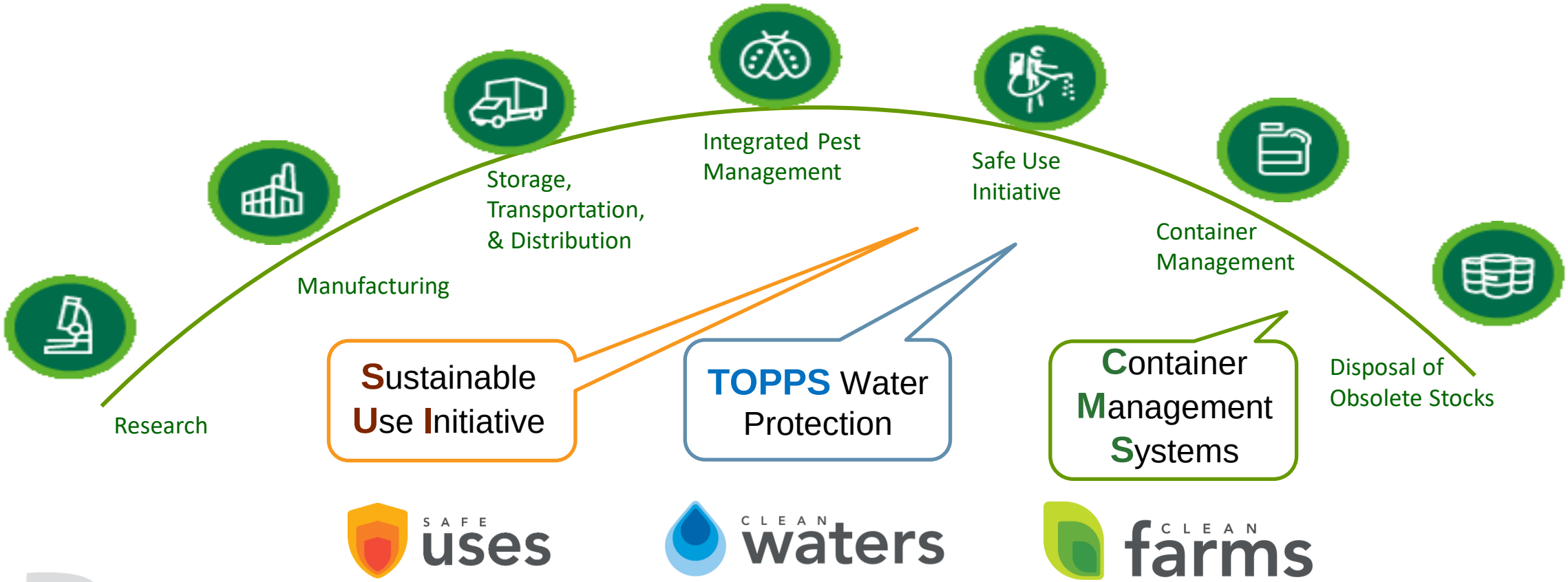
# Responsible Management of Pesticide Packaging

## CMS Collection report 2021

CLE Packaging Expert Group (PTSG)
November 2022

# Industry initiatives for Container Management

## Stewardship Lifecycle for Crop Protection Chemicals



# KPIs of benchmarked CM Systems in Europe

# Container Management Programmes

## Overview of CMS in Europe (2021)

### CLEAN farms Nationwide industry run CMS (Mature)

(BG) (FR) (DE) (BE) (ES) (HR)

(HU) (PL) (PT) (RO) (SI)

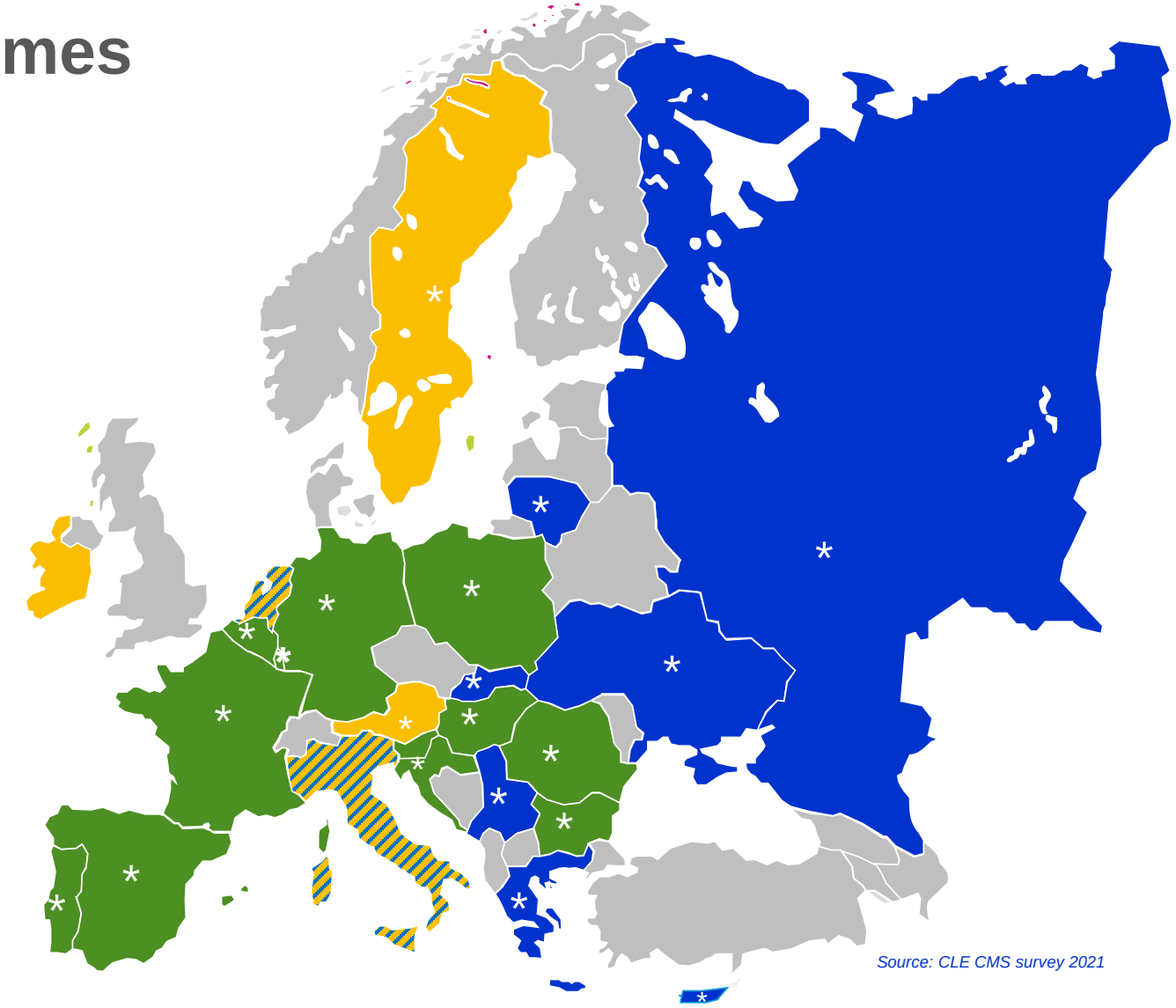
### CLEAN farms Industry run pilot CMS

(RS) (CY) (GR) (SK) (LT) (RU) (UA)

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

(NL) (IE) (AT) (SE) (IT)

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



Source: CLE CMS survey 2021

* "Countries providing annual CLE statistics are the Mature, Pilots + Austria and Sweden. In addition, Ireland, Italy and the Netherlands have occasionally provided partial collection data. CMS in Luxembourg has been managed by a new EPR since 2019, with no data provided so far"

CLEAN farms

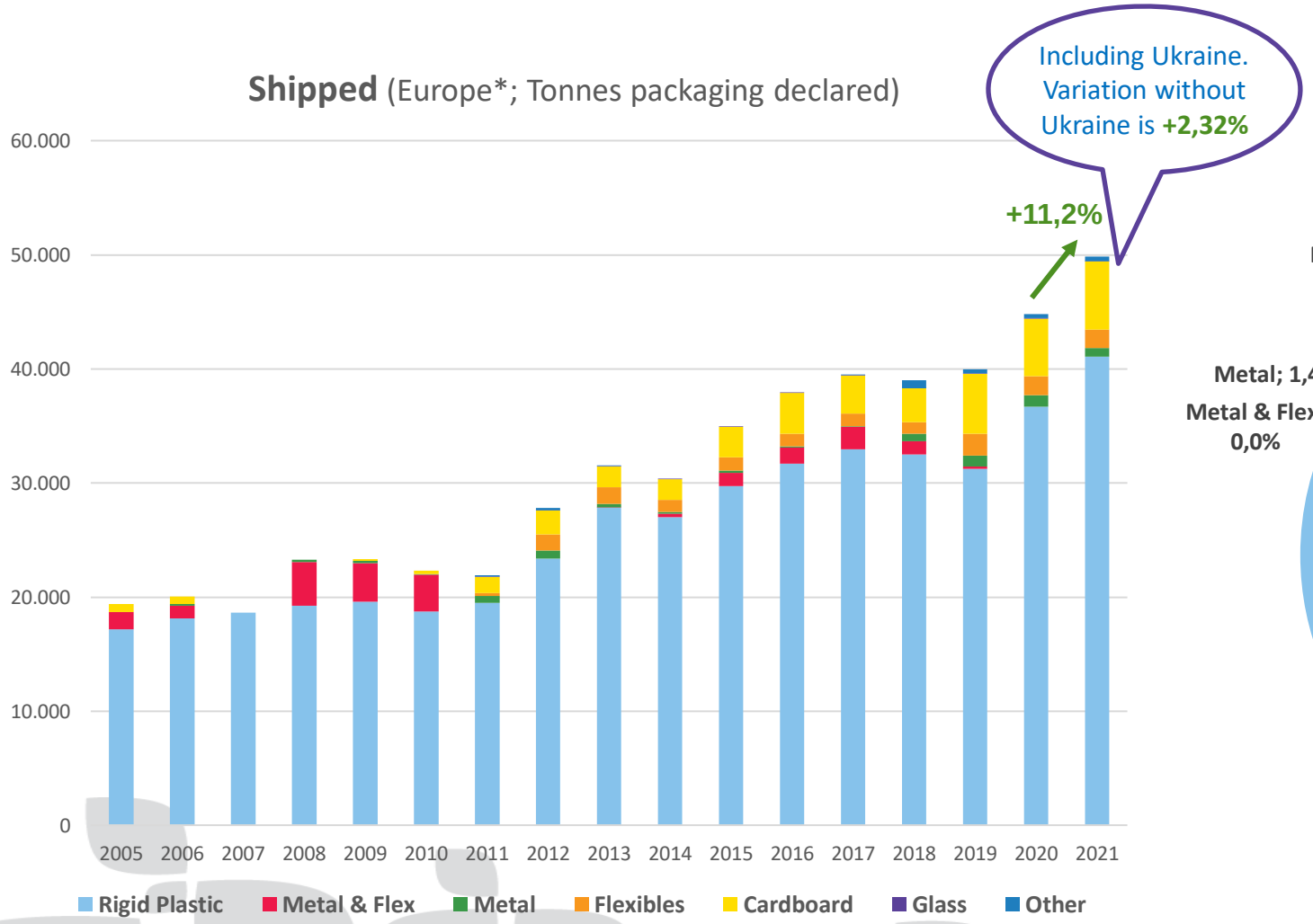
# CMS Statistic

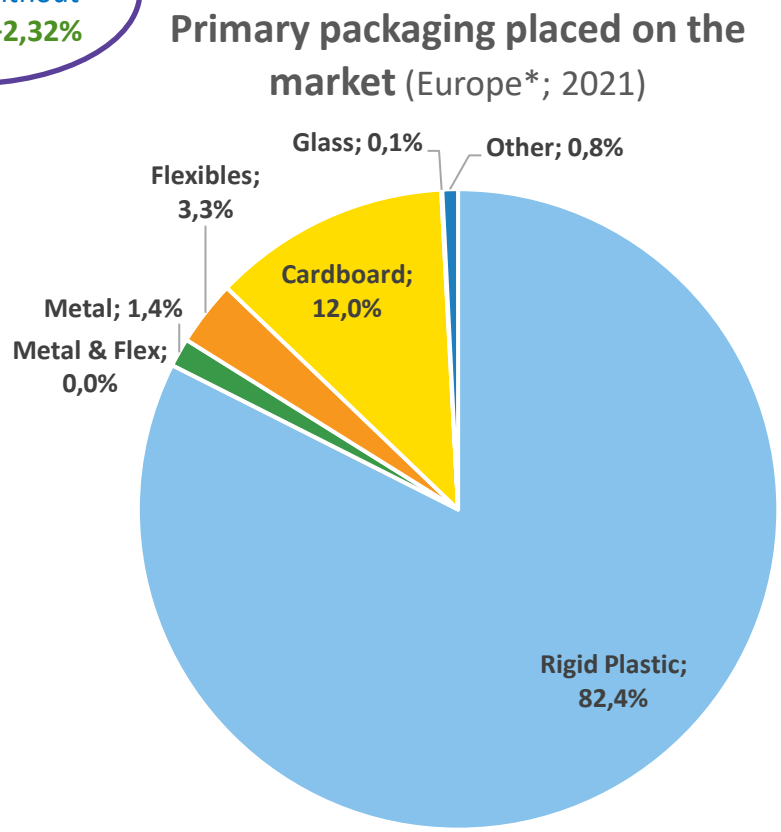
## General comments

- Figures are based on information provided by benchmarked countries or studies. Data from some countries are based on Government statistics that might not be available at the time of the edition of reports; data might be updated in subsequent years (e.g. +2-3 years for Italy).
- The scope of the survey regularly evolve due to the inclusion of new countries (e.g. Romania in 2007;  6 pilot countries in  2013-2015, Ukraine in 2021), of new studies, etc. with important impact on trends (e.g. overall collection rate)
- Quality of data varies and data harmonization between countries is sometimes difficult (e.g. definition of total cost; different sorting and collection rules) and requires in-depth review work. Data also sometimes includes other packaging (e.g. from fertilizers)
- The quality of data for Plastics (rigid containers) is deemed accurate and reliable. The data and trends for the other primary packaging are less accurate and reliable because not all benchmarked countries collect this data (e.g. shipped) or the waste.
- Data usually represents the quantity placed on the market by members companies; the total market is bigger in many of these countries. Similarly, the quantities reported for collection and recycling cover the materials managed by the benchmarked CMS programmes only. More packaging waste might be collected through other routes of disposal (e. g. municipal schemes; private contracts by farm owners with waste operators)
- The benchmark figures cover a subset of systems and the overall coverage is probably higher
- **The data illustrates overall trends and progresses; it is not intended to be used to compare or rank the performance of individual CMS systems**

# Container Management Europe

## Synopsis 2005 – 2021: Packaging placed on the market




***) Monitored countries**

**Matures (12):**
- Belgium
- Bulgaria
- Croatia
- France
- Germany
- Hungary
- Luxemburg (<2019)
- Poland
- Portugal
- Romania
- Spain
- Slovenia

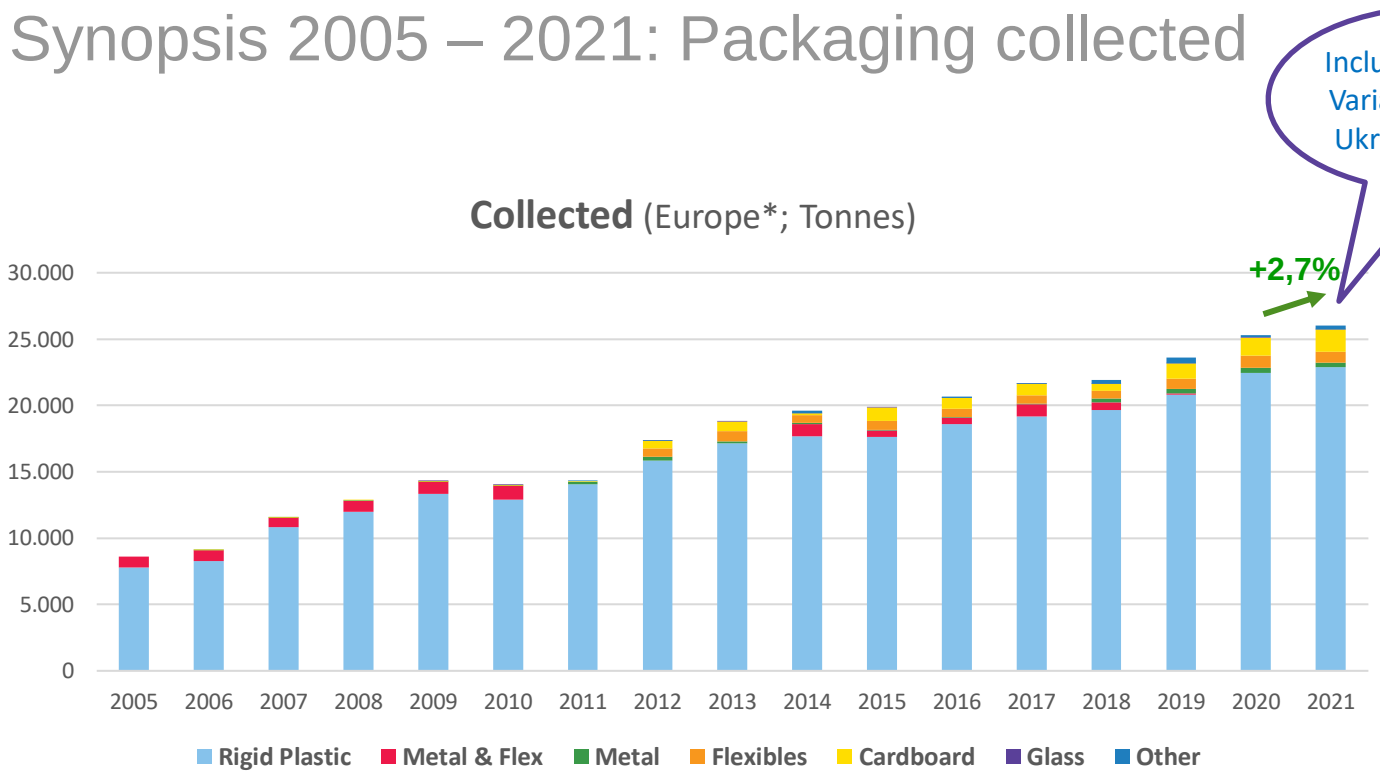
**Pilots (7):**
- Cyprus
- Greece
- Lithuania
- Russia
- Serbia
- Slovakia
- Ukraine (2021)

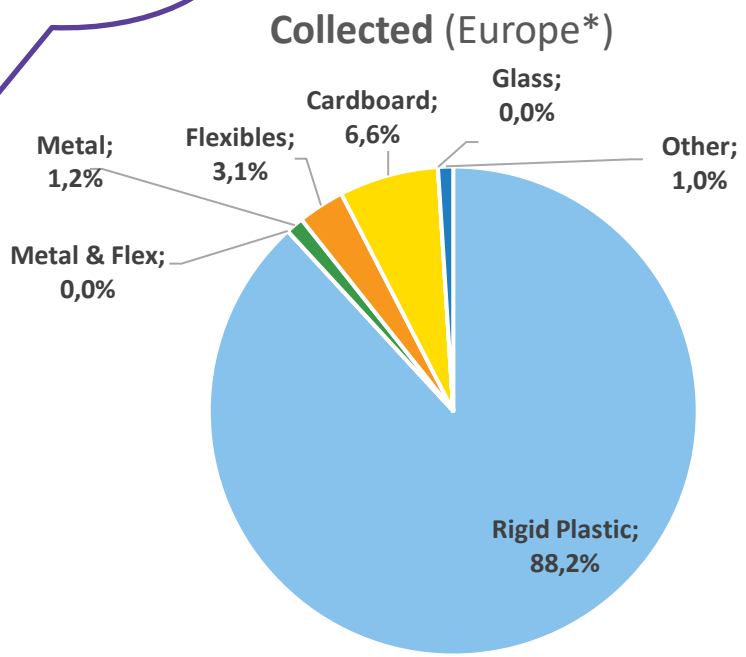
**Independent (4):**
- Austria
- Ireland (>2020)
- Italy (2013-2018)
- Sweden
- Netherlands (2013-2018)

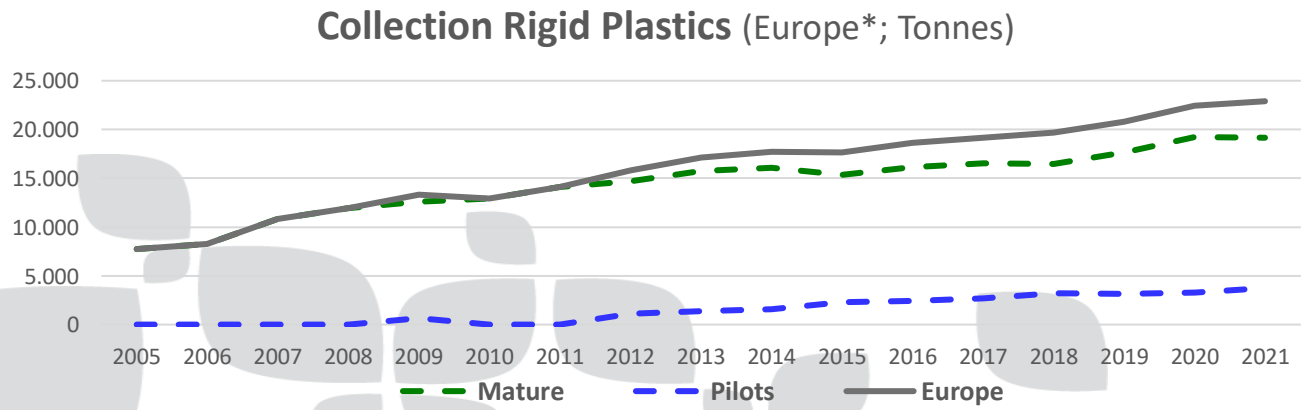
- Based on data provided by the industry in the benchmarked countries. The total market in these countries and in Europe might be bigger because some programmes declared only the data about rigid plastic containers.

# Container Management Europe

## Synopsis 2005 – 2021: Packaging collected




*) Monitored countries

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- Bulgaria
- Croatia
- France
- Germany
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- Poland
- Portugal
- Romania
- Spain
- Slovenia

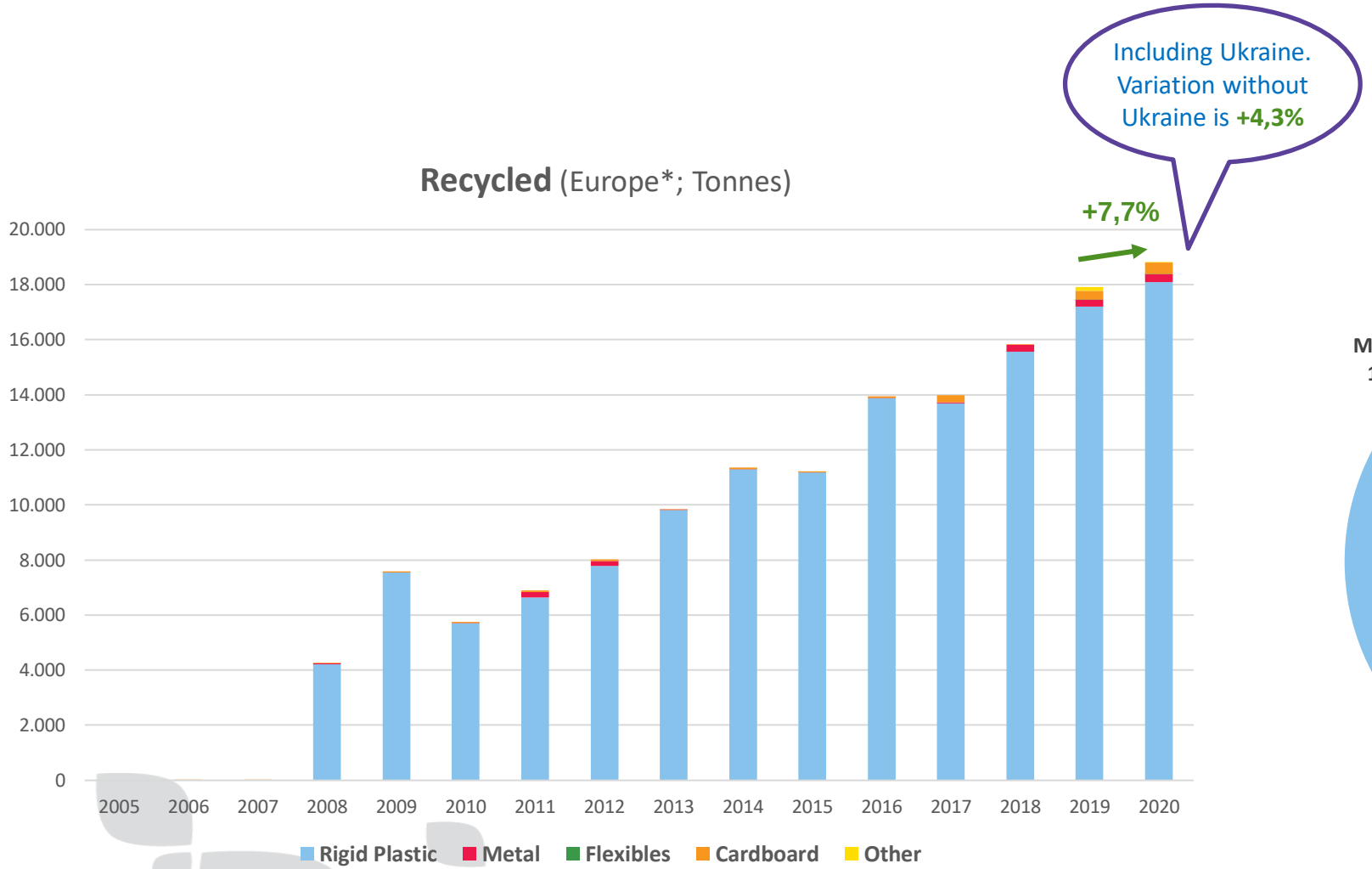
**Pilots (7):**
- Cyprus
- Greece
- Lithuania
- Russia
- Serbia
- Slovakia
- Ukraine (2021)

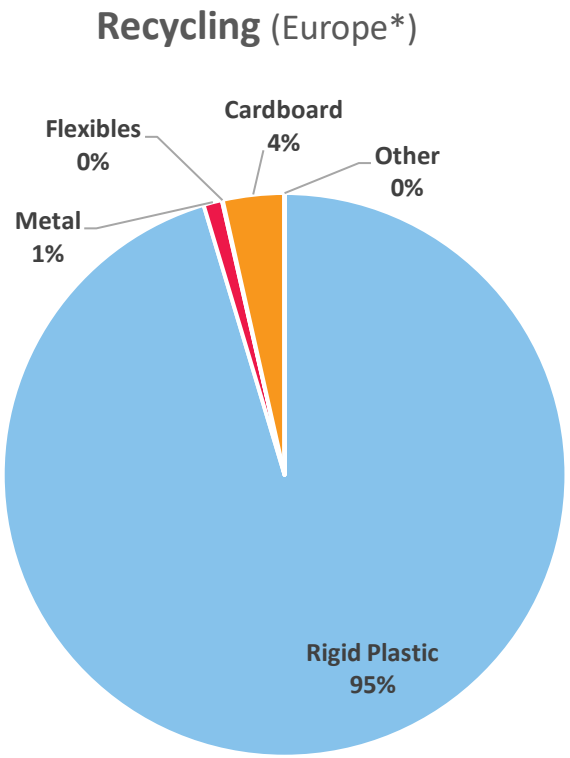
**Independent (4):**
- Austria
- Ireland (>2020)
- Italy (2013-2018)
- Sweden
- Netherlands (2013-2018)

- Based on data provided by the industry in the benchmarked countries; the real quantity in these countries and in Europe might be bigger due to other collection routes

# Container Management Europe

## Synopsis 2005 – 2021: Packaging Recycled




***) Monitored countries**

**Matures (12):**
- Belgium
- Bulgaria
- Croatia
- France
- Germany
- Hungary
- Luxemburg (<2019)
- Poland
- Portugal
- Romania
- Spain
- Slovenia

**Pilots (7):**
- Cyprus
- Greece
- Lithuania
- Russia
- Serbia
- Slovakia
- Ukraine (2021)

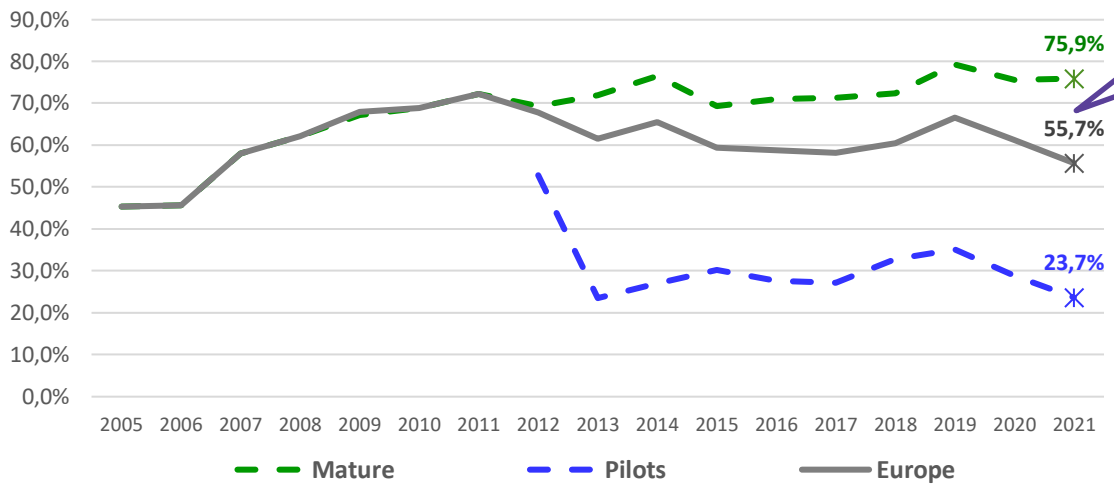
**Independent (4):**
- Austria
- Ireland (>2020)
- Italy (2013-2018)
- Sweden
- Netherlands (2013-2018)

- Based on data provided by the industry in the benchmarked countries; the real quantity in these countries and in Europe might be bigger due to other routes of collection

# Container Management Europe

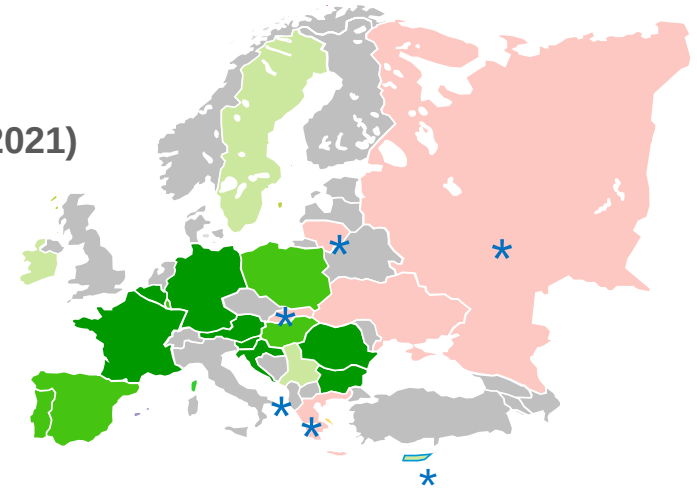
## Performance overview (collection rate)

### Collection rate Rigid Plastics (Europe*)



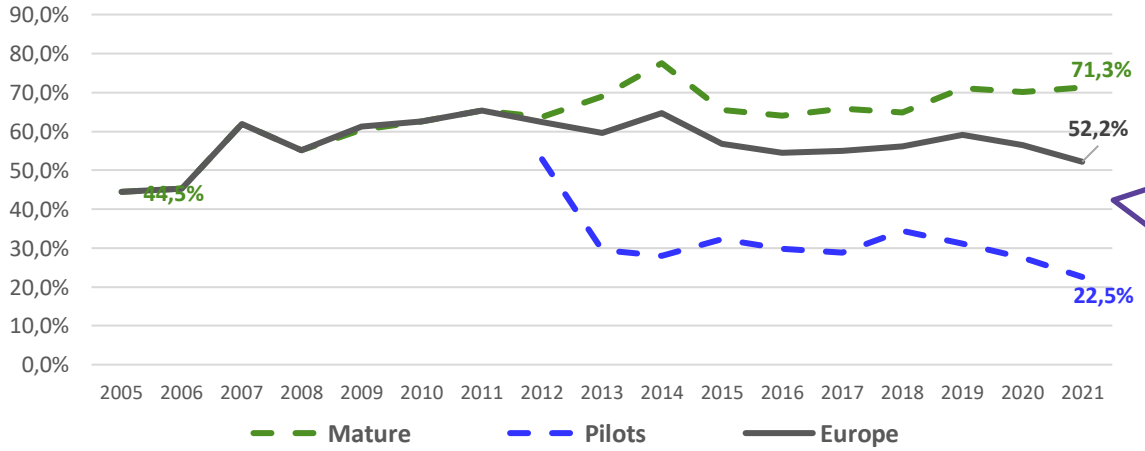

The reduction of collection rate is in part due to the new CMS in Ukraine. Without Ukraine data, the collection rate would be 60,1% (vs 61,2% in 2020)

### Collection rate Plastics (2021)



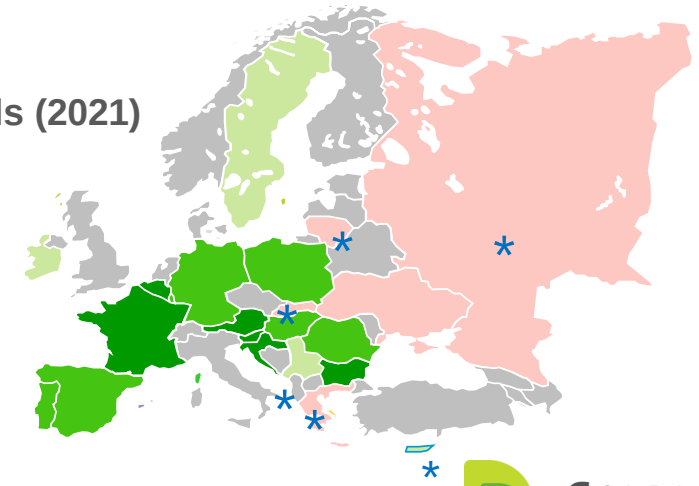
- Collection rate > 75%
- Collection rate 50% – 75%
- Collection rate 25% – 50%
- Collection rate < 25%
- * Pilot projects

### Collection rate All Materials (Europe*)




Data for the **other primary packaging** (other than rigid plastics) is not always complete. The trends here presented are estimates based on data available in countries

### Collection rate All Materials (2021)



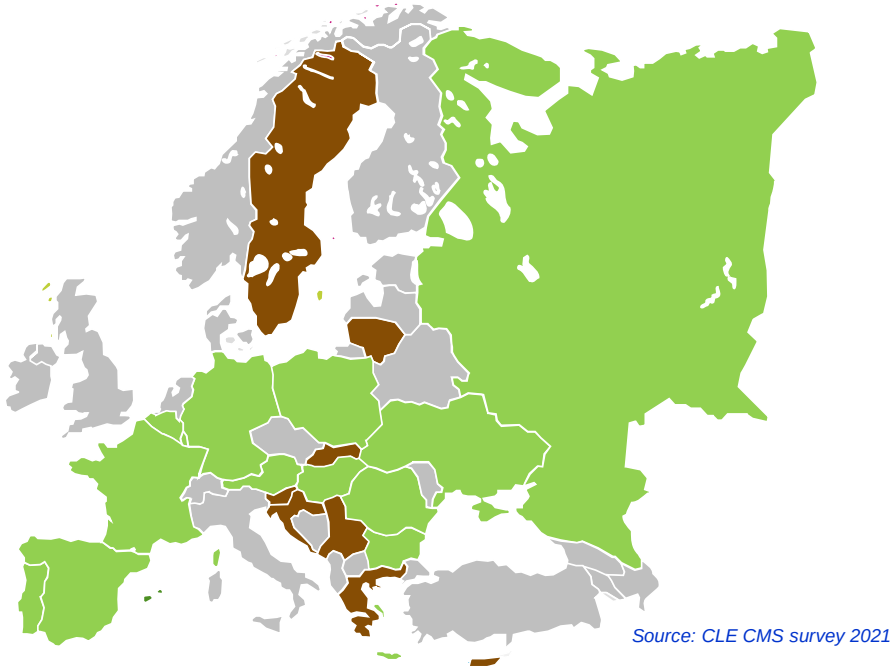
*) Benchmarked countries (Europe)

Source: CLE CMS survey 2021

# Implementation of Container Management Strategies

## CMS with recycling programmes; CMS recognised as compliance EPR programme

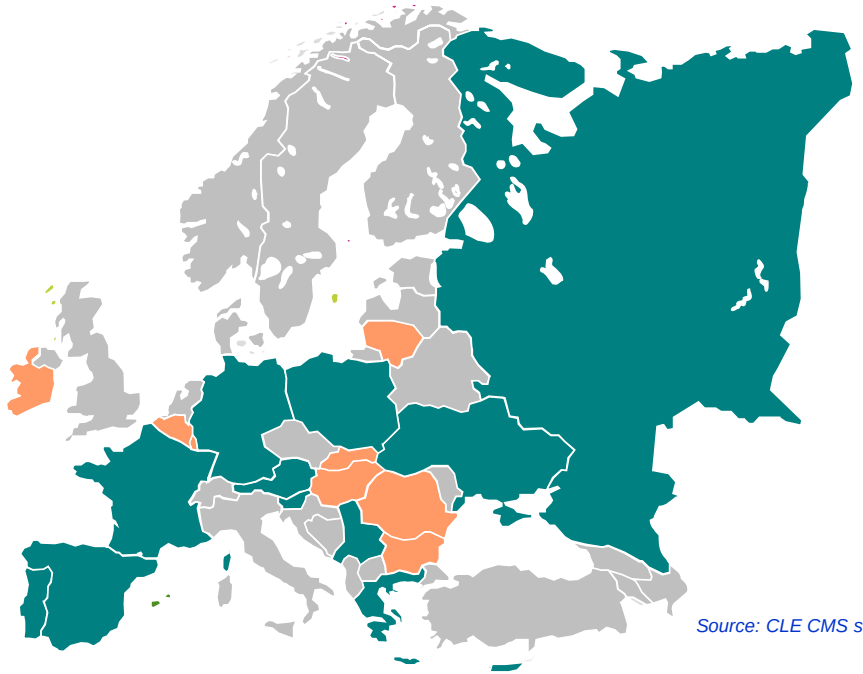
### Country with recycling programme in place



Source: CLE CMS survey 2021

- Recycling programme in place for rigid plastics (HDPE)
- Incineration with energy recovery
- No info available

### CMS programmes recognised as compliant EPR scheme



Source: CLE CMS survey 2021

- Accredited EPR scheme (i.e. in principle, subject to EPR regulations and targets)
- Independent collection and recovery programme, i.e. members must also declare their packaging to a recognised local Producer Responsibility Organisation (PRO) to fulfil their legal EPR obligations. In some countries, CMS costs are partly covered by an agreement with the compliant EPR organisation (e.g. BE, IE)
- No EPR obligation on PPP packaging or information not available

**Remarks**:

- For the EU legal targets for 2025/2030, only the packaging that has been "prepared for reuse or recycling"* will be recognised.
- CMS programmes that are recognised as EPR scheme will have to comply with EU legal targets 2025/2030; i.e. to have recycling programme in place, unless regulated differently by the local laws

*) waste which, *having undergone all necessary checking, sorting and other preliminary operations to remove waste materials that are not targeted by the subsequent reprocessing and to ensure high-quality recycling, enters the recycling operation whereby waste materials are actually reprocessed into products, materials or substances (PPWD 94/62EC, Art.6a)*

# Container Management Strategies

## CMS performance for industry-run CMS programmes in Europe (2021)

- Primary objective for pesticide container management strategies (CMS) is to reduce risks at the source by promoting thorough rinsing of empty containers and by maximising the return of packaging wastes. **Collection rate** is the key performance indicators for collection and recovery programmes for pesticide containers.
- Safe and controlled recycling of the plastic material is an important contribution to the sustainability of these programmes and to the Circular Economy.

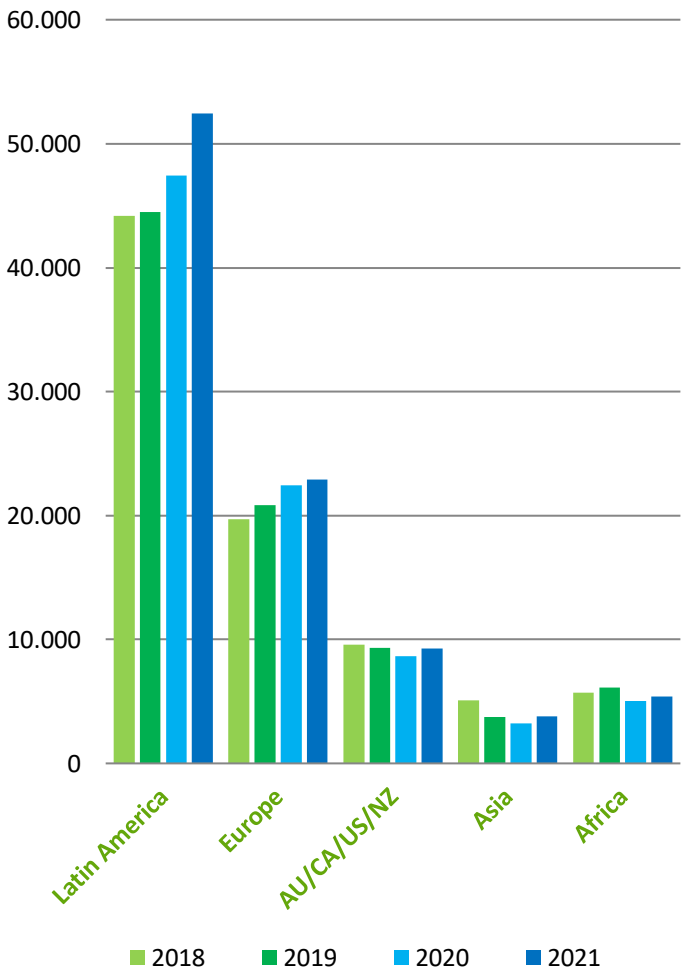
| Trademark CMS programmes (year of collection start) | | Collection rate [Plastics; 2021] | Final treatment (% of quantity collected) |
|---|---|---|---|
| **BE** *(1997)* | **AgriRecover** www.agrirecover.eu | **90%** ↗ | **Recycling** (91%) |
| **BG** *(2014)* | **SCPP (ССОП)** www.bgcpa.eu | **94%** → | **Recycling** (89%)<br>**Energy Recovery** (11%) |
| **DE** *(1996)* | **PAMIRA** www.pamira.de | **76%** ↘ | **Recycling** (97%)<br>**Energy Recovery** (3%) |
| **ES** *(2002)* | **SGIFITO** www.sigfito.es | **67%** ↘ | **Recycling** (100%) |
| **FR** *(2002)* | **ADIVALOR** www.adivalor.fr | **89%** ↗ | **Recycling** (97%)<br>**Energy Recovery** (3%) |
| **HR** *(2008)* | **CROCPA EKO MODEL** www.crocpa.hr | **97%** → | **Energy Recovery** (100%) |
| **HU** *(2003)* | **CSEBER** www.cseber.hu | **68%** ↗ | **Energy Recovery** (50%)<br>**Recycling** (27%) |
| **PL** *(2004)* | **System PSOR** www.systempsor.pl | **64%** ↘ | **Recycling** (80%)<br>**Energy Recovery** (20%) |
| **PT** *(2006)* | **Valorfito** www.valorfito.com | **55%** ↗ | **Recycling** (73%)<br>**Landfilled** (18%)<br>**Energy Recovery** (8%) |
| **RO** *(2007)* | **SCAPA** www.aiprom.ro | **93%** ↗ | **Recycling** (47%)<br>**Energy Recovery** (44%)<br>**Incineration** (8%) |
| **SI** *(2010)* | **SloPak** www.slopak.si | **82%** → | **Energy Recovery**<br>**Recycling** (18%) |

| Trademark CMS programmes (year of collection start) | | Collection rate [Plastics; 2021] | Final treatment (% of quantity collected) |
|---|---|---|---|
| **AT** | **Various collection programmes** | **85%** → | **Recycling** (75%)<br>**Energy Recovery** |
| **IE** | **Various collection programmes** | **48%** ↗ | **Recycling** (100%) |
| **SE** | **SvepRetur** www.svepretur.se | **46%** ↘ | **Energy Recovery** (100%) |
| **CY** *(2015)* | **Green-dot Cyprus** www.greendot.com.cy | **46%** ↗ | **Energy Recovery** (100%) |
| **EL** *(2014)* | **CYCLOS** (from 2023) www.esyf.gr | **2%** ↗ | **Recycling**<br>**Energy Recovery** |
| **LT** *(2016)* | **LT Crop Protection Assoc. (LAAA)** www.augaluapsauga.lt | **4%** ↗ | **Energy Recovery** (100%) |
| **SK** *(2014)* | **ZORBA** www.agrozora.sk | **7%** ↗ | **Recycling** (97%)<br>**Energy Recovery** |
| **RU** *(2014)* | **ECOPOL** www.ecopole.ru | **22%** ↘ | **Recycling** (100%) |
| **SR** *(2013)* | **SECPA EKO MODEL** www.secpa.rs | **46%** ↘ | **Energy Recovery** (100%) |
| **UA** *(2021)* | **AGRO VARTA** www.agrovarta.org | **16%** ↗ | **Recycling** (100%) |

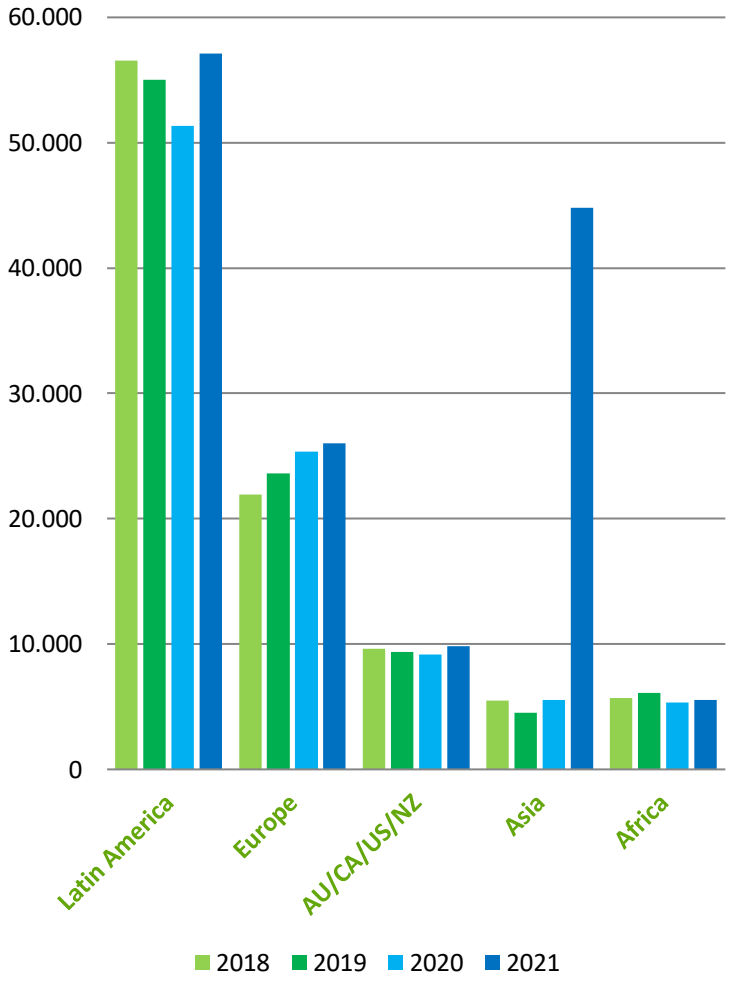
# CLI Global Container Management Data

## Regional Trend 2018-2021

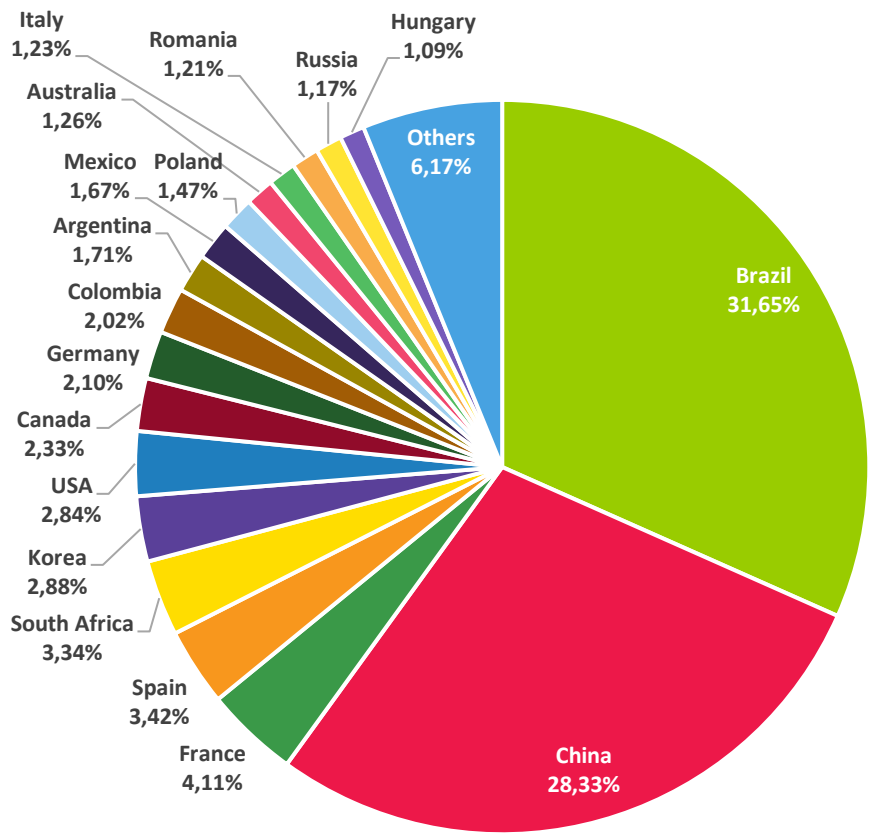
### Regional Trend 2018 - 2021
### Plastic collected




### Regional Trend 2018 - 2021
### All Packaging collected




### 2021 Global Packaging Collected
(All Materials; % of total collected globally)




**Total collected: 143.302 T**
(declared by countries)



*Note: • Collection figures cover benchmarked countries only. Data are expressed in metric tonnes.*
*• The total amount of collected material may be higher due to other routes of collection*

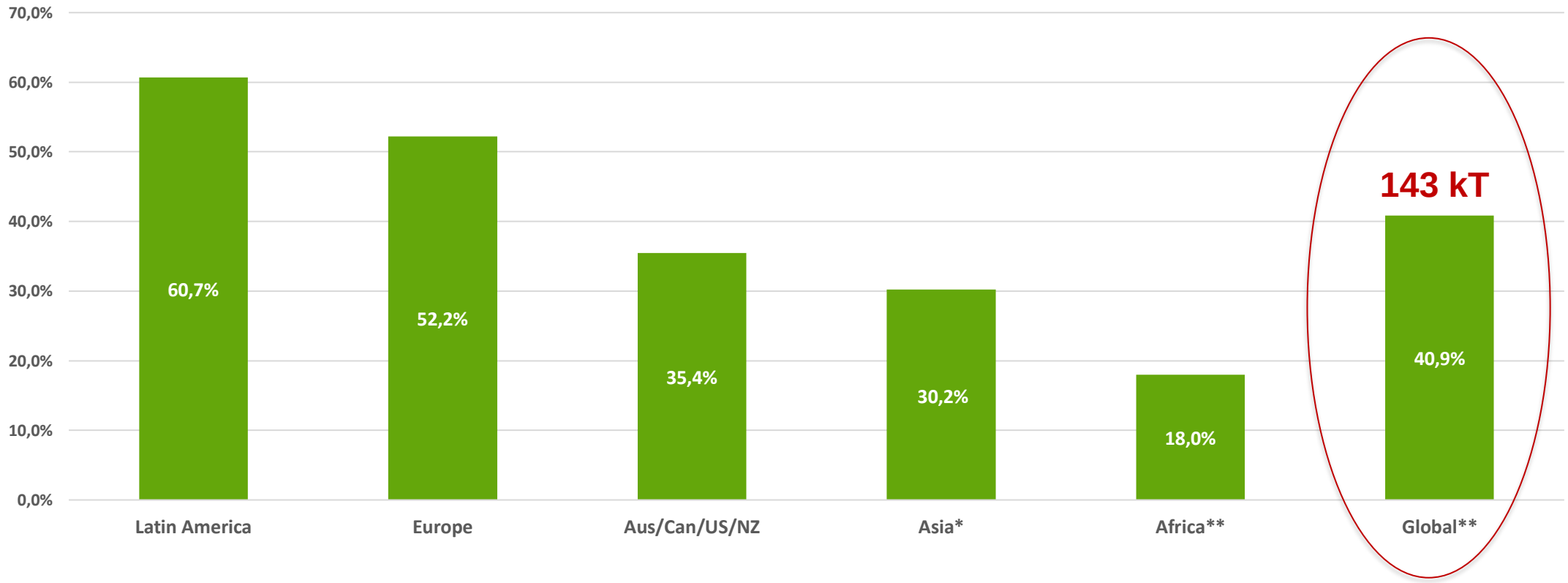
# CLI Global Container Management Data

## Regional collection performance

Preliminary data

### Collection rate All Packaging 2021

Total Packaging collected *vs* Packaging sent to market




*) Limited collection data available for Asia
**) Quantity sent into the market are estimated (all Packaging)

*Note:*
- *Performance figures cover the collection data declared by benchmarked countries only*
- *The total amount of collected material may be higher due to other routes of collection*

# CLE Commitment for Circular Economy

## Monitoring of the Commitments implementation in EU MS

# CLE Commitments for the Circular Economy

## Aims and Overall Objectives

### Circular Economy

**III** **Establish an average 75% collection rate** of plastic pesticide and biopesticide containers across EU Member States by 2025.

**IV** **Ensure that a container scheme is available in all EU Member States by 2025**, expanding the programme in two additional Member States each year.

**More** recovery and plastic container recycling, **with less** plastics waste.

## 2030 Commitments

### For the Future of #Ag


With new CMS projects in:

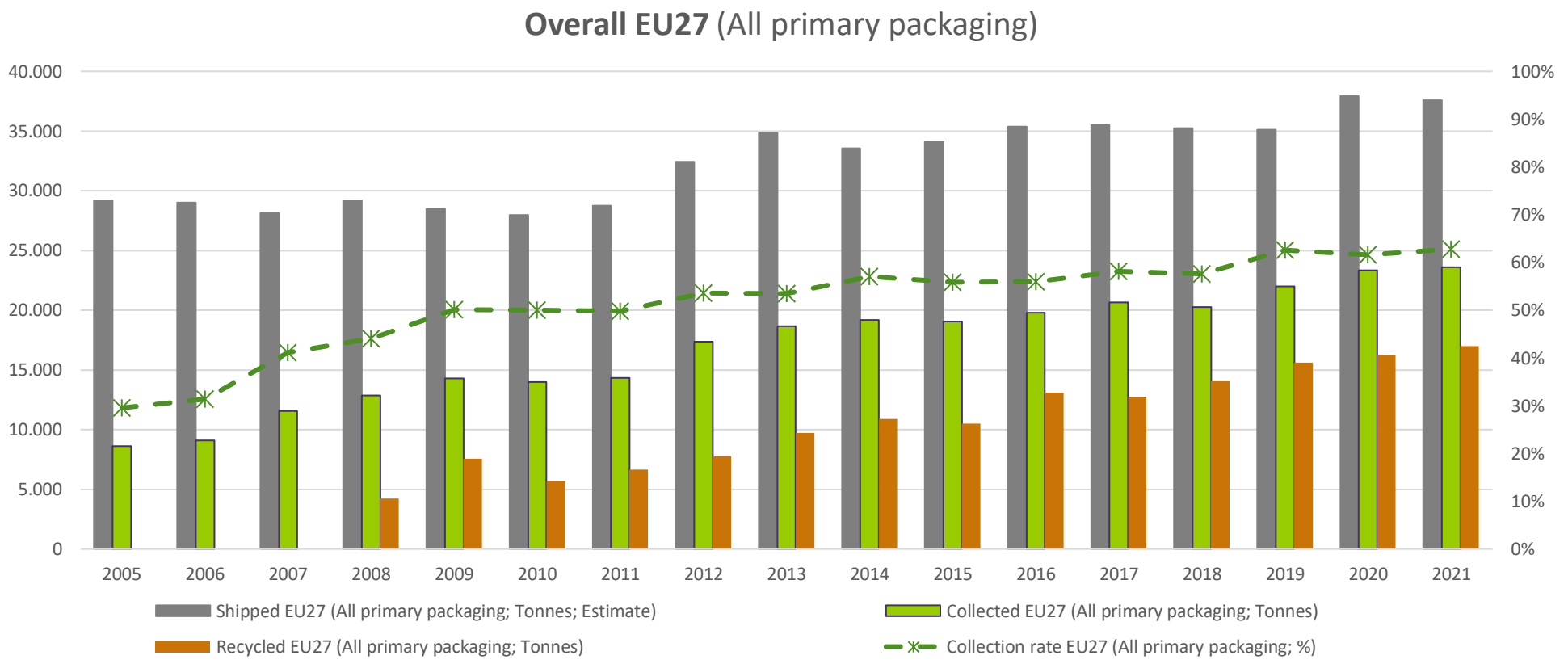
Czech Republic; Estonia;

Denmark; Latvia; Finland;

Ireland; Malta & The Netherlands

# CLE Commitments for the Circular Economy

## Overview of Container Management progresses in Europe (EU27)




## Contributions to the Circular Economy and the EU Plastics Strategy:

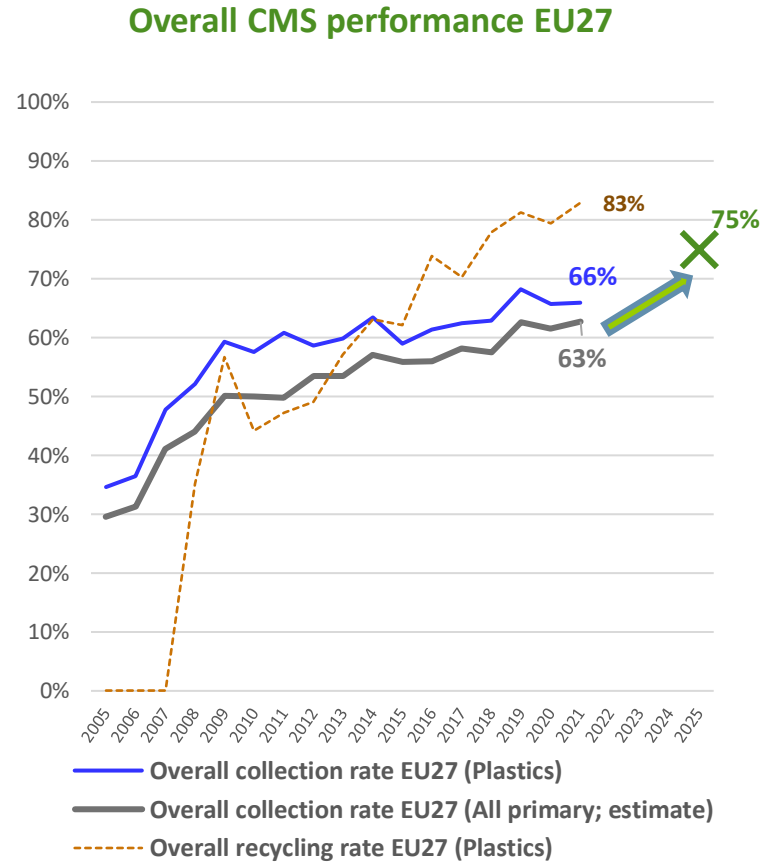
- Risks reduction at the source (packaging design; rinsing; separate collection; minimized production of hazardous waste)
- Collected over 290,000 metric tonnes of packaging since 2005 (EU)
- Recycled over 152,000 metric tonnes of high valuable plastics in safe applications since 2005 (EU)

# CLE Commitments for the Circular Economy

## Progress monitoring: status 2021

| **2030 Commitments** *For the Future of #Ag* | ***Commitments for the Circular Economy*** **– Implementation monitoring –** | | | |
|---|---|---|---|---|
| **Targets for 2025** (All primary packaging) | **IV) Dedicated CMS in all MS** Status 2021 | **III) Collection rate** Status 2021 | | |
| | | | **Plastic containers** | **All primary packaging** |
| ***NEW CMS in all MS*** *With new CMS projects in ("Roadmap"): CZ, DK, ET, FI, IE, LV, MT, NL* ***Collection rate across 27 MS >75%*** ***More Recycling!*** | ***EU MS with dedicated & monitored CMS programmes: 20 MS*** **Mature programmes** (11 MS): BE, BG, DE, ES, FR, HR, HU, PL, PT, RO, SI **Pilots programmes** (5 MS): CY, GR, (IT), LT, SK **Independent programmes** (4 MS): AT, IE, (LU), SE | Monitored CMS (20 MS) | **71%** | **67%** |
| | ***EU MS without CMS and/or performance monitoring: 7 MS*** CZ, DK, EE, FI, LV, MT, NL | Total EU (27 MS) | **66%*** | **63%*** |

* *Calculated as total quantity collected by monitored programmes (19 MS) / total quantity plastic packaging shipped in the EU27 market (where data is not available, quantity is estimated based on market sales data).*




**66%**
EU collection rate (Plastics)

**20/27**
EU Member States with CMS

**2021 —— 2025**

**75%**
Target EU collection rate (Primary packaging)

**100%**
Target for availability in EU Member States

# CLE Commitments for the Circular Economy

## Next steps - Proposals

### Plan collection boost for 2023-2025:

- CLE to share with countries (NA & CMS) ambitious but realistic **specific collection targets for 2025** (that would allow successful implementation of the 75% target at EU level)
- Countries' team to discuss the targets feasibility & implementation with members and provide feedback to CLE
- Country teams to develop an **collection plan 2023 - 2025** with necessary measures and activities

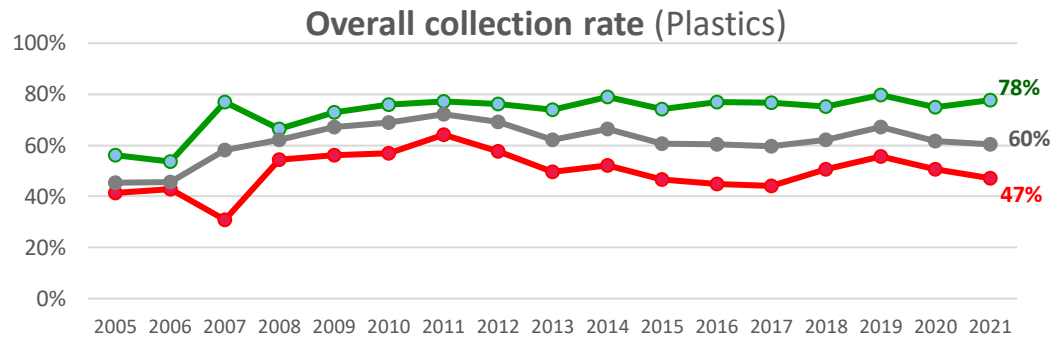
### Facilitate Commitments' implementation in EU MS:

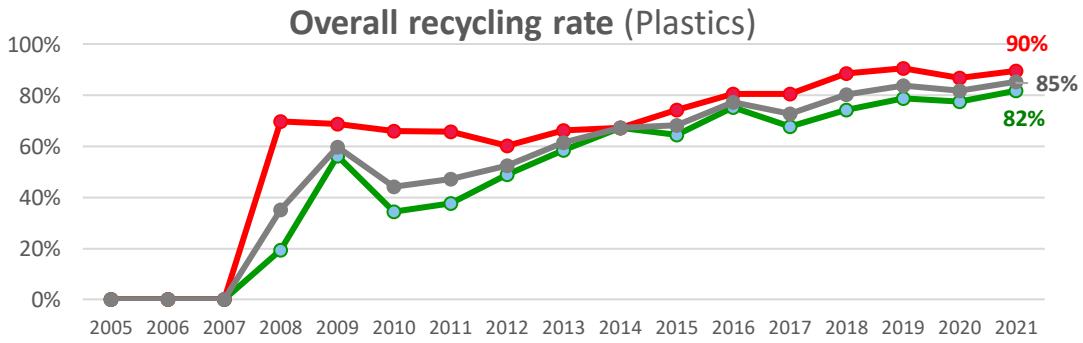
- CLE's corporate members to ensure full support for Commitments' implementation in EU MS and to provide guidance to their local companies
- CLE to reach to NAs & CMS to collect **companies' contact details** for CMS activities in countries (company specific lists) to facilitate companies' internal discussion on CMS & Commitments' implementation

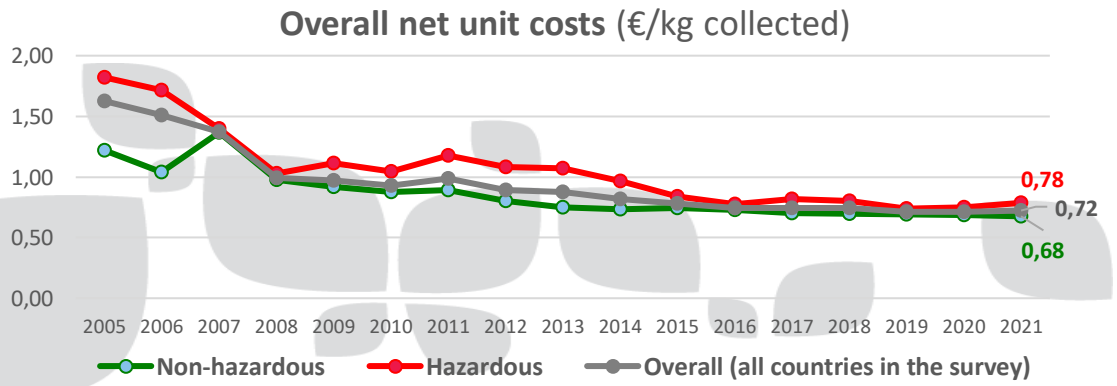
# Additional information

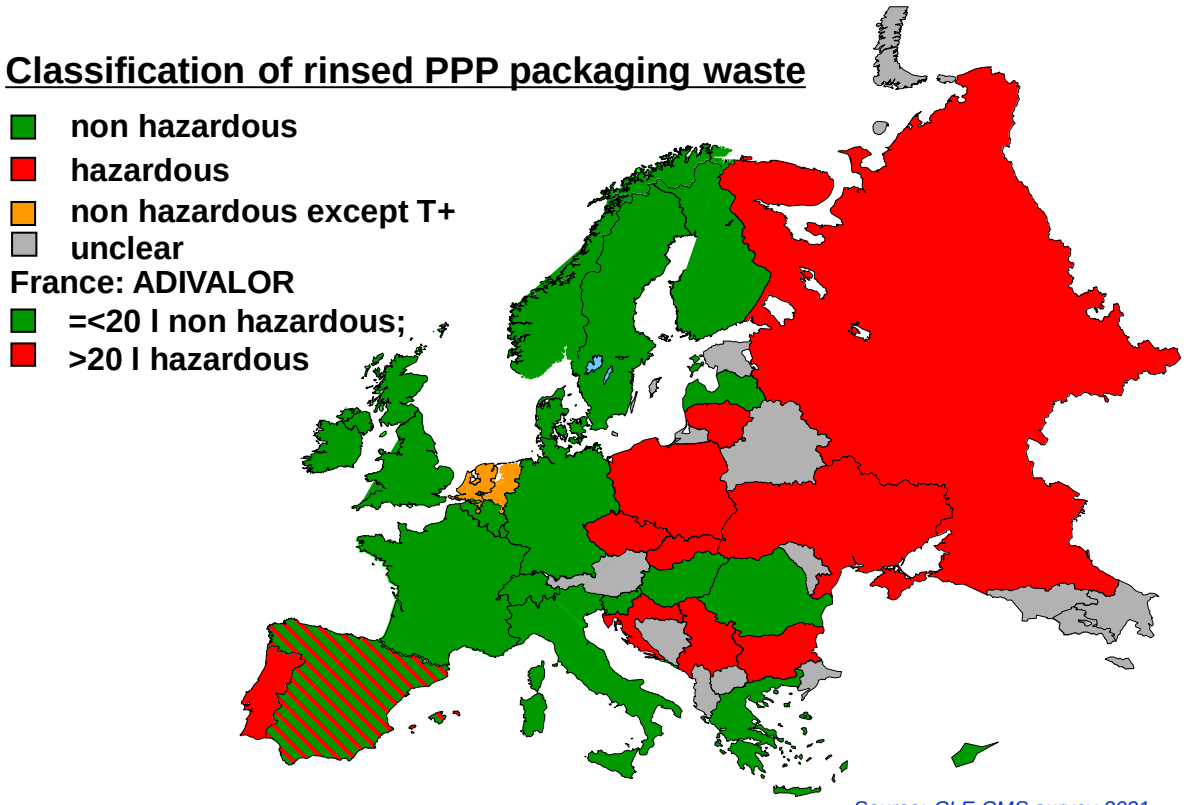
# Implementation of Container Management Strategies

## Classification of rinsed PCRs & Impact on CMS performance




*Source: CLE CMS survey 2021*

**Monitored countries**
(countries that provided full data)

**Matures:**
- Belgium
- Bulgaria
- Croatia
- France
- Germany
- Hungary
- Luxemburg (<2019)
- Poland
- Portugal
- Romania
- Spain
- Slovenia

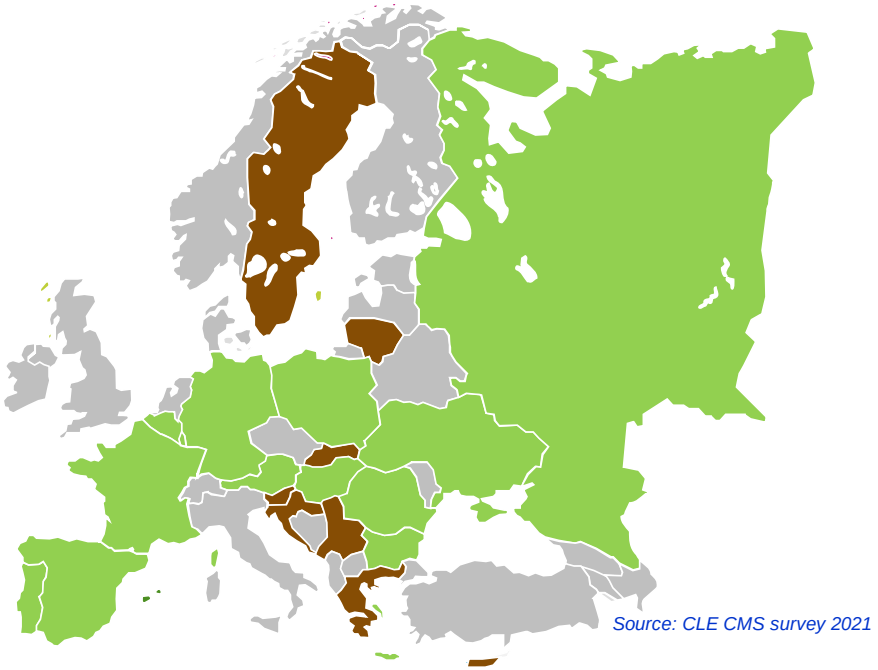
**Pilots:**
- Cyprus
- Greece
- Lithuania
- Russia
- Serbia
- Slovakia

**Independent:**
- Austria
- Sweden

# Implementation of Container Management Strategies

## Safe and controlled recycling of materials from primary pesticide packaging

### Country with **recycling programme** in place




- Recycling programme in place for rigid plastics (HDPE)
- Incineration with energy recovery
- No info available

Road fence & cones
(SCAPA; RO)

Internet protection tube
(SCPP; Bulgaria)

Cable conduits twin-layers
(ADIVALOR, France)

### Industry's guideline for the safe recycling of plastics:

- **Only rinsed** & **controlled** pesticide packaging should be sent for recycling
- **Toll Manufacturers** (Reprocessor, Recycler):
  - Contracted based on a full **assessment** and **approval process**
  - Clear **responsibilities** & **liabilities** established through **legally binding contract**
  - Prefer **few partners & long term collaboration** to allow investment in **best available technologies**
  - **Performance** should be **measured** and **improved**
- Must <u>not</u> recycle containers into products destined for the **food, drink, toy, clothes, pet, veterinary, hobby garden sectors, pharmaceutical & furniture**
- **End-use application** should undergo a **risk assessment**. Prefer applications that are:
  - ✓ **Not in human contact** on a routine basis
  - ✓ Mainly **outdoor** and **industrial applications**
  - ✓ Ideally **underground/enclosed applications**
  - ✓ Part of a **closed-loop system** (i.e. part of an industry return scheme).
- A list of end-use applications that have undergone risk analysis is available on the CropLife International website.
- Country managers or local CropLife associations are requested to submit annual report to CropLife International with recycling results, end-use applications, incident, reports, ..

***Plastic being recycled into unknown or untested end use applications is considered an industry risk!***