



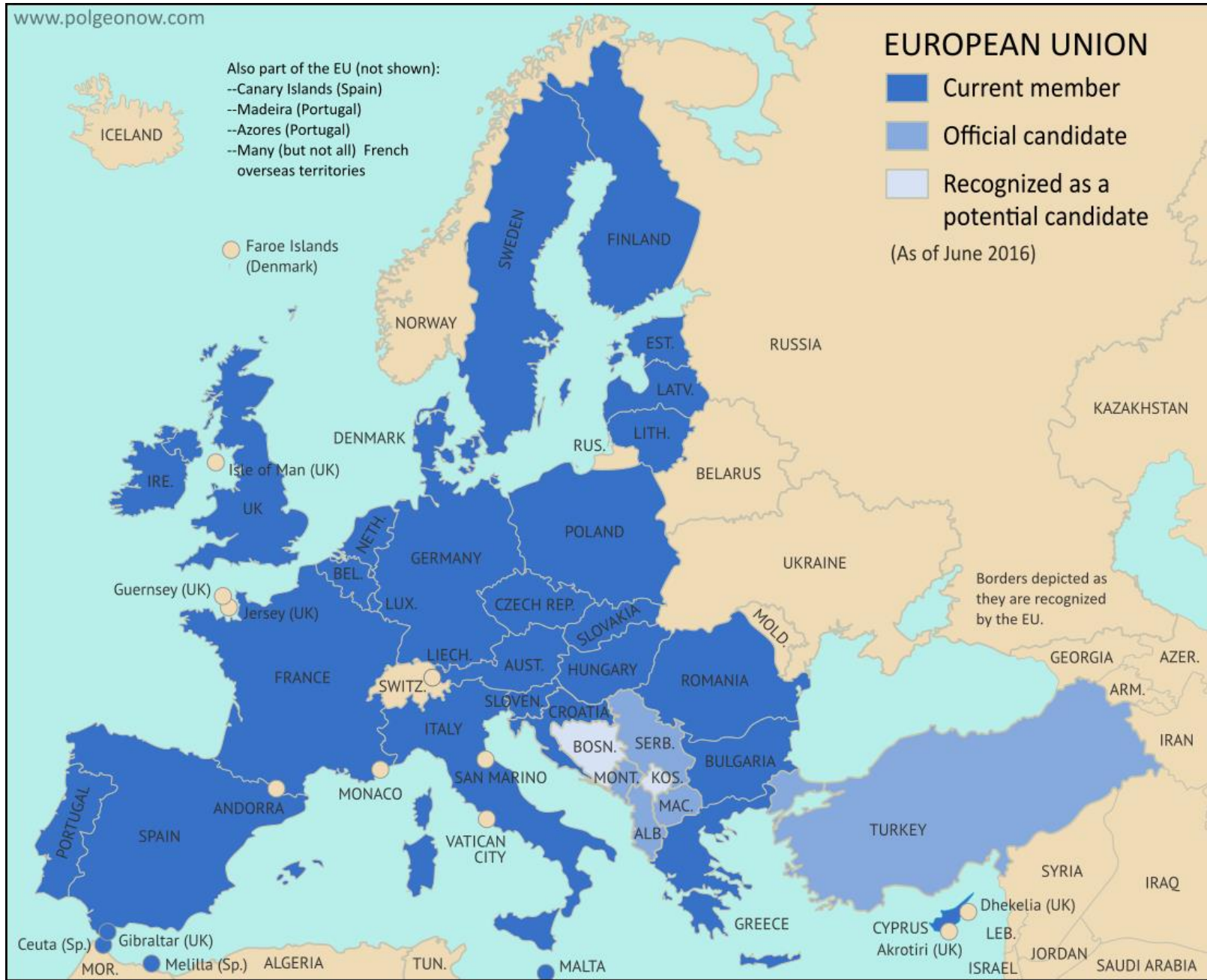
European Union Waste Management Policies, Strategies, & Directives

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SWANA Old Dominion Chapter / VRA
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Overview

- EU Waste Management & Recycling Framework
- Common Practices
- Funding Mechanisms
- Juxtaposition with USA
- Potential Action Items
- Additional Thoughts
- Resources for Further EU Program Study



Member Countries (28 in total)



European Commission

- EC Environment Directorate General
 - EC proposes policies and legislation pertaining to air, water, waste and goal of a sustainable economy.
 - Enforce that Member States apply EU environmental law correctly (compliance)
- European Environment Agency (EEA) of EU
 - Provides independent information
 - Clients are the European Union institutions (the EC, the European Parliament, the Council and member and cooperating countries).

EC Waste & Recycling Framework

- 1999 Landfill Directive
 - Biodegradable Waste (Organics) Diversion
- 2005 Thematic Strategy
 - Waste Prevention & Recycling Society
- 2008 Waste Framework Directive
 - Definitions & Requirements
 - Polluter Pays & EPR Policies
- 2015 Circular Economy Action Plan

EC Waste & Recycling Framework

- 2018 Waste Rules & Circular Economy Package
 - Recycling Targets
 - Separate Collections
 - Biodegradable Waste (Organics)
 - Diminish Landfilling
 - Economic Incentives – EPR
 - Waste Prevention

HIGHLIGHTS OF EU's APPROACH

EU Landfill Directive – 1999

- < 5 percent organic waste to landfills
- Reduce landfill waste amounts to 1995 levels (time requirement/reduction allowances through 2020)
- More stringent country requirements
 - landfill tax in most countries
 - several have “banned” landfill for untreated wastes

BMW LANDFILL REDUCTIONS

- EU Landfill Directive 1999 Policy on Biodegradable Municipal Waste (BMW)
- If >80% of waste to landfill then defer by 4 years
- 75% of 1995 levels by 2006 2010
- 50% 2009 2013
- 35% 2016 2020
- Waste often increased, at least until recently
- Therefore, task even harder unless waste prevention

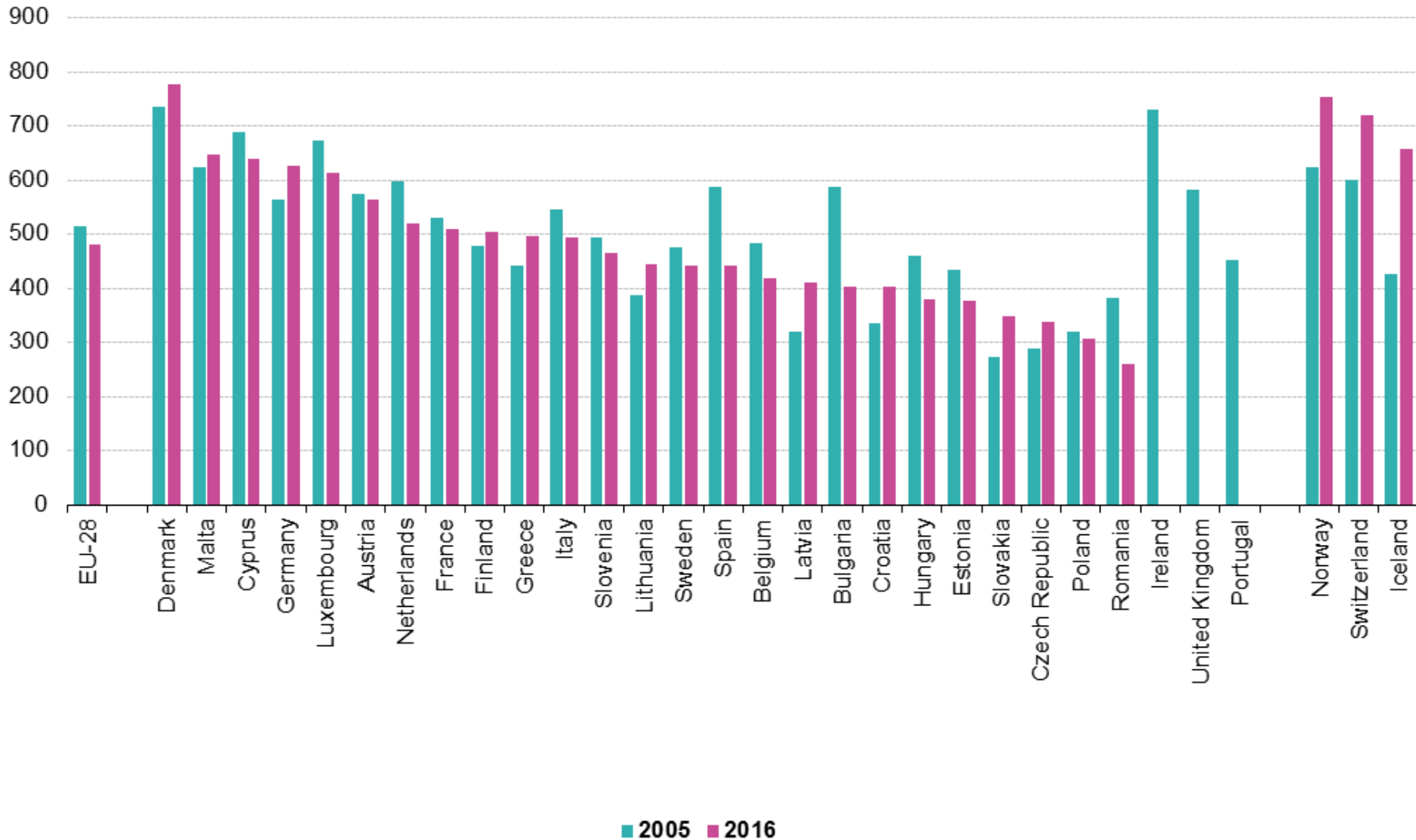
2018 Waste Rules

- MSW Recycling Targets
 - 2025 = 55% (from households/businesses)
 - 2030 = 60%
 - 2035 = 65%
- Packaging Materials Recycling Targets
 - 2025 = 65% of packaging materials
 - 2030 = 70% of packaging materials
- Separate targets for specific materials

2018 Waste Rules

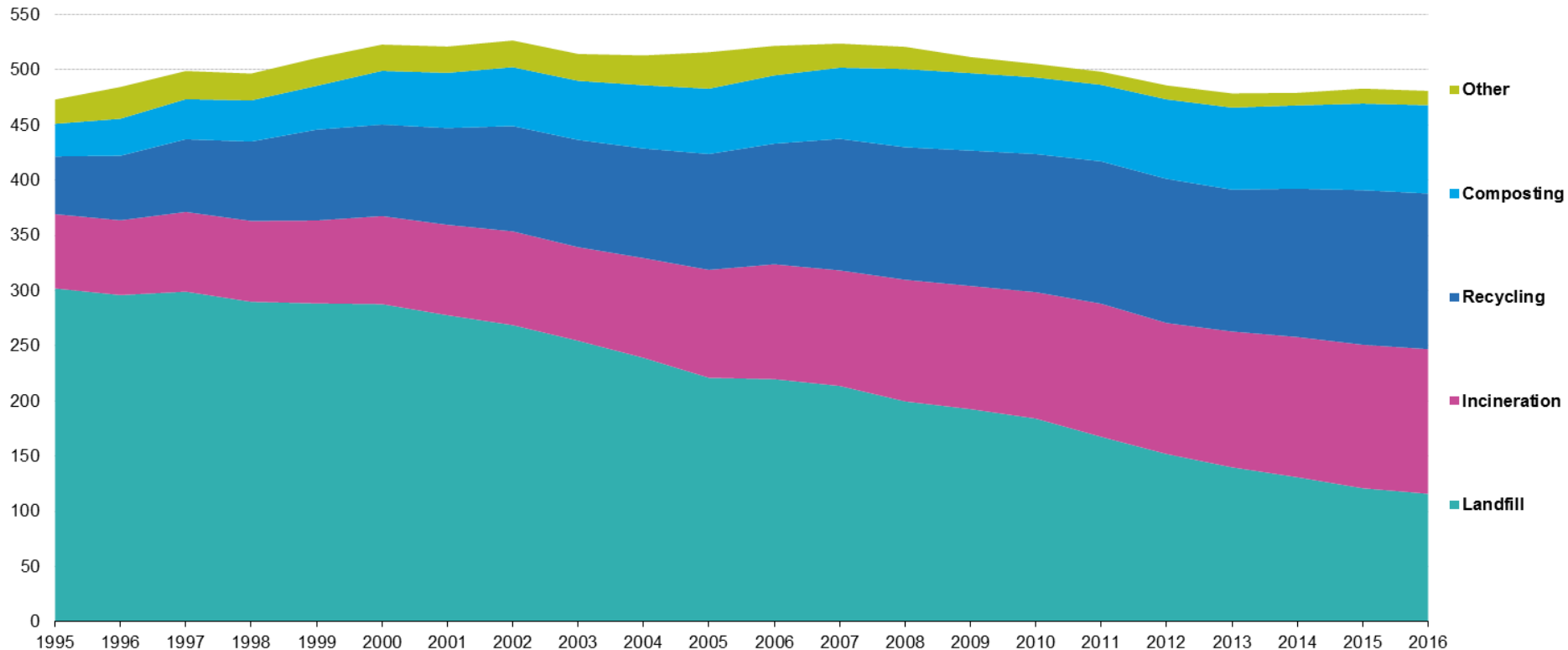
- Limits municipal waste to be landfilled to a maximum of 10% by 2035.
- Although waste management in the EU has improved considerably in recent decades, almost a third of municipal waste is still landfilled and less than half is recycled or composted, with wide variations between member states.
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EU MSW Generation



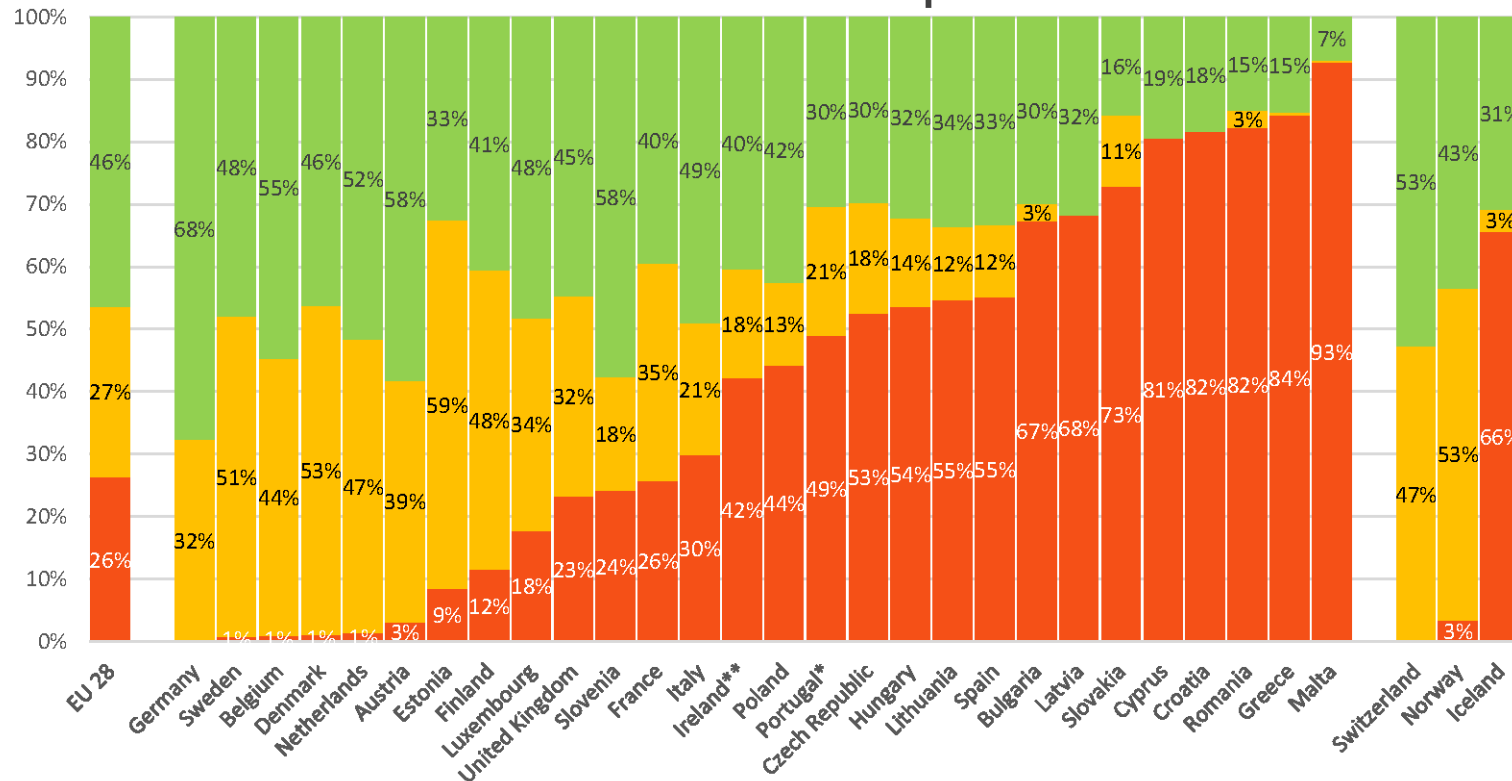
EU MSW Treatment Practices

- Landfilling decrease from 64% to 24%
- Composting, WTE, recycling increasing



EU MSW Treatment Practices

EU 28 + Switzerland, Norway and Iceland
Municipal waste treatment in 2015



- Landfill
- Waste-to-Energy
- Recycling + Composting

Graph by CEWEP, Source: EUROSTAT 2017

* : 2014 data (most recent data available)
** : 2012 data (most recent data available)

EU Common Practices

- From 1995 to 2016 MSW landfilled in the EU-28 declined by 86 million tonnes (59%) from 145 million Mg.
- 2005-2016 landfilling has decrease an average of 5.9% per year
- From 1995 to 2016 composting has increased an average of 5.1% per year.
- Recycling and composting together accounted for 46 % in 2016 relative to waste generation
- Municipal waste incinerated has thus risen from 67 kg per capita to 131 kg per capita.

EU Common Practices

- Source Segregation
- HeMBT or HeBioT (yields RDF)
 - Screening for material segregation
 - Drying
 - Shredding / Sorting / Processing

EU Funding Mechanisms

- Nearly all countries implement some form of PAYT
- All the countries that show landfill rates well below the EU-28 average of 28 % have either banned landfill of biodegradable or mixed municipal waste, or implemented a ban combined with a landfill tax of at least EUR 30 / Mg

Juxtaposition with USA

- VA – No Statewide Landfill Ban
- NC Statewide Landfill Bans
 - Yard Waste, 2025 = 55% (from households/businesses)
 - 2030 = 60%
- Some NC Local Landfill Bans
 - Cardboard, Clean Wood, etc.
- Segregated Collection
 - Basic recyclable materials – fairly common
 - Organic Waste – infancy stage

Potential Action Items

- Importance of direct financial incentives plus provision of facilities
- All of the Above Actions for Consideration
 - Composting
 - WTE / WC
 - Increased Recycling
 - Segregated Collections
 - Landfill Bans
 - PAYT
 - Landfill Tax

Additional Thoughts

- Education Imperative...What Can Be Recycled?
- Look at What's in Your Trash!!
- Will businesses cease universal acceptance of non-customer's waste & recycling

Resources for Further Study

- <http://ec.europa.eu/environment/waste/>
- <https://www.eea.europa.eu/soer-2015/europe/waste>
- http://ec.europa.eu/eurostat/statistics-explained/index.php/Municipal_waste_statistics

CONCLUSION

- Consider a pre- or post-retirement second career as an international “soldier of fortune” in solid waste management...the world needs you!!