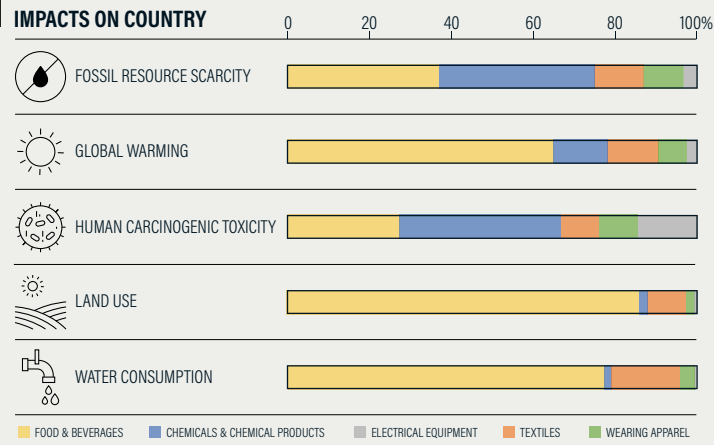


The United Republic of Tanzania exported USD 3,5 billion of manufactured products in 2019. This production, oriented at foreign markets, causes significant pollution impacts at the source. A lifecycle analysis of selected Tanzanian manufacturing exports revealed various effects on environmental and human health.

The analysis highlights the importance of the "Food & Beverages" sector, especially when considering the cradle-to-gate system boundary. In terms of products, processes, and company sizes, the "Food & Beverages" sector is very diverse. In general, however, it has the most relevant environmental impacts on energy use, water consumption, solid waste, and wastewater generation.

Economic relevance, LCA impacts, and available data served as criteria to select the "Food & Beverages" sector as a focus area in the United Republic of Tanzania.

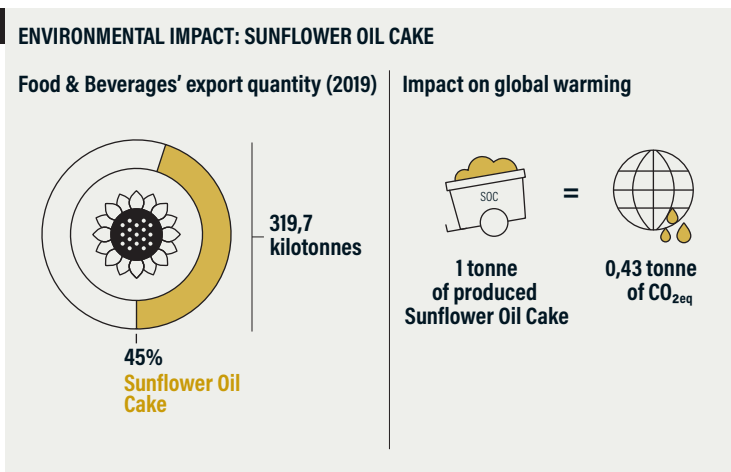


PUBLIC GOVERNANCE : formal and informal arrangements that determine how public decisions are made and how public actions are carried out

Challenges	Achievements	Improvements
<ul style="list-style-type: none"> Limited transparency, information disclosure on signed agreements, and accountability. Limited legal and policy frameworks and local constraints, such as the absence of financial resources and inadequate enforcement infrastructure, undermine their effectiveness in regulating formal and informal activities. 	<ul style="list-style-type: none"> Environmental Management Act, as the primary law concerning the control of pollution, provides a legal and institutional framework for environmental management. Manufacturing and processing industries need to carry out an Environmental Impact Assessment before obtaining the license for its activities. 	<ul style="list-style-type: none"> Countries shall consider at least the general exceptions of the international trade regime and the interplay with the ratified MEAs. Strengthening institutional capacities for law enforcement, specially applied to informal sector.

PRIVATE GOVERNANCE : social mores that determine acceptable market behaviour, professional standards and codes of conduct

Challenges	Achievements	Improvements
<ul style="list-style-type: none"> Industrialisation and access to international markets is expected to increase associated negative environmental impacts, exacerbated by the high vulnerability to climate change. Lack of monitoring and limited data availability quantifying industrial pollution. Difficulties in accessing financial resources and high cost of capital. 	<ul style="list-style-type: none"> Global markets are pressuring companies towards sustainable manufacturing, setting up conditions and standards to which local companies must comply. The Cleaner Production Centre of Tanzania promotes Resource Efficient and Cleaner Production, provides advice on environmental management, in-plant assessments, and industry/government capacitation. 	<ul style="list-style-type: none"> Promotion of Resource Efficient and Cleaner Production measures. Pollution reduction and productivity increase by applying resource efficiency and cleaner production initiatives, industrial symbiosis, and promoting a circular economy.



Sunflower Oil Cake (SOC) is the most exported product in the Food & Beverage sector in the United Republic of Tanzania. A process-based LCA identified that SOC production has an impact on marine ecotoxicity, stemming mainly from the emissions of herbicides. Whereas the use of fertilizers and pesticides, at this stage, causes heavy metal emissions that increase human noncarcinogenic toxicity. In the transportation stage, heavy metal emissions from brake wear also generate an impact on marine ecotoxicity and human noncarcinogenic toxicity. Solutions to mitigate SOC's environmental impacts include improving the manufacturing activity at the plant, reducing energy and water consumption, optimizing transport, selecting environmentally preferable chemical inputs, and better handling both wastewater and waste.

