



“Food loss and food waste constitute a major constraint to achieving the sustainable development goals (SDGs) in Ghana.”

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Image Source: The mix of formal and informal economy which is typical of many middle and lower-income countries is a critical dimension of sustainable transformations, with food production one among many sectors of daily life which are impacted by urbanization. Here, food packing waste near a supermarket in the outskirts of Johannesburg in South-Africa. Image by Nicolas J.A. Buchoud, all rights reserved ©.



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Food losses and waste management in Ghana: Can the circular economy offer solutions to these problems?

Agriculture is a mainstay of most Sub-Sahara African (SSA) countries like Ghana. The sector contributes significantly to Gross Domestic Product (GDP) growth, employment creation, poverty reduction, food provision and generation of foreign exchange to finance development programs and projects. More than 65 per cent of Ghana's land area is used for agriculture, and this accounts for 19.6 per cent of GDP and 13 per cent of total export earnings.¹ The complex inter-relations amongst agriculture, food supply chains (FSC), demography and climate

change are great concerns in Ghana. The rapidly increasing population implies an increase in the demand for food. However, food production and FSC are heavily constrained by significant inefficiencies such as food loss and waste.²

Food loss and food waste (FLW) generally refer to total losses and waste within the various stages of FSC, starting from growing, harvesting, packing, processing, transporting, marketing, and distribution, to final consumption.³ Nearly 17% of all food produced for human consumption in the world is wasted or lost along the FSC, corresponding to about 931 million tons in 2019.⁴ In a developing country like Ghana, FLW occurs mainly at the production stage due to technological reasons, such as poor harvesting procedures and poor storage conditions, as well as inefficient transportation and logistics. FLW in Ghana is estimated to be well below 40 to 50% but these numbers are still significant. FLW is estimated to amount to about 4 billion USD per year or about 15% of the total value of grain output (27 billion USD) in the country.⁵ As a result, FLW constitutes a major constraint in achieving the Sustainable Development Goals (SDGs) in Ghana.

To effectively improve both FLW performance and resource efficiency, the deployment of a circular economy (CE) model in the agriculture value chain is imperative. Inculcating the principles of reducing, reusing, refusing, rethinking, repairing and recycling agricultural resources in this value chain will enable the reduction in non-renewable resource use and waste production throughout the life cycle of agro-products. This is

achieved by connecting farmers, marketers and manufacturers with consumers. Every modern-day farmer in a developing economy needs to share success stories and encourage young people to take up farming as a lifelong occupation. This can only be achieved by closing the agriculture value chain loops and increasing yields and profitability.

In summary, the circular economy model can help Ghana to significantly reduce inefficiencies in the agricultural sector and deliver positive economic, social and environmental benefits to the population. If Ghana achieves a 50% food loss reduction by 2025, it would result in a fall in unit costs of production for all food groups and an increase in production, sales, revenues and GDP.⁶ Achieving this reduction requires putting policy-makers at the center of the transformation process. Designing and enforcing a legislative framework that promotes the deployment of the CE model in agriculture, initiated by the Ministry of Food and Agriculture (MoFA) of Ghana, could serve as a promising starting point. Also, private sector entities, including food processing and packaging companies, civil society organizations and research institutions need to design food products that guarantee low environmental impacts and high resource efficiency. Efforts by the Zoomlion Waste Management Company and the Biotechnology and Nuclear Agriculture Research Institute to in prioritize agriculture value chain improvements through composting of household and market waste are steps in the right direction to address FLW in Ghana. More of such actions across the country could result in a significant transformation of the agriculture value

chain. Finally, achieving circularity in the agriculture value chain should be an inclusive process, addressing and considering every single individual. Substantial effort should be made to change the general public's consumption patterns. For instance, people should be encouraged to only buy what is needed, ensure appropriate storage of food, eat smaller portions, repurpose leftovers, respect food and support local food producers. If people shop, cook and eat smarter, especially in a country where food waste predominantly occurs within households, during social gatherings and at parties, agricultural resource efficiency and improvement of agricultural value chains can be achieved.

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