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Vulnerability Profile of São Tomé and Príncipe



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Sao Tome and Principe: graduation road map at a glance

- March 2015:** Sao Tome and Principe, for the first time, met two of the three thresholds of graduation from LDC status (see p. 6 and p. 9). The Committee for Development Policy (CDP) accordingly found Sao Tome and Principe pre-eligible for graduation. This finding brought no immediate change to the country's entitlement to LDC treatment. The CDP will re-examine the potential graduation case of Sao Tome and Principe in its next triennial review of the list of LDCs in March 2018.
- March 2018:** If Sao Tome and Principe again meets two of the three graduation thresholds, the CDP will normally find the country fully eligible for graduation, and accordingly recommend graduation from LDC status in its report to the UN Economic and Social Council (ECOSOC).
- July 2018:** ECOSOC will normally endorse the CDP's recommendation to graduate Sao Tome and Principe from LDC status.
- December 2018:** The UN General Assembly, in turn, will normally endorse the recommendation to graduate Sao Tome and Principe, 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, Sao Tome and Principe will enter the standard (normally three-year) grace period during which the country retains its LDC status and is expected to negotiate, 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, Sao Tome and Principe will officially graduate from LDC status. Yet it may continue, for a period of time, to have the benefit of LDC treatment under "smooth transition" measures.

There are two types of smooth transition measures: (i) those that are negotiated with development partners on a case-by-case basis; and (ii) those

that are systemic, i.e. established for all graduating LDCs and automatically extended to them.

1. Introduction: historical and institutional context

Sao Tome and Principe was added to the list of LDCs in 1982. 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 Sao Tome and Principe was meeting two of the three thresholds of graduation from LDC status, namely, the graduation borders relevant to the per capita income and economic vulnerability criteria. The CDP accordingly found that Sao Tome and Principe was meeting "*eligibility criteria for graduation for the first time*", a preliminary finding that is commonly referred to as a situation of "pre-eligibility" for graduation from LDC status. This notion will normally lead to a situation of full eligibility if the country meets the same graduation thresholds three years later, in accordance with the graduation rule. Sao Tome and Principe will therefore, in theory, "*be considered for graduation at the next triennial review [of the list of LDCs] in 2018*"¹ if the country's performance by then has remained above two graduation thresholds.

The CDP, in the 2015 review of the list, observed Sao Tome and Principe'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"². It is an input to the work of the CDP in answering the question of the graduation of Sao Tome and Principe from LDC status.

Sections 2, 3 and 4 examine the situation of Sao Tome and Principe under the graduation thresholds relevant to the three criteria for identifying LDCs, namely the per capita income criteria, the human assets criterion, and the economic vulnerability criterion, respectively. Section 5 will offer concluding remarks.

Graphs 1, 2 and 3 illustrate Sao Tome and Principe's evolution, since 1991, 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 nine triennial reviews of the list of LDCs from 1991 (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 115 observed in 2015 under the first criterion indicates that Sao Tome and Principe stands at 115% of the relevant graduation threshold.

¹ Committee for Development Policy, Report on the seventeenth session (23-27 March 2015), Economic and Social Council, Official Records, 2015, Supplement No. 13, E/2015/33, para. 59.

² 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
Sao Tome and Principe's pre-eligibility for graduation from LDC status
in the 2015 review of the list of LDCs

	PER CAPITA INCOME	HUMAN ASSETS	ECONOMIC VULNERABILITY
To pre-qualify for graduation in the 2015 review of the list, an LDC had to meet at least two of the following three graduation thresholds...	...to have a gross national income per capita of at least US \$1,242 (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)
Score of Sao Tome and Principe under the relevant criterion	\$1,431 (3-year average GNI per capita)	77.4 (Human Assets Index score)	39.1 (Economic Vulnerability Index score)
Score of Sao Tome and Principe in % of the graduation threshold	at 115.2% of the graduation threshold	at 117.3% of the graduation threshold	at 81.9% of the graduation threshold <i>(see footnote 10)</i>

Source: UNCTAD, based on CDP data

2. Sao Tome and Principe and the per capita income criterion

At 115% of the graduation threshold in 2015, and a provisionally estimated 137% in 2018, Sao Tome and Principe has demonstrated relatively fast economic progress within a decade. This brought the country to exceed the graduation border for the first time in the 2015 review of the list of LDCs, a performance now confirmed in the 2018 review. Steady economic growth as measured through the gross domestic product at constant prices over the past decade (near 5% per annum on average) enabled the country to rise from a gross national income per capita of \$950 en 2007 to \$1,720 en 2016 (graduation threshold at \$1,242 en 2015).

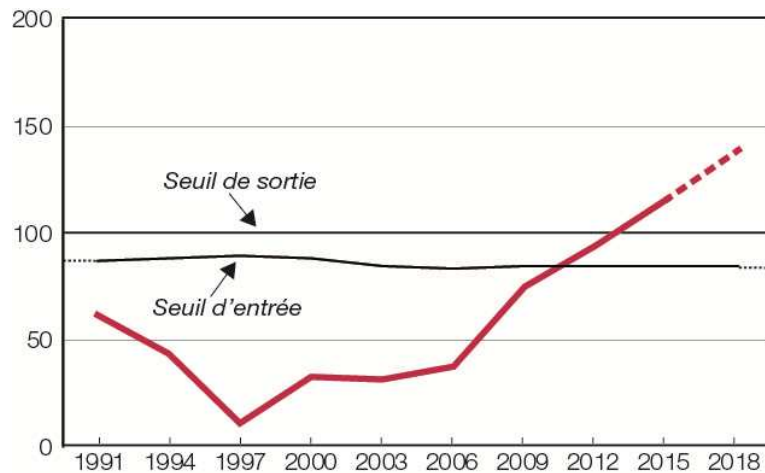
Sao Tome and Principe (STP) gets most of its income from the services sector (trade and tourism), agriculture and fishing, as well as construction. Together, these sectors represented 56% and 61.3% of GDP in 2009 and 2013, respectively.³

³ AFDB, OECD, UNDP: 2015 African Economic Outlook

The Gross National Income per capita (GNI per capita) has been growing rapidly in recent years, multiplying three folds over twelve years, from \$590 in 2003, to \$1'110 in 2009, to \$1'760 in 2015 (Table 2). This income per capita has been growing slightly higher than in the rest of Sub-Saharan Africa, making STP relatively prosperous, compared to many other countries in the region.

Graph 1
SAO TOME AND PRINCIPE: 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

Table 2
 Gross National Income per capita (GNI/capita) of STP in US\$, 2003-2018

Country\Region\Year	2003	2006	2009	2012	2015	2016	2017 (f)	2018 (f)
Sao Tome and Principe	590	900	1,080	1,270	1,690	1,720	1,924	2,002
Sub-Saharan Africa	531	924	1'185	1'623	1'637	1'683	1'745	1'862

Source: World Bank-World Development Indicators (WDI), 2017. IMF forecast⁴ 2016-2018

According to the National Institute of Statistics (INE) of STP, the growth rate of GNI was on average 4.7% a year between 2000 and 2015. If IMF forecasts materialize, the GNI per capita could reach \$1'924 in 2017 and \$2'002 in 2018, in case the growth rate remains the same, at about 5%.

⁴ IMF. World Economic Outlook Database, April 2017.

GNI is not very unequally distributed in STP. A 2010 publication by INE indicated that the top 20% richest people were getting 41% of total income (40.2% in 2000) whereas the poorest 20% at the bottom were getting only 8.4% of total income (7.9% in 2000). This is a better income distribution than in three other countries in the region: Seychelles, Angola and South Africa (Table 3).

The level of poverty in general has remained high according to various sources. Available data on year 2010 indicate that poor people (at \$3.10 a day) represented 68.3% of the population of STP, a higher figure compared to 2000 when the poor were still 62.27%. But at \$1.9 a day, their proportion decreased to 32.28% in 2010, while still slightly higher than their 2000 level (29.84%).

Table 3
Income distribution in Sao Tome and Principe and three other African countries

Country\ Indicator	Gini coefficient 2009	Share of income in 2009 (%)		
		20% Top	20% Bottom	60% Middle
Sao Tome and Principe	32.9	41.0	8.4	50.6
Seychelles	65.8	69.6	3.7	26.7
Angola	58.6	61.9	2.0	36.1
South Africa	57.8	72.2	2.5	25.3

Source: IOF 2010, INE Sao Tome; FAO 2013; UNCTAD calculation for last column

For the forthcoming years, STP hopes to realize its high potential in hydrocarbons, in fisheries and in tourism. There is therefore hope that in the not so distant future, general prosperity may become the new reality in STP.

To conclude, given its current GNI per capita, which is above \$1'242⁵ since 2012, STP has already gone beyond the graduation threshold on the basis of income criteria. If that income continues to grow or remains stable, and if the country fulfils one of the two other criteria (human capital or vulnerability) at the next revision (2018), STP will be elected to graduate from LDC category in 2021.

However, given the level and trend of its debt (\$279.4 million in 2015, 87.8% of GDP for the same year,⁶ but 82.2% according to IMF), and its high dependency on foreign aid (\$159.6 million on average per year between 2010 and 2014, equivalent to 60.2% of GNI - see Table 3), especially for some important social sectors, such as education and health, which were receiving 90% of multilateral and OECD countries' aid. (see Table 5), graduation from LDCs before hydrocarbon exploitation may reduce growth and stall sustained development, maybe even leading to more serious socio-economic problems (recession, unrest) for the country.

⁵ US \$1,242 was the graduation threshold under the income per capita criterion in 2015.

⁶ World Bank, WDI, 2017

Table 4
Aid disbursed for Sao Tome and Principe (2010 à 2014), \$US million

Type/Year	2010	2011	2012	2013	2014	Annual average
Grants	60.2	48.3	418.1	24.5	203.2	150.9
Loans (new)	10.2	8.4	12.6	3.7	8.6	8.7
Total	70.4	56.7	430.7	28.2	211.8	159.6

Source: SISA- Sistema de Informação e Segmento das Ajudas. Desembolsos por Parceiro. 2011-2014
UNCTAD calculation for last column

Table 5
Use of multilateral and OECD countries' aid by Sao Tome and Principe in 2014

Amount and share	Social	Multi-sector	Production	Other	Total
Amount (\$ million)	36	2	1	1	40
Share (%)	90	5	2.5	2.5	100

Source: Development Aid at a Glance. Statistics by region. 2. Africa. 2016 Edition

3. Sao Tome and Principe and the human assets criterion

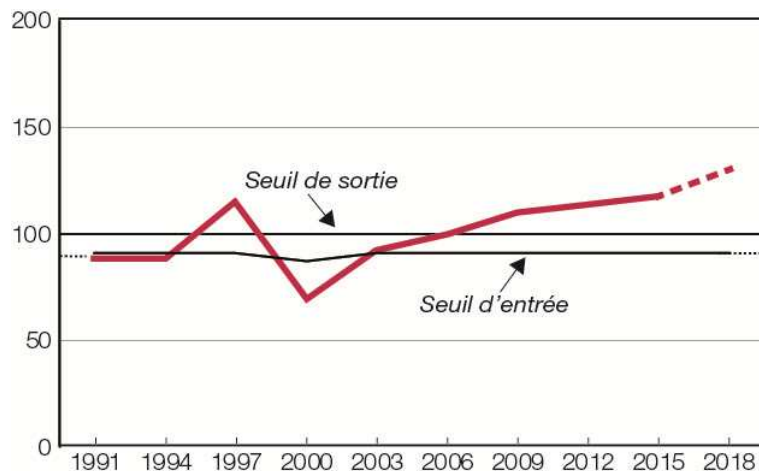
At 117% of the graduation threshold in 2015 (68% en 2000), and an expected 130% in 2018, Sao Tome and Principe has demonstrated steady progress in its human capital performance. Child mortality decreased from 112 pour 1,000 live births in 2000 to 51 in 2015 (-54%), and the gross secondary school enrolment ratio doubled in between 2002 and 2015 (from 39% to 80%). A relapse under the graduation threshold relevant to this criterion is no longer a likely scenario.

STP has a young population. Medium age was 19 in 2012. 52% of the population has less than 20 years and those 65% above were only 4% of total population. This implies a high dependency ratio (81.9% in 2009 and 78.5% in 2015), especially the young compared to working-age population. This high dependency requires important social investments by the state and families, especially in education.

Despite commendable efforts made by STP since independence, about 40 years ago, important challenges remain in the area of human resources development. Indicators in the following tables show that STP still has progress to achieve in the areas of poverty reduction and child malnutrition. In the following we are analyzing briefly the current situation and the recent evolution of the five indicators of human development criteria: population undernourishment, infant mortality, secondary school enrolment, adult literacy and maternal mortality.

Graph 2
SAO TOME AND PRINCIPE: 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

3.1 Percentage of population undernourished

According to various sources, the rate of malnutrition in the overall population of STP was 6.6% in 2014. This was a relatively good rate compared to many other African countries and even in the world (Table 6). That rate also shows important and positive evolution of nutrition in the country, given that the rate used to be 21.5% in 2000. This means a reduction of 2/3 in 14 years, well in advance and beyond the Millennium Development Goals which aimed for a reduction by ½ by 2015 compared to 2000. If STP could maintain or continue to reduce malnutrition, that would be a big achievement on the country's path to sustainable development.

Table 6
 Evolution of malnutrition in Sao Tome and Principe and elsewhere

Country/region/year	Share of population under-nourished (%)		
	1990	2000	2014
Sao Tome and Principe	22.9	21.5	6.6
Cabo Verde	16.1	18.7	9.4
Angola	63.5	51.1	14.2
Africa	27.6	25.7	19.8

World	18.6	15.0	10.8
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Source: FAO Statistical Pocketbook 2015

However, despite these achievements on nutrition in the overall population, the nutrition situation for children under 5 years old is significantly worse than average in the country. In fact, according to the World Bank⁷, between 2005 and 2011, 14.4% of these children were underweight and 17.2% were stunted, with a height less than required for children under five years old, mainly a consequence of malnutrition.

Such acute malnutrition for one out of every six children under 5 is a real obstacle for the long term development of human resources in Sao Tome and Principe. It is well known that stunting affect not only negatively the development of the brain of such young children and irreversibly but also their siblings in next generation according to some studies.

In order to mitigate the impact of malnutrition on those children, a special programme for nutrition for those under 5 seems to have been put in place. However, the dependence of the programme of foreign aid may make its sustainability questionable when the country graduates from LDC status and donors gradually withdraw from assistance to the country they will consider more able to fulfil all its needs.

3.2 Child (under five) mortality

The second indicator of the level of human capital development is the rate of mortality for children under 5 years old. That rate for Sao Tome and Principe is estimated to be 47.3 deaths⁸ per 1000 live births (47.3‰) in 2015. The rate has decreased more quickly than the world average. In 1990, the rate for STP and the world were more than twice their 2015 level: 111.7‰ for STP and 91‰ for the world (Table 7). The gap between the two rates has shrunk from 20.7‰ to 4.3‰ over the 25 year period. Therefore, STP made quicker progress than the world as a whole.

Even more visible progress was made for girls as their mortality rate was identical to world average in 2015 (43‰) whereas in 1990 it was still 13.2 ‰ higher (104.2‰ compared to 91‰). Finally, the rate is half the average rate for Sub-Saharan Africa where it still reaches 83‰.

Table 7
Under-5 mortality rate in Sao Tome and Principe (‰), 1990-2015

Category/Year	1990	2003	2006	2009	2012	2015
All children	111.7	77.6	66.7	58.5	52.4	47.3
Boys	116.9			60.7		51.5
Girls	104.2			51.9		43.0
Sub-Saharan Africa	181.0					83.0
World	91.0					43.0

Source: World Bank, WDI 2017

⁷ World Bank, WDI, 2017

⁸ World Bank, WDI, 2017

Sao Tome and Principe has therefore registered considerable progress in child mortality rate in recent decades. This trend should continue after graduation from LDC status. However, given the strong links between child mortality and child malnutrition, the same worry explained above is also justified here: there is a real risk of reversal to higher mortality if aid is suddenly suspended after graduation.

3.3 Maternal mortality

According to the World Bank, maternal mortality rate in Sao Tome and Principe was estimated at 156 per 100'000 live births⁹ in 2015, a decrease of more than half compared to 1990 when it was at 330 (Table 8). This is a very good performance compared to other countries in Sub-Saharan Africa (547) and to the world average (216). The rate could even be half (74) according to national estimates for annual average between 2008 and 2016.

This low mortality rate is explained by better access to health services for pregnant women in Sao Tome and Principe, compared to other Sub-Saharan African countries where, in 2008-2016, only 79% of pregnant women benefited from prenatal health care and only 51% of them were attended by professionals at delivery, compared to 98% and 93% respectively for Sao Tome and Principe.

Table 8
Maternal mortality rate, per 100'000 live births (1990- 2016)

Country\Region\Year	1990	2015	2008-2016 National estimates
Sao Tome and Principe	330	156	74
Cabo Verde	256	42	10
Sub-Saharan Africa	987	547	
World	385	216	

Source: World Bank, World Development Indicators, 2017

To conclude, the situation of Sao Tomé and Principe on the criteria of human capital is sufficiently good to justify graduation from LDC status. In fact, according to CDP estimates in 2015, the composite human asset index (HAI), which is an average of the five indicators discussed above, was 77.4. This is 11.4 points above graduation threshold on the same index: 66.

3.4 Secondary school enrolment

The third indicator of human development level is the rate of secondary school enrolment. Various sources estimate that rate to be 84% in 2015. 4 out of 5 secondary school aged children are therefore regularly enrolled. This is a very good performance for STP. It is 10% higher than the world average and almost double the rate for Sub-Saharan Africa (Table 9).

⁹ World Bank - WDI 2017

Table 9
Secondary school enrolment rate in Sao Tome and Principe (%), 2003-2015

Indicator/Year	2003	2009	2012	2015
Total enrolment	37.5	52.1	59.2	84.9
Boys	34.7	49.3	55.7	80.7
Girls	40.3	54.8	62.8	89.3
Sub-Saharan Africa	29.8	38.3	41.8	42.7
World	62.3	69.0	73.7	75.1

Source: UNESCO and World Bank, 2017

Evolution in time shows that enrolment in secondary school has doubled over the 12 years between 2003 and 2015. Only 37.5% of young people of secondary school age were enrolled in 2003. STP had then an enrolment rate almost similar to other Sub-Saharan African countries (29.8%) but slightly less than half the world average (62.3%).

In terms of gender, most sources indicate that girls have a better enrolment ratio than boys. With 5.6% more in 2003, the gap in favor of girls has almost doubled to 8.6% in 2015. In terms of geographic distribution, rural areas have less secondary schools than towns. However, efforts are being made to bring schools closer to pupils outside urban areas.

Beyond quantity, quality problems affect the system at secondary level in STP. According to observers met during our mission to the country, quality did not improve in parallel to the performance achieved in terms of quantitative enrolment. This low performance in quality education may partly explain the relatively low proportion of pupils completing secondary school: (70%) for boys and 78% for girls in 2015.

Factors explaining the problems of quality education include: insufficient full time teachers, a high proportion of part-time teachers who have other profession in parallel to teaching. 60% of teachers had no pedagogical training until 2015; over population to the level of 55 pupils per class.

The Government of Sao Tomé and Principe should therefore give priority to quality improvement in education, fulfilling its own objectives for 2019 and 2022: hiring full time professors with pedagogical training; Classes with a lower number of pupils (30 instead of 55); more schools with closer proximity to the parents' residence; making available more libraries and laboratories, etc.

3.5 Adult literacy

According to the World Bank, adult literacy rate in Sao Tome and Principe was estimated at 90% in 2011. The Nationals Statistics Service confirms the rate at 90.1% in 2012. That indicator is far above the average for other sub-Saharan African countries (61%) and is even higher than the world average (85%). However, there are disparities (Table 10) between towns (81.4%) and rural areas (87.6%) and even more between the poorest (77.5%) and the richest (96.3%) people. Finally it is worth mentioning that these high rates reflect the proportion of people who can read only.

According to the 2012 census, only 48% of men and 52% of women could read and write. Therefore, the country still have a long way to go in order to fulfill its objective of near universal writing capacity for the people above 15 years old, especially given that the alphabetization programme for the 15-24 years old has registered a higher drop-out rate in 2013-2014, due to the termination of incentives previously in place.

Table 10
Adult literacy rate (%), 2005-2014

Countries\region/Category	Male	Female	Total
Sao Tome and Principe	95	85	90
Sub-Saharan Africa	69	53	61
World	89	81	85

Source: World Bank, World Development Indicators, 2017

4. Sao Tome and Principe and the economic vulnerability criterion

At 82% of the graduation threshold in 2015 and an expected 76.5% in 2018, Sao Tome and Principe remains an economically vulnerable country¹⁰. The high concentration of the economy in primary activities is the principal factor of this vulnerability. Yet the economy of Sao Tome and Principe is not considered highly unstable in the light of the Economic Vulnerability Index, as indicated by the country's scores under the agricultural production instability index and export instability index. Further progress toward the graduation line could happen if the country managed to further expand and diversify its economy within the primary sphere and into other international services.

The third graduation criteria assess the economic vulnerability of Sao Tome and Principe. It is estimated with the following indicators: size of population, merchandise exports concentration, share of agriculture in GDP, instability in exports of goods and services, instability of agricultural production, number of victims of natural disasters, share of population living in coastal areas. The following sections present the situation of the country on each of these indicators.

4.1 Smallness

The population of Sao Tome and Principe was estimated at 200'000 inhabitants in 2017. It was 178'000 in the 2012 census (Table 11). With annual demographic rate slightly above 2% during the last years, population could reach 217'000 in 2018 and 232'000 in 2021¹¹. The country has therefore a small population, but very young, with a median age of

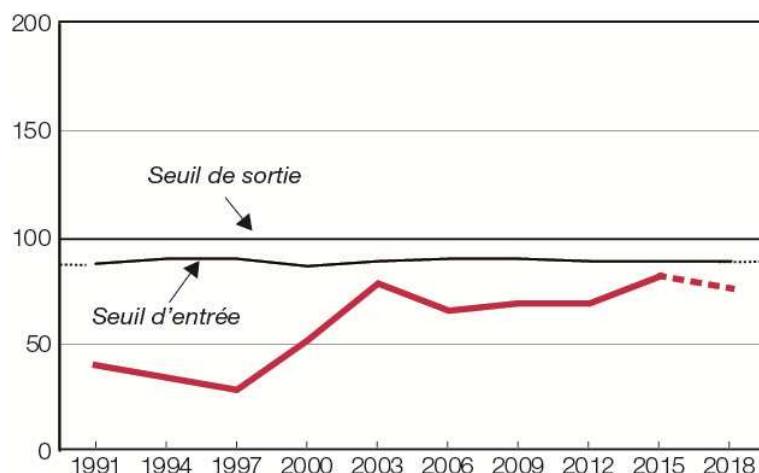
¹⁰ It is noteworthy that the upward movements demonstrated by Sao Tome and Principe in 2000, 2003 and 2015 under the graduation threshold relevant to economic vulnerability illustrate a downward evolution of the country's EVI score. The graphic inversion from downward to upward serves to harmonize the interpretation of progress under this criterion with the interpretation of progress under the other two criteria: be it above or below the graduation line, an upward trend always indicates that the country has made progress toward or above the graduation line, while a downward trend (e.g. in 2006) will be synonymous with regression away from the graduation milestone.

¹¹ IMF. World Economic Outlook database, April 2017.

19 in 2012 and 52% of the population with less than 20 years. Only 4% of the population was more than 65 years old.

Graph 3
SAO TOME AND PRINCIPE: 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

The population has urbanized very quickly, from a 56.3% rural majority in 1990 to a 65.1% urban majority in 2015. Density was 193 inhabitants per square kilometer, one of the highest in Africa. The territory is small: 1,000 km². In brief, Sao Tome and Principe has a small population but young and proportional to its small territory.

Table 11
 Population of Sao Tome and Principe, 1990-2021

Indicator/Year	1990	2000	2003	2006	2009	2012	2015	2018	2021
Population (in '000)	113	137	146	157	167	178	190	217 f	232 f
Annual growth rate, in %	1.9	1.9	2.3	2.2	2.2	2.2	2.1		
Urban population, in %	43.6	53.4	56.2	58.8	61.2	63.3	65.1		
Rural population, in %	56.3	46.6	43.7	41.1	38.8	36.7	34.9		
Life expectancy, in years	61.8	63.3	64	64.9	65.7	66.1	66.5		
Fertility: # of children per woman	5.8	5.3	5.1	5	4.8	4.7	4.5		

Source: World Bank, WDI, 2017 (f = forecast)

4.2 Economic remoteness

In the light of the remoteness index within the composite Economic Vulnerability Index (EVI), Sao Tome and Principe is economically less remote (by 10%) than other LDCs considered on average. The moderate degree of remoteness was one of the factors of the upturn in the country's performance under the graduation threshold in 2015, an upturn synonymous with lesser economic vulnerability. The same moderate level of remoteness did not keep the EVI score of Sao Tome and Principe from undergoing a downturn in 2018 (increased distance to the graduation line).

4.3 Share of population living in low-lying areas

According to World Bank, the share of population of Sao Tome and Principe living in coastal areas, at less than 5 meters above sea level, was 1.32% in 2010, slightly more than 1990 when it was 1.18% (Table 12). It is a very small proportion of total population. But it could have increased a bit and may continue to grow in the future given the rapid urbanization near the sea, especially around the capital Sao Tome where some areas are visibly below sea level. However, for the rest of the country, the landscape rises sharply at higher ground as soon as one goes away from the beach.

Table 12
Share of population living at less than 5 metres above sea level

Indicator/Year	1990	2000	2010
Population living at less than 5 metres above sea level (% of total population of the country)	1.18	1.31	1.32

Source: World Bank, WDI, 2017

To conclude on the vulnerability criterion, the preceding data and analysis have shown that Sao Tome and Principe has an economy that is still vulnerable due to its very small population, agricultural production with a very important deficit, hampering food self-sufficiency, high concentration in exports of goods and services, with a big deficit in the balance of payments. Therefore, the country does not yet meet the vulnerability criteria and it runs the risk of falling back to LDC status in case graduation is not accompanied by a sustained diversification of the economy, especially the development of sectors such as fisheries, tourism and hydrocarbons.

4.4 Share of primary sectors in GDP

The share of primary sector (agriculture, fisheries, hunting, mines and quarry) in the economy of Sao Tome and Principe has decreased over 15 years, from 20.5% of GDP in 2000 to 12.3% in 2015 (Table 13). Other sources show an even sharper decrease to about 10% of GDP.

This continuous decrease is in sharp contrast to trends in other countries in Africa and even the rest of the world. In Africa, primary sector grew slightly, from 14.87% in 2000 to 16.03% in 2015. The world on average saw primary sector growing from 3.45% to 4.45% over the same 15 years.

Table 13
Share of primary sectors in the GDP of Sao Tome and Principe (in %), 2000-2015

Country/Region\Year	2000	2003	2006	2009	2012	2015
Sao Tome and Principe	20.5	21.8	18.4	11.2	11.8	12.3
Africa	14.9	17.1	14.9	16.5	14.6	16.0
World	3.45	3.4	3.35	3.85	4.3	4.45

Source: UNCTAD Stat, 18 mai 2017

Sao Tome and Principe will probably need to reverse this trend, not only to meet the food needs of its growing population in a secure way, but also to create jobs and diversify its economy to make it less vulnerable to external shocks, to export more, including fish and other fish products, a sector with huge potential.

The diversification seems possible given the political will expressed by various policy documents and during discussions with high policy makers, the favorable climate and physical environment. The landscape is always green as it rains all over the year, hence no need for irrigation. Their volcanic land is very fertile and does not require fertilizers.

However, climate change is making rain irregular, bringing the need for some control in rainwater, including cultivation in greenhouses. These new methods might make agriculture more costly and less competitive, thus hampering food imports substitution with local production.

4.5 Merchandise export concentration

Merchandise exports in Sao Tome and Principe were more concentrated in 2015 than they were in 2000. The concentration index has increased from 0.379 to 0.565 in the 15 year period (Table 14). Even though the number of products exported each year has remained stable, exports have become slightly less diversified since the diversification index has decreased from 0.681 in 2000 to 0.660 in 2015.

Table 14
Concentration of merchandise exports from Sao Tome and Principe, 2000-2015

Indicator/Year	2000	2003	2006	2009	2012	015
Number of products exported	25	30	26	20	23	29
Concentration index	0.379	0.647	0.545	0.460	0.467	0.565
Diversification index	0.681	0.674	0.647	0.680	0.636	0.660

Source: UNCTAD Stat, May 2017

This higher concentration and lower diversification make Sao Tome and Principe more vulnerable to shocks such as a sharp decrease in prices/income or quantity exported for any of its major exports such as cocoa or tourism.

4.6 Victims of natural disasters

According to authorities in the Environmental Service of Sao Tome and Principe, the country has not experienced any major natural disaster over the last years. The last important event was an epidemic, due to a bacterium, that took place in October 2005. It caused 25 deaths and affected 1349 people (Table 15). However, it was the 1983 drought that affected the highest number of people: 93'000, almost half the population of the country.

Table 15
Natural disasters in Sao Tome and Principe, 1980-2015

Disasters/risks-impact\period	1980-2002	2003-2015	Victims 1980-2015
Number of events	3	1	
Epidemics (parasitic, bacterial, virus, etc.)	2	1	2,412
Drought (1983)	1		93,000
Deaths	181	25	206
Other people affected (survivors)	94,063	1,349	95,412

Source: EM-DAT. The Emergency Events database. Université Catholique de Louvain (UCL)-CRED, D. Guha-Sapir, Brussels, Belgium, 25 September 2017

The authorities indicated that new risks related to climate change are appearing already and may worsen in the future. These risks include rainy seasons that have become unstable, with seasons shifting by several months, and too much or too little rain; rising sea level, deforestation, land-slides, etc. As more than 60% of the population live in coastal areas, these risks need to be managed efficiently in order to avoid serious economic setbacks in the future.

4.7 Instability of agricultural production

According to FAO and the World Bank, agricultural production in Sao Tome and Principe, as measured in terms of value-added, has increased regularly over 12 years, between 2003 and 2015, from \$20.7 million to \$37.7 million. However, production is no longer sufficient to feed the population. Food deficit (Table 16) has drastically increased, from -\$2 million in 2000 to -\$27 million in 2014.

The deficit follows a big increase in food imports, from \$7 million in 2000 to \$32 million in 2014, without any significant change in food exports (from \$3 million in 2000 to \$5 million in 2014). Also, cereals and tubers production has drastically decreased between 2000 and 2014, with their indices going from 80 to 27 and 97 to 36 respectively.

Table 16
Agricultural production and evolution in Sao Tome and Principe, 2000-2015

Indicator\Year	2000	2003	2006	2009	2012	2015
Value added (VA) agric. US\$ million		20.7	24.5	20.3	29.1	37.7
VA agric., constant 2010 US\$ million		17.1	19.1	22.1	23.3	24.6
VA agric., growth rate, in %		2.5	5.9	3.8	1.6	2.2
Food deficit ¹² in US\$ million	-2					-27 ¹³
Cereals production index ¹⁴	80					27
Tubers production index	97					36
Food production index, net	96					113

Source: World Bank and FAO, 2017

4.8 Instability of exports of goods and services

Exports of goods and services in Sao Tome and Principe have increased strongly in the last 16 years, from \$16.3 million in 2000 to \$101.1 million in 2016 (Table 17), a steep increase of 520.2%. The high growth of exports was mainly due to exports of services (tourism) which grew from \$13.6 million (83.4% of total exports) in 2000 to \$87.5 million (86.5% of total exports) in 2016, a sharp increase of 543.4%, 23.2% higher than total exports increase. Among those services exported, tourism alone contributed 69.5% to total exports in 2015, making it by far the main export item and shifting the economy of Sao Tome and Principe from decades-old cocoa-based economy to a recent tourism-based economy.

Beyond this instability in terms of composition of exports, the growth of services has been mostly regular, except for the years 2013/2014 when they have almost doubled, from \$36.2 million in 2013 to \$69.9 million in 2014.

Another factor explaining these high figures is the progressive improvement in the data collection by the Central Bank of Sao Tome and Principe since 2011, with an additional shift brought about by the application of the sixth edition of the IMF manual on balance of payment as well as a larger coverage in the collection of data in 2013 and 2014¹⁵.

Exports instability is therefore real in Sao Tome and Principe, but it is a positive instability because it accelerates exports and growth even though the country has also imported even more services, generating up to \$100 million deficit in the trade balance over the last few years.

¹² Exports minus imports, in million of US dollars.

¹³ FAO, 2014

¹⁴ Index (2004-2006 = 100).

¹⁵ http://www.bcstp.st/Upload/Estatisticas/Manuais/BalancadePagamentos21072017_7_57_29.pdf
<http://www.bcstp.st/Banco-Central-STome-Principe-Estatistica?y=4jr8pJAunGWrdliEMvPFA==>

Table 17
Exports of goods and services from Sao Tome and Principe, in US \$ million, 2000-2016

Indicator/Year	2000	2008	2009	2010	2011	2012	2013	2014	2015	2016
Exports of goods	2.7	7.8	9.2	10.9	10.9	15.1	12.9	17.2	11.3	13.6
Cocoa		4.6	3.7	4.1	3.8	5.7	8.3	11.0	7.9	8.6
Exports of services	13.6	9.7	10.4	13.4	18.4	17.9	36.2	69.9	78.8	87.5
Tourism	9.9	7.7	8.3	11.1	16.0	15.0	30.6	56.0	62.2	
Business services		0.2	0.2	0.2	0.2	0.3	4.3	12.0	11.4	
Total exports	16.3	17.5	19.6	24.3	29.3	33.0	49.1	87.1	90.1	101.1

Source: IMF, Balance of Payments Statistics Yearbook, 2016. UNCTADStat, Oct. 2017

5. Conclusion

In accordance with the graduation rule, the progress demonstrated by Sao Tome and Principe in its gross national income per capita and in its human assets has been sufficient to make the country pre-eligible for graduation from LDC status. There could be hesitations, in the next review of the list of LDCs, in finding Sao Tome and Principe fully eligible for graduation, given the questionable extent of structural progress in the country. With a limited expansion of the tourism sector and a slow pace in the development of the fisheries sector, the national economy has diversified little over time. There has not been a sufficient momentum of progress to widen the financial base of the country and enable it to pursue its development efforts with less concessionary support. One fails to foresee, within the next decade, Sao Tome and Principe being able to stay on a transformational pathway without the maximum concessionary treatment it can presently count on as one of the Least Developed Countries.

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"¹⁶. 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"¹⁷.

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 the category, but it is additionally expected to exceed this threshold by a

¹⁶ 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)

¹⁷ United Nations, Programme of Action for the Least Developed Countries for the Decade 2011-2020, May 2011, para. 28.

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

Graduation criteria used in the 2015 review of the UN list of LDCs	Relevant indicators
Per capita income criterion	<p>Gross national income (GNI) per capita:</p> <ul style="list-style-type: none"> * based on a 3-year average (2011-2013 in the 2015 review) * graduation threshold in 2015: US \$1,242 * "income-only" graduation threshold: US \$2,484
Human assets criterion	<p>Human Assets Index (HAI):</p> <p>A composite index based on the following 4 indicators:</p> <ul style="list-style-type: none"> * percentage of undernourished people in the population * under-five mortality rate * gross secondary school enrolment rate * adult literacy rate
Economic vulnerability criterion	<p>Economic Vulnerability Index (EVI):</p> <p>A composite index based on the following 8 indicators:</p> <ul style="list-style-type: none"> * population * remoteness (average distance from major markets) * share of population living in low-lying areas * share of agriculture, forestry and fisheries in GDP * merchandise export concentration index * share of victims of natural disasters in the population * index of instability of agricultural production * index of instability of exports of goods and services
Summary of the graduation rule	<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>

