Briefing Paper:

Nutrition-Sensitive Agricultural Development

Case studies of Indonesia, Lao PDR, Myanmar and Timor-Leste

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Introduction

This briefing paper explores the relationship between nutrition-sensitive policies and agricultural development, and is informed by the livelihoods approach, malnutrition dynamics and governance concerns. It reviews four countries in Southeast Asia - Indonesia, Lao PDR, Myanmar and Timor-Leste - to illustrate the connections between agriculture, food security and nutrition. These case studies also map the policy environment, coordinating mechanisms and key stakeholders for each country in order to provide background information for future research on nutrition-sensitive development and cross-sectoral collaborations.

Summary

Nutrition-sensitive agricultural development aims to achieve nutrition outcomes through agricultural development interventions, an approach that requires multisectoral collaboration and is supported by global initiatives such as the Scaling Up Nutrition movement. By enhancing the nutrition sensitivity of agricultural and livestock programmes, the intention is to reduce child and maternal malnutrition of rural populations in developing countries, whose livelihoods are generally based on agriculture and who suffer the highest levels of poverty, malnutrition and food insecurity. Evidence from the Lancet series 2008 and 2013 highlights the cruciality to address the nutrition status of women and children, particularly during the 1,000 days of opportunity, in order to insure a healthy, vibrant and productive population. Nutrition-sensitive interventions focus on addressing the underlying determinants of nutrition through other sectors, such as agriculture, in a targeted and cross-sectoral manner. The nutrition sensitivity of agriculture development requires further research as its effectiveness remains inconclusive due to poor evaluation design, indicating a strong need for research with explicit nutrition objectives and indicators. However, clear pathways and guiding principles have been identified to articulate the links between agriculture and nutritional outcomes, most of which emphasise the crucial role of women as key mediators of family health. To sustainably accelerate the reduction of undernutrition through a nutrition-sensitive approach, aligned national policy frameworks and multi-sectoral coordination mechanisms across ministries are vital, for which effective leadership and enabling environments are required.

Key considerations across all case studies

- Rural populations experience highest levels of poverty, food insecurity and undernutrition
- Most rural livelihoods depend on agriculture, despite increasing diversification
- Recurrent natural disasters impact on food and nutrition security
- Animal source foods play a key role in devising strategies to improve nutrient-dense diets sustainably
- Socio-cultural factors affect inadequate feeding practices, and gender inequality is persistent
- Nutrition is increasingly present within the political agenda
- Recent national policies reflect a nutrition-sensitive approach - aligned with SUN / UNICEF frameworks
- Bridging national policies with local implementation and decentralisation efforts is a challenge
- Inter-ministerial coordinating mechanisms are developing with strong multilateral presence
- MDGs achievement favours government attention and resources towards food and nutrition security
- Collaboration with ACIAR projects has the potential to yield synergistic outcomes
Opportunities

Indonesia

- Strengthen decentralisation efforts to implement food security and nutrition policies
- Draw on strong SUN Movement presence and embracement of nutrition-sensitive approach
- Collaborate with Food Security Councils to promote nutrition sensitivity at sub-national levels
- Favor livelihood strategies that generate income and enhance nutrition through livestock systems
- Potential research topics
  - effects of changes in rural livelihoods to food and nutrition security
  - correlation between engagement in food production and food insecurity
  - factors influencing breastfeeding patterns and complementary feeding practices

Lao PDR

- Support the establishment of the Inter-sectoral coordination mechanism and National Nutrition Centre
- Develop strategies to increase food production and access for remote populations
- Draw on the highly diverse diets to promote protein-rich foods and ensure wild foods sustainability
- Explore the role of poultry for nutrition outcomes, poverty reduction and livelihood strategies
- Potential research topics
  - effects of declining natural resources to rural livelihoods and food security
  - livelihoods strategies to support nutrition outcomes of ethnic minorities
  - factors affecting undernourishment increases when transitioning to complementary foods

Myanmar

- Strengthen the government’s capacity to harmonise food and nutrition policies, and across levels
- Identify strategies to enhance the food and nutrition security of specific vulnerable regions/states
- Support the diversification of diets, particularly in terms of vegetables and protein intake
- Reinforce production of animal-source foods for enhanced nutrition at the household level
- Potential research topics
  - effects of changes in livelihoods and land access / ownership to food and nutrition security
  - correlation between indebtedness and lean season shortages, and alternative coping strategies
  - factors influencing undernourishment upsurges during the complementary feeding period

Timor-Leste

- Support the Inter-sectoral coordination mechanisms within the KONSSANTIL structure
- Draw on the government’s eagerness to address malnutrition and a conducive policy environment
- Identify effective and sustainable cross-sectoral strategies to support child and maternal nutrition
- Consider integrated crop and livestock smallholder systems to strengthen livelihoods for better nutrition
- Potential research topics
  - determinants of post-harvest losses and potential strategies to mitigate them
  - assess nutrition and livelihoods outcomes of improved varieties from the Seeds for Life project
  - factors affecting diet adequacy differentials between children and adults within households
1. Nutrition-sensitive agricultural development

The Briefing Paper starts by summarising the link between rural livelihoods and agricultural development. Then, it reviews the consequences and levels of undernutrition; followed by defining nutrition-sensitive development interventions. Then, it elaborates on nutrition-sensitive agriculture, identifying the links between agriculture and nutrition, identified pathways and design principles; followed by a review on institutional considerations for coordinated action. Finally, a country profile highlighting key food and nutrition security issues, institutional framework, relevant programs and links to DFAT priorities is developed for each case study.

Livelihoods approach

A livelihood is articulated through the capabilities, comprised of assets - material and social - and activities used as a means of living by a household. When a household’s livelihood is able to cope with and recover from shocks and stresses, whilst maintaining or improving its productive asset base and capabilities, it is secure. For this security to be sustainable, the household livelihood needs to be able provide for future generations.

Rural populations of Southeast Asia are mostly affected by poverty and low nutrition status. Livelihoods of the majority of rural populations depend on subsistence farming, with little but increasing alternative opportunities for income generating activities. Seasonal shortages particularly impact the capabilities of small farmers to sustain an adequate diet, affecting their level of food security and further entrenching their disadvantage.

Agricultural development is key for rural populations’ prosperity especially if targeted to improve nutritional outcomes, which can in turn improve agricultural productivity and has the potential to simultaneously enhance gender equity, ecological sustainability and serve emerging markets avid of nutritious foods. These win-win situations must be pursued whilst ensuring women’s participation and empowerment as they are the main household carers, whose actions most impact on children’s health.

Nutrition-sensitive agricultural development can support household’s livelihoods by enhancing their capabilities and productive asset base whilst ensuring the necessary nutritional requirements for rural populations to fully participate in educational and labour activities, vital for economic growth.
Malnutrition and its consequences

**Malnutrition** affecting children from conception to two years of age impacts irreversibly in their cognitive and physical development\(^{25,27}\), reducing adult income and offsprings’ health\(^{32}\). This “1,000 days window of opportunity” is crucial to ensure the child’s future. The Lancet Series 2008\(^{26}\) and 2013\(^{28}\) have provided insightful evidence of its cruciality, which combined with global initiatives like the SUN Movement\(^{25}\), have placed nutrition high in the development agenda.

Undernutrition is the outcome of insufficient food intake and repeated infectious diseases\(^{30}\), it can be identified by anthropometric indicators (below) and by lacking micronutrients in poor-quality diets\(^{31}\):

- **Stunting** or low height for age - reflects chronic malnutrition and frequent infections
- **Wasting** or low weight for height - reflects acute malnutrition and is a predictor for child mortality
- **Underweight** or low weight for age - reflects elements of stunting and wasting, or a BMI <18.5 for adults

**Micronutrient deficiencies** include lack of Vitamin A, iron, iodine and zinc, and result in long-term health consequences in childhood\(^{32}\).

**Poverty** is cause and consequence of poor human development, and is linked to malnutrition in a vicious cycle. Thus, preventing maternal and child undernutrition is a key investment for the socio-economic development of a country, because investing in nutrition breaks the intergenerational cycle of poverty.

This is the latest nutrition comparable data* for the countries of interest:

<table>
<thead>
<tr>
<th>Country</th>
<th>Stunting % children &lt;5</th>
<th>Wasting % children &lt;5</th>
<th>Anaemia % children &lt;5</th>
<th>Anaemia Pregnant Women / Women Reproductive Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing countries* 35</td>
<td>27.3% 2012</td>
<td>8.5% 2012</td>
<td>52.5% 2004</td>
<td>39.4% 2011 - PW</td>
</tr>
<tr>
<td>Indonesia 17</td>
<td>37.2% 2013</td>
<td>12.1% 2013</td>
<td>28.1% 2013</td>
<td>37.1% 2013 - PW</td>
</tr>
<tr>
<td>Laos PDR 19</td>
<td>44.2% 2012</td>
<td>5.9% 2012</td>
<td>41% 2006(^{7})</td>
<td>22% 2006(^{7}) - WRA</td>
</tr>
<tr>
<td>Myanmar 18</td>
<td>35.1% 2009</td>
<td>7.9% 2009</td>
<td>75% 2004</td>
<td>71% 2003 - PW</td>
</tr>
<tr>
<td>Timor Leste 189</td>
<td>50.2% 2013</td>
<td>11% 2013</td>
<td>62.5% 2013</td>
<td>38.9% 2013 - WRA</td>
</tr>
</tbody>
</table>

* Low and middle income group aggregate (all developing economies).
Low- and middle-income economies are those in which 2013 GNI per capita was $12,745 or less.
**Nutrition-sensitive development**

Nutrition interventions aim to address the causes of malnutrition, both immediate -direct- and underlying -indirect-, that determine foetal and child nutrition development\(^24\).

- **Nutrition-specific interventions** address the immediate determinants of nutrition, particularly directed to impact the ‘window of opportunity’\(^26, 27\).

- **Nutrition-sensitive interventions** address the crucial underlying determinants of nutrition through other sectors: agriculture and food security, education, social protection, sanitation, and women’s empowerment, whilst incorporating specific nutrition goals.

Direct interventions can reduce stunting by 20\(^\%\)\(^2\) while income growth can only solve part of the problem\(^24\), hence the need to research nutrition-sensitive interventions. Exploring their synergies and identifying effective coordinated approaches for their implementation is vital to address stunting and malnutrition.

**Conceptual framework of the determinants of nutrition and underlying cause\(^9\)**
**Nutrition-sensitive agriculture**

**Links between agriculture and nutrition**

Agricultural and rural development provide a crucial opportunity for reducing malnutrition, not only because large proportions of malnourished populations live in rural areas, but also because agriculture is their main source of livelihood. Improving nutrition outcomes of smallholder farmers will improve productivity while potentially reducing child malnutrition in a sustainable way.

Targeted agricultural and livestock programmes focused on improving access to high-quality and diverse diets, and enhancing poor household’s income can complement efforts to increase agricultural productivity, including staples biofortification, homestead food production and animal-source foods interventions.

For agriculture, the issues is when and how to become nutrition-sensitive to support stunting reduction and identify ways to implement a “nutrition lens” to improve or protect -do no harm- the nutritional status of populations.

An emphasis on measuring the nutritional impact of interventions is key, as two systematic reviews show little impact of agricultural programs on child nutrition, partly because of lack of sound design and evaluation.

Research gaps and methodologies have been identified to strengthen the current evidence, articulated through this framework.
Pathways and guiding principles

The pathways by which agricultural programmes can improve nutritional outcomes have been widely discussed, converging on the fact that women are key mediators in the pathways between agriculture inputs, intra-household resource allocation, and child nutrition.

Women’s control over resources and income flows have disproportionately positive impacts on household health and nutrition, thus stimulating rural employment schemes. However, these require careful consideration on the net effect on women’s time allocation to avoid increasing poor nutrition outcomes.

**Pathways from agriculture to nutrition**: 

- Pathway 1 - Agriculture as source of food - including livestock systems
- Pathway 2 - Agriculture as source of income - how is spent on food & basic needs
- Pathway 3 - Agricultural policy and food prices
- Pathway 4 - Women’s social status and empowerment
- Pathway 5 - Women’s time and availability to manage child care
- Pathway 6 - Women’s own health and nutritional status
- Pathway 7 - Natural resource management - soil, water and biodiversity

* Adapted from Gillespie, 2013; Ruel and Alderman, 2013; and Herforth, 2013
The key **guiding principles** for nutrition-sensitive agricultural policies and programmes, aimed for sound impact assessment are\(^\text{10, 11}\):

1. Design explicit nutrition objectives and M&E impact indicators, mitigate potential harms
2. Assess context to adapt to the local causes of malnutrition
3. Target nutritionally vulnerable groups and improve equity
4. Invest in and empower women
5. Increase production, diversification and reduce post-harvest losses -including mycotoxins control-
6. Incorporate nutrition promotion and education -building on existing local knowledge, attitudes and practices, using behavioural change communication
7. Improve processing to retain nutritional value, shelf-life, food safety
8. Expand nutrient-rich foods markets and markets access for vulnerable groups
9. Collaborate and coordinate with other sectors
10. Maintain or improve the natural resource base

See Carter and Darbas (2014)\(^4\) for an articulation of nutrition-sensitive agricultural development interventions applied to a case study in South Asia; Randolph et al. (2007)\(^23\) for important considerations on the role of **livestock** in human nutrition and health for poverty reduction; and de Bruyn et al. (2014)\(^6\) for **family poultry** for food and nutrition security.

**Value chains** for nutrition could become a meaningful approach, yet its potential remains untapped\(^24\); whilst policies which impact nutrition through **food systems** have been identified\(^22\).

**Macro-level drivers** can also make nutritional outcomes more vulnerable due to changes in climate change, energy and food prices volatility, trade, and land-use policies\(^13\), illustrating how this approach operates at the household and the larger food system levels\(^11\).

**Incentives** for farmers to focus on nutrition outcomes are encouraged, as assuming their buy-in might be mistaken\(^16\), which could be articulated through win-wins between economic growth and nutrition incentives, including labour-saving technologies\(^22\).

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**Policy implementation recommendations**

To accelerate reductions on undernutrition, prioritising the national achievement of a few high coverage nutrition-specific interventions with proven effects on stunting reduction\(^7\), while maximising the nutrition-sensitivity of national developments\(^15\), are highly recommended.

Multiple cases document the right combination of political commitment, strategic programming and resources, resulting in fast improvement in child and maternal nutrition, whilst stressing how effective **leadership** and locally generated solutions regarding how to organise nutrition tend to be more successful\(^11\).
Nutrition-sensitive actions must be multidisciplinary and multisectoral to be successful, facilitating collaboration among ministries and experts from different disciplines. However, despite existing intersectoral planning policies, fruitful implementations are seldomly documented.

Barriers to effective coordinated action across ministries can be overcome with different advocacy strategies, cultivating policy champions, and making nutrition an explicit political priority, like embedding it within electoral commitments.

Nutrition governance requires enabling environments based on 1. knowledge and evidence - generating up-to-date data and rigorous research; 2. politics and governance - focusing on inclusive horizontal coordination mechanisms and engagement with civil society and private sector; and 3. capacity and resources - leadership and better estimation of benefit to cost ratios for nutrition-sensitive interventions.

Other key considerations are crucial for generating change at the subnational level, including incentives for local governments - specially relevant for decentralising systems, and improving nutrition training programmes and academic curricula to improve service delivery.

Finally, these are proposed methods to improve the commitment, accountability and responsiveness to undernutrition reduction.
References - Nutrition-Sensitive Agricultural Development


2. Republic of Indonesia (Indonesia) - Country analysis

2. Country overview

Independent from the Dutch since 1945, Indonesia evolved from Soeharto’s New Order authoritarian regime to the democratic Reformasi in 1998. This decentralising regional power is a vast archipelago inhabited by 247.8 millions, fourth largest population in the world. Its size, economic development and growing middle-class makes Indonesia’s profile the most divergent among the four case studies, reflected in a national poverty line of 11.4%.

However, regional disparities are significant, partly due to transportation and infrastructure challenges. A focus on Sulawesi, composed of six provinces, and the provinces of West Nusa Tenggara (NTB) and East Nusa Tenggara (NTT) located in eastern Indonesia will be given.

Despite the current de-agrarianisation trend, agriculture is a political and historical priority due to large-scale food shortages in the 1960s, resulting in a strong focus on national food self-sufficiency, particularly rice, and articulated through a highly subsidised, regulated and protected system. Rice, the main staple and cultural symbol of prosperity, corn, soybean, sugar and beef are classified as strategic foods. However, in the focus areas sago and corn are staples.

Food insecurity affected 36% of the population in 2008, with most focus provinces above the national average of 14.4% for insufficient calorie intake - a specific food security assessment for NTT is available. Limited access to food is a result of poverty due to lack of stable employment, increasingly delinked from agriculture for rural livelihoods due to urban migration and off-farm incomes, despite 41% of households still depending on agriculture. Natural disasters are recurrent and severe, which when combined with the “lean season” in autumn can have devastating impacts on food security. These transitory factors are increasingly affected by climate change.

Poverty and food security are highly interrelated with similar geographical distribution, affecting mostly rural but also urban areas, with paradoxically small correlation between food security and engagement in food production, such as for Nusa Tenggara subsistence farmers’ experiencing higher food insecurity than those in Sulawesi who grow cocoa as cash crop.

Indonesia showcases the double burden of malnutrition, with simultaneously high stunting and children overweight levels, at 37.2% and 12.1% respectively. Stunting levels are above average in all focus provinces except one, and six of them have over 40% prevalence, topped by NTT with over 50%. Four out of the eight selected provinces are classified as highest priority due to also entailing above average insufficient nutritional intake, reflecting inter-generational nutritional problems.
Poor households spend almost 70% of their income in food and base their diets on carbohydrate sources\textsuperscript{11}, pointing at the need to balance the \textit{dietary intake} in nutritional terms. Breastfeeding is very low, with 85.8\% of infants fed on formula\textsuperscript{11} and only 36\% of children 6-23 months consume an acceptable diet\textsuperscript{13}. Also, addressing micronutrient deficiencies have been neglected for 10 years\textsuperscript{11}.

\textbf{Socio-cultural factors} affect malnourishment, including limited knowledge on how to prepare a nutritious diet, traditional beliefs and taboos around food consumption, child caring practices and reproductive health\textsuperscript{11}. \textbf{Ethnic diversity} in the focus provinces is high, with Southeast Sulawesi inhabited by five main groups, lead by the Tolaki with 16\% of the population\textsuperscript{14}.

Disparities in nutrition indicators are not significant among genders\textsuperscript{25}. However, \textbf{gender} inequality and discrimination are key factors, with limited employment opportunities, inadequate pay and lack of political commitment to gender mainstreaming laws\textsuperscript{5}. \textbf{Female illiteracy} rate was 13\% in 2007, although 27\% for the NTB province\textsuperscript{4}.

\textbf{Economy} growth has facilitated improvements in social welfare\textsuperscript{11}, and although an OPEC founder, since 2004 Indonesia is a net oil importer\textsuperscript{16} compromising its ability keep subsiding fertilisers for agricultural development.

<table>
<thead>
<tr>
<th>Nutrition indicators\textsuperscript{19}</th>
<th>2013</th>
<th>Other indicators\textsuperscript{27}</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textbf{CU5 - children under 5}</td>
<td></td>
<td>HDI</td>
<td></td>
</tr>
<tr>
<td>Stunting</td>
<td>37.2%</td>
<td>Human Development Index</td>
<td>108 / 187 2014\textsuperscript{24}</td>
</tr>
<tr>
<td>Underweight</td>
<td>19.6%</td>
<td>GDP per capita</td>
<td>$3,556</td>
</tr>
<tr>
<td>Wasting</td>
<td>12.1%</td>
<td>National Poverty Line</td>
<td>11.4% 2013\textsuperscript{26}</td>
</tr>
<tr>
<td>Anaemia - 12-59 months</td>
<td>28.1%</td>
<td>Rural Poverty Line</td>
<td>14.3% 2013\textsuperscript{25}</td>
</tr>
<tr>
<td>Vitamin A supplementation</td>
<td>75.5%</td>
<td>Rural Population</td>
<td>48.6%</td>
</tr>
<tr>
<td>\textbf{WRA - Women of reproductive age}</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insufficient calorie intake MUAC below 23.5</td>
<td>24.2%</td>
<td>Primary sector % GDP</td>
<td>14.4%</td>
</tr>
<tr>
<td>Anaemia - pregnant women</td>
<td>37.1%</td>
<td>Gender Inequality Index</td>
<td>103 / 187 2013\textsuperscript{23}</td>
</tr>
<tr>
<td>Iodine supplementation</td>
<td>62.3% 2007</td>
<td></td>
<td>90.1% 2011\textsuperscript{26}</td>
</tr>
<tr>
<td>Exclusive breastfeeding 6 months</td>
<td>42% 2012\textsuperscript{13}</td>
<td></td>
<td>98.8% 2011\textsuperscript{26}</td>
</tr>
</tbody>
</table>
Vulnerability to Food Insecurity in Indonesia, 2009

Vulnerability to Food Insecurity in NTB, NTT and Sulawesi, 2009
2. National Policy Framework

The decentralisation of food security policy and institutions is challenged by competing views on the scale of self-sufficiency, i.e. local vs national, while welfare programmes are addressing accessibility concerns. Policies harmonisation requires clear integration and coordination among jurisdictional levels.

**Food Security Policies**

The Government of Indonesia (GoI) counts with 13 different laws and regulations related to food security, under the Ministry of Agriculture (MoA). Among these:

- The **Food Security 68/2002**, framework within which local governments are expected to contribute to national food security objectives.
- The **Food Security Policy Village Food Resiliency 2006**, flagship national program targeting rural communities to reduce food insecurity and malnutrition at the household level through Local Government involvement.
- The **Food Law 18/2012** strongly states self-sufficiency -90% rice self-sufficient- as a political objective, based on local food availability and food sovereignty.
National Plan of Action for Food and Nutrition 2011-2015\(^\text{11}\) (NAP-FN)
By the Ministry of National Development Planning (Bappenas) in partnership with multiple associations and UN Agencies. It prioritises targeting mothers and children, strengthening multisectoral coordination mechanisms and achieving the MDGs goals. Accompanied by a Regional Action Plan for Food and Nutrition with the involvement of districts and municipalities; as well as a gamut of nutrition-related legislation and programmes\(^\text{22}\). It has five pillars of action involving community nutrition improvement; increasing food accessibility; increasing quality and safety control; change of community behaviour towards a clean and healthy lifestyle; and strengthening food and nutrition institutions across levels. It stratifies the provinces according to the NMTDP targets, with seven out of eight focus provinces classified as strata 3 and 4, i.e. with the highest priority.

National Medium Term Development Plan 2010-2014 (NMTDP)
By Bappenas. It recognises food security as a priority whilst focusing on strengthening health and nutritional status. It states three specific targets aligned with the MDGs goals: reducing the prevalence of undernutrition and stunting among under-fives to 15.5% and 32% respectively, and to achieve sufficient calorie intake among the population.

Policy Framework SUN Movement 1,000 days, 2013\(^\text{12}\)
By Bappenas. It focuses on six nutrition goals specifically affecting child and maternal health outcomes: stunting, wasting, over-weight, low-weight birth and exclusive breastfeeding. It articulates the SUN Movement rationale within Indonesian legislation, while identifying nutrition-specific and sensitive-interventions and developing the coordination structure.

Rice for Poor Households programme - Raskin
By Bappenas, implemented by BULOG (National Food Logistics Agency). Evolved from a Social Security Net program to alleviate the impacts of the 1997/98 financial crisis, providing a ration of rice to targeted poor households. In 2009 it fed 18.5 million households\(^2\); however there are more recipients than determined by the quota.

Coordinating Mechanisms

Agency for Food Security\(^9\)
Established in 2001 by the MoA. Its mission is to strengthen food security through the implementation of strategic national food security programs and activities. It performs a coordinating role among different food security stakeholders at national and international levels.

Food Security Council
Created in 2006 by the MoA and under the President supervision. Coordinating institution for food security stakeholders, supporting the achievement of national and regional food security at the provinces and districts/cities levels. Composed of a National FSC, 33 provincial Food Security Councils and 497 Food Security offices in 2012\(^9\).
National Movement to Accelerate Nutrition Improvement 42/2013
Launched by the President in October 2013, providing authority to the Ministry of People’s Welfare (MoPW) to oversee coordination of the SUN Movement, and identifying structures to convene multiple stakeholders and sectors at national and subnational level.

3. Multilateral agencies’ involvement

There are multiple organisations working on nutrition-related issues in Indonesia. These include UN agencies - UNICEF, UNFPA, WHO, ILO, FAO and WFP; international financial institutions - World Bank, Asian Development Bank; specialised agencies - ACIAR, IFAD, World Agroforestry Centre; a myriad of NGOs - including Save the Children, World Vision, CARE International; and philanthropic groups - Bill and Melinda Gates Foundation.

Bilateral donors were lead by Japan with 918 $US millions, Australia with 527, and the United States with 229, followed by Germany and the EU as the major funders of Indonesia’s Official Development Assistance in 2012.

Donor agencies involved in the SUN Platform for Development Partners include Australia, United States, World Bank and Millennium Challenge Corporation.

Key programs

READ - Rural Empowerment and Agricultural Development, 2002-2014
Designed by GoI and IFAD in 2002, it promotes improvements in sustainable livelihoods of the rural poor in Central Sulawesi. Its core objective is economic growth and improved natural resource management in target villages. Key stakeholders are MoA, Bappenas and Ministry of Finance (MoF), including a partnership with the Mars Company on cacao technical support. A mid-term review in 2011 found improvements on income based on investment in key agricultural commodities, better food security and equity of women.

Food and Nutrition Security Monitoring System 2009 (FNSMS)
Led by the Food Security Agency, implemented by the Food Security Offices and supported by WFP, UNICEF and ILO. Started in 2009, it provides a tool for early warning and response planning. Piloted in four provinces, including NNT and Central Sulawesi, generates specific data on their food and nutrition situation. Key findings showcase a 22% prevalence of chronic food insecure households in rural areas attributed to limited food access and structural factors, with 60% of households receiving the Raskin program.

ACIAR research programs
Counts with an extensive number of projects, many based in Eastern Indonesia. They focus on enhanced productivity and food quality, whilst developing improved market linkages for high-value products sourced from smallholder production systems. In 2014–15 ACIAR will contribute to development of the whole-of-government strategy for the Australian aid program in Indonesia.
4. Key considerations

a. Government structure and opportunities

Indonesia is a presidential representative democratic republic, with a multi-party system since 1998. The GoI has placed nutrition in the core of its national policies, however the challenge remains on how to implement these through the decentralised system.

For the purpose of nutrition-sensitive agricultural projects, collaboration with the MoA and MoH, and working with the National Food Security Agency and Food Security Council (structure below) as well as with provincial subsidiaries, seems appropriate.

![Organization Structure of Food Security Council](image)

Participating in existing national mechanisms and strengthening provincial coordination are advised, such as through Bappeda (Provincial and District Planning agencies).

The MoPW leads the SUN Policy Framework through its **Coordinating Structure**:

- **Task Force** (Coordinating Minister of People’s Welfare)
- **Advisory Team** (Coordinating Minister of People’s Welfare)
- **Technical Team** (Deputy Minister of Human Resources Development & Cultural Affairs (Sek sayısı))
- **Team of Experts** (Supporting Technical Team)

- Campaign
- Advocacy
- Training
- Partnership
- Planning & Budgeting
- Environmental, Safety Health
b. Legislative cycles and annual budget

In 2014 a new President was elected, Joko Widodo, for a five year term. The next elections are expected in 2019, Parliament in July and Presidential in September/October. Since 2005, heads of local government are directly elected by popular election.

In 1999, a new legal framework for budgeting was established\(^1\). The budget cycle is annual and approved on late October, indicating that budget discussions should happen half way through the year.

In the context to achieving the MGDs, budget allocation is continually increased, including provisions to support local governments with satisfactory MGDs’ target performance\(^1\). However, the budget plan (RAPBN) 2014 only allocates 0.53% for child and maternal health; and the MoH receives 1% less than the Ministry for Religious Affairs\(^5\).

5. Links with DFAT priorities

Indonesia is an important partner and neighbour whose political stability and economic development are of strategic value to Australia. In 2013-14 Australia committed $600.1 millions and $605.4 million are estimated for 2014-15\(^3\), thus becoming Indonesia’s second bilateral donor.

The relationship between Australia and Indonesia is reflected in the Partnership Country Strategy 2008-2013, extended until 2014 in order to align the next strategy with the following NMTDP. A 2014-2015 programme has been released, focusing on economic development, gender equality through women’s economic empowerment, strengthening education, and disaster prevention.

Nutrition-sensitive agricultural projects are committed to support economic development through a livelihoods analysis of food insecurity and by improving the population’s nutritional status to fully participate in the workforce. Improved nutrition is the base for adequate education achievements, gender equality and stability within the country.

Women’s economic empowerment is one of the identified pathways in which agriculture can improve nutrition outcomes. This approach has the potential to explore tangible solutions in which rural women in Indonesia can improve gender equity while reducing poverty and ensuring income-generating opportunities.

By strengthening nutrition-sensitive agricultural development, a complementary opportunity to collaborate with ACIAR’s projects centred on smallholder farmers is provided, which could yield valuable returns on Australia’s aid investment in Indonesia.
References - Indonesia


3. Lao People’s Democratic Republic (Lao PDR) - Country analysis

1. Country overview

Lao PDR is a landlocked mountainous country influenced by regional histories, still the most bombed country per capita in the world\(^2^0\). A civil war ended with a socialist regime in 1975, transitioning to liberalisation from the 1990s. It is a small Least Developed Country\(^1^8\) of 6.6 million people\(^2^5\), of which 27.8% are below the poverty line\(^2^3\).

The rural population accounts for 64.7%\(^2^5\), concentrated in upland areas and challenged by remoteness and difficult access to facilities and markets, with almost double the poverty rates than in urban areas\(^2^3\). Three factors influence the distribution of food security and malnutrition: socio-economic status, geography and ethnicity, particularly affecting rural poor populations in the North and South, from non-Lao-Tai ethnicity -32% of the population\(^2^1\).

The agricultural sector contributed to 45% of the GDP in 2011\(^2^0\), whilst employing 76% of the population\(^2^1\) with only 7% of total land under production\(^3\). Availability of arable land is constricted by unexploded ordnances (UXO) - two thirds of the country still contaminated from the Vietnam War\(^2^0\); dams, mines and agroforestry developments; and a rugged topography. The main crop is rice, followed by maize, vegetables and cash crops - rubber, sugarcane and coffee\(^2^1\).

Mining, hydroelectric and agribusiness concessions bring economic opportunities, but also imperil rural livelihoods based on subsistence farming and non-timber forest products. These are also adapting to diversification in production systems, land use reforms\(^9\) and attempts to eradicate opium cultivation. A Resettlement Village Policy has had mixed impacts on nutrition in rural communities, struggling to adapt to new livelihoods in the lowlands\(^2^0\).

Food insecurity seems less critical than malnutrition with recent declines in hunger and an acceptable food consumption for 89% of the population\(^2^1\) - anticipating worst during the lean season, between August and October; but rising food prices are a concern for vulnerable households\(^2^1\). Natural disasters are recurrent, with cyclical floods and droughts that may be exacerbated by climate change, highlighting the importance of sustainable approaches.

Malnutrition is a major challenge. In 2012, stunting prevalence among children under-five was 44.2%, whereas 5.9% were wasted and 26.6% underweight\(^1^1\). Poverty, geography and mother’s education are key predictors of child malnutrition in Lao PDR. Micronutrient deficiencies are suspected to be elevated, with a stronger incidence in children than women of reproductive age\(^2^0\). With a highly ethnically diverse population, minority groups present a higher prevalence of stunting: 60.9% of the Chinese-Tibetans compared to 33.4% for Lao-Tai in 2012\(^1^1\).
**Dietary intake** is highly diverse although imbalanced, as rice is dominant combined with extremely low fat, oil and protein consumption. In 2012, 11% of the population had borderline/poor food consumption\(^{21}\), mainly in the southeastern provinces and substantially lacking protein. Wild meat and fish are a primary source of proteins and fats for rural households, with an estimated sourcing of 32 to 45%\(^{21}\), which availability and access are increasingly threatened by developments and forest degradation.

**Socio-cultural differences** in feeding patterns are reflected in 83% of rural women restricting their diets in terms of protein-rich foods during pregnancy and after giving birth, compared to 75% in urban areas\(^6\); combined with inappropriate complementary feeding practices are prevalent with 52.2% children under five years consuming a suboptimal diet\(^{21}\).

Simultaneous action to improve dietary intake and **sanitation** has been identified as key to address malnutrition\(^{21}\). Disparities in child malnutrition indicators are not significant between genders\(^{11}\); with a 63% reduction in child mortality since 1990 levels\(^{11}\). **Female literacy** rates are improving for younger generations but still with a 10% differential favouring man\(^{23}\), and are significantly lower for minority women. **Gender equality** has made slow progress, with inequity being closely linked to ethnicity, poverty and geography and wider gaps\(^2\).

The **economy** has been growing at 7-8% a year over the past decade\(^{25}\), based on the exploitation of abundant natural resources, particularly hydropower and mining, substantially contributing to government’s revenue\(^{26}\). Unregulated developments are of concern due to ecosystem degradation\(^{15}\).

<table>
<thead>
<tr>
<th>Nutrition indicators(^{11})</th>
<th>2012</th>
<th>Other indicators(^{25})</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CU5 - children under 5</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stunting</td>
<td>44.2 %</td>
<td>HDI Human Development Index</td>
<td>139 / 187 2014(^{16})</td>
</tr>
<tr>
<td>Underweight</td>
<td>26.6%</td>
<td>GDP per capita</td>
<td>$1,413</td>
</tr>
<tr>
<td>Wasting</td>
<td>5.9%</td>
<td>National Poverty Line</td>
<td>27.6% 2008(^{23})</td>
</tr>
<tr>
<td>Anaemia</td>
<td>41% 2006(^6)</td>
<td>Rural Poverty Line</td>
<td>31.7% 2008(^{23})</td>
</tr>
<tr>
<td>Vitamin A supplementation</td>
<td>59.1%</td>
<td>Rural population</td>
<td>64.7%</td>
</tr>
<tr>
<td><strong>WRA - Women of reproductive age</strong></td>
<td>Underweight (&lt;18.5 BMI)</td>
<td>15% 2006(^6)</td>
<td>Primary sector % GDP</td>
</tr>
<tr>
<td>Anaemia</td>
<td>22% 2006(^6)</td>
<td>GII Gender Inequality Index</td>
<td>118 / 187 2013(^{17})</td>
</tr>
<tr>
<td>Iodine deficiency</td>
<td>14% 2006(^6)</td>
<td>Literacy rate female</td>
<td>70% 2010(^2)</td>
</tr>
<tr>
<td>Exclusive breast feeding - 6 months</td>
<td>40.4%</td>
<td>Literacy rate female youth</td>
<td>79% 2010(^2)</td>
</tr>
</tbody>
</table>
Relative Status of Food and Nutrition Security in Lao PDR, 2011-2013

Population below the poverty line in Lao PDR, 2008

Prevalence of stunting in Lao PDR, 2012
Economic growth and child undernutrition in Lao PDR, 1990 - 2013

![Graph showing economic growth and child undernutrition in Lao PDR, 1990 - 2013](image)

Created from World Bank, 2013\(^{27}\); and MoH & Lao Statistics Bureau, 2013\(^{11}\).

2. National Policy Framework

Food security has traditionally been equated to rice self-sufficiency\(^{21}\) by the Government of Lao PDR (GoL), it is gaining prominence within the national discourse together with nutrition reflected in various key policies. Institutional multi-sectoral mechanisms are under development.

**National Nutrition Policy 2008 (NNP)**


By the Ministry of Health (MoH). Both constitute the policy framework for nutrition. The NNP provides the political direction on nutrition and establishes the engagement between governmental agencies and development partners. It aims to improve malnutrition by 2015 through clear targets to reduce the prevalence of stunting to 34%, of wasting to 4%, and of anaemia to 30% for children under-five and 25% for women of reproductive age, and further in 2020.

The NNS/NPAN is articulated through immediate, underlying and basic causes of malnutrition, whilst recognising the need for cross-sectoral coordination. It identifies interventions in 10 key areas to attain the indicators specified by the NNP, with a focus on child and maternal health. Good governance and short-term measurable impacts are defined as key to achieve these targets, through scaling-up proven and cost-effective interventions.
National Socio-Economic Development Plan, 2011-2015 (NSEDP)
By the GoL. The NSEDP is the central framework outlining the government’s development priorities, where nutrition has been mainstreamed for the first time. It highlights a focus on: poverty reduction and rural development, economic development, cultural and social development, and sustainable development, natural resource management and environmental protection. The NNP targets are included.

Strategy for Agriculture Development, 2011-2020
By the Ministry of Agriculture and Forestry (MAF). Food security is one of the four sector priorities, and it recognises chronic malnutrition as a major problem in Lao PDR. The strategy focuses on developing the diversity and improving the quantity of foods produced. The Food Security Strategy 2001-2010 is being updated in partnership with FAO.

Rural Development and Poverty Eradication, 2015 (RDPE)
By the GoL. An ambitious framework for poverty reduction by integrating the most remote villages and modernise the industry while considering environmental outcomes and preserving the natural resource base. However, ambiguity in land ownership challenges the appropriate management of resources and protection of rural livelihoods.

Coordinating Mechanisms

National Science Council
By the Prime Minister's Office. Leading an Interim Coordination Task Force that will propose a coordinating and implementation mechanisms for the NNS/NPAN. Inter-ministerial, multi-stakeholder and sub-national levels will be encompassed; provisionally, the Round Table Process (RTP) serves as platform for food and nutrition security coordination.

National Nutrition Taskforce - under development
By the National Science Council and MoH. Will coordinate technical aspects of the NNS/NPAN implementation. Will aim to improve the nutrition governance and management mechanisms, supported by the REACH initiative (below). However, its establishment has been ongoing since 2011 and not finalised.

The establishment of a National Nutrition Centre is planned by 2015, under the MoH and with FAO support.

In 2013, MAF was discussing to create an ad-hoc Task Force on Food Security and Nutrition under the Sector Working Group Agriculture and Rural Development.
3. Multilateral agencies’ involvement

The presence of bilateral donors and international NGOs increased in the late 1980s with the country’s opening to the West. These are coordinated through the Round Table Process, an aid effectiveness platform with annual high level meetings chaired by the GoL and UNDP.

The principal actors are UN agencies -including UNDP, UNICEF, UNESCO, WHO, FAO, WFP; multi-lateral agencies -World Bank, Asian Development Bank and International Monetary Fund; international NGOs -over 20 in nutrition-related programmes coordinated through the INGO Network; specialised agencies -ACIAR, GAIN alliance, IFAD; and Civil Society groups.

Official Development Assistance totalled 777 US million in 2012-13, lead by Japan with 88.9, followed by Australia with 52.5 and Germany with 39.6 US million respectively. The EU is also a key actor.

Key programs

REACH initiative
Inter-agency process led by the GoL that gathers all stakeholders to address high priority areas of food insecurity and child undernutrition through five specific evidence-based interventions with an efficacy rate of 60% (NNS/NPAN). Started in 2008 by FAO, UNICEF, WFP and WHO, it focuses on stakeholder coordination, operationalisation of the NNS/NPAN, and resource mobilisation. Mapping of stakeholders involved in nutrition and programs was undertaken in 2009.

Scaling Up Nutrition
Lao PDR joined the SUN Movement in 2011, mainly partnering with the MoH and supporting the nutrition agenda post-2015. It is supporting the GoL to identify adequate approaches to decentralise nutrition activities to the provincial level and ensure resources mobilisation for nutrition and food security.

Upland Research and Capacity Development Program
Implemented by the MAF and funded by the EU, focuses on research to support rural poverty reduction while ensuring sustainable resource management and building capacity. It aims to strengthen the research capacity on agricultural and forestal developments by improving rural livelihoods, poverty alleviation and sustainable management in Lao’s uplands.

ACIAR research projects
It has extensive research programs, including strengthening rice-based farming systems for food security, a livestock alternatives to shifting agriculture in the upland region, lowland farming diversification, and various forestry programs. A research intervention that complements larger donor projects is underway in the south.
4. Key considerations

a. Government structure and opportunities

Lao PDR is a unitary state, a centralised democracy according to the 1991 Constitution, with a single-party regime. Timid approaches to decentralisation are foreseen.

For the purpose of nutrition-sensitive agricultural projects, working with the MAF and the MoH seems appropriate, as well as with the National Commission for Mother and Child. The Department of International Cooperation coordinates the national sector working groups.

Collaboration should focus on strengthening the negotiation of a cross-sectoral coordinating mechanisms, and support the development of governance mechanisms to operationalisation of the NNS/NPAN from the national to village levels. Australia is a member of the High Level Round Table Meetings.

A National Nutrition Centre is planned for 2015 part of the NNS/NPAN, providing an opportunity to support and influence their development and reinforce a nutrition-sensitive approach to agricultural development in future policies.

b. Legislative cycles and annual budget

Elections are every five years, last one in 2011, and next iteration expected in late April 2016. Despite being a single-party election, there is a small presence of independent parliamentarians.

The budgetary cycle is annual, highly reliant on foreign aid funds and a widening fiscal deficit. The fiscal year starts in October, suggesting that funding discussions should happen in the first half of the year.

In 2011 the GoL approved a health sector reform strategy increasing its budget to 9% of the total expenditure. The NPAN requires of $600M in total funds between 2010-2014 to implement all planned activities, for which the GoL requires major donor support.
5. Links with DFAT priorities

Australia is one of the largest bilateral donors in Lao PDR with a relationship of over 60 years, whose development and prosperity are important as a regional neighbour. In 2013-14 Australia agreed $56.4 millions and $55.6 million are estimated for 2014-15.

The partnership is reflected through the Australia-Laos Development Cooperation Strategy 2009-2015, committing to support the development of inclusive growth through trade integration, education infrastructure and capacity building, and rural development.

Nutrition-sensitive agricultural projects are aligned with the focus on inclusive economic growth and rural development, as a healthy and well fed population will facilitate Laotians to further develop their economic growth. Optimal nutritional status and stable food security are key to achieve these goals, as they are crucial for social capital development.

Enhancing rural populations’ livelihoods is the target of nutrition-sensitive agricultural development, which is aligned with one the pillars of Australia’s aid in Lao PDR. Moreover, multiple ACIAR projects in the country converge with this approach, presenting potential to yield complementary research outcomes and return on investments.

Development outcomes will be attained by implementing nutrition-sensitive agricultural framework, as strengthening the rural population of Lao PDR in terms of their nutritional status will impact in their capability to engage in economic development and education achievements, priorities of Australia in Lao PDR.
References - Lao PDR


4. Republic of the Union of Myanmar (Myanmar) - Country analysis

1. Country overview

Myanmar, a former British colony and under authoritarian military rule since 1962, is transitioning towards a democracy since 2008. This nation of 52.7 millions is progressing to a market-oriented economy, and from 60 years of conflict to peace in border areas. It is a Least Developed Nation with 25% of its population under the poverty line, and the lowest HDI among the four case studies.

Poverty is more pervasive in rural areas, with a 29% incidence compared to 15% in urban locations, concentrating 85% of food poverty in rural locations where 66.8% of the Burmese live. Food poverty is unevenly distributed, affecting mostly the regions/states of Chin, Rakhine, Tanintharyi and Shan. Thus, geography is a key driver of food insecurity in Myanmar, also affected by socioeconomic status, ethnicity and insecurity. Poor households spend up to 74.1% of income in food.

Myanmar is rich in natural resources and has four distinct agroecological zones. The agricultural sector contributed to 37.8% of the GDP in 2011, employing 70% of the population and with an increasing focus on the export market for crops - rice and pulses - and fisheries. Other main crops of this net food exporter nation are oilseed, vegetables and maize, whose market liberalisation since 1988 is still limited by dwindling interventionist agricultural policies and changing land rights.

However, plentiful agricultural production coexists with high levels of rural inequality, poverty and malnourishment in Myanmar. Food and nutrition insecurity are exacerbated not only by the lean season after the Monsoon and natural disasters threats, but also by land access, with 30% of rural populations landless and 37% with small landholdings, whose livelihoods increasingly depend on casual farm labor and are more vulnerable to prices fluctuations. Indebtedness is widespread and mostly used to purchase food, a coping strategy for poorer households. Rural livelihoods are based on agriculture, although the importance of non-farm income and migration is growing.

Myanmar is experiencing a triple burden of high child and maternal mortality rates, combined with communicable and noncommunicable diseases. Malnutrition is pervasive with 35.1% children under-five stunted, 22.6% underweight, and 7.9% wasted in 2009. Stunting and underweight children are more prevalent in rural areas with significant regional differences, particularly high in Rakhine and Chin states. Undernourishment affects genders evenly, but it is correlated to poverty and mother’s educational level.
Low dietary diversity and insufficient dietary intake -30.5% of households\(^\text{17}\) - are key drivers of malnutrition in Myanmar, combined with high disease burden due to lack of infrastructure and health care\(^\text{19}\). Diets are high in carbohydrates, and protein accounts for only 11.4% of consumption -mostly from vegetable sources\(^\text{19}\). Micronutrient deficiencies are present, with particularly high anaemia levels for both mothers and children\(^\text{17}\).

Dietary diversity among mothers and children during the complementary feeding period is suboptimal\(^\text{22}\), when stunting and underweight rates dramatically increase\(^\text{18}\). Improving knowledge and changing attitudes is crucial, while acknowledging the inherent barriers of poverty\(^\text{22}\). Cultural perspectives require consideration, as inadequate nutrient consumption for pregnant and lactating women is influenced by avoidance of certain foods due to traditional food habits.

Women’s rights in Myanmar have historically been recognised, with same rights as men regarding land tenure, and parity among genders for primary and secondary enrolments\(^\text{19}\). However, women of ethnic minorities tend not enjoy the same status. Female literacy rates are over 90%\(^\text{29}\), although there are nearly three times the number of illiterate females compared to males\(^\text{19}\).

The economy has been growing in double digits from 2005 to 2011\(^\text{17}\), while the share of the primary sector - primarily rice production, with 80% of the total sector value-, has been decreasing since 2001 due to rapid increases from the gas, oil, mineral and gemstone industries in Myanmar\(^\text{3}\).

<table>
<thead>
<tr>
<th>Nutrition indicators(^\text{18})</th>
<th>2009</th>
<th>Other indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CU5 - children under 5</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stunting</td>
<td>35.1%</td>
<td>HDI - Human Development Index 150 / 187 2014(^\text{25})</td>
</tr>
<tr>
<td>Underweight</td>
<td>22.6%</td>
<td>GDP per capita $876 2012(^\text{9})</td>
</tr>
<tr>
<td>Wasting</td>
<td>7.9%</td>
<td>National Poverty Line 25% 2009(^\text{8})</td>
</tr>
<tr>
<td>Anaemia</td>
<td>75% 2004(^\text{17})</td>
<td>Rural Poverty Line 29% 2009(^\text{8})</td>
</tr>
<tr>
<td><strong>Children 6 to 59 months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin A supplementation</td>
<td>67.8%</td>
<td>Rural population 66.8% 2012(^\text{30})</td>
</tr>
<tr>
<td><strong>WRA - Women of reproductive age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight (&lt;18.5 BMI)</td>
<td>21.7% 2003(^\text{17})</td>
<td>Primary sector % GDP 37.8% 2010(^\text{17})</td>
</tr>
<tr>
<td>Anaemia Pregnant women</td>
<td>71% 2003(^\text{17})</td>
<td>GII Gender Inequality Index 83 / 187 2013(^\text{24})</td>
</tr>
<tr>
<td>Iodine supplementation</td>
<td>47% 2006(^\text{17})</td>
<td>Literacy rate female 90.4% 2011(^\text{29})</td>
</tr>
<tr>
<td>Households</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusive breast feeding - 6 months</td>
<td>23.6%</td>
<td>Literacy rate female youth 95.8% 2011(^\text{29})</td>
</tr>
</tbody>
</table>
Pre-monsoon Food Security situation in Myanmar, 2013

Economic growth and child undernutrition in Myanmar, 1990 - 2011
2. National Policy Framework

Food security has been central in policy since 1988 through food sovereignty and rice self-sufficiency principles. The legal framework is poorly harmonised, and the link between nutrition and agriculture remains weak. Administrative decentralisation is incipient, and coordination mechanisms are recent.

Health Policies

National Plan of Action for Food and Nutrition, 2011-2015 (NPAFN)
By the Ministry of Health (MoH). The National Health Policy 1993 establishes the political direction, focusing on primary health care. The Myanmar Health Vision 2030 defines the road map to achieve universal health services and reducing malnutrition. See for a comprehensive list of health regulations.

The NPAFN is the second nutrition strategy of Myanmar - previous from 1994; drafted in partnership with development partners, a novelty in Myanmar. It aims to address the immediate, underlying and basic causes of malnutrition, articulated through 10 strategic objectives and specific targets for 2016: reduce stunting to 30%, underweight to 20% and wasting to 7%; and targets on micronutrient deficiencies and overweight. It presents the latest data on malnutrition from 2009, defines the multisectoral coordination structure, and incorporates SUN promoted indicators.

National Economic and Social Development Plan, 2011/12-2015/16 (NESDP)
By the Government of Myanmar (GoM). It sets the vision for the country to become a developed, modern and peaceful nation. It highlights five objectives: infrastructure development; border areas; rural development; poverty alleviation; achieving the MDGs 1 and 7; and maintaining good financial and economic conditions. It articulates several agricultural interventions, including meeting targeted yields of designated crops.

National Strategy on Rural Development and Poverty Alleviation, 2011
By the Ministry of Livestock, Fisheries and Rural Development (MLFRD). It establishes eight priority areas: agricultural production; livestock and fisheries production; rural productivity; credit enterprises; rural cooperatives; rural socio-economy; rural renewal energy; and environmental conservation. It focuses on food security, rural development and poverty reduction through sustainable economic development.

Agriculture sector

By the Ministry of Agriculture and Irrigation (MoAI). The Agriculture Sector Review 2004, established freedom of choice in agricultural development, new agricultural land development, addressing land tenure rights, and mainstreaming landless households to achieve the needs of local consumers, the export market and rural communities.

The National Agricultural Plan combines sub-sector priorities - crops; livestock and fisheries; forestry - , to achieve the NESDP goals. For a comprehensive list of Agricultural Policies and articulation of the primary sector restructuring principles, see FSWG, 2013:8. There is not a food security specific framework.
Coordinating Mechanisms

Central Board for Food and Nutrition
By the MoH. Provides high-level leadership, is chaired by the MoH, MoAI, MLFRD, and amalgamates 14 different ministries. It takes major policy and strategic decisions, ensures stakeholder commitment, and aims to lead the promotion of food and nutrition security in Myanmar.

Under the Board, two more groups have been defined in the NPAFN\(^{17}\): Food and Nutrition Working Group, responsible for implementing the NPAFN through collaboration with nutrition-related sectors, and organising the Food and Nutrition Advisory Group, which will provide technical advice.

National Nutrition Centre (NCC)
By the MoH. The NCC is the core implementation institution of the NPAFN, and the guardian of the coordination process\(^{7}\). Its functions include resource mobilisation, setting priorities and targets for the programmes, alignment with broader development strategies and sectoral policy processes.

It is not clear how the Board governance structure, established in 2013, will interact with the NCC and the non-governmental coordination groups.

Non-governmental coordination groups

Food Security Working Group (FSWG)\(^{6}\)
Network of non-governmental stakeholders - national and international - aimed to improve practices related to food security, established in 2003. It has a focus on food security information analysis, training, and government dialogue.

Food Security and Agriculture Thematic Group (FSATG)
Coordinates agricultural and a wide range of food security issues at national level. Its members include UN agencies - FAO and WFP are co-chairs -, international and local NGOs\(^{28}\).

Myanmar Nutrition Technical Network (MNTN)
Coordinates nutritional activities among development partners. Its members include 28 international and local NGOs, which have prepared a joint action plan; facilitated by UNICEF\(^{28}\).
3. Multilateral agencies’ involvement

Since the Nargis emergency in 2010, a new phase for partnerships between government and civil society started, reflecting a relaxation in political control.

Main actors are UN agencies - UNICEF, WHO, UNDP, WFP and FAO; international financing institutions - World Bank, Asian Development Bank; international NGOs - including Action Contre la Faim, Helen Keller International, Save the Children; local NGOs; and specialised agencies - CGIAR, ACIAR. For a comprehensive list see MIMU16.

Bilateral funds totalled 504 US millions in 2012, lead by Japan with 68 US millions, followed by the United Kingdom with 55, Australia with 51 and the EU Institutions with 4720. Myanmar receives less aid per capita than other similar countries4.

Key programs

Livelihoods and Food Security Trust Fund (LIFT)
Established in 2009, it’s a multi-donor fund -including Australia-15- aiming to improve the food and livelihood security of the rural poor in Myanmar and attaining the MGD1. It is a mechanism to channel aid among partners effectively, promoting coherence and innovation while articulating a single voice for policy engagement.

Its assistance has reached 5% of Myanmar’s population, improving food security and income for 250,000 and 60,000 households respectively15. LIFT has conducted two surveys - 201212 and 201313, providing the most up-to-date information on food security.

Scaling Up Nutrition (SUN)23
Myanmar joined the Sun Movement in 2013, which framework has been incorporated to the NPAFN. Partners with the MoH to mainstream child and maternal nutrition interventions in a coordinated fashion. The SUN framework has influenced Myanmar’s poverty alleviation strategy where undernutrition is considered the backbone of poverty reduction.

ACIAR research projects1
Improving food security and rural incomes for smallholders is the main focus of ACIAR’s projects in Myanmar, achieved through increased production and better access to markets and services. It researches in the Delta and Dry agroecological zones. Among others, it has partnered with the International Crops Research Institute for Semi-Arid Tropics (ICRISAT) on a legume productivity project in the Dry zone. One key project focuses on strengthening institutional capacity, extension services and rural livelihoods2.
4. Key considerations

a. Government structure and opportunities

Myanmar is a young semi-democracy, has a multi-party system with restricted parliamentary weight, and a National Constitution from 2008. Its recent aperture is enabling discussions across different actors, sometimes colliding with a crowded policy environment as many stakeholders are seeking to drive policy action.

Regional and township governments were created in 2011, with implementative roles and initial developments in regional policy-making. Provided the variability in nutrition and food poverty among regions, decentralised and area-specific nutrition policy should be encouraged, which is beginning for agricultural matters.

Inter-ministerial coordination (structure below) is a new approach to policy implementation in Myanmar, defined in the NAPFN in 2013.

There are challenges with poor data quality and information sharing, as most of it is prepared for internal use by government and other agencies, often not available to the public. Liaising with the non-governmental coordination mechanisms is advised.
b. Legislative cycles and annual budget

First national elections were in 2010, followed by a by-election in 2012 where the National League for Democracy became the opposition party, despite not affecting the balance of power\textsuperscript{11}. The next general election is expected for December 2015.

The National health budget is highly centralised\textsuperscript{6}, and it lacks transparency and credibility as it provides scant information to citizens\textsuperscript{10}. Influencing its content or programs seem an unrealistic option.

The total health expenditure was 2\% of the GDP in 2012\textsuperscript{27}, and according the SUN webpage “the Government of Myanmar has increased budget in the health sector, along with basic infrastructure for nutrition”\textsuperscript{23}.

5. Links with DFAT priorities

Australia is the third largest bilateral donor in Myanmar, with $81.4 million in 2013-14 and $90 million estimated for 2014-15\textsuperscript{4}. The Australia-Myanmar Aid Program Strategy 2012-2014 and the Partnership for Reform reflect DFAT’s commitment to reduce poverty and support the transition towards democracy, while aligning with Myanmar’s development priorities.

Australia’s focus on strengthening the democratic process are embraced through a nutrition-sensitive framework, as it requires strong coordination and multisectoral public sector mechanisms to attain nutrition and food security outcomes. Thus, institutional capacity building is key to this approach to development.

Nutrition-sensitive agricultural development is committed to improve the lives of rural populations, which in Myanmar comprise the majority of its population and experience the highest levels of poverty and food insecurity. Australia’s ACIAR programs and leadership through the LIFT strongly complement this proposal, proving a valuable opportunity for synergistic gains in food security research whilst improving agricultural productivity.

Finally, Australia’s prioritisation of health for the 2014-15 period is complementary with this approach through the improvement of child and maternal nutritional status, vital for the population’s development and the prosperity of this evolving nation.
### References - Myanmar


5. Democratic Republic of Timor-Leste

(Timor-Leste) - Country analysis

1. Country overview

Timor-Leste emerged as an independent country in 2002, after centuries of colonial rule and 24 years of Indonesian occupation. This history has resulted in institutional fragility and is key to understand its current situation as a Least Developed Country and one of the poorest countries in South-Asia, with 41% of its 1.2 million population living below the poverty line.

Poverty and food insecurity are almost synonyms in Timorese households. They are primarily a rural phenomenon, affecting the means that individuals have to provide for food and other essential needs and the lack of assets to overcome temporary shortages. Poor households spend up to 75% of income in food.

Timor-Leste’s agricultural sector is mostly based on household food production, which is the main source of food, employment and income or livelihood for 70% of the population living in rural areas, characterised by low productivity and difficulties for accessing markets due to poor infrastructure. In 2005, the domestic production only reached two thirds of the national requirements, with very high post-harvest losses and annual variability depending on rainfall. Main crops grown are maize, rice and cassava, depending on the topographical altitude, and coffee, the only cash crop produced for the export market.

Chronic food insecurity was experienced by 62% of households in 2013, due to widespread subsistence agriculture and lack of alternative sources of income other than farming for 63.1% of the population, resulting in dependence over food imports. Food insecurity is exacerbated by transitory food shortages between October and March affecting 21.6% of rural households and by a fast-depleting resource base essential for their livelihood, combined with limited availability of arable land and an inappropriate land tenure system.

Malnutrition is widespread, with stunting prevalence among the highest in the world, despite recent improvements. In 2013, 50.2% of children under five were stunted, and 11% were wasted, indicating a diet lacking sufficient energy and micronutrients. The rate of maternal malnutrition is equally high, with 24.8% of women in reproductive age being underweight and 38.9% anaemic, revealing a high prevalence of micronutrient deficiencies for both mother and children.

Dietary intake is inadequate among children, despite 62% undertaking exclusive breastfeeding during the first 6 months. Only 17.6% children 6-23 months meet the minimum acceptable diet, increasing to 25.1% among 24-59 months old. However, 61.3% of households had an acceptable Food Consumption Score, suggesting that inadequate children’s diets are possibly more related to practices than to food availability.
Malnutrition has been recognised as a socio-cultural problem, where cultural attitudes are associated with suboptimal feeding practices. Knowledge and skills to provide care and an acceptable diet require attention, as stunting is not perceived by parents as a problem, nor the lack of dietary diversity. There is an over-emphasis on staples, the consumption of animal-source foods is low among women, particularly if rural and uneducated, and mainly eaten on special occasions.

Disparities in nutrition indicators are significant among rural and poorer populations, but not between genders, although slightly worse for males. Timor-Leste has progressed importantly in reducing child mortality by more than 60% since 1999, whilst fertility rates remain the highest in Southeast Asia at 5.7 births per woman.

Literacy rates are below 60%, although improving among younger generations, and with minor differences between genders. However, women have low status and violence against women is a serious problem, reflecting remnants of the traditional patriarchal system.

Its economy has been growing over 10% annually for the last three years and is based on the petroleum sector with 76.9% of the GDP in 2011, exports from which the state obtains most of its revenue. The strong presence of international agencies since independence is declining, and thus reducing their development partner commitments to the budget.

<table>
<thead>
<tr>
<th>Nutrition indicators</th>
<th>2013</th>
<th>Other indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CU5 - children under 5</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stunting</td>
<td>50.2%</td>
<td>HDI - Human Development Index</td>
</tr>
<tr>
<td>Underweight</td>
<td>37.7%</td>
<td>GDP per capita</td>
</tr>
<tr>
<td>Wasting</td>
<td>11%</td>
<td>National Poverty Line</td>
</tr>
<tr>
<td>Anaemia</td>
<td>62.5%</td>
<td>Rural Poverty Line</td>
</tr>
<tr>
<td><strong>Children 6 to 59 months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin A supplementation</td>
<td>53%</td>
<td>Rural population</td>
</tr>
<tr>
<td><strong>WRA - Women of reproductive age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight (&lt;18.5 BMI)</td>
<td>24.8%</td>
<td>Primary sector % GDP</td>
</tr>
<tr>
<td>Anaemia</td>
<td>38.9%</td>
<td>GII Gender Inequality Index</td>
</tr>
<tr>
<td>Iodine deficiency</td>
<td>26.6%</td>
<td>Literacy rate female</td>
</tr>
<tr>
<td>Exclusive breast feeding - 6 months</td>
<td>62%</td>
<td>Literacy rate female youth</td>
</tr>
</tbody>
</table>
Percentage of food insecure / highly vulnerable population in Timor-Leste, 2006

Economic growth and child undernutrition in Timor-Leste, 1999 - 2013

2. National Policy Framework

Timor-Leste counts with 4 key policies and one declaration that intersect with nutrition-sensitive approaches, as well as developing institutional coordination mechanisms.

**National Food Security Policy, 2005**

By the Ministry of Agriculture, Forestry and Fisheries. First general framework on food security aimed to advance its reconstruction since the country independence, when many internally displaced people started re-establishing their assets and the agricultural sector transitioned to a free market economy. Main objectives are reducing poverty, improving food security and agricultural productivity.


By the Ministry of Health (MoH) and UNICEF. Second nutrition policy - prior in 2004. It presents the latest nutrition indicators from 2013, a detailed map on policy frameworks addressing malnutrition and inter-sectoral coordinating mechanisms at national, district and sub-district levels.

It provides a comprehensive multi-sectoral framework to address the immediate, underlying and basic causes of malnutrition, prioritising efforts from pregnancy to 24 months and aiming to scale-up a set of “High Impact Nutrition Interventions” through the lifecycle approach.

Its objective is to reduce malnutrition and micronutrient deficiencies among children and women through the implementation of nutrition specific and nutrition sensitive interventions, recognising the importance of both the health and non-health sectors. Implementation will initially concentrate in the same districts, providing an opportunity for research alignment.

**Strategic Development Plan, 2011-2030**

By the Government of Timor-Leste (GoTL). Improvements on social capital, infrastructure and rural development are prioritised, all of which intersect with nutrition outcomes. It promotes diverse consumption of locally produced foods, improved mother and child nutrition care practices, better access to and quality of nutrition services at health facilities in the community, and nutrition behaviour change programs.

In agriculture, the primary goal is to achieve food security by 2020 and to reduce rural poverty, by transitioning subsistence farming to commercial farming of crops, livestock and fisheries, improved farming practices and enhanced productivity, while ensuring environmental sustainability and natural resources conservation.

**Strategic framework for Rural Development for 2010 – 2020**

One of its axis focuses on farming and food production, measuring its success with reduction of underweight children prevalence.
Coordinating Mechanisms

Inter-Ministerial Food and Nutrition Security Working Group® (IMFNS-WG)
Created in 2011, it collects multi-sectoral data through the Food Security Information and Early Warning System, reporting to the Council of Ministers. It emerged after the Comoro Declaration against hunger and malnutrition 2010, the first official recognition of food security and malnutrition as national priorities, with seven signatory ministries.

KONSSANTIL11 - National Food Security, Sovereignty and Nutrition
Inter-Ministerial Committee established in early 2013, reporting to the Prime Minister and chaired by the Minister of Agriculture and Fisheries (MAF) with MoH’s involvement. It aims to strengthen coordination between ministries, services and agencies that work on food and nutrition security while consolidating resources.

3. Multilateral agencies’ involvement

There is widespread presence of organisations in Timor-Leste, including multiple UN agencies -FAO, WFP, WHO, UNICEF, ILO and UNOPS (United Nations Operations and Project Services); other specialised agencies -International Rice Research Institute (IRRI) and ACIAR; and many NGOs, including CARE International, World Vision, Oxfam and Concern.

Government funds totalled 283 US millions in 2012, lead by Australia with 37.5% of the total official development assistance, followed by United States 10.2% and EU Institutions 9.5%17.

Key programs

Zero Hunger Campaign, 201410
National Action Plan for a Hunger and Malnutrition Free Timor-Leste
By the GoTL and development partners - including Australia. Establishes a detailed plan to eradicate hunger and malnutrition within 10 years with specific targets, and a strong focus on coordinating approaches for implementation success. It emerges from the “Zero Hunger Campaign” lead by the UN at a global level.

School Feeding program
Run by GoTL with World Vision and CARE Australia - WFP no longer. Provided 324,000 energy-dense fortified meals in 201012; increasing spending from 15 to 25 US cents per student per day in 201414. However, it does not target the crucial window of opportunity, and although important, it has no direct effect on undernutrition3.
Seeds of Life, 2000 - ongoing ¹⁹
Research-based program lead by MAF in partnership with Australian agencies, including the ACIAR and DFAT. Present in most districts, being the largest program in the subsistence sector ($25 million from 2011–2015)⁵. It focuses on increasing yields of staple foods by selecting and distributing improved varieties, with impressive results²⁰. In 2013, 25% of crop farmers across Timor-Leste grew one or more improved varieties, with 57% yield increase by farmers¹⁸. It also aims to overcome climate variability by developing new productions methods, increase soil fertility and reduce post-harvest storage losses. ACIAR’s has three more projects in Timor-Leste¹.

Village Poultry health and biosecurity⁷
Research-based project funded by DFAT Government Partnerships for Development Project with the involvement of the University of Sydney. It focuses on building the capacity of government and villagers in poultry raising and marketing, whilst improving food security, nutrition and biosecurity policies and practices. It aims to increase poultry production to benefit some of the poorest members of the community with high quality protein and micronutrients. It also attends the challenges posed by biosecurity threats, such as presence of Newcastle Disease that causes regular high mortality in village chickens.

The Joint Programme, 2009 - 2013¹²
By the Millennium Development Goal Achievement Fund and the GoTL. Aimed to address food insecurity and malnutrition by coordinating the UN agencies and Government Ministries’ work with community in Aileu, Baucau, Manatuto and Oecusse. Targeted women and children under-five, enhancing institutional capacity while increasing access to nourishing foods.

A core achievement was the implementation of the Food Security Information and Early Warning System (FSIEWS) across all districts, reporting to the IMFNS-WG. The final evaluation recommends¹² greater emphasis on health, education, rural development and agriculture; strengthen inter-institutional coordination and gender factors.

Other
Timor-Leste is not a SUN country, although the approach of the NNS 2014 follows its narrative and there is potential to join soon⁴.
4. Key considerations

a. Government structure and opportunities

The GoTL is open and used to working with external partners, is starting to decentralise, whilst eager to develop its young nation from a post-conflict situation to one of full development.

For the purpose of implementing a nutrition-sensitive agricultural framework, working with the MAF and the MoH, and their respective Department of Food Security and Department of Nutrition, seems appropriate. Collaboration should focus on the 3 key institutional coordinating mechanisms: Konssantil, IMFNS-WG, and the Nutrition Technical Working Group (MoH).

Their structure is articulated in the following manner:

![Structure of Konssantil](image-url)
Australia is a member of the Konssantil Permanent Technical Secretariat, who manages financial resources.

A new version of the Food Security Strategy is under development, providing an opportunity to influence its content and reinforce a nutrition-sensitive approach to agricultural development in the future policy.

### b. Legislative cycles and annual budget

Elections occur every 5 years, last one in 2012. The following are expected in 2017, Presidential in March/April and Parliamentary in July.

The budgetary cycle is annual, covering the period from 1st of January until 31st of December. The 2014 budget was approved by the Council of Ministers on late October 2013, indicating that budget discussions should happen halfway through the year.

The GoTL aims to dedicate 10% of the state budget to food security and nutrition.

<table>
<thead>
<tr>
<th>Ministry of Health</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Agriculture and Fisheries</td>
<td>13,406 (2%)</td>
<td>13,924 (2%)</td>
<td>14,451 (2%)</td>
<td>15,018 (2%)</td>
<td>15,568 (2%)</td>
</tr>
</tbody>
</table>

### 5. Links with DFAT priorities

Timor-Leste is a strategic partner for Australia and largest bilateral donor, with $112.3 millions in 2013-14 and $96.6 million -estimated- for 2014-15. The partnership is reflected in the Strategic Planning Agreement for Development 2011-2030, committing to achieve Timor Leste’s development goals.

The commitment to reduce poverty and facilitate economic development is addressed through the nutrition-sensitive agricultural framework, as a nourished and healthy workforce will enable the Timorese to sustain and further develop its double digit economic growth. To achieve these goals food security improvement is crucial, as it is the basis for stability and social capital growth.
The rural development focus of this approach is in line with the ACIAR’s Seeds of Life and the Village Poultry Health project, a set of complementary relationships that embed the potential to produce faster and sustained outcomes. By strengthening nutrition sensitive agricultural development, women are empowered to develop income-generating opportunities whilst improving their nutritional status and their children’s.

A nutrition-sensitive framework for development embraces building the public sector’s capacity, as coordination among Ministries and Departments is key to improve its policy and planning capabilities, which intersect with health and rural development, stated priorities of Australia for Timor-Leste.
References - Timor-Leste


