



POLICY BRIEF

DETERMINANTS OF WASTING AMONG CHILDREN UNDER 5 YEARS OF AGE IN LAO PDR

Reduction of all forms of malnutrition is a priority by the Government of Lao PDR. This policy brief summarizes available evidence regarding the determinants of wasting among children under 5 years in the country. It identifies potential protective and risk factors that are key to optimize national and sectorial plans and strategies to reduce child wasting. Understanding the main predictors of wasting are expected to impact policy and programming choices, ensure efficiency in use of resources and targeting of actions.

Wasting is a life-threatening symptom of sudden changes in dietary intake and illness. It reduces the body's ability to fight infections and may increase the severity of existing ones. Frequent episodes may cause long term development delays among

children. The prevalence of wasting among children under 5 years increased from 5.9% in 2011-2012 to 9.0% in 2017 in Lao PDR. Wasting is most prevalent among children under 2 years of age in the country. The current COVID-19 pandemic and its associated adverse effects on the economy, access to food, education, health, and nutrition services may exacerbate the existing prevalence of wasting. The World Health Assembly target for wasting is a prevalence less than 5% by 2025. The present trend of wasting and the COVID-19 pandemic may make this target challenging to achieve. Regression analysis of LSIS 2 (2017) data using STATA software shows that protective and risk factors include wealth status; maternal education; poor water, sanitation and hygiene (WASH) practices; exclusive breastfeeding and appropriate feeding among infants.

Policy recommendations for reduction of wasting in Lao PDR



Invest in maternal and child nutrition practices throughout the life cycle, especially in the first 1000 days of life.



Promote exclusive breastfeeding, appropriate infant and child feeding practices



Strengthen Nutrition-WASH programming to address household and environmental factors that contribute to wasting and other forms of malnutrition.

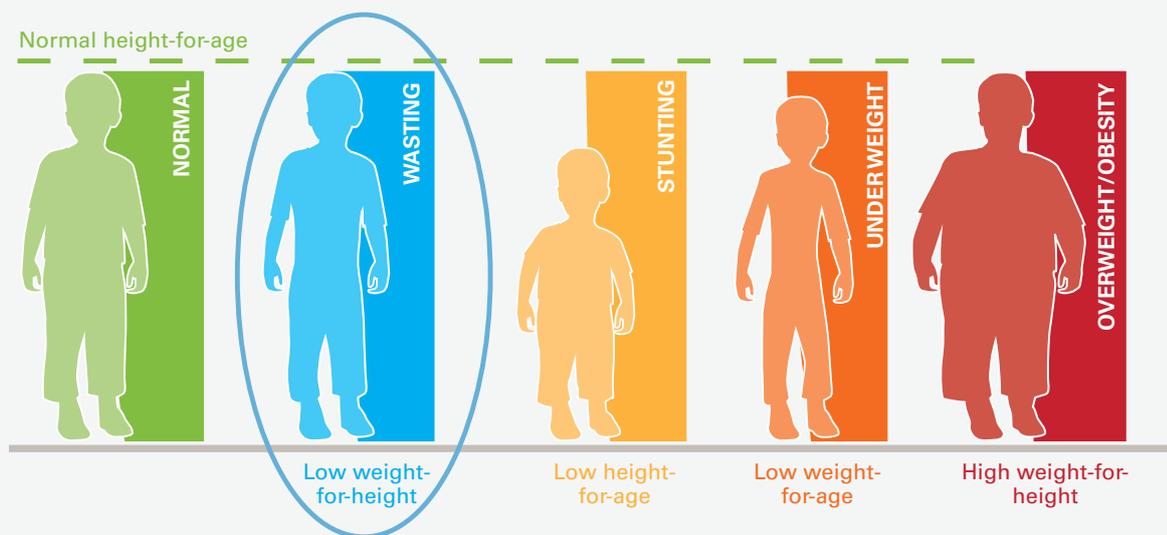


Prioritize social protection schemes targeting poor and deprived households in response to the negative consequences of the COVID-19 crisis on health and economy.

INTRODUCTION

Child wasting refers to a child who is too thin for his or her height/length. Wasting is defined as weight-for height more than two standard deviations below the World Health Organization (WHO) child growth standards median¹. Wasting in children is a symptom of sudden changes in dietary intake and illness. Globally, insufficient food intake and/or infections such as pneumonia, respiratory track infection are major causes of wasting among children under 5 years old². Wasting compromises the immune system, increases the likelihood of infections whilst worsening existing conditions. Frequent episodes of wasting may result in long term developmental delays among children². Though wasting is less prevalent than stunting, it is associated with a higher risk of child mortality. A Hazard Ratio of association with mortality from a pooled data of 10 prospective studies conducted in developing countries estimated the risk of death to be 2.3 for wasting as compared to 1.5 for stunting³. Severely wasted children are 12 times more likely to die than healthy children⁴.

Figure 1: Picture showing all forms of malnutrition



The global prevalence of wasting among children under 5 years was estimated to be 6.7 percent in 2020⁵. This is equivalent to 45.4 million wasted children, out of which 13.6 million are severely wasted⁵. The Asian region is home to the world's highest number of wasted children with Southern Asia having the highest prevalence of 14.1 percent. Among South East Asian countries, the prevalence of wasting was estimated to be 8.2 percent in 2020 which is the second highest in Asian region. Wasting is more prevalent among children below 2 years of age².

WASTING AMONG CHILDREN UNDER 5 YEARS IN LAO PDR

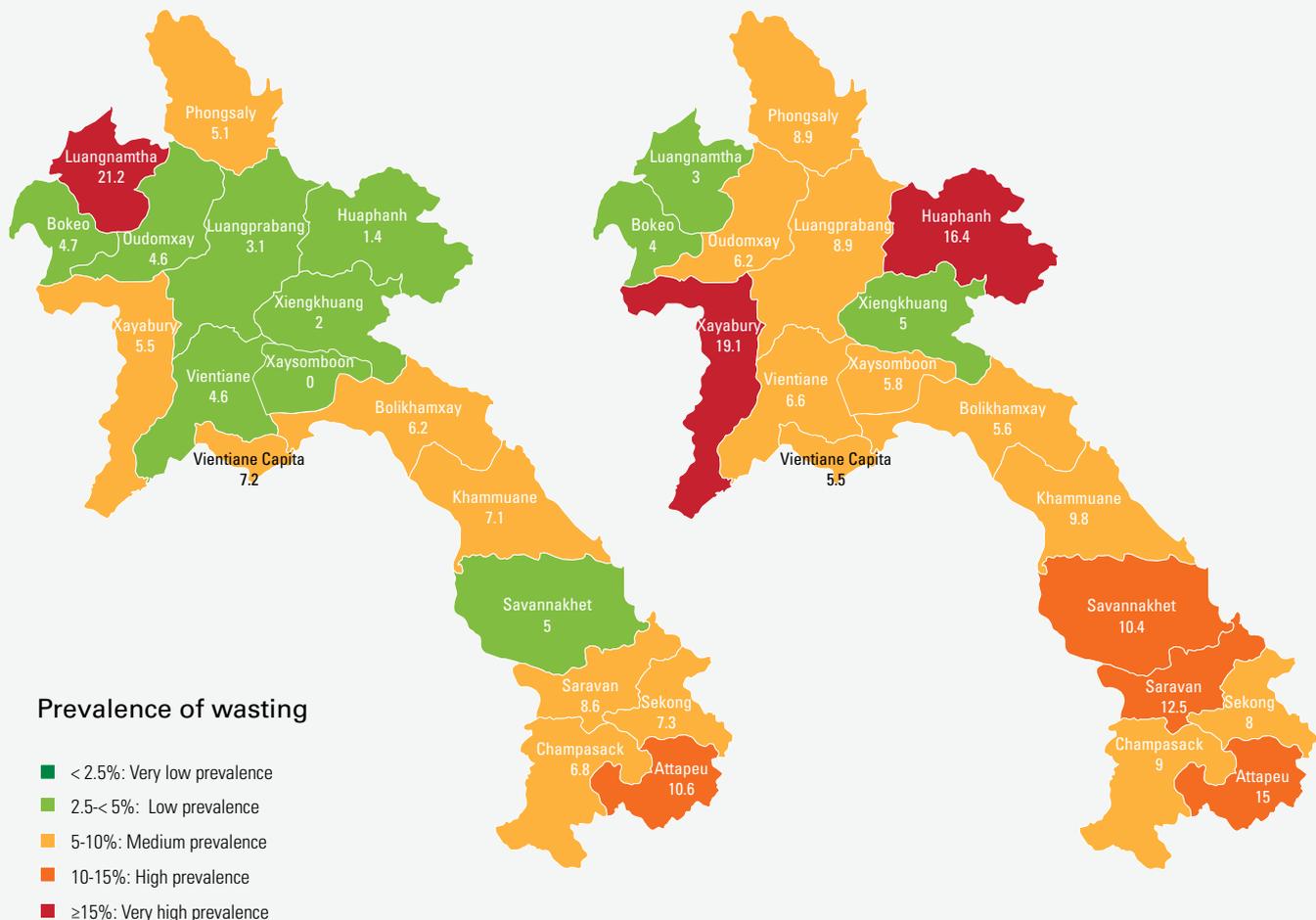
Besides the increasing trend, there exists wide disparity among provinces with Vientiane Capital having the lowest prevalence of 5.5 percent whilst Xayabury province had the highest prevalence of 19.1 percent in 2017. According to the WHO classification of public health significance, the country is classified as “medium prevalence” (5 - <10%)⁵.

Severe Acute Malnutrition (also known as severe wasting) is a major contributor to child mortality. It is estimated that severely wasted children are 12 times more likely to die than healthy children⁴. 4.4 percent of deaths are specifically attributable to severe wasting⁵. In Lao PDR, about 73,000 children are at risk of severe acute malnutrition annually. Without lifesaving support, these children are at an increased risk of death.

Figure 2: Prevalence of wasting at the national and provincial level in Lao PDR.

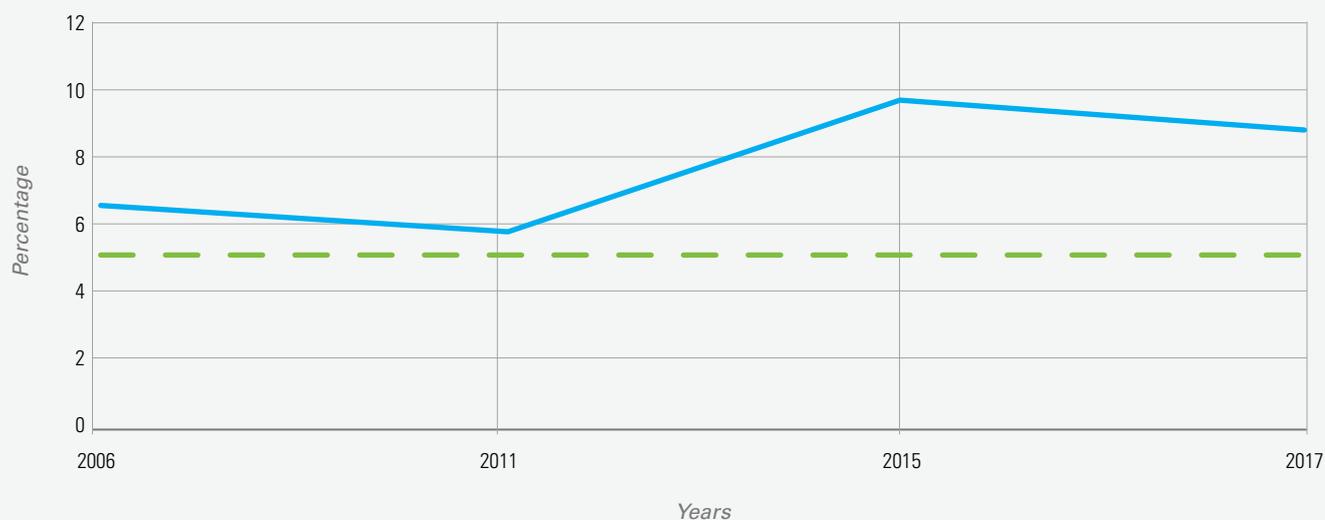
A LSIS 1 (2011-2012)
NATIONAL PREVALENCE: 5.9%

B LSIS 2 (2017)
NATIONAL PREVALENCE: 9.0%



Wasting is one of the six WHO global nutrition targets together with stunting, anaemia among women of reproductive age, low birth weight, childhood overweight and exclusive breastfeeding for the first 6 months of life¹. The World Health Assembly target for wasting is a prevalence below 5 percent by 2025. According to official data, the prevalence of wasting was 5.9 percent in 2011-2012 (LSIS1), which was closer to the WHA target⁶. The 2015 Lao Child Anthropometry Assessment Survey indicated a 9.7 percent prevalence in 2015 and in 2017, LSIS 2 showed a prevalence of 9.0 percent⁷. Since 2015, the national prevalence of wasting is almost twice the expected target of the World Health Assembly, 2025.

Figure 3: Trend of wasting in Lao PDR compared with WHA target



Source: MICS, 2006; LSIS 2011/12, 2017; LCAAS, 2015



DETERMINANTS OF WASTING AMONG CHILDREN UNDER 5 YEARS IN LAO PDR

Data analysis on determinants of wasting using the LSIS2 2017 dataset identified predictors that were significant among children under two years of age. The most predominant protective factors to prevent wasting were household wealth status, presence of soap or detergent at place of handwashing, maternal educational status and appropriate infant feeding practices. The type of toilet facility used by household and bottle feeding were factors identified to increase the risk of being wasted.

Predictors of wasting in children in Lao PDR

PREDICTOR	P VALUE	ODD RATIO	95% C.I. OR	
			Lower	Upper
 Wealth index	0.037	1.595	1.027	2.477
 Soap or detergent present at place of handwashing	0.026	0.767	0.607	0.969
 Type of toilet facility used by household	0.029	1.782	1.061	2.995
 Maternal education	0.047	0.585	0.345	0.992
 Bottle feeding	0.018	1.345	1.052	1.720
 Appropriate feeding in children below 2 years of age	0.012	0.744	0.591	0.937

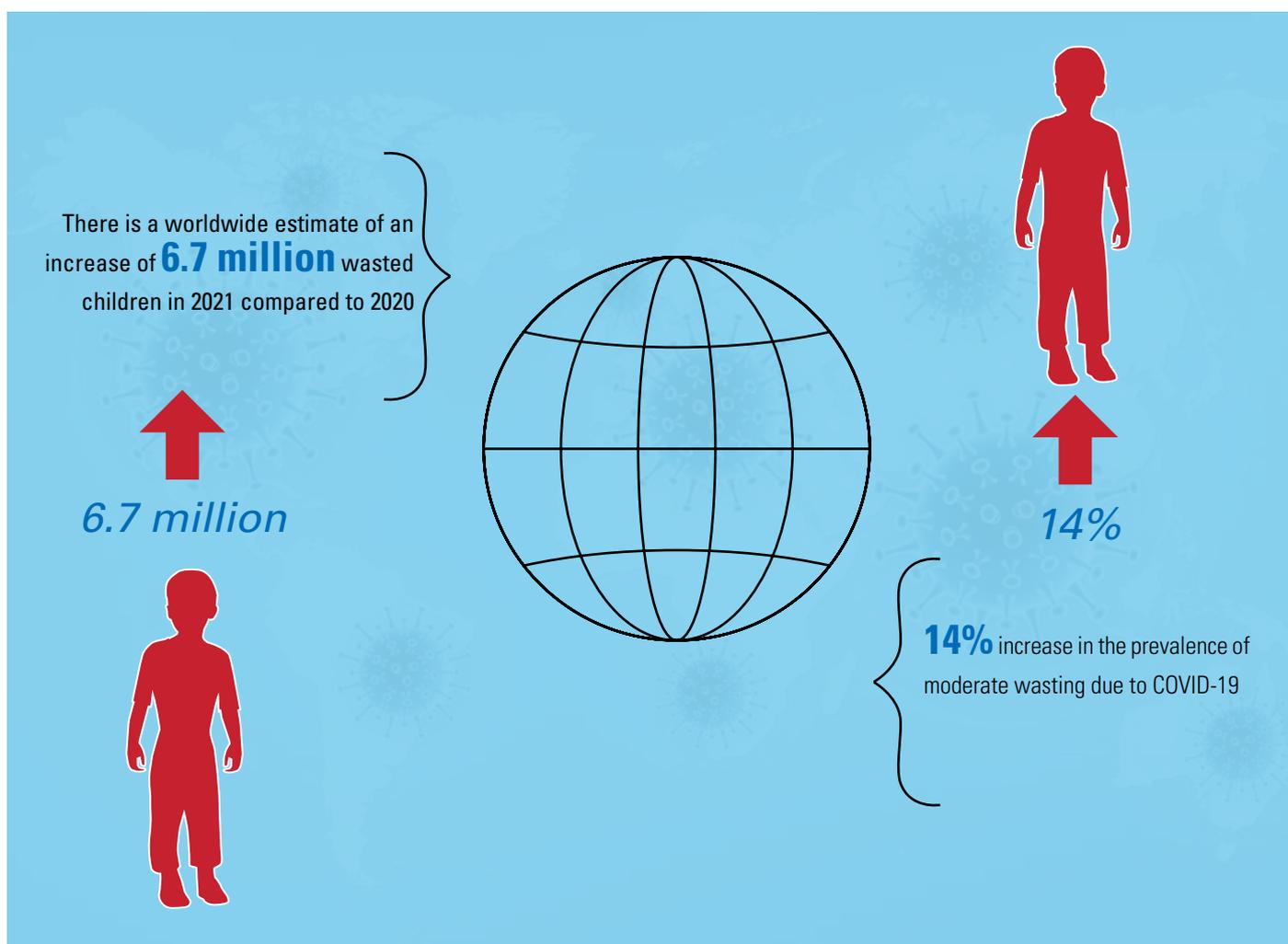
Regression analysis using the Lao Social Indicator Survey, 2017

The predictors found to be significantly related with wasting in Lao PDR are consistent with other findings malnutrition worldwide⁸. It is important to highlight that these predictors were found to be associated with children of younger age which are consistent with observations from other studies⁸. An association with wealth index and maternal education are consistent with existing disparities in Lao PDR. The poorest children whose mothers are less educated are the most affected by wasting. According to LSIS 2, children of the poorest wealth quintile were twice as likely to be wasted than those of the richest quintile. Also, children born to mothers with no education and from the poorest wealth quintile were twice as likely to be severely wasted.

A close association was found between the presence of soap or detergent at the place of handwashing and the type of toilet facility used by the household. This highlights the need to enhance WASH practices in households as part of nutrition programmes. Similar determinants were found on separate analysis on predictors of stunting in Lao PDR. Also, in the case of wasting, bottle feeding was shown to be a negative predictor of wasting. Similarly, appropriate feeding practices among children below 2 years emerged as a key predictor of wasting in the country.

COVID-19 AND WASTING IN LAO PDR

Malnutrition such as wasting is known to be closely related to the economy of countries. The human development index (HDI) is known to reflect overall achievements in social and economic dimensions. Wasting has an inverse correlation with HDI at the country level worldwide ($r = -0.43$, $p < 0.001$)⁹. The World Bank has estimated that 90% of low and middle income countries' economies will shrink due to the COVID-19 crisis⁵ and Lao PDR is not an exception. In 2020, it was estimated that the Gross Domestic Product of the country will decline to minus 0.6 percent as all sectors experience adverse shocks of varying intensity¹⁰. There is a worldwide estimate of an increase of 6.7 million wasted children in 2021 compared to 2020, with a 14 percent increase in the prevalence of moderate wasting due to COVID-19¹¹. This is expected to go together with an expected increase in child mortality. The ongoing COVID-19 crisis is expected to impact on access to food, health, education and nutrition services among others. This is expected to negatively reflect on the prevalence of wasting^{12,13}.



Source: Headey D et al (2020)

RECOMMENDATIONS

Globally, actions to tackle predictors of wasting include improvements on water supply, promotion of hygiene practices, food security, health services, promotion of exclusive breastfeeding, promotion of maternal education, and economic stimulus targeted at vulnerable households at both the national and sub national levels. High-level multi-sectoral coordination involving government and development partners, civil-society organizations and initiatives that involve public-private partnerships represent an accelerator to optimize these efforts. Lastly, a successful reduction on wasting and other forms of malnutrition need proper control of the ongoing COVID-19 crisis and interventions that may enhance household food security and health access.

Main policy recommendations:



Invest in maternal and child nutrition practices throughout the life cycle. Especially in the first 1000 days of life

Wasting is more prevalent in children below 2 years of age. Optimal maternal nutritional status before, during and after pregnancy impacts on proper child development. Proper Infant and Young Child Feeding (IYCF) practices and complementary feeding promotion as well as micronutrient supplementation and fortification programs are well-known protective factors to reduce malnutrition in children. Also, investment in girls' education should be prioritized considering the positive correlation with reduction of malnutrition.



Promotion of exclusive breastfeeding and appropriate infant feeding

There is the need to enhance breastfeeding practices especially exclusive breastfeeding until 6 months of age, whilst campaigning against the use of breastmilk substitutes and bottle breastfeeding. Also, appropriate infant feeding practices for children below 2 years are fundamental protective factors to prevent wasting.



Strengthen Nutrition-WASH programming to address household and environmental factors that contribute to wasting

Poor water, sanitation and hygiene practices are associated with a higher risk of wasting in Lao PDR. Interventions to prevent children from infections that cause diarrhoea, intestinal worms infestation, and control of environmental factors such as unsafe drinking water are encouraged as part of WASH interventions to prevent wasting. Continuing efforts to promote hand washing with soap and promotion of hygiene behaviours are key for successful reduction of wasting among children are also critical.



Prioritize social protection schemes targeting poor and deprived households and control of the negative consequences of the COVID-19 crisis on health and economics.

The COVID-19 crisis is expected to have a negative impact on the economy of the country. There are estimates of significant increases in wasting worldwide due to economic consequences of the COVID-19 pandemic.

Expansion of social protection programmes and adequate food access are key to increase income and improve food security of the most vulnerable especially in the context of the COVID-19 pandemic. This is key to prevent all forms of malnutrition including wasting.

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