Angola

Sustainable Freight Transport (SFT) Assessment: Preliminary Findings

I. Background and introduction

1. Freight transport systems are crucial in driving economic growth, boosting trade competitiveness, and advancing sustainable development. Despite the strategic economic importance of freight transport for trade and development, the increased freight transport activity can give rise to negative externalities and sustainability challenges. Recognizing the intrinsic linkages between sustainable development and freight transport and logistics, the United Nations Trade and Development (UNCTAD) conducted the Sustainable Freight Transport (SFT) Assessment for Angola. This assessment builds on the UNCTAD SFT methodology, which provides a comprehensive analysis of the freight transport sector's present status, performance, opportunities, and challenges within the economic, social, and environmental pillars of sustainable development in the freight transport sector.

2. The SFT assessment for Angola consists of quantitative and qualitative components, focusing on maritime, road, and rail transport as the primary modes of freight transport in Angola. The quantitative assessment is based on internationally comparable scores (UNCTAD SFT Index) and survey-based scores.[1] For the internationally comparable scores, a total of twenty indicators have been identified from international data sources to measure SFT performance across the three sustainability pillars using the UNCTAD SFT Index methodology. These indicators are aggregated to generate internationally comparable SFT scores for 165 economies, including Angola. For the survey-based scores, stakeholders from various sectors involved in freight transport were consulted to gather their perceptions of specific SFT performance aspects. Responses to the closed-ended questions in the stakeholder surveys are utilized to create quantitative scores for the maritime, road, and rail freight transport sectors, respectively.

3. This document presents preliminary findings on the challenges and strengths of Angola's freight transport sustainability derived from the quantitative assessment. The qualitative assessment, based on the responses to open-ended questions in the surveys and stakeholder interviews, along with policy recommendations and action matrix underpinned by comprehensive analysis, will be included in the final report of the SFT assessment for Angola. After consultation and validation, the final report of the SFT assessment for Angola will be made available online.

II. SFT quantitative assessment result

4. The current section presents the key findings derived from Angola's SFT assessment, focusing on the three pillars of sustainable development: economic, social, and environmental. The assessment draws on two types of information sources: international data sources (e.g., UNCTAD and World Bank) and stakeholder responses to a survey questionnaire. The subsequent section, titled "Internationally comparable SFT scores: UNCTAD SFT Index", delves into Angola's SFT performance compared to global and African averages. The results and analysis of the survey-based scores are detailed in the section below titled "Survey-based SFT scores".

[1] The latest version of the UNCTAD SFT Index is publicly available in UNCTAD SFT homepage: https://sft-framework.unctad.org/interactive-charts.

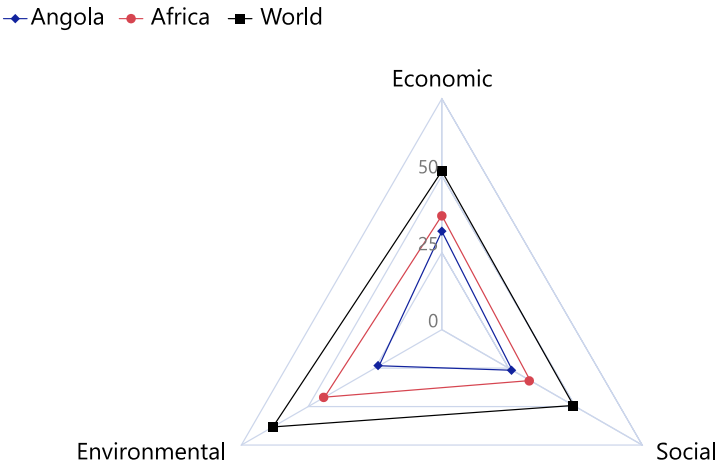
1. Internationally comparable SFT scores: UNCTAD SFT Index

5. In the following analysis, the internationally comparable SFT scores (i.e., UNCTAD SFT Index) and their underlying indicators are used to assess Angola's SFT performance in comparison to global and African economies.[2] [3] Compared to the world and the African average scores, currently Angola ranks relatively low in terms of sustainable freight transport performance. Taking the overall score that combines economic, social, and environmental dimensions of sustainable freight transport, Angola is positioned 152nd out of 165 countries worldwide (Figure 1). Angola shows low scores across the three pillars of sustainable freight transport. Particularly, scores achieved by Angola's freight transport regarding the social and environmental sustainability dimensions are found to be significantly lower than the average scores of the African equivalent.

Figure 1: Angola's SFT ranks and scores from international data sources, across the economic, social, and environmental pillars, in comparison to World and African averages

Total rank	Economic rank	Social rank	Environmental rank
152	141	152	143

SFT scores from international data sources



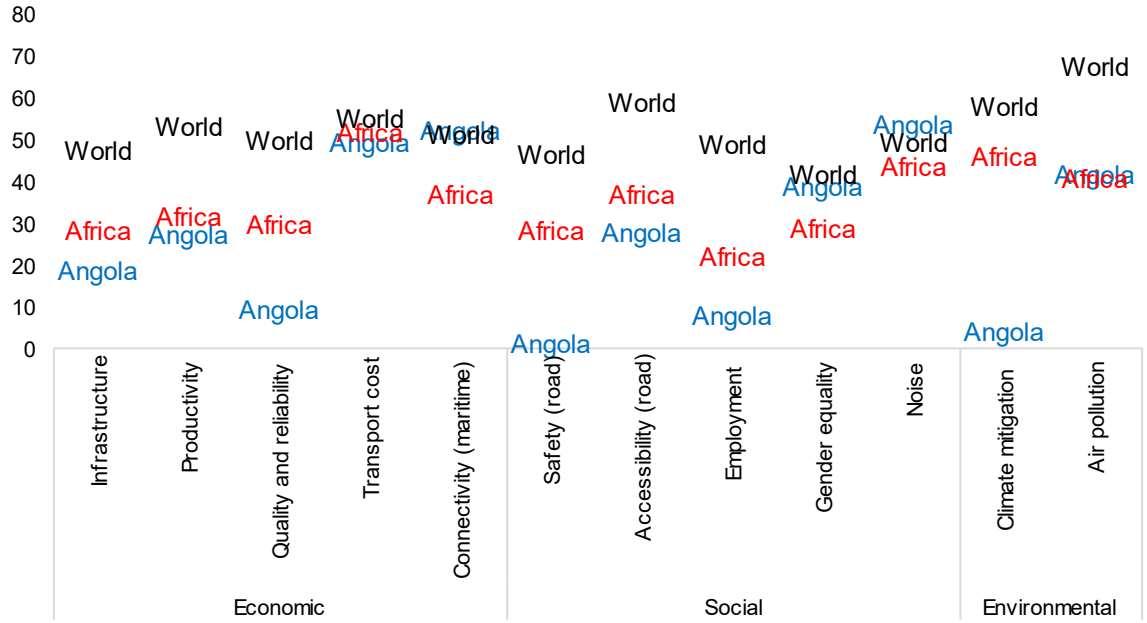
Source: UNCTAD calculation based on twenty indicators from the international data source, 2024.
Note: Countries with the worst performance globally receive a score of 0, while countries with the best performance attain a score of 100.

6. The low performance levels of Angola's freight transport sector in terms of social sustainability are primarily explained by the current safety and labour conditions (Figure 2). Angola's road traffic death

[2] The internationally comparable SFT scores are calculated with values of the underlying indicators in respective SFT areas. For example, the SFT score for transport infrastructure summarizes three indicators, namely, road density, road paved ratio, and infrastructure dimension of World Bank's Logistics Performance Index (LPI).
[3] When evaluating the underlying indicators for Angola, UNCTAD methodology compares Angola's values to median values of the world and African economies because the median is less influenced by skewed data and extreme values, making it a more reliable measure for this comparison. In contrast, average values are used for the comparison of the internationally comparable SFT scores, because the score calculation process addressed issues related to skewed distribution and extreme values. The censoring and log-transformation during the score calculation are supposed to address the skewness and extreme values.

rate was 30.7 per 100,000 people in 2019, which was significantly higher than the world median (12.8 per 100,000) and the African median (18.0 per 100,000) (Table 1).[4] Monthly earnings in Angola's transport sector, one of the major indicators informing about the underlying labour conditions, were estimated at $399 (purchasing power parity in 2019). These earnings were lower than the median values at the world ($1,122) and African ($444) levels.[5]

Figure 2: Angola's SFT scores from international data sources, across twelve elements of the economic, social, and environmental pillars, in comparison to World and African averages



Source: UNCTAD calculation based on twenty indicators from international data sources, 2024.
Note: The connectivity score exclusively reflects the connectivity of the maritime transport sector, while safety, and accessibility scores only pertain to the road transport sector, due to limited data availability. Countries with the worst performance globally receive a score of 0, while countries with the best performance attain a score of 100.

7. Under the environmental pillar, Angola's freight transport sector is lagging behind in terms of climate mitigation. Over the 2016-2021 period, the level of GHG emissions from Angola's transport sector (7.5 million tons CO2 equivalent) was higher than the world median and African median of GHG emission levels (6.1 million tons and 2.0 million tons, respectively). Even if adjusted for the size of the transport sector activity, GHG emissions intensity in Angola's transport sector was 3.3 kilogram per dollar of value-added, which is more than double the world median (1.5 kilogram per dollar) and approximately 60 per cent higher than African median (2.0 kilogram per dollar).[6]

8. Under the economic pillar, Angola's freight transport scored significantly lower than the African average on the infrastructure criteria and on the quality and reliability criteria. In contrast, Angola's freight transport achieved a higher score than the world average on the connectivity criteria. In terms of infrastructure, the density of Angola's road transport network was 0.06 kilometres per square-

[4] Institute for Health Metrics and Evaluation (IHME), 2020
[5] International Labour Organization (ILO), 2024
[6] European Commission et al., 2022

kilometre in 2019, lower than the world median (0.29 kilometres per square-kilometre) and the African median (0.09 kilometres per square-kilometre).[7] In terms of quality and reliability, the assessment is based on, "logistics competence and quality" and "timeliness" as defined under the World Bank Logistics Performance Index. Angola achieved low scores (2.3 and 2.1, respectively in 2023) compared to almost all other countries.

9. Regarding connectivity, Angola scored relatively high in terms of the Liner Shipping Connectivity Index compared to other African countries. The port of Luanda is the major contributor to Angola's connectivity in the global shipping network.[8] Angola has high bilateral liner shipping connections to South Africa, Congo, China, Singapore, Malaysia, Spain, Belgium, Cameroon, Portugal, and Ghana.[9] However, Angola's shipping connectivity decreased from Q2 2020 to Q2 2022. In 2023, Angola held the 70th position in terms of its liner shipping connectivity in a total of 174 countries. This is partly due to reduced connections suffered during the global logistic disruptions in the aftermath of the COVID-19 pandemic.[10]

10. Angola's relatively low performance in terms of the economic pillar under the SFT Assessment is consistent with the country's low ranking observed when looking at its Logistics Performance Index (LPI). Angola ranked 134th out of 139 countries and lagged behind Sub-Saharan Africa. The biggest challenge for Angola relates to customs and infrastructural issues as well as timeliness.

Table 1: Selected SFT-related indicators

	Angola	World median (average)	African median (average)
Economic pillar: Infrastructure			
---- Road density (km/km²)	0.06	0.29 (0.84)	0.09 (0.26)
---- Infrastructure (LPI score)	2.1	2.7 (2.9)	2.3 (2.4)
Economic pillar: Service quality and reliability			
---- Logistics competence and quality (LPI score)	2.3	2.9 (3.0)	2.5 (2.6)
---- Timeliness (LPI score)	2.1	3.2 (3.3)	2.7 (2.8)
Social pillar: Safety			
---- Traffic death rate (deaths per 100,000 people)	30.7	12.8 (15.0)	18.0 (20.4)
Social pillar: Labour conditions			
---- Transport sector monthly earnings ($ in PPP)	399	1,122 (1,587)	444 (757)
Environmental pillar: Climate mitigation			
---- Transport sector GHG emissions level (million tons-CO2eq)	7.5	6.1 (41.3)	2.0 (7.4)
---- Transport sector GHG emissions per value added (kg/$)	3.3	1.5 (1.7)	2.0 (2.2)

Source: UNCTAD calculation based on international data source, 2024.

Note: For the complete list of twenty indicators, see UNCTAD SFT Index website: https://sft-framework.unctad.org/methodology

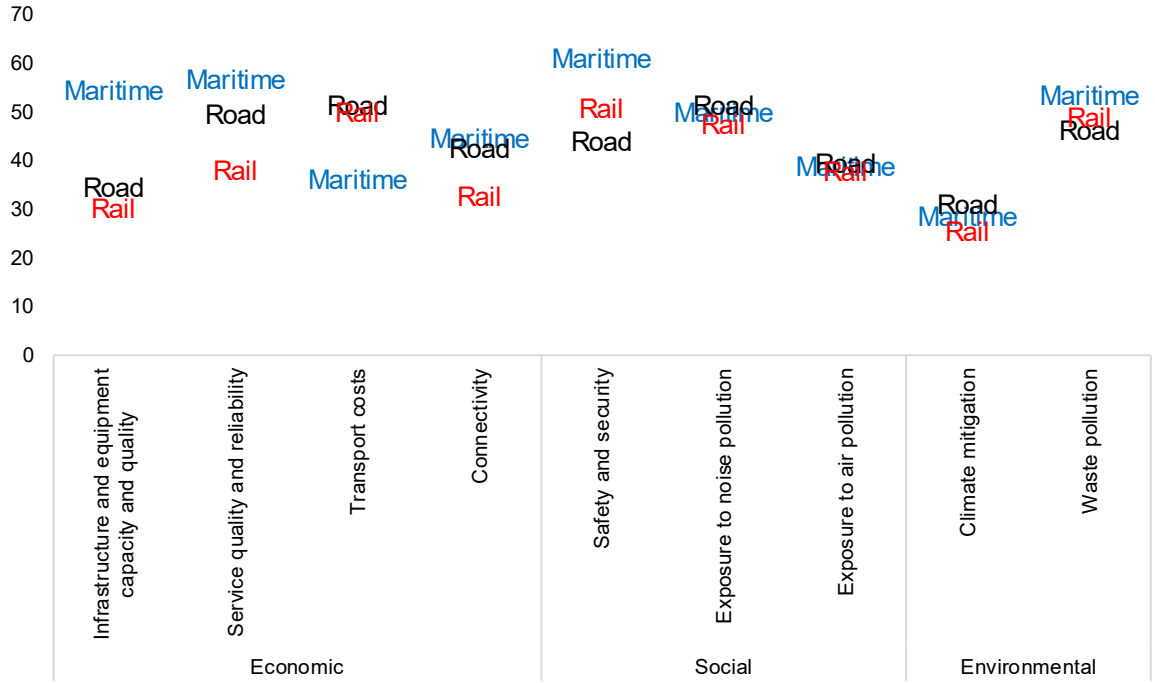
[7] International Road Federation (IRF), 2023
[8] UNCTAD, 2023a
[9] UNCTAD, 2023b
[10] UNCTAD, 2023c

2. Survey-based SFT scores

11. The scores calculated based on information and input received from the stakeholders' survey questionnaire confirm that Angola's freight transport systems perform poorly when it comes to climate change mitigation and road safety and security. Angola's freight transport sector's low performance in terms of infrastructure and equipment is attributable to the road and rail sectors ,not to ports (see Figure 3). The rail sector also contributed to the poor performance relating to service quality and reliability. Although Angola's maritime connectivity was perceived as good, by the respondent stakeholders, its rail connectivity, on the other hand, was perceived to be low. According to the responses received, the maritime sector performed well well across most of the SFT indicators and criteria, although Angola's score relating to transport costs was low due to several shipping and port charges/fees (Table 2).

12. It should be noted that the low score for climate change mitigation is mainly due to insufficient implementation of data collection and monitoring systems. Stakeholders did not consider the level of GHG emissions to be problematic. This is because Angola's freight transport GHG emissions absolute levels were not necessarily high. This perception is also consistent with the above analysis that draws upon widely available SFT indicators from international sources. However, as the emission intensity relative to the sector's economic output was high, the results of the present Angola's SFT assessment underscore the need to strengthen emission data collection and monitoring systems as well as to enforce environmental regulations that aim to avoid an increase in total GHG emissions.

Figure 3: Angola's survey-based SFT scores across nine categories of the economic, social, and environmental pillars, breakdown by mode of transport

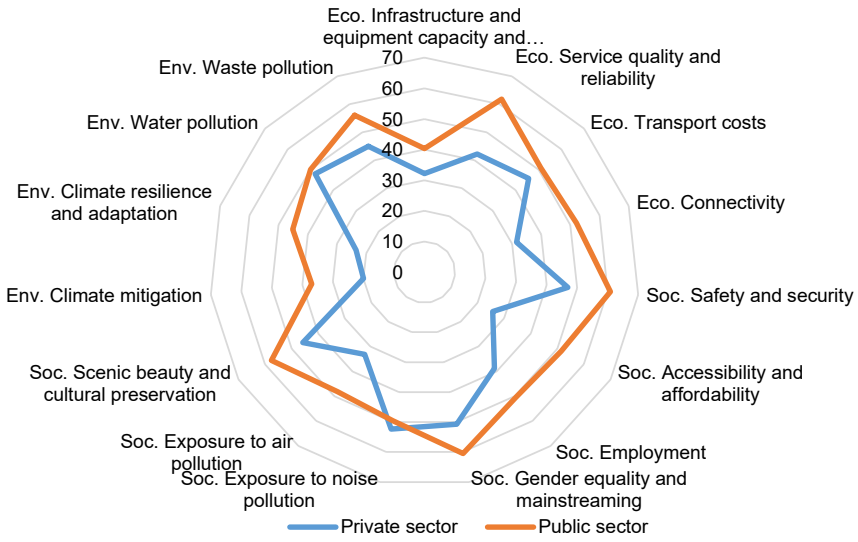


Source: UNCTAD secretariat calculations based on stakeholders' responses to the survey questionnaire, 2024.
Note: Worst performance (where all stakeholders answered "poor" performance) is indicated by a score of 0, and best performance is indicated by a score of 100. Six SFT categories (i.e., accessibility and affordability, employment, gender equality, scenic beauty and cultural preservation, climate resilience and adaptation, and waste pollution)

are not available for the breakdown by mode of transport because questions on these categories are only about all transport modes. As slightly different questions are used for each transport mode (e.g., questions about "quality of existing railways" vs" quality of existing roads"), comparison across transport modes requires careful interpretation.

13. Responses to the survey revealed a wide gap between the perceptions of the public and private sectors (Figure 4). The public sector seems more optimistic than the private sector across all the sustainability indicators and criteria, except for noise pollution. The largest divides prevail in terms of accessibility and affordability, followed by climate resilience and adaptation, and connectivity. This implies that more information, consultation and involvement of the private sector is needed for better transport planning to improve the sustainability performance of the freight transport sector. On the other hand, there were only small differences between the answers of male and female participants.

Figure 4: Angola's survey-based SFT scores across 15 categories of the economic, social, and environmental pillars, breakdown by respondents' sector (public/private)



Source: Calculated by the UNCTAD secretariat based on stakeholders' responses to the survey questionnaire, 2024.
Note: Worst performance (where all stakeholders answered "major problem" performance) is indicated by a score of 0, and best performance is indicated by a score of 100.

3. Summary of the quantitative assessment

14. The following table summarizes the categories linked to sustainability where Angola's freight transport is showing low-performance levels according to data on sustainability criteria/indicators that are widely available and published by international sources as well as information and input obtained through the SFT survey questionnaire administered by the UNCTAD secretariat to Angola's freight transport stakeholders.

Table 2: Key findings of the quantitative assessment

SFT categories	Identified challenges
Economic pillar	

Infrastructure	• Low road and rail network density • Low quality of existing roads and railways, rolling stocks, and infrastructure along corridors • Insufficient implementation of regulations aimed at preventing road damages • Limited availability of logistical facilities along the corridors
Transport costs	• High road freight transport costs • High charges/surcharges by ports and shipping companies • High inland and logistics costs and border crossing costs
Quality and reliability	• Low availability and reliability of rail freight transport service • Long waiting times during modal shifts • The difficulty of tracking and tracing cargo across different transport modes
Connectivity	• Low connectivity of railways from production sites • Low port-hinterland connectivity • Low cross-border connectivity of corridors
Social pillar	
Safety and security	• High rate of deaths caused by road traffic and accidents • Insufficient implementation of safety measures for vehicle operations
Accessibility and affordability	• Low access to affordable all-weather transport and services for rural/ production areas • Low access to affordable logistic facilities and services for producers/ manufacturers/ SMEs • Insufficient implementation of strategies/plans to improve rural transport and logistics accessibility and affordability
Labor condition	• Low wage levels compared to the African average • Low incentives to make the sector more attractive for employment • Insufficient supply of skilled labour
Exposure to noise pollution	• Insufficient implementation of regulations and technical measures aimed at reducing/managing e noise levels (ports, roads, railways)
Exposure to air pollution	• Insufficient monitoring, evaluation, and reporting on air pollution (ports, roads, railways) • Insufficient implementation of regulations/measures aimed at reducing air pollution (ports, roads, railways)
Environmental pillar	
Climate mitigation	• High GHG emission levels and intensity compared to median values of the world and African economies • Insufficient collection of data that enables the measurement of GHG emissions from ports, roads, railways, and across corridors • Insufficient implementation of regulations and measures aimed at reducing/managing GHG emissions from ports, roads, railways, and across corridors)
Climate resilience and adaptation	• Insufficient monitoring and evaluation of climate-related vulnerability, risks, and impacts • Insufficient implementation of climate resilience and adaptation strategies/ plans/ measures • Insufficient availability of finance for implementing climate resilience and adaption strategies/plans/ measures
Waste pollution	• Insufficient Implementation of waste management regulations and measures for road freight transport

Source: Compiled by the UNCTAD secretariat, 2024.

NOTE

Please note that the preliminary findings provide only the quantitative results of the SFT assessment for Angola. The comprehensive final report, including qualitative analysis and policy recommendations, will soon be available online.

III. References

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