding, and low dietary diversity of complementary food.
- Childhood illness (particularly diarrhea and acute respiratory infections, which are the main causes of death among children under 5) and suboptimal care-seeking behaviors for illness.
- Maternal malnutrition (including anemia) and low birth weight.
- Suboptimal water, sanitation, and hygiene practices, including limited access to safe water, hygienic sanitation services to remove waste, and continued open defecation.
- Childbearing by 19 years of age for close to 1 in 4 women.
- Cultural practices that decrease dietary intake during pregnancy, contributing to insufficient maternal weight gain and low birth weight.
- Low vaccination coverage.

**Basic**
- Poverty that affects the lowest wealth quintile.
- Weaknesses in nutrition governance, particularly:
  - Deterioration in nutrition program service delivery caused by government decentralization and limited nutrition capacity/training at the district levels for implementation.
  - Lack of a unified vision of what malnutrition is (too much emphasis on severe acute malnutrition and treatment, rather than chronic malnutrition and prevention) by policymakers, particularly at the district-level, and civil society.
  - Limited data for key nutrition indicators for women and children, including anemia, underweight, and short stature among women, and little use of monitoring/evaluation data for decision making.
  - Relative lack of importance (or awareness) placed on maternal malnutrition.
  - Greater need for coordination across sectors, within sectors, and with donors.

Maternal and Child Malnutrition Indicators in Indonesia

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Women &gt; 18 years</th>
<th>Underweight (women)</th>
<th>Overweight/obese (women)</th>
<th>Low birth weight</th>
<th>Stunting</th>
<th>Underweight</th>
<th>Wasting</th>
<th>Anemia (pregnant women)</th>
<th>Anemia (child)</th>
<th>Vitamin A deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children under 5 years</td>
<td>0%</td>
<td>12%</td>
<td>14%</td>
<td>33%</td>
<td>37%</td>
<td>20%</td>
<td>12%</td>
<td>28%</td>
<td>37%</td>
<td>21%</td>
</tr>
</tbody>
</table>


Notes: Anemia (child) is for children 12–59 months and anemia (pregnant women) did not specify age group. Underweight (women) refers to women of reproductive age 15–49 years.

The median urinary iodine concentration (UIC) for school-age children is 229 ug/L; the proportion of school-age children with low UIC (< 100 ug/L) is 16% (WHO 2007).
## Child Nutrition

### Trends in Nutritional Status of Children Under Age 5, 2004–2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Underweight</th>
<th>Stunted</th>
<th>Wasted</th>
<th>Overweight/Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>22</td>
<td>20</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>2004</td>
<td>26</td>
<td>29</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>2007</td>
<td>19</td>
<td>29</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>2010</td>
<td>12</td>
<td>15</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>2013</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

### Nutritional Status of Children by Age (in Months), 2010

- **0–5**
  - Stunted: 40%
  - Underweight: 34%
  - Wasted: 6%
- **6–11**
  - Stunted: 37%
  - Underweight: 31%
  - Wasted: 9%
- **12–23**
  - Stunted: 33%
  - Underweight: 27%
  - Wasted: 4%
- **24–35**
  - Stunted: 28%
  - Underweight: 23%
  - Wasted: 5%
- **36–47**
  - Stunted: 24%
  - Underweight: 20%
  - Wasted: 4%
- **48–59**
  - Stunted: 21%
  - Underweight: 19%
  - Wasted: 4%

Source: 2010 National Report on Basic Health Research (data not provided for 2013)

### Child Mortality, 1997–2012

- **Neonatal**
  - Mortality Rate per 1,000 Live Births: 22
- **Infant**
  - Mortality Rate per 1,000 Live Births: 35
- **Under 5**
  - Mortality Rate per 1,000 Live Births: 45

### Dietary Practices of Children

- **Ever breastfed**: 96%
- **Early initiation of breastfeeding**: 91%
- **Exclusive breastfeeding**: 49%
- **Timely introduction of complementary foods**: 41%
- **Minimum dietary diversity**: 58%
- **Minimum meal frequency (breastfed children)**: 61%
- **Minimum acceptable diet (breastfed children)**: 68%
- **Consumed iron-rich foods past day**: 34%
- **Consumed vitamin-A rich foods past day**: 61%
- **Supplemented with vitamin A in past 6 months**: 61%
- **Supplemented with iron in past week**: 14%

Source: 2012 DHS

### Child Health Indicators

- **Received basic vaccinations by 12 months**: 60%
- **Received deworming in past 6 months**: 26%
- **Symptoms of acute respiratory infection in past 2 weeks**: 5%
- **Care-seeking for acute respiratory infection**: 14%
- **Symptoms of diarrhea in past 2 weeks**: 31%
- **Care-seeking for diarrhea**: 65%
- **Symptoms of fever in past 2 weeks**: 75%
- **Care-seeking for fever**: 74%

Source: 2012 DHS

Note: Basic vaccinations include BCG, measles, and three doses each of DPT and polio vaccine.
Maternal Nutrition

**Maternal Health Indicators**

- Maternal mortality ratio (per 100,000 live births): 220
- Total fertility rate (children per women): 2.6
- Median age at first marriage (of women 25–49 years): 20.4
- Median age at first birth (of women 25–49 years): 22.0
- % of women 15–19 years who have begun childbearing by age 19: 24.1
- Median number of months since preceding birth (of women 15–49 years): 60.2
- % of married women currently using any method of family planning: 61.9
- % of married women with an unmet need for family planning: 11.4
- % of women 15–49 years with live birth in the past 5 years receiving antenatal care from a "medically-trained" or "skilled" provider (doctor, nurse, midwife, and auxiliary nurse/midwife): 95.7
- % of women 15–49 years with birth in past the 5 years who delivered in a health facility: 63.2
- % of women 15–49 years with birth in past the 5 years who delivered with a "medically-trained" or "skilled" provider (doctor, nurse, midwife, and auxiliary nurse/midwife): 83.1

**Maternal Nutrition Indicators**

- % overweight or obese (BMI ≥ 25 kg/m²) (women > 18 years): 32.9
- % anemic (pregnant: Hb < 11 g/dL; non-pregnant: Hb < 12 g/dL)
  - Pregnant: 37.1
  - Overall: 28
- % of women with birth in the last 5 years given vitamin A supplementation after birth of last child: 48.1
- % of women with birth in the last 5 years given any iron supplementation during last pregnancy: 75.5
- % of women with birth in the last 5 years who took at least 90 days of iron supplementation during pregnancy of last child: 32.7
- % of women with birth in the last 5 years who took deworming medication in last pregnancy: No data
- % living in houses with iodized salt: 77.1

Sources: 2012 DHS; maternal mortality: UNICEF 2012; overweight/obesity, anemia (pregnant), iodized salt: 2013 Riskesdas; anemia (non-pregnant): Atmarita 2005

**Food Security; Diet Diversity; and Water, Sanitation, and Hygiene**

**Food Security Indicators**

- Global Hunger Index (2013): 10.1 (serious level of hunger)
- % of households with poor or limited food consumption (food insecure): No data
- % undernourished in total population (2011–2013): 9.1
- Food supply (kcal/capita/day) (2009): 2,646
- Depth of food deficit (kcal/capita/day) (2011–2013): 64

**Diet Diversity Indicators**

- % of dietary energy supply from cereals, roots, and tubers (2008–2010): 67
- Average supply of protein from an animal source (grams/capita/day) (2008–2010): 16

**Water, Sanitation, and Hygiene Indicators**

- % of population with access to improved drinking water sources (2012): 75
- % of population with access to sanitation facilities (2012): 71
- % of population using appropriate treatment method for drinking water (2012): 69

Gender

Indonesia has made steady progress on gender equality. The median age at marriage has steadily increased and is currently 20.4 years. Adolescent pregnancy (women 15–19 years who have begun childbearing by age 19) has also steadily declined to 24.1%. Sixty-three percent of women report being employed. Among those who are employed, 65% report being able to decide by themselves how to dispose of their income, however, 60% report earning less than their husbands. More women (35%) than men (17%) felt that domestic violence was acceptable for reasons such as going out without telling her spouse, neglecting her children, arguing with her spouse, refusing sex, and burning food. Relative to other countries, the social acceptance of domestic violence among women is moderately low, but men’s attitudes toward domestic violence is perhaps more revealing in that far fewer men accept the use of domestic violence for any of the reasons mentioned. This suggests an environment that favors women’s empowerment. This is also consistent with women’s high level of participation in decision making across all age groups—70% of women 15–49 years report participating in decisions about their own health, major household decisions, and visiting relatives (DHS 2012).

Government Policies and Program Environment: Needs and Challenges

Policies. Indonesia’s commitment to reducing malnutrition, as evidenced by policies specific to nutrition, has been determined to be reasonably strong in past assessments (WHO 2010). The Ministry of Health Strategic Plan 2009–2014 includes nutrition as a main component, addressing underweight, overweight, anemia, and IYCF practices as part of the Programme for Community Nutrition Improvement (UNICEF and SMERU Research Institute 2012). In 2011, Indonesia committed to the Scaling Up Nutrition (SUN) Movement and demonstrated its commitment to tackling malnutrition by launching the national “First 1,000 Days of Life Movement.” The current National Plan of Action on Food and Nutrition (2011–2015) follows on a previous plan (2006–2010) and aims to reduce stunting by 5% by 2015. The national plan outlines nutrition activities that are not covered in the Programme for Community Nutrition Improvement (ibid). The main objectives of the National Plan of Action on Food and Nutrition, in addition to reducing stunting, include addressing wasting in children under 5 years, underweight, overweight, maternal anemia (including in adolescent girls), increasing rates of exclusive breastfeeding, improving coverage of key nutrition services.

Programs. Indonesia implemented large-scale nutrition projects, such as the posyandus (integrated service posts), starting in the 1970s to provide community nutrition services including growth monitoring, supplementary feeding for growth-faltering children, and referrals to the health system, and to serve as distribution points for supplements (e.g., vitamin A) (WHO 2010). In recent years however, due to lack of funding, volunteer staff, and political support, many posyandus have become inactive.

Nutrition-Specific Policies

| Policy Framework for the First 1,000 Days of Life Movement |
| Government Regulation No. 33 on Exclusive Breastfeeding, 2012 |
| Health Law, 2009 (breastfeeding regulations) |
| Maternity Protection Law, 2003 |
| Maternity leave of 3 months |
| Health Law No. 35, 2009 |
| Government Regulation on Food Safety, Quality, and Nutrition, 2004 |
| Government Regulation on Food Labeling and Advertisement, 1999 |
| Food Law No. 18, 2012 |
| Presidential Instruction No. 69 on Salt Iodization, 1994 |
| Minister of Home Affairs Decree No. 63 on Control of Iodine Deficiency, 2010 |
| Minister of Health Decree on the Technical Specification on the Use of Sprinkles (multiple micronutrient powder) for Young Children, 2010 |
| National Standard for Flour Fortification |
| National Standard for Iodized Salt, 1994 |
| National Standard for Vitamin A in Oil |
However, the number of posyandus increased by 15% between 2000–2006 and the number of more sustainable types of posyandus (Purnama and Mandiri) have increased by 60% (UNICEF Indonesia 2012). In general, the public health system in Indonesia is weak and underfunded (USAID Indonesia).

**Needs and challenges.** Government decentralization, which began in 2001, has had negative effects on the provision of nutrition and health services, which are presented in several analyses (WHO 2010; Friedman et al. 2006; UNICEF Indonesia 2012; WHO Indonesia; WHO 2010). With decentralization, districts that previously followed central government mandates became responsible for planning, implementing, and evaluating nutrition services and have faced significant challenges. In particular, district-level staff did not have adequate training on effective evidence-based nutrition interventions and the importance of nutrition for health and development. In addition, coordination between different levels of government has been problematic and harmonizing policies and practices across districts is also challenging as each district has decided how best to address nutrition services, resulting in many different approaches and structures. Decentralization has also negatively affected health information systems and comprehensive national data are limited. Using monitoring and evaluation data to guide program development and implementation has also been identified as a weakness in the past. As a result, program coverage (e.g., growth monitoring) is low in many areas and program effectiveness questionable. Similar to many other countries, the counseling provided as part of growth monitoring and promotion may be absent or inadequate and greater training in nutrition for frontline workers is needed. At a broader level, efforts to reduce malnutrition (particularly stunting) appear to be stymied by the general perception (in particular in lower levels of government and the general population) of wasting as the main form of malnutrition of concern in Indonesia as well as a general focus on treatment rather than prevention. Maternal malnutrition in particular has been judged to be “invisible” to most Indonesians.

**Development Partner Support**

- The Asian Development Bank, through the Nutrition Improvement through Community Empowerment (NICE) Project, provides funds to purchase sprinkles for 24 districts and seeks to increase the use of effective health services and nutrition practices.
- The World Bank supports programs to improve access to quality health care, including maternal and child health nutrition services.
- The Canadian International Development Agency provides bilateral aid to assist UNICEF and the Micronutrient Initiative in the procurement and distribution of twice-annual vitamin A supplementation.
- UNICEF and the EU, through the MYCSNIA Program, provide communication and counseling for IYCF, promote consumption of locally-produced micronutrient-rich foods, distribute and promote the use of micronutrient powders, and help local and national institutions with data analysis and interpretation to better inform national policies and programs. In addition, UNICEF, in coordination with the Micronutrient Initiative, is building the capacity of the government to enforce the law prohibiting the distribution of non-iodized salt.
- FAO seeks to reduce food insecurity through school gardening programs
- WFP seeks to reduce food insecurity through enhanced monitoring, improving responses to natural disasters and shocks, and behavior change communication for improved nutrition.
**Recommended Nutrition Priorities**

Key nutrition priorities for Indonesia include focusing on stunting, wasting, overweight and obesity among women and children, anemia, maternal malnutrition, low birth weight, micronutrient deficiencies, and potentially both iodine deficiency and more than adequate iodine intake in areas of the country. Programs and activities should be focused on women and children in the lowest wealth quintile, who are disproportionately affected. The U.S. Government has invested significantly for health programs and activities in Indonesia and a significant portion of these funds were allocated to nutrition, specifically through the Millennium Challenge Corporation. Given the scale of malnutrition in Indonesia, targeted funding for direct nutrition interventions and activities could help bolster efforts to reduce malnutrition. Among existing USAID-funded activities and programs this includes integrating evidence-based nutrition-specific interventions and actions. Additional opportunities include:

- Supporting and undertaking nutrition advocacy to strengthen multisectoral coordination for nutrition, augment accountability and governance for nutrition, and increase demand for quality nutrition services
- Expanding efforts to improve IYCF practices, specifically related to exclusive breastfeeding, complementary feeding, and diet quality and diversity
- Expanding technical assistance and support for water and sanitation (for example, through projects like WASHplus)
- Integrating nutrition into infectious disease efforts (such as those for tuberculosis, malaria, and HIV) and integrate nutrition assessment, counseling, and support (NACS) into HIV and tuberculosis programs
- Supporting efforts for deworming among children and pregnant women and supporting malaria prevention and treatment among pregnant women and young children
- Building capacity in nutrition (e.g., on evidence-based nutrition interventions) among health professionals from the public and private sector and among health volunteers

In terms of opportunities to support the Government of Indonesia, opportunities include:

- Engaging with the government to strengthen nutrition service delivery and improve quality of services
- Engaging with the government to strengthen investment in the health sector broadly; in nutrition specifically, raise commitment to reducing malnutrition and promote good governance for nutrition
- Supporting coordination and implementation efforts of the National Plan of Action on Food and Nutrition
- Supporting efforts to improve health information systems, collection of nutrition data (especially for women of reproductive age), and its use in program design/planning

USAID can also work in close coordination with other donors to:

- Support the SUN movement and other government initiatives to promote nutrition service delivery
- Align resource allocation to limit duplication of activities and leverage donor investments to strategically invest in nutrition, focusing on areas that need added resources such as IYCF and quality nutrition service delivery
- Support and promote optimal IYCF practices (with UNICEF and the EU), including relevant policy/legislation (e.g., strengthening monitoring of the code of marketing of breast milk substitutes)

**Recommended Indicators to Monitor Nutritional Impact**

It is recommended that USAID incorporate the following key nutrition indicators into new and existing implementation plans in order to specifically monitor the impact of USAID programs on maternal and child nutrition status.

1. Prevalence of underweight children under 5 years of age (< -2 SD)
2. Prevalence of stunted children under 5 years of age (< -2 SD)
3. Prevalence of stunted children under 2 years of age (< -2 SD)
4. Prevalence of wasted children under 5 years of age (< -2 SD)
5. Prevalence of underweight women (BMI < 18.5)
6. Women's dietary diversity: mean number of food groups consumed by women of reproductive age
7. Prevalence of exclusive breastfeeding of children under 6 months of age
8. Prevalence of children 6–23 months receiving a minimum acceptable diet

While nutrition-sensitive interventions can have an impact on the indicators listed, it is critical to implement nutrition-specific activities that address the direct causes of malnutrition in order to see reductions in these key indicators.
References


Research and Development Agency for Health and MOH. Riskesdas 2013.


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