

# Leveraging Innovation for the Circular Economy

## Bottom-up insights on plastics and manufacturing pollution.

01.11.2021

Henrique Pacini

UNCTAD



# Innovation & Circularity

- Product / Service
  - Changing materials & design
- Systems
  - Up, mid and downstream
- Data
  - You cannot regulate what you can't measure

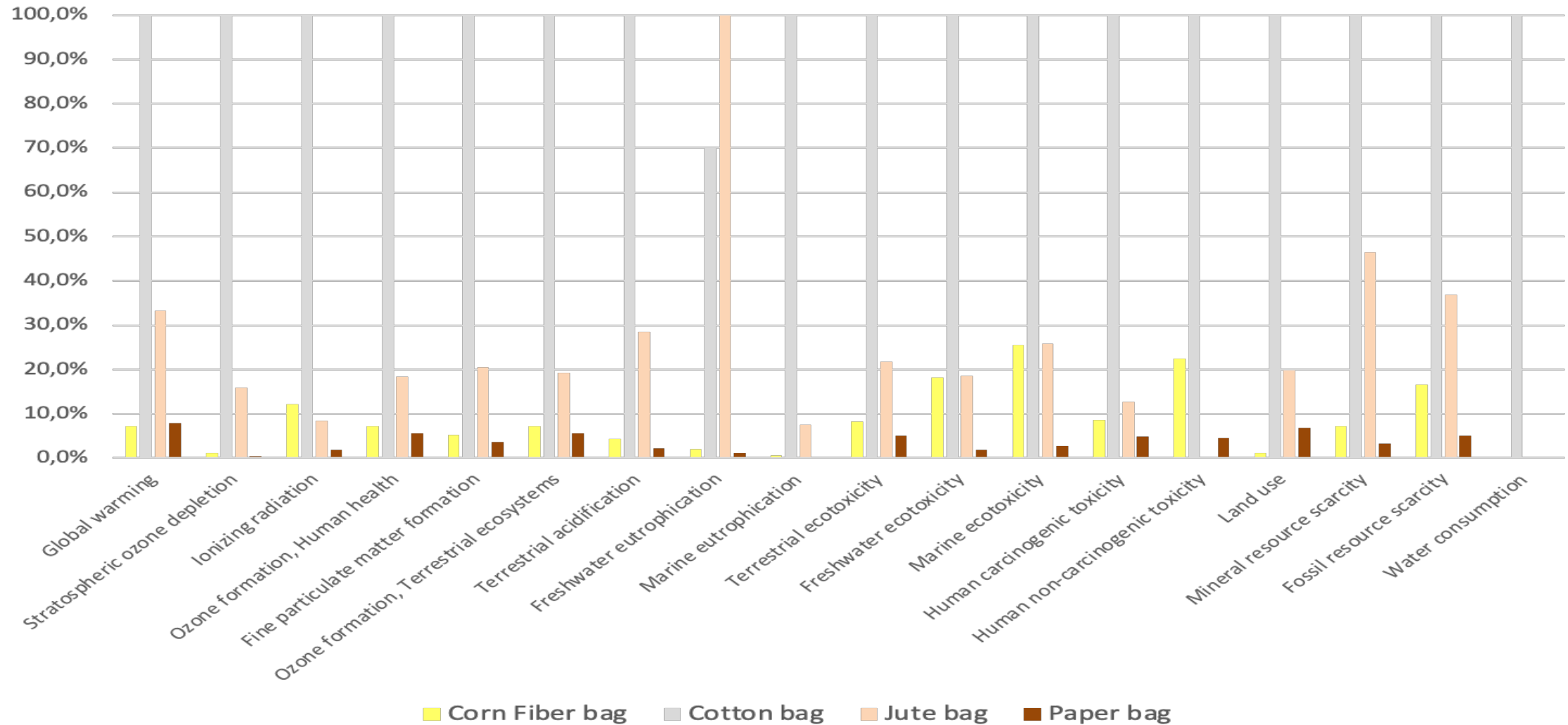
# Product Innovation: Plastics substitutes



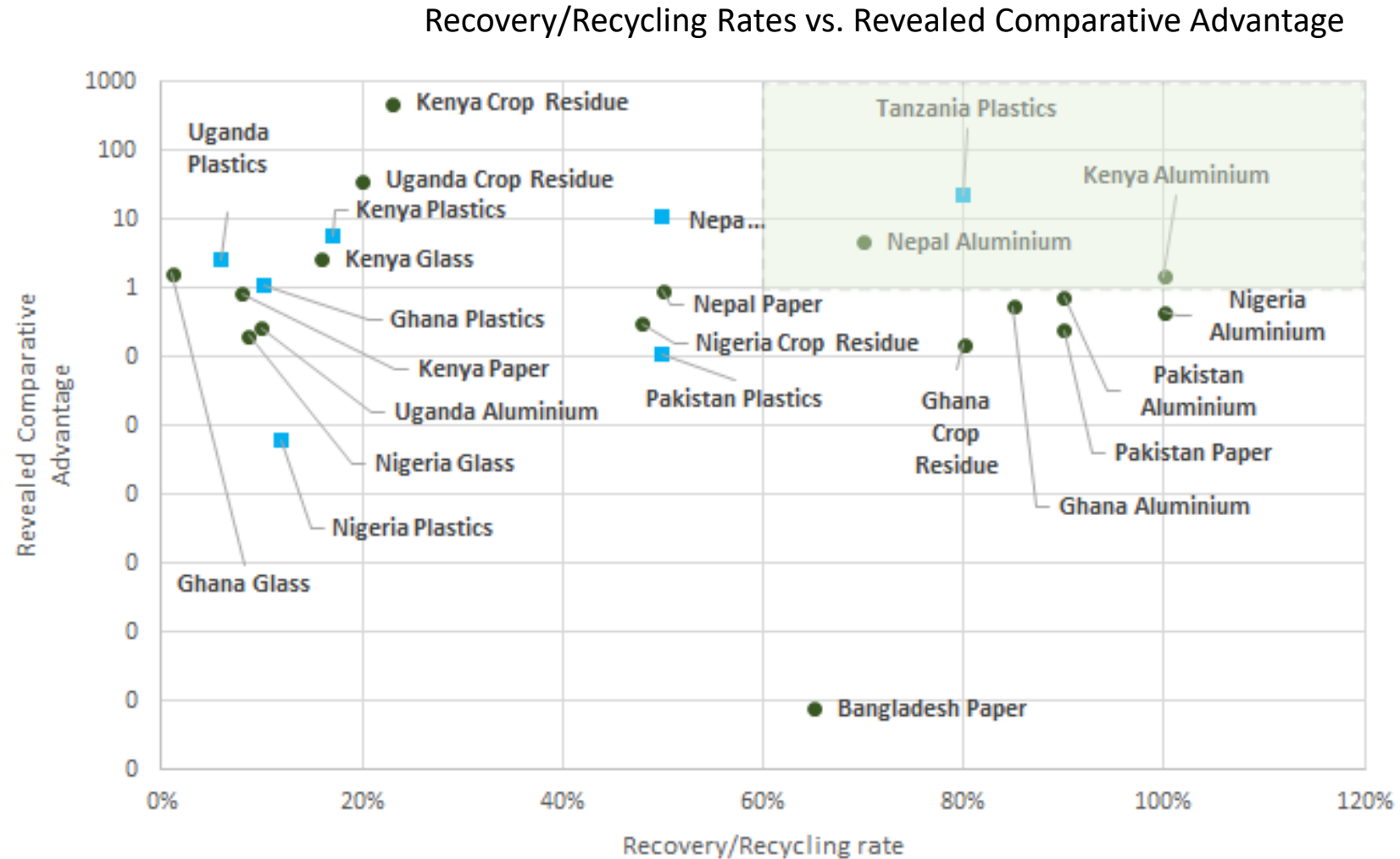


# Data: Life-cycle analysis of plastic substitutes

Potential environmental impacts in the life cycle of alternatives to plastic bags in Bangladesh



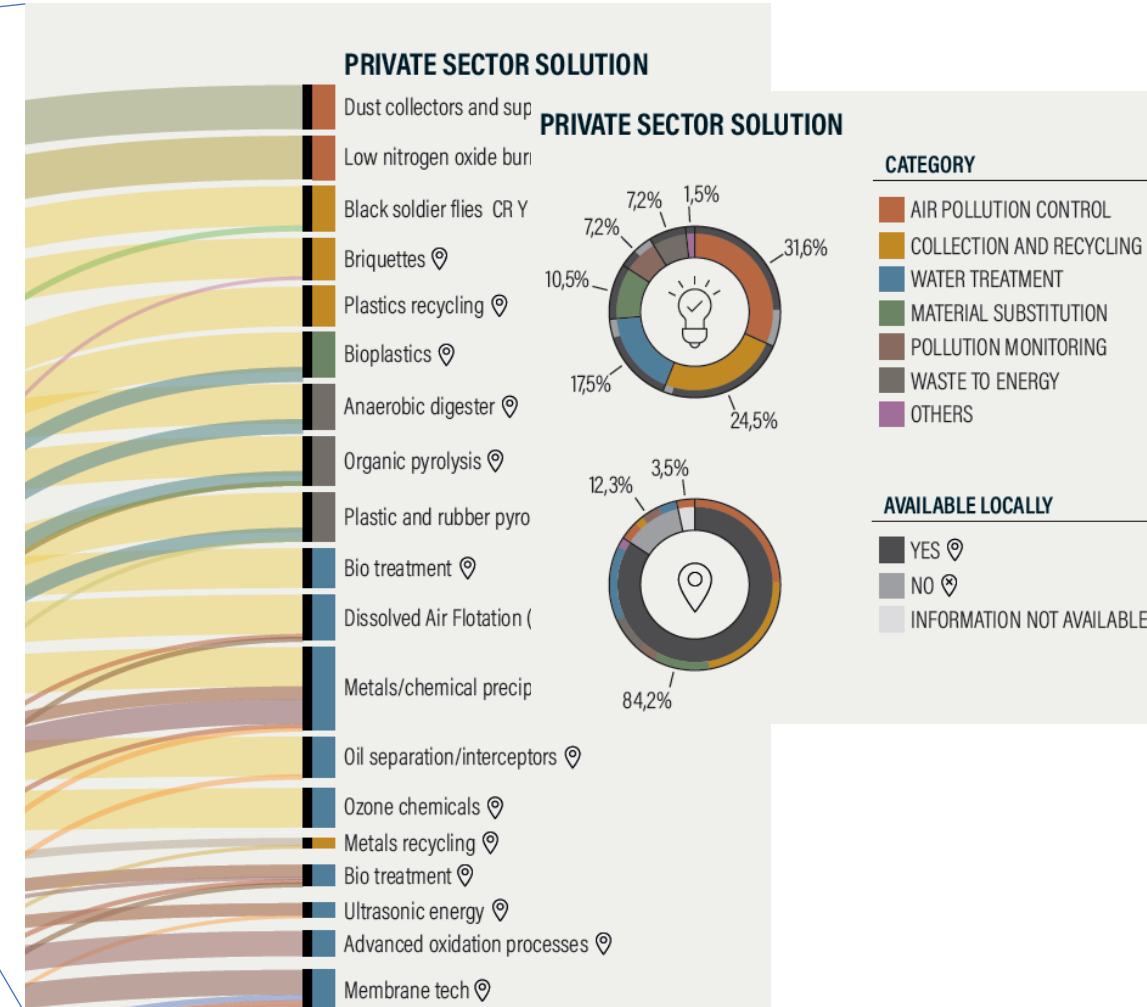
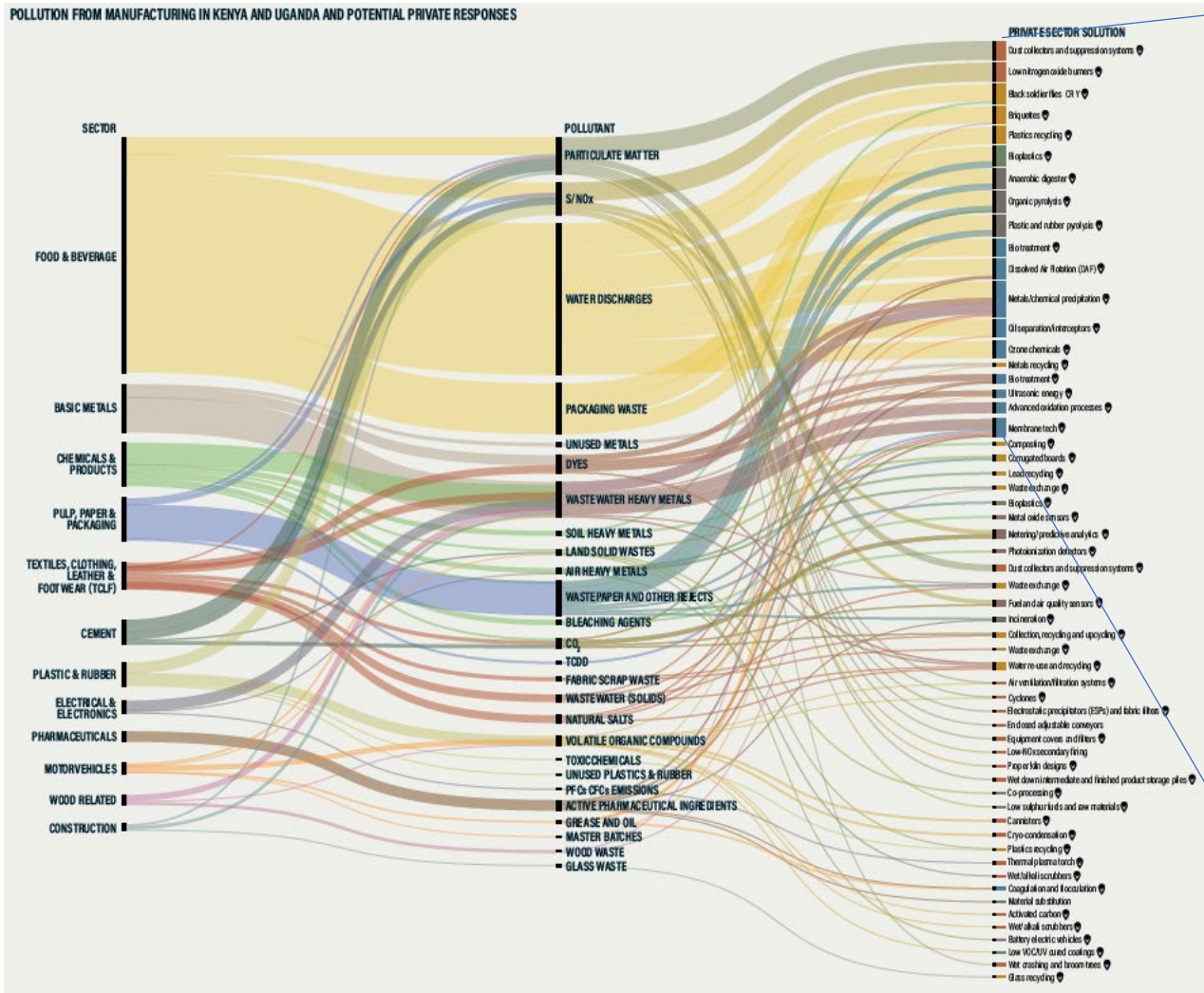
# Systems innovation: Material alternatives have consequences



Understanding the **downstream** consequences of proposed plastics substitutes is important!



Product & Service innovation  
Closing manufacturing pollution “loops”



# Final considerations

- Product & Systems innovation:
  - Important to analyze current LCA structure of material alternatives
  - Downstream matters: Material change needs to be for the “better”
  - Downstream capacities need to match alternatives adopted
- Needs to be supported by...Data
  - LCA perspectives & metrics for policy making.
- Pollution control measures not only a cost
  - New product opportunities emerging out of “trapped” pollution & residues
  - Imports sometimes needed: tariff liberalization & NTMs reduction.