#### WASTECOSMART



Increasing regional innovation capacities for resources efficiency and integrated waste management through cooperation, research and technological development

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3<sup>rd</sup> International Conference on Sustainable Waste Management Tinos 2015





#### Resource efficiency: Europe's challenges

- Demand for materials exceeds ability of generating what Europe needs
- Import 6 times more resources than export
- Threat of shortages in primary materials
- Loss of 60% of 3 billion t/a of solid waste to landfill and incineration







#### Resource efficiency: Europe's opportunities

- 1998-2007: 19-38% increased recycling rate
- Solid Waste management and recycling industry today
  - Turnover: 137 billion Euro
  - Jobs: over 2 million
- With 70% recycling – Jobs: + 0.5 million

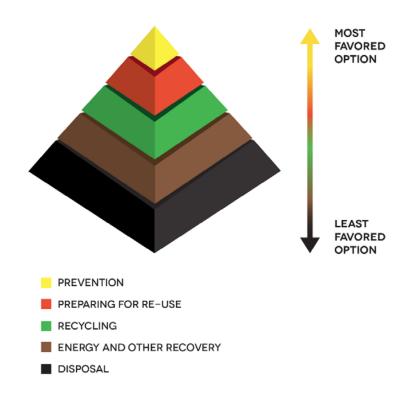






## Towards resource efficiency

- 2008: Waste Framework Directive
  - Five-step waste hierarchy
- 2011: Resource Efficient Europe flagship initiative





# WASTECOSMART The partnership



Six regional triple helix clusters

- Science
- Industry
- Public sector

#### NETHERLANDS Area: 41,543 km<sup>2</sup> Population: 16.8 million Amount of MSW (2011): 596 ka/capita

UNITED KINGDOM

int of MSW (2011): 516 kg/capita

LIVERPOOL CITY REGION CLUSTER Academia: University of Central Lancashire

(UCLAN) – Centre for Waste Management Business: C-Tech Innovation Ltd.

Public authority: Merseyside Recycling &

Area: 243,610 km<sup>2</sup>

Waste Authority

AMSTERDAM REGION CLUSTER Academia: VU University – Institute for Environmental Studies (IVM) Business: Amsterdam Economic Board Public authority: City of Amsterdam, Afval Energie Bedrijf

ITALY Area: 301,338 km<sup>2</sup> Population: 60.7 million Amount of MSW (2011): 535 kg/capita

PIEDMONT REGION CLUSTER Academia: Politecnico di Torino Business: Ago Renewables SpA Public authority: Engim San Paolo, Municipality of Collegno

#### HUNGARY

Area: 93,030 km<sup>2</sup> Population: 10.0 million Amount of MSW (2011): 382 kg/capita

CENTRAL HUNGARIAN REGION CLUSTER

Academia: Corvinus University of Budapest – Faculty of Hortioultural Science Business: Geoview Systems Ltd. Public authority: Municipality of the XXIII District of Budapest. Soroksár

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WASTECOSMART stands for "Optimisation of Integrated Solid Waste Management Strategies for the Maximisation of Resource Efficiency" and has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 319969.

Public authority: Municipality of Sundbyberg

CYPRUS

tion: 9.4 million n of MSW (2011): 460 kg/capits

STOCKHOLM REGION CLUSTER Academia: SP Technical Research Institute

SWEDEN

of Sweden Business: Envac AB

Area: 449,984 km<sup>2</sup>

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Area: 9,251 km<sup>2</sup> Population: 819,100 (concerns only the area under effective control by the Republic of Cyprus) Amount of MSW (2011): 658 kg/cspita

#### PAPHOS REGION CLUSTER

Academia: Neapolis University Paphos, Neapolis Innovation Research and Development Centre Business: Atlantis Consulting Cyprus Ltd. Public authority: Municipality of Paphos

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### WASTECOSMART Objectives

- To promote transnational cooperation of research-driven waste management clusters
- To strengthen and to increase the innovation capacity of regional research-driven clusters in resource efficiency
- To foster research and technological development within the waste sector





# WASTECOSMART Joined actions

- Assess regional research and innovation needs in the waste management sector;
- Elaborate Joint Action Plan (JAP) and measures towards implementation in each region;
- Develop a Decision Support Framework to formulate waste management strategies;
- Support less developed regions in waste management.





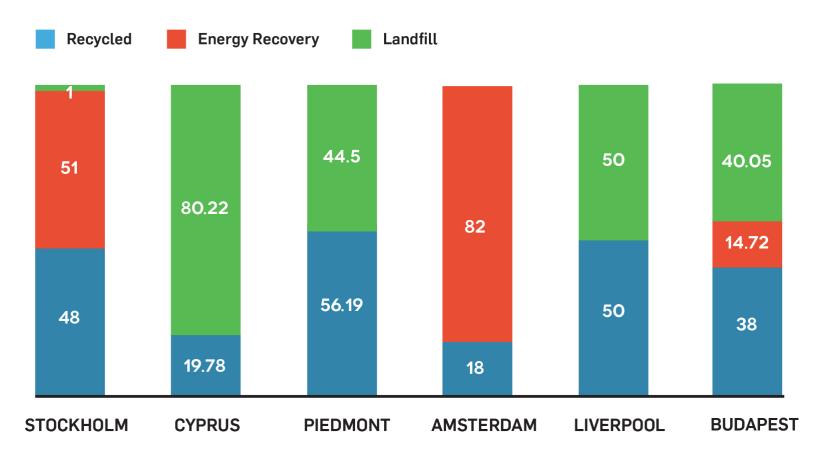
#### **Generation of Joint Action Plan**







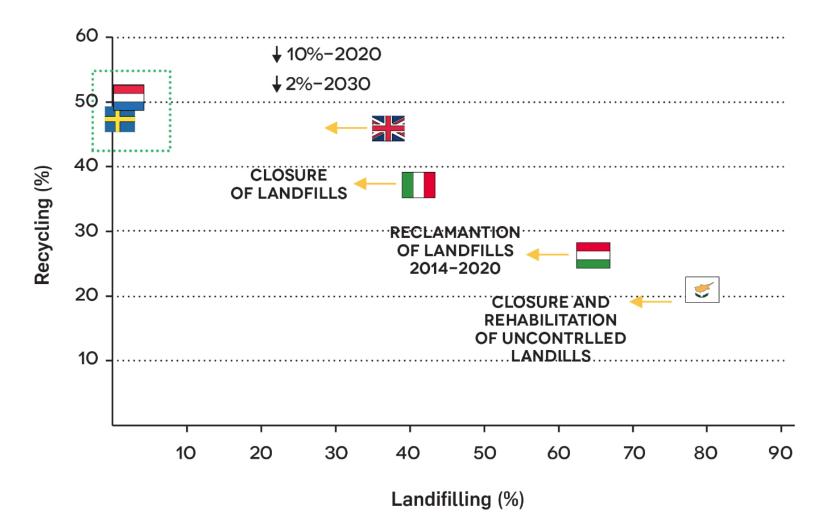
### Assessment of dominant treatment methods for Municipal Solid Waste







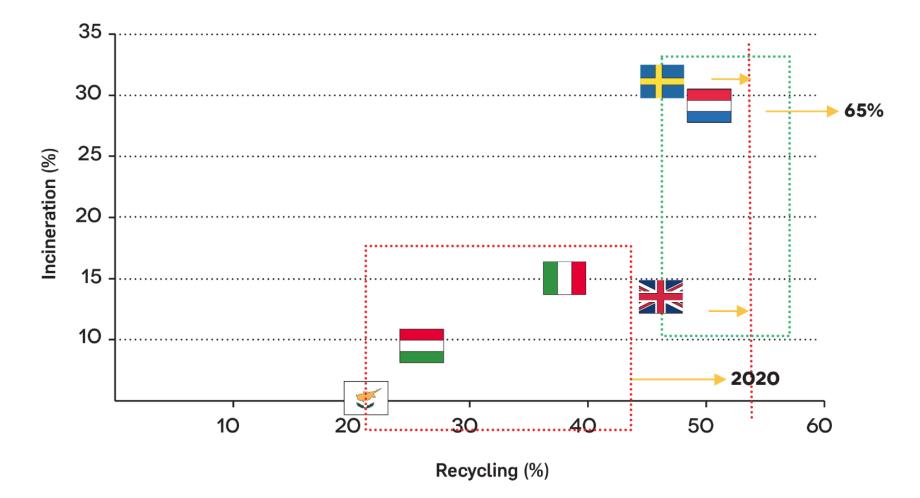
### Landfilling vs Recycling rates







### Incineration vs Recycling rates





## WASTECOSMART Decision Support

- Mentoring Guide for policy makers and key stakeholders
- Multi-criteria analysis (resource use, social impact, costs and benefits, environmental impact)
- Ranking of pre-defined waste management alternatives against business-as-usual scenario







### Joint Action Plan (JAP) for **COCO** innovative waste management

- A common roadmap for three priority areas:
  - Waste minimisation
  - Maximising the value of waste
  - Transfer of knowledge

LEAST FAVOURED

OPTION

FAVOURED OPTION

PREVENTION

RECYCLING REUSE

MOST





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ENERGY AND OTHER RECOVERY

DISPOSAL



# WASTECOSMART Regional Stakeholder Workshops

- Testing the use of our tools to develop regional Solid Waste management strategies
- Possibility for 2 Greek regions to hold WASTECOSMART stakeholder workshop Contact: Astrid Severin







#### WWW.WASTECOSMART.EU



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