



**Energy transition and circular economy
technologies in the virtual island of
Heliosthana 2030**

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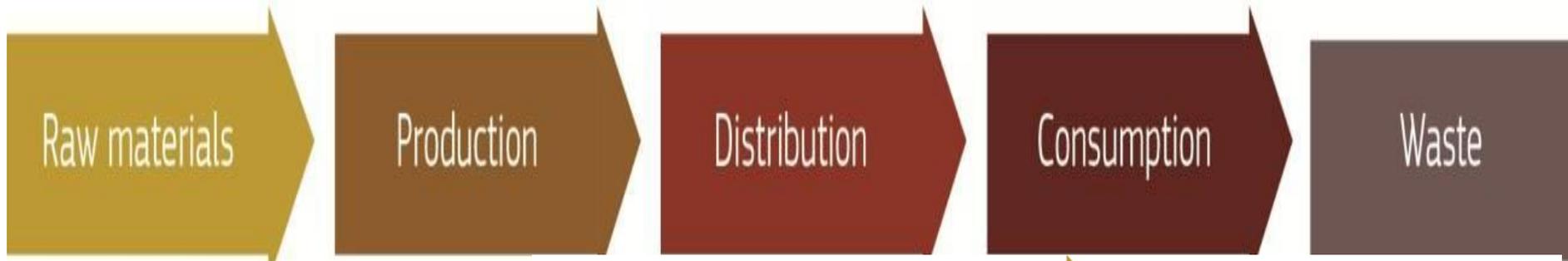


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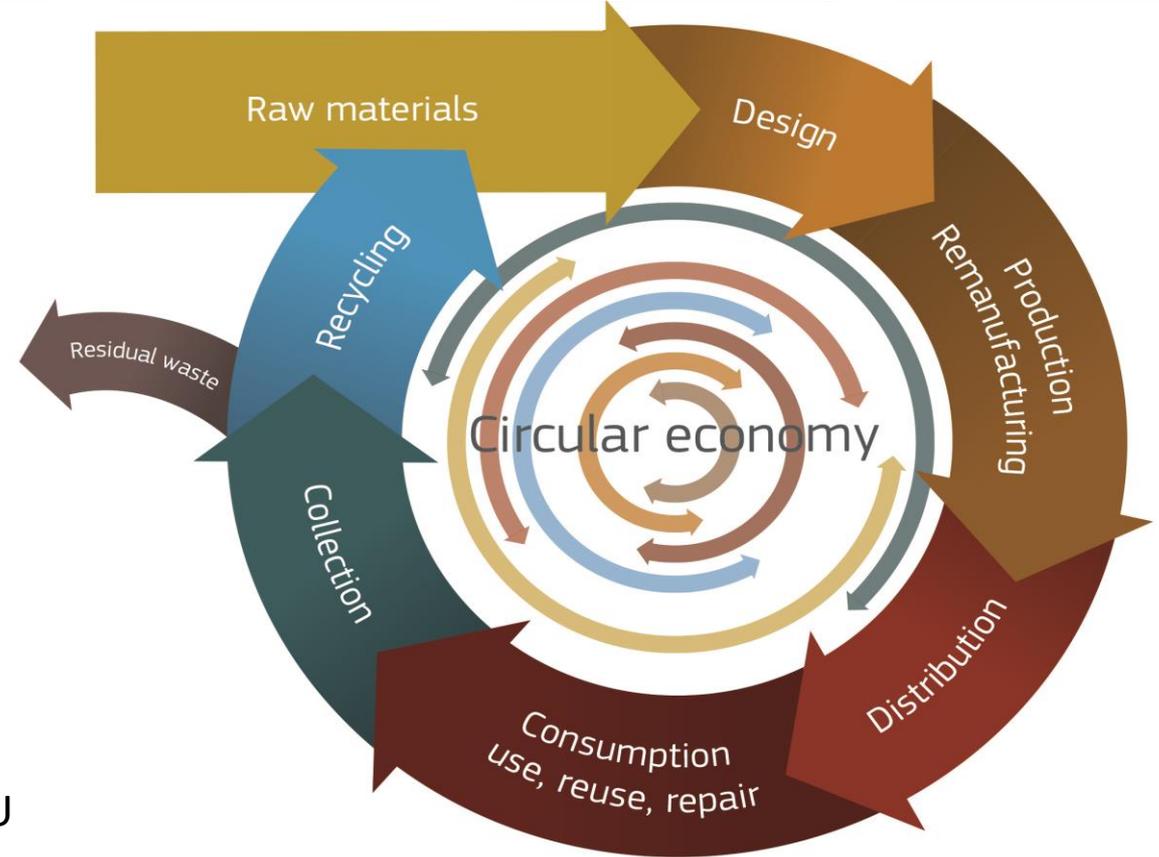
The Linear Model no Longer Viable

- With 9 billion people by 2030, challenges of meeting demand for goods and services is unparalleled.
- Global solid waste volumes are projected to increase from 1.3 to 2.2 billion tons by 2025.

From a linear economy ...



... to a circular economy



Heliosthana in 2031

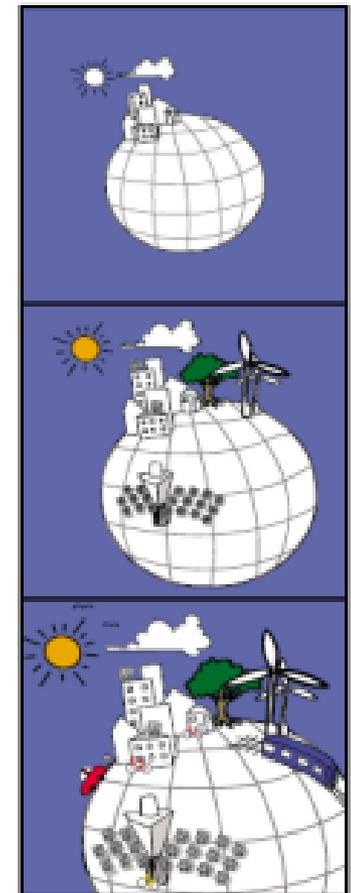


for a living planet*

HEINRICH BÖLL STIFTUNG
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The virtual country **Heliosthana** aims to become a global pioneer of “**circular economy**” in a world in which our economic competitiveness and well-being can no longer be based on the wasteful use of natural resources. Heliosthana has been a front-runner in terms of sustainable energy, intelligence-based digital solutions, carbon-neutral circular economy, low-emission solutions and zero waste reforms since 2014 and up to today, in 2031.

HELIOSTHANA,
A MEDITERRANEAN SUSTAINABLE ENERGY COUNTRY





Heliosthana in 2031

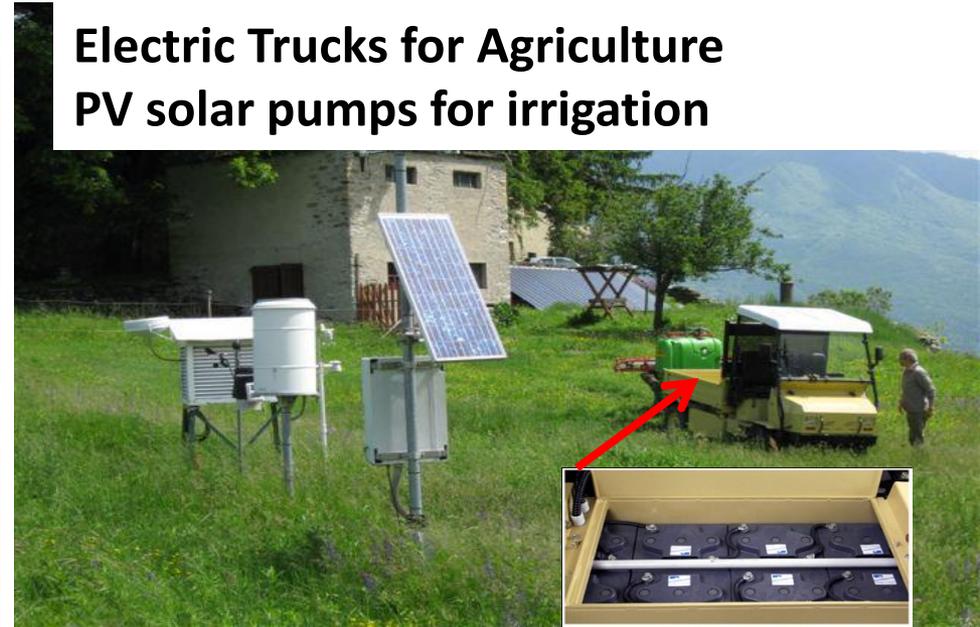
- ~ 19 million inhabitants, vast majority of population concentrated in Heliopolis and Eolis
- Multi-cultural, several influences
- Official language: Heliosthanean
- Not EU member
- Income level: in between Turkey and Morocco
- Main economic activities:
 - before 2010: fisheries, agriculture, craft, manufacturing industry
 - Now (2031): renewable energy technologies, renewable electricity, IT (reliable, clean and cheap electricity), Biodiesel from microalgae, circular economy road map, sustainable buildings and transport....



Intermodality and electrified public transport



Electric Trucks for Agriculture PV solar pumps for irrigation



Heliosthana 2019



Heliosthana in 2031

- Second country in the world (after Finland) to prepare a national road map to a circular economy in 2017.
- A national renewable energy plan increased uptake of renewable energy to 42 percent of the mix and 100% RE Electricity in 2030.
- A “Grid Code” was developed in 2014 and reviewed in 2022.
- Several guides were published like “infographics regarding the life cycle of materials”.



Circular economy at Heliosthana : policy context

- **Heliosthana's 2030 Strategy for smart and sustainable development**
 - Resource Efficiency Leading Initiative
 - Mid-term review: pressure on resources and environmental concerns identified as a long-term trend affecting growth
 - Environment and Energy transition targets by 2030 and 2040
 - Circular Economy Road Map, public consultation in 2017 and adoption in 2019.
- **Second "Sustainable Development Action Programme (2021-2025)"**
 - Thematic objective to turn Heliosthana into a resource-efficient, green and competitive low-carbon economy
 - Initiatives : how the Private Sector can Reimagining the Future of Business.

Circular Economy Road Map

Supporting Framework

Waste target review

Specific waste challenges

Resource Efficiency target

Heliosthana Resource Efficiency Platform recommendations

Green Employment Initiative
Green Action Plan
RE & EE Roadmap

Legislative proposal

- Impact assessment
- Waste Recycling obligation
- Banish building demolition
- Renovation of existing buildings

- **Sustainable buildings**
- Sustainable food
- Sustainable Transport
- Clean Production

- Set up high resources efficiency target

A supporting framework

- ***Design and innovation***

Horizon 2030: large scale RE projects, skills development, Digital platform Market for reuse of material; a coherent clean product policy, Eco-design, biogas, biodiesel from microalgae, RE water desalination, RE Electricity Storage in Electric Vehicles (charge & discharge).

- ***Enabling investment***

Innovative financial instruments, Environmental taxation, VAT exemption for trading of reused material, Green Funds. 2% of GDP dedicated to R&D.

- ***Broad stakeholder cooperation***

Communication, information, awareness , action on SMEs and green employment

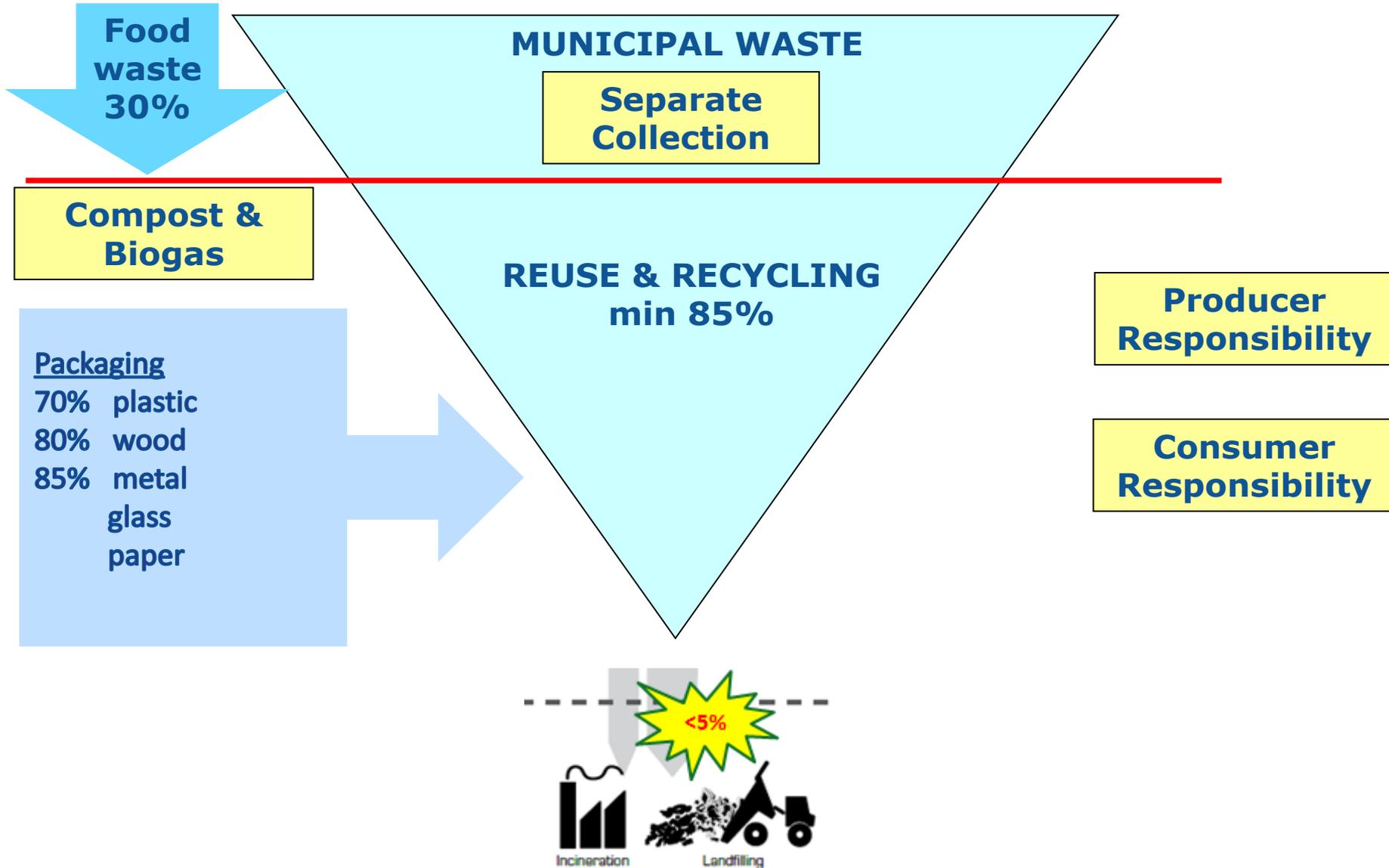
- ***Towards a recycling society – waste as a resource***

Phasing out landfilling of recyclable waste, Waste water treatment and reuse, extended producer responsibility, discourage new construction and facilitate renovation

- ***A resource efficiency target***

carbon-neutral circular economy, low-emission solutions and zero waste.

2030 –Waste Targets



Heliosthana in 2031

Towards a recycling society – waste as a resource

- Over 80% of companies have access to carton recycling in for packaging
- More than 75% of Printer inkjet supplies & similar technologies contain “closed loop” plastic
- Developing and Deploying Best Practices
- 100% of paperboard met controlled wood requirements
- Long term business growth
- Better risk management
- Brand equity and reputation:

Recommendations : Scaling the circular economy

- Provide an adequate governance framework and economic incentives.
- Improve the use of natural resources, design, production, consumption, reuse, repair, remanufacturing, recycling and the overall waste management
- New business models – service-based solutions
- Creating digital road map for circular economy.

The Way Forward

- **Think systemically, define a vision and act**
- **Consensus**
- **Collaborative Approaches**
- **Common Understanding**

Thanks for your Attention

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