

OPTIMISING INTEGRATED WASTE MANAGEMENT

The optimisation of integrated waste management is a key challenge for many European regions. It requires the formulation of comprehensive waste management strategies, the assessment of research and innovation needs and informed decision-making with regard to the choice of policies, processes and technologies suitable for specific regional circumstances.

WASTECOSMART aims to contribute solutions to this challenge by increasing regional innovation capacities for resources efficiency and integrated waste management through cooperation, research and technological development.

For the project, six research-driven triple helix clusters (science, industry and public sector) have been formed in Paphos (CY), Central Hungary, Piedmont (IT), Amsterdam (NL), Stockholm (SE) and Liverpool City Region (UK). WASTECOSMART also collaborates with international partners from Brazil, Mexico and India to promote international collaboration and opportunities in waste management.

HOW CAN WE STRENGTHEN THE COLLABORATION OF SCIENCE, BUSINESS AND PUBLIC AUTHORITIES IN INTEGRATED WASTE MANAGEMENT?

WHAT ARE THE NEEDS OF MY REGION IN RESEARCH AND INNOVATION?

WHAT IS THE OPTIMAL WASTE MANAGEMENT SYSTEM FOR MY REGION?

WHAT CAN MY REGION LEARN THROUGH INTERREGIONAL COOPERATION?

HOW CAN WE INCREASE REGIONAL COMPETITIVENESS IN INTEGRATED SOLID WASTE MANAGEMENT?

WHAT TECHNOLOGIES AND PROCESSES ARE ALREADY OPERATING SUCCESSFULLY IN THE MARKET?

WHAT BUSINESS OPPORTUNITIES CAN BE CREATED THROUGH OPTIMISED WASTE MANAGEMENT?

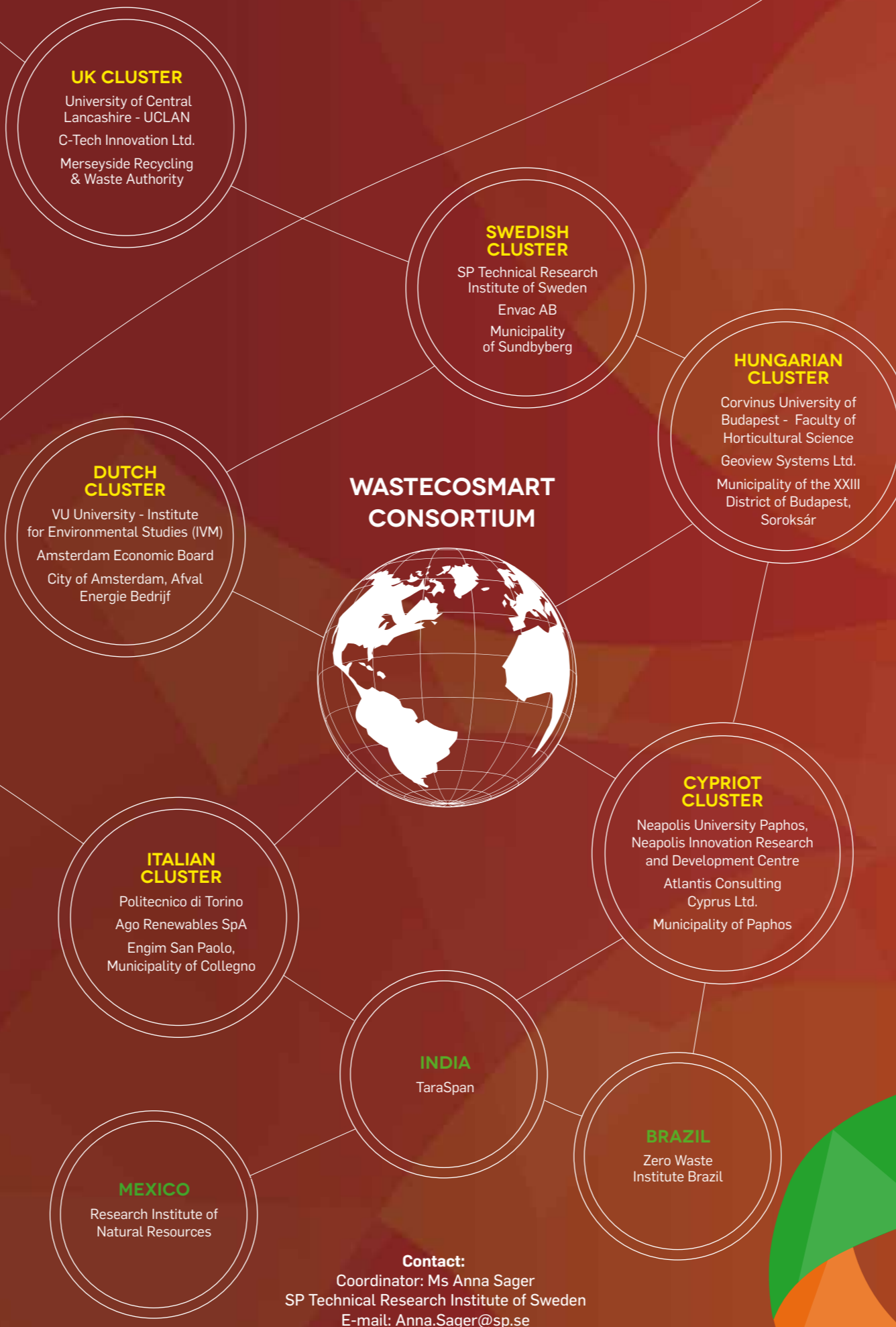
THE WASTECOSMART PARTNERS JOINED FORCES TO:

- Foster and promote transnational cooperation of research-driven waste management clusters;
- Develop a Decision Support Framework supporting the formulation of waste management strategies;
- Assess regional research and innovation needs in the waste management sector;
- Elaborate a Joint Action Plan (JAP) and regional research agendas according to needs of each individual regional cluster;
- Set measures towards the implementation of the JAP in each region;
- Support less developed regions in waste management and unlock business opportunities in international markets.

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INNOVATIVE SOLID WASTE MANAGEMENT THROUGH RESEARCH AND COOPERATION

MAXIMISING RESOURCE EFFICIENCY IN EUROPEAN REGIONS



INNOVATIVE WASTE MANAGEMENT: A PARADIGM SHIFT FOR RESOURCE EFFICIENCY

Today, the performance of the European economy relies heavily on the import of raw materials and resources from other parts of the world. Despite this, Europe loses 60% of its 3 billion tonnes of solid waste through landfilling and incineration each year. This current situation has a harmful impact upon both the climate and the environment. From an economic and environmental point of view, it is high time for a paradigm shift for resource efficiency.

With its 2011 Resource Efficient Europe flagship initiative, the European Union has laid out the political will to promote and implement innovative resource efficiency measures and to accelerate research and innovation in this area. In particular, Europe calls on regional stakeholders to act without delay and invest more and more effectively in sustainable growth with an emphasis on resource efficiency.¹ Innovative solid waste management is a key driver for resource efficiency, impacting not only the supply of raw materials and energy, but also the quality of water, soils and ecosystems.

For sustainable waste management to succeed at regional and local levels, a new wave of innovation will be required, ensuring "that residual waste is close to zero and that ecosystems have been restored". A number of European regions have already changed the paradigm and can lead the way in innovative waste management. The challenge is now to transfer innovative solid waste management strategies and best practices throughout Europe.

"Demand for materials has long exceeded Europe's ability to independently generate what it needs. The continent imports over six times more resources than it exports, and its economy is now threatened by approaching shortages in primary materials."

¹ 'Regional policy contributing to sustainable growth in Europe', SEC(2011) 92 final

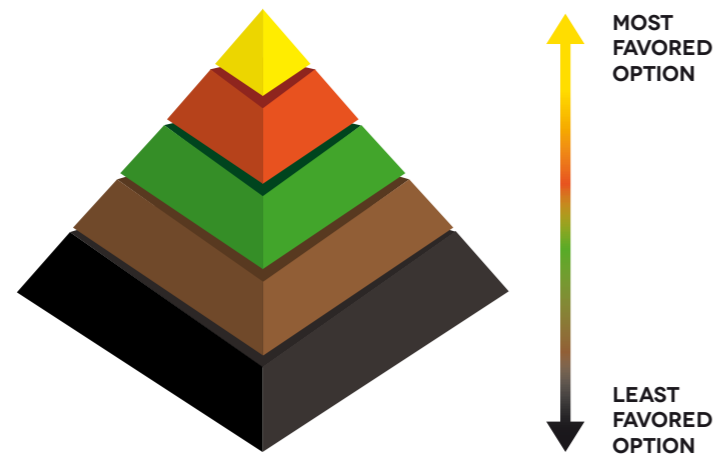
MOVING UP THE WASTE HIERARCHY

European legislation is a key driver for innovative waste management, with a strong emphasis on reducing the production of waste. In its Waste Framework Directive, the European Union has defined a five-step waste management hierarchy, outlining prevention as the most favoured option, followed by re-use and recycling, to recover resources to a maximum level. Finally, disposal - such as landfilling - is considered the least favoured option, to be used only when other options are not possible.

Nevertheless, many European countries are starting at the bottom of the pyramid and rely heavily on landfilling and incineration, with significant efforts needed to move towards more sustainable waste management.

Key focus is given to the implementation of waste prevention through modern manufacturing, eco- design, the reduction of packaging, and collaboration with industry and consumers for greener products.

The WASTECOSMART consortium joins efforts to move waste management at the regional level up the waste hierarchy pyramid. Knowledge and expertise are shared amongst WASTECOSMART regional clusters, to define the most efficient solid waste management strategies that can help local and regional authorities to prevent waste generation.



- PREVENTION
- PREPARING FOR RE-USE
- RECYCLING
- ENERGY AND OTHER RECOVERY
- DISPOSAL

TRIPLE HELIX CLUSTERS MAXIMISING RESOURCE EFFICIENCY THROUGH COOPERATION IN RESEARCH AND DEVELOPMENT

