National case studies - presentation of sectoral good practices

Waste in Spain

Madrid- 5 de Abril de 2017.

Waste Sector in a low carbon economy

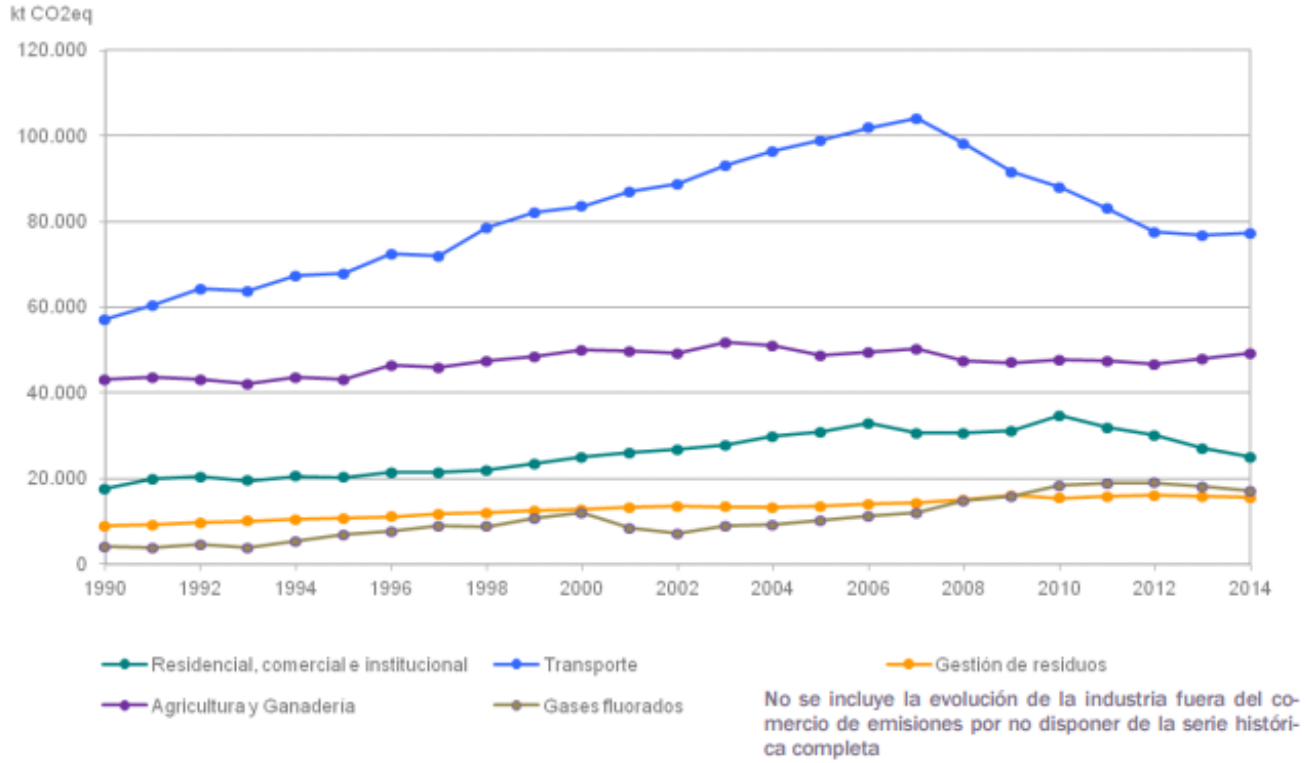
What is the relevance of waste in this topic?

AÑO 2013	
Residencial, comercial e institucional	12%
Transporte	38%
Gestión de residuos	8%
Agricultura	25%
Gases fluorados	8%
Industria no sujeta al comercio de emisiones	8%
Total	100%

Diffuse sectors in Spain (Source: Mapama)

Waste Sector in a low carbon economy

Evolution until 2014



Source: Mapama

Waste Sector in a low carbon economy

Emissions in the waste sector:

-**Direct**: those generated by the activities of the waste management sector (Emissions of methane in a landfill and emissions from the combustion of waste in an incineration plant)

-**Indirect:** Those generated by waste management activities (transport for example)

- **Benefits:** the net emissions reduced in other economic sectors thanks to the use of materials recovered from waste, including carbon sequestration (eg in soil) and carbon storage (eg in trees) as a consequence of certain forms of waste material recovery. **These elements are difficult to calculate**

Best practices: Good news: It,s easy to make it better.

Why do landfills emit methane? → Biowaste

So? What do we do with bio-waste? → **Composting**!!!

Landfill Directive includes a biowaste reduction in landfills.

An adequate management of bio-waste through composting reduces the emission of greenhouse gases, and also generates compost, which fixes carbon in the soil

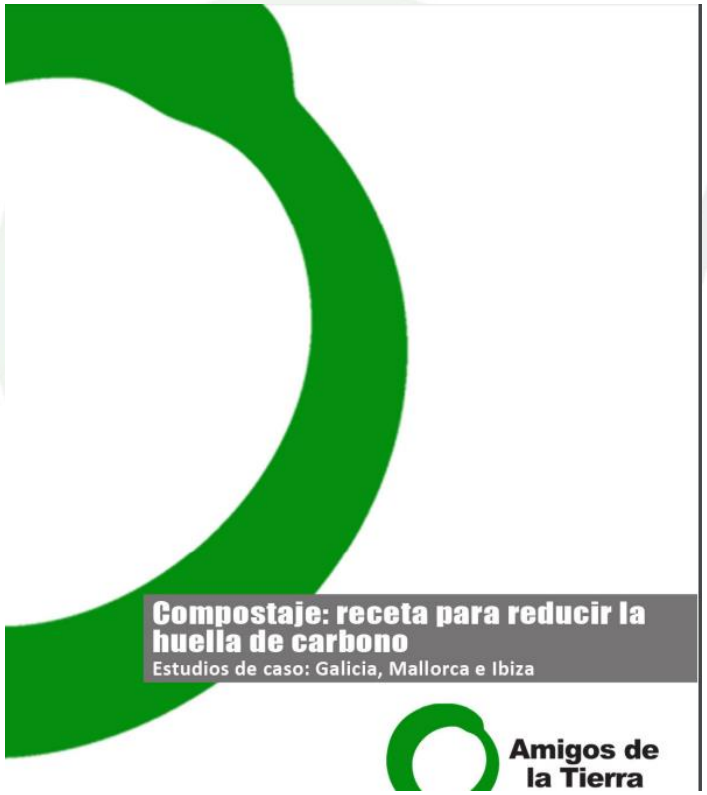
Best practices

Home composting

Amigos de la Tierra has developed projects of domestic composting for **two decades**, working in more than **50 municipalities**, reaching about **50,000 participants** and setting up about **5,000 composters**.

Best practices

Home composting: Is it an effective emissions reduction system?



We made a study with a consultant (Inclam CO2) for more accurate figures.

http://www.tierra.org//wp-content/uploads/2016/01/Casos_compostaje_huella_de_carbono.pdf

Best practices

We analyze the case of Galicia, Mallorca and Ibiza:

	Transporte	Electricidad	Agua	Total (g CO2/kg residuo orgánico)
Incineración (Complejo Ambiental de Cerceda-A Coruña)	9,8	41,4	0,75	99,4
Vertedero de Areosa (Complejo Ambiental de Cerceda-A Coruña)	9,8	12,0	0,00923	28,7
Planta de compostaje de Nostián (A Coruña)	8,7	22,7	0,014	22,7
Vertedero Ca Na Putxa (Ibiza)	1,3	1,4	-	10,7
Planta incineración Son Reus (Mallorca)	1,3	71,3	0,248	235
Planta metanización Son Reus (Mallorca)	1,1	67,8	0,953	69,8
Planta compostaje Son Reus (Mallorca)	1,6	49,3	0,053	51,1

The management of 1 kg of bio-waste produces between 10,7 and 235 g of CO2.

Best practices

What about home composting?:

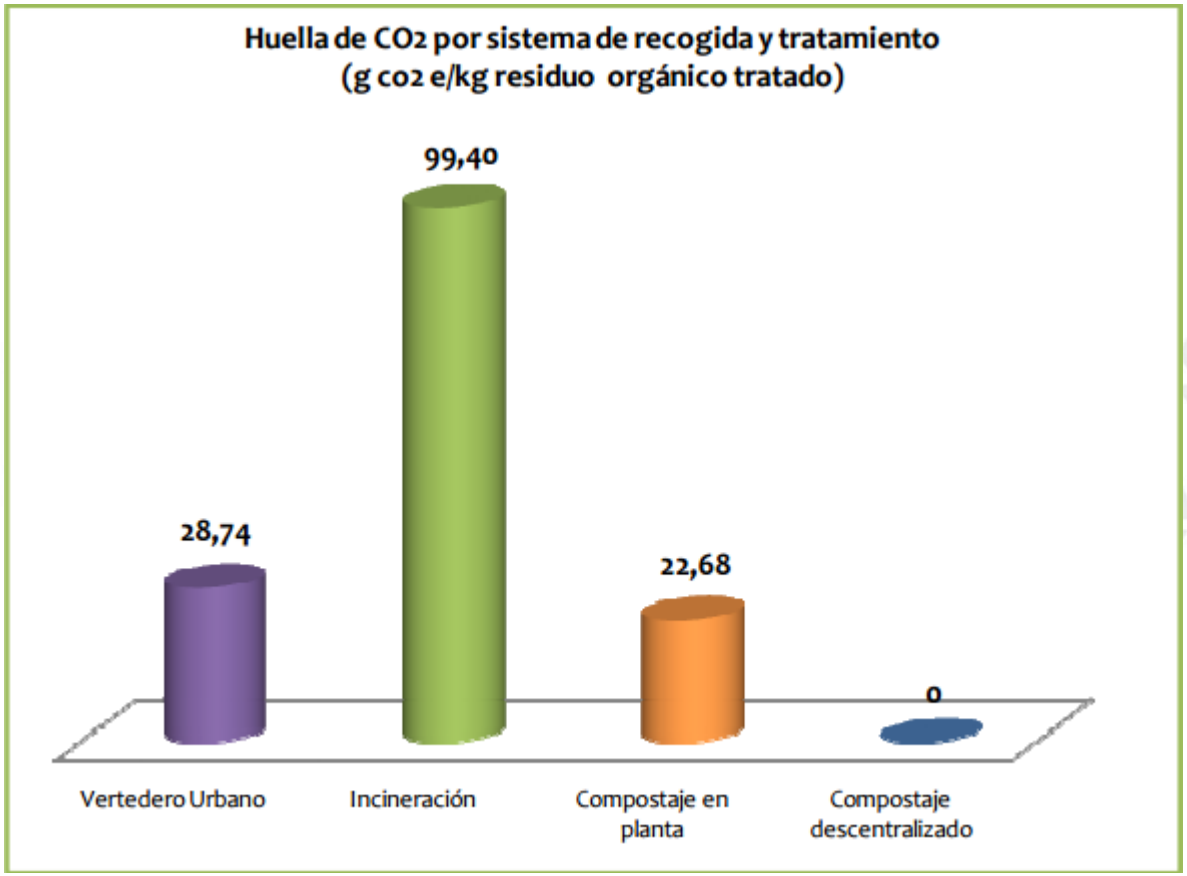
The study concludes:

Taking into account the carbon footprint methodology and the characteristics of home composting projects, no greenhouse gas generating activities are produced. In this scenario, the subject performing the composting, the generator of organic waste and the end user of the product or compost generated is the same person, without transport in any case.

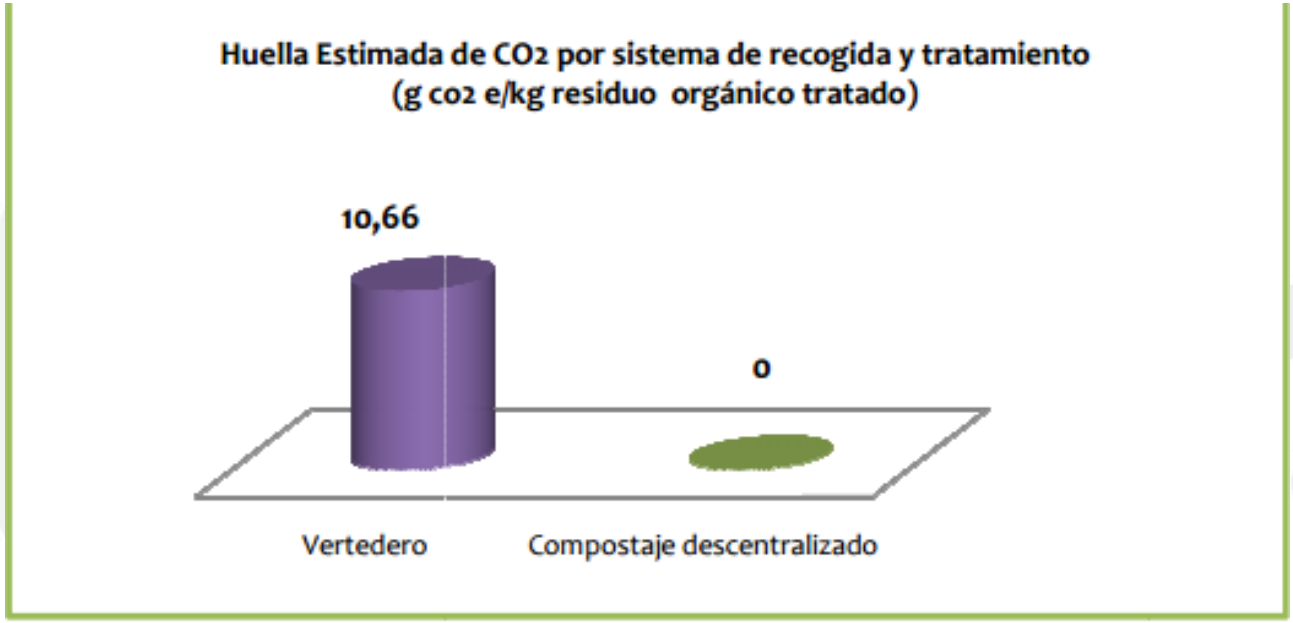
-Due to this we arrive at the following conclusion: **The carbon footprint associated with the decentralized composting life cycle is zero.** This statement is supported by the following aspects:

- No associated transport or fossil fuel consumption (the generation of the waste and its treatment is carried out in the same place).
- The use of compost is carried out in situ.
- Although there may be water consumption in the composting process is minimal and therefore negligible.

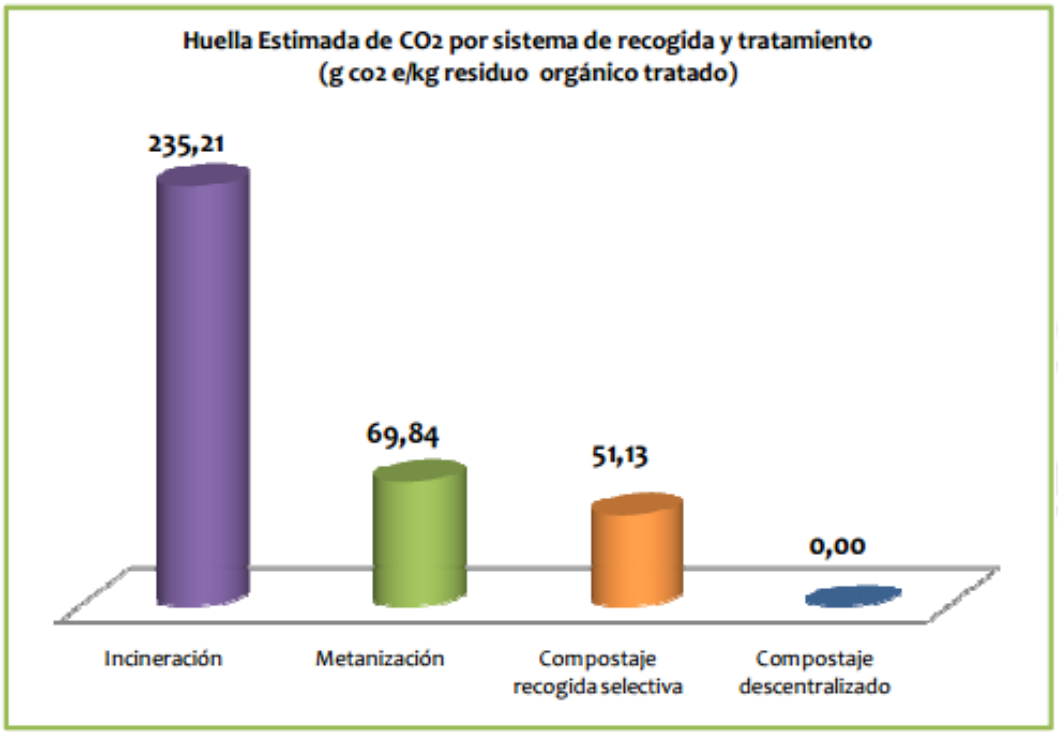
Galicia



Ibiza



Mallorca



Conclusions

-Proper waste management has the potential to reduce diffuse CO2 emissions

- The best waste management system to reduce carbon footprint is undoubtedly home composting

- Domestic composting not only avoids landfill or incinerator emissions, but also avoids waste transportation, and fixes carbon to the soil with compost application.

-The waste reduction generation is the best way to move towards a low carbon economy, so it is imperative to implement Zero Waste policies.

MUCHAS GRACIAS POR SU ATENCIÓN

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