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STRATEGIES FOR SUSTAINABLE WASTE MANAGEMENT

Ministerial round table

Commission for Sustainable Development (CSD-18)

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What have we done since Rio 1992 and Johannesburg 2002?

How far have we advanced towards achieving the Millennium Development Goals?

What are the remaining obstacles and challenges?



What have we done?

- New legal framework for waste management (Basel, Rotterdam, Stockholm conventions ...)
- New technologies in production and waste management; replaced products and materials
- Enhanced public knowledge and awareness

More investments in waste management, enhanced monitoring, improved control



Major challenges:

Barriers and constraints to proper waste management and promotion of 3R

- Quantity of waste
- Composition of waste
- Organization of waste management
- Financing of waste management
- Responsibility for generated waste
- Cleaner production and consumption
- Illegal management (shipment, disposal)



3R

REDUCE – REUSE – RECYCLE

3R - DEVELOPED COUNTRIES

- **High percentage separate collection** – enhanced public awareness
- **Developed capacity for recycling and reuse** – available financial resources
- **High demand and market for secondary material** – industrial capacity



3R - DEVELOPING COUNTRIES

Create interest for:

- Reduction – levying **charges** on production and purchase of products
- Separate collection (increase the percentage of return of useful waste) - **incentives** for consumers
- Reuse/Recycling – **subsidies** for recycling and separate collection - business development

Financial basis: *Polluter-pays principle*

Success in all these areas should enhance public awareness and business interest



Waste management in Croatia

Population: 4,500,000

Capital city: 800,000

Total area: 87,609 sq.km

Land area: 56,542 sq.km

Territorial sea area: 31,067 sq.km

Total length of coast: 5,835 km

N°of islands: 1,185 (47 inhabited)





Policy framework for sustainable waste management

- **Waste Management Strategy (2005)**
 - sets strategic goals
- **Waste Management Plan (2007)**
 - implementation framework for the Strategy
- **Waste Management Act (2005),(2009)**
 - legal basis
- **National Strategy on Sustainable Development (2009)**
 - overarching framework: protects and preserves national resources

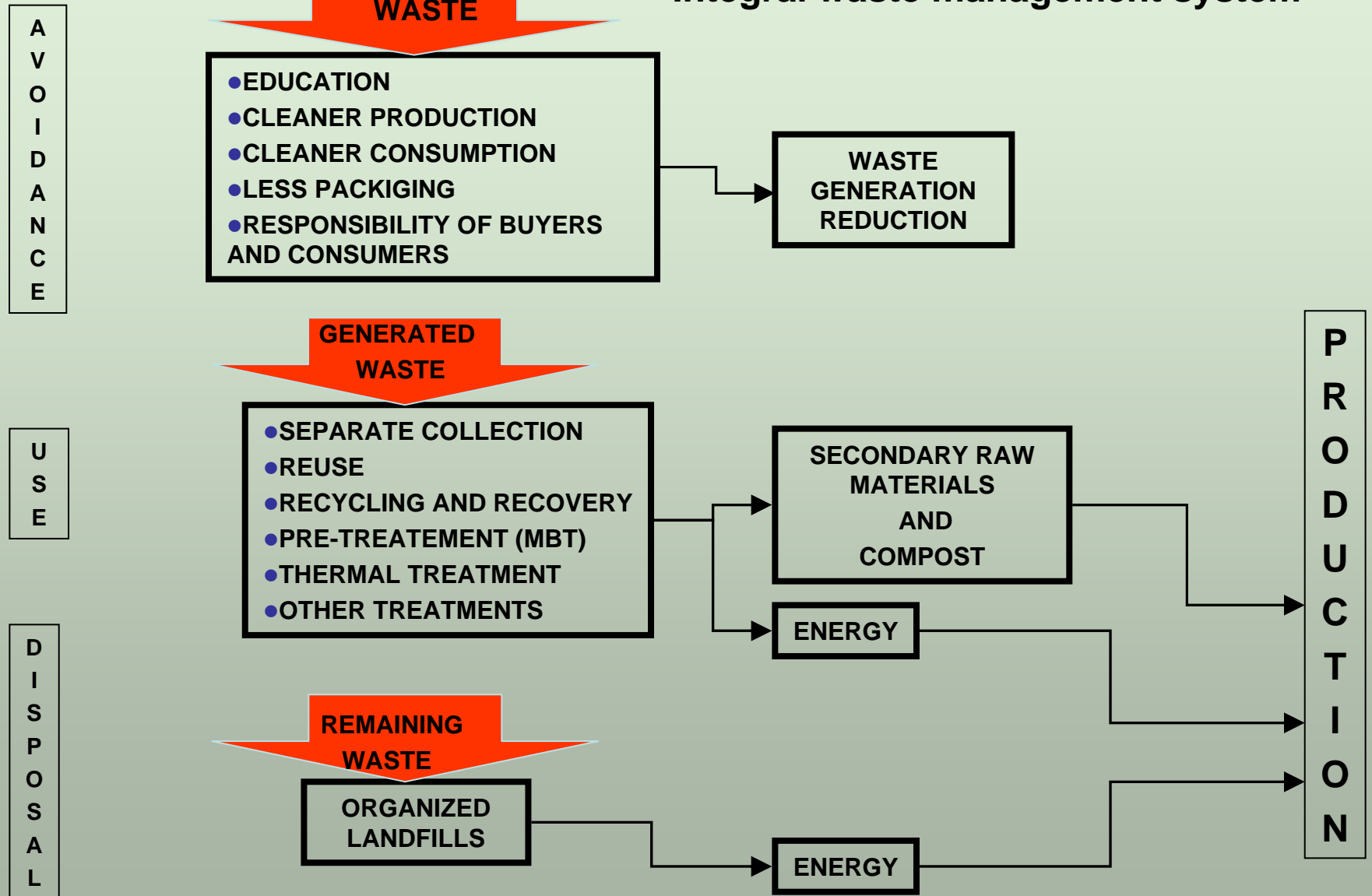


Waste Management Strategy

- **Remediation and closure** of existing local landfills (dumpsites)
- **Remediation of highly burdened areas**
 - former industrial sites
- Development of **waste management centers** with **pre-treatment** of waste prior to final disposal
- Development of recycling facilities and **primary selection of useful raw materials**
- Enhanced public knowledge and awareness
- Establishment of an **integral waste management system**

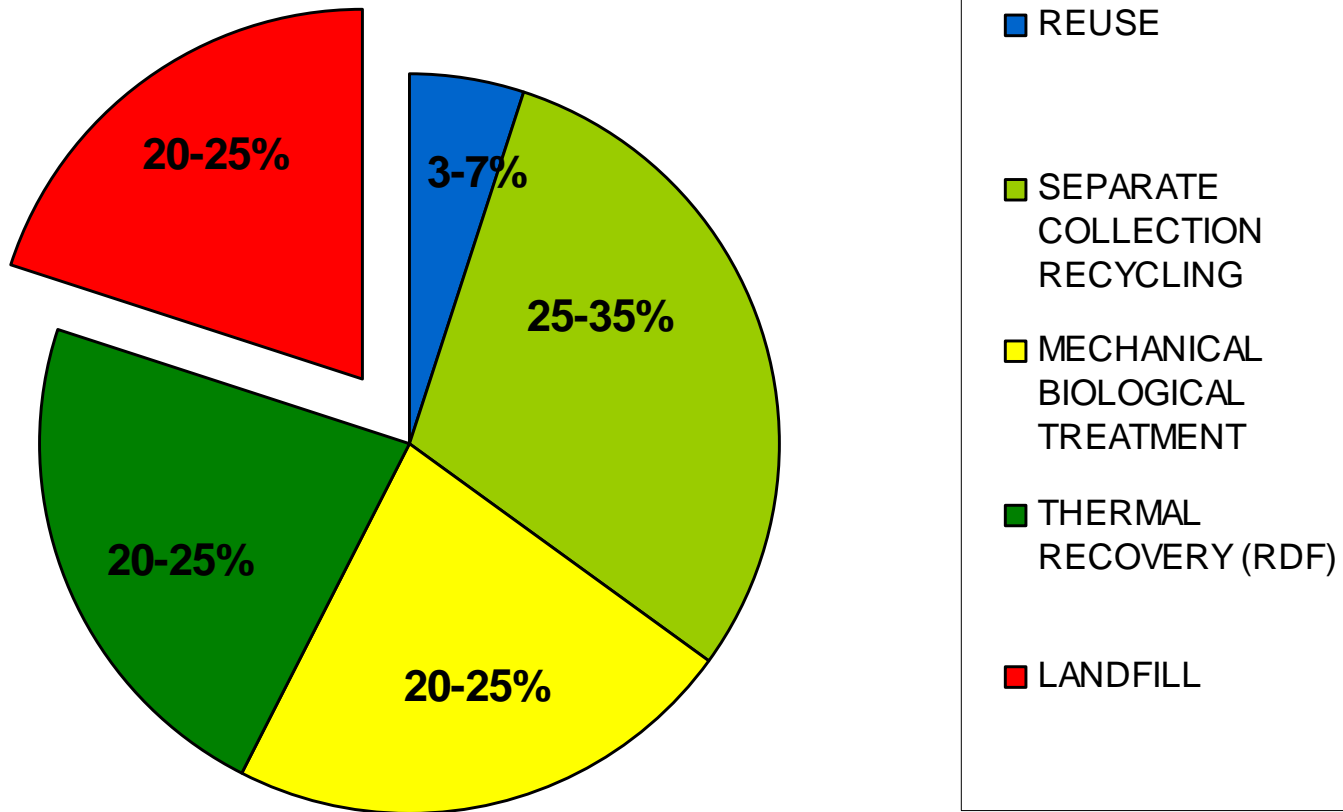


Integral waste management system





Integral Waste Management System





Waste Management Plan

PRIMARY SELECTION AND RECYCLING OF USEFUL RAW MATERIALS

- Private investments – concessions for collection and recycling
- *Polluter-pays principle*
- Incentives from generated revenues
- Establishment of an extra budgetary fund

WASTE MANAGEMENT CENTERS (WMCs)

- Future WMCs - 18 for 21 counties
- No landfills on islands – only waste transfer stations
- Mechanical Biological Treatment (MBT) to reduce landfill area at WMC; energy production from biogas



Financing

Revenues:

- Environmental Protection and Energy Efficiency Fund (EPEEF), extra-budgetary fund - major financing agency
- SO₂, NO_x, CO₂ emission charges (energy production, motor vehicles...)
- *Polluter-pays principle* (packaging materials, electric goods, electronics, vehicles, batteries, accumulators, oil, grease, tires...)

Financing:

- Primary selection – incentives
- Recycling - subsidies for recycling
- Infrastructure in recycling and collection – private investments



Waste Management Act

Regulations and Ordinances

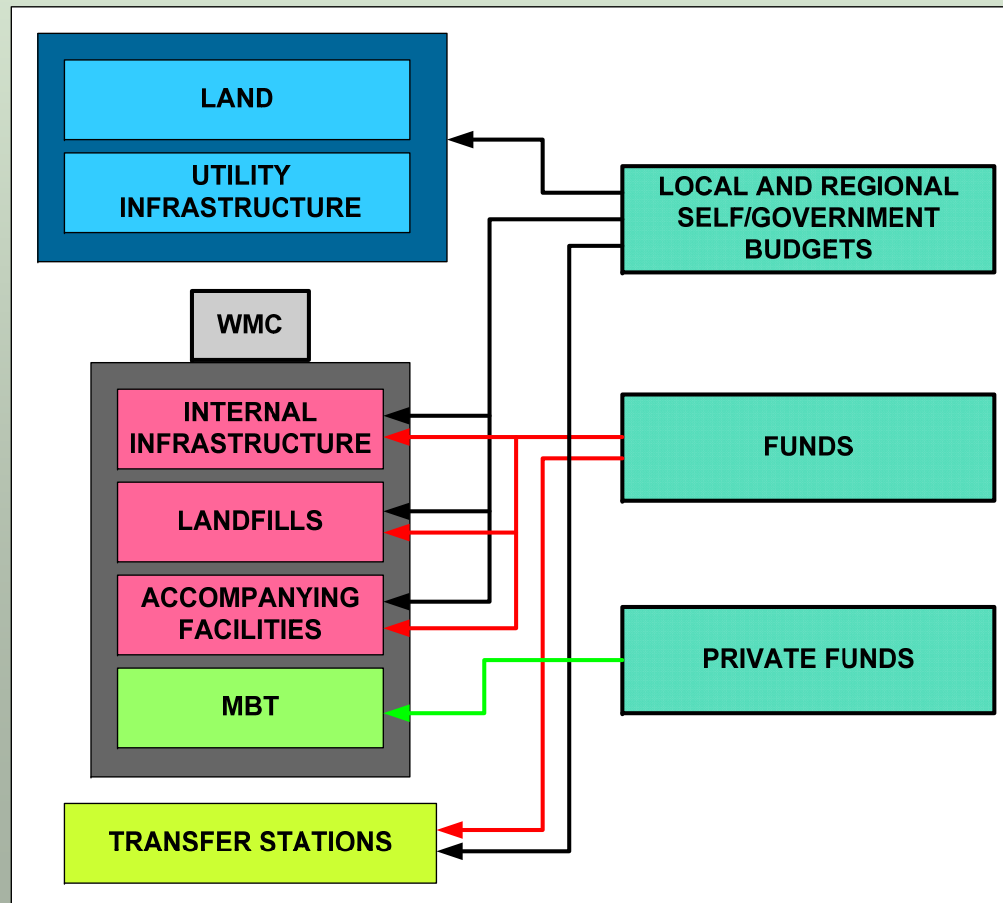
- **Packaging Waste** – charged per unit / incentives for return
- **Waste Oils** – charged per weight / collection free of charge
- **Batteries** – charged per weight / return free of charge
- **End of life vehicles** – charged per weight / incentives for return per weight
- **WEEE** - charged per weight / pick-up free of charge
- **Tires** - charged per unit / pick-up free of charge
- **Asbestos** – specialized pick-up free of charge
- **Demolition waste** – concession for licensed operators
- **Medical waste** – concession for licensed operators



Waste Management Centers

Financial Mechanisms

- Public cost (landfills, infrastructure) – EPEEF& EU funds (80%), local authorities (20%)
- Mechanical Biological Treatment (MBT) – loans or private sector (PPP)





Green Economy

- Facilities for recycling: PET, Al-cans, glass, paper, plastic, ELV, WEEE, oil, tires
- Facilities for separate collection: concessions for different types of waste
- Expansion of waste management services: new employment
- Framework for further development of partnerships

Packaging Waste Regulation – rid the country of PET bottles, Al-cans and glass in only two months

Substantially enhanced changes in public knowledge and awareness concerning waste issues



Key issues

- **KNOWLEDGE:** How to ensure that everybody understands and is aware of the options and benefits of sustainable waste management?
- **PARTICIPATION:** How to develop effective participation and partnerships in all stages of sound waste management with all relevant stakeholders
- **IMPLEMENTATION:** How to maximize the CSD mandate to bring about effective coordinated and concrete action on the ground?



Thank you!

