



# The implications of food waste generation on climate change: A case study from Greece

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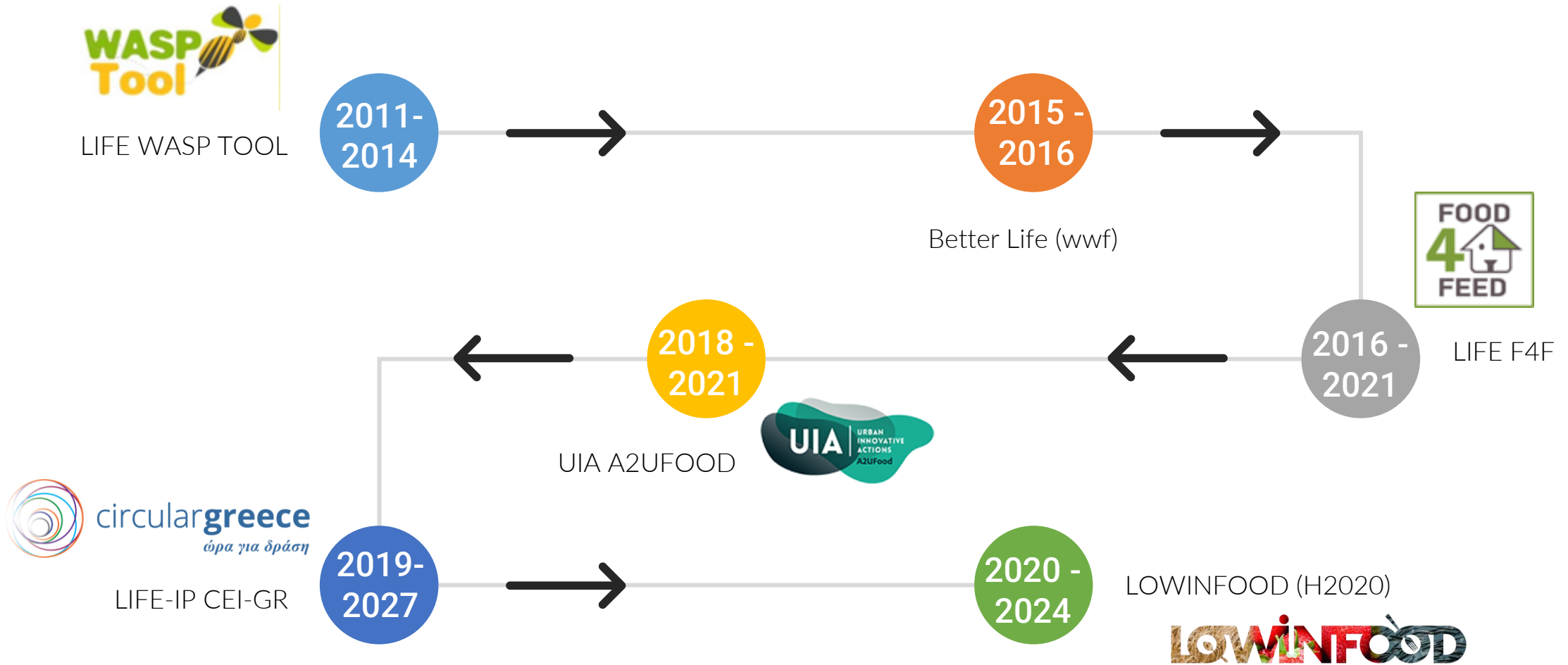
ΧΑΡΟΚΟΠΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ  
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## Research group: Sustainable Environmental Management & Technology (SEM&T)

Harokopio University is a dynamic Greek University, specialising on issues related to the quality of life, spanning the full spectrum of Sustainability, Resource Efficiency, Waste Management and Circular Economy. Its peer-reviewed journal publications and projects per academic staff ranks it among the three top academic institutes in Greece.



# Projects timeline



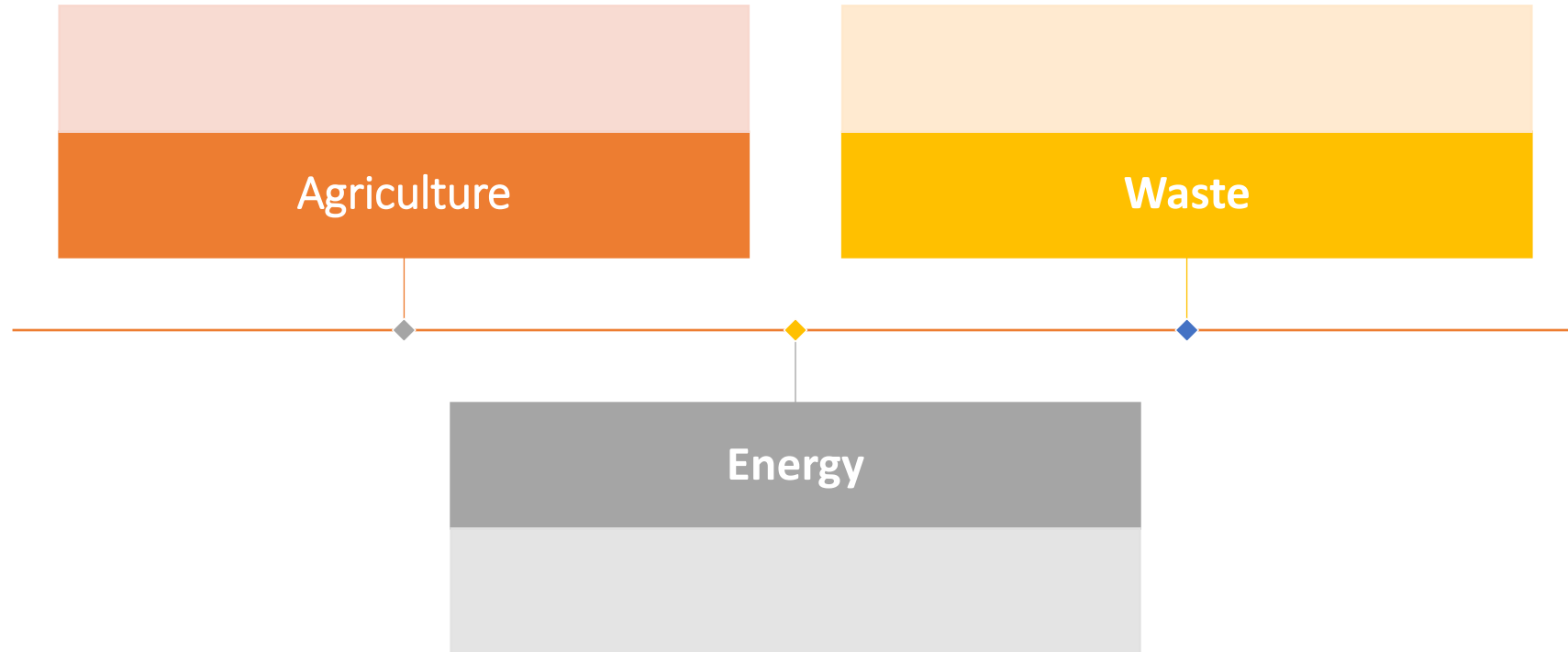


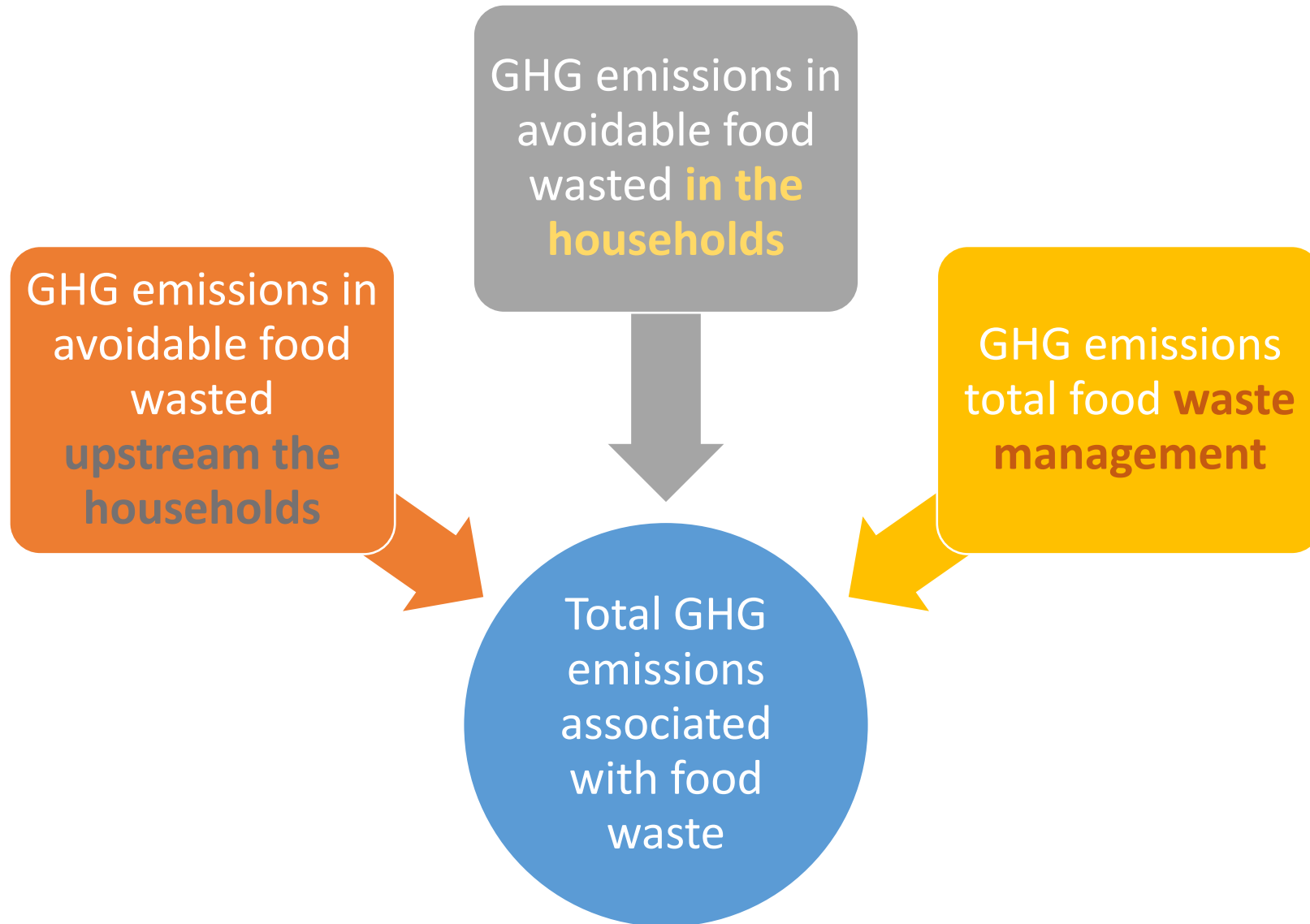
# Objective

The estimation of the GHG emissions associated with food waste generation in Greece



# Life Cycle GHG Implications of food





# Sources of data

1

Food waste generation diary

2

FAO food balance sheet for Greece 2009

3

Food GHG databases

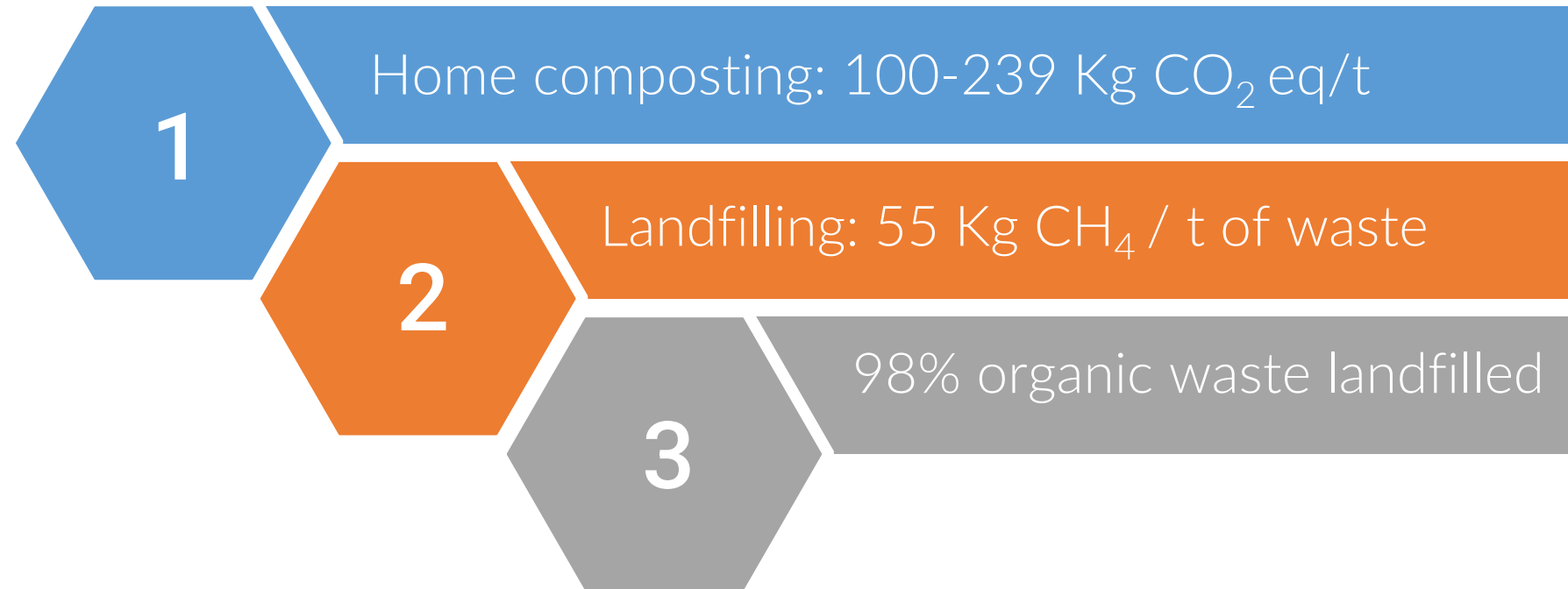
4

Peer-reviewed literature

# Calculation procedure





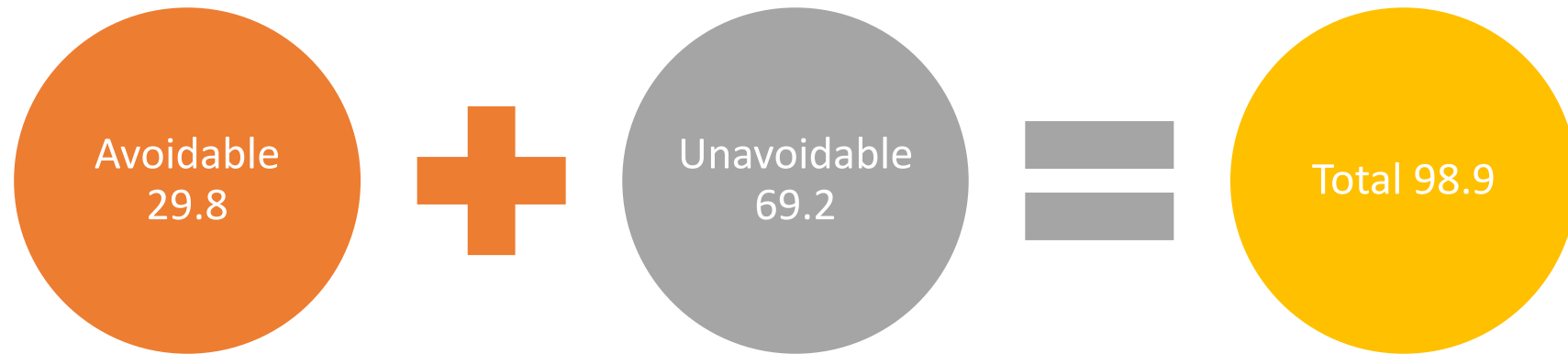


# Waste management factors

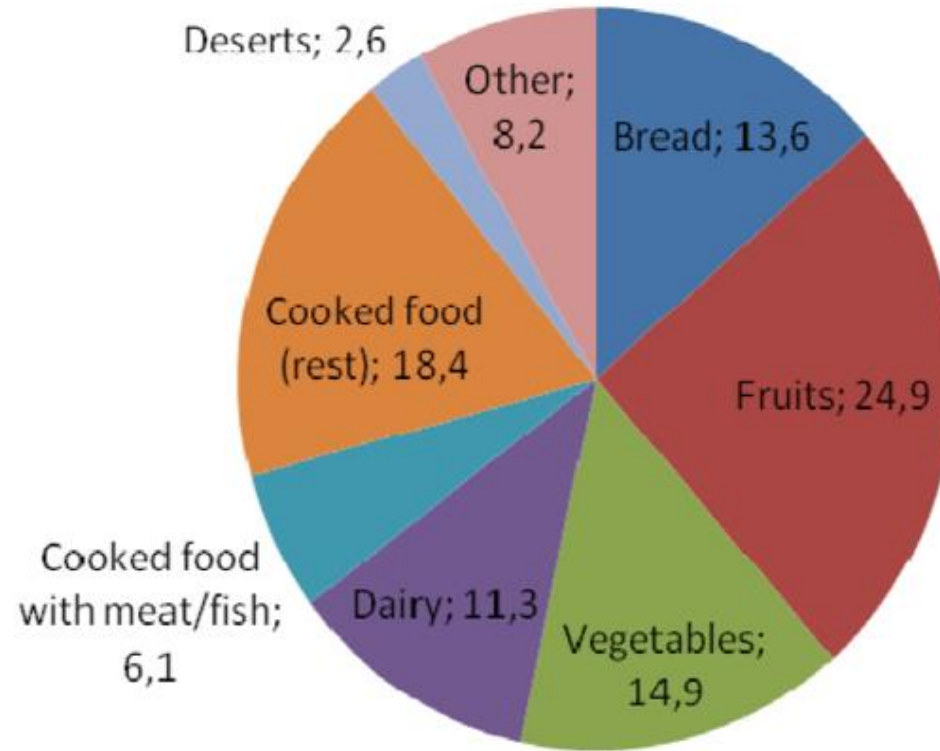


# Key results

# Food waste generation in Greece (Kg/Inh./y.)

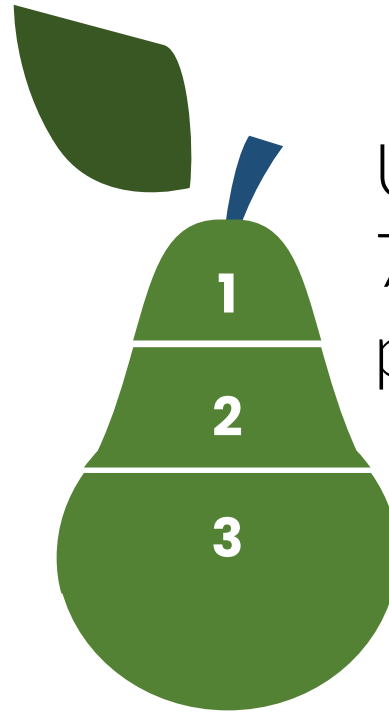


# Distribution (%) of the avoidable fraction of food waste in Greece



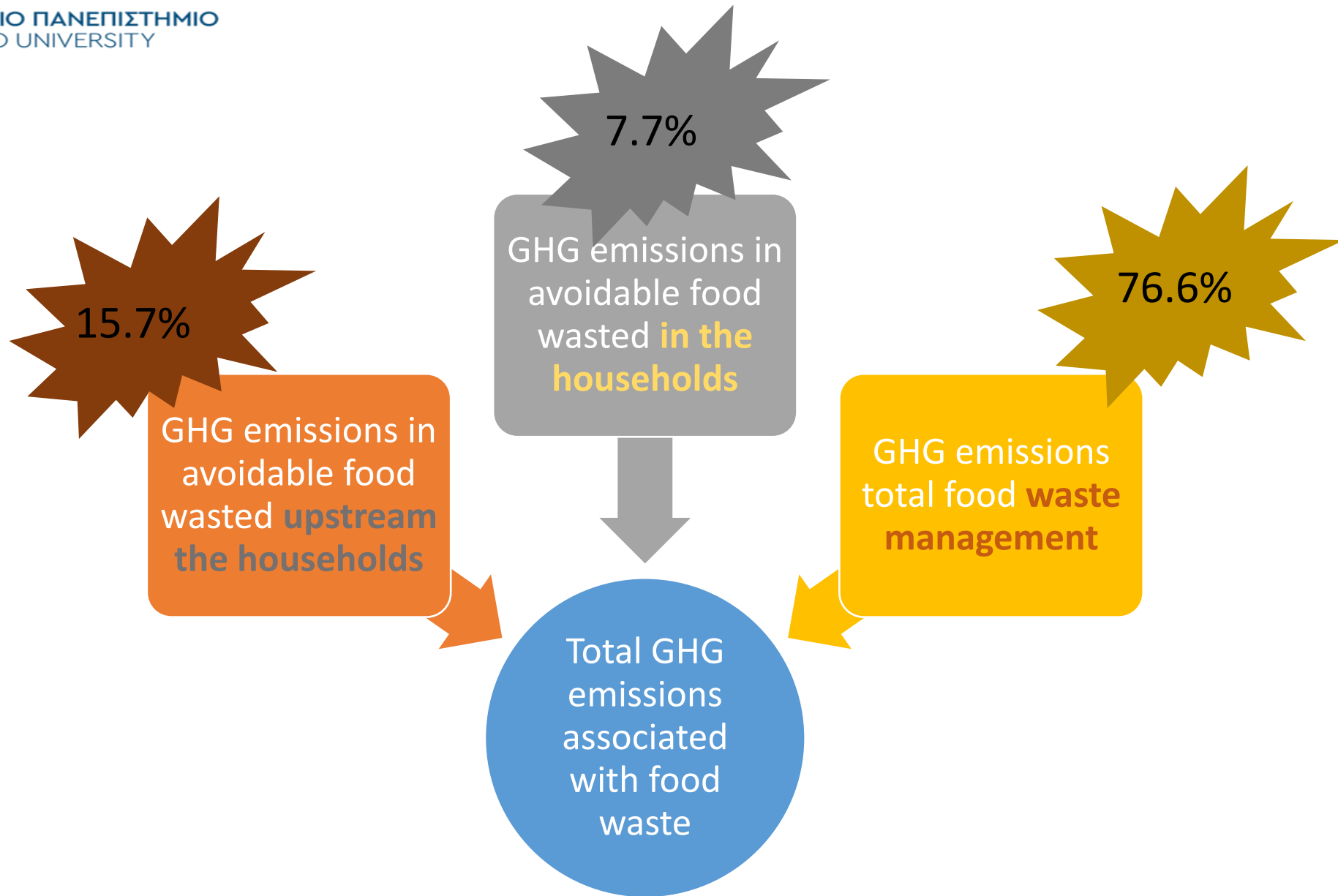
# Results

Avoidable in household: 38.2 Kg CO<sub>2</sub> eq. per capita per year



Upstream of household: 77.8 Kg CO<sub>2</sub> eq. per capita per year

**Total: ~ 5,600Gg CO<sub>2</sub> eq. per year**





## Conclusions

- The demand for food is rising
- So does food waste
- Food waste prevention reduces the amount of GHG emitted
- ~ 5,600 Gg of CO<sub>2</sub> eq. are associated with food waste
- Need for locally available data

# Thanks for your attention!

The screenshot shows a web browser window with multiple tabs. The active tab is titled 'The implications of food waste g...'. The address bar shows the URL: [reader.elsevier.com/reader/sd/pii/S2352550915000135?token=3E5E2C22D6355D9ED13A73CE98FB8FFDA951D55C896110CB44A0D14AAE15FB9100D613E378C89FD1879B3F2DC6849C84&originRegion...](https://reader.elsevier.com/reader/sd/pii/S2352550915000135?token=3E5E2C22D6355D9ED13A73CE98FB8FFDA951D55C896110CB44A0D14AAE15FB9100D613E378C89FD1879B3F2DC6849C84&originRegion...). The browser interface includes navigation buttons, a search bar, and a download button. The page content features the Elsevier logo on the left, a ScienceDirect banner, and the journal title 'Sustainable Production and Consumption' with the IChemE logo. The article title is 'The implications of food waste generation on climate change: The case of Greece'. The authors listed are Konstadinos Abeliotis\*, Katia Lasaridi<sup>1</sup>, Vassiliki Costarelli<sup>2</sup>, and Christina Chroni<sup>3</sup>. The affiliation is Harokopio University, School of Environment, Geography and Applied Economics, El. Venizelou 70, 17671 Athens, Greece. The Windows taskbar at the bottom shows the system tray with the date 29/9/2022 and time 11:08 πμ.

Contents lists available at [ScienceDirect](#)

**Sustainable Production and Consumption**

journal homepage: [www.elsevier.com/locate/spc](http://www.elsevier.com/locate/spc)

**The implications of food waste generation on climate change: The case of Greece**

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FEEDBACK



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