

Full-Cost Accounting of Food Waste





The Hidden Costs

Nadia El-Hage Scialabba, FAO, Rome

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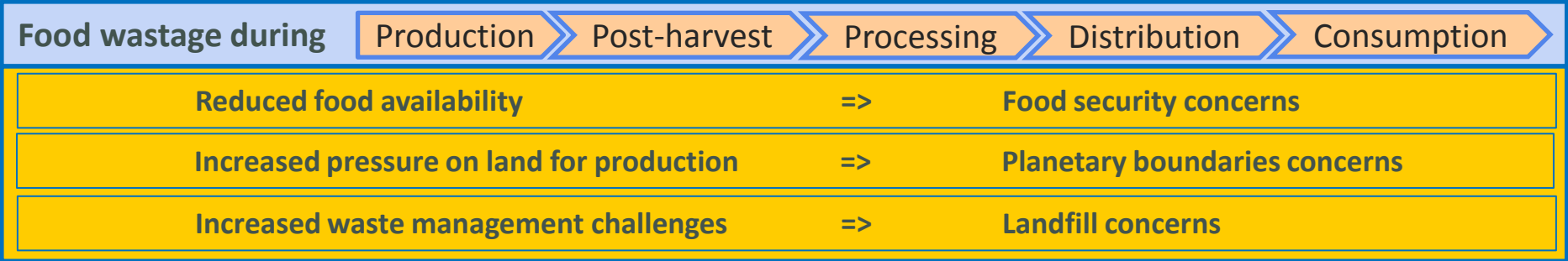


Why is it important?

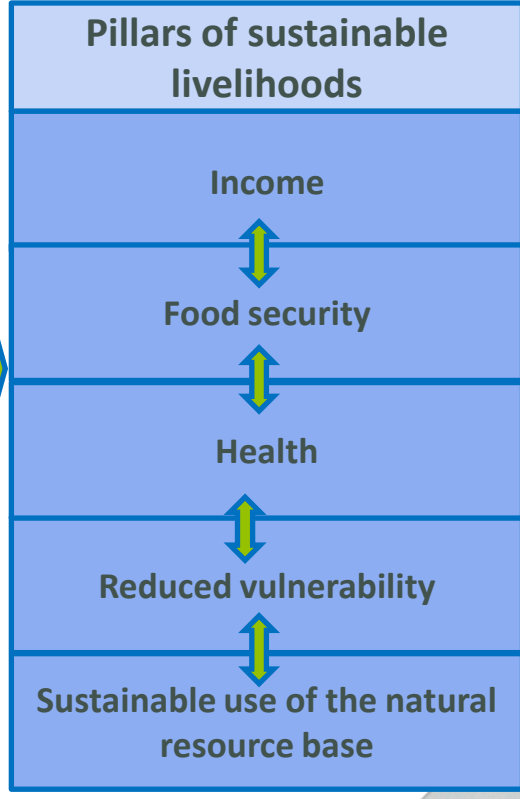
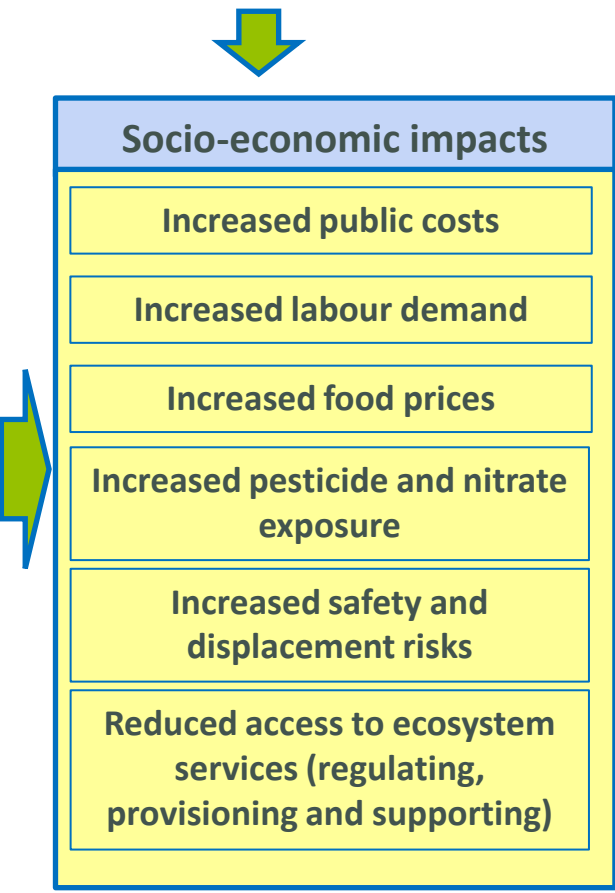
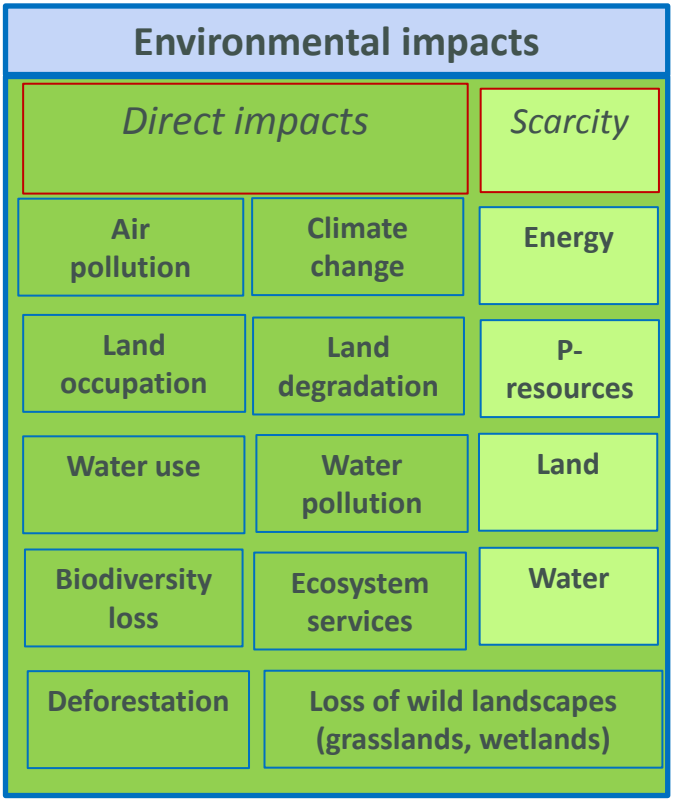
-  The economic loss incurred by food wastage has not triggered the necessary investments to reduce it, despite decades of FAO assistance on post-harvest losses and much knowledge
-  At the retail and consumer levels, it is economically more “profitable” to waste food than preventing it
-  Full-cost accounting seeks to lower the “profitability” of unsustainable production and consumption practices by monetizing environmental and social externalities
-  Awareness on the societal costs can inform decision-makers on the actual contribution of ecosystems to human wellbeing

Full-Cost Accounting of Food Waste

Framework



Loss of productivity ↑ Direct and indirect impacts ↓



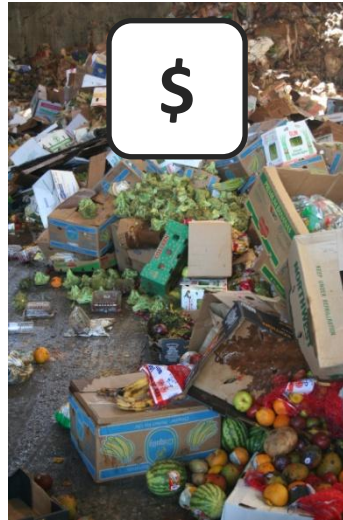
Economic impact



Economic quantification of 1.3 Gt of food waste

If using producer prices
(FAOSTAT, 2009)

USD 750 billion / year <



If using trading prices
(TRADESTAT, 2005-2009)

< USD 845 billion / year

This cost is much higher if socio-environmental costs are considered



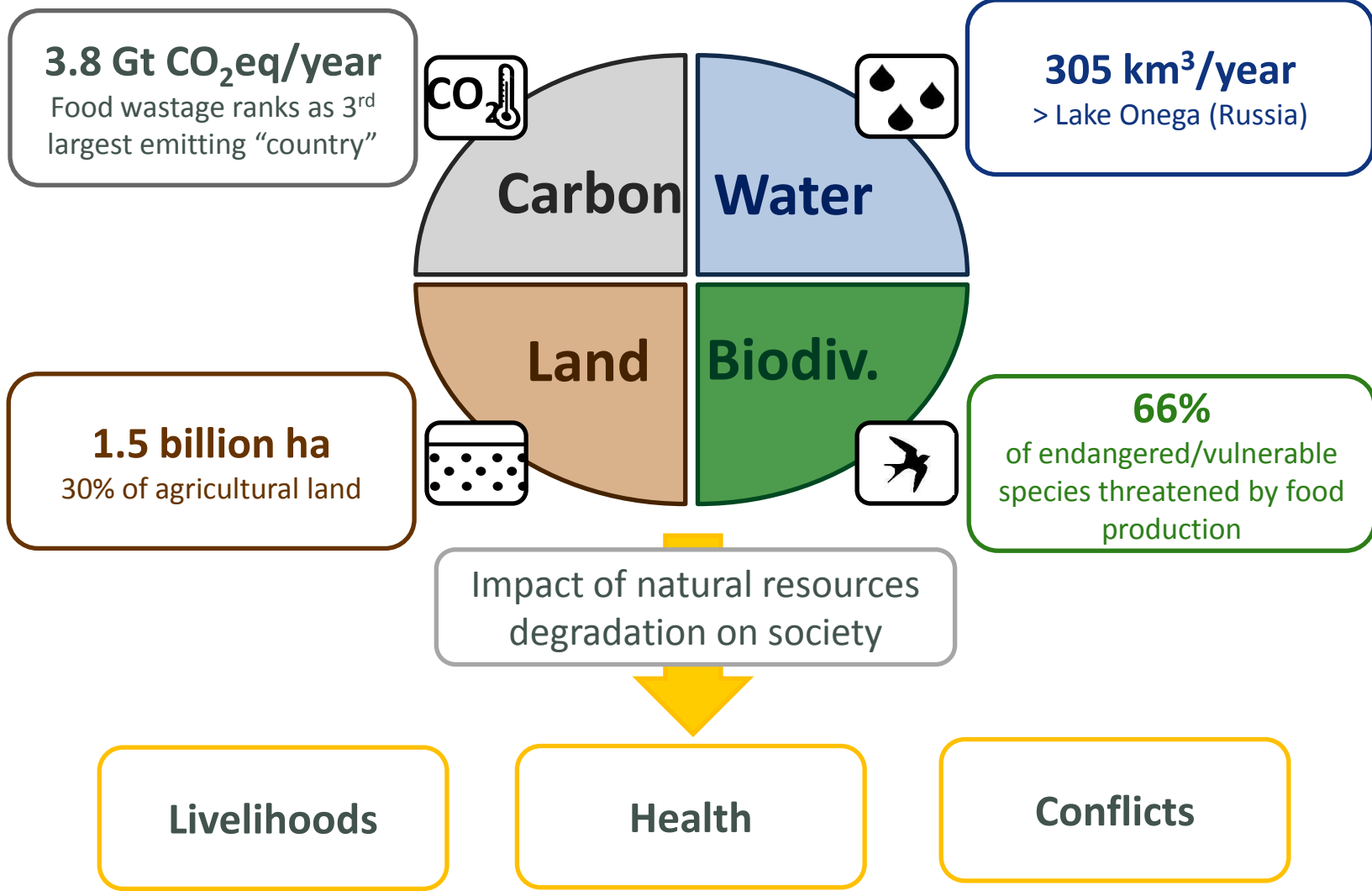
Full-Cost Accounting of Food Waste



Environmental and related social impacts

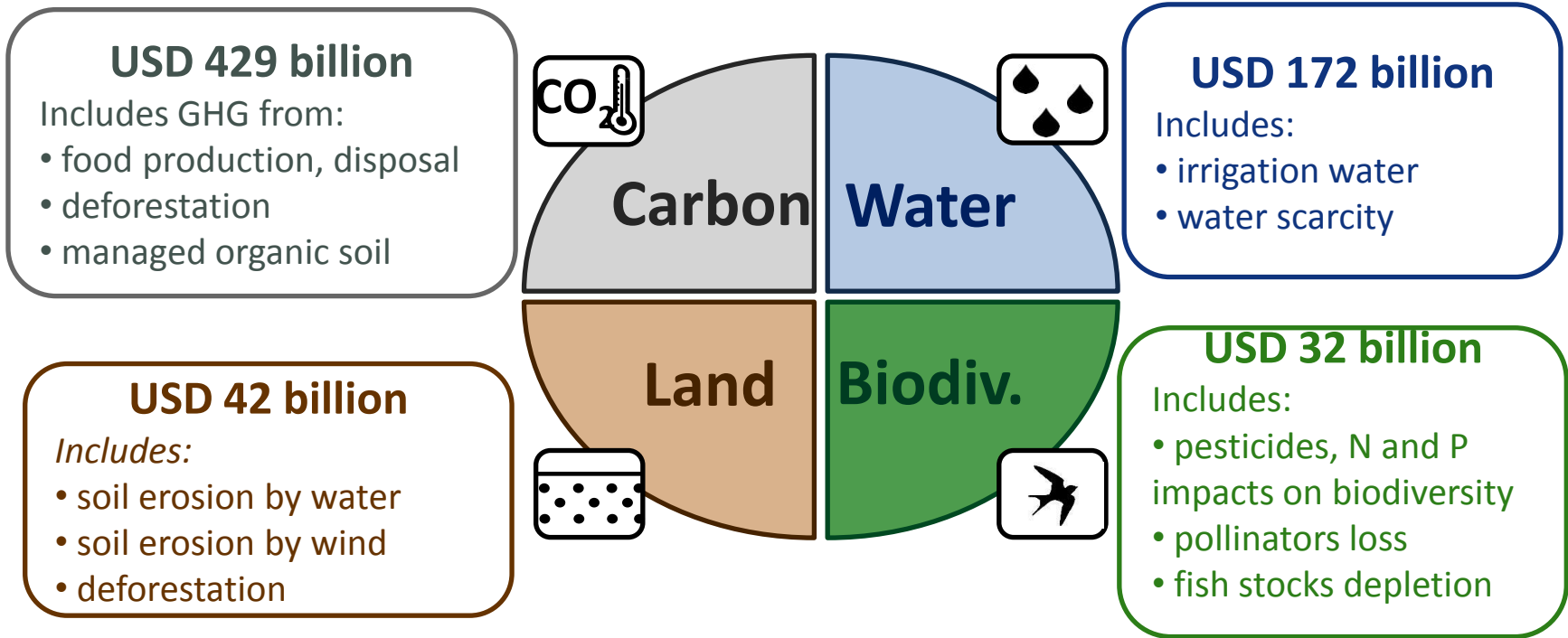


1.3 Gt of food wastage/ year



Monetization of environmental impacts

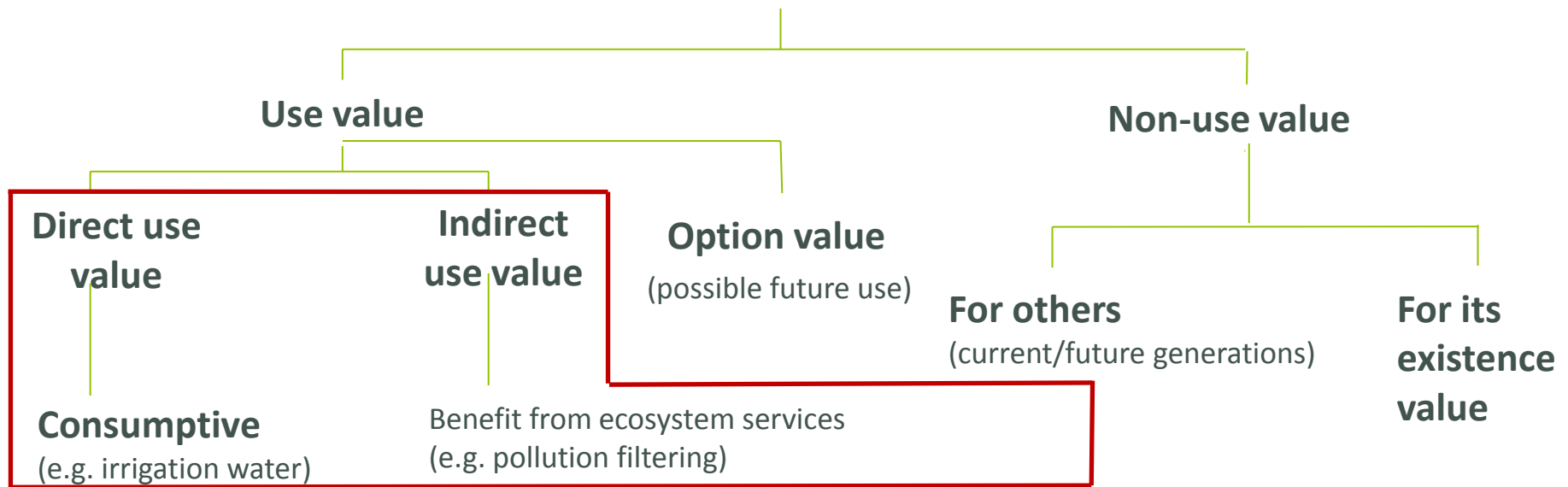
Natural resources used by food waste cost more than USD 675 billion



... and still, not all the environment costs have been accounted for, such as grassland degradation, loss of species and ecosystem services



Total Economic Value (TEV) approach



Non-Consumptive
(e.g. recreation)

Scope of the FWF study: mainly damage costs (e.g. cost of cleaning pesticides in water) but also social cost of carbon (e.g. property damages due to climate extremes) from consumptive use of natural resources

Well-being valuation



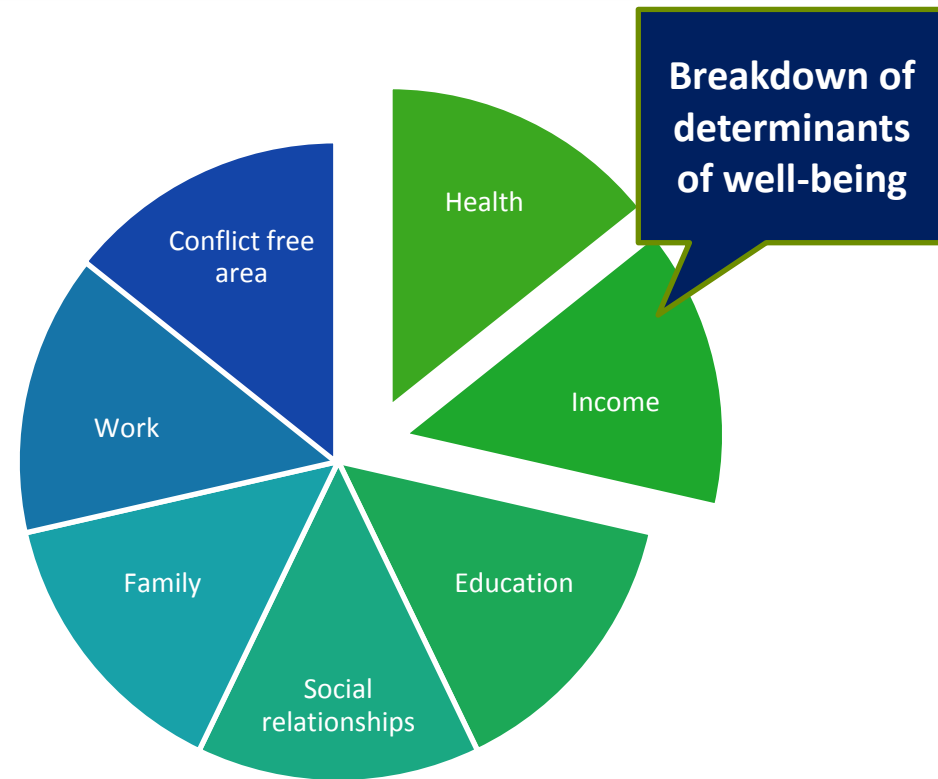
Health damages: impact on quality of life of affected individuals (secondary health expenditures, death and impact on relatives and GDP)



Livelihood loss: individual quality of life through income loss and food insecurity



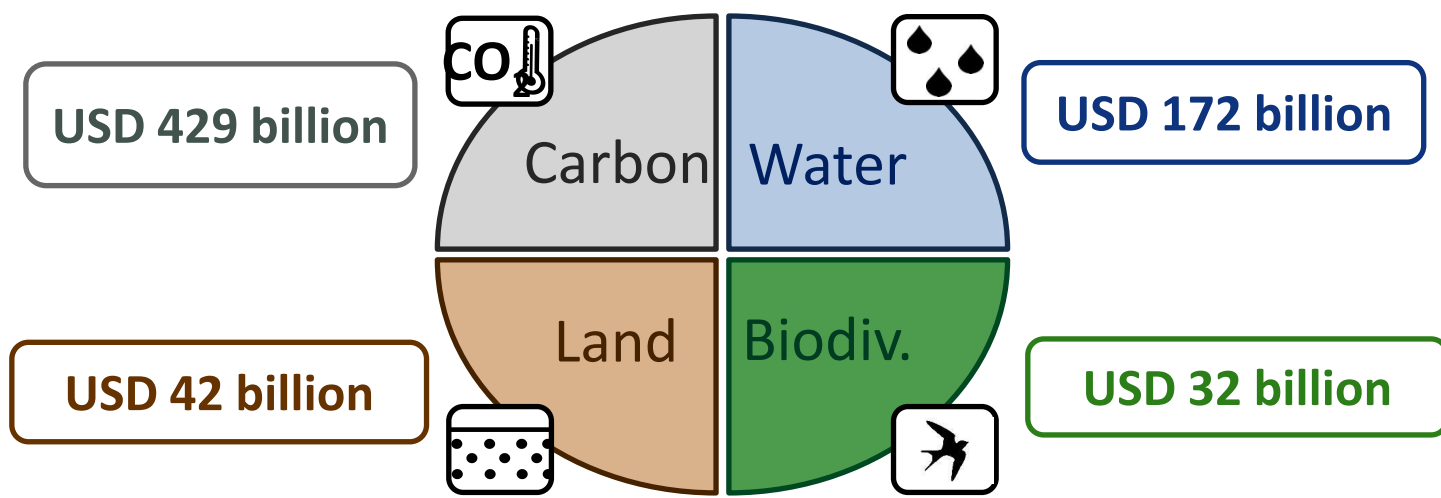
Conflict: quality of life of injured and indirect victims (death, damage to the environment and loss of capital and GDP excluded)



Well-being Valuation estimates the amount of money to compensate individuals, using data from the World Values Survey in 57 countries (2005-2008), the British Household Panel Survey data (since 1991) and Uppsala University Conflict Data Programme (since 1970)

Full-Cost Accounting of Food Wastage

Environmental, social and economic costs



Natural resources degradation

USD 280 billion
Livelihoods
(due to water erosion)

USD 150 billion
Health
(due to pesticides)

USD 390 billion
Conflicts
(due to water erosion)

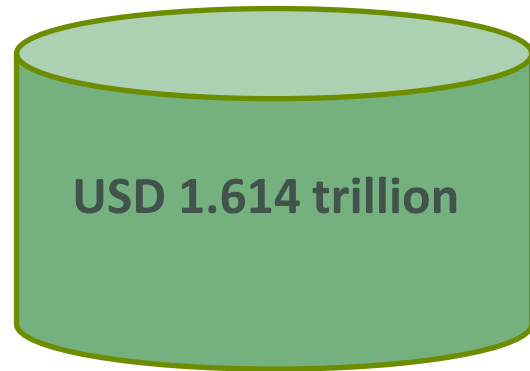
Subsidies (OECD countries) USD 119 billion

Market price USD 845 billion

Total costs



Hidden costs are twice the market price of food wastage



Socio-environmental costs
(understated)



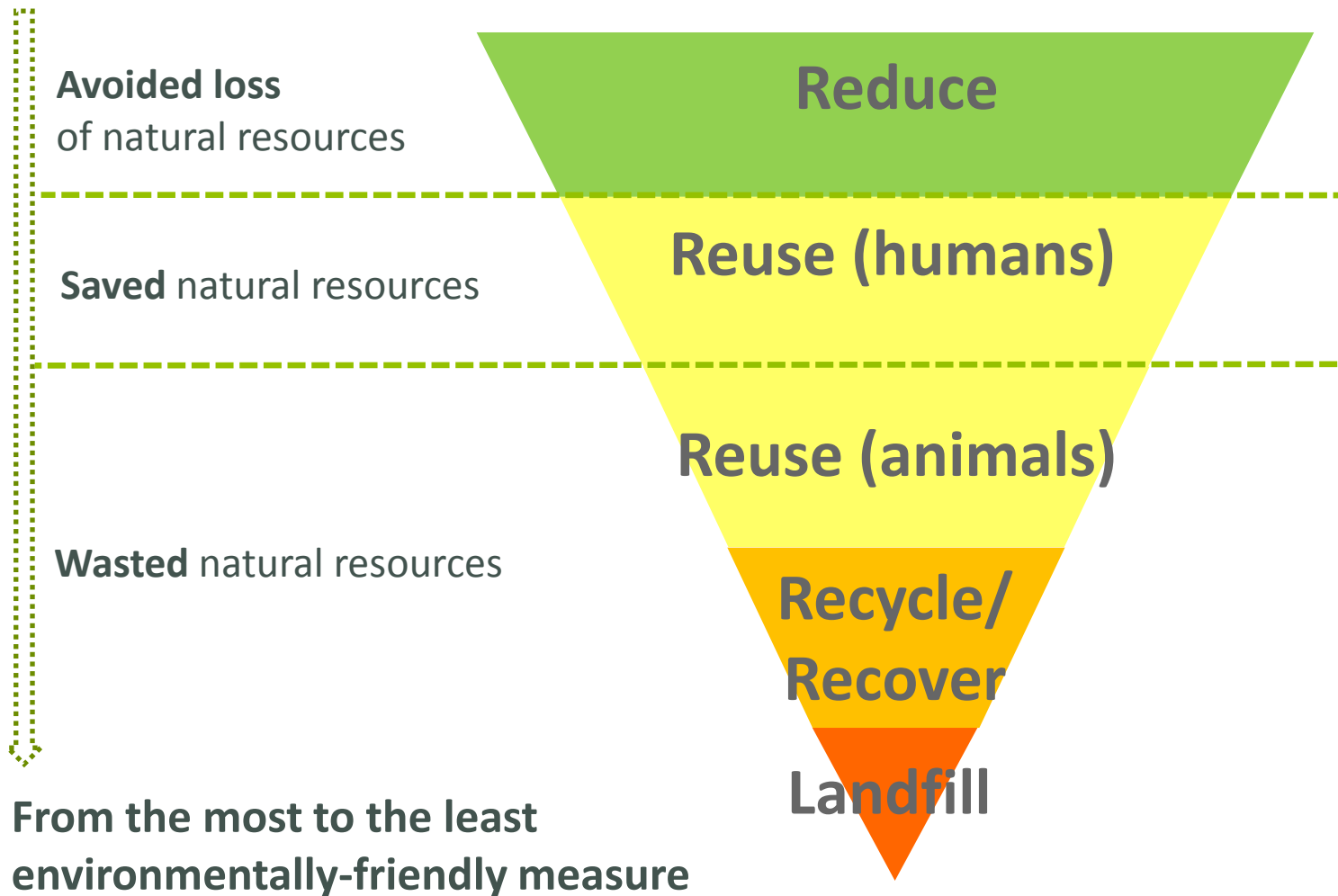
Market price



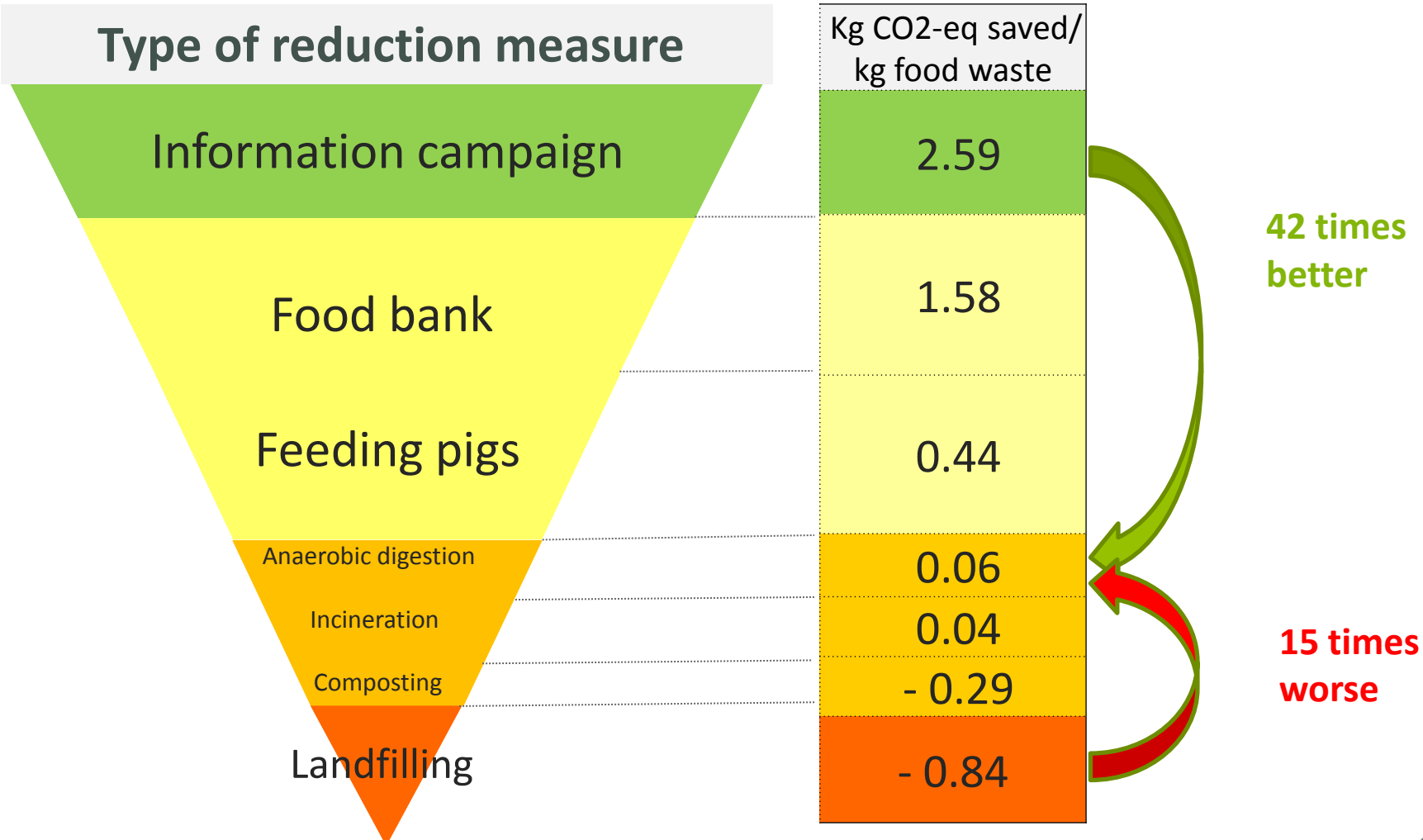
Total: USD 2.46 trillion

Reduction measures






Hierarchy of food wastage reduction measures on the environment



GHG impact of reduction measures



Conclusions

-  Externalities surpass the economic production value of food wastage ... findings give a sense of market distortions
-  Understanding the full-cost of food wastage promotes action to mitigate impacts on natural resources and well-being
-  The impact of food wastage on the environment, people and the economy calls for cross-sectoral cooperation to reduce it
-  Pre-waste action should be a priority over post-waste solutions
-  Where investment potential is limited, wastage reduction measures should target high impact commodities (e.g. meat)

THANKS

www.fao.org/nr/sustainability/food-loss-and-waste



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