



Fingal County Council

South Dublin County Co

Dublin City Council

**Dun Laoghaire/Rathdown
County Council**



Total population 2006 Census: 1,186,159





Right Solution for Dublin

- Waste to energy is an integral part of European waste management policy
- It complies with Government policy
- It is safe and proven technology
- It will produce electricity for 50,000 homes and district heating for 60,000
- It will save a minimum of 80Ha/200 acres of land that would otherwise be used for landfill (over 25 years)
- Energy Recovery is higher up waste hierarchy than landfill
- Waste to energy reinforces and enhances recycling

Aims of the Strategy Study

The principle aims - technical, environmental, institutional and financial aspects, are as follows:

- To determine and assess the current waste management situation in the Dublin Region
- To recommend an integrated waste management strategy
- To recommend the most appropriate organisational, regulatory and funding mechanisms

Strategy Recommendations

Waste Minimisation

- Employment of Community Environmental Officers
- New Enforcement Unit

Strategy Recommendations Contd.

Waste Collection Recommendations

- Source separation and separate collection of dry recyclables
- Provision of Bring Banks and Waste Recycling Centres
- Source separation and separate collection of household organic waste
- Source separation of harmful waste (e.g. batteries, oils, paints etc)
- Source separation and separate collection of commercial and industrial waste from private enterprises as well as construction/demolition waste

Strategy Recommendations Contd.

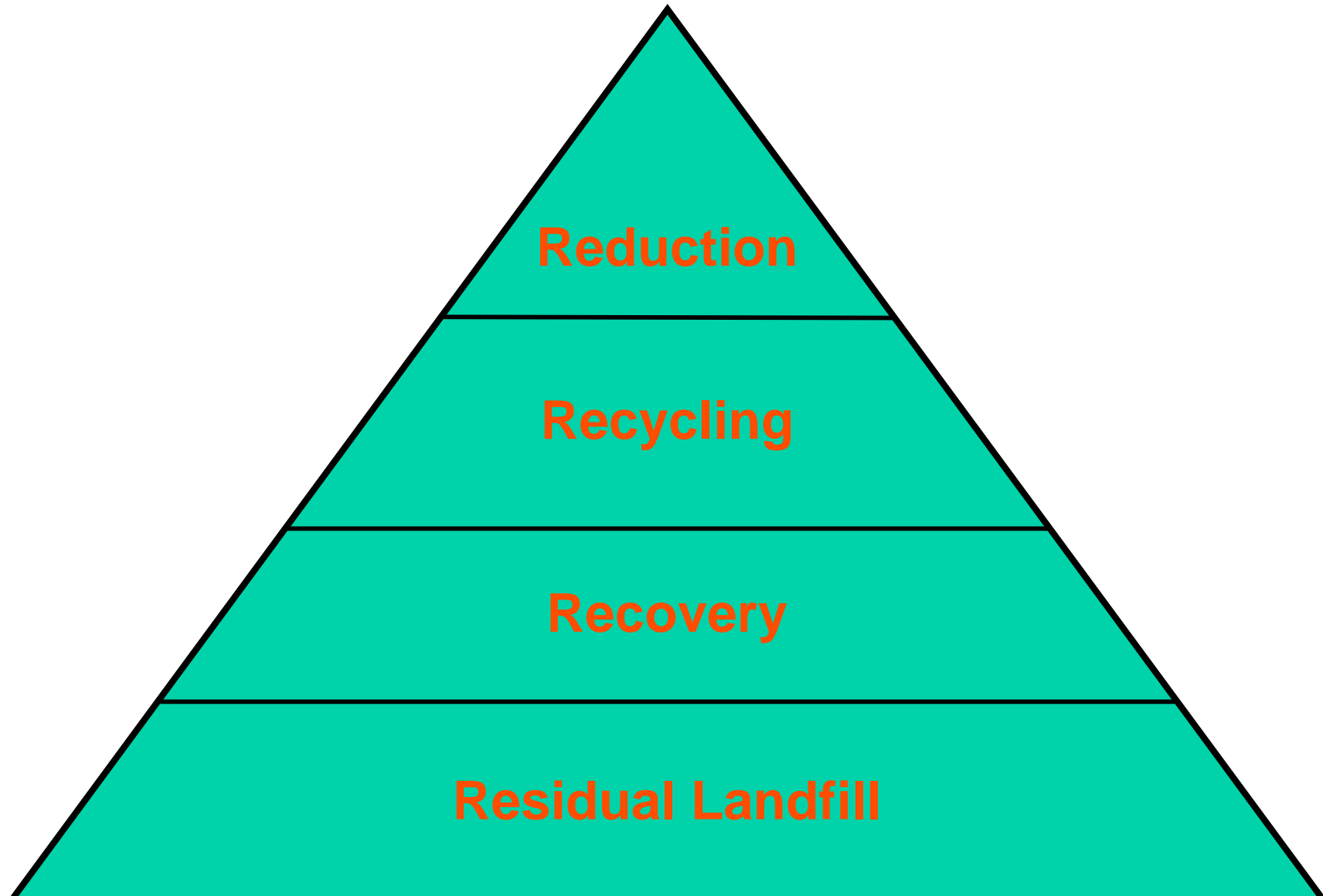
- The provision of additional sorting and baling facilities in the Dublin Region for recyclables collected prior to marketing
- Provision of green garden waste depots and composting facilities
- Facilities for the biological treatment of kitchen organic waste using composting or biological digestion processes in one or two plants serving the Region
- Provision of central thermal treatment facility with energy recovery
- Provision of facilities for the reception, sorting and recycling of construction/demolition waste
- Provision of recycling facilities/treatment for dealing with other priority wastes such as packaging and harmful wastes
- The provision of a new landfill for the Region

Further Studies funded by E.U.

- (a) Review of current technology
- (b) Site selection criteria
- (c) Size/capacity of plant or plants
- (d) Safe treatment of dioxins
- (e) Ensuring that emissions meet EU and national requirements
- (f) Arrangements for safe disposal of residue
- (g) Economic use of energy
- (h) Procurement/planning procedures

Waste Hierarchy

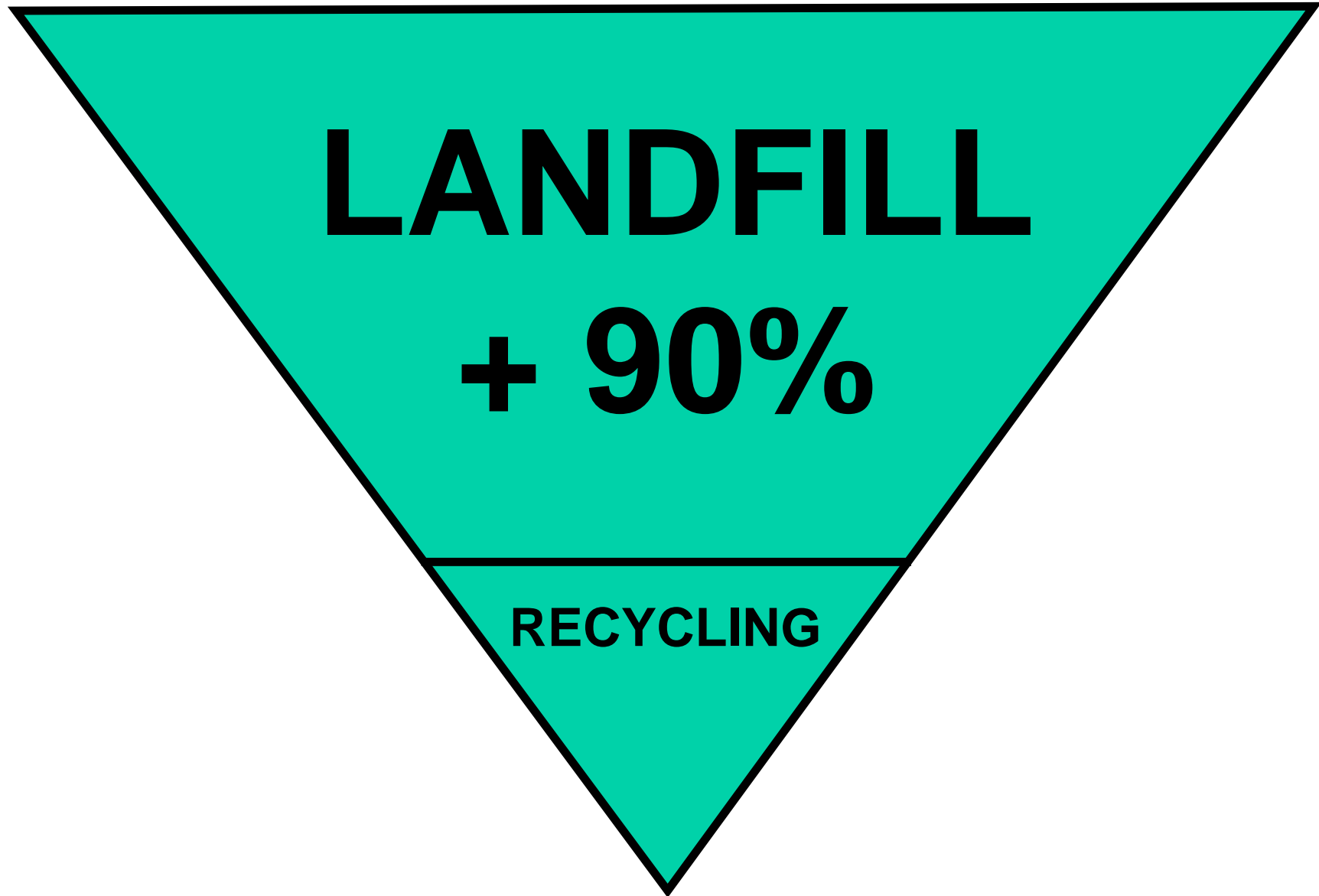
Integrated approach



Integrated Package of Measures

- Separate collection of dry recyclables
- Separate collection of biological waste
- Provision of civic amenity/recycling centres and bring banks (glass, etc)
- Central processing facilities for biological waste
- Facility for thermal treatment
- Landfill to replace existing facilities
- Implementation of charges to comply with the EU “Polluter Pays” policy

Waste Management Before Plan



Range of Waste Management Services

- Door-to door collection of residual waste (weekly grey/black bins and bags)
- Door-to-door collection of dry recyclables (green bin/bag)
- Door-to-door collection of bio waste (brown bins – pilot project started in Fingal and Dublin City Council)
- Glass Banks
- Community Bring Centres
- Recycling Centres

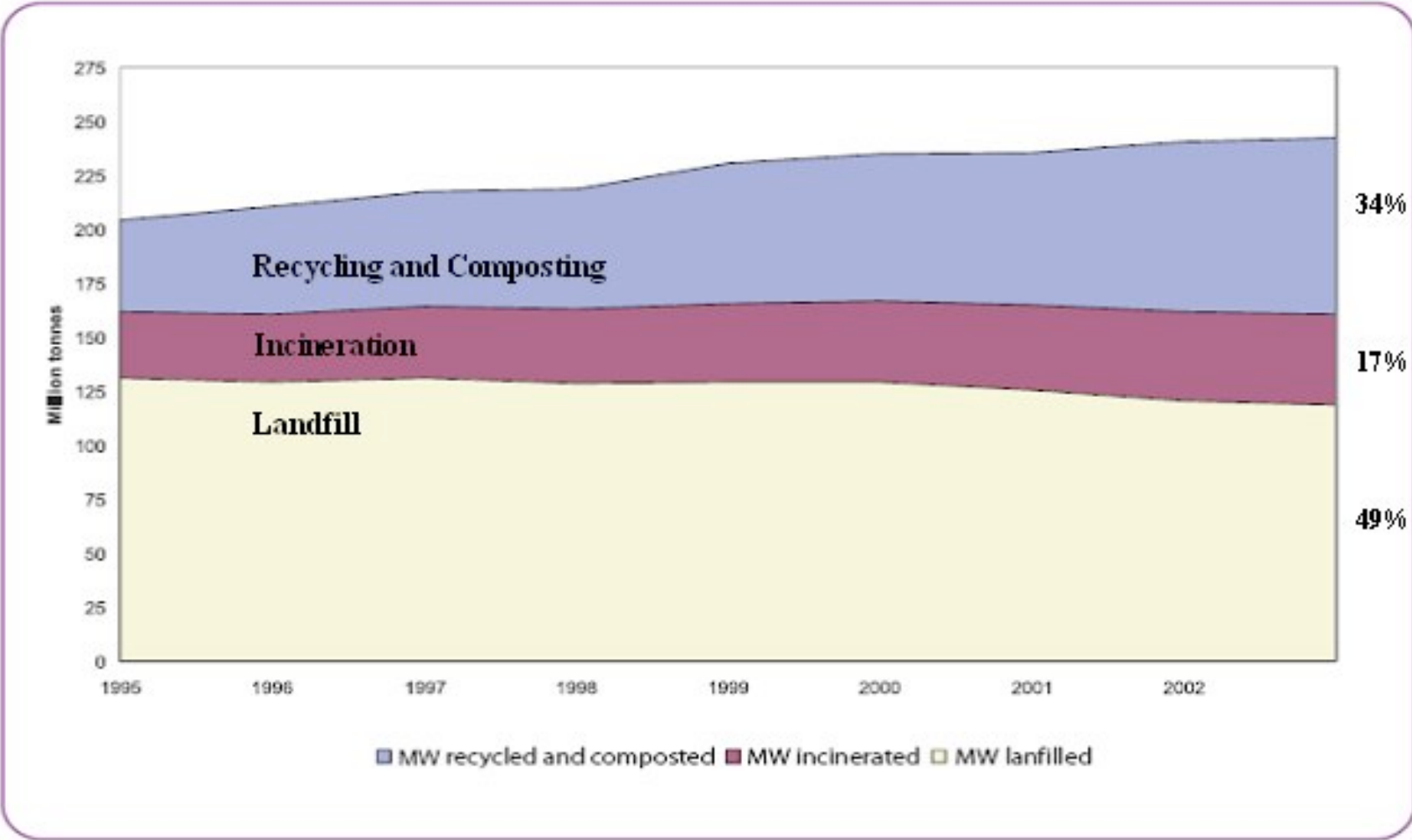
Range of Waste Management Services Contd.

- Green Waste Collection Centres (incl. Christmas trees)
- Bulky Household Waste Collection (variable frequencies)
- Street Cleaning and Litter Service
- Cleaning of areas subjected to dumping
- Services provided free by waiver to necessitous families
- Separate collection of commercial cardboard (in Dublin City only)
- Separate collection of dry recyclables from commercial customers (in Dublin City)

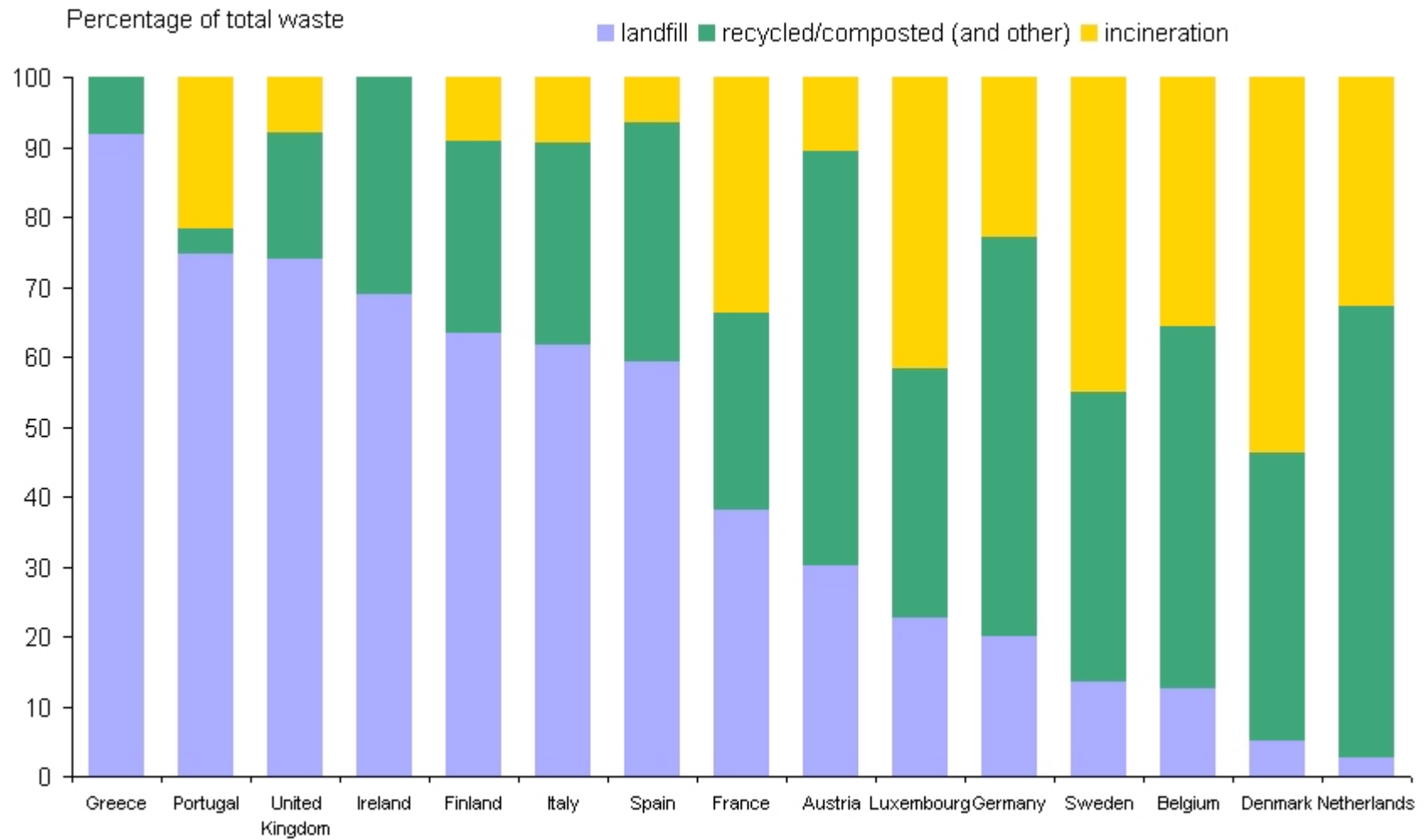
Door to Door Recycling Service

Household Bins	357,338
Household Bags	18,273
Apartment Households	25,137
Apartment Sites	684
Schools	542

Treatment of municipal waste in EU



Municipal waste management in the European Union



Eurostat

Measures to Ensure the Prior Segregation of Waste

Householder	Waste Collection Operator	Service Provider
Awareness and Compliance with legislation	Monitoring and complying with waste collection permit	Spot Checks in Quarantine area – return of unacceptable loads
Source Separation	Compliance with contractual obligations with Service Provider	Enforcement of contracts with waste collection operators
Three bin system/ Separate collection	Spot Checks	Compliance with EPA licence limits
Using recycling Centres and Bring Centres		Enforcement by EPA in case of exceedences to emission limits
Availing of Bulk Waste Collection		Possible financial penalties under proposed project agreement in case of exceedences to emission limits
Recycling hazardous waste and WEEE		

National Policy Documents

- Changing Our Ways – Published in September 1998
- Preventing and Recycling Waste – Published in March 2002
- Taking Stock and Moving Forward – Published in April 2004
- The National Strategy on Biodegradable Waste – Published in April 2006
- National Development Plan – published in 2007

Statements of policy in support of waste to energy

- Changing our Ways September 1998
- 7.2 Waste to Energy Incineration (WTE)
- 7.7.1. Mass burn WTE plays a major part in municipal waste management in many other EU countries, as well as further a field
- 7.7.5 The development of WTE capacity is consistent with, and could make a significant contribution to the implementation of the Government's renewable energy policy

Statements of policy in support of waste to energy contd.

- Taking Stock and Moving Forward April 2004
- Key Point 10
- Thermal treatment, with energy recovery, has a role to play as one element in the integrated approach to waste management; facilities will be subject to stringent controls through licenses issued by the EPA
- National Strategy on Biodegradable Waste April 2006
- 9.6.1 Thermal Treatment
- Thermal treatment with energy recovery in accordance with the internationally accepted waste management hierarchy is a key element of Irish waste management policy

Statements of policy in support of source separation and separate collection systems

- **Changing Our Ways September 1998**
- **7.3 Alternative collection systems**
- **7.3.1 The type of collection system employed must reflect the recycling scenario which is to be pursued. For instance, a significant proportion of municipal waste is organic material – either separate or alternate bin collection is necessary to allow this material to be efficiently segregated and diverted to a central composting facility. Different approaches may be utilised in order to segregate materials for recovery purposes, including-**
 - the use of multiple bins or other containers,
 - alternate collection schedules,
 - “bring” systems (e.g. bottle banks),
 - reliance on civic amenity facilities, and
 - “kerbside” collections systems

Statements of policy in support of source separation and separate collection systems contd...

- Preventing and Recycling Waste March 2002
- “5.1 The Challenge of Promoting Recycling
Better separation and sorting of waste at source, allied to segregated collection, to provide cleaner waste fractions and single material waste streams”
- “5.4 Source Separation and segregated collection
Householders will be required to segregate their waste into a number of distinct types of material waste”
- National Strategy on Biodegradable Waste April 2006
- “5.2 Strategy Principles
emphasis on source separation of biodegradable wastes by the producer, followed by separate collections by the collector, enabling high quality recyclables to be recovered”

Statements of policy in support of source separation and separate collection systems contd...

- “5.4 Key Waste Streams
Separate collection of bio-waste will also be required, together with the provision of composting facilities for garden waste and centralised biological treatment facilities for food waste”
- “8.3.1. Households and Communities
Separate collection of organic waste will be required in all suitable urban rural areas as part of an integrated collection system”

Statements of policy in support of an integrated approach to waste management

- Changing Our Ways September 1998
- “7.4.3 No one solution can address all waste management requirements; consequently, the emphasis of this policy statement is on integrated waste management”
- “7.7 Waste to Energy Incineration (WTE)
 - 7.7.1. Mass burn WTE plays a major part in municipal waste management in many other EU countries, as well as further a field. In general, materials recycling and WTE incineration are fully compatible in an integrated approach to waste management”
- Taking Stock Moving Forward April 2004
- Key Point 1 The policy approach will remain grounded in the concept of integrated waste management, based on the internationally recognised waste hierarchy, designed to achieve, by 2013, the ambitious targets set out in Changing our Ways”
- “Key Point 10 Thermal treatment, with energy recovery, has a role to play as one element in the integrated approach to waste management; facilities will be subject to stringent controls though licenses issued by the EPA and through subsequent licence enforcement and facility monitoring

Statements of policy in support of an integrated approach to waste management contd..

- National Strategy on Biodegradable Waste April 2006
- “4.2 Integrated mix of treatment options
Counties that have succeeded in diverting large quantities of BMW from landfill employ the following alternative treatment options simultaneously:
Materials recycling for paper and cardboard waste;
Central composting, mainly garden waste and, to a lesser extent, for food waste; and
Thermal treatment for residual “mixed” (or bagged”) waste”

National Development Plan

- “In line with national policy on the integrated approach to waste management, thermal treatment with energy recovery will be the preferred option for dealing with residual waste after achieving ambitious targets in respect of waste prevention, recycling and recovery”
- “These waste to energy plants will be provided as entirely private sector developments or by way of public/private partnerships”
- “In the case of the Dublin Region, the relevant authorities are proceeding by way of public private partnership for which the necessary regulatory approvals are being sought”
- Achievements to Date & Key Challenges Ahead
“A fully integrated waste management structure: Not all waste can be recycled. Best international practice favours waste-to-energy treatment in preference to landfill. A number of waste-to-energy facilities are at various stages of the planning and waste licensing process. These are necessary so that Ireland can have a fully integrated waste management structure.”
- Waste prevention
“A National Waste Prevention Programme has been established and is being headed by the EPA to progress what can be achieved domestically and the Department is in continuous discussion with its EU counterparts to discuss community-wide approaches.”