



Responsible Management of Pesticide Packaging

CMS Collection data 2018

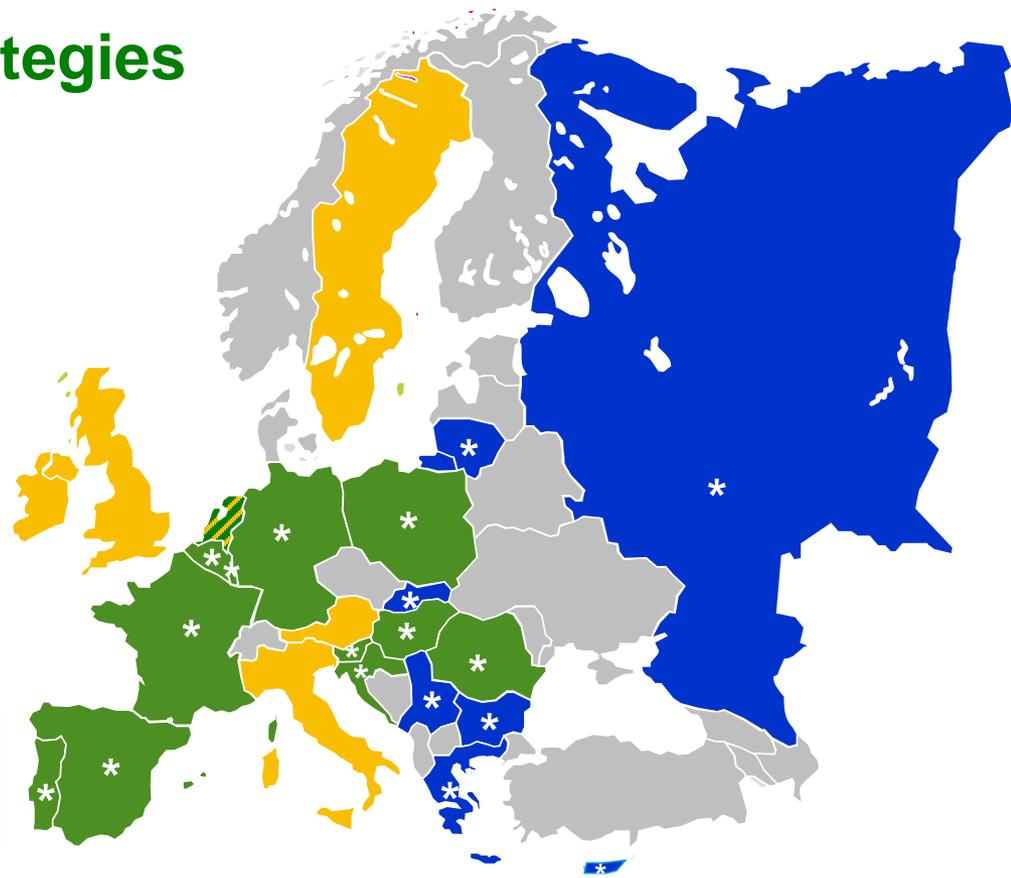
ECPA
Packaging Expert Group

November 2019



Container Management Strategies

Overview of CMS in Europe



Nationwide industry run CMS ("EU11")

| | | | | |
|-------------------|---------------|------------------------|-----------------|----------------|
| ADIVALOR (FR) | AMIRA (DE) | AgriRecover (BE+LU) | SIGFITO (ES) | CROCPA (HR) |
| valorfito (PT) | PL (PL) | SCAPA (RO) | CSEBER (HU) | SLOPAK (SI) |

Industry run pilot CMS

| | | | | | | |
|--------------|---------------|-------------------|----------------|-----------------|--------------|-----------------|
| CCON (BG) | SECPA (RS) | green-dot (CY) | cyclos (GR) | AKCUCIA (SK) | LAAA (LT) | skonone (RU) |
|--------------|---------------|-------------------|----------------|-----------------|--------------|-----------------|

Countries with independent collection programme(s), joint by industry. E.g.:

| | | | | | |
|---------------|-------------|---------------|--------------------|------------|------------|
| STORL (NL) | IIE (IE) | bonus (AT) | SVEPARETUR (SE) | UK (UK) | IT (IT) |
|---------------|-------------|---------------|--------------------|------------|------------|

☐ Countries with no (known) dedicated CMS. Pesticide packaging waste are collected via collection systems for domestic or special / industrial wastes (tbc!)

* "EU18" countries covered by annual ECPA statistics (=EU11 + 7 pilots). In addition, Italy, Sweden and Netherland also provided partial collection data.

Container Management Project

Aims and Overall Objectives

KPIs and Timeframe (Plastics)

| | By 2015 | From 2020 |
|---------------------------------------|---------|-----------|
| European collection rate | > 60% | > 75% |
| % country CMS coverage | | 100% |
| Ecological footprint (recycling rate) | > 60% | > 75% |
| Cost/kg | | < 0,70€ |



Container Management Project



KPIs of benchmarked CM Systems



CMS Statistic

General comments and warnings

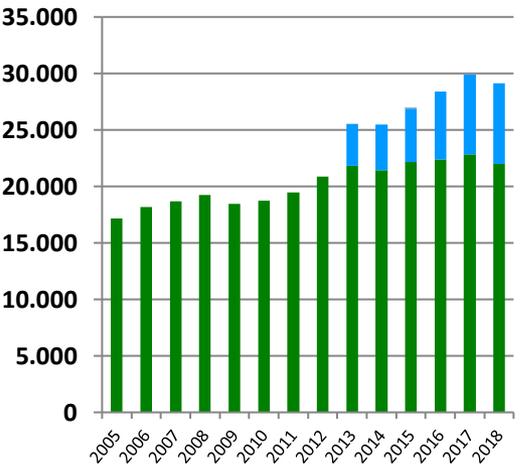


- These figures are still in preliminary stage as some information from countries are still not complete/clarified. This is especially true for cost figures.
- Figures originate from information provided by benchmarked countries or studies (e.g. Italy)
- Reference data changes due to inclusion of new countries (e.g. Romania in 2007; 6 pilot countries in 2013-2015), new studies, etc.
- Quality of data varies and data harmonization between countries is sometimes difficult (e.g. definition of total cost; not all can provide data specific to rigid plastics containers – the reference pack for our KPIs) and requires in-depth review work.
- There are other routes of disposal (e. g. municipal schemes)
- Thus, the benchmark figures cover a subset of systems and the overall coverage is probably higher
- The data illustrate trends!**

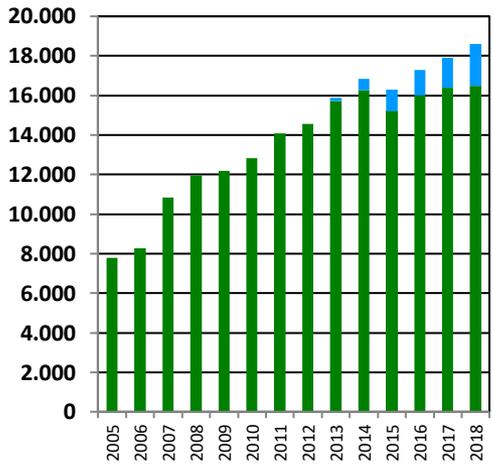
Container Management EU18*

Synopsis 2005 – 2018

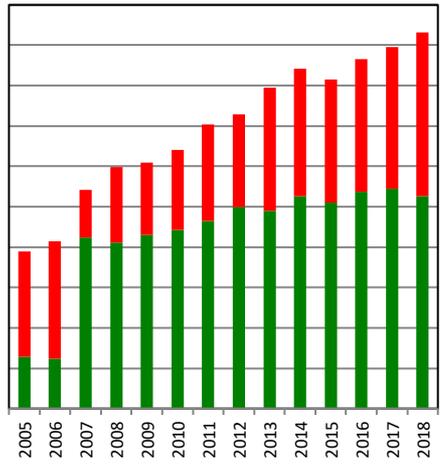
Quantity shipped
Mature / Pilots
[Plastics; To]



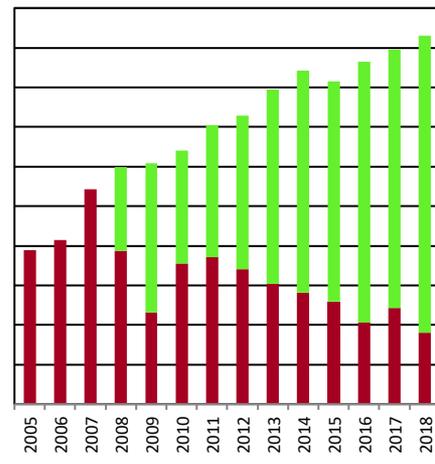
Quantity collected Mature / Pilots
[Plastics; To]



Waste classification
Non-hazardous / Hazardous

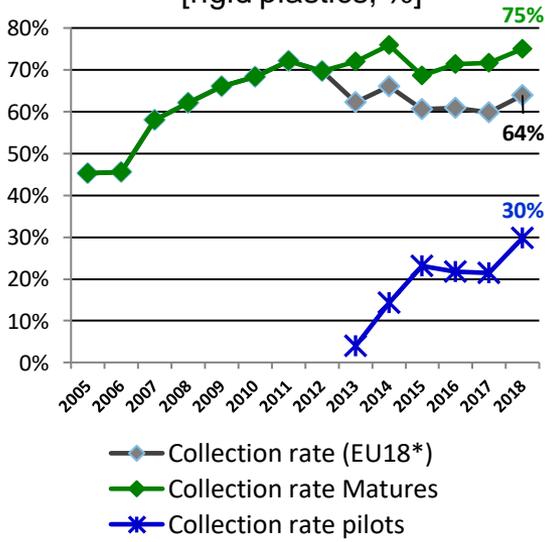


Treatment:
Recycled / Not recycled

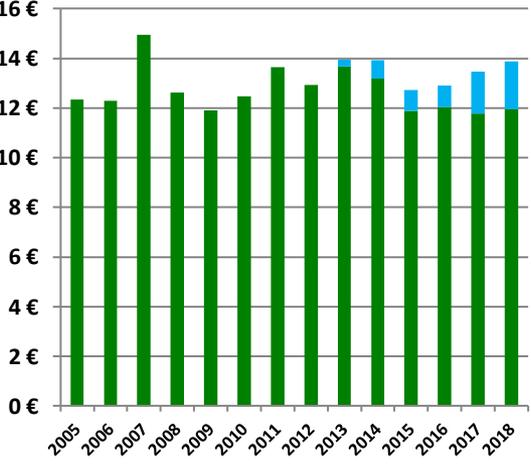


*EU18 monitored countries

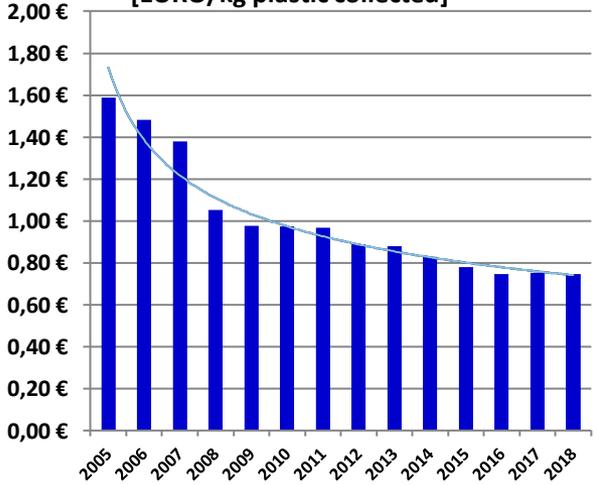
Collection rate
[rigid plastics; %]



TOTAL CMS COST
(Mature & Pilots)
[MEuro]



Unit cost plastics
(Matures + Pilots)
[EURO/kg plastic collected]



- Pilots:**
- Bulgaria
 - Cyprus
 - Greece
 - Lithuania
 - Russia
 - Serbia
 - Slovakia

- Matures:**
- Belgium
 - Croatia
 - France
 - Germany
 - Hungary
 - Luxembourg
 - Poland
 - Portugal
 - Romania
 - Spain
 - Slovenia

Container Management EU18

Synopsis 2005 – 2018: Trends



Trends EU18 (2018; plastics)

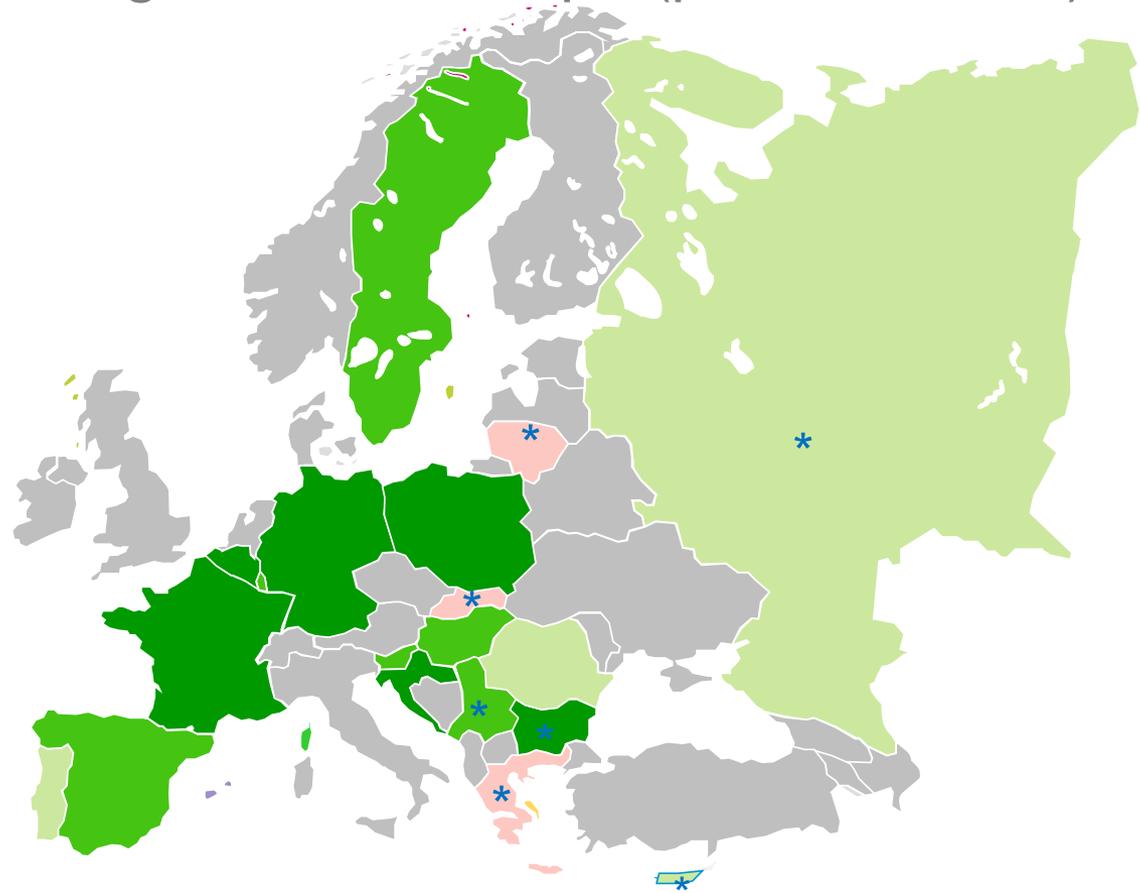
- Increase of total **quantity of plastics collected**
18,6 kto (PY: 17.9 kto)
- Increase of **collection rate**
63.9% (PY: 59,1%)
- Sharp increase of quantity of **recyclates** and of **recycling rate**
15.0 kto; 80.6% (PY: 13.0 kto; 72.9%)
- Increase of **overall cost**
13.8 M€ (PY: 13.5 M€)
- Similar **unit CMS cost (€/kg collected)**
0.75 €/kg (PY: 0.75 €/kg)

| Data 2018 (rigid plastics!) (vs. 2017) | Matures ("EU11") | Pilots (7) | EU18 |
|--|------------------|-----------------|------------------------|
| Tonnes rigid plastics shipped to market | 22 018 (-3,6 %) | 7 119 (+0.3%) | 29 137 (-2.7%) |
| Tonnes plastics collected | 16 507 (+0.8 %) | 2 118 (+39.1%) | 18 624 (+4,0%) |
| Tonnes plastic recycled | 13 087 (+11.7 %) | 1 928 (+43.8%) | 15 010 (+15.0%) |
| Overall collection rate | 75.0% (+4.6%) | 29.7 % (+38.7%) | 63.9% (6.9%) |
| Overall recycling rate | 79.3% (10.8%) | 91,0% (+3,4%) | 80.6% (10.5%) |
| k€ Total cost (plastics!) | 11 948 (+1.4%) | 1 940 (+16%) | 13.888 (+3.2%) |
| €/kg average cost per kg plastics collected | 0.72 (+0.6%) | 0.92 (-17%) | 0.75 (-0,8%) |

Container Management EU18

Overview of Container Management in Europe (plastics; 2018)

- Collection rate > 75%
- Collection rate 50% – 75%
- Collection rate 25% – 50%
- Collection rate < 25%
- * Pilot projects



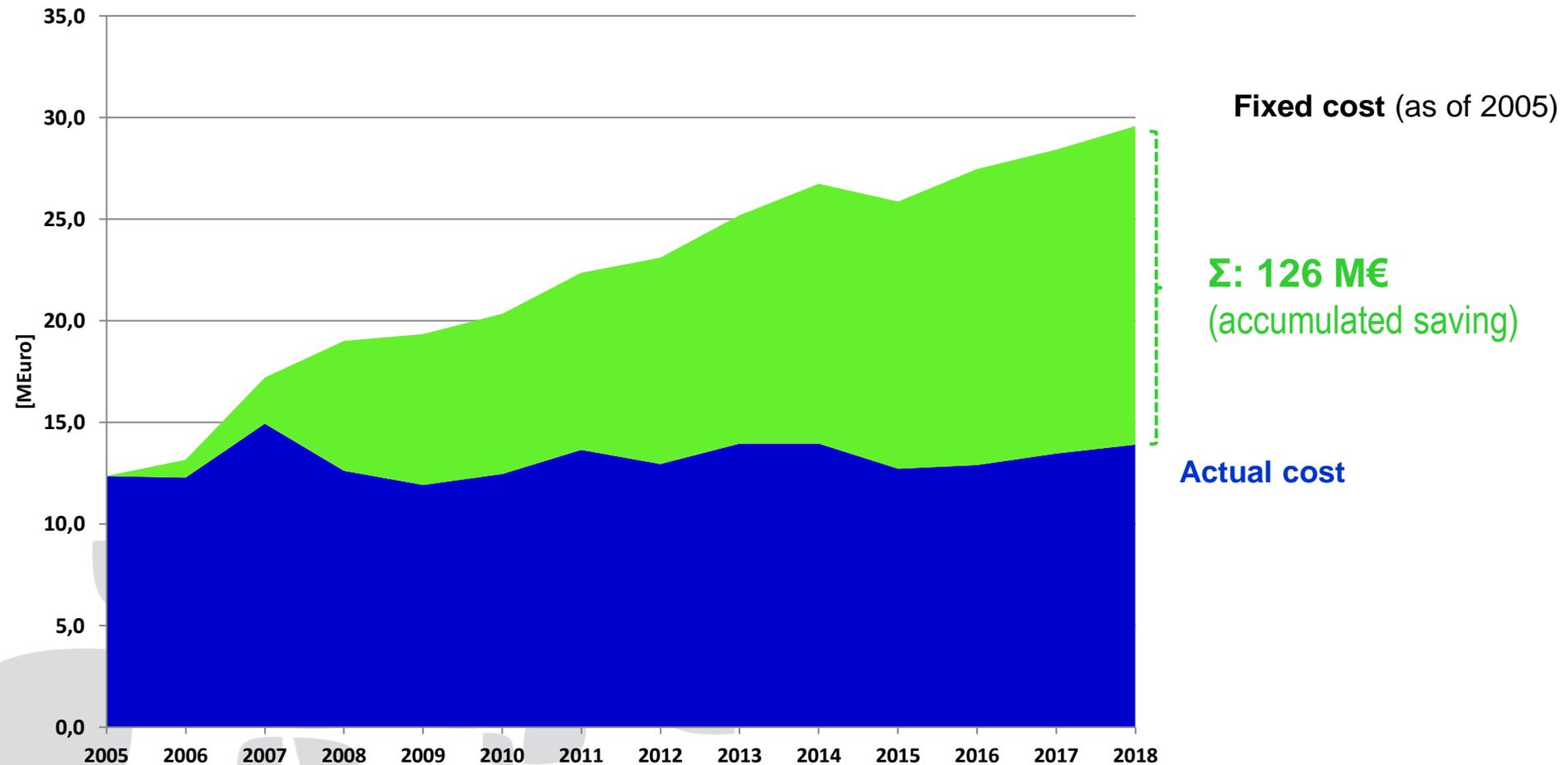
Contributions to the Circular Economy and the EU Plastics Strategy:

- Reduction of risks at the source (packaging design; rinsing; separate collection)
- Collected over 200,000 metric tonnes of packaging since 2005
- Recycled over 100,000 metric tonnes of high valuable plastics in safe applications since 2005

CMS Europe EU18: Cost reduction

Actual cost vs. cost development with fixed specific cost of 2005 (1,59€/kg)

Total estimated cost reduction 2015 - 2018



Container Management Project



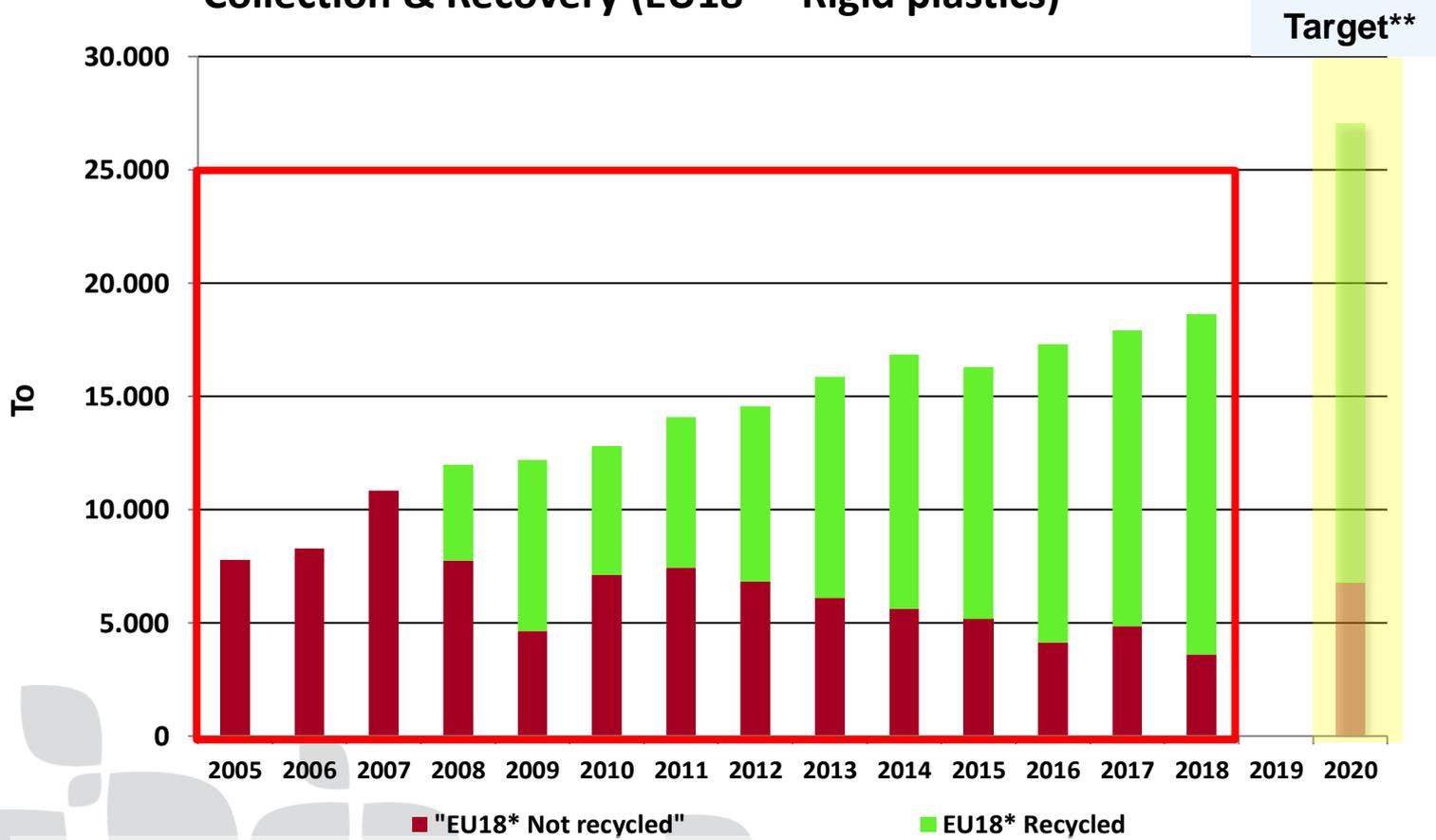
CM Project - Roadmap



Container Management Project

Aims and Overall Objectives

Collection & Recovery (EU18* - Rigid plastics)



** Target for all Europe. Covers recycling and equivalent options (e. g. energy recovery)

EU18* monitored countries

Matures:

Belgium
Croatia
France
Germany
Hungary
Luxemburg
Poland
Portugal
Romania
Spain
Slovenia

Pilots:

Bulgaria
Cyprus
Greece
Lithuania
Russia
Serbia
Slovakia

Note:

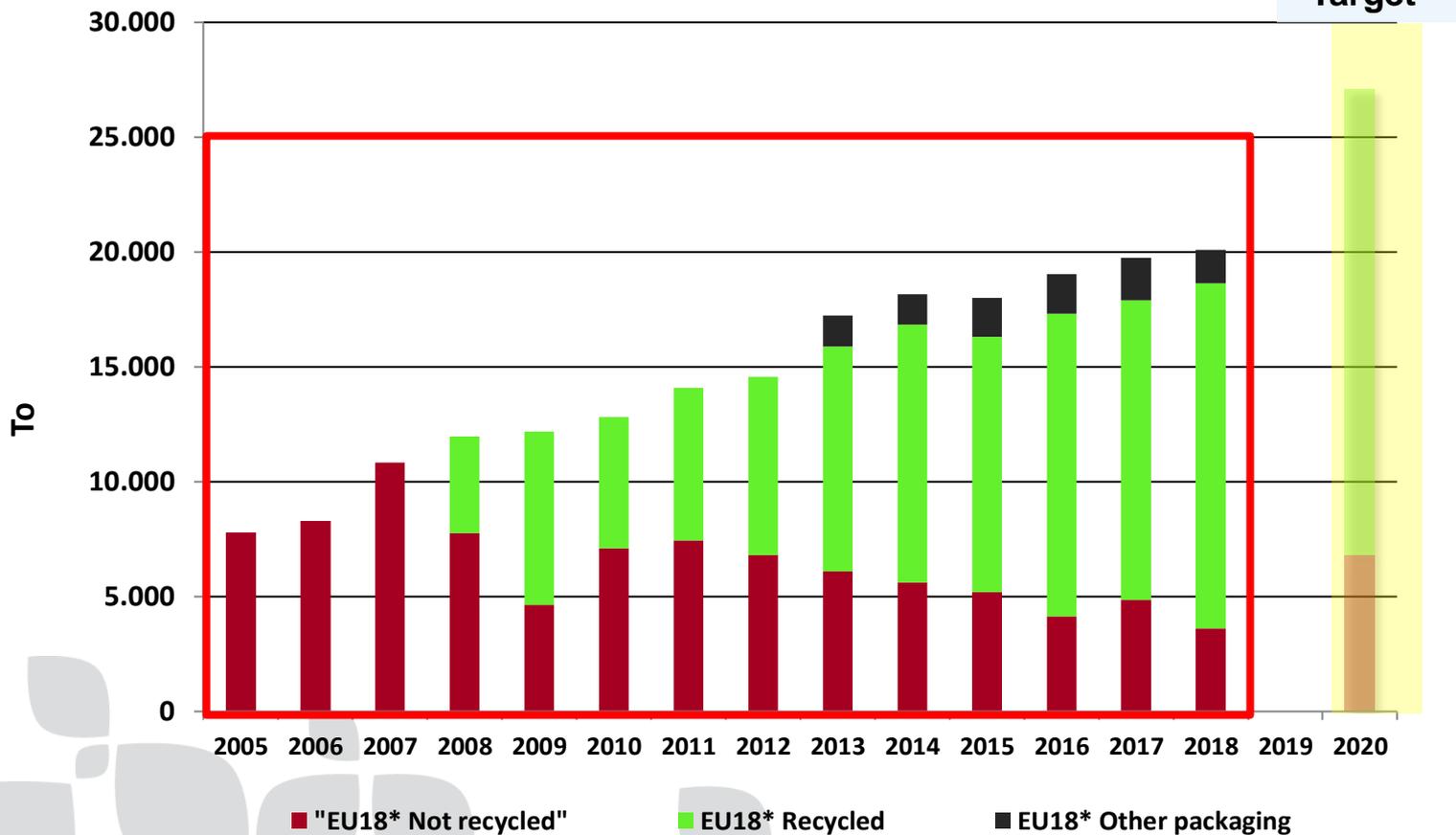
- Figures cover benchmarked countries (EU18*) only
- Only plastic containers
- The total amount of collected material may be higher due to other routes of collection

Container Management Project

Aims and Overall Objectives



Collection & Recovery (EU18* - all packaging)



** Target for all Europe. Covers recycling and equivalent options (e. g. energy recovery)

EU18* monitored countries

Matures:

- Belgium
- Croatia
- France
- Germany
- Hungary
- Luxembourg
- Poland
- Portugal
- Romania
- Spain
- Slovenia

Pilots:

- Bulgaria
- Cyprus
- Greece
- Lithuania
- Russia
- Serbia
- Slovakia

Note:

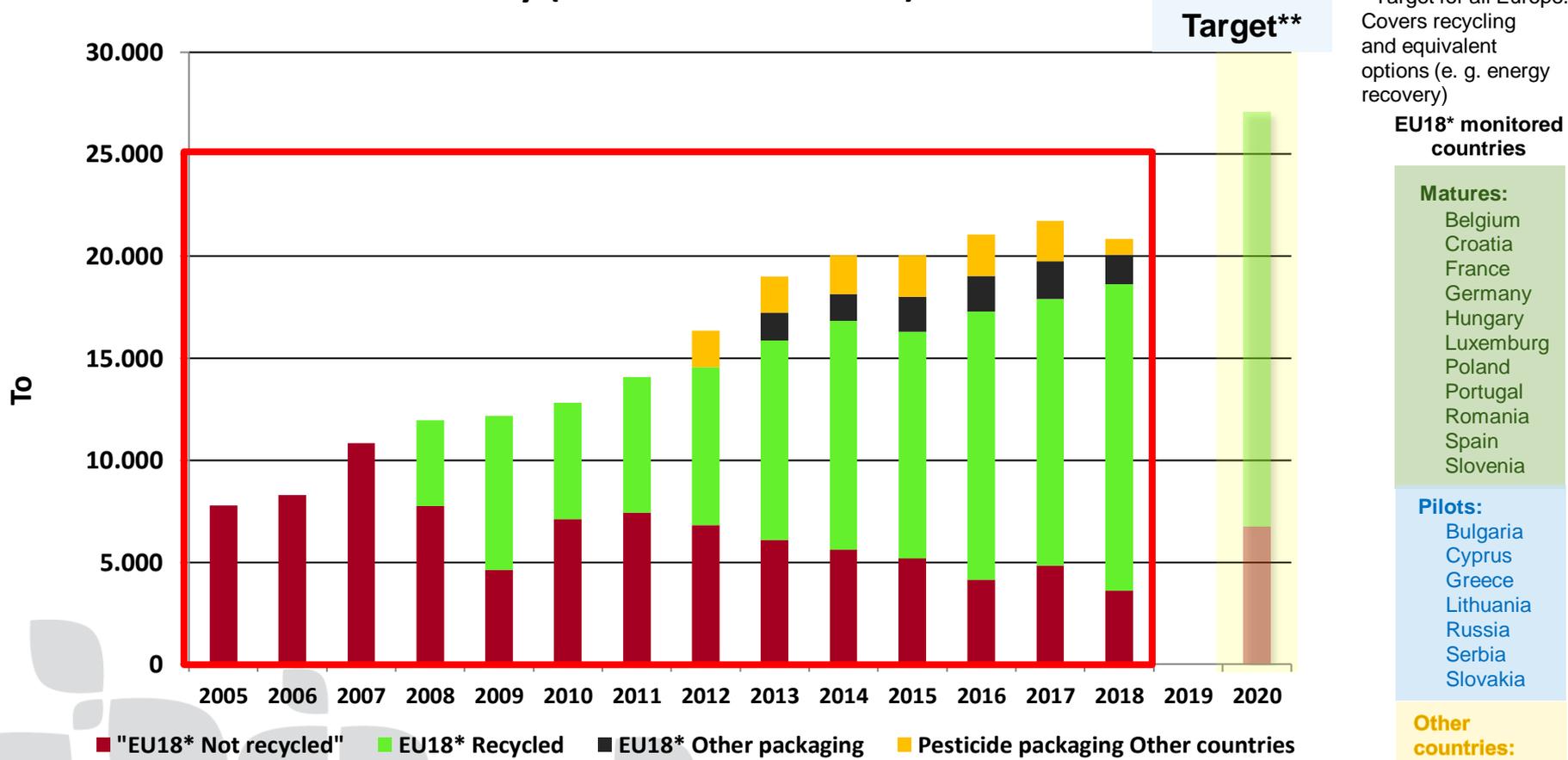
- Figures cover benchmarked countries (EU18*) only
- The total amount of collected material may be higher due to other routes of collection

Container Management Project

Aims and Overall Objectives



Collection & Recovery (incl. other countries)



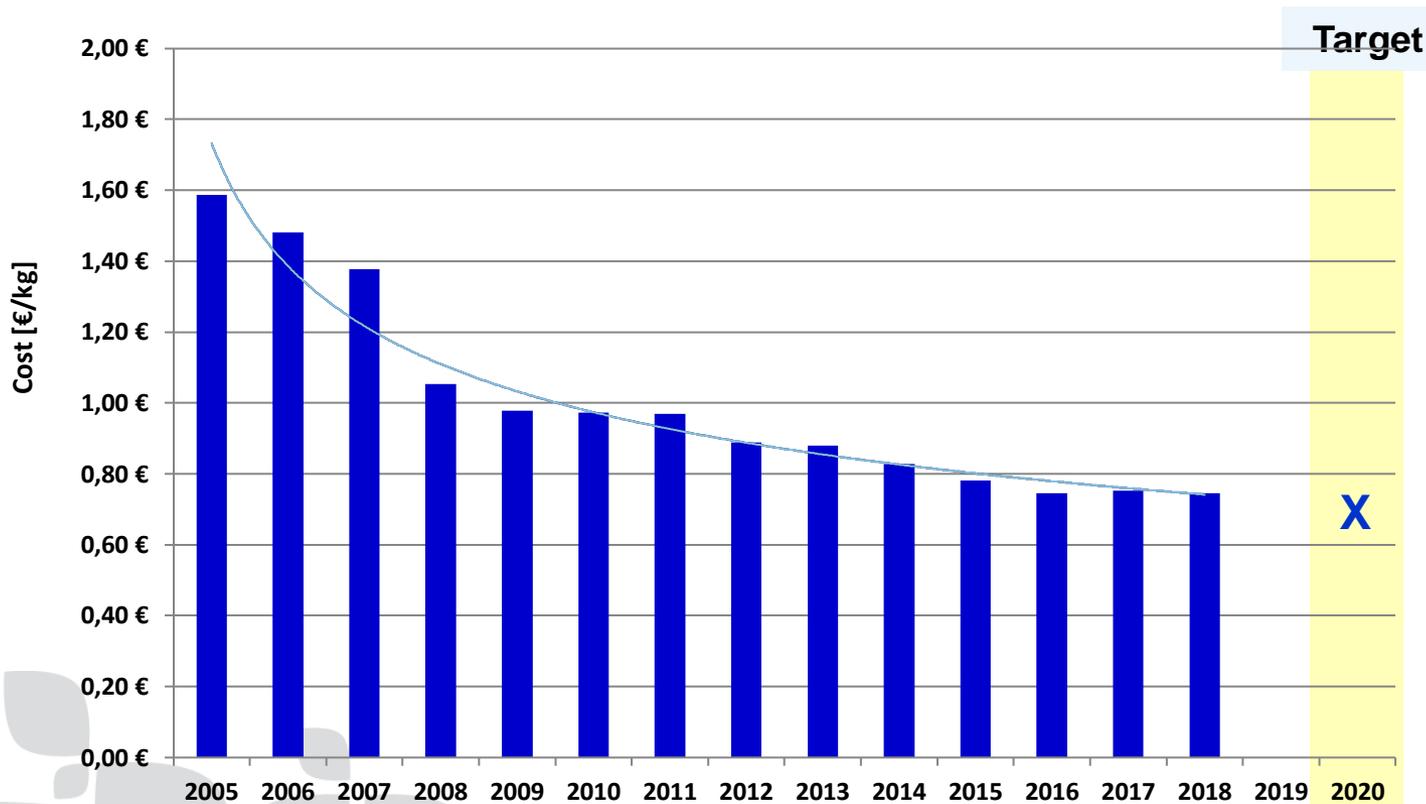
Note:

- Data from "Other countries" are very limited and inhomogeneous. It might only consider some packaging types (e.g. from most toxic products in NL)
- The total amount of collected material may be higher due to other routes of collection.

Container Management Project

Aims and Overall Objectives

Unit cost (EU18*, rigid plastics)
[€/kg plastic collected]



*EU18 monitored countries

Matures:

Belgium
Croatia
France
Germany
Hungary
Luxemburg
Poland
Portugal
Romania
Spain
Slovenia

Pilots:

Bulgaria
Cyprus
Greece
Lithuania
Russia
Serbia
Slovakia
(since 2013)

Note:

- Figures cover benchmarked countries (EU18*) only
- Only plastic containers
- The total amount of collected material may be higher due to other routes of collection

Survey: impact of waste classification



Container Management Project

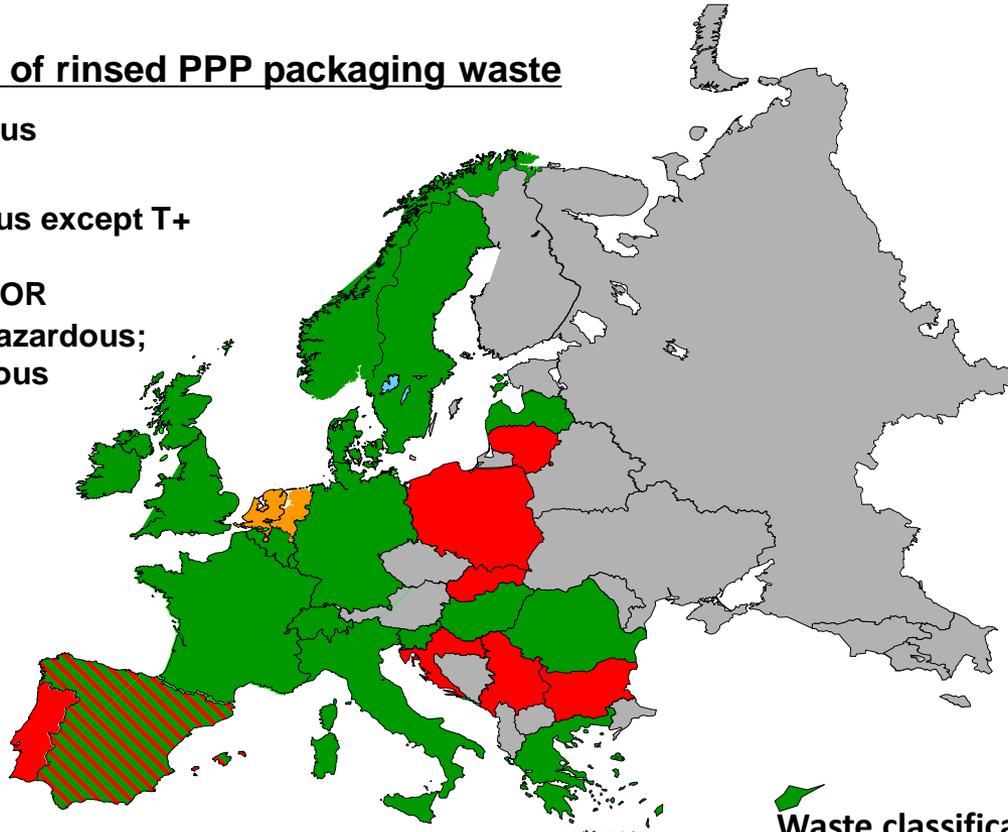
Classification of rinsed PCR's in Europe

Classification of rinsed PPP packaging waste

- non hazardous
- hazardous
- non hazardous except T+
- unclear

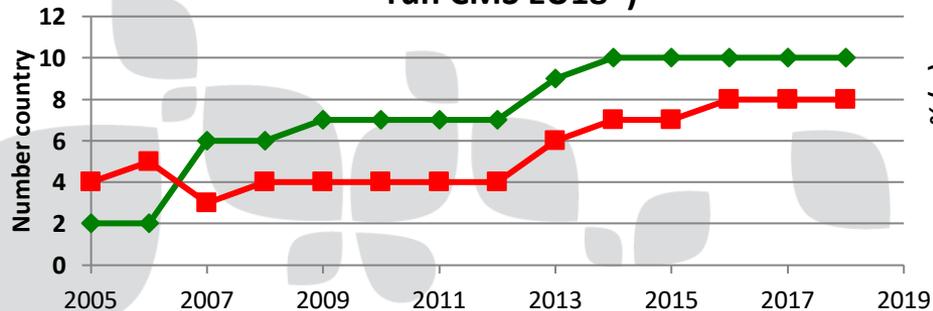
France: ADIVALOR

- =<20 t non hazardous;
- >20 t hazardous

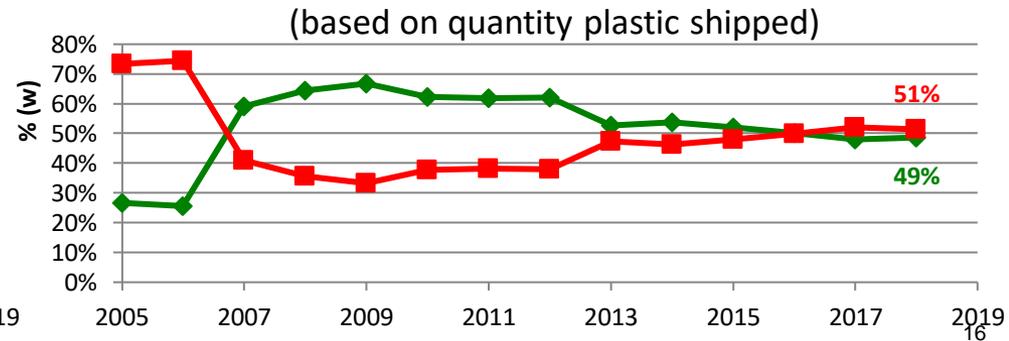


Source: ECPA CMS survey 2019

Waste classification in countries with industry-run CMS (EU18*)

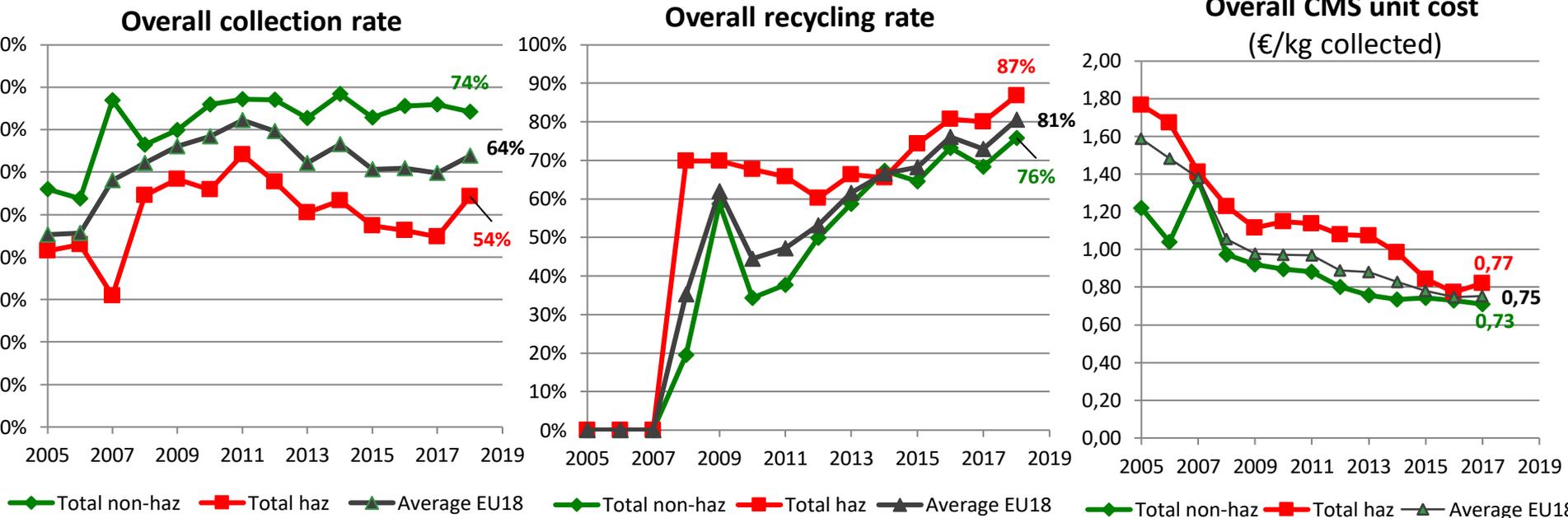


Waste classification in countries with industry-run CMS (EU18*)



Container Management Project

Benchmark of the impact of classification on CMS performance (EU18)



Trends EU18 (plastics, 2018):

- Statistically appropriate to benchmark countries with **hazardous / non-hazardous** classification because similar number of country (8/10) and market size (51%/49% quantity packaging shipped)
- Overall, **collection rate is higher** when the classification is **non-hazardous**:
Non-hazardous CMS: 74%; **Hazardous CMS: 54%**
- Overall, **recycling rate is higher** in systems with **hazardous classification**:
Non-hazardous CMS: 76%; **Hazardous CMS: 87%**
- Overall, **unit cost (€/kg collected) is lower** with **non-hazardous** classification (3-60% lower over the last 15 years)
- At country level, these trends can show very different pattern.

Container Management Project



Thanks

