

MEASURING THE IMPACT OF LA NIÑA ON FOOD AND NUTRITION SECURITY IN TIMOR LESTE

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Distance (km)

| | Atar | Maliana | Manatuto | Suai | Viqueque | Liquiçá | Ermera | Dili | Oecussi |
|----------|------|---------|----------|------|----------|---------|--------|------|---------|
| Atar | 0 | 12 | 18 | 25 | 32 | 38 | 45 | 52 | 60 |
| Maliana | 12 | 0 | 6 | 13 | 20 | 26 | 33 | 40 | 48 |
| Manatuto | 18 | 6 | 0 | 7 | 14 | 21 | 28 | 35 | 42 |
| Suai | 25 | 13 | 7 | 0 | 7 | 14 | 21 | 28 | 35 |
| Viqueque | 32 | 20 | 14 | 7 | 0 | 7 | 14 | 21 | 28 |
| Liquiçá | 38 | 26 | 21 | 14 | 7 | 0 | 7 | 14 | 21 |
| Ermera | 45 | 33 | 28 | 21 | 14 | 7 | 0 | 7 | 14 |
| Dili | 52 | 40 | 35 | 28 | 21 | 14 | 7 | 0 | 7 |
| Oecussi | 60 | 48 | 42 | 35 | 28 | 21 | 14 | 7 | 0 |



INTRODUCTION

- The country has an area of 14,609 square kilometers, It is divided in thirteen districts.
- Timor Leste has experience on La Nina
- The Government of Timor-Leste is committed to ensuring that its population is secure in terms of both food and nutrition security in the short-term and the longer-term.
- The food security situation is being compounded by the effects of climate change and La Nina
- Ministry of Agriculture has initiated a new system of multi-sectoral food security monitoring.

AGRICULTURE SYSTEM IN TIMOR-LESTE

- Timor-Leste has been recurrently producing less food than the consumption requirements of the population.
- Timor-Leste has two crop seasons of maize and rice production.
- Most of the farmers are using slash and burn system.
- The government provided food production input

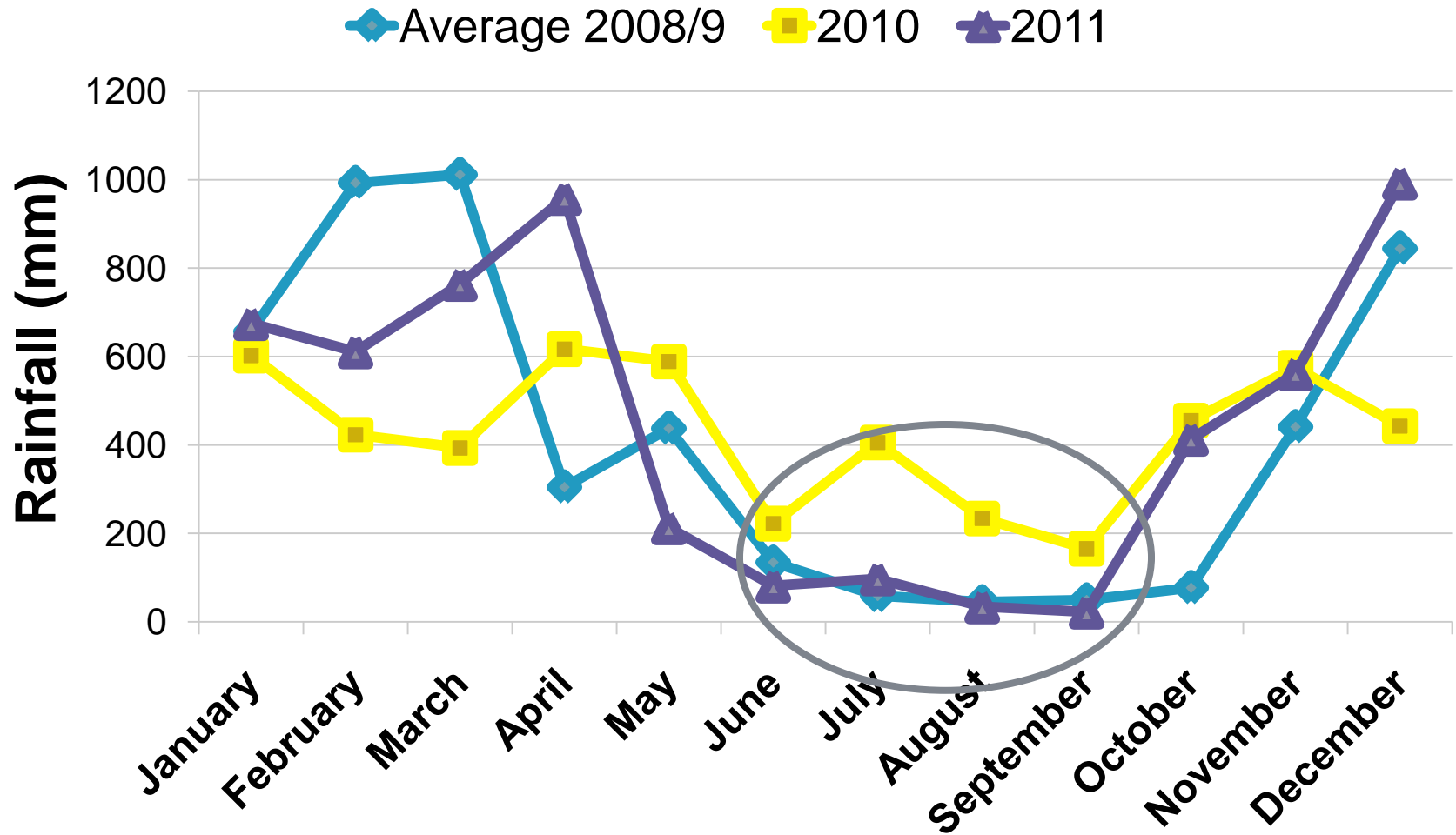
CROP CALENDAR OF MIZE AND RICE PRODUCTION

| Crops | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep t | Oct | Nov | Dec | |
|-----------------------|-----------------|--------|----------------|-------------|--------|--------|------------|------------|------------|--------|--------|-------------|--------|
| Rice (main season) | Red | Red | Green | Yellow | Yellow | Yellow | Yellow | Blue | Blue | Blue | Blue | Blue | Red |
| Maize (main season) | Green | Yellow | Yellow | Yellow | Blue | Blue | Light Blue | Light Blue | Light Blue | Red | Red | Red | Red |
| Rice (second season) | Yellow | Blue | Blue | Blue | Blue | Red | Green | Green | Green | Green | Green | Green | Yellow |
| Maize (second season) | Blue | Blue | Blue | Red | Red | Red | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| | Lean Period | | | | | | | | | | | Lean Period | |
| Sowing | Planting | | Harvest | Land | | | | | | | | | |

RAINFALL IN TIMOR LESTE

- There are two distinct rainfall patterns:
 - the northern monomodal rainfall pattern, which produces a 4–6 month wet season.
 - The southern bimodal rainfall pattern, which produces a longer (7–9 month) wet season
- The climatic condition, known as La Niña, that are said to have triggered these dry periods within Timor-Leste.

DISTRIBUTION OF THE RAINFALL



IMPACT OF LA NINA ON TRANSPORTATION



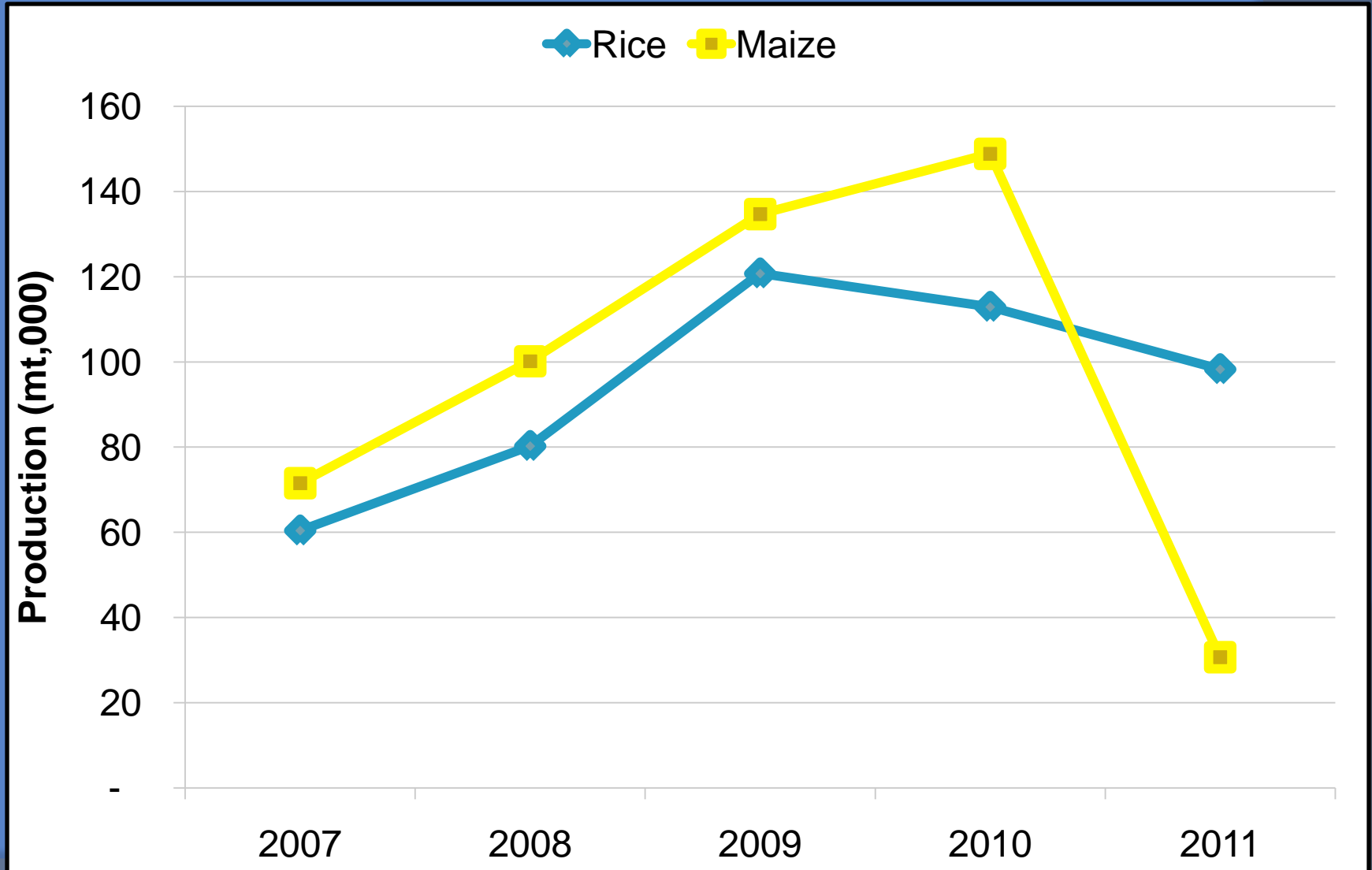
CLIMATE CHANGE IMPACT ON MAIZE AND RICE PRODUCTION

- As an impact of increasing rainfall during 2010 have negative impact on maize production.
- The total area of cultivation are decrease 64% (75,804 ha to 26,926 ha) of the total area cultivation of 2009/2010.
- The total production of 30% of the average production of 2007-10.
- The sequence of decreasing production automatically impacts the food situation in Timor-Leste where maize is the main food after rice.
- The farmers facing problems with insufficient seed for 2012 crop season.

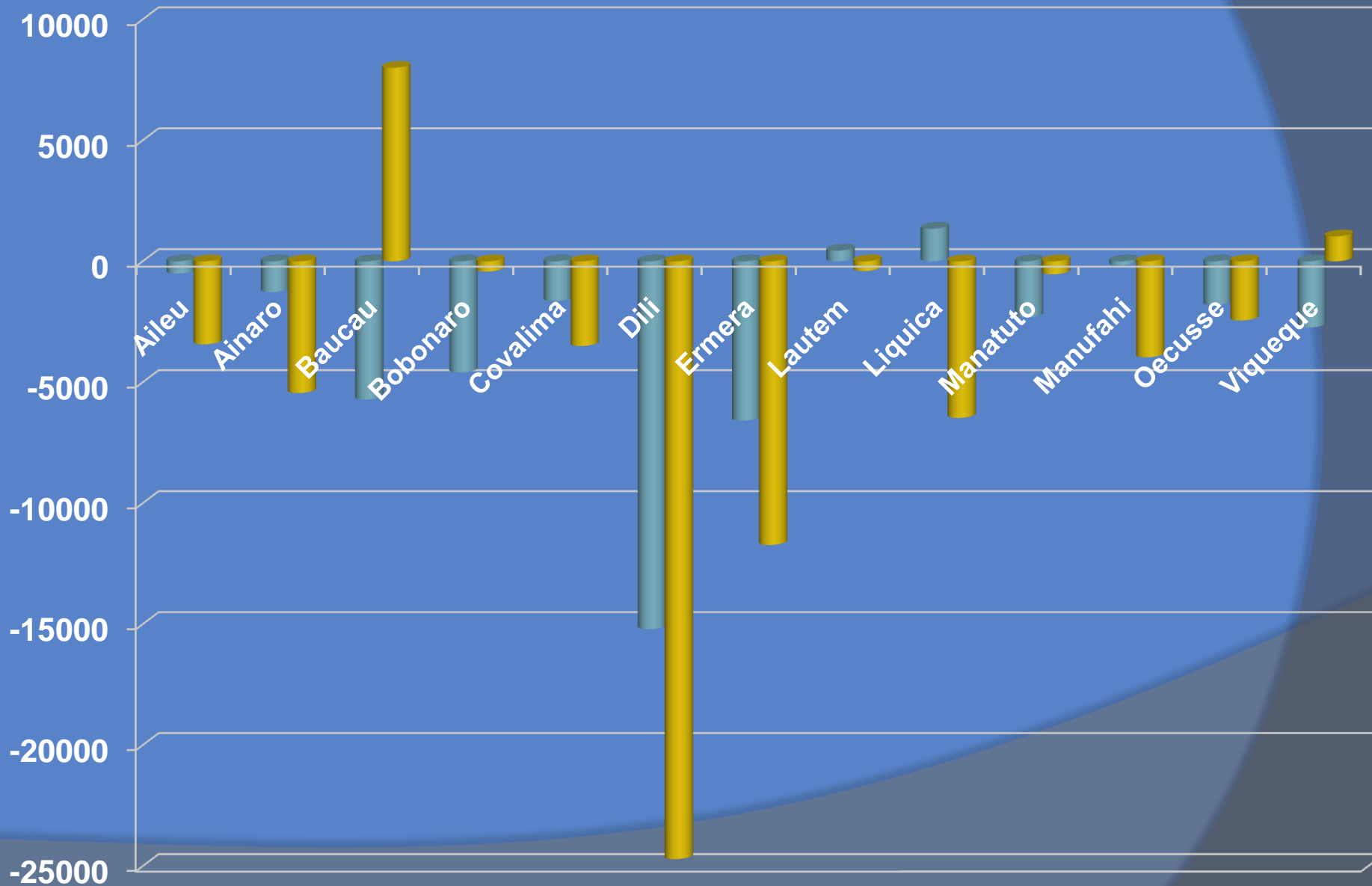
AREA CULTIVATION, HARVEST, PRODUCTION AND PRODUCTIVITY OF MAIZE FOR 2007 - 2012

| Year | Area Cultivation (ha) | Total area harvested (ha) | Total Production (ton) | Productivity (t/ha) |
|-------------|------------------------------|----------------------------------|-------------------------------|----------------------------|
| 2007 | 77,613 | 72,480 | 71,526 | 0.99 |
| 2008 | 86,504 | 79,433 | 100,173 | 1.26 |
| 2009 | 77,961 | 71,340 | 134,715 | 1.89 |
| 2010 | 75,804 | 70,255 | 148,891 | 2.12 |
| 2011 | 26,928 | 21,699 | 30,666 | 1.41 |
| 2012 | 37,072 | 36,830 | 79,566 | 2.16 |

RICE AND MAIZE PRODUCTION FOR 2007 - 2010



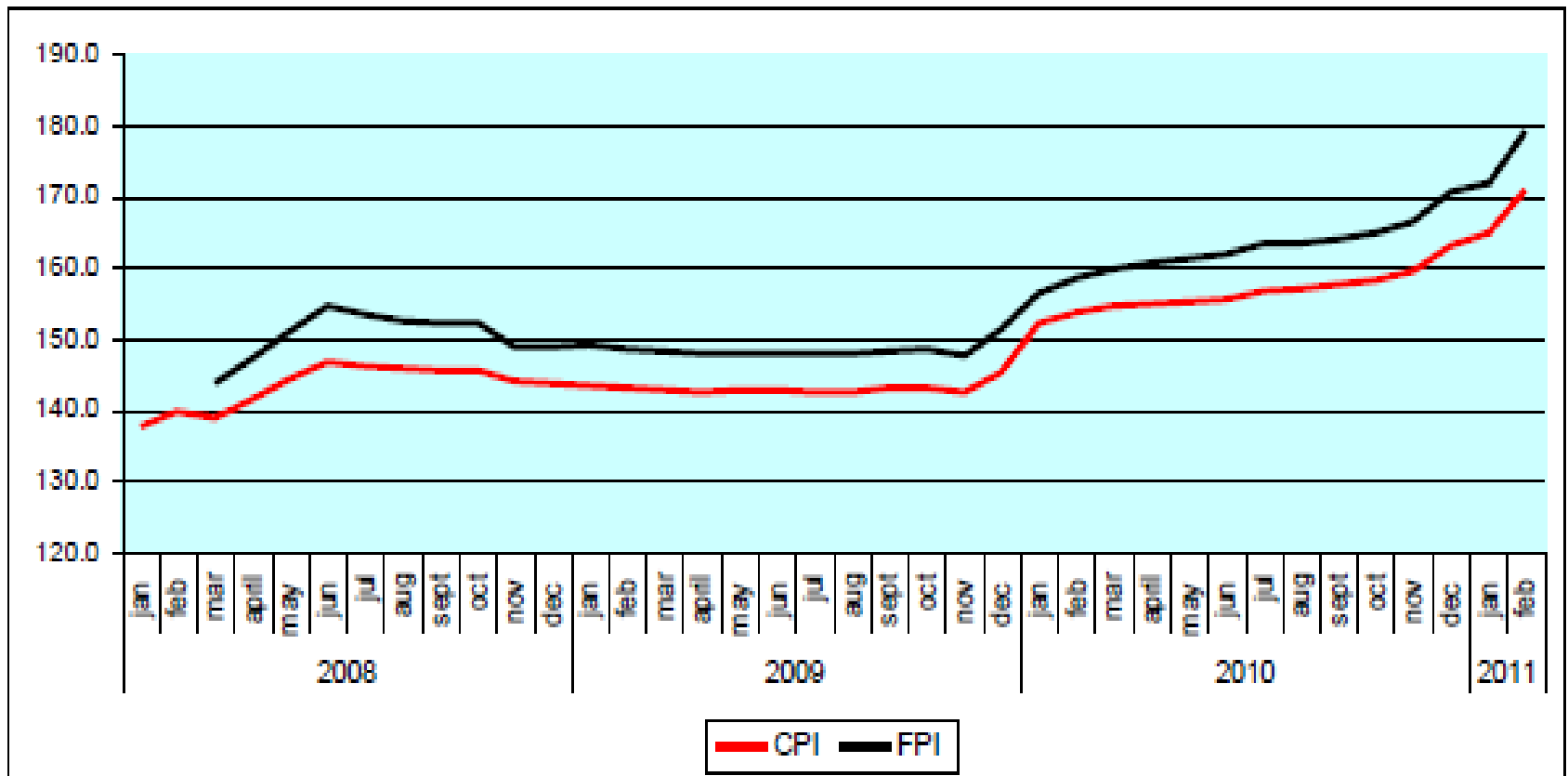
SURPLUS AND DEFICIT FOOD PRODUCTION 2011



POOR PRODUCTION AND CORRELATING FOOD PRICE INCREASES

- The food security conditions are not set to improve until early 2012 due to lack of seeds to cover the decreased 64% of the number of area cultivation in 2011.
- This is especially challenging for poor rural and urban families which spend up to 75% of their income on food
- However, the Food Price Index increased significantly from 140 points to 180 during the early year of 2011 and strongly increased to 208 points in July 2012 as the impact on food access and impact on food price.

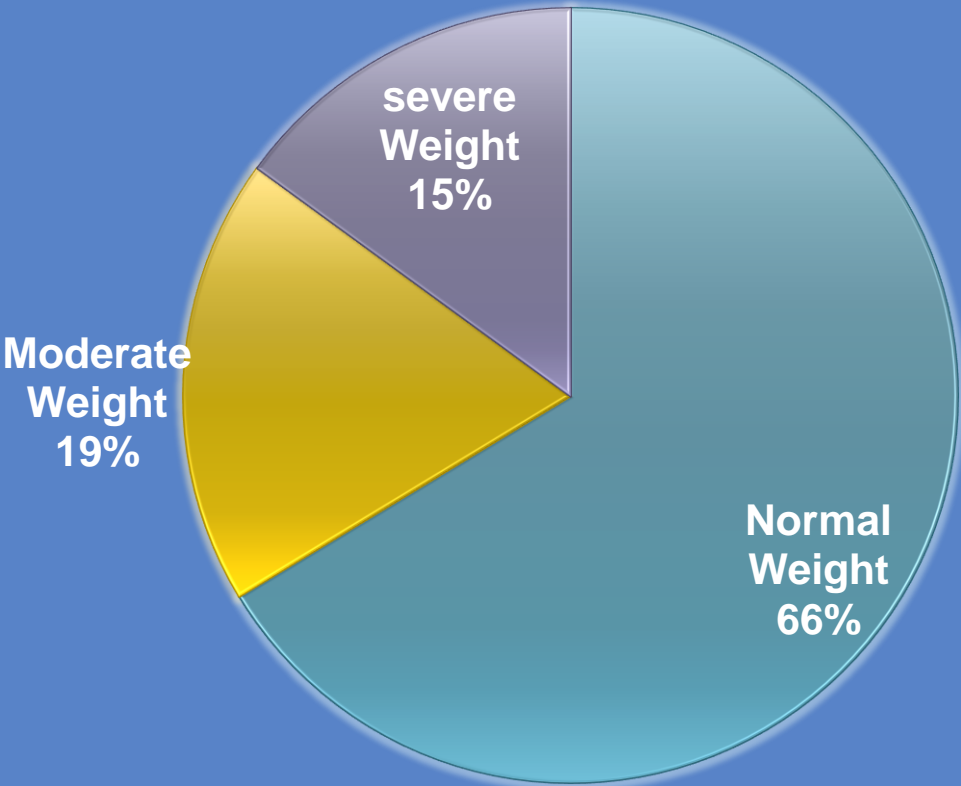
CONSUMER PRICE INDEX (CPI) AND FOOD PRICE INDEX (FPI) 2009 - 2011



IMPACT OF DECREASED HARVEST ON FOOD AND NUTRITION SECURITY

- Food insecurity is among the three major proximate determinant of children nutritional status, other include adequate care and health.
- According to the 2007 Second Participatory Assessment in Timor-Leste, shortage of food is considered the main indicator of poverty.
- The decreased food availability complicated the growing malnutrition and hunger in the country, as 34% of the children under five years of age under-weight and 15% are wasted.

Nutritional status (underweight) of children under 5 measured by health services during 2011.



HOUSEHOLD COPING STRATEGIES

- Agriculture production is not enough to cover consumption requirement of the household for the hold year
- The communities and households choice to various coping mechanism like reducing the meals per day, quantity of meal per day.
- Selling animal for purchasing food consumption.
- Borrowing food from other community
- Increasing the livelihood resilience of farming families would do much to protect them from food and price shocks

GOVERNMENT STRATEGY

- Importing rice from other country to recover deficit food consumption.
- Establish Food Security Committee for creating National information Early Warning System for identification of the vulnerable on food insecurity.

Thank You

Obrigado