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## **Vulnerability Profile of Timor-Leste**

**SUSTAINABLE  
DEVELOPMENT GOALS**

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## Timor-Leste: graduation road map at a glance

- March 2015:** Timor-Leste met, for the first time, the "income only" rule of graduation from Least Developed Country (LDC) status as a result of its (3-year average) per capita GNI performance at 303% of the graduation threshold<sup>1</sup>. The Committee for Development Policy (CDP) accordingly found Timor-Leste pre-eligible for graduation. This finding brought no immediate change to the country's entitlement to LDC treatment. The CDP, in its next triennial review of the list of LDCs in March 2018, will re-examine the potential graduation case of Timor-Leste and answer the question of full eligibility for graduation.
- March 2018:** If Timor-Leste again meets the "income only" graduation rule, the CDP will normally find the country fully eligible for graduation, and accordingly recommend graduation from LDC status in its report to the Economic and Social Council (ECOSOC). Should the Committee find that Timor-Leste meets the normal graduation rule based on two graduation thresholds, there would be a basis for full eligibility for graduation, and for a recommendation to graduate the country.
- July 2018:** ECOSOC will normally endorse the CDP's recommendation to graduate Timor-Leste from LDC status if the Committee has made such recommendation.
- December 2018:** The UN General Assembly, in turn, will normally endorse the recommendation to graduate Timor-Leste, through a resolution formally stating the UN decision to take the country out of the list of LDCs. On the day of adoption of this resolution, Timor-Leste will enter the standard (normally three-year, yet negotiable) grace period during which the country retains its LDC status and is expected to secure, in cooperation with its development partners, a "smooth transition" to post-LDC status.

***NB:** The adverb "normally" qualifying the action of the CDP, ECOSOC and the General Assembly indicates that the relevant decisions by these three bodies are expected to take place in accordance with a "normal" calendar. However, flexibility from this normal timeframe can take place at the discretion of any relevant body if that is deemed to be in the interest of the country under review:*

- (i) the CDP may delay its decision to recommend the graduation of a country; or it may never resolve to make this recommendation;*
- (ii) the Economic and Social Council may delay its action on a CDP recommendation to graduate a country; or it may never resolve to endorse this recommendation;*
- (iii) the General Assembly may avail itself of the possibility of delaying its endorsement of a recommendation to graduate the country, or it may never resolve to endorse this recommendation; it may also, if it endorses the recommendation, decide to grant the country a grace period of a duration different from the standard three-year prescription.*

- December 2021:** At the end of the grace period, Timor-Leste will officially be taken out of the list of LDCs. The hypothesis of a graduation in December 2021 is based on the assumption of a standard sequencing, in 2018, of the UN's decision to reclassify Timor-Leste, followed by a normal grace period.

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<sup>1</sup> If a country demonstrates a per capita income performance more than double the graduation threshold, and if this performance is deemed sustainable, the country will be considered pre-eligible (on a first occasion) or eligible (on a second occasion) for graduation regardless of its performance under the other two criteria.

## 1. Introduction: historical and institutional context

Timor-Leste was added to the list of LDCs in 2003, a year after its accession to independence. In its 2015 review of the UN list of Least Developed Countries (LDCs) in March 2015, the United Nations Committee for Development Policy (CDP) observed that Timor-Leste was meeting the "income only" graduation rule, given its score at 303% of the relevant graduation threshold. The CDP accordingly found Timor-Leste pre-eligible for graduation from LDC status, a temporary situation that would normally evolve toward full eligibility if the country, three years later, meets the same "income only" rule or the normal graduation rule (i.e. two graduation thresholds).

The CDP, in the 2015 review of the list, observed Timor-Leste's potential graduation prospects as being determined by the performance described in Table 1.

This Profile was prepared in accordance with General Assembly resolution 59/209 of 20 December 2004, which decided that "after a country has met the criteria for graduation for the first time, UNCTAD is mandated to prepare a vulnerability profile on the identified country to be taken into account by the Committee for Development Policy at its subsequent triennial review"<sup>2</sup>. It is an input to the work of the CDP in answering the question of the graduation of Timor-Leste from LDC status, with a focus on the extent to which effective structural progress has been taking place in the country.

Sections 2, 3 and 4 examine the situation of Timor-Leste under the three criteria for identifying LDCs, namely the per capita income criterion, the human assets criterion, and the economic vulnerability criterion, respectively. The examination undertaken under each criterion casts light on various factors and determinants of the country's overall performance under the criterion.

Graphs 1, 2 and 3 illustrate the evolution of Timor-Leste, since 2003, under the graduation thresholds relevant to the per capita income criterion, the human assets criterion, and the economic vulnerability criterion, respectively. The data indicate the country's distance to the graduation threshold, as well as the distance to the admission threshold (the level for admitting new countries into the list). All data through the eight triennial reviews of the list of LDCs after 1991 (1994, 1997, 2000, 2003, 2006, 2009, 2012, 2015) have been standardized in index form, with the graduation threshold standing out as the 100 basis. For example, a score of 87 observed in 2015 under the second criterion indicated that Timor-Leste stood at 87% of the relevant graduation threshold.

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<sup>2</sup> General Assembly resolution A/RES/59/209, *Smooth transition strategy for countries graduating from the list of least developed countries*, para. 3(b), 20 December 2004.

**Table 1**  
Timor-Leste's pre-eligibility for graduation from LDC status  
in the 2015 review of the list of LDCs

	<b>PER CAPITA INCOME</b>	<b>HUMAN ASSETS</b>	<b>ECONOMIC VULNERABILITY</b>
To pre-qualify for graduation in the 2015 review of the list, an LDC <b>normally</b> had to meet at least two of the following three graduation thresholds...	...to have a gross national income per capita of at least <b>US \$1,242</b> (2011-2013 three-year average)	...to have a score >66 under the Human Assets Index (HAI), extreme values of which, among LDCs, were 7.8 (lowest human assets) and 87.6 (highest human assets)	...to have a score <32 under the Economic Vulnerability Index (EVI), extreme values of which, among LDCs, were 71.5 (highest vulnerability) and 24.9 (lowest vulnerability).
However, by virtue of the "income only" exception to the normal graduation rule, pre-eligibility for graduation would be observed...	... if the (2011-2013 three-year average) gross national income per capita of the country is at least <b>US \$2,484</b> , regardless of the performance under the other two criteria.		
Score of Timor-Leste under the relevant criterion	\$3,767  (3-year average GNI per capita)	57.4  (Human Assets Index score)	54.9  (Economic Vulnerability Index score)
Score of Timor-Leste in % of the graduation threshold	at <b>303.3%</b> of the graduation threshold	at <b>87.0%</b> of the graduation threshold	at <b>58.2%</b> of the graduation threshold <i>(see footnote 15)</i>

Source: UNCTAD, based on CDP data

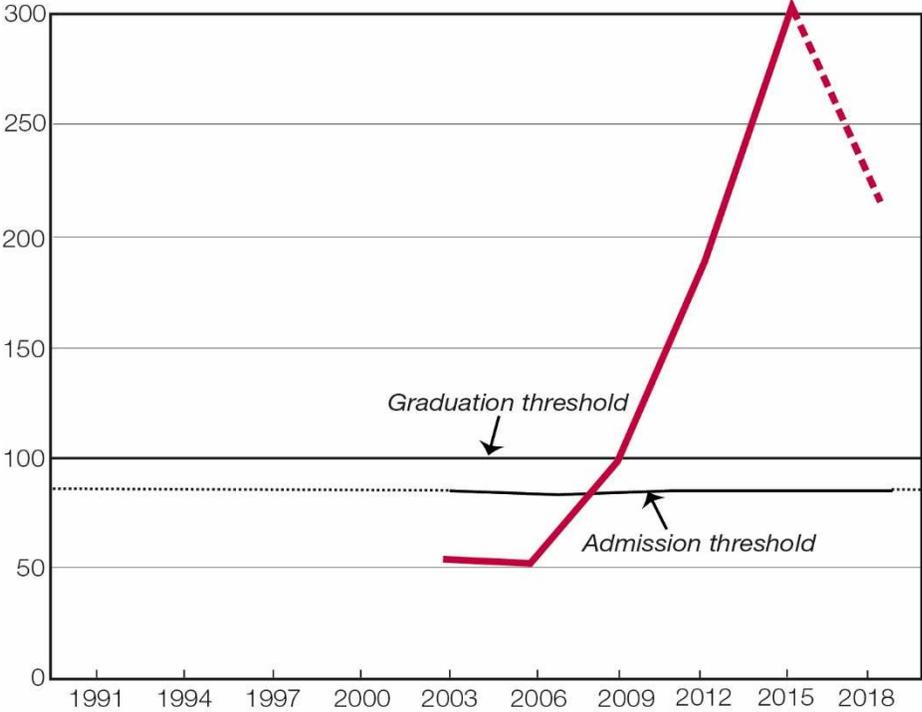
## 2. Timor-Leste and the per capita income criterion

At 303% of the graduation threshold relevant to the per capita income criterion while performance under the human assets and economic vulnerability criteria remains under relevant graduation borders, Timor-Leste has been pre-eligible for graduation from LDC status in accordance with the "income only" exception to the normal graduation rule. A projected estimate (dotted line in Graph 1) indicates the eventuality of full eligibility for graduation in 2018, at 216% of the graduation threshold. The spectacular real growth performance which took place from 2007 (at an average 9% per annum until 2014) put Timor-Leste's score under this criterion on a

rocketing path through the 2009, 2012 and 2015 reviews of the list of LDCs. GNI per capita rose from \$810 in 2002 (the year of accession to independence) to \$4,150 in 2012, its historical peak.

**Graph 1**  
 TIMOR-LESTE: distance from the graduation threshold  
 under the per capita income criterion (based on GNI per capita)

*NB: data up to 2015 are based on actual CDP findings; the 2018 projection is provisional*



Source: UNCTAD, based on CDP data up to 2015

2.1 Gross National Income per capita

Since a few years after its independence in May 2002, Timor-Leste economy is heavily dependent on oil and gas. Previously, it was based on agriculture, with coffee as the main export. These hydrocarbons contributed about 80% of the country's GDP in 2012-2013 and about 99% of exports and other revenue<sup>3</sup>. Production in the offshore petroleum sector peaked in 2013 and has been declining<sup>4</sup> since then.

<sup>3</sup> Petroleum exports as well as income from Petroleum Fund investments are excluded from other exports; they are recorded as part of the income account.

<sup>4</sup> According to World Bank (2016), Oil production reached 60 million barrels in 2013 but was projected to decrease to 40 million barrels in 2016.

The gross national income per capita (GNI per capita) has been growing rapidly, from a low level of \$680 in 2003 to \$4,150 in 2012. But it dropped to \$2,180 in 2015 (see Table 1), mainly as a result of the sharp fall in petroleum prices since 2014, combined with decreasing petroleum production in existing wells and a diminished price incentive to explore new ones. According to the IMF, petroleum revenue fell by 40% in 2015 alone<sup>5</sup>.

**Table 2**  
Gross National Income per capita (Atlas method) in Timor-Leste, in US\$ (2003-2016)

Year	2003	2006	2009	2012	2015
<b>GNI/cap.</b>	680	1,770	2,260	4,150	2,180

Source: World Bank-World Development Indicators (WDI) database, July 2017

This has happened despite commendable efforts by the Timor-Leste government to delink trends in the petroleum sector from short term economic performance. This was done through the creation of a Petroleum Fund (\$16.2 billion invested so far, by end 2015). However, the main purpose of the fund is to ensure that these natural resources benefit future generations. That is why only a portion of the benefits on investments from the petroleum fund is used so far, on a sustainable basis (hopefully in perpetuity), to finance Government budget.

The high growth in income had recently put Timor-Leste on a path to graduation from LDC status on the basis of the "income only" criterion. GNI per capita was more than twice higher than the graduation threshold<sup>6</sup> for three consecutive years before 2015. Despite the recent drop in the prices of hydrocarbons and its impact on GNI per capita since 2015, the performance of Timor-Leste in 2018 may remain above the "income only" threshold.

Timor-Leste also needs to make extra efforts to diversify quickly its economy, especially if no new oil or gas fields are developed and current wells keep depleting rapidly, making it a post-oil country in less than five years<sup>7</sup>. In that scenario, the Government will be forced to withdraw from the principal of the Petroleum Fund to finance its budget, with the risk of depleting the fund even before current young generation retirement.

Meanwhile, the Government is investing in the non-oil economy, using both withdrawals from the Petroleum Fund as well as concessional loans to finance large infrastructure projects, enhance human resources development and promote new sectors such as tourism and hydrocarbon-related industry, as well as revitalizing old sectors such as agriculture.

<sup>5</sup> IMF Country Report N° 16/183. Republic of Timor-Leste. June 2016

<sup>6</sup> US \$1,242 was the income threshold for graduation in 2015, and \$2,484 the double underpinning the "income only" exception.

<sup>7</sup> World Bank, East Asia and Pacific Economic Update, October 2016.

## 2.2 The income distribution status

The rapidly growing income at the national level does not seem so far to be accompanied with unequal distribution of wealth among the population of Timor-Leste. For instance, Gini index was equal to 31.6 in 2007, which put Timor-Leste among least unequal countries in the world, with a ranking (decreasing inequality) at 124 out of 151 countries (Table 3). A UNDP source puts the Gini coefficient even lower at 30.4%<sup>8</sup>. Timor-Leste's distribution of wealth among its population seems closer to Norway's best practice than to South Africa's.

**Table 3**  
Distribution of income in Timor-Leste and other countries (2007-2013)

Country rank	Gini index	Share of income (%)		
		20% richest	20% Poorest	60% in the middle (middle class)
1. South Africa (2011)	63.4	68.9	2.5	28.6
2. Namibia (2009)	61.0	66.4	3.3	30.3
30. Malaysia (2009)	46.3	51.4	4.6	44.0
93. Indonesia (2013)	39.5	47.4	7.2	45.4
<b>124. Timor-Leste (2007)</b>	<b>31.6</b>	<b>40.9</b>	<b>9.0</b>	<b>50.1</b>
127. Sao Tomé & Príncipe (2010)	30.8	39.5	8.4	52.1
129. Cambodia (2012)	30.8	40.2	9.1	50.7
151. Norway (2012)	25.9	35.3	9.3	55.4

Source: World Bank, WDI, 01/2017; [www.indexmundi.com](http://www.indexmundi.com); our calculation for last column

However, the situation may have evolved significantly since 2007 as was the case for most other realities in Timor-Leste during the last 10 years. Also, other data indicate that poverty is still widespread in Timor-Leste, with poverty headcount at \$1.90 a day affecting 46.76% of the population in 2009 while poverty headcount at the national level is a little bit higher at 49.9% of the population<sup>9</sup>. Worse, UNDP data shows that the population in multidimensional poverty and severe multidimensional poverty reaches respectively 64.3% and 31.5%. And the overall loss in Human Development Index due to inequality is 30.7%.

Fortunately, the Government is aware of the problems associated with poverty and has been implementing several measures to mitigate its consequences, especially on children and pregnant women. For example, feeding programs are implemented all over the country, especially through health centers and primary schools. Social security programs are being implemented for some vulnerable categories of the population such as aging veterans of the independence war. Inequality in education, health and transport is being addressed through heavy and steady investments in schools, hospitals and roads construction, especially in rural and remote areas.

<sup>8</sup> <http://hdr.undp.org/en/countries/profiles/TLS>. Dated 15 December 2015.

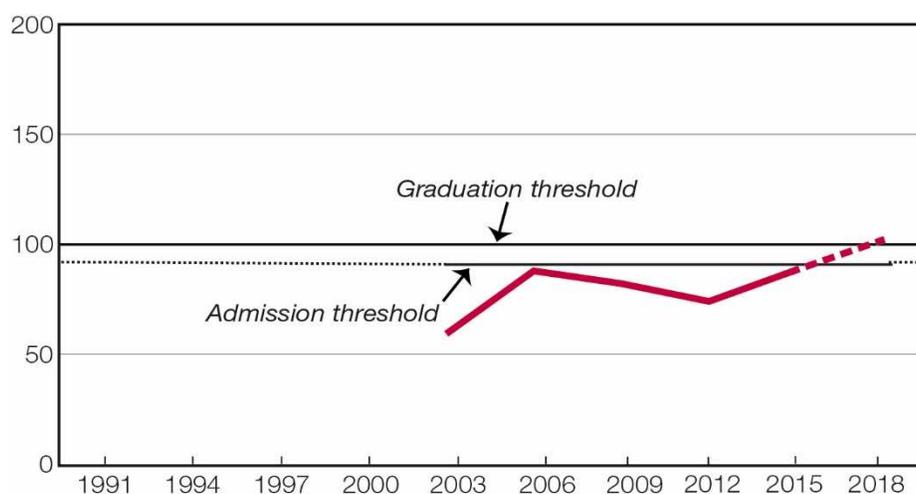
<sup>9</sup> World Bank, WDI, 01/2017.

### 3. Timor-Leste and the human assets criterion

Significant progress has been observed under the graduation threshold relevant to the human assets criterion, with an upturn to 87% of the threshold in 2015, and to a provisionally estimated 101% in 2018. This progress largely results from steady successes in the fight against child mortality (with a 41% decrease in the child mortality ratio over the past five years), and toward greater adult literacy (+15%). This prefigures the possibility of a score very near to the graduation line in 2018 (next review of the list of LDCs).

**Graph 2**  
TIMOR-LESTE: distance from the graduation threshold  
under the human assets criterion  
(based on the *Human Assets Index*)

*NB: data up to 2015 are based on actual CDP findings; the 2018 projection is provisional*



Source: UNCTAD, based on CDP data up to 2015

Timor-Leste has one of the youngest populations in the world. Children (0 to 14 years) were 42% of the population in 2015, making Timor-Leste one of the top 20 (17<sup>th</sup>) youngest countries in the world (see Table 4), with a very high dependency ratio (82%) for the young on the working age population.

Such a large proportion of young people require a lot of investments in education, time and other resources, both for households and the Government. Given the need to provide services to such a high and growing number of children, the Government of Timor-Leste has made tremendous efforts in education and health, as well as other human development activities since independence in 2003. However, important challenges remain in the drive to reach a satisfactory level in human capital development.

Several indicators show that Timor-Leste still needs to make substantial progress in terms of a) food provision to fight malnutrition, b) child health and c) education at secondary level. The previous three indicators are used by the Committee for Development Policy (CDP) to measure human capital level for graduation from-as well as inclusion to -LDC category. Each of the three indicators will be analyzed in detail in the following sections.

**Table 4**  
Countries with the highest proportion of children (0-14) in their population in 2015

Country	Population ages (0-14) in %	Dependency ratio for the young (%)
1. Niger	50	107
2. Uganda	48	97
3. Chad	48	96
4. Angola	48	95
5. Mali	48	95
6. Somalia	47	93
7. Zambia	46	90
8. Congo DRC	46	90
9. Gambia	46	90
10. Burkina Faso	46	88
11. Malawi	45	88
12. Mozambique	45	88
13. Tanzania	45	88
14. Burundi	45	85
15. Nigeria	44	83
16. Senegal	44	82
17. Timor-Leste	<b>42</b>	<b>82</b>
Lower Middle income economies	31	48
World	26	40

Source: World Bank, WDI, 01/2017

### 3.1 Percentage of population undernourished

According to FAO, WFP and IFAD, the undernourishment ratio of Timor-Leste population was estimated at 34%<sup>10</sup> in 2005-2007 and 26.9% in 2014-2016 (Table 5), suggesting that malnutrition was still at a high level but rapidly decreasing (-40.4% ) compared to other LDCs (-33.2%) but not quickly enough compared to its neighbouring countries in terms of change (-68.5%) or to meet MDG targets (-50% change in proportion between 1990 and 2015).

To meet MDGs target, malnutrition should have been halved (-50%) by 2015 compared to its 1990 level. To be in line with other South-Eastern Asia countries, the proportion of undernourishment should go below 10% of the population and keep decreasing. Therefore, there is still some way to go for Timor-Leste to meet internationally agreed targets for malnutrition and even a longer way to go before the country is in line with the situation enjoyed by its neighbors.

<sup>10</sup> FAO, WFP and IFAD, *The State of Food Insecurity in the World 2015*

There are even more pressing issues in terms of quality of future human capital when malnutrition concerns such categories of the population as pregnant women and children under 5 years old. In fact, there is a need to address severe malnutrition among children under 5 years old, as it still results in stunting in large proportions (50.2% of children under 5 in 2013 according to international sources<sup>11</sup>), thus affecting their physical and mental development as adults in the future.

**Table 5**  
Undernourishment in Timor-Leste and other groups of countries, 2005-2016

Country/ Sub-region/group	Number of people undernourished		Proportion of undernourished persons in the total population			Change so far <sup>12</sup> %
	2005-2007 (millions)	2014-2016 (millions)	1990- 1992 %	2005- 2007 %	2014- 2016 %	
Timor-Leste	0.3	0.3	45.2	34.0	26.9	-40.4
South-Eastern Asia	103.2	60.5	30.6	18.3	9.6	-68.5
LDCs	237.6	250.9	40.0	31.4	26.7	-33.2
Lower middle- income economies	420.0	355.6	22.8	18.2	13.5	-40.7

Source: FAO, WFP, IFAD. *The State of Food Insecurity in the World 2015*.

As the following table (Table 6) shows, stunting still affects not only a very high proportion of children but it also affects more male children (53.1% in 2013) than female children (47.2% in 2013) as was already the case in 2009 and 2007. Other sources also indicate that there is more stunting in rural areas than in urban areas due to the difference in the types of food consumed.

Also, while the proportion of stunting among children under 5 has been slightly decreasing from 57.7% in 2009 to 50.2% in 2013, the gap between boys and girls has been increasing, from 4.2% (59.8-55.6) in 2009 to 5.9% (53.1-47.2) in 2013. This issue should receive the highest priority in government spending. The will to act on this issue seems there in various statements and policy documents but more action and concrete results are needed urgently.

**Table 6**  
Prevalence of stunting, height for age (% of children under 5)

Category/Year	2007	2009	2013
Female	51.5	55.6	47.2
Male	56.3	59.8	53.1
Both sexes (total)	53.9	57.7	50.2

Source: World Bank. World Development Indicators. January 2017

<sup>11</sup> 51.9% according to a national survey published in 2013 and 46% according to another 2016 survey.

<sup>12</sup> Rome Declaration on World Food Security, adopted at the World Food Summit, Rome, 13-17 November 1996

### 3.2 Child (under five) mortality

The second indicator of the level of development of human capital is the mortality rate for children under five years of age. The rate for Timor-Leste in 2015 was estimated to be 53 (deaths per 1,000 live births or 53‰). It has been dropping steadily since 1990 (Table 7) from a high level where it reached 176‰, thus exceeding the target fixed by the Millennium Development Goal to reduce by half the 1990 rate. It has also matched the rate of other lower middle-income countries (53‰) whereas in 1990, Timor-Leste's rate was 57‰ higher than the rate of those countries (119‰). Therefore, on this particular indicator, it is well justified that Timor-Leste joins this group of countries.

**Table 7**  
Evolution of Timor-Leste child mortality rate (under 5, per 1,000 live births)

Country/Region/Year	1990	2003	2006	2009	2012	2015
Timor-Leste	176	94	78	67	59	53
East Asia & Pacific	57					17
Lower middle-income countries	119					53
World	91					43

Source: World Bank, WDI database, 01/2017; Child mortality org, 09/2015.

Despite this important progress, child mortality in Timor-Leste is still lagging far behind its neighbors in East Asia and Pacific where the rate is a low 17‰. Given the Government commitment and plans, there is good chance that more progress may have already been made on this indicator and more progress can be expected in the forthcoming years.

### 3.3 Maternal mortality

A new component of the Human Assets Index is the maternal mortality rate. Various sources (WHO, UNICEF, World Bank) indicate that Timor-Leste had a rate of 215 in 2015 (Table 8). It was a good rate compared to the world average (216) that same year and compared to its very high level in 2000 where it was more than 3 times its 2015 rate (694). The country has also reduced its rate more rapidly than the rest of the world, from almost 3 times worse to better between 1990 and 2015. However, compared to its neighboring countries in East Asia and Pacific, Timor Leste's performance is still almost 4 times worse despite reducing the gap from more than 6 times worse in 2000. Also, the national estimate in 2009 was 560, which is 37.5% higher than the international data (350). Except this divergence, the country seems otherwise on the right track in terms of maternal mortality rate.

**Table 8**  
Maternal mortality rate (modeled estimate), per 100,000 live births

Year/Country-region	1990	2000	2003	2006	2009	2012	2015
Timor-Leste	1080	694	567	466	350	267	215
East Asia & Pacific	159	113			78	67	59
World	385	341			254	232	216

Source: World Bank, WDI, July 2017

### 3.4 Secondary school enrolment

The third indicator of the level of development of human capital is the rate of enrolment of children in secondary school (Gross enrolment ratio, GER). Various sources estimate Timor-Leste's GER to be about 76.8%<sup>13</sup> in 2015 (Table 9). However, net enrolment ratio (NER) is usually much lower. It was estimated by UNESCO at 55.8% in 2015 but other sources in Timor-Leste have previously published a rate almost half such a figure. For example, in 2013, the figure for NER was 48.6% for UNESCO but only 25% for official sources in Timor-Leste<sup>14</sup>.

**Table 9**  
Timor-Leste secondary school enrolment ratio, 2003-2015 (%)

Category-region/Year	2003	2006	2009	2012	2015
Ratio (GER), both sexes	46.4	53.5	61.9	71.8	76.8
Female (GER)		39.1	61.2	73.3	79.6
Male (GER)		39.7	62.5	70.4	74.1
Ratio (NER), both sexes		14.0	34.1	47	55.8
Lower middle-income (GER), both sexes					65.0
East Asia and Pacific					88
World					75

Source: UNESCO database (Jan 2017); Ministry of Education of Timor-Leste; World Bank, WDI, July 2017

The above table shows that Timor-Leste has made tremendous progress in secondary school enrolment since 2003. In a short period of twelve years, the Gross enrolment ratio has almost doubled, from 46.4% in 2003 to 76.8% in 2015. It is even higher than the average GER for lower middle-income countries (65%) or the world average (75%). But it is still below the average for its neighbouring countries in East Asia and Pacific (88%).

<sup>13</sup> UNESCO data, 2017

<sup>14</sup> Timor-Leste. Education for All 2015 National Review. A report submitted in 2015 to a UNESCO conference to assess progress made since 2000 towards achieving Education for All.

Data in the table also show female pupils in Timor-Leste are recently doing better than the male pupils in terms of enrolment. Since 2012, all statistics show a clear trend where female pupils succeed more easily than the male, with less repetition and less drop-out. The gender gap seems increasing at all levels of education in favor of female pupils. Some observers may establish a causality link between the higher malnutrition and stunting we discussed above which was found to affect more young boys than girls and the low performance in secondary school for at least half the same boys. But such causality needs further study to be confirmed.

However, in general, the Government of Timor-Leste considers that the success of female pupils is a real achievement on the front of eliminating gender bias against girls in the education system and beyond. But reverse bias at the expense of male pupils is a problem that the authorities are hoping to fix.

### 3.5 Adult literacy

Adult literacy rate in Timor-Leste was estimated by UNESCO to be 64.1% in 2015 (Table 10). It had been increasing quickly, almost doubling in 14 years, from a low level of 37.6% in 2001. However, literacy is not evenly distributed among the population of Timor-Leste. As in many other countries, urban population is almost twice more literate (83.2% in 2010) than rural population (45.9% the same year) when the average for the total population was 57.8%. Similarly, there was a gender disparity even though in less magnitude and slightly decreasing in time. Adult male were respectively 10.6% and 9% more literate in 2010 and 2015 than adult female.

**Table 10**  
Timor-Leste's adult literacy rate (%)

Category, region\Year	2001	2010	2015
<b>Total (15+ years old)</b>	<b>37.6</b>	<b>58.3</b>	<b>64.1</b>
Rural		45.9	
Urban		83.2	
Female		52.5	59.5
Male		63.1	68.5
<b>East Asia and Pacific</b>	<b>91.6</b>	<b>95.1</b>	<b>95.1</b>
<b>World</b>	<b>81.9</b>	<b>85.3</b>	<b>85.3</b>

Source: UNESCO data base, Jan 2017; Timor-Leste (Education Monograph, Census 2010), 2015. WDI, July 2017

Also, Timor-Leste has been lagging behind its neighbouring countries of East Asia and Pacific in terms of literacy but the gap is being reduced in time even though there was still a substantial way to go to fill the remaining 31% gap in 2015. Therefore, the Government of Timor-Leste needs to invest more in alphabetization in general, with special priority put on promoting literacy of women in rural areas.

#### 4. Timor-Leste and the economic vulnerability criterion

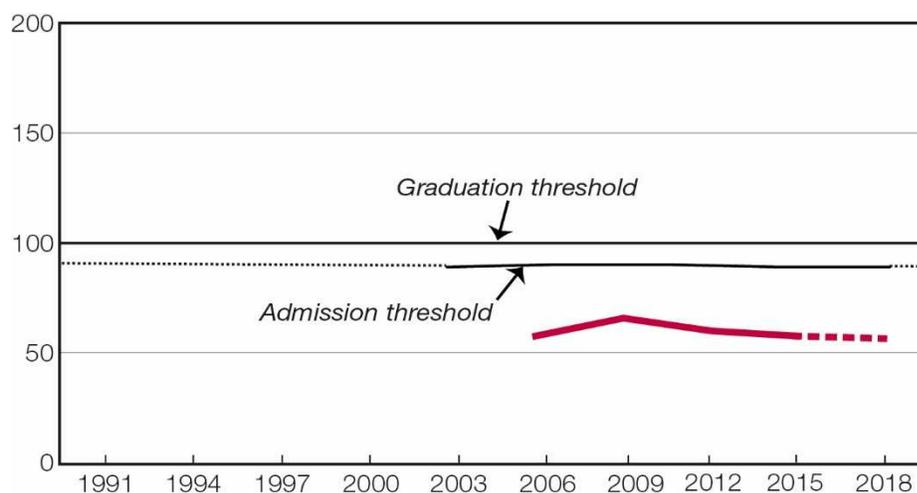
The lagging situation under the economic vulnerability criterion (at only 58% of the graduation threshold in 2015, and a provisionally estimated 57% in 2018) should be interpreted with caution. Only two of the eight indicators entering the *Economic Vulnerability Index* effectively portray Timor-Leste as a highly exposed economy, therefore as a potentially vulnerable one: merchandise export concentration, and instability of exports of goods and services. Both observations (a high degree of concentration; high export instability) are explained by a single economic factor: oil extraction. Whether this context can be considered a mark of economic vulnerability (despite the fluctuations in oil export receipts) is debatable, given the wealth effect of oil exports --a "positive shock"-- on the national economic landscape.

Timor-Leste's economic vulnerabilities include some shocks due to sudden and strong variations in external trade for its exports but also to the damages due to several types of natural disasters. Natural shocks include epidemics, excessive or lack of precipitations, earth movements, etc. International trade shocks are linked to the instability in the price of its oil exports.

**Graph 3**

**TIMOR-LESTE:** distance to the graduation threshold  
under the economic vulnerability criterion  
(based on the *Economic Vulnerability Index*)

*NB: data up to 2015 are based on actual CDP findings; the 2018 projection is provisional*



Source: UNCTAD, based on CDP data up to 2015

##### 4.1 Population living in low-lying areas

Populations at risk include those who settled in low coastal areas. Table 10 shows the proportion of Timor-Leste people living below 5 meters above sea level. They are still less than 1% of the population and most of these people live in rural areas (0.81% in 2010). The proportion of people at risk has remained stable over the period 1990-2010, slightly close to 1%.

Most of these people live in rural areas (0.81%) while only very few people (0.12%) live in urban areas. Four main zones have been identified by the Ministry of Social Affairs and Solidarity as low-lying zones: Beacau in the North, Suai Loro in the South, Batuguede on the coast of the Western part of the capital Dili, and Tasi-Tolu zone near the three lakes below the hills near Dili.

Low-lying zones are therefore a manageable problem so far in the case of Timor-Leste. In fact Timor-Leste is mainly a mountainous country, with mountain slopes rising quickly after the beach in most places. This corresponds to the view from the plane when visitors are about to land at Dili airport.

**Table 11**

Proportion of the population living in areas below 5 metres above sea level, 1990-2010

Year	Proportion	Urban	Rural
1990	0.92	0.10	0.82
2000	0.93	0.12	0.81
2010	0.93	0.12	0.81

Source: World Bank. World Development Indicators, January 2017

#### 4.2 Merchandise export concentration

Timor-Leste's merchandise exports are among the top five most concentrated in the world. Since 2012, they are in fact third after Iraq and Angola, with a merchandise export concentration index of 0.930 in 2015 (see Table 12). This is more than three times of the same index for LDCs (0.256), more than four times that of lower middle income countries (0.213) and more than seven times that of South Eastern Asia countries (0.116). Crude petroleum oil and natural gas have become two of the four only products exported whereas the country used to export 47 products in 2003, but with far much less value than hydrocarbons.

**Table 12**

Top 5 countries with the highest export concentration index, 2003-2015

Country-group (2015 rank) /year	2003	2006	2009	2012	2015
Iraq (1)	0.956	0.950	0.966	0.975	0.914
Angola (2)	0.940	0.954	0.957	0.942	0.895
<b>Timor-Leste (3)</b>	<b>0.211</b>	<b>0.589</b>	<b>0.768</b>	<b>0.918</b>	<b>0.930</b>
<b>Number of products exported</b>	<b>47</b>	<b>21</b>	<b>10</b>	<b>3</b>	<b>4</b>
Palau (4)	0.754	0.874	0.907	0.910	0.923
Nauru (5)	0.407	0.226	0.858	0.942	0.914
South Eastern Asia	0.167	0.153	0.127	0.117	0.116
Least Developed Countries (LDCs)	0.336	0.468	0.453	0.418	0.256
Lower middle income countries	0.166	0.235	0.213	0.203	0.213

Source: UNCTAD Stat, Jan. 2017

Relying so heavily on so few products is a very risky situation for the economy of the country. Timor-Leste needs therefore to diversify its exports both for merchandise and services in order to reduce the vulnerability of heavy dependence on only two products even though they are energy or strategic products. Even though this is a classic situation for many petroleum producing countries, the limited amount of reserves should encourage the country to speed up diversification in its exports.

#### 4.3 Victims of natural disasters

Several natural disasters have hit Timor-Leste in recent years. These include epidemics due parasitic and bacterial diseases (Table 13); storms, floods and landslides; drought, earth movements, etc. According to various sources, since 2003, there have been 9 natural disasters in the country, about 1 every two years on average. These resulted in a limited number of deaths (53) but a great number of people affected (221'730), close to 20% of the whole population.

Another source<sup>15</sup> citing Government data indicates that between 2002 and 2013 (Table 10, column 3), 793 events took place. These included disasters not counted by other sources, such as strong wind and fire, which represented 62% of all events (489 out of 793). Also, government sources seem to have identified more floods and storms than other sources (254 instead of 3) between 2002/2003 and 2013/2014.

**Table 13**  
Natural disasters/hazards in Timor-Leste, 1986-2014

<b>Disaster-Consequences/period</b>	<b>1986-2002</b>	<b>2003-2014</b>	<b>Government data 2002-2013</b>	<b>Government data: deaths 2012-2017</b>
Total events	3	9	793	
Epidemics (parasitic, bacterial, viruses, etc.)	2	2	1	
Floods and storms	1	3	254	46
Droughts	-	2	1	-
Ground movements and landslides	-	2	48	6
Strong winds			308	11
Fires			181	10
Hail storms				3
Rains				21
Damage cost	-	\$4,000		
Total deaths	182	53		97
Total number of people affected	4,920	221,730		

Source: EM-DAT. International Disaster database. [www.cred.be](http://www.cred.be). 19 Dec. 2016; Apolinario Magno, November 2017

Timor-Leste has tropical, hot and humid climate. The climate is affected by the West Pacific Monsoon and, periodically, from significant El Niño drought which interrupts its normally heavy rainfall in wet season (December to April). Tropical cyclones, earthquakes and tsunamis are also other important risks even though they are less frequent.

<sup>15</sup> Apolinario Magno: unpublished paper produced as part of his consultancy to UNCTAD, November 2017

In November 2011, the UN Mission in Timor-Leste reported that the country had suffered 470 disaster events over the previous ten years. A medium exposure to hazards but with a lack of coping and adaptive strategies, making it the 7<sup>th</sup> most disaster-prone country in the world.

The Government is aware of these risks and has been implementing some strategies to minimize their impact on the population: vaccination campaigns to prevent diseases; weather forecasting, reforestation and irrigation to minimize the impact of storms, flooding and drought, etc. However, drought episodes are still affecting too many people (120'000), thus calling for more effective strategies to limit its impact.

#### 4.4 Instability of agricultural production

Agricultural production in Timor-Leste has been growing well since 2003 (Table 14). From 2003 to 2014, value added for the sector has been regularly growing, doubling in constant 2010 US\$. Cereal yield has more than doubled as well, from 1.44 t/ha to 2.92 t/ha. Annual percentage growth does not show much instability beyond the very high and welcome growth of 26.6% in 2012.

**Table 14**  
Evolution of agriculture and food production in Timor-Leste, 2003-2014

Indicator/year	2003	2006	2009	2012	2014
Food production index (2004-2006 = 100)	100.96	103.15	132.95	133.05	120.92 <sup>16</sup>
Agriculture value added, (constant 2010 US\$, million US\$)	163	187	196	200	195
Agriculture value added, (annual % growth)	-1.8	5.1	8.3	26.6	-2.5
Cereal yield (kg/ha)	1,443.4	1,503.4	2,315.5	2,089.9	2,923.1

Source: World Bank, *World Development Indicators*, Jan. 2017

#### 4.5 Instability of exports of goods and services

Timor-Leste's exports of goods and services being heavily dominated by oil and gas, it is the volatility in the price of these hydrocarbons at the international markets that is the main driver of instability of exports of goods and services in Timor-Leste (Table 15). Changes in oil

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<sup>16</sup> 2013

production have also some effect on exports and may be even more determinant in the future as some petroleum production wells dry up while not enough new wells begin producing.

In order to mitigate the vulnerability of the economy due to instability of exports in goods and services, Timor-Leste needs as much diversification as possible, both in terms of products and services exported (horizontal) as well as in terms of their value addition (vertical). One big project to diversify vertically along the gas and petroleum value chain is Tasi Mane Project which aims to build a petroleum refinery and petrochemical complex as well as a liquefaction plant for natural gas in the South of the country (See box below).

**Table 15**  
Crude petroleum price<sup>17</sup> instability (2003-2015)

Price-Index- /period	2003	2006	2009	2012	2015
Price index (2000=100)	102	228	219	372	180
Average annual price, in current US\$	28.90	64.28	61.79	105.01	50.79

Source: UNCTAD Stat, Jan. 2017

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<sup>17</sup> Average of UK Brent (light), Dubai (medium) and Texas (heavy), equally weighted (\$/barrel).

(Box)

### Oil in Timor-Leste, a source of strength and vulnerability

Oil represent about  $\frac{3}{4}$  of GDP in Timor-Leste during most of the years since 2003. At its peak production (60 million barrels and \$4.3 billion revenue a year) in 2013, it contributed 76% of budget. However, with sharp reductions both in production (40 million barrels in 2016) and prices (by 50% in 2014), revenue fell by 58.1% to \$1.8 billion compared to peak, but share in budget increased to 82% in 2016. In addition to this excessive dependency and instability, one more problem with the sector is its marginal contribution to jobs creation with only 0.1% of workers in 2015.

In order to manage oil income in a sustainable manner and to benefit future generations, a petroleum fund has been set up by Timor-Leste Government since 2005. The Fund grew rapidly, doubling every three years to \$4 billion in 2008, \$8 billion in 2011 and culminating to slightly above \$17 billion in 2015.

However, known oil and gas reserves are predicted to last 16 years only at 2014 production rate. More worrying, according to some observers in civil society (La'o Hamutuk), without including Sunrise, a disputed maritime area under negotiations with Australia, reserves could be over in about 4 years. Negotiations on sharing production on Sunrise were expected to finish by end September 2017.

In order to diversify the economy and create jobs, the Government has launched in 2010 ambitious multibillion projects such as the Tasi Mane petroleum and gas infrastructure and the Special Economic Zone of Oecusse. The Tasi Mane project (South Coast Petroleum Corridor) is estimated to cost \$15 billion. It will include a refinery, onshore and offshore pipelines, a liquefied natural gas plant, a 150 km highway, 2 seaports and 2 airports. The Oecusse project is estimated to cost \$4 billion through investments for tourism and industry development of the territory in the North, detached from the rest of the country as an enclave inside Indonesian bordering area.

While part of these big projects are expected to be financed through partnerships with private investors, some observers worry that they may generate big risks in case of low profitability: excessive debts, unsustainable budget deficits, slower growth or even recessions.

\* \* \*

Since independence in 2002, Timor-Leste's primary activities (agriculture, fisheries, forests, etc.) contributed a diminishing share (Table 16) of the country's GDP. The share went from 27.8% of GDP in 2003 to 19.8% in 2015. Given that Timor-Leste's GDP has been growing rapidly during that period, a decrease of 8% in this indicator is a relatively good performance in the sense that it brings less vulnerability while preserving the needed production in the strategic area of food availability.

**Table 16**  
Share of agriculture in Timor-Leste's GDP, 2003-2015

Year	2003	2006	2009	2012	2015
Share of agriculture in GDP (%)	27.8	31.2	20.5	19.9	19.8

Source: World Development Indicators, World Bank, Jan. 2017

## ANNEX

### The graduation criteria and the graduation rule

The question of graduation from LDC status was conceptualized by the United Nations in 1991, when the first major revision of the criteria for identifying LDCs took place. The methodological elements of the graduation rule were also adopted in that year, a move that has paved the way for five cases of graduation from LDC status: Botswana in 1994, Cabo Verde in 2007, Maldives in 2011, Samoa in 2014, and Equatorial Guinea in 2017.

In 1990, the Second United Nations Conference on the Least Developed Countries in Paris had envisaged graduation from LDC status as a natural prospect for countries that would eventually demonstrate enough economic progress to be able to remain on the same development path with a lesser need for concessionary treatment. In 2001, the Third United Nations Conference on the Least Developed Countries in Brussels contemplated graduation as a criterion on the basis of which the success of the Programme of Action for the Least Developed Countries for the Decade 2001-2010 would be "judged"<sup>18</sup>. An unprecedented leap forward was made by UN member States ten years later, at the Fourth United Nations Conference on the Least Developed Countries in Istanbul (May 2011), with a bold pronouncement on the matter, namely, "the aim of enabling half the number of Least Developed Countries to meet the criteria for graduation by 2020"<sup>19</sup>.

#### *The rationale for graduation*

Graduation from LDC status is naturally synonymous with the recognition of structural economic progress. A graduating country will necessarily be expected to have demonstrated, through a convincingly improved economic and social performance, enough structural progress to be able to pursue its development efforts with less external support. If the decision to take a country out of the list of LDCs is well founded, the graduating country, with enhanced institutional capacities, will be expected to remain undisturbed while development partners may deny it privileged access to a special treatment.

#### *The graduation rule*

The graduation rule applies specific thresholds to the indicators relevant to the three criteria (gross national income per capita; human assets index; economic vulnerability index). For each of these indicators, there is a margin between the threshold for adding a country to the list and the threshold for graduating a country. The margin is considered a reasonable estimate of the additional socio-economic progress that ought to be observed if one assumes that the graduating country is effectively engaged on a path of improvement: not only is the graduating country expected to have risen to the threshold under which non-LDCs would be admitted into

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<sup>18</sup> UN General Assembly, Third United Nations Conference on the Least Developed Countries, Brussels, Belgium, 14-20 May 2001, Programme of Action for the Least Developed Countries for the Decade 2001-2010, para. 21(e)

<sup>19</sup> United Nations, Programme of Action for the Least Developed Countries for the Decade 2011-2020, May 2011, para. 28.

the category, but it is additionally expected to exceed this threshold by a significant margin. This dispels the risk that graduation be dictated by temporary or insignificant economic circumstances.

Two other elements of the graduation rule also imply durable structural progress in the graduating country:

- at least two of the three graduation thresholds must normally be met for the relevant LDC to qualify for graduation, whereas a symmetrical application of the admission rule and graduation rule would imply that, ceasing to meet one of the three criteria under which the country was once identified as an LDC would be a sufficient reason for that country to qualify for graduation (see the "income only" exception to the graduation rule in the table below);
- a recommendation to graduate a country will not be made until the relevant graduation thresholds have been met by the country in at least two consecutive reviews of the list of LDCs.

The graduation criteria which were used by the United Nations in the 2015 review of the list of LDCs are summarized in the following table.

## Graduation criteria and indicators

<b>Graduation criteria used in the 2015 review of the UN list of LDCs</b>	<b>Relevant indicators</b>
<b>Per capita income criterion</b>	<p><b>Gross national income (GNI) per capita:</b></p> <ul style="list-style-type: none"> <li>* based on a 3-year average (2011-2013 in the 2015 review)</li> <li>* graduation threshold in 2015: US \$1,242</li> <li>* "income-only" graduation threshold: US \$2,484</li> </ul>
<b>Human assets criterion</b>	<p><b>Human Assets Index (HAI):</b></p> <p>A composite index based on the following 4 indicators:</p> <ul style="list-style-type: none"> <li>* percentage of undernourished people in the population</li> <li>* under-five mortality rate</li> <li>* gross secondary school enrolment rate</li> <li>* adult literacy rate</li> </ul>
<b>Economic vulnerability criterion</b>	<p><b>Economic Vulnerability Index (EVI):</b></p> <p>A composite index based on the following 8 indicators:</p> <ul style="list-style-type: none"> <li>* population</li> <li>* remoteness (average distance from major markets)</li> <li>* share of population living in low-lying areas</li> <li>* share of agriculture, forestry and fisheries in GDP</li> <li>* merchandise export concentration index</li> <li>* share of victims of natural disasters in the population</li> <li>* index of instability of agricultural production</li> <li>* index of instability of exports of goods and services</li> </ul>
<b>Summary of the graduation rule</b>	<p>For all three criteria, different thresholds are used for identifying cases of addition to, and cases of graduation from, the list of LDCs. A country will qualify to be added to the list if it meets the addition thresholds on all three criteria and does not have a population greater than 75 million. Qualification for addition to the list will effectively lead to LDC status only if the government of the relevant country accepts this status. A country will normally qualify for graduation from LDC status if it has met graduation thresholds under at least two of the three criteria in at least two consecutive triennial reviews of the list. However, if the per capita GNI of an LDC has risen to a level at least double the graduation threshold and is deemed sustainable, the country will normally be found pre-eligible or eligible for graduation regardless of its performance under the other two criteria.</p>