

# THE FIRST IPC ANALYSIS REPORT ON THE CHRONIC FOOD INSECURITY SITUATION IN TIMOR-LESTE

# Evidence and Standards for Better Food Security and Nutrition Decisions

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> Government and National Partners that contributed to the IPC Chronic Food Insecurity Analysis:

Ministry of Agriculture and Fisheries Ministry of Commerce and Industry Ministry of Social Solidarity Ministry of Education Ministry of Health Minister of Finance Oxfam Catholic Relief Services [CRS] Mercy Corps United Nations Food and Agriculture Organization [FAO] United Nations World Food Programme [WFP] United Nations Children's Fund [UNICEF]

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This analysis has been conducted under the leadership of the Government of Timor-Leste and has been made possible with the technical and financial services received from the European Union and FAO.













IPC National Partners of this Analysis:















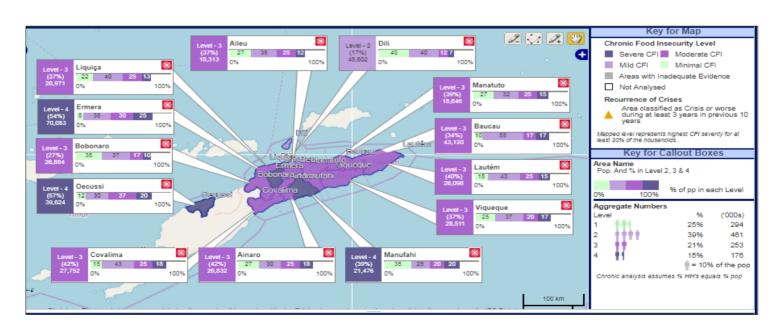
**430 000 36%** of the population % of population Phase 3+

Level 4	176 000 <b>People at Severe level</b>
Level 3	254 000 <b>People at Moderate level</b>
Level 2	461 000 <b>People at Mild level</b>
Level 1	301 000 <b>People at Minimal level</b>

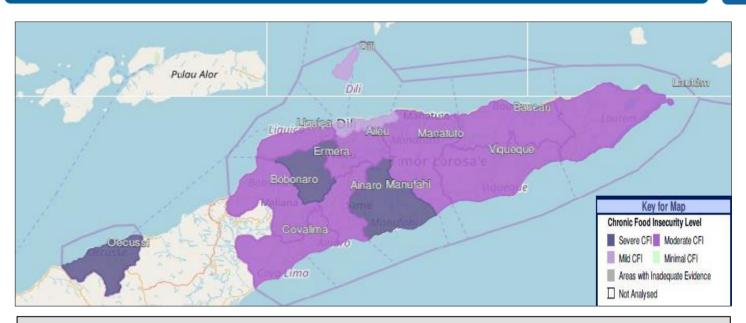
The results of this IPC Chronic Food Insecurity analysis will remain valid for the next 3 to 5 years, in the absence of any structural changes.

- How Many and When: The analysis conducted in April 2018 shows only 25 percent of the population are considered food secure (IPC level 1). Approximately 430 000 people (36 percent) are chronically food insecure across 12 municipalities and the special Administrative Region of Oecussi and Ambeno (SAROA); out of them, 176 000 people (15 percent) experiencing severe chronic food insecurity (IPC level 4), and 254 000 people (21 percent) are moderately chronically food insecure (IPC level 3).
- Where and Who: Of major concern are the municipalities of Ermera, Manufahi and the Special Administrative Region of *Oé-Cusse* Ambeno (SAROA), which fall under severe chronic food insecurity (IPC level 4). Other municipalities with higher proportion of chronically food insecure population are Ainaro, Covalima, Manatuto, and Lautem.
- Why: The major factors contributing to the severe and moderate chronic food insecurity conditions in Timor-Leste are: low agricultural productivity, poor quality and quantity of food consumption, low value livelihood strategies combined with high dependency on single livelihood strategy that has resulted in high poverty (42 percent) and chronic under nutrition. Poor basic infrastructure facilities for sanitation, clean water, roads, irrigation, schools and health compounded the situation. Other factors that contributed to severe chronic food insecurity include inadequate financial and human capitals, and the negative impact of climate hazards and risks.

#### IPC CHRONIC FOOD INSECURITY SITUATION MAP



### IPC CHRONIC FOOD INSECURITY SITUATION



Except Dili municipality having mild level of Chronic Food Insecurity (IPC level 2), the other 9 municipalities are facing a moderate level of Chronic Food Insecurity (IPC level 3) and two municipalities and the SAROA are facing severe Chronic Food Insecurity (IPC level 4). Municipalities under level 4 should be prioritized for programmes aiming at increasing food security (increase food availability, access and quality of food consumption), nutrition, basic infrastructures and poverty reduction (income diversification). At the same time, all 12 municipalities and the SAROA need to be regularly monitored and reached out to with resilience and disaster risk reduction programmes, to protect and strengthen livelihoods and reduce their vulnerabilities to future shocks and risks.

Municipality	<b>Total Population</b>	IPC CFI Level 1	IPC CFI Level 2	IPC CFI Level	IPC CFI Level
Aileu	48 837	13 430 (28%)	17 093 (35%)	12 209 (25%)	6 104 (13%)
Ainaro	63 136	17 362 (28%)	18 941 (30%)	15 784 (25%)	11 049 (18%)
Baucau	123 203	12 320 (10%)	67 761 (55%)	21 560 (18%)	21 560 (18%)
Bobonaro	97 762	34 216 (35%)	36 660 (38%)	17 108 (18%)	9 776 (10%)
Covalima	65 301	9 795 (15%)	27 753 (43%)	16 325 (25%)	11 428 (18%)
Dili	277 729	110 912 (40%)	111 092 (40%)	34 716 (12%)	20 818 (8%)
Ermera	127 424	9 557 (8%)	47 784 (38%)	38 227 (30%)	31 856 (25%)
Lautem	65 240	11 417(18%)	27 727 (43%)	16 310 (25%)	9 786 (15%)
Liquiça	71 927	16 183(23%)	28 771 (40%)	17 982 (25%)	8 991 (13%)
Manatuto	46 619	12 820 (28%)	15 151 (33%)	11 654 (25%)	6 992 (15%)
Manufahi	53 691	18 792 (35%)	13 423 (25%)	10 738 (20%)	10 738 (20%)
Oé-Cusse	68 913	8 614 (13%)	20 674 (30%)	25 842 (38%)	13 782 (20%)
Viqueque	76 033	19 008 (25%)	28 512(38%)	15 206 (20%)	13 305 (18%)
Aggregate TOTAL	1 185 815	294 426 (25%)	461 342 (39%)	253 661 (21%)	176 185 (15%)

#### What IPC and IPC Chronic Food Insecurity are:

IPC is a set of tools and procedures to classify the severity and characteristics of acute food and nutrition crises as well as chronic/ persistent food insecurity based on international standards. IPC consists of four mutually reinforcing building, convergence of evidence, accountability, transparency and comparability. The IPC analysis aims at

### SITUATION OVERVIEW AND RECOMMENDATIONS



#### Classification results and issues

About 36% of the Timorese population are facing moderate and severe chronic food insecurity (IPC level 3 and 4), of which 21% are moderately food insecure and 15% are under severe condition. The remaining 64% of the population is slightly food insecure (39%) to food secure (25%) (IPC level 1). The highest levels of chronic food insecurity (moderate and severe) are in SAROA (58%) and Ermera (55%).

The major drivers of chronic food insecurity in Timor-Leste are the exceptionally high levels of stunting and poor quality and quantity of food consumption. Across all the municipalities around 46% of children under 5 are moderately and severely stunted ranging between 29% and 60% at municipality level. Ten municipalities and SAROA were identified with high rate of children and households consuming inadequately diversified diet and overall 66% of children aged 6-23 months were not consuming minimally diversified diet and only 13% were receiving a Minimum Acceptable diet. At the household level it was found that 30% were receiving more than 70% of their total calories consumed from starchy staples (such as rice, bread or cassava) indicating a very poor quality diet lacking in macronutrient and micronutrient balance. The situation is particularly serious in the 3 municipalities classified as IPC level 4 (Ermera, Manufahi and the Special Administrative Region of Oé-Cusse Ambeno).

The nine municipalities (Ainaro, Covalima, Manatuto, Lautem, Baucau, Bobonaro, Viqueque, Liquica and Aileu) that are classified as moderately chronically food insecure (IPC level 3) also face low food production with an average of 4 months food deficits, therefore consumption of adequate food quantity likewise remains inconsistent. At the same time, access to improved sources of water for better food preparation and hygiene further convoluted chronic food insecurity in Timor-Leste's rural and remote areas.

### Limiting and underlying factors driving Chronic Food Insecurity

Among the major underlying factors driving food insecurity are the low level of agricultural productivity and the high levels of level of poverty (42 percent) restricting households' ability to consume an adequate diet. The highest proportion of population below the poverty line were found in the level 4 municipalities, SAROA and Ermera municipality 63% and 57% respectively.

Municipalities classified in level 4 are also confronted with unsustainable livelihood strategies e.g., (agriculture, remittances and donations) which often generate irregular and inadequate income with 68% households relying on agriculture. Apart from the population that have diversified income sources in Dili (IPC level 2), 53% of the households in the IPC levels 3 and 4 municipalities are relying on unsustainable livelihoods.

The key limiting factor preventing Timor-Leste from being food secure is high deficit in food production and access to food, and particularly populations living in off grid rural areas remain a major concern. Most households are practicing homestead and subsistence agriculture, producing food in small areas not more than a hectare, particularly in SAROA and municipalities of Manufahi, Liquica and Ainaro. These areas therefore are heavily reliant on markets for their food needs with 65% of households across accessing food from markets. With high levels of poverty the ability of households to afford a diet of sufficient quantity and quality is therefore assumed to be limited.

In addition, poor sanitation and hygiene practices, limited access to clean water and other basic infrastructure including health facilities and irrigation are the most common issues to all municipalities except Dili municipality where 92% of households have access to improved sanitation, 96% to improved water sources and better access to health facilities.

In summary, the major limiting and underlying factors for food insecurity in Timor-Leste are as follows:

- Food availability: Municipalities of Ermera, Manufahi, Ainaro, Covalima, Liquiça and SAROA
- Access to food: Municipalities of Manufahi, Covalima, Liquica and Lautem
- Food utilization: SAROA and all municipalities except Dili and Manatuto
- Livelihood strategies: SAROA and all municipalities except Dili and Covalima
- Human capitals: Municipalities of Ermera, Manufahi, Aileu, Bobonaro and SAROA
- Financial capitals: Municipalities of Ermera, Covalima, Lautem, Liquiça, Manatuto and Viqueque



IPC CHRONIC FOOD INSECURITY ANALYSIS Report # 01 | Issued in January 2019

#### RECOMMENDATIONS FOR ACTION

4

Given that most of the municipalities shared similar main drivers of food insecurity, where most of the population could not meet the minimum dietary needs, high levels of chronic malnutrition (stunting), most children not meeting the minimum acceptable diet, high poverty and insufficient access to basic infrastructures (clean water, improved sanitation, etc.), many of the recommendations are applicable for most parts of the country.

Generally, integrated and inclusive mid to long-term interventions aimed at improving the overall food security situations are required. Particularly addressing poverty (affecting access to food), low food production and availability of nutritious food all year round, behavioural changes linked to improving dietary diversity and good nutrition for women and children and increasing access to basic infrastructure especially safe water and improved sanitation and hygiene aiming for significant reduction of chronic malnutrition.

Specifically, a dialogue between the government, development partners and other stakeholders should instantly be realized for a thoughtful discussion for a joint decision of concrete steps for the below recommendations that have been decided as priorities during the validation of the results. In fact, most of the recommendations are also actions that were committed for immediate implementations under the National Strategic Development Plan (NSDP), National Food Security and Nutrition Policy, National Nutrition Strategy and Plan, Zero Hunger National Action Plan (PAN-HAM-TIL) and in the Nutrition Round Table Dialogue.

- Livelihoods and economic empowerment in rural areas: Diversify income generation opportunities, job creation and employment of the productive sector (e.g. agriculture sector) targeting youth and young farmers.
- Increase dietary diversity: Expansions of good practices in promoting social behaviour change and nutrition specific and sensitive programs (particularly campaigns on increasing protein consumption, integration of nutrition topics into school curriculum, community health and extension services), proper hygiene and child care practices and school feeding based on a diversity of locally produced food. Passing of legislation and enforcement of the promotion of fortified food products.
- **Improve basic infrastructure:** build sustainable safe drinking water system accessible anytime of the day, improved sanitation facilities at houses and schools, build reliable farm to market roads and functional health facilities.
- Increase food availability: Reduce food deficits and increase nutritious food production: Improve water supply to irrigate farms and adoption of climate smart agriculture practices (e.g. conservation agriculture, agroforestry) to produce varieties of food available all year round. Transform subsistence farming systems through integration in an operational markets and functional value chain. Invest on improved post harvesting technologies including the expansion of efficient food and seed storage facilities.
- Improve human capitals: Create targeted out of school youth and young farmer's literacy programs, vocational formation, entrepreneurship and management trainings. Improve school facilities and invest in strengthening teachers specific skills on main subject matters applicable in Timor-Leste (e.g. agriculture, food processing, marketing, etc.).
- Expansion of financial service facilities: Increase coverage of financial services (e.g. BNCTL), especially for credit/loans in rural areas to increase farmer engagement in the market systems and value chain.
- Strengthen agriculture and rural statistics and food security monitoring system: Conduct regular census, research, studies, assessments and monitoring (to begin, focus in IPC level 4 municipalities) for regular food security analysis and to improve evidenced based planning, budgeting and better targeting, for decision makers to respond quickly with most appropriate actions to reduce risk of having food security crises.

The IPC analysis identified major concerns in the municipalities of Ermera, Manufahi and the Special Administrative Region of Oé-Cusse Ambeno (SAROA), which are classified as IPC level 4. However, the report recommends that investments for immediate interventions should be targeted to the populations classified under IPC level 3 and 4 in all Municipalities (see table in page 5).



Municipality	Total Population	Total Population IPC Level 3 and 4	Percent	Severity (IPC Level)
Aileu	48 837	18 313	38	3
Ainaro	63 136	26 833	43	3
Baucau	123 203	43 120	36	3
Bobonaro	97 762	26 884	28	3
Covalima	65 301	27 753	43	3
Dili	277 729	55 534	21	2
Ermera	127 424	70 083	55	4
Lautem	65 240	26 096	40	3
Liquiça	71 927	26 973	38	3
Manatuto	46 619	18 646	40	3
Manufahi	53 691	21 476	40	4
Oé-Cusse	68 913	39 624	58	4
Viqueque	76 033	28 511	38	3

#### MONITORING AND UPDATES

The Integrated Food Security Phase Classification (IPC) is a set of analytical tools, and processes, to analyze and classify the severity of acute and chronic food insecurity situation according to scientific international standards. The IPC tools and procedures are compatible with whatever data collection systems, methodological approaches, and institutional arrangements exist in-country, and allow comparison of findings over time and across countries.

The overall process in conducting the first IPC Chronic Food Insecurity analysis in Timor-Leste was rigorously done through a technical consensus and joint analysis by the IPC National Technical Working Group (TWG) with members from various government ministries, UN agencies, national and international non-government organizations, led by the National Director of Food Security and Cooperation (FSC) in the Ministry of Agriculture and Fisheries (MAF).

The overall process of the first IPC analysis also supported the strengthening of the government institutions and provided platforms to share information and enabling diverse stakeholders to work together to consolidate wide-ranging evidences that were used in analyzing the severity of the food insecurity in Timor-Leste. Therefore, to further institutionalize the IPC Chronic Food Insecurity analysis in Timor-Leste, it is therefore recommended the following activities:

- Establish a timeline for the next IPC Chronic analysis.
- Increase available data by integrating key outcome indicators such as Individual Dietary Diversity Score (IDDS),
   Food Consumption Score (FCS), Food Insecurity Experience Scale (FIES), and Household Dietary Diversity Score (HDDS) into planned national surveys and censuses.
- Strengthen the capacity of the IPC National TWG particularly in calculating Prevalence of Undernourishment (PoU), IPC report writing and ISS management.

#### CHRONIC FOOD INSECURITY SITUATION

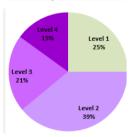


430 000

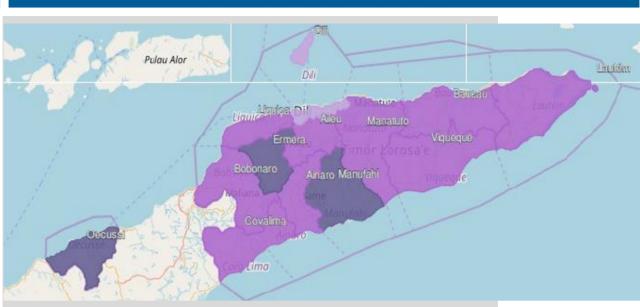
PEOPLE FACING SEVERE AND MODERATE CHRONIC FOOD INSECURITY

IPC Chronic 3+

1 185 815 Total Population



36% of the total population need action addressing Chronic Food Insecurity



#### PEOPLE MOST AFFECTED PER MUNICIPALITIES (IPC Level 4,3,2)

Ailen	Ainaro	Baucau	Bobonaro	Covalima	Dili	Ermera	Lautem	Liquiça	Manatuto	Manufahi	RAEOA	Viqueque
6 104	11 049	21 560	9 776	11 428	20 795	31 856	9 786	8 991	6 992	10 738	13 782	13 305
12 209	15 784	21 560	17 108	16 325	34 659	38 227	16 310	17 982	11 654	10 738	25 842	15 206
17 093	16 941	67 761	36 660	27 753	110 911	47 784	27 727	28 771	15 151	13 423	20 674	28 512

176 000
People at Severe level

254 000
People at Moderate level

\*\*\*

FOOD AVAILABILITY LIMITED IN

MAJOR LIMITING FACTORS

6

4

11

AREAS

AREAS

MAIN DRIVERS

INADEQUATE FOOD CONSUMPTION

461 000



FOOD ACCESS

LIMITED IN U A

\*\*\*

**36%**People
(IPC Level 3 + )

INSUFICIENT FOOD QUANTITY

295 000 People at Minimal level

People at Mild level



FOOD UTILIZATION ISSUES IN AREAS

\*\*

**74%**People
IPC Level 2+

34%

Children 6-23 Months

FOOD QUALITY MINIMUM DIVERSIFIED

INSUFICIENT

MAJOR UNDERLYING FACTORS

42%

PEOPLE FACING HIGH LEVEL OF POVERTY

**47%** 

POPULATION WITH LIMITED SUSTAINABLE LIVELIHOOD STRATEGIES

M

46% Children 6-23 Months

**NUTRITIONAL STATUS** 

MINIMUM MEAL FREQUENCY

DIET

Low income and purchasing power

Lack of access to

productive assets

...

Limited access to social services

Vulnerability to shocks

46%

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Children under 5 years of age chronically malnourished

#### OVERVIEW OF THE LIMITING AND UNDERLYING FACTORS BY MUNICIPALITIES

OVERVIEW OF THE LIMITING AND UNDERLYING FACTORS BY MUNICIPALITIES												
LIMITING FACTORS OF FOOD INSECURITY				KEY DRIVERS OF FOOD INSECURITY								
AREA	<b>\$</b>	<b>4</b>	***		iiii	<b>H</b>	\$		M		$\triangle$	•
	Food Availability	Food Access	Food Utilization	Livelihood Strategies	Human Capitals	Physical Capitals	Financial Capitals	Natural Capitals	Social Capitals	Policy/ Institutional Processes	Recurrent Risks	Unusual Crises
Aileu												
Ainaro									€x			
Baucau												
Bobonaro									<b>9</b> *			
Covalima									<b>e</b> *			
Dili									<b>e</b> *			
Ermera									€ <sub>x</sub>			
Lautem									€ <sub>×</sub>			
Liquiça									€ <sub>×</sub>			
Manatuto									€ <sub>×</sub>			
Manufahi									€ <sub>×</sub>			
Oé-Cusse									<b>e</b> *			
Viqueque												
Legend		Major Limiting	g Factor		Minor Limiting	; Factor		Not a Limiting	Factor	<b>9</b> x	No Evidence	



8

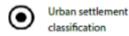
### **Municipality of Ermera**



#### KEY FOR THE MAP

#### IPC Chronic Food Insecurity (CFI) Level Classification







IPC LEV	CFI ÆL	%	('000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1		8	9 557		
2		38	47 784		
3		30	38 227	Food Availability	-
4		25	31 856	and Food Utilization	\$

Ermera is one of the land-locked municipalities of Timor-Leste under agro climatic zone C, with a population of 127, 424 people and an elevation above 500. The land of is suitable for coffee production, which is main source of income of most of the population. The area has a monomodal rainfall pattern, limiting food production to one season. Food crops are mainly tubers (cassava 95.3%) and maize (89%), although the area has potential for vegetables and legume commercial production. For the past three years, production of maize and rice (staple food) was consistently low, resulting in households facing chronic annual cereal shortages for more than 4 months. Agriculture is the main livelihood of approximately 83% households, planting crops on small areas (not more than a hectare) with no access to irrigation system.

Survey data shows that 90% of households preferred eating maize and cassava, and only 19% consumed meat and 11% fish. Around 81% of children were not able to meet minimum dietary diversity and 29% of children are and severely moderately stunted (chronically malnourished).

Approximately 33% of the population has no access to improved sources of water. In terms of connectivity there are no good roads except Gleno to Dili. Other basic health and social services are also difficult to access. An estimated 57% of households are below the national poverty line and 30% of the population under the lowest wealth quintile.

- Expand production of nutrition dense, climate resilient and locally available food crops such as the orange flesh, sweet potatoes, moorings, pulses and other neglected and underutilized species of food crops.
- Improve farming and post-harvest management systems such as wider adoption of climate smart agriculture and effective food storage practices.
- Strengthen communities' skills on food processing and preservation of home-grown vegetables and fruits.
- Improve access to safe water by constructing and rehabilitating safe water sources and water systems and intensify education sanitation practices and the importance and use of improved latrines.
- Expand better infant/child feeding and caring practices and nutrition education in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.



**TIMOR-LESTE** 

#### **Municipality of Manufahi**

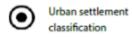


#### KEY FOR THE MAP

IPC Chronic Food Insecurity (CFI) Level Classification



Map Symbols





IPC CFI LEVEL	%	( <b>'000s</b> )	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1	35	18 792	<u>ā</u>	
2	25	13 423		
3	20	10 738		
4	20	10 738	Food Availability, Access and Utilization	

Manufahi municipality is located in the south coast of Timor-Leste. It borders Manatuto municipality to the east, Aileu to the north, Ainaro to the west and the Timor sea to the south. It has a population of 53 691 people, land area of 1,326.6 km<sup>2</sup> and enjoys the benefit of bimodal rainfall pattern allowing for two crop production seasons. However, with limited labor many farms are not being utilized, despite that agriculture is the main livelihood of 97% of the population. The major crops grown in Manufahi are rice, maize and various root crops (cassava, sweet potato), that are commonly produced in small scale (backyard), primarily for home consumption. Vegetables and pulses are grown occasionally, although not enough for a whole year-round supply. Some families planted cash crops (coffee, coconut), fruits and timber trees in small parcel and raised livestock that is usually for sale during lean season or once food supply dwindles.

Despite the potential, Manufahi is in level 4 of chronic food insecurity with 20% of the population experiencing severe chronic food insecurity. Many households reported food shortages from October to March. Around 61% of children were not eating minimum dietary diversity and 38% of children moderately and severely stunted.

Many of the households have no regular access to clean water and 94% are using solid fuel.

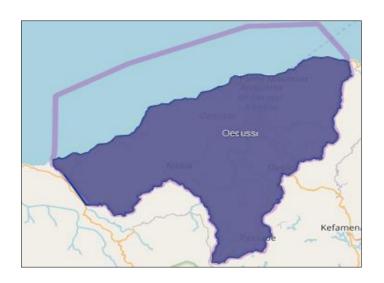
Access to markets and basic social services is limited particularly for upland and remotely located villages, with unpassable road during wet season.

- Intensify production of various nutrition dense food crops that are resilient to the changing climatic patterns in Timor-Leste.
- Expand promotion of less labor intensive farming system (e.g. conservation agriculture) and provide value addition for farmers to encourage producing food crops for two seasons.
- Improve road access and other basic facilities (health services, clean and safe water sources).
- Expand better infant/child feeding and caring practices and nutrition education in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.



#### PROFILE OF THE MOST AFFECTED AREAS

#### Special Administrative Region of Oé-cusse Ambeno

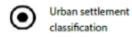


#### KEY FOR THE MAP

IPC Chronic Food Insecurity (CFI) Level Classification



Map Symbols





IPC CFI LEVEL	%	(*000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1	13	8 641		<b>A</b>
2	30	20 674		
3	38	25 842	Food Availability and Food	<b>III I</b>
4	20	13 782	Utilization	

Special Administrative Region of Oé-cusse Ambeno is located in the enclave of the north coast of the western part of the Timor island. It is separated from the Timor-Leste main island with 14 345 households and 68 913 people that are mostly engaged in agriculture as a single income stream. The land area of 817 23 sq. km is mainly used for producing food crops in a farm not more than 1 hectare for home consumption with very little surplus for occasional sale.

Oé-cusse has a monomodal rainfall pattern, thus most of the time is dry, limiting the production to only one season, resulting in the over reliance on food imports in nearby Indonesian localities. The crop production is mainly rice, maize and root crops with limited production of vegetables, legumes and fruit, although some households are engaged in raising livestock in a subsistence level with food shortages extended to eight months, particularly in the remote upland areas. The current limited agricultural production and diversity are among the factors leading to a very poor quality of food consumption with 60% of households consuming a diet made up of more than 70% in starchy staples. The poor diet extends to children with 71% of children not eating minimum dietary diversity, and 50% of children failing to eat a minimum number of meals. The levels of chronic malnutrition are therefore very high and 51% of children are moderately and severely stunned.

Basic infrastructures particularly access to clean and safe water, social & financial services and markets are limited and mostly inaccessible during rainy season.

- Expand investment in the agriculture sector, particularly increasing crop productivity and output through improved agriculture facilities such as post-harvesting technologies and food related infrastructure.
- Diversify the economy by strengthening the fisheries and tourism industries.
- Maximize the use of the 23 km irrigation system in Tono to intensify production of various nutrition dense food crops that are resilient to the changing climatic patterns in Timor-Leste, using less labor intensive farming system and provide value addition for farmers to encourage producing food crops for two seasons.
- Expand nutrition behavior change program and better infant/child feeding and caring practices and in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.



**TIMOR-LESTE** 

### **Municipality of Aileu**



#### KEY FOR THE MAP

IPC Chronic Food Insecurity (CFI) Level Classification

classification



data collection

IPC CFI LEVEL	%	('000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1	28	13 430		
2	35	17 093	الم الم	
3	25	12 209	Food Utilization	
4	13	6 104		

Aileu is in the northwestern part of Timor-Leste and is one of only two land-locked municipalities, the other being Ermera,

47 km southwest of Dili, the national capital. It has mountainous landscapes with 7 598 households and 48 837 people. Most of the population are self-employed as farmers and rely on agriculture as the main source of income. The total area available for agriculture is approximately 3 204 hectares, however it is not full cultivated due to limited agriculture infrastructure. Most households are engaged in minor agricultural activity producing mainly for home consumption with some occasional sales that are mostly based on shifting cultivation, the common farming system. Coffee and vegetables production are potential alternative sources of income. However, the changes in the monomodal rainfall pattern led to less rain during the rainy season resulting in a prolonged dry season.

Majority of the population experienced food shortages of at least four months and for some households the shortages lasted up to six months. Around 60% of children were not given the minimum number of meals. Most of the population consumed mainly carbohydrates and an estimated 30% of households were getting more than 70% of their total caloric intake from starchy staples. Poor dietary diversity is evident at child level with 71% of children not receiving a diet of minimum diversity. Overall 41% of children under five in the municipality were found to be underweight and 24% of children were severely stunted.

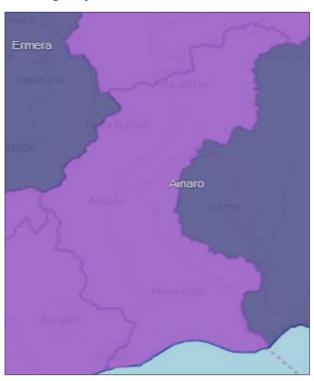
Access to water is improving and 72% of households are accessing water from improved sources and 88% are treating water by boiling. Around 90% of households were consuming iodized salt.

- Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.
- Intensify agriculture diversity and production of various nutrition dense food crops that are resilient to the changing climatic patterns in Timor-Leste through the promotion of climate smart agriculture practices and technologies.
- Improve food production infrastructure to increase value addition for the potential crops (coffee and vegetables) to diversify livelihoods.
- Intensify skills strengthening and vocational training.



### PROFILE OF THE MOST AFFECTED AREAS

### **Municipality of Ainaro**



#### KEY FOR THE MAP

IPC Chronic Food Insecurity (CFI)

1 - Minimal	2 - Mild	3 - Moderate	4 - Sever
Areas with ina	dequate eviden	ce Areas no	ot yet analysed

Map Symbols

Urban settlement classification	Priority Areas for additiona data collection
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IPC CFI LEVEL	%	('000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1 2 3 4	28 30 25 18	17 362 18 941 15 784 11 049	Food Availability and Food Utilization	

Ainaro is located in the southwest part of Timor-Leste and has a population of approximately 63 136 people and 10 601 households in 21 villages and 4 sub districts. Around 96% of the population are engaged in agriculture as household main income source, mainly producing crops such as rice, maize and tubers at a subsistence level using unsustainable slash and burn farming system.

The municipality has 6 076 hectares of land suitable for rice production and 9 000 hectares for maize, the main staples in Timor-Leste. Tourism offered great potential and Livestock, coffee and vegetables productions are promising particularly in Maubise areas.

Despite the potential for diversified livelihoods majority of the population are engaged in agricultural activity. The population still experienced food shortages from November to March, although along the coastal area, the lean season is shorter with farmers planting crops in two seasons with the bimodal rainfall pattern.

A relatively high proportion of households were consuming a diet of poor quality, lacking in dietary diversity with 42% of the households consuming a diet primarily consisting of starch staple (70% on the total calories consumed come from starchy staples), mostly from own production. The poor diet is reflected among children in the area with 70% of children not attaining minimum dietary diversity and 50% of children do not have minimum dietary diversity. Chronic malnutrition rates among children are exceptionally high 40% of children severely stunted as per DHS 2016.

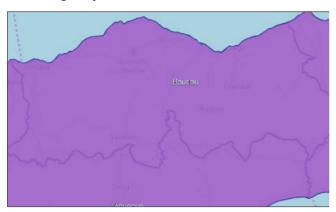
Access to water is improving with 63% of households accessing water from improved sources and 91% treating water by boiling. Consumption of iodized salt became a common practice by the 90% of the households.

- Intensify agriculture diversity and production of various nutrition dense food crops that are resilient to the changing climatic patterns in Timor-Leste through the promotion of climate smart agriculture practices and technologies.
- Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.
- Diversify income sources by maximizing tourism potential and improve food production infrastructure to increase value addition for the potential crops (coffee and vegetables).



#### PROFILE OF THE MOST AFFECTED AREAS

#### **Municipality of Baucau**

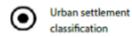


#### KEY FOR THE MAP

#### IPC Chronic Food Insecurity (CFI) Level Classification



Map Symbols





IPC CFI LEVEL	%	('000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1	10	12 320		<b>H</b>
2	55	67 761	L\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
3	18	21 560	Food Utilization	
4	18	21 560		

Baucau is located in the eastern part of the country, approximately 122 km from Dili, the country's capital. The second biggest city after Dili with an area of 1.494 km² with 14 423 hectares potential area for rice and 16 000 hectares for maize. The municipality has 6 administrative post, 59 villages and 281 sub villages.

Agriculture is the main economic activity in Baucau with 89.7% of the households engaged in crop production, and some households are engaged in buy and sell, home industry and other off-farm activities. Households' level of agriculture activities varies with some households producing crops particularly vegetables and cash crops for markets but most are engaged in minor agriculture activity mainly for home consumption. Similar to other municipalities, the main crops being produced are rice, maize and tubers, although vegetable, cash crops and industrial crop production are also common. The agriculture production is considered better with farmers' access to irrigation system and other agriculture facilities improved over other municipalities, although households still experience food shortages of least for four months.

Food consumption in the municipality is therefore limited in both quantity and quality. An estimated 28% of households were consuming a diet composed primarily of starchy staples (more that70% of total calories coming from starchy staples) The quality of diet among children is also poor, reflected in 78% of children not attaining minimum dietary diversity. Malnutrition rates among children are also notably high, 34% of children under five are underweight, and 25% of children are severely stunted.

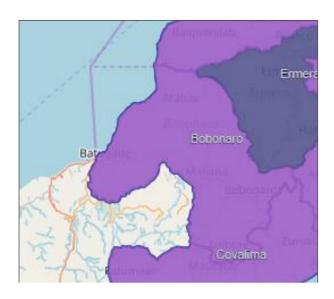
The economic condition in the municipality is relatively better with around 67% of the population above the national poverty line. Access to water is improving with 60% of households accessing water from improved sources. Consumption of iodized became a common practice by 86% of the households.

- Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.
- Expand promotion of climate smart agriculture practices and technologies.
- Diversify income sources by maximizing potential crops (vegetables, coconut, candle nut and other cash crops).



**TIMOR-LESTE** 

# **Municipality of Bobonaro**

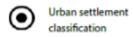


#### KEY FOR THE MAP

IPC Chronic Food Insecurity (CFI) Level Classification



Map Symbols





MAJOR MAJOR IPC CFI % ('000s) UNDERLYING LIMITING 1 35 34 216 38 36 660 17 108 18 Food Utilization 10 9776

Bobonaro municipality is situated in the western part of Timor-Leste bordering Indonesia with 17 635 households and 97 762 people living in a land area of 1.368 km². 64% of the population works in the agriculture sector with majority of the households involved in minor agriculture activity producing mainly for home consumption with some sales. Bobonaro has relatively high rice production having 7 662 hectares of irrigated rice fields. The municipality has 25 477 hectares for maize and other crops.

Similar to other municipalities, the main crops being produced are rice, maize and tubers, although vegetables, cash crops and industrial crop production are also common. The agriculture production is considered better in the municipality with farmers having improved access to irrigation system and other agriculture facilities, although households still experience food shortages for at least for four months.

A relatively large proportion of households were consuming a diet of poor quality lacking in diversity with starchy staples composing more than 50% pf the total calories for more than 70%. The poor quality of diet is further reflected in 70% of children not eating minimum dietary diversity. The levels of malnutrition are also high with 53% of children under five underweight, and 26% of children were severely stunted.

Household economic condition is also compromised with 52% below the national poverty line.

- Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.
- Diversify income sources by maximizing potential crops (vegetables, coconut, candle nut and other cash crops).
- Intensify skills strengthening and vocational training.
- Expand promotion of climate smart agriculture practices and technologies.



**TIMOR-LESTE** 

### **Municipality of Covalima**



#### KEY FOR THE MAP

IPC Chronic Food Insecurity (CFI) Level Classification



Map Symbols



IPC CFI LEVEL	%	(*000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1	15	9 795	ō &	<b>=</b>
2	43	27 753		\$
3	25	16 325		
4	18	11 428	Food Availability, Access and Utilization	

Covalima municipality is situated in the southwest part of Timor-Leste with a land area of 1 230 km<sup>2</sup> and a population of 65 301 people of which 85% are self-employed, working in the agriculture sector involved in minor agriculture activity producing mainly for home consumption.

The main food produced is rice, maize and tubers, although vegetables, cash crops and industrial crop production are also common. Covalima has bimodal rainfall pattern therefore has potential for two cropping seasons and low land rice farmers have access to irrigation systems and other agriculture facilities, . Despite the potential households still experiencing food shortages of at least four months. Covalima is well known area for livestock rearing that most households have raised cattle, goat, buffalo and pig, potential to diversify livelihoods to reduce the current rate (53%) of households are below the national poverty line.

The literacy rate in Covalima is 63.4% which is quite high however, only 10% of labor force has tertiary education. Poverty rates are therefore quite high in the municipality (53% below the poverty line)

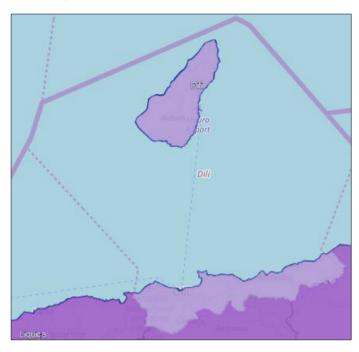
Many households are consuming a diet made up primarily of starchy staples (rice maize, whet etc.) as 73% of the households get more than half of their calories from starchy staples, mostly from own production. The level of dietary diversity among children is also low with 57% of children not eating minimum dietary diversity. Chronic malnutrition rates in the municipality are also high at 48%, of which 19% of children are severely stunted.

- Intensify agriculture diversity and production of various nutrition dense food crops that are resilient to the changing climatic patterns in Timor-Leste through the promotion of climate smart agriculture practices and technologies.
- Diversify income sources by maximizing livestock potential.
- Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.
- Expand savings and credit program and other financial services.



**TIMOR-LESTE** 

### **Municipality of Dili**



#### KEY FOR THE MAP

IPC Chronic Food Insecurity (CFI)
Level Classification



Map Symbols



Dili is the capital city of Timor-Leste that has a population of approximately 277 729 people and 42 485 households. It has a total area of 364.1 km² including the small island of Atauro. Most of the population are employed and has sustainable income apart for those living in the peri-urban metinaro and Atauro island where 96% of the population is engaged in agriculture and fisheries, mainly for consumption. Although very minor agricultural activities (backyard gardening) is practiced around the metropolitan.

Dili has a progressive and vibrant economy, being the center of all the economic development that offers Timorese households opportunities to engage in the business sector, and only 29% of households below the national poverty line. The tourism industry is providing alternative income sources and offered employment to youth migrated from the rural areas. Social services are easily accessible and basic infrastructure is much improved.

Most of the population is relying on food imports and local products from the rural areas that are easily accessible in the markets. Except the peri-urban Metinaro and Atauro Island, the food security situation in the Dili metropolitan area is better. But overall some issues persist with 50% of children not eating minimum dietary diversity, and 18% of children are severely stunted (chronically malnourished).

Access to water is relatively high with 96% of the households accessing water from improved sources and 93% of households were consuming iodized salt.

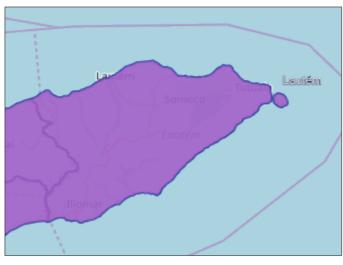
IPC CFI LEVEL	96	(*000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1	43	117 843		
2	40	110 911		
3	13	34 659		
4	8	20 795		

- For the Peri-Urban Metinaro and Atauro Island: Intensify agriculture diversity and production of various nutrition dense food crops that are resilient to the changing climatic patterns in Timor-Leste through the promotion of climate smart agriculture practices and technologies.
- Diversify income sources by maximizing tourism potential and improve food production infrastructure to increase value addition for fisheries.
- <u>All Dili</u>: Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.



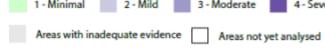
**TIMOR-LESTE** 

#### **Municipality of Lautem**



#### KEY FOR THE MAP

#### IPC Chronic Food Insecurity (CFI) Level Classification



Map Symbols

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a

IPC CFI LEVEL	%	(*000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLAYING FACTORS
1	18	11 417	<b>一</b> 数 同。	ē, A
2	43	27 727		<b>2 1</b>
3	25	16 310	Food Access and Food Utilization	-0
4	15	9 786		•(-

Lautem is located in the eastern most part of Timor-Leste with an area of 1 702 km<sup>2</sup>, a population of approximately 65 240 people and 12 050 households. Around 97% of the population are engaged in agriculture production as the sole income source and producing mainly for home consumption. The coastal communities are engaged in artisanal fishing, therefore, less of an economic activity. Households mainly produced maize, tubers and rain-fed/ dry land rice with no access to irrigation system. Most of the farmers are using traditional farming practices and technologies with low input therefore productivity and outputs are low in most of the crops. For the past five years cereal (maize and rice) production has significantly decreased that contributed to four months annual food shortages but even extended to six in coastal communities that are usually affected by a prolonged drought compared to the upland. It has a monomodal rainfall pattern therefore crop production is limited to one season.

Limited income diversity leads to 32% of households falling below the national poverty line. Tourism, livestock and Fisheries production have the potential to be maximized to diversify income. As it stands, investment in tourism, livestock and fishery sectors are limited.

With the limited agricultural diversity, 32% of the households are consuming a diet lacking in diversity i.e. consuming diets in which starchy staples (such as rice, wheat and maize) comprise more than 70% of the total calories consumed, mostly from own production. The energy-based diet resulted at household level is witnessed at child level

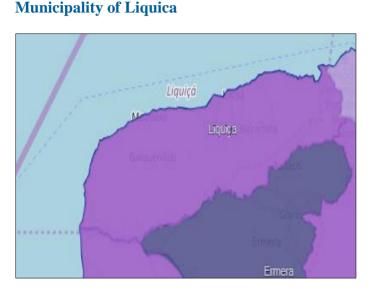
88% of children not eating minimum dietary diversity, and 20% of children are severely stunted.

Access to water is improving with 70% of households accessing water from improved sources. Consumption of iodized was a common practice for 95% of the households in Lautem.

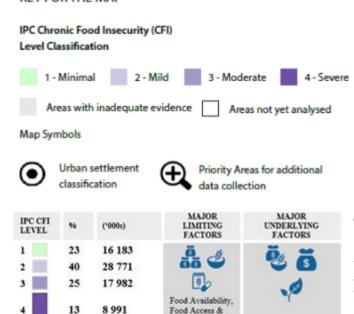
- Diversify income sources by maximizing tourism potential and livestock and fisheries production with value addition and access to markets.
- Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.
- Expand savings and credit program and other financial services.
- Expand and intensify adoption of climate smart agriculture practices and technologies.



**TIMOR-LESTE** 



#### KEY FOR THE MAP



Liquica is located in the northern coast of Timor-Leste, approximately 32 km from the capital Dili with a land area of area 543 km². It has a population of approximately 71 927 people which 85% is engaged in the agriculture sector as the main income source. Crop production is subsistence using unsustainable slash and burn farming system. The potential 1866 hectares for rice and 5000 hectares for planting maize is only limited for one cropping season given the monomodal rainfall pattern and poor access to irrigation system. Households commonly produced rice, maize and tubers, although flat areas at the coast are used for commercial vegetable production. Tourism and fisheries offer great potential that need to be explored for income diversification.

The population in Liquica also experienced food shortages from November to March due to low agriculture production. Households were found to be consuming a diet lacking in diversity and an estimated 28% of the were eating a diet in which starchy staples comprise more than 70% on the total calories consumed, mostly from own production. The energy-based diet resulted is further reflected in 77% of children not eating minimum dietary diversity. Child malnutrition rates are similarly poor with 41% of children under five are underweight and 27% of children are severely stunted.

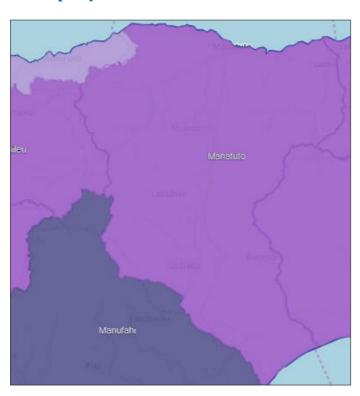
Access to water is improving with 81% of households accessing water from improved sources, and 81% are drinking boiled water. Consumption of iodized was practiced among 88% of households.

- Intensify agriculture diversity and production of various nutrition dense food crops that are resilient to the changing climatic patterns in Timor-Leste through the promotion and adoption of climate smart agriculture practices and technologies.
- Diversify income sources by maximizing tourism potential and fisheries production with value addition.
- Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.
- Expand savings and credit program and other financial services.



#### PROFILE OF THE MOST AFFECTED AREAS

#### **Municipality of Manatuto**



KEY FOR THE MAP

IPC Chronic Food Insecurity (CFI) Level Classification



 Urban settlement classification	$\oplus$	Priority Areas for additional data collection	

IPC CFI LEVEL	96	(*000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1	28	12 820		<b>* *</b>
2	33	15 151		<b>4</b> \$
3	25	11 654		
4	15	6 992		

Manatuto is municipality is located in the North-West part of Timor-Leste and extends to the south coasts of the island. It has land area of 1 706 km² with 12 731 hectares potential for rice cultivation and 19 896 hectares for maize. Manatuto has a population of approximately 46 619 people, 82% of which is engaged in agriculture as a main income source. Although, the level of activity is minor, producing mainly for home consumption with occasional sales. Manatuto is well connected in terms of transportation will 11 routes that has connections with other municipalities.

Manatuto municipality has significant potential for rice production with two existing irrigation systems that are operational and can be accessed by farmers all year round to have two or more cropping periods. The south coast has bimodal rainfall pattern thus has two cropping seasons, such a situation reduces the normal four month lean season period. Recently farmers adopted less labor and inputs requiring farming practices called conservation agriculture that resulted in increased maize productivity and outputs, as well as increased soil fertility. Other crops being produced in Manauto are tubers and legumes.

The dietary diversity of households is however still limited as in other provinces with 27% of households consuming a diet comprised primarily of starchy staples (more than 70% on the total calories consumed, mostly from own production.) The poor quality of diet is also witnessed in children as 70% of children were not given a diet of adequate diversity (more than 4 food groups). The poor diet and care practices can be linked to the alarmingly high rates of chronic malnutrition with 27% of children severely stunted.

Poverty rates in the municipality are high with 43% households below the national poverty line. Tourism offers great potential, livestock and fisheries, productions are promising particularly in north and south coast areas. These potentials need to be explored to create diverse livelihoods.

Access to water is improving with 83% of the households having accessing water from improved sources and 76% consumed iodized salt.

- Diversify income sources by maximizing tourism potential and fisheries production with value addition.
- Expand savings and credit program and other financial services.



**TIMOR-LESTE** 

## **Municipality of Viqueque**



#### KEY FOR THE MAP

#### IPC Chronic Food Insecurity (CFI) Level Classification



$oldsymbol{\odot}$	Urban settlement classification	$\oplus$	Priority Areas for additional data collection

IPC CFI LEVEL	%	('000s)	MAJOR LIMITING FACTORS	MAJOR UNDERLYING FACTORS
1	25	19 008	**	
2	38	28 512	Food Utilization	
3	20	15 206	1 oou cumbadon	
4	18	13 305		\$

Viqueque is located in the south eastern part of the country, with an area approximately 1 781 km² with 12 500 hectares potential area for planting maize and 9 793 hectares for rice. It has a total population of 76 033 people of which 86% are engaged in crop production and livestock rearing. Household level of agriculture activities varies but they are mainly engaged in minor agriculture activity producing for home consumption.

Similar to other municipalities, the main crops being produced are rice, maize and tubers, although vegetable, cash crops and industrial crop production are also common. The agriculture production considered better with farmer's access to irrigation system and other agriculture facilities, although households still experiencing food shortages at least for four months. The economic condition of households is relatively better with 37% above the moderate level national

poverty line.

The common diet lacks diversity with around 35% of households getting more than 70% of their total calories from starchy staples, mostly from own production. The poor quality of diet at household level is reflected in IYCF practices with 65% of children failing to receive a diet of minimum diversity (more than 4 food groups), and 80% of children not receiving the minimum number of meals, the highest proportion in the country. Child malnutrition rates are therefore quite high with 35% of children under five underweight and 27% of children severely stunted.

Access to water is relatively high with 96% of households accessing water from improved sources and 100% of households consumed iodized salt.

- Expand nutrition behavior change and better infant/child feeding and caring practices programs in communities with a special emphasis on maximum utilization of nutrition dense local food to improve dietary diversity.
- Diversify income sources by maximizing livestock and fisheries production with value addition.



### PROCESS, METHODOLOGY AND DATA SOURCES

The first IPC Chronic Food Insecurity analysis in Timor-Leste was conducted by the IPC National Technical Working Group (NTWG), led by the National Director for Food Security and Cooperation (NDFSC) in the Ministry of Agriculture and Fisheries (MAF). Members of the NTWG comprised of different government ministries and departments, UN Agencies, I/NGOs.

All members of the NTWG were trained on the overall process of the IPC Chronic Food Insecurity analysis and classification protocols. The first IPC chronic food insecurity analysis was conducted on April and May 2018 and was conducted with the technical assistance by the regional IPC and global IPC unit.

The analysis covered the 12 municipalities and the special administrative region of Ocussi and Ambeno, using officially published national survey reports and raw data during the past ten years. The main sources of the analysis were:

- Demographic and Health Survey Reports (Ministry of Finance-NSO and Ministry of Health) Year 2016, 2013 & 2010
- Timor-Leste Living Standard Survey (MoF-NSO) Year 2014
- Food and Nutrition Survey (MoH & UNICEF) Year 2013
- El Nino rapid assessment (MAF) Year 2015/16
- Population census Year 2015
- Labor Force Survey (GDE-MdPF no SEPFOPE) Year 2013
- Poverty Report (MoF NSO) Year 2014

The IPC analysis conducted by the NTWG was based from a consensus on the convergence of evidences following protocols of the IPC chronic food insecurity analysis. The analysis mainly used key food security indicators such as:

- Quality of Food Consumption
- Proportion of children eating minimum dietary diversity
- Starchy Staple Ratio (SSR)
- Starchy Staples Expenditure Ratio (SSER)
- **Quantity of Food Consumption**
- **Food Consumption Score (FCS)**
- Meal Frequency among children
- **Coping Strategies**
- Reduced Coping Strategy Index (rCSI)
- Nutrition
- **Stunting**

In addition, the key contributing factors used in the analysis were:

- Reliance on low value livelihood strategies
- National poverty line
- Iodized salt consumption
- Access to improved water sources

Following the completion of the analysis, the findings were validated in several occasions with KONSSANTIL, development partners, academe and municipal and decentralized government institutions prior to the national validation.

The analysis was based on data already generated and officially published in different reports from various sources. In most national surveys and census, sample size are adequate and data are disaggregated at the municipal level. For some data that were not published in the report, the IPC data analyst team calculated those indicators from raw data based on IPC requirements and validated them by the IPC TWG before it was used for the analysis. It would be valuable if the data is available to conduct an analysis at the post administrative level as evidence for the decentralized planning and targeting for various strategies and interventions to address the underlying causes of food insecurity and malnutrition. However, the current available data does not allow such analysis, therefore, the analysis was limited to the municipal level to ensure the validity and the acceptable confidence level. Furthermore, despite the attempt to calculate the Prevalence of Undernutrition (PoU) it was not possible due to the limited country technical capacity.

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FAO, Ergilio. Vicente@fao.org IPC Global Platform: www.ipcinfo.org This analysis has been conducted under the leadership of the Government of Timor-Leste and has been made possible with the technical and financial services received from the European Union and FAO.













IPC National Partners of this Analysis:











