EUROPEAN COMMISSION
EUROSTAT

Directorate E: Sectoral and regional statistics
E-2: Environmental Statistics and Accounts; Sustainable Development

Country-specific notes on Batteries and Accumulators for Reference Year 2023

Revision November 2025[1]

General notes:

(1) This paper provides additional information on specific aspects such as methodology of data collection and related changes in the methodology.
(2) Compliance or non-compliance with targets of the Battery Directive is not addressed in this document. For such aspects please refer to Eurostat's Statistics Explained article *Waste statistics - recycling of batteries and accumulators.*
(3) Failure in submission by a Member State of all or some data (missing obligatory cells) is not addressed in this document.

Please consider that the countries below are listed in protocol order, which is not identical to their alphabetical order in English.

Belgium (BE)

No inconsistencies were found.

Bulgaria (BG)

No inconsistencies were found.

In 2022 and 2023 Bulgaria did not send any Nickel-Cadmium batteries (W160602) to recycling. The collected Ni-Cd batteries in Bulgaria are negligible in quantity. For this reason, they are stored in the territory of Bulgaria until the accumulation of quantities that can be sent to another Member State for recycling. Therefore, the values in 2022 and 2023 are 0 t.

The amount of batteries placed on the market and collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given.

[1] Document considers data submitted by the Member States through 30 October 2025.

Czech Republic (CZ)

In 2023, 2 540 t of portable batteries were collected in total. However, 1 230 t (48.4 %) out of these were lead-acid batteries. A share of 48.4 % of collected portable lead-acid batteries is very high in comparison to what the share of lead-acid batteries put on the market 4.5 % (244 t) in 2023. The reported figures indicate that more portable lead-acid batteries were collected than put on the market in 2023. A similar inconsistency was found in 2022 as well as the previous years. A potential explanation could be that, misleadingly, industrial and/or automotive lead-acid batteries are included in collected portable batteries.

In addition, an increase in the amount of 'Other batteries and accumulators' was determined in 2022 (0.44) from 2021 (0.12 t). This increase continued in 2023 (0.59 t).

Denmark (DK)

The input fractions to the recycling process (RCY_INP) of Lead-acid batteries (W160601) is given with 4 336 t for the year 2021 and 2022. The value has decreased by 33.5 % in comparison to the year before (2020: 12 922 t; 2019: 19 527 t). In 2023 the value was given with 18 746 t and was higher again and more in line with the timeline before 2021. This is also mirrored in the output fraction of the recycling process (RCY) for Lead-acid batteries (W160601).

Data on lead content and cadmium content is missing.

The amount of batteries collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given.

Germany (DE)

No inconsistencies were found.

Estonia (EE)

Data on cadmium content is missing.

The amount of batteries placed on the market and collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given.

Sales of portable batteries increased in 2022 (653 t) and 2023 (634 t) in comparison to 2021 (520 t). This reflects an increase in sales.

Ireland (IE)

Data on the recycling input (RCY_INP) and output (RCY) up to 2022 encompassed the total volume treated by the recycler and not only data about inputs originating in Ireland. In 2023, the numbers for recycling input (RCY_INP) and output (RCY) have significantly decreased, reaching a level consistent with data from Ireland only.

The amount of batteries placed on the market and collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given.

Greece (EL)

No inconsistencies were found.

Spain (ES)

No inconsistencies were found.

The amount of batteries collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given.

France (FR)

No inconsistencies were found.

The amount of batteries collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given. Information regarding the collection of Ni-Cd batteries and the corresponding collection rate will not be disclosed due to confidentiality reasons, as this service is currently performed by a single recycler in France.

Croatia (HR)

In 2023, 1 089 t (81.6 %) out of 1 334 t of 'portable batteries' placed on the market (MKT) were 'Lead-acid batteries' and 575 t (80.3%) out of 717 t of portable batteries collected were 'Lead-acid batteries'. The share of portable lead-acid batteries out of the total portable batteries seems much too high in comparison to data from other MS. A potential explanation could be that, misleadingly, industrial and/or automotive lead-acid batteries are included in portable batteries.

No other inconsistencies were found.

Italy (IT)

The input and output fractions into the recycling process (RCY_INP and RCY) of 'Lead-acid batteries' (W160601) significantly dropped in 2022 (RCY_INP: 69 114 t; RCY: 64 283 t) in comparison to 2021 (RCY_INP: 112 188 t; RCY: 103 651 t). In 2023 both values were higher again (RCY_INP: 97 279 t; RCY: 91 384 t).

No other inconsistencies were found.

Cyprus (CY)

No inconsistencies were found.

Latvia (LV)

The amount of batteries placed on the market and collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given.

No other inconsistencies were found.

Lithuania (LT)

There was a significant decrease of the input and output fractions in 2022 (RCY_INP: 0 t; RCY: 0 t) and 2023 (RCY_INP: 5.4 t; RCY: 4.2 t) compared to 2021 (RCY_INP: 102.2 t; RCY: 81.1 t) and the previous years. 'Nickel-Cadmium batteries' waste was not treated or exported in 2022. The low values in 2023 in comparison to 2021 could also be caused by irregularities in the import and export of waste 'Nickel-Cadmium batteries' batteries.

No other inconsistencies were found.

Luxembourg (LU)

No inconsistencies were found.

Hungary (HU)

With regards to 'Other batteries and accumulators', there was a significant increase of the input and output fractions in 2022 (RCY_INP: 6 633 t; RCY: 4 052 t) in comparison to 2023 (RCY_INP: 461 t; RCY: 256 t).

With regards to 'Nickel-Cadmium batteries' there was a significant decrease of the input and output fractions in 2022 (RCY_INP: 33.2 t; RCY: 25.9 t) and 2023 (RCY_INP: 44.0 t; RCY: 0.0 t) compared to 2021 (RCY_INP: 141.8 t; RCY: 111.8 t) and the previous years.

There was a significant increase, from 3 203 t in 2022 to 4 568 t in 2023, of the 'Portable batteries and accumulators' (W1606B) placed on the market (MKT).

No other inconsistencies were found.

Malta (MT)

No essential inconsistencies were made; however, the share of 'Lead-acid batteries' in portable batteries placed on the market is in comparison rather high 31.3 % in 2023. This has also been observed in previous years.

Netherlands (NL)

No inconsistencies were found.

Austria (AT)

No inconsistencies were found.

Poland (PL)

Ther was an increase of the input and output fractions of 'Other batteries and accumulators', in 2022 and 2023 in comparison to previous years.

No other inconsistencies were found.

Portugal (PT)

No inconsistencies were found.

As in previous years the MS did not deliver any recycling data on 'Nickel-Cadmium batteries'

and ‘Other batteries and accumulators’. Givin the explanation, that in Portugal there are not any NiCd batteries and other batteries accumulators recyclers. Recyclers abroad don´t give information about recycling process. Some information given by PRO is not enough to obtain realistic estimative.

Romania (RO)

Romania neither provided data for the reference year 2023 nor a methodology.

Slovenia (SI)

The input fractions into the recycling process (RCY_INP) of ‘Lead-acid batteries’ (W160601) significantly increased by 6 950 t from 2021 (6 996 t) to 2022 (13 946 t) and 2023 (15 746 t). The output fractions of the recycling process (RCY) of ‘Lead-acid batteries’ (W160601) show a similar development. The reason being, that for the years 2022 and 2023, all waste recycled by the Slovenian recycler is included, both imported waste and waste generated in Slovenia. Up to and including 2021, only waste generated in Slovenia and recycled in Slovenia and abroad is taken into account.

The input fractions into the recycling process (RCY_INP) of ‘Nickel-Cadmium batteries’ (W160602) for 2022 and 2023 are both 0 t, compared to 15.6 t in 2021. The output fractions into the recycling process (RCY_INP) of ‘Nickel-Cadmium batteries’ (W160602) for 2022 and 2023 are also both 0 t, compared to 11.7 t in 2021. SI believe that neither Directive 2006/66/EC nor Regulation (EU) No 493/2012 (adopted pursuant to Article 12(6) of Directive 2006/66/EC) lays down a common methodology for calculating the achieved recycling rates, a common methodology for calculating recycling efficiency, or the format for reporting such data.

Slovakia (SK)

The amount of batteries placed on the market and collected is not differentiated by batterie type (‘Lead-acid batteries’, ‘NiCd batteries’, ‘Other batteries’), instead only a total amount for ‘portable batteries and accumulators’ is given.

No other inconsistencies were found.

Finland (FI)

No inconsistencies were found.

Sweden (SE)

The data for 2022 and 2023 was confidential and not validated.

Iceland (IS)

Iceland failed to deliver a version of their data that was ready for validation in 2022. They first need to correct 2022 before prefilling for 2023. Consequently, Iceland neither provided data for the reference year 2023 nor a methodology.

Liechtenstein (LI)

Liechtenstein reported only one single figure: collection of 'Portable batteries and accumulators' in tonnes.

Norway (NO)

The amount of batteries placed on the market and collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given.

No other inconsistencies were found.

Northern Ireland (UKN)

All data related to recycling encompasses data from the whole UK.

The amount of batteries placed on the market and collected is not differentiated by batterie type ('Lead-acid batteries', 'NiCd batteries', 'Other batteries'), instead only a total amount for 'portable batteries and accumulators' is given.

No other inconsistencies were found.