

# The Potential Contribution of Waste Management to a Low Carbon Economy

ACR+ Conference, Committee of the  
Regions

12<sup>th</sup> January 2015

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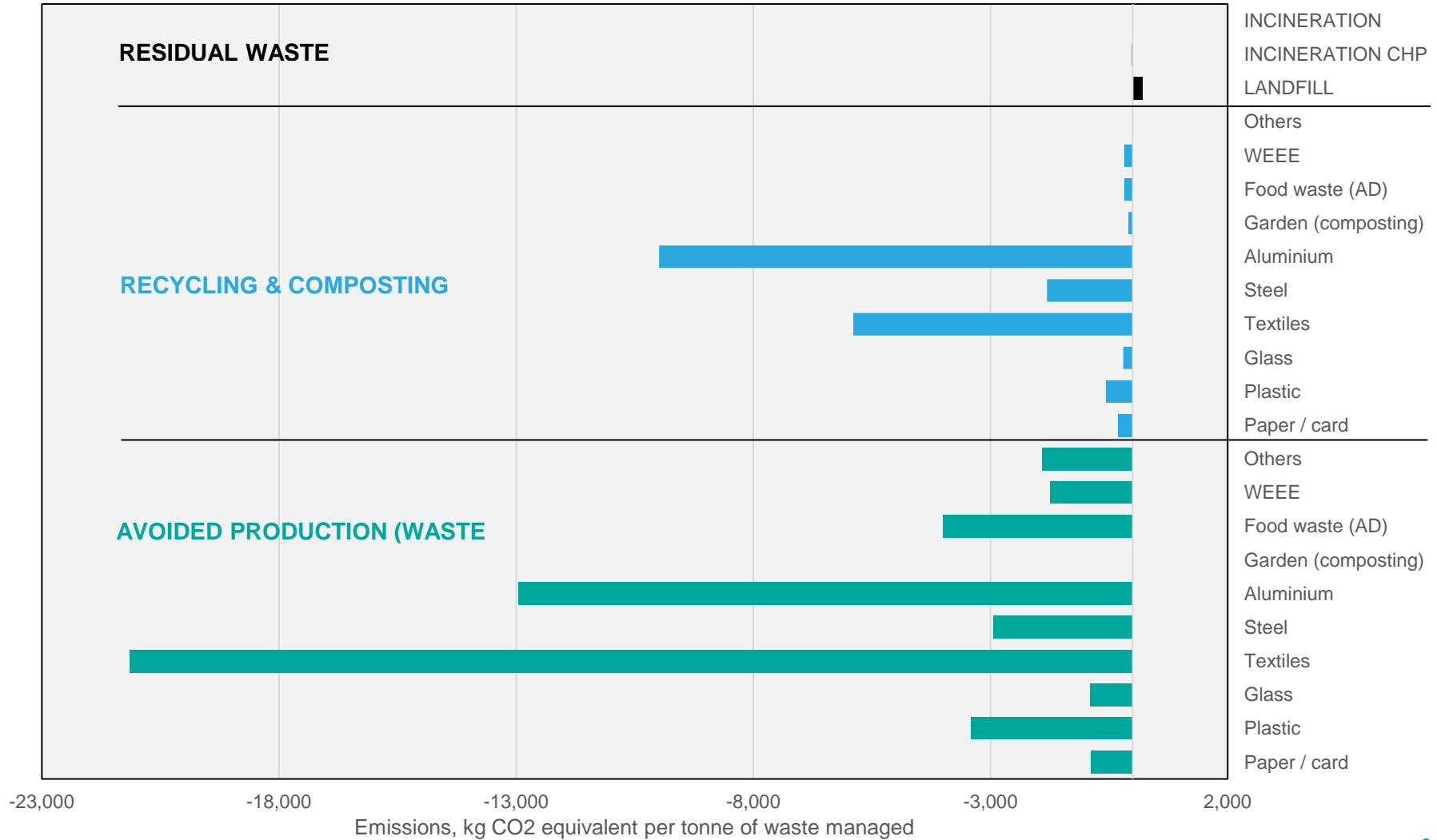
**Chairman**

**Eunomia Research & Consulting Ltd**

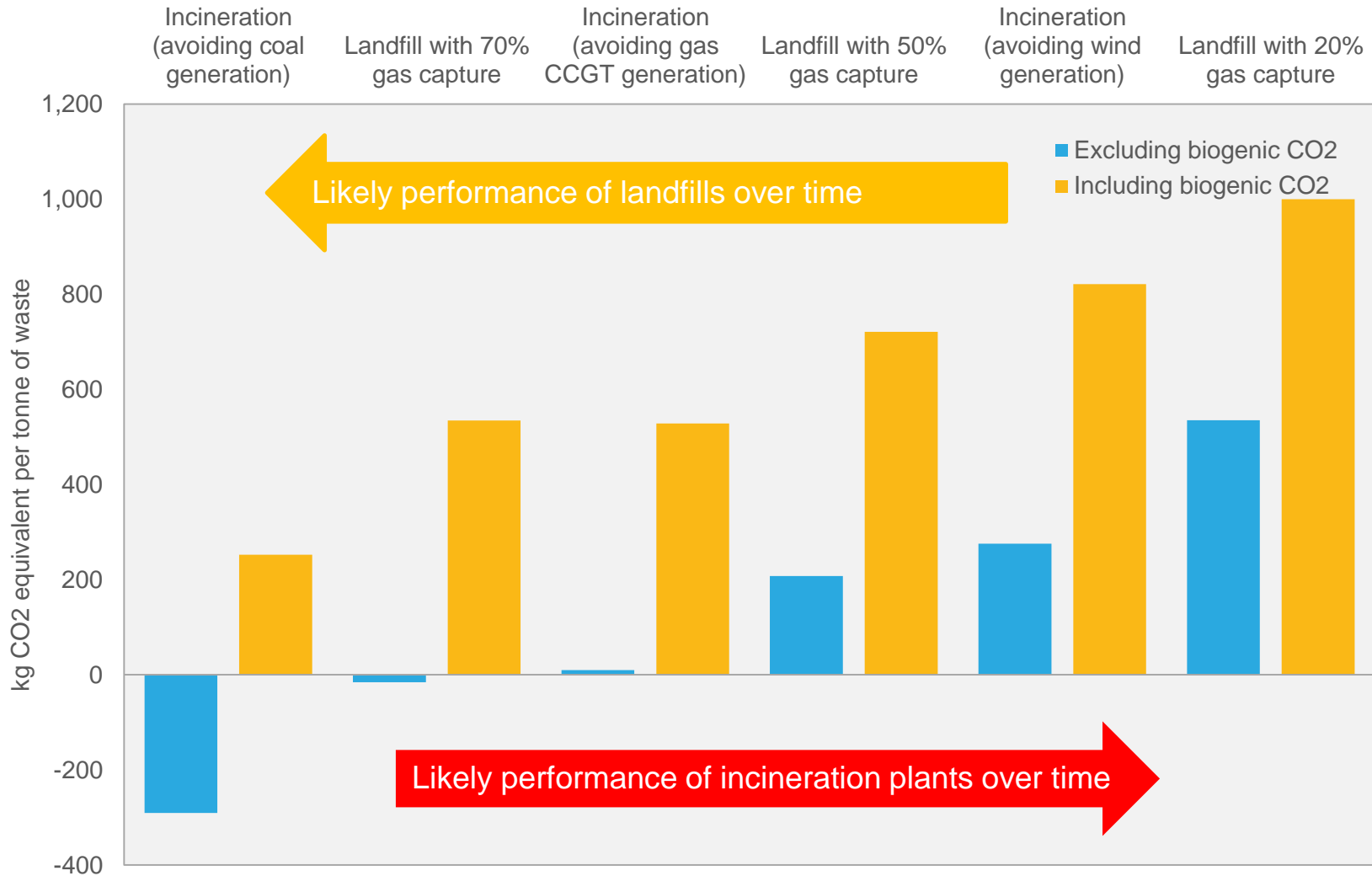
# Background to the Study

- 1. Commissioned by Zero Waste Europe**
- 2. In partnership with**
  - 1. ACR+**
  - 2. Zero Waste France**
- 3. Supported by LIFE financial instrument**

# GHG Impacts

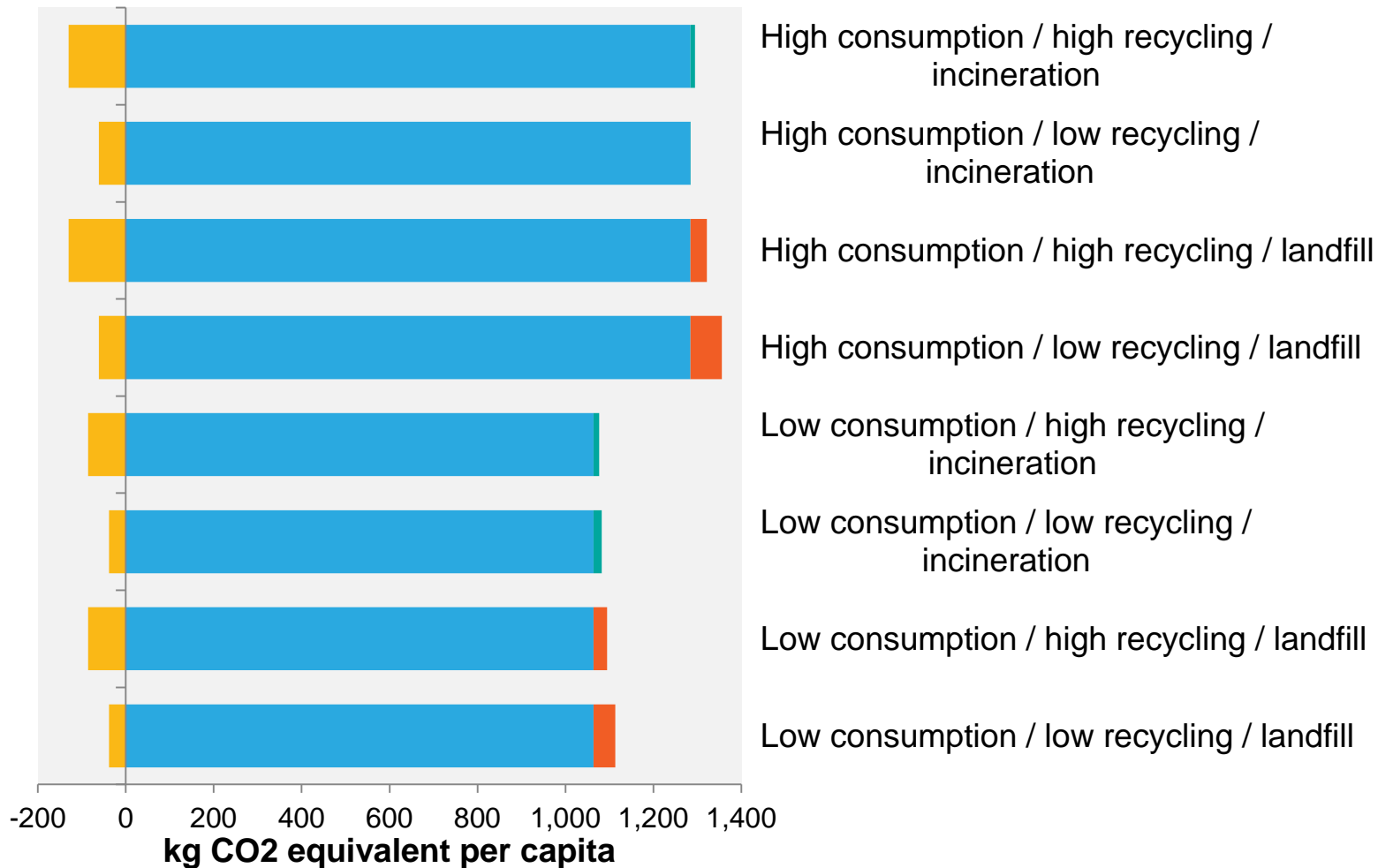


# Residual Waste Treatments



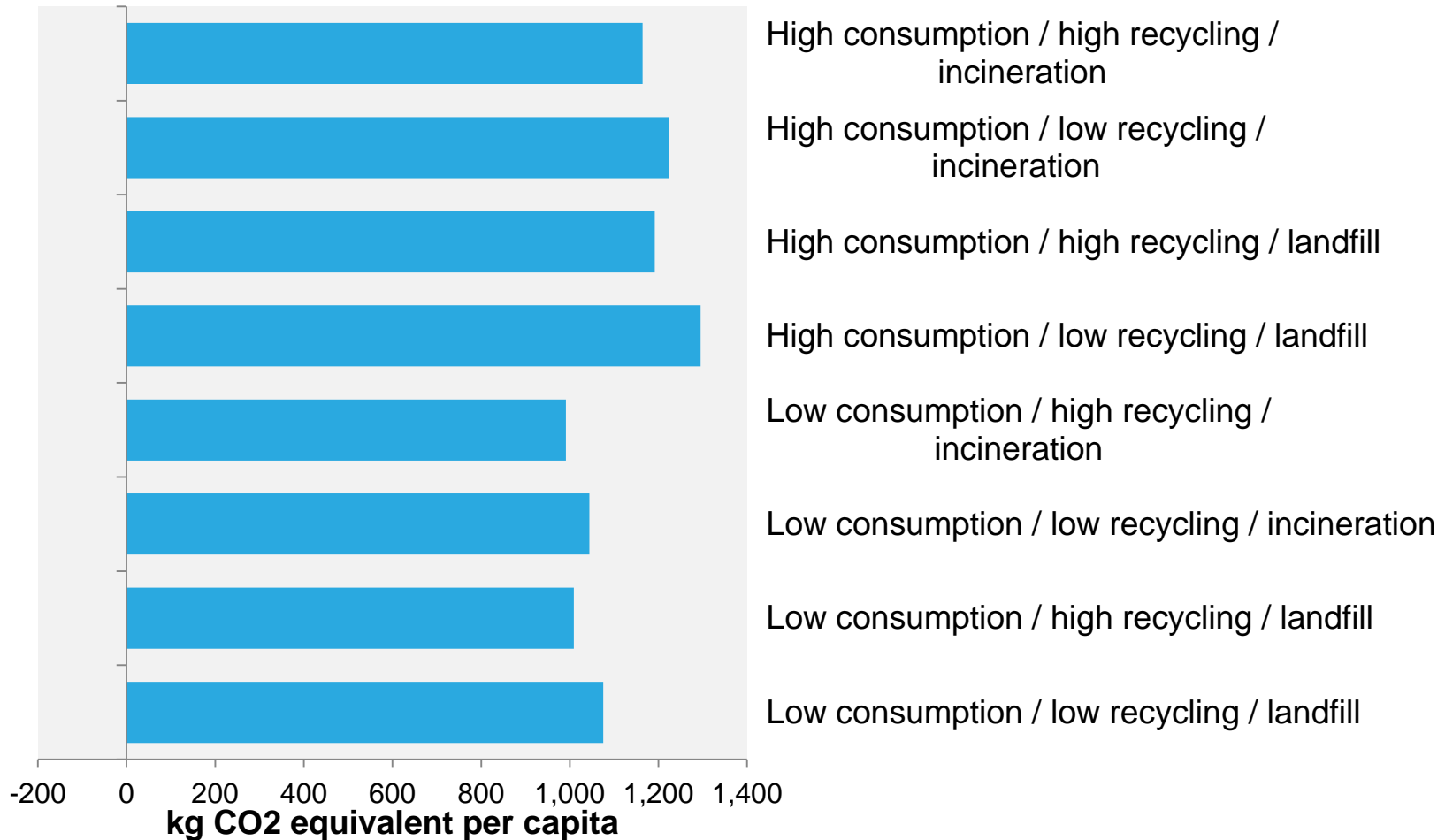
# Scenarios

■ Production ■ Recycling ■ Incineration ■ Landfill



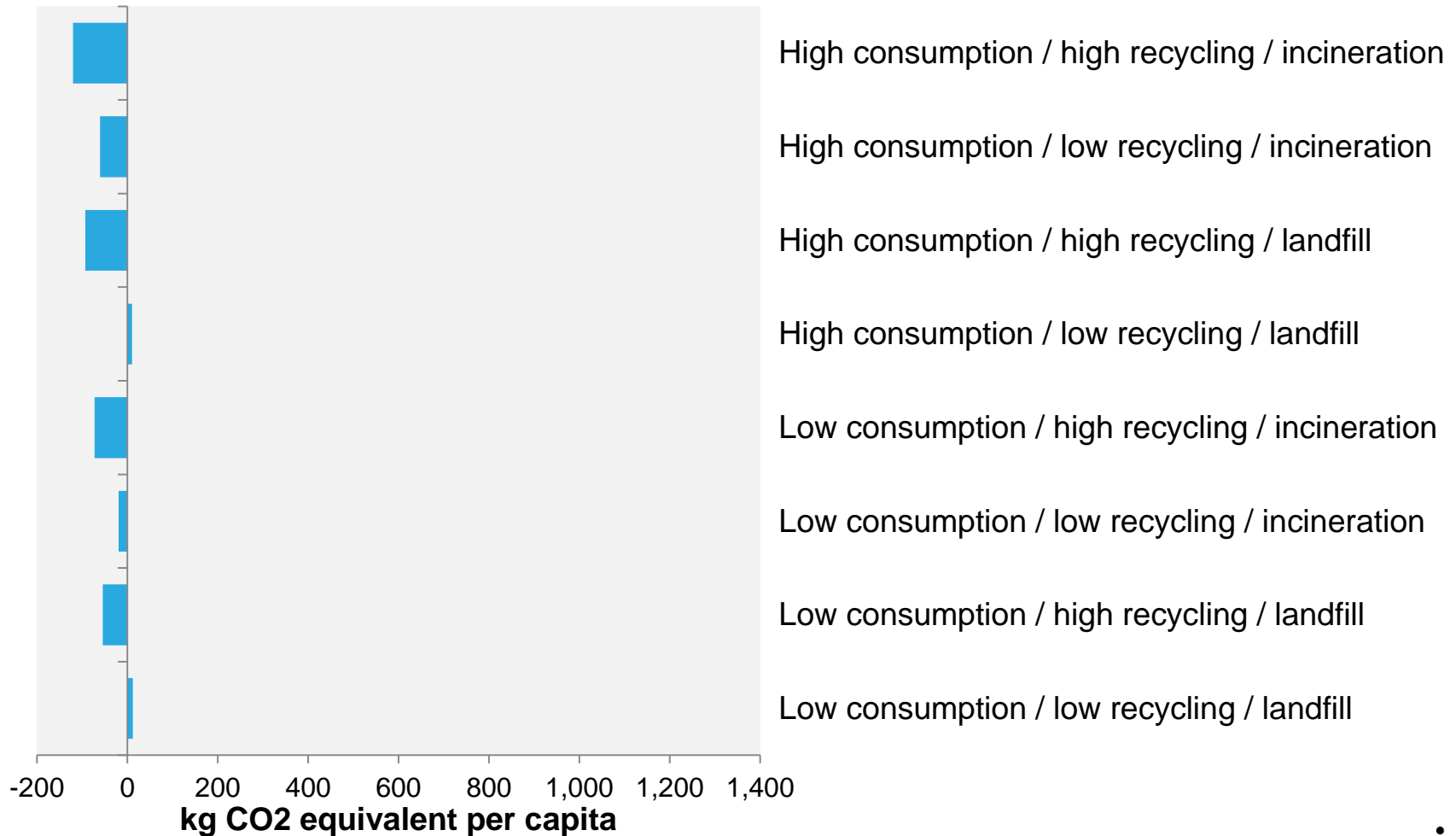
# Scenarios

■ Consumption and end-of-life management, kg CO2...

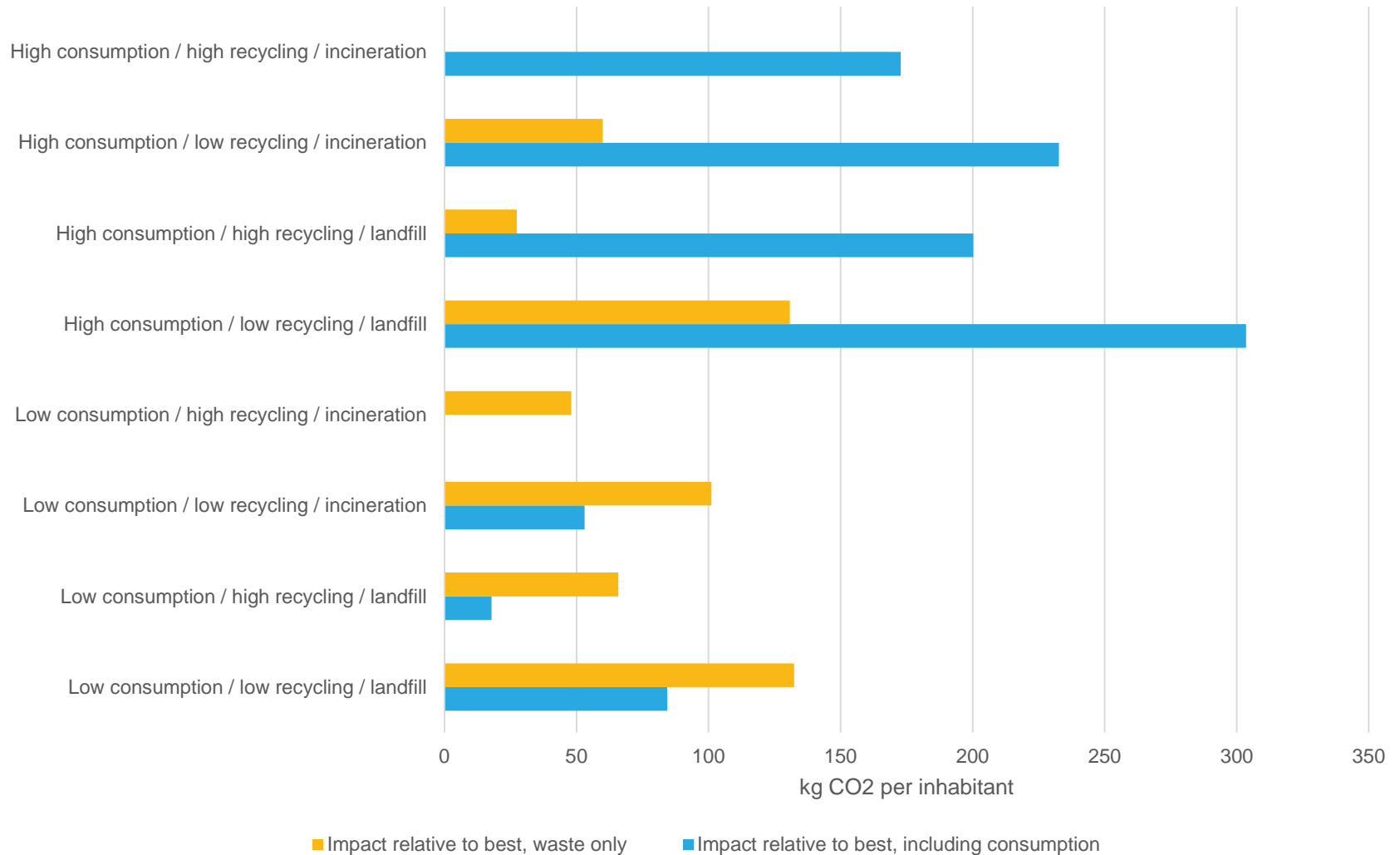


# Scenarios

■ End-of-life management only, kg CO2 eq per person



# Scenarios





# Recommendation 1

- 1. Waste policies should be designed to manage waste in the upper tiers of the waste hierarchy (i.e. recycling or above)**

# Recommendation 2

**2. Indicators of waste management performance should shift from ‘how much is landfilled?’ to ‘how much residual waste is generated?’**

**(note CE package – Art 9 of WFD proposal)**

# Recommendation 3

- 3. The implementation of blanket bans on the landfilling of waste should be resisted. Since, for materials widely found in mixed residual waste, material-specific landfill bans are not enforceable, the focus should be on measures to encourage, or mandate, the separation of waste for preparation for reuse or recycling**

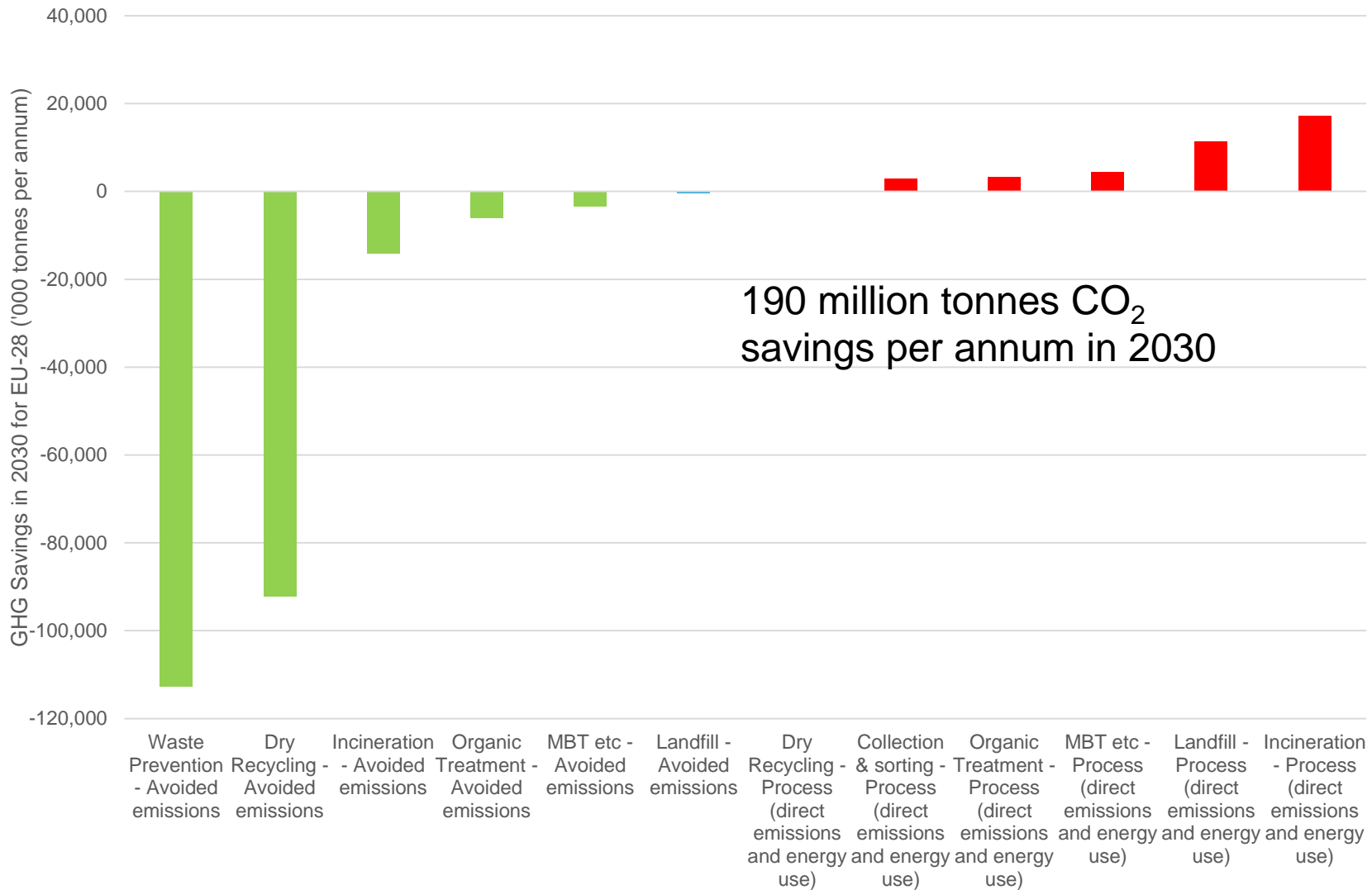
# Recommendation 4

- 4. Member States should reconsider their support mechanisms for renewable energy: in particular, they should immediately discontinue support for all forms of energy from residual waste. This includes the use of implicit subsidies, such as exemptions from taxes on heating fuels, unless there are ‘balancing’ incineration taxes in place**

# Recommendation 5

- 5. At the same time, it would make sense to consider the withdrawal of any form of support for the utilisation, directly, of harvested biomass for renewable energy generation / renewable fuels**

# EU-28 – Previous CE Package



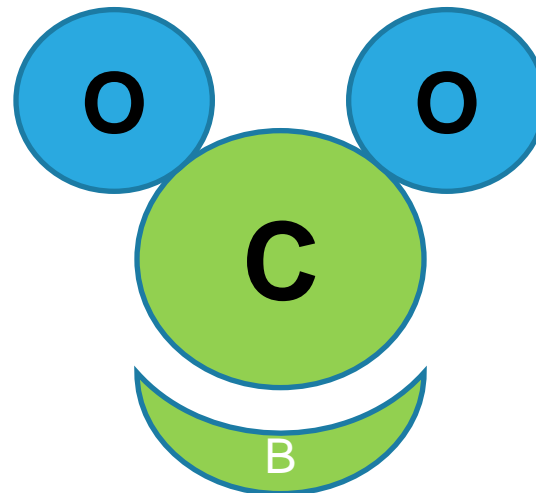
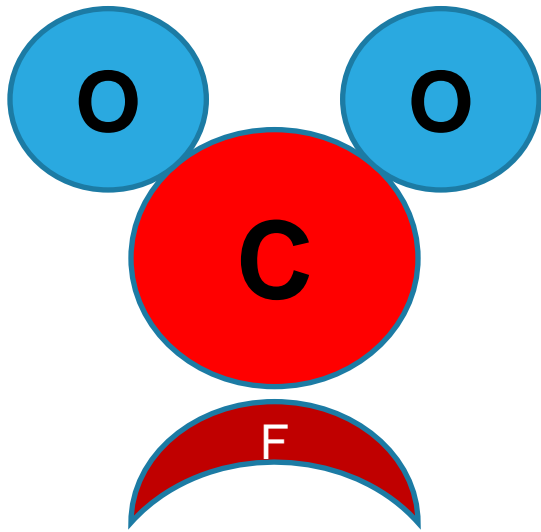
# Recommendation 6

- 6. Consideration needs to be given as to how to integrate 'waste' within the framework of European policies to tackle climate change. One way would be to consider its integration within the EU-ETS. Another would be to consider reinforcing the Effort Sharing Decision, making GHG emission reduction targets with appropriate ambition for the waste sector. Particular attention would need to be paid to ensuring the benefits of recycling and reuse were adequately recognised, even where the recycling and reuse took place in other countries**

# The Source of CO<sub>2</sub>

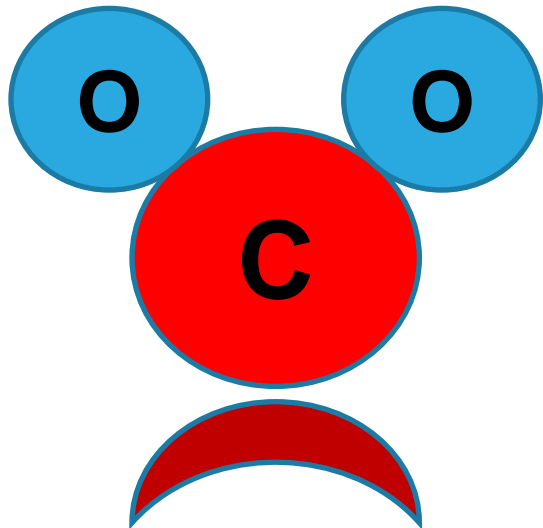
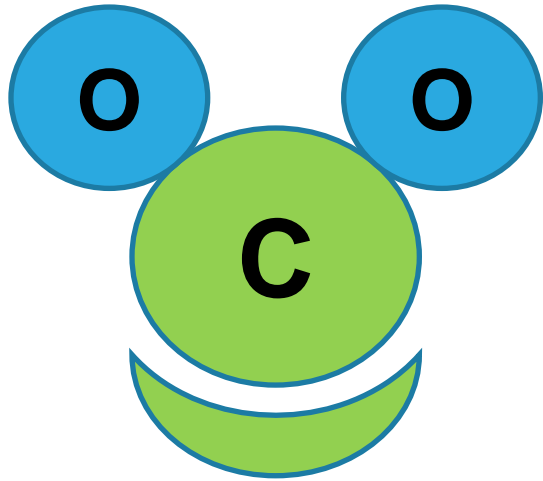
SHALL I WARM UP  
BECAUSE OF YOU?

*ONLY IF YOU'RE A  
MOLECULE OF FOSSIL  
ORIGIN*





# The Source of CO<sub>2</sub>

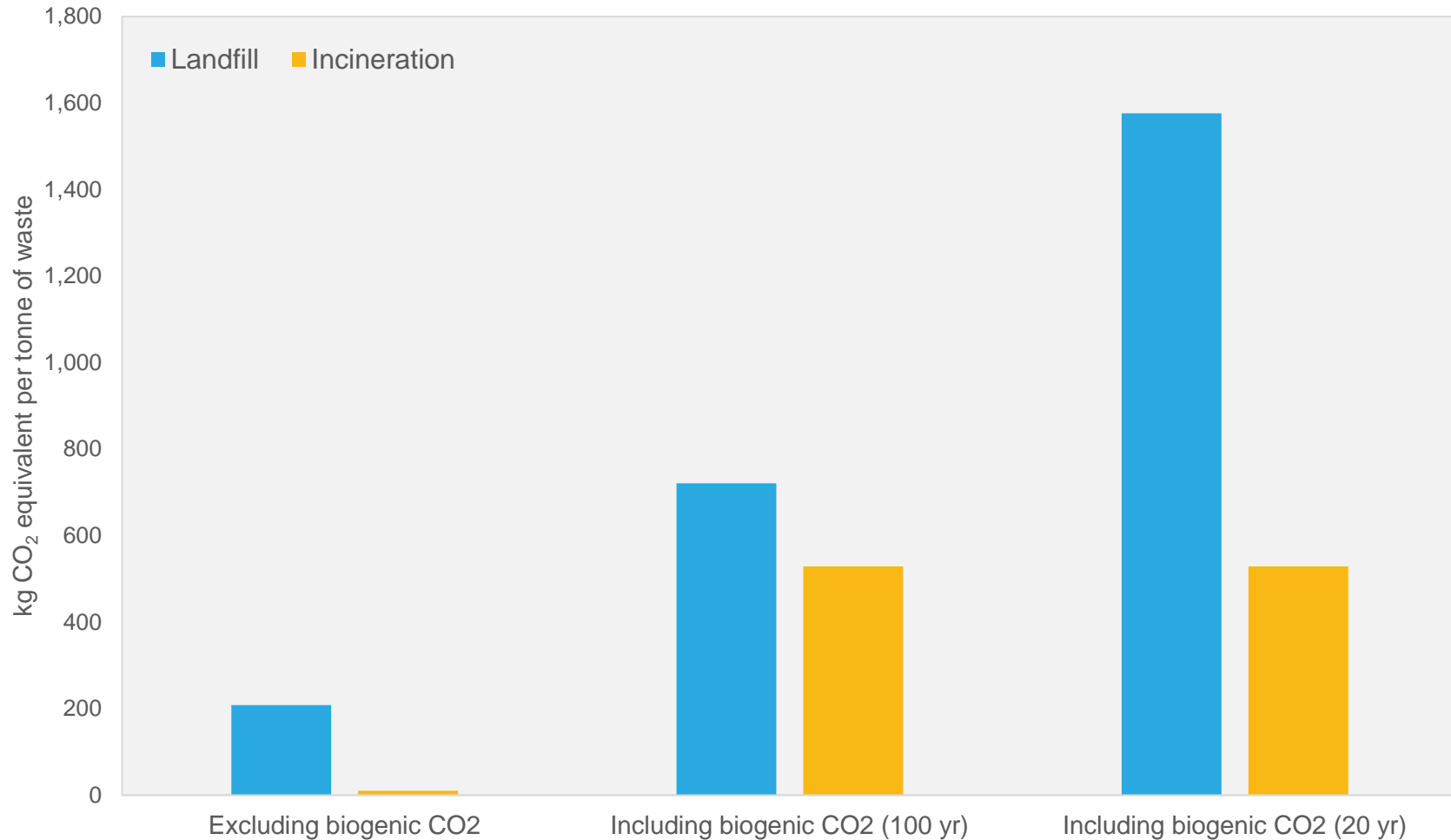


## **RULE:**

IN A COMPARATIVE ANALYSIS, ALL GHG EMISSIONS IN THE AFFECTED SYSTEMS SHOULD BE CONSIDERED, TAKING INTO ACCOUNT THEIR EFFECT ON THE CAPACITY OF THE BIOSPHERE TO ACT AS A SINK FOR GHGs.

IF THE SYSTEMS ARE NOT CHANGING THE CAPACITY OF THE BIOSPHERE TO ACT AS A SINK OR SOURCE, ALL GHG EMISSIONS ARE RELEVANT, IRRESPECTIVE OF THEIR ORIGIN: THE CLIMATIC SYSTEM WILL NOT DISTINGUISH 'HAPPY' AND 'UNHAPPY' CO<sub>2</sub>

# Influence of Biogenic Carbon



# Recommendation 9

- 9. All lifecycle studies engaged in comparative assessments of waste treatments should incorporate CO<sub>2</sub> emissions from non-fossil sources in their comparative assessment**

# Recommendation 8

- 8. Recognising the uncertainty associated with the way in which emissions from the AFOLU (agriculture, forestry and other land use) Sector are accounted for, inventories should include emissions of biogenic CO<sub>2</sub> from incineration (and biomass power plants) until such time as the accounting methods have across countries been assessed in terms of the adequacy of the treatment of this matter**

# Inventories



Mobile Combustion



Waste



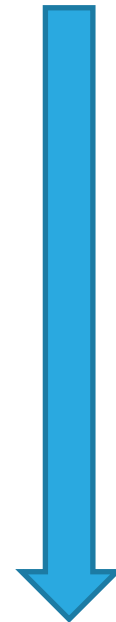
Stationary Combustion



Waste



Waste



Industry?

# Is Recycling Good for your Inventory?

Where is the  
primary raw  
material  
from?



Where is the  
secondary  
reprocessed?

# Is Recycling Good for your Inventory?

	Primary production	Secondary production	Scenario description	t CO <sub>2</sub> eq.
<b>Actual impact</b>	5 tonnes CO <sub>2</sub> eq.	1 tonne CO <sub>2</sub> eq.	ACTUAL GLOBAL IMPACT	-4
<b>Inventory impact</b>	Domestic	Overseas	Primary Production Increases Exports to Compensate for Reduced Domestic Demand	0
	Domestic	Overseas	Primary Production Falls in Line with Reduced Domestic Demand	-5
	Overseas	Domestic	Secondary Production Increases in Line with Increased Availability of Feedstock	1
	Overseas	Domestic	Secondary Producer Reduces Demand for Foreign Feedstock	0
	Domestic	Domestic	Primary Production Falls as Secondary Production Increases	-4
	Domestic	Domestic	Primary Production Remains Constant as Secondary Production Increases	1
	Domestic	Domestic	Primary Production Remains Constant and Secondary Production Remains Constant	0
	Domestic	Domestic	Primary Production Falls and Secondary Production Remains Constant	-5

# Recommendation 7

**7. In the short-term, and in the absence of a move to consumption-based inventories, it would be helpful to include:**

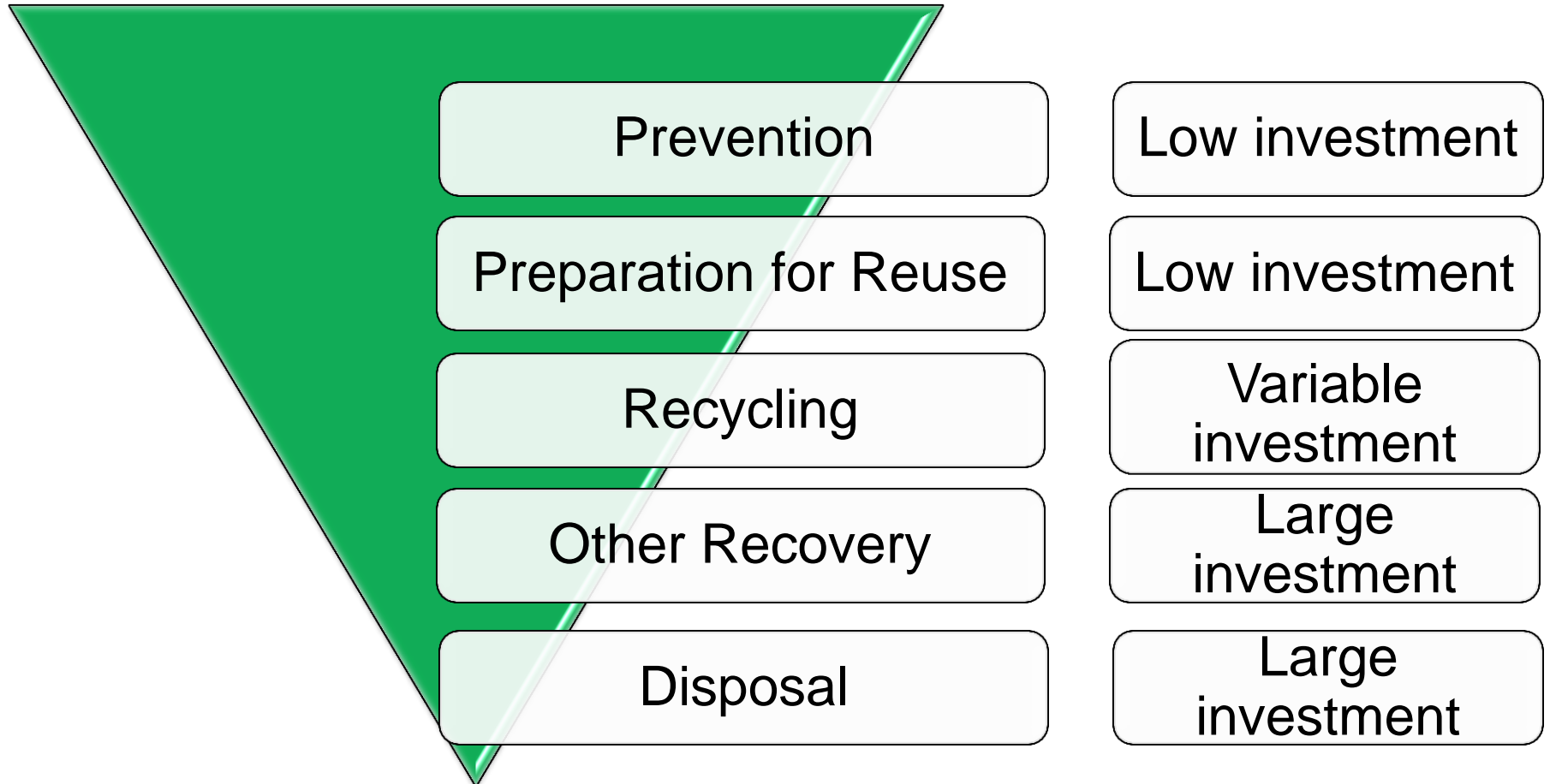
- as an addendum to the ‘waste’ section of the inventory, the estimated GHG effects of recycling (including where materials collected for recycling are exported), and
- in the Industry chapter, the extent to which industries make use of recycled materials (and the implied level of emissions saving).



# Recommendation 10

**10.** In the longer term, it would be preferable to move towards consumption based inventories. The information requirements might be significant (although, arguably, if other countries are gathering appropriate inventories, it should be possible to do this)

# The Hierarchy as Viewed by FIs



# Recommendation 11

**11. Regional funds (and funding from international financial institutions) urgently need to reconsider their funding of waste management projects**



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*Report downloadable from:*

<http://www.zerowasteeurope.eu/downloads/the-potential-contribution-of-waste-management-to-a-low-carbon-economy/>