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Innovations in Food Loss and Waste Management

The valorisation of agri-food waste for a circular bioeconomy

Highlighting policy incoherence through nexus thinking

Sarah Milliken





If we accept that the agri-food system will always result in some waste (by-products and residues), how can these be best **valorised**?

- Nexus thinking
- European Green Deal targets and ambitions
- The food surplus and waste hierarchy

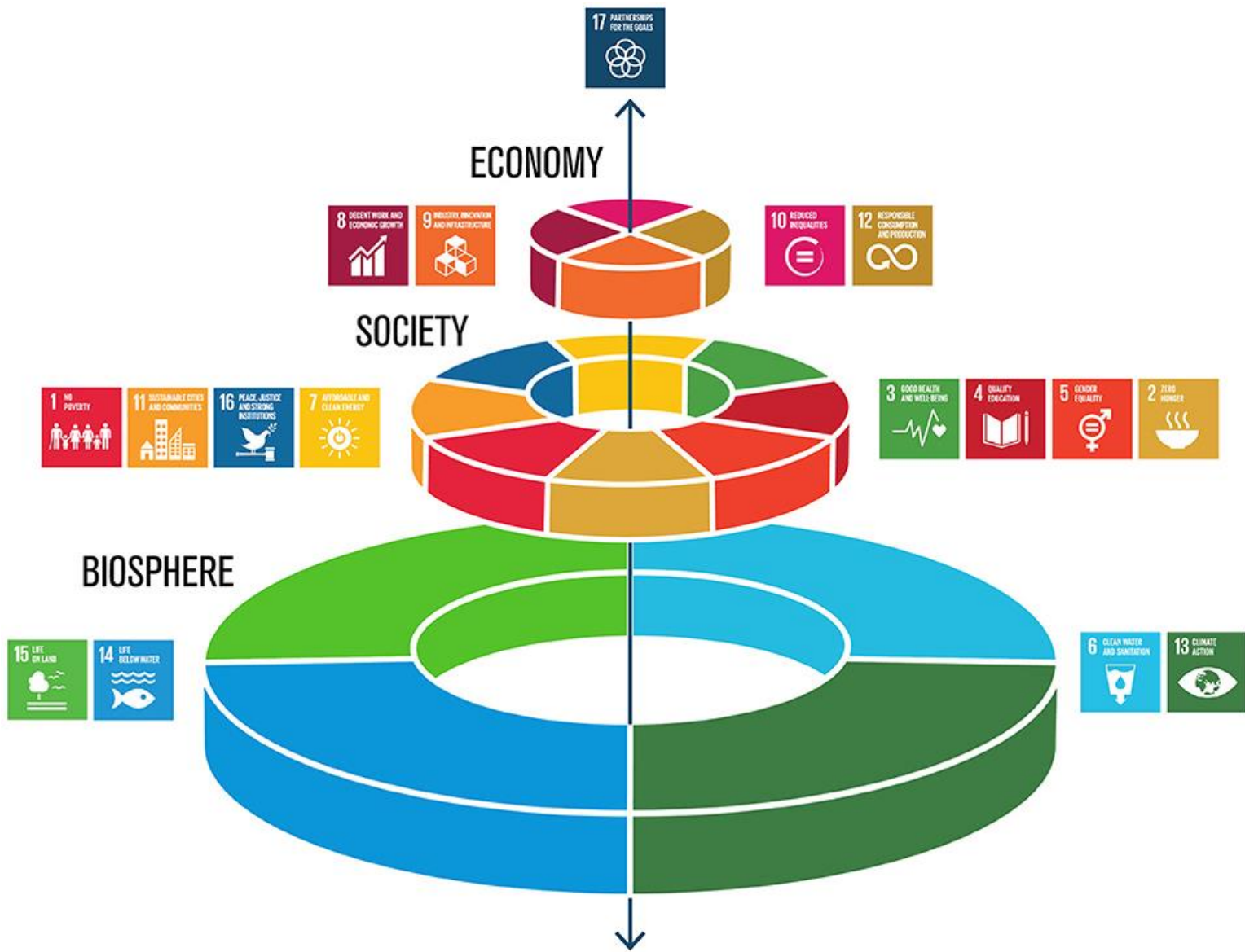
EU Bioeconomy Strategy (2018)



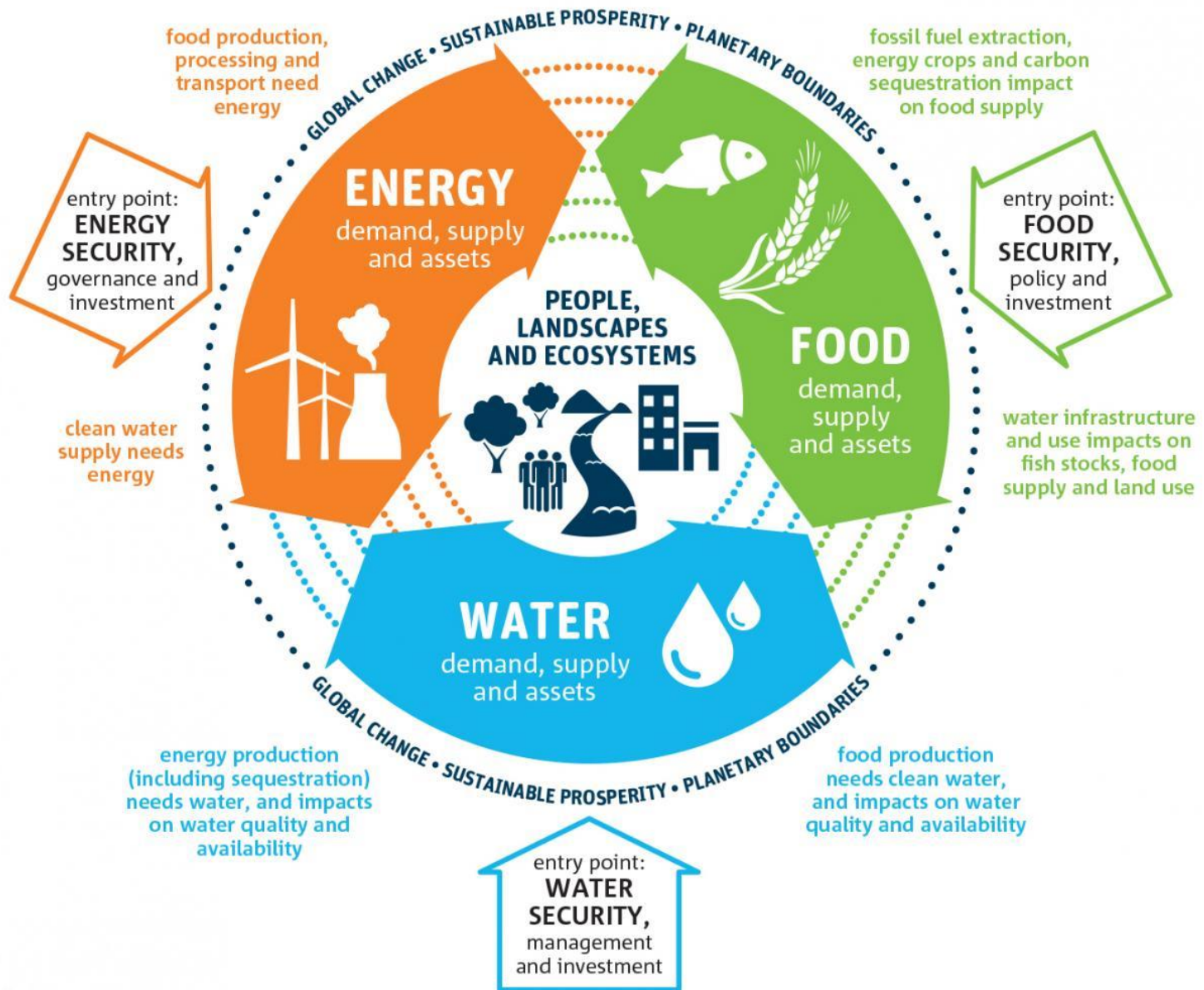
Environment: management of land and biological resources within ecological boundaries

Economy: sustainable value chains and consumption

Society: social fairness and just transition

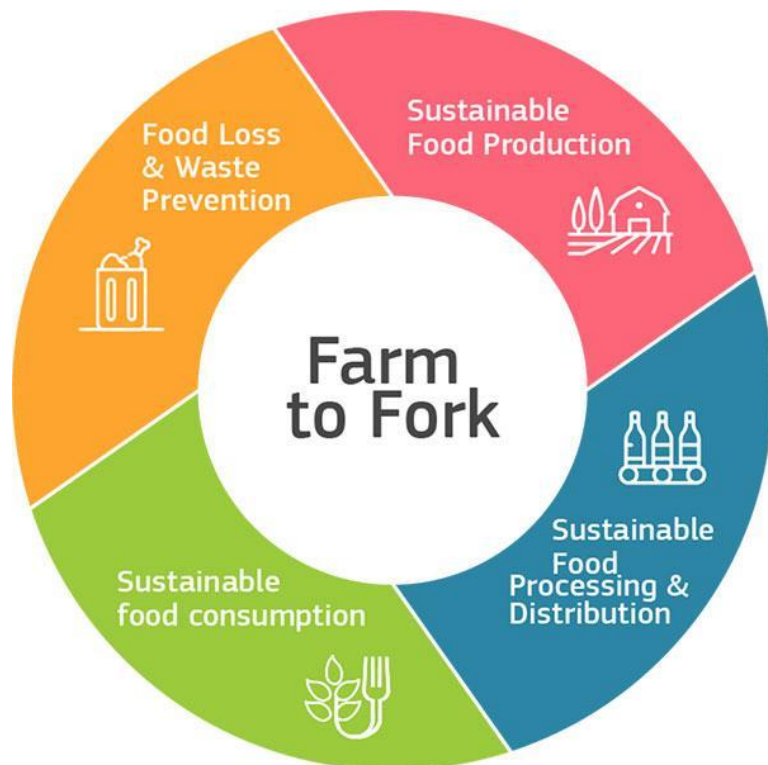


Rockström & Sukhdev (2016) *How Food Connects all the SDGs*



European Green Deal

- By 2030 reduce **greenhouse gas emissions** by at least 55%
- By 2030 increase renewable **energy** capacity to a minimum of 42.5%



By 2030

- 25% of total farmland to be under organic farming
- decrease fertilizer use by at least 20%



Agri-waste

Farmers should develop the production of **renewable energy** from agriculture waste and residues. Farms also have the potential to produce biogas from other sources of waste and residues, such as from the **food and beverage industry**

+ recycling of organic waste into **renewable fertilisers**

+ developing alternative **feed materials** such as insects and by-products from the bio-economy (e.g. fish waste)

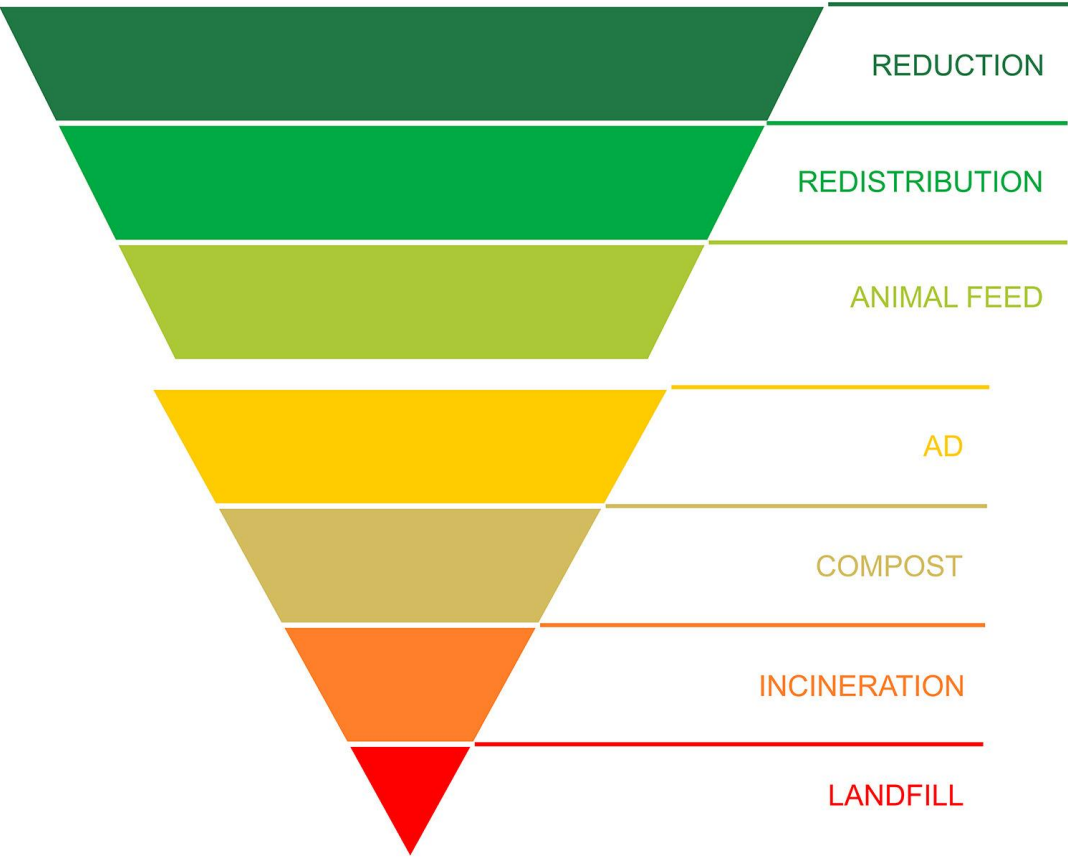
European Union commitments to strengthen the policy and regulatory framework on **water** and circular economy and resource efficiency



By 2030

- contribute to the reduction of water use
- ensure that the EU Common Agriculture Policy contributes to efficient management of natural resources such as soil and water

Food Surplus and Waste Hierarchy

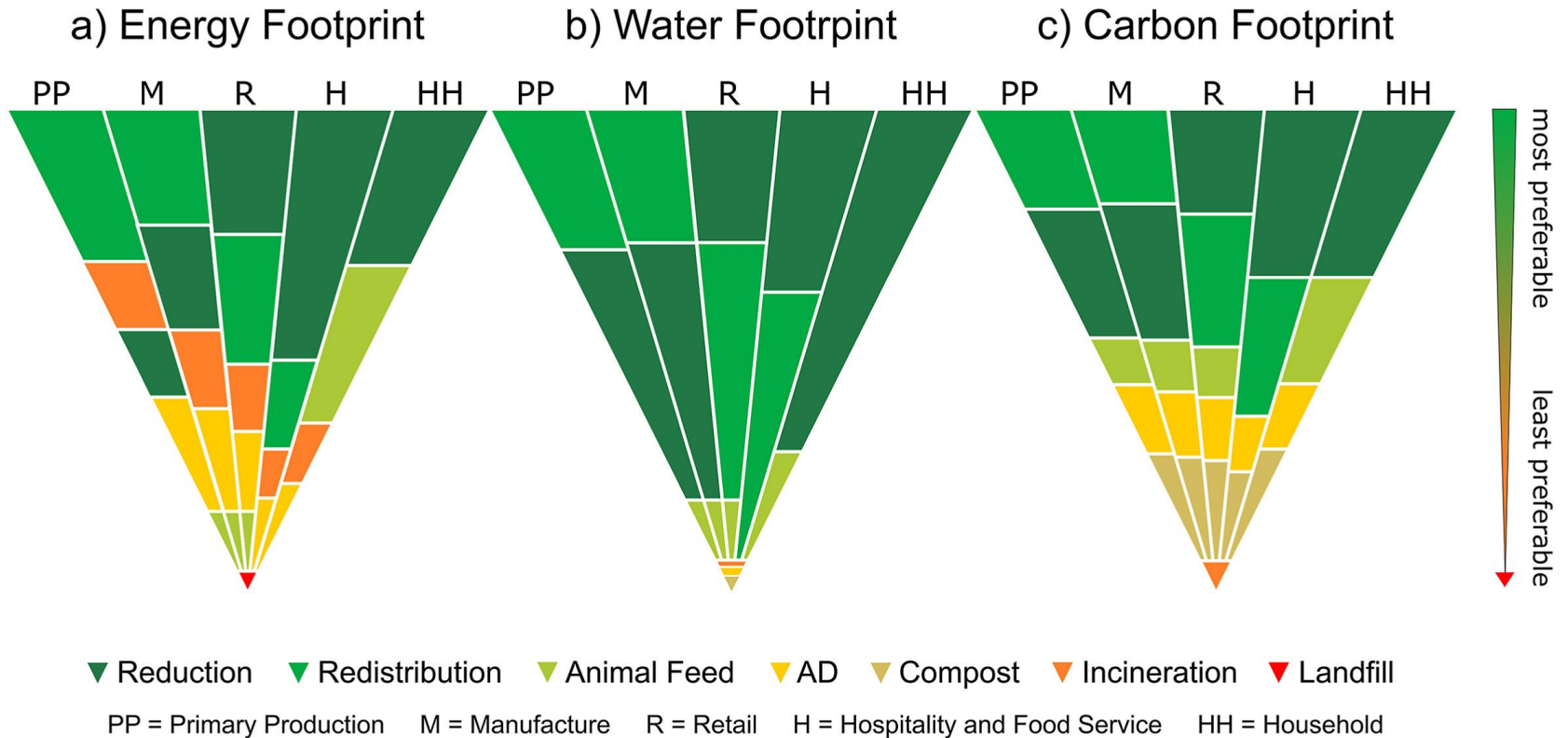


Most Preferable Option

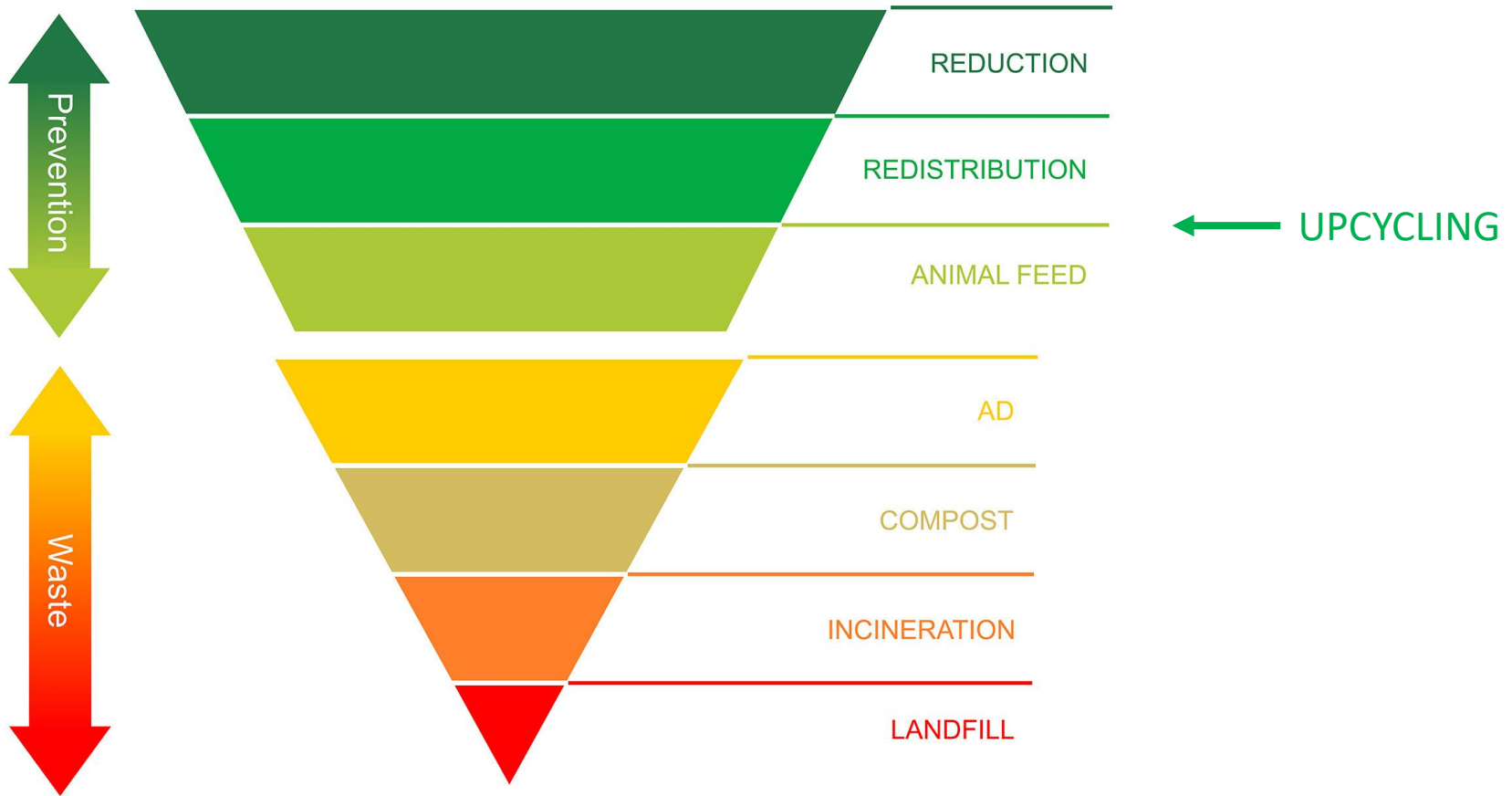


Least Preferable Option

FOOD SURPLUS AND WASTE HIERARCHY BASED ON:

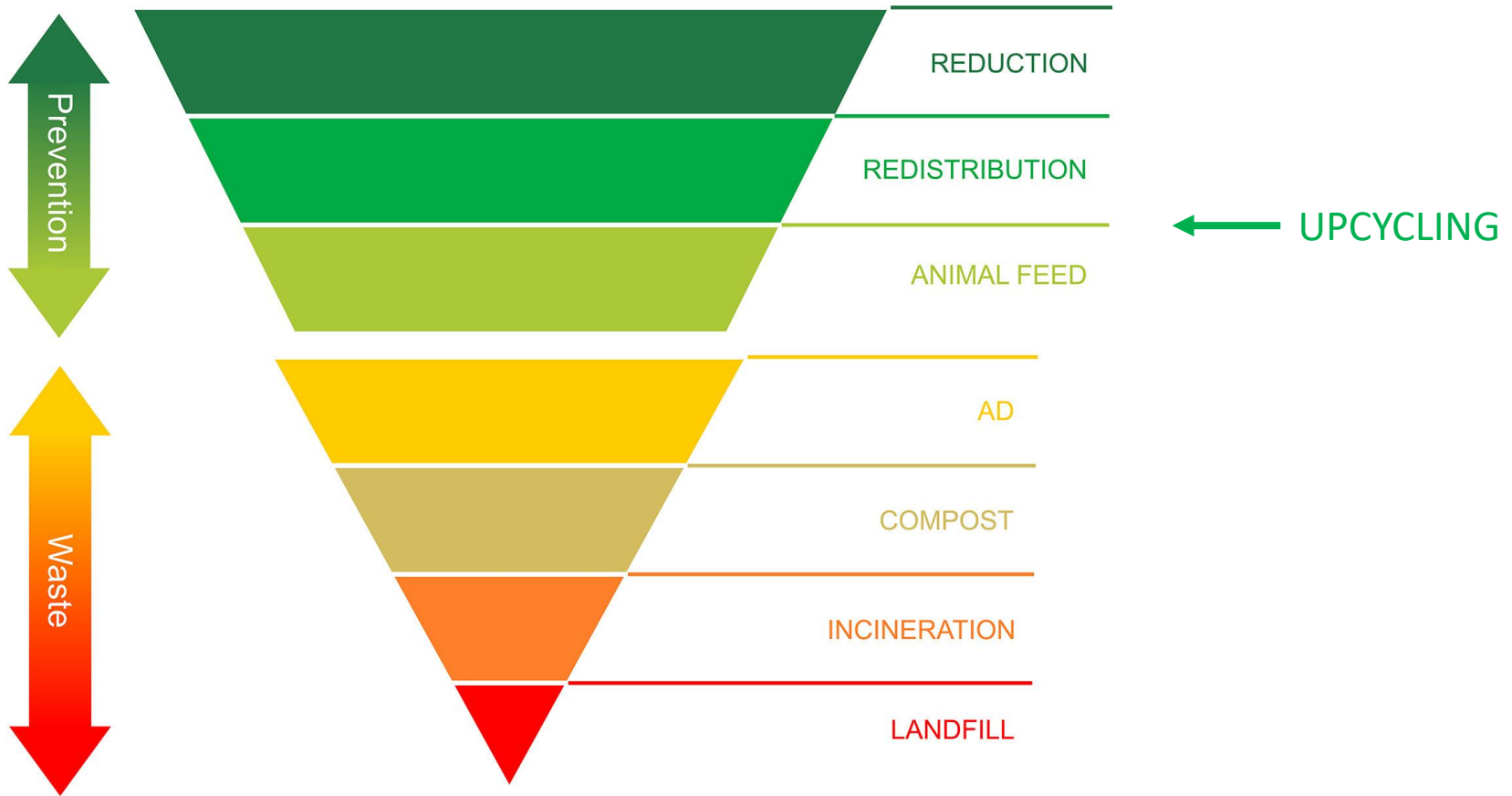


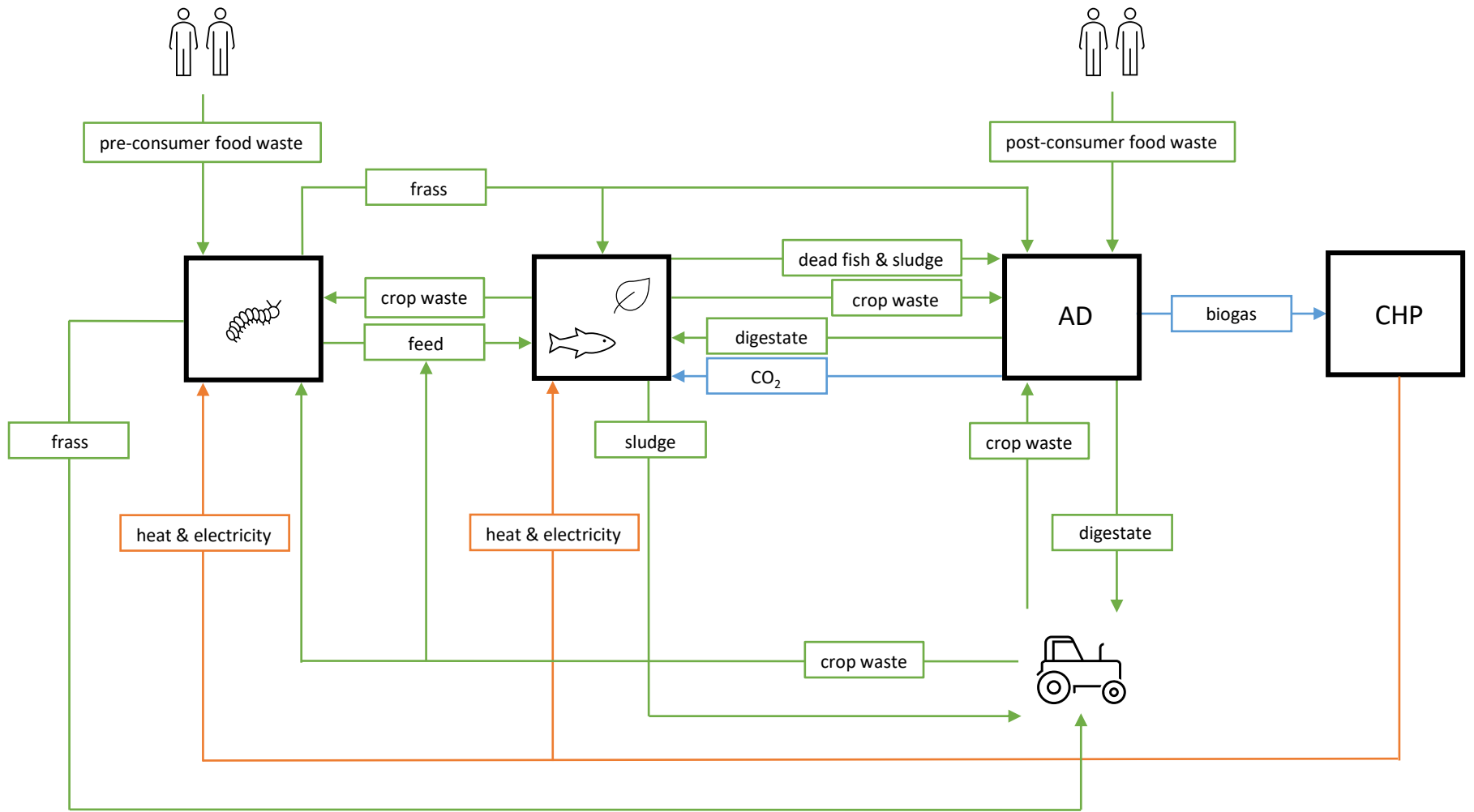
Food Surplus and Waste Hierarchy





Food Surplus and Waste Hierarchy







Thank you!

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