

Plastics and circularity: A life cycle perspective

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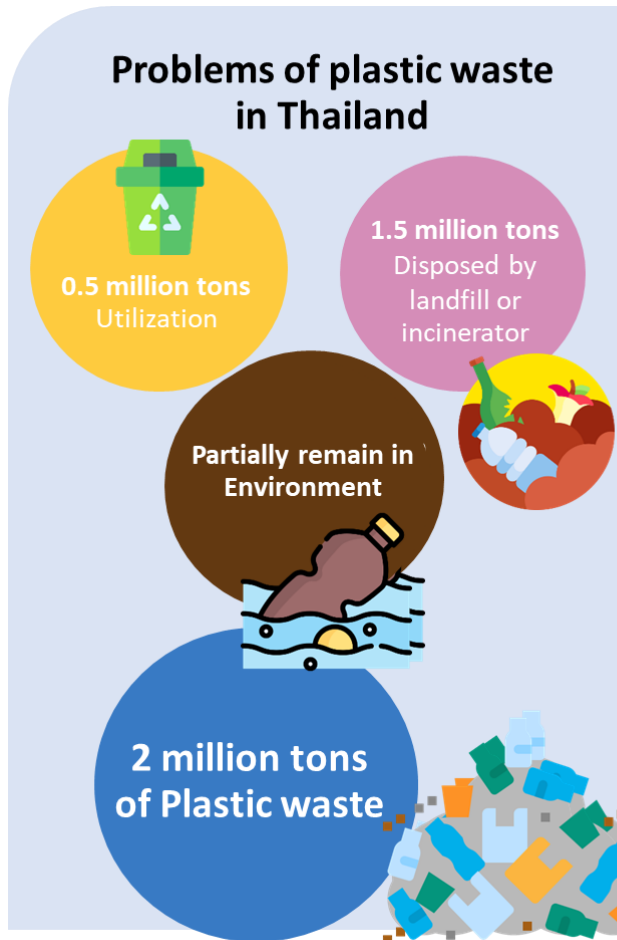
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Thailand's Roadmap on Plastic Waste Management 2018-2030



Stop using in 2019

- Cap seal
- Oxo
- Microbeads

2020-2021

- Develop guidelines/requirement/standard for environmentally friendly product
- Law enforcement on plastic waste management

2019

2022

2027

2030

100% of target plastic wastes will be recycled by applying Circular economy principle

Summary of implementation in according to SDGs



Bioeconomy

Involves the production of renewable biological resources and the conversion of these resources into value added products



Circular economy

Aims at reusing and recycling resources



Green economy

Determines to keep economy, society and the environment in balance, leading to sustainable development



Are reusable cups better than single-use ones?



Single-use
PP cup



Single-use
PET cup

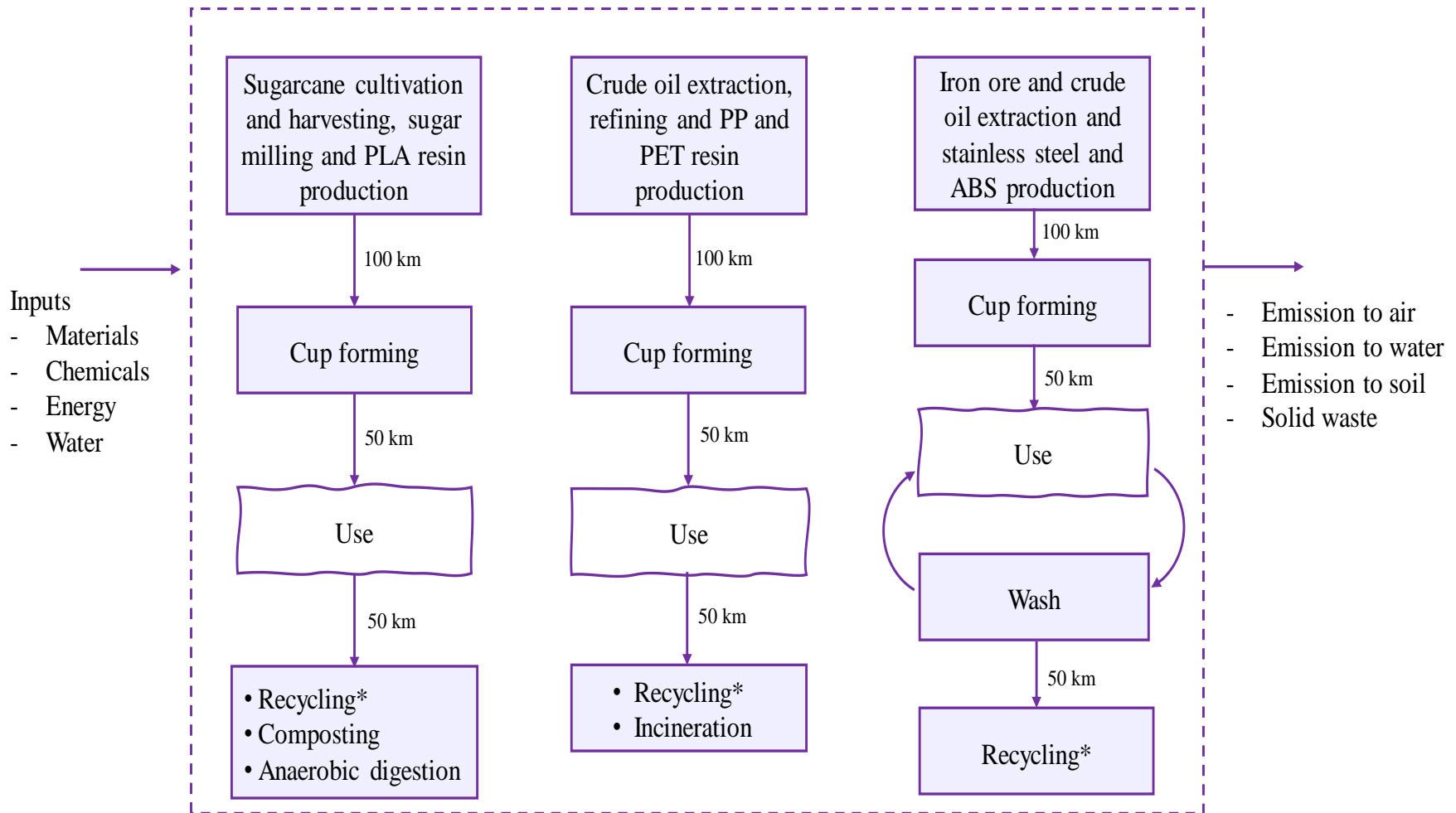


Single-use
PLA cup

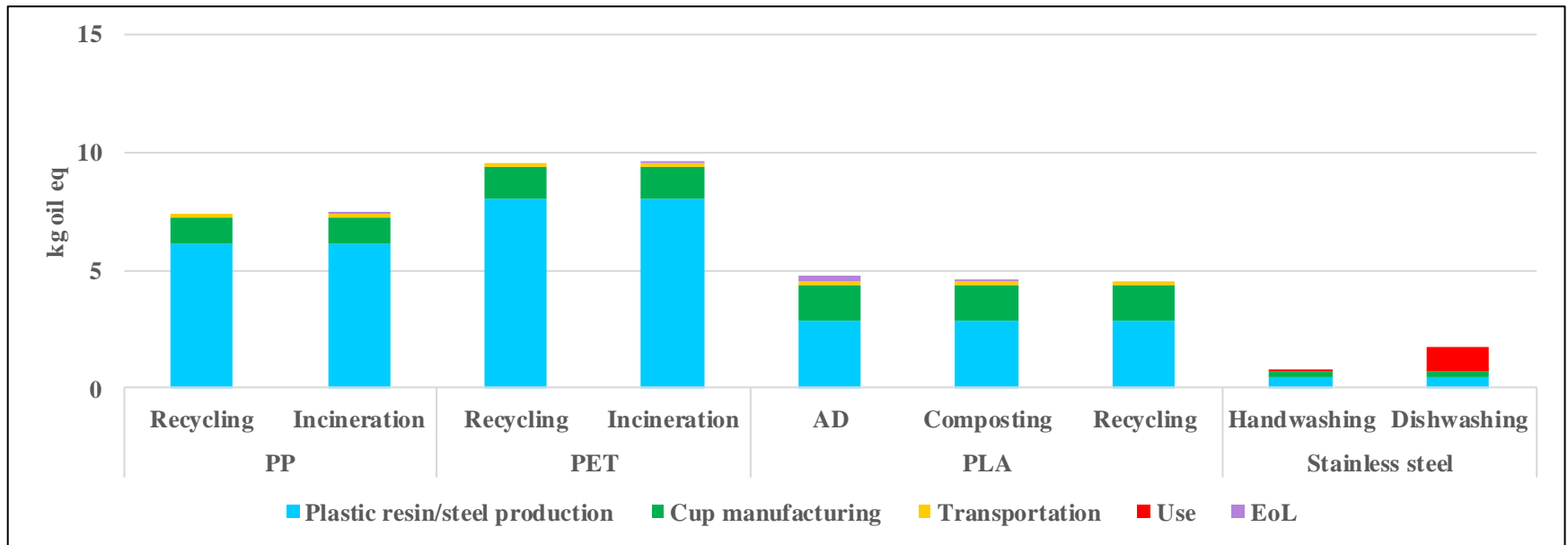
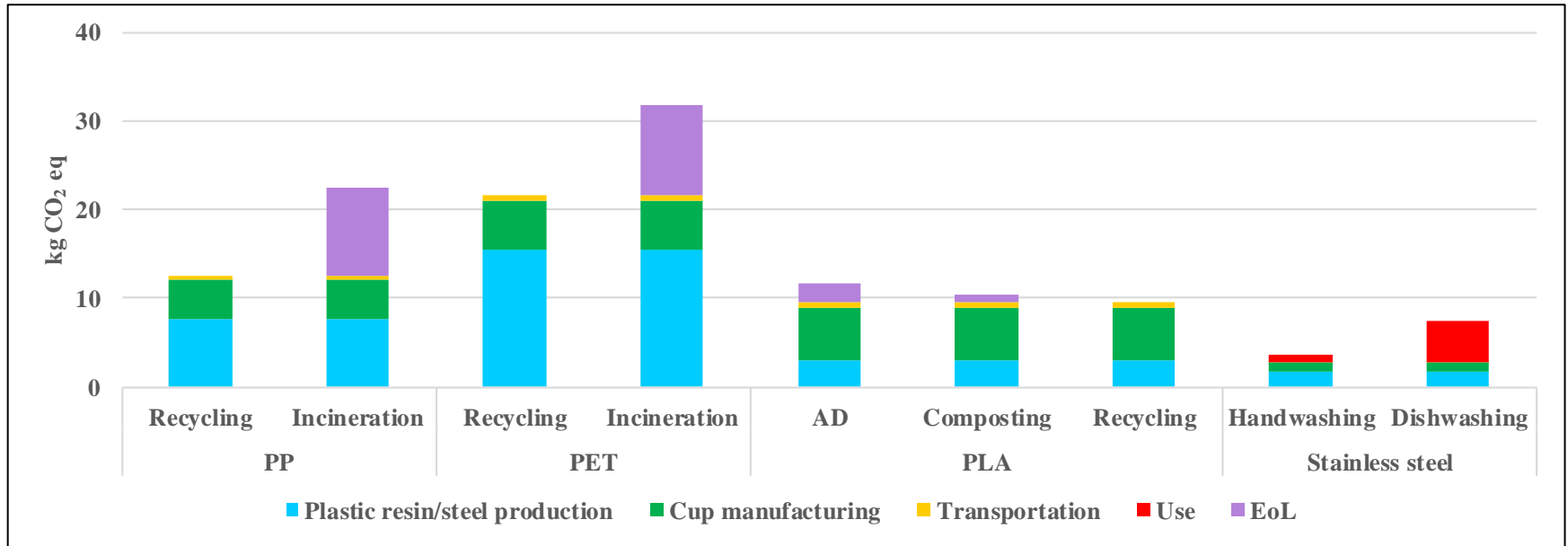


Multiple-use
SS cup

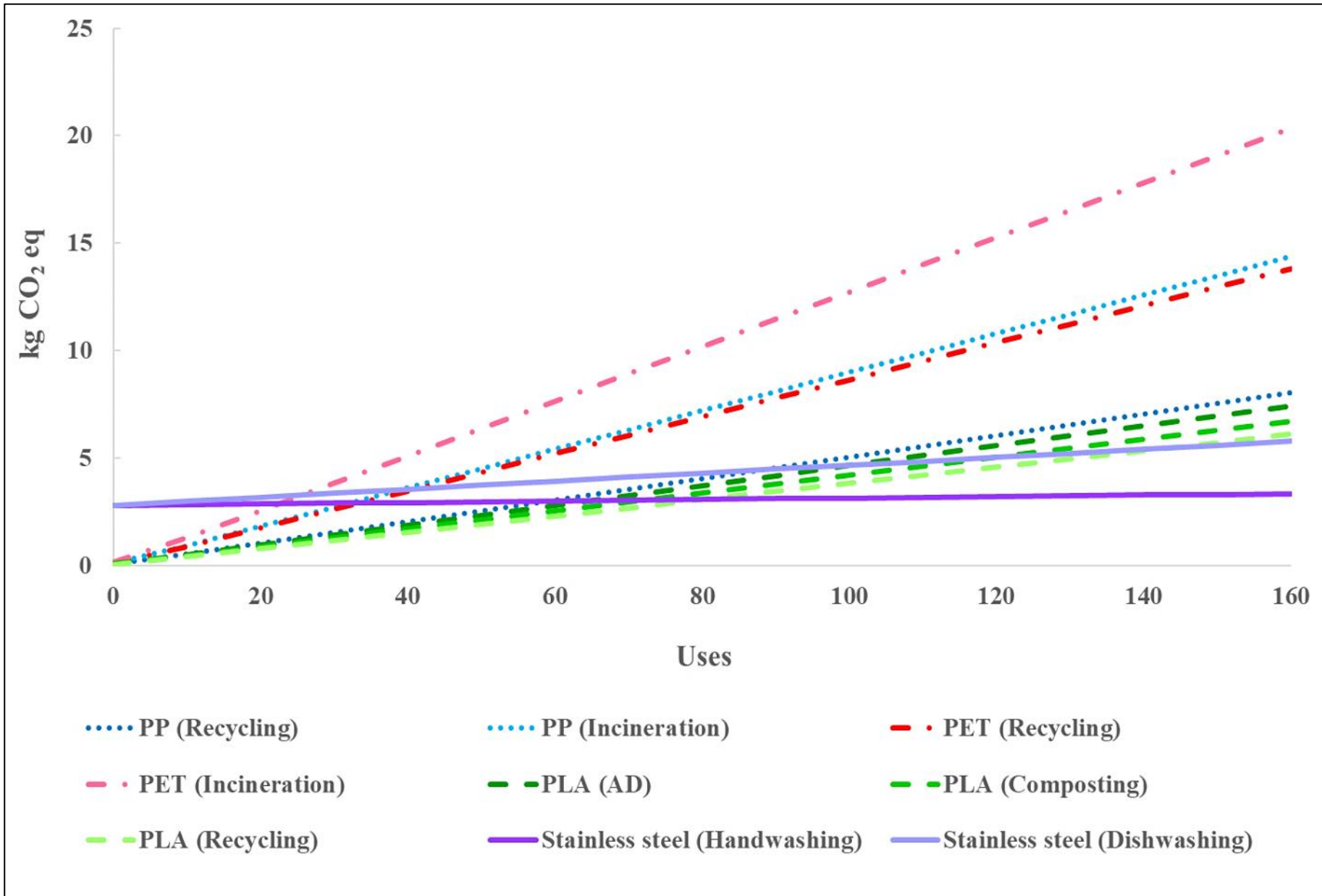
Things to consider (system boundary)

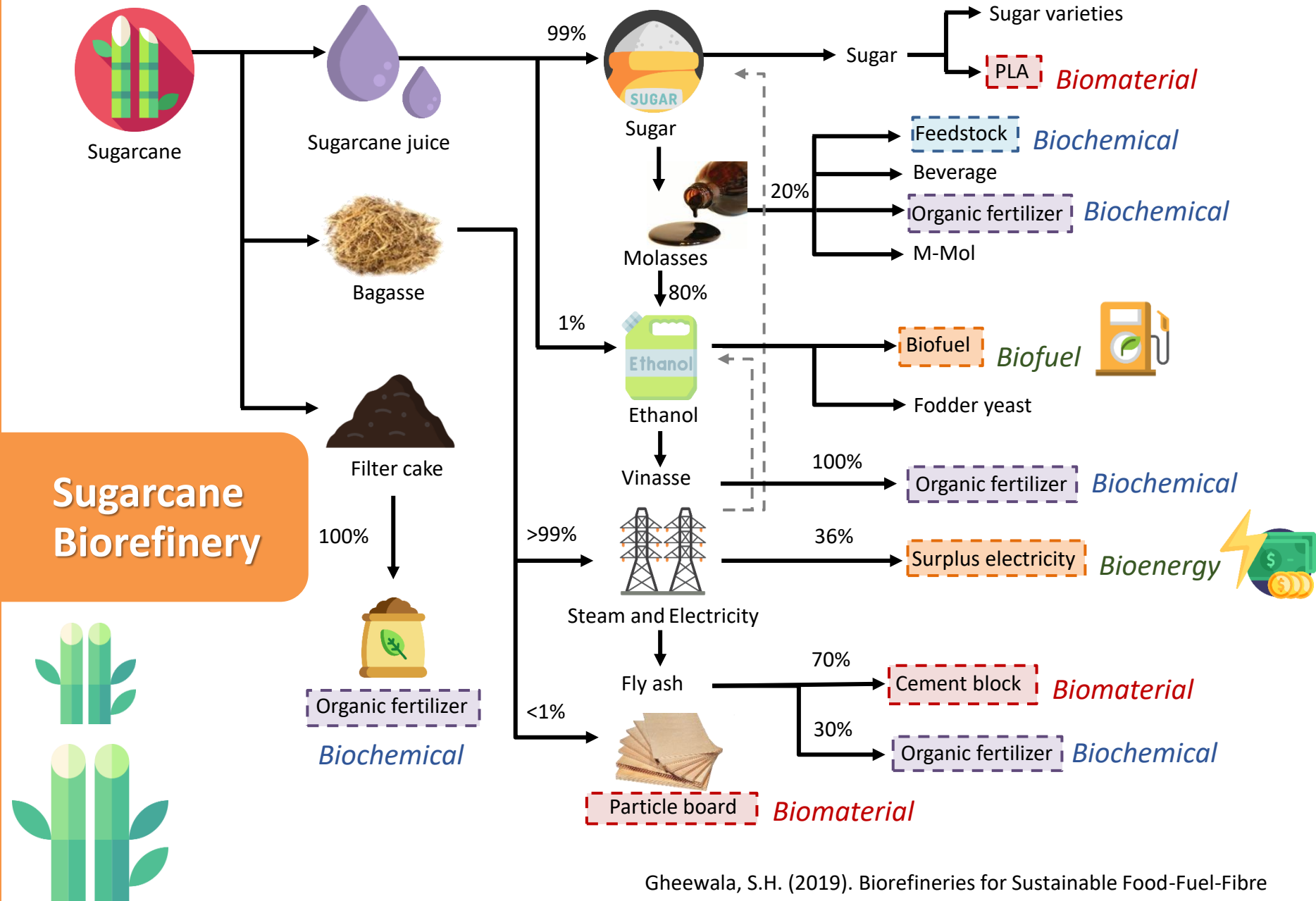


How do single-use cups compare to multiple use ones?



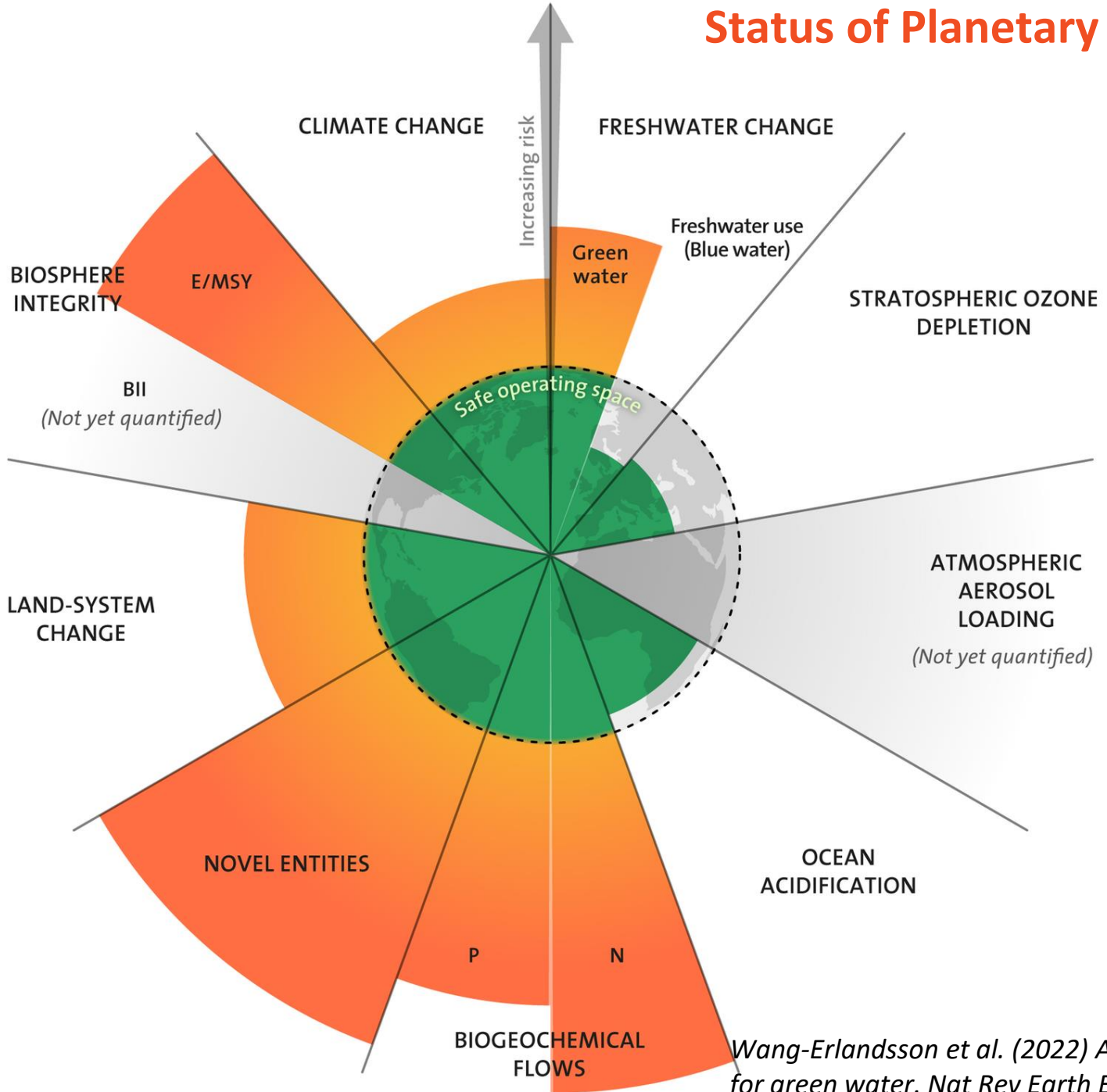
How many times must a reusable cup be reused?





Gheewala, S.H. (2019). Biorefineries for Sustainable Food-Fuel-Fibre Production: Towards a Circular Economy, E3S Web of Conferences, 125, 01002, <https://doi.org/10.1051/e3sconf/201912501002>

Status of Planetary Boundaries



Wang-Erlandsson et al. (2022) A planetary boundary for green water. *Nat Rev Earth Environ* 3, 380–392.

Parting thoughts

- Life cycle thinking/systems solutions
- Mindfulness over tokenism
- Environmental pragmatism over environmental extremism
- Sustainable consumption is a must