



Country Context

HDI ranking: 145th out of 182 countries¹

Life expectancy: 60 years²

Lifetime risk of maternal death: 1 in 38²

Under-five mortality rate: 72 per 1,000 live births²

Global ranking of stunting prevalence: 5th-highest out of 136 countries²

Technical Notes

Stunting is low height for age.

Underweight is low weight for age.

Wasting is low weight for height.

Current stunting, underweight, and wasting estimates are based on comparison of the most recent survey data with the WHO Child Growth Standards, released in 2006. They are not directly comparable to the trend data shown in Figure 1, which are calculated according to the previously-used NCHS/WHO reference population.

Low birth weight is a birth weight less than 2500g.

The methodology for calculating nationwide costs of vitamin and mineral deficiencies, and interventions included in the cost of scaling up, can be found at: www.worldbank.org/nutrition/profiles

The Costs of Undernutrition

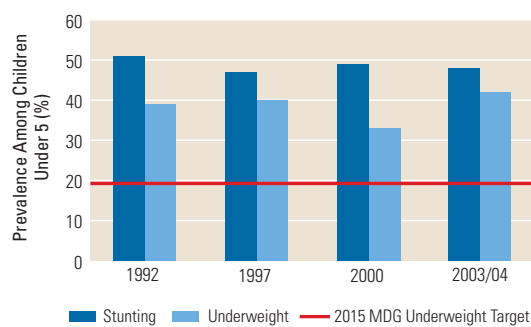
- Globally, over one-third of child deaths are due to undernutrition, mostly from increased severity of disease.²
- Children who are undernourished between conception and age two are at high risk for impaired cognitive development, which adversely affects the country's productivity and growth.
- Childhood anemia alone is associated with a 2.5% drop in adult wages.⁵

Where Does Madagascar Stand?

- Madagascar has the 5th-highest rate of stunting in the world, tied with Malawi.
- 53% of children under the age of five are stunted, 42% are underweight, and 13% are wasted.⁴ Preliminary new DHS data indicates that stunting may have decreased three percentage points to 50%.³
- 15% of infants are born with a low birth weight.²

As shown in **Figure 1**, undernutrition rates have stayed virtually constant in Madagascar over the past two decades. Madagascar will not meet MDG 1c (halving 1990 rates of child underweight by 2015) with business as usual.⁸

FIGURE 1 Madagascar Is not on Track to Meet MDG 1



Source: WHO Global Database on Child Growth and Malnutrition (figures based on the NCHS/WHO reference population).

As seen in **Figure 2**, Madagascar has higher rates of stunting than many of its neighbors and income peers in the Africa region. This shows that it is possible to achieve lower rates of undernutrition despite low per capita income.

Undernutrition is not just a problem of poverty. As **Figure 3** shows, children are undernourished in almost one-half of even the richest households. This is not typically an issue of food access, but of caring practices and disease.

Annually, Madagascar loses over US\$720 million in GDP to vitamin and mineral deficiencies.^{5,6}

Scaling up core micronutrient interventions would cost less than US\$10 million per year.

(See *Technical Notes* for more information)

Key Actions to Address Malnutrition:

Increase nutrition capacity within the Ministries of Health and Agriculture.

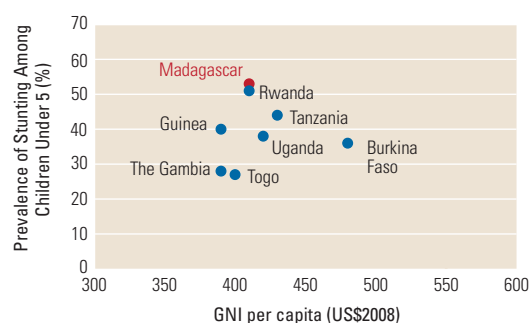
Improve infant and young child feeding through effective education and counseling services.

Increase deworming of young children and iron supplementation for pregnant women.

Improve dietary diversity through promoting home production of a diversity of foods and local market development.

Protect environmental resources on which sustainable food production is based.

FIGURE 2 Madagascar Has Higher Rates of Stunting than its Income Peers



Source: Stunting rates were obtained from the WHO Global Database on Child Growth and Malnutrition (figures based on WHO child growth standards). GNI data were obtained from the World Bank's World Development Indicators.

Vitamin and Mineral Deficiencies Cause Hidden Hunger

Although they may not be visible to the naked eye, micronutrient deficiencies impact well-being and are widespread in Madagascar, as shown in **Figure 4**.

- Adequate intake of micronutrients, particularly iron, vitamin A, iodine and zinc, from conception to age 24 months is critical for child growth and mental development.

Poor Infant Feeding Practices

- In Madagascar, 38% of all newborns do not receive breast milk within one hour of birth.⁴
- One-third of infants under six months are not exclusively breastfed.⁴
- During the important transition period to a mix of breast milk and solid foods between six and nine months of age, almost one-quarter of all infants are not fed appropriately with both breast milk and other foods.⁴

Solution: Support women and their families to practice optimal breastfeeding and ensure timely and adequate complementary feeding. Breast milk fulfills all nutritional needs of infants up to six months of age, boosts their immunity, and reduces exposure to infections.

High Disease Burden

- In Madagascar, 1 in 4 deaths of children under five is due to pneumonia, and 1 in 5 is due to diarrhea.⁸
- Undernutrition increases the likelihood of falling sick and severity of disease.
- Undernourished children who fall sick are much more likely to die from illness than well-nourished children.
- Parasitic infestation diverts nutrients from the body and can cause blood loss and anemia.

Solution: Prevent and treat childhood infection and other disease. Hand-washing, deworming, zinc supplements during and after diarrhea, and continued feeding during illness are important.

Limited Access to Nutritious Food

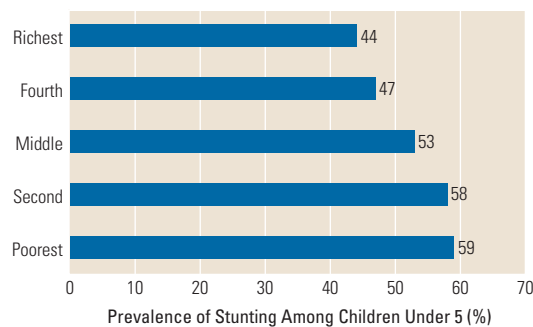
- 35% of households are food insecure, as defined as per capita access to calories.⁹ However, many more households likely lack access to diverse diets year round.
- Achieving food security means ensuring quality and continuity of food access, in addition to quantity, for all household members.
- Dietary diversity is essential for food security. High prevalence of hidden hunger indicates that dietary diversity may be low.

Solution: Involve multiple sectors including agriculture, education, transport, gender, the food industry, health, environment and other sectors, to ensure that diverse, nutritious diets are available and accessible to all household members.

References

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FIGURE 3 Undernutrition Affects All Wealth Quintiles – Poor Infant Feeding Practices and Disease are Major Causes



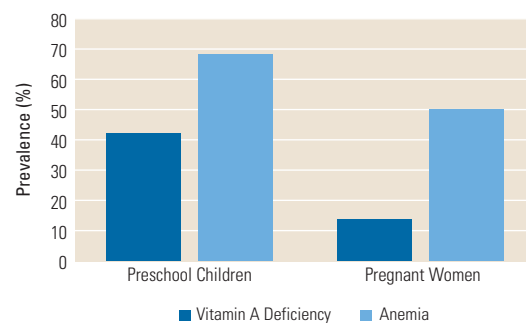
Source: DHS 2003/04 (figures based on the WHO Child Growth Standards).

- **Vitamin A:** 42% of preschool aged children and 14% of pregnant women are deficient in vitamin A.¹⁰ Supplementation of young children and dietary diversification can eliminate this deficiency.
- **Iron:** Current rates of anemia among preschool aged children and pregnant women are 68% and 50% respectively.¹¹ Iron-folic acid supplementation of pregnant women, deworming, provision of multiple micronutrient supplements to infants and young children, and fortification of staple foods are effective strategies to improve the iron status of these vulnerable subgroups.
- **Iodine:** 25% of households do not consume iodized salt,² leaving 169,000 infants remain unprotected from iodine deficiency disorders.

World Bank Nutrition Related Activities in Madagascar

Projects: The World Bank has been supporting community nutrition activities in Madagascar since 1998 through the Second Community Nutrition Project

FIGURE 4 High Rates of Vitamin A and Iron Deficiency Contribute to Lost Lives and Diminished Productivity



Source: 2000 vitamin A and 2003–4 anemia data from the WHO Global Database on Child Growth and Malnutrition.

(US\$47.6 million). The objectives were to: (i) improve the nutritional status of children under-three, pregnant and lactating women, and school-aged children; and (ii) ensure long-term sustainability of nutrition outcomes by improving the quality and quantity of food intake by children at home. The World Bank has prepared a new phase of support for community nutrition activities in Madagascar, the Joint Health Sector Support Program, a US\$63 million initiative aimed at increasing utilization of health services, particularly among mothers and children, and strengthening the health system. This is on hold due to the current political situation in Madagascar.

Analytic Work: The World Bank is in the process of finalizing a Country Status Report (CSR) on Health, Nutrition and Population with a detailed analysis of the health sector, including nutrition. The Bank has also produced a Health Sector Policy Note based on the CSR outlining key sector priorities and policy recommendations which will serve as a guiding document to the government.



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