



UWWTD National Summary Chapter 2020 Poland

1. Key messages

This document provides an overview of the data reported by Poland for 2020 under the Urban Waste Water Treatment Directive (“the Directive”).

The information presented in this document should be considered as the assessment by the European Commission and the main conclusions of the 2020 data submitted by Poland for the 12th reporting cycle. There is no link between this document and any infringement proceedings initiated before 2023. The reported information is without prejudice to any future infringements that the Commission may decide to launch.

In 2020, Poland had a population of **38 Mio** and reported **1,524 agglomerations** generating $\geq 2,000$ p.e. each, of which:

- **1,184 agglomerations (78%)**, generating **26,473,737 p.e. (71%)** of waste water, complied with the requirements of the Directive; and
- **340 agglomerations**, generating **10,742,589 p.e.** of waste water, did not comply with the requirements of the Directive.¹

As regards the compliant agglomerations:

- The load in full compliance with **Article 3** (collection and/or IAS) represents a percentage equal to **77.1%** of the total load;
- The load in full compliance with **Article 4** (secondary treatment) represents a percentage equal to **75.8%** of the total load subject to compliance²;
- The load in full compliance with **Article 5** (treatment more stringent than secondary) represents a percentage equal to **69.9%** of the total load subject to compliance (agglomerations generating more than 10,000 p.e. and discharging into sensitive areas).

In 2020, Poland had not yet reached the target for collecting and treating waste water to fully comply with the Directive (also known as “**distance to target**”).

¹ Agglomerations are only legally compliant with the Directive when their entire generated load is compliant (articles 3, 4 and/or 5). For non-compliant agglomerations, the distance to target is calculated for each article based on the non-compliant fraction. Distance to target represents the real implementation status more accurately than compliance does.

² Collected load from agglomerations below 10,000 p.e. and discharging into coastal waters may not need to be subject to secondary treatment.

- **9.7%** of the waste water load must still be collected (approximately **3,626,500 p.e.**);
- **10.4%** of the collected waste water load must still undergo secondary treatment in line with the requirements of the Directive (approximately **3,763,900 p.e.**); and
- **15.5%** of the collected waste water load from agglomerations generating >10,000 p.e. and discharging into sensitive areas must still undergo more stringent treatment in line with the requirements of the Directive (approximately **4,923,500 p.e.**).

3% of the waste water load is addressed by means of individual or other appropriate systems (IAS)³ i.e. non-centralised sanitation systems (approximately **1,112,600 p.e.**).

For the reference year 2020⁴ Poland reported:

- **1,524 agglomerations**⁵ $\geq 2,000$ p.e.⁶ with a total generated waste water load of **37,216,326 p.e.**;⁷
- **1 agglomeration for which the waste water was collected and then discharged without treatment** for a total load of **10,815 p.e.**; and
- **1,643 urban waste water treatment plants**, with a total design capacity of **53,494,000 p.e.**, of which:
 - **30 plants** were equipped with technology for **primary** treatment;
 - **1,613 plants** were equipped with technology for **more stringent** treatment than secondary treatment.

In conclusion, with 28.9% of the load not compliant in 2020 and a distance to target of **9.7% for collection, 10.4% for secondary treatment and 15.5% for more stringent treatment**, Poland still needs to make a significant effort to reach full compliance with the Directive. Poland reported **EUR 3.48 billion** of investments planned at national level for the period 2023-2028, which shows that efforts are ongoing.

More detailed information on the implementation of the Directive in Poland can be found on the website <https://water.europa.eu/freshwater/countries/uwwt/poland>.

³ IAS compliance is not assessed under the implementation report but considered to be "appropriate" and therefore all IASs reported are considered as compliant.

⁴ Annual data on the collection and treatment of waste water to 31 December 2020.

⁵ An agglomeration is an area where the population and/or economic activities are sufficiently concentrated for urban waste water to be collected and conducted to an urban waste water treatment plant or to a final discharge point (Article 2(4) of the Directive). Member States define the boundaries of their agglomerations and report data per agglomeration.

⁶ Member States do not have reporting obligations under the Directive for agglomerations <2,000 p.e.

⁷ p.e. stands for 'population equivalent': the organic biodegradable load having a 5-day biochemical oxygen demand (BOD5) of 60 g of oxygen per day (Article 2(6) of the Directive). This term reflects organic pollution generated at the agglomeration level by inhabitants and other sources, such as non-resident population and industries under Articles 11 or 13.

2. Situation of sensitive areas

Poland applies **Article 5(8)** of the Directive, which means that its entire territory is considered as a sensitive area and the Member State does not therefore have to designate individual sensitive areas.

Poland also applies **Article 5(2,3)** of the UWWTD, identifying all water bodies on its territory as sensitive areas (SAs) and/or catchments of sensitive areas (CSAs) under Article 5(2,3).

In these areas, all agglomerations above 10,000 p.e. discharging into a sensitive area subject to Article 5(2,3) must comply with Article 5 (apply more stringent treatment than secondary treatment, i.e. nitrogen and/or phosphorus removal and/or microbiological treatment⁸) and report individual equipment and performance for each of their treatment plants.

As specified above, Poland reported **1,524 agglomerations** $\geq 2,000$ p.e. with a total generated waste water load of **37,216,326 p.e.**

⁸ The latter is not assessed in the current report as it is mainly implemented to ensure compliance with other EU Directives on drinking water and bathing water.

3. Legal compliance

Compliance with the main requirements of the Directive is assessed per agglomeration. Three requirements are needed for full compliance, namely:

- Collection of waste water (condition required for compliance with Article 3 and also for compliance with Articles 4 and 5);
- Secondary treatment of the collected waste water, i.e. adequate treatment level and treatment performance (condition required for compliance with Article 4 and also for Article 5); and
- More stringent treatment than secondary treatment, i.e. adequate treatment level and treatment performance; generally applicable to agglomerations >10,000 discharging into sensitive areas.

In Poland, in 2020, **71% of agglomerations (1,184) complied** with the Directive, which represents **78% of the waste water load** generated by the country (26,473,737 p.e.), as shown below.

Figure 1. Compliance rate for agglomerations in Poland in 2020

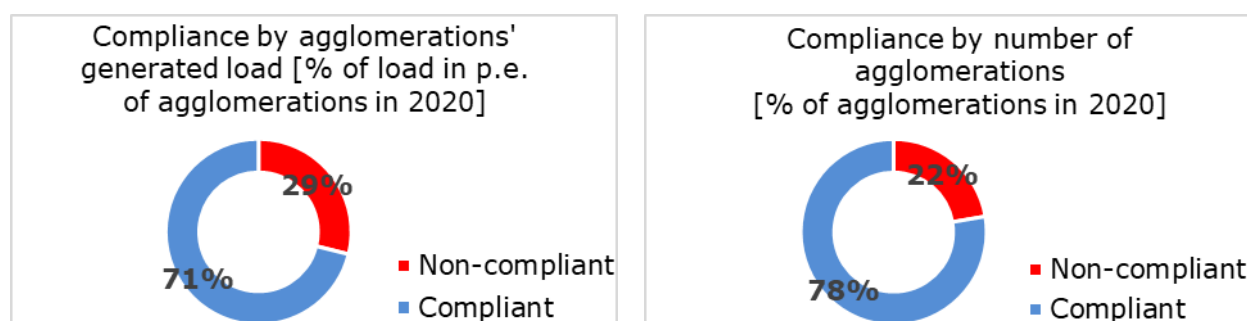


Table 1. Compliance rate by Article, agglomeration and load generated for Poland in 2020

Poland in 2020	Agglomeration			Waste water load		
	Total [No]	Compliance rate [No]	Compliance rate [%]	Total [p.e.]	Compliance rate [p.e.]	Compliance rate [%]
Article 3 (collection)	1524	1249	82 %	37,216,326	28,712,026	77.1 %
Article 4 (secondary treatment)	1521*	1203	79.1 %	36,070,275**	27,355,188	75.8 %
Article 5 (more stringent treatment)	538*	410	76.2 %	31,788,811**	22,206,940	69.9 %

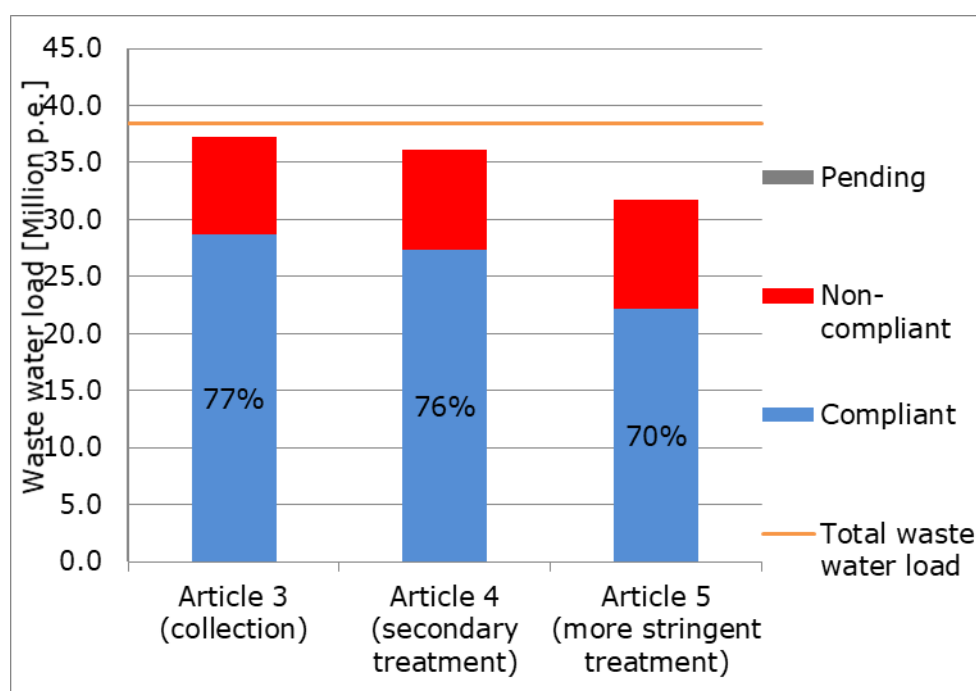
* The total [No of agglomerations] includes only those agglomerations that must provide secondary treatment / or more stringent treatment than secondary treatment before discharging waste water from their treatment plants.

** The total [p.e. waste water load] is the sum of the load of all of the agglomerations that must provide secondary treatment or more stringent treatment than secondary treatment before discharging waste water from their treatment plants.

Table 2. Compliance rate and distance to target (DTT) by article and changes of these rates between 2018 and 2020 for Poland [change if >1%], arrows and dots colours: green=improvement, yellow=no change, red=deterioration. Note: decrease in value for compliance means deterioration, for DTT means improvement.

	Compliance			DTT		
	2018	2020	variation	2018	2020	variation
Article 3 (collection)	95%	77%	↓ -17%	0%	10%	● 9%
Article 4 (secondary treatment)	94%	76%	↓ -18%	1%	10%	● 9%
Article 5 (more stringent treatment)	88%	70%	↓ -18%	4%	15%	● 11%

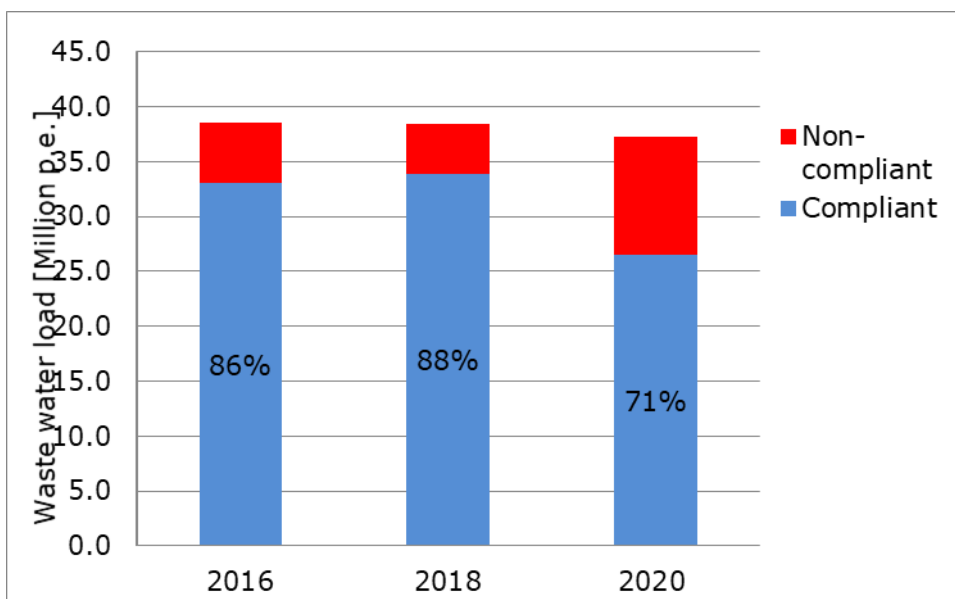
Figure 2. Compliance rate in Poland in 2020 per requirement⁹ [% of waste water load from agglomerations that complied with the given requirement of the Directive]



As indicated in the figure above, only **77% of waste water is collected adequately**. In addition, compliance with **Article 4** is only reached for **76%** of the load, corresponding to **1,203** compliant agglomerations. Compliance with **Article 5** is reached for **70%** of the load, corresponding to **410** compliant agglomerations.

⁹ The pending category comprises pending deadlines under the Accession Treaty of a Member State and/or the 7-year transition period applied to new designations of sensitive areas by a Member State.

Figure 3: Compliance rate with the Directive in Poland in the period 2016-2020 [% of waste water load of agglomerations that complied with the Directive for the given year]



As indicated in the figure above, the overall compliance for Poland has decreased substantially since 2018 from 88% to 71%.

Figure 4: Compliance rate by region (NUTS2) in Poland in 2020 [% of waste water load of agglomerations that complied with the Directive]

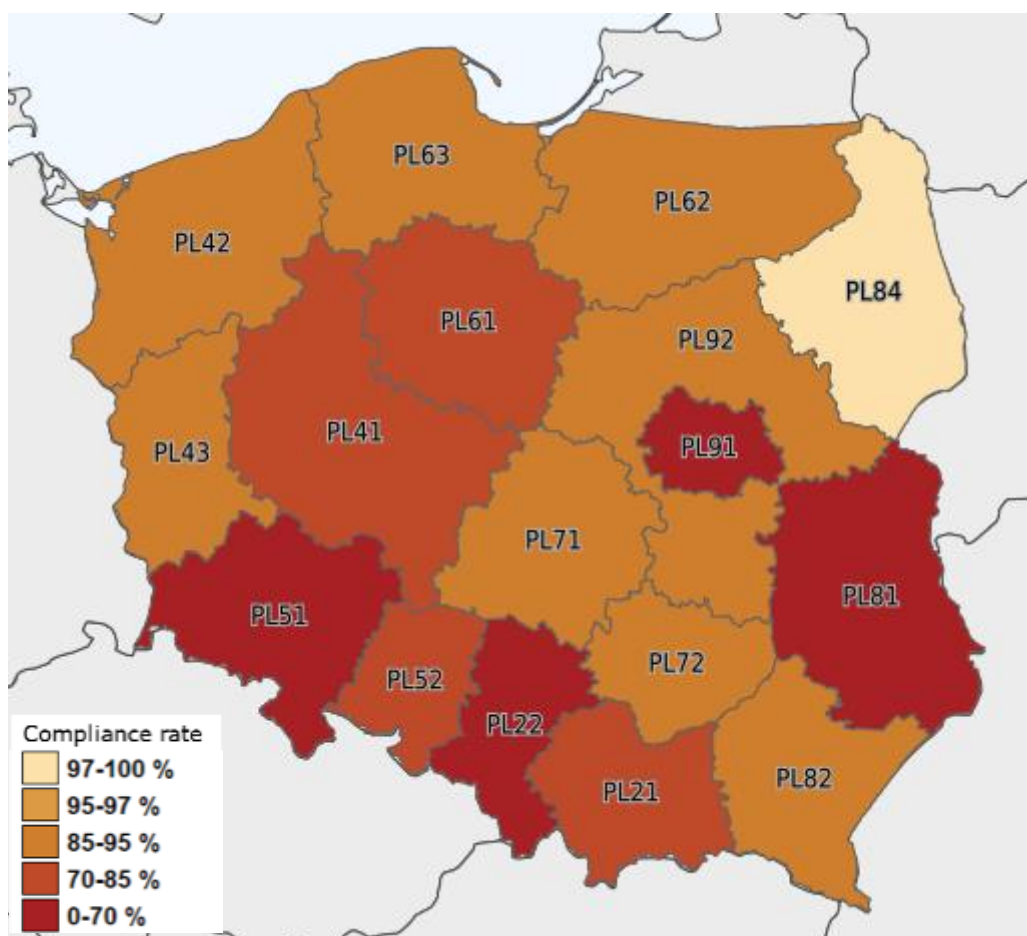


Table 3. Generated and compliant load and rate at regional level (Nuts2) for Poland in 2020

NUTS 2 ID	NUTS 2 NAME	Total generated load (p.e.)	Rate for Art. 3 (%)	Rate for Art. 4 (%)	Rate for Art. 5 (%)	Compliant load (p.e.)	Rate (%)
PL21	Małopolskie	3,203,750	87.8	97.1	80.7	2,349,243	73%
PL22	Śląskie	4,266,528	57.7	70.9	69.8	2,438,460	57%
PL41	Wielkopolskie	3,599,193	73.4	96.1	93.4	2,532,519	70%
PL42	Zachodniopomorskie	2,116,436	94.3	97.3	96.2	1,922,313	91%
PL43	Lubuskie	961,803	93.5	94.1	93.6	885,152	92%
PL51	Dolnośląskie	3,021,864	88.4	88.7	48.4	1,548,956	51%
PL52	Opolskie	974,739	80.4	98.9	97.3	772,942	79%
PL61	Kujawsko-pomorskie	1,877,719	80.0	93.9	85.4	1,317,738	70%
PL62	Warmińsko-mazurskie	1,229,585	88.5	99.0	100.0	1,081,970	88%
PL63	Pomorskie	2,657,475	93.8	97.3	97.0	2,446,951	92%
PL71	Łódzkie	2,087,799	87.4	95.7	95.9	1,814,379	87%
PL72	Świętokrzyskie	921,398	89.4	93.7	93.7	808,283	88%
PL81	Lubelskie	1,633,917	62.0	62.3	59.1	1,004,876	62%
PL82	Podkarpackie	1,897,364	87.5	89.4	87.1	1,629,639	86%
PL84	Podlaskie	1,030,099	100.0	100.0	100.0	1,030,099	100%
PL91	Warszawski stołeczny	3,585,646	29.4	28.8	25.2	979,699	27%
PL92	Mazowiecki regionalny	2,151,011	91.0	98.4	97.5	1,910,518	89%

In 2020, the compliance rate for Poland was 71.1% on average, but with strong regional differences.

4. Distance to target

NB: The term "distance to target" represents the effort still needed to reach compliance with the Directive for each requirement (per article). The term applies to non-compliant agglomerations, and their compliant fractions are not part of this concept, which only covers "non-compliant fractions of non-compliant agglomerations".

In Poland, the distance to target for 2020 is substantial for collection and for waste water treatment, both for secondary and more stringent treatment. The figures on the waste water load of all agglomerations are the following:

Table 4: Detailed distance to target figures and rates by Article, by agglomeration and by load generated for Poland in 2020

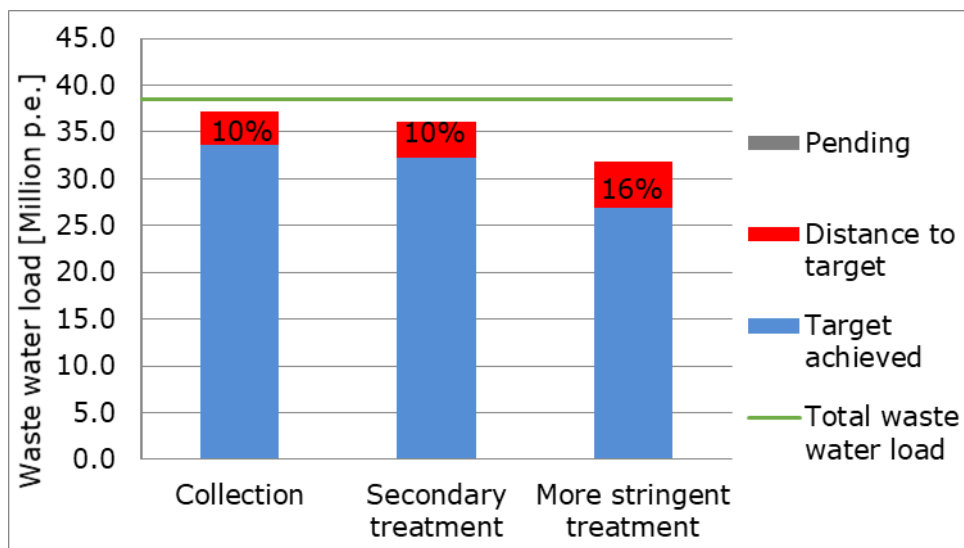
Poland in 2020	Waste water load		
	Target [p.e.]	Distance to target [p.e.]	Distance to target [%]
Article 3 (collection)	37,216,326	3,626,457	9.7 %
Article 4 (secondary treatment) *	36,070,275*	3,763,925	10.4 %
Article 5 (more stringent treatment) **	31,788,811**	4,923,531	15.5 %

*The target [p.e.] for secondary treatment represents the waste water load that should be adequately collected + the load that is collected from all agglomerations and should receive compliant secondary treatment (i.e. not exempted from meeting Article 4), regardless of whether the agglomeration complies with Article 3 or not.

** The target for more stringent treatment represents the waste water load that should be adequately collected + the load that is collected from all agglomerations generating >10,000 p.e., and discharging into sensitive areas that should receive compliant more stringent treatment, regardless of whether the agglomeration complies with Article 3 or not.

As mentioned above, Poland still needs to make a substantial effort with regard to adequate collection of its waste water, for which the distance to target still stands at 9.7%. In addition, the distance to target for secondary treatment and more stringent treatment is still significant with 10.4% of the load still needing secondary treatment corresponding to 3.8 million p.e., and 15.5% of the load still needing more stringent treatment, corresponding to 4.9 million p.e., as illustrated in the following figure.

Figure 5. Distance to target for collection, secondary treatment and more stringent treatment in Poland in 2020 [% of waste water load of all agglomerations. This load did not meet criteria for compliance with the given requirement of the Directive]



5. Additional information

A detailed assessment showed that the load generated by 248 agglomerations changed significantly. Concerning the most significant changes, Poland explained that these were due to large load variations from the food industry, and the fact that the 2018 reporting did not include the load from the food industry

In addition, for 42 agglomerations, the load entering the treatment plant is much higher than the capacity of the plant, although only four of the plants fail to comply. Concerning this and other related ratios, Poland explained that residents are not obliged to register with the local authorities, and that tourist resorts were closed during COVID restrictions, meaning that the theoretical load was not the effective load, which was in reality lower. However, this explanation requires clarification because the country confirmed that the load entering the plants is a monitored value, and that the capacity of a plant is defined in a permit and should reflect the maximum quantity that the plant can adequately treat. Thus, if over a yearly average, the former exceeds the latter, it is generally not possible to achieve correct treatment.

In addition, 231 treatment plants have undergone a significant change in their design capacity. Poland explained that for oversized plants, the operator can turn off some treatment lines, while for undersized plants, the operator can ask for a new permit and implement a new treatment line.

6. National Implementation Programme (Article 17)

a) Non-compliant individual agglomerations

In the report submitted by Poland under Article 17, **92 projects** are listed concerning works on **collecting systems** and **163 projects** concerning works on **treatment plants** planned for the period after 2020 to tackle **non-compliant situations** identified in 2020. The works are scheduled for completion **by 2028**.

The **investment needed** to ensure adequate urban waste water collection and treatment, i.e. compliance with the Directive, as estimated by the national authorities and included in their Article 17 reporting, amounts in total to **EUR 741 million** for the period 2023-2028. This covers works on collecting systems and works on treatment plants for **non-compliant situations**.

b) National investments to reach and maintain compliance and comparison with OECD study

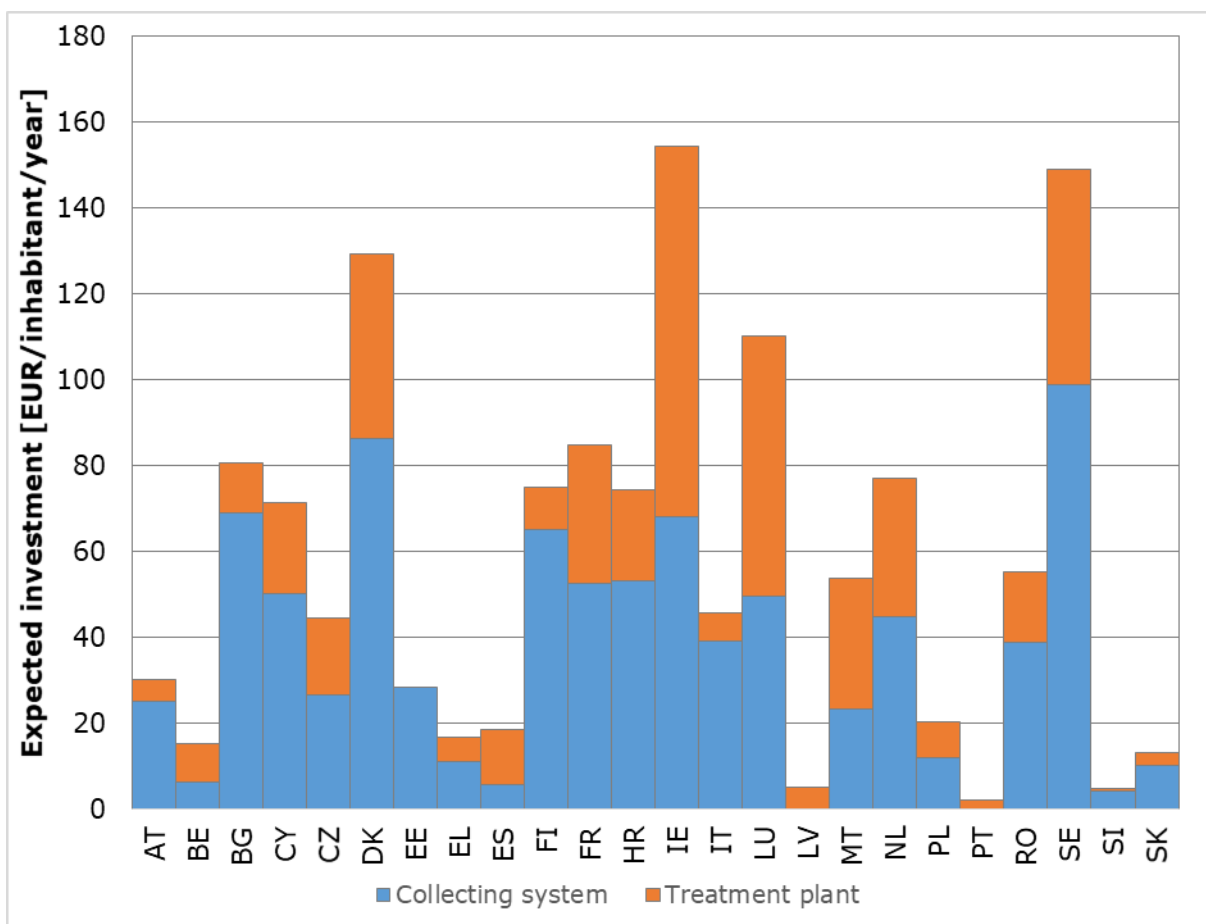
At national level, as indicated in an **OECD study**¹⁰, Poland would need to increase its investments further **to reach and maintain compliance**. The OECD projected that the financing needs **by 2030** (total cumulative additional expenditure on sanitation) **amount to EUR 18.6 billion**.

Nevertheless, Poland reports (Art. 17) aggregated figures at national level covering both investments in non-compliant agglomerations and investments in maintenance and renewal **for the period 2020-2027** amounting to an anticipated **EUR 6.19 billion**. This figure is notably below the OECD forecast (approximately two thirds), and the periods covered are 10 years (OECD) vs 8 years (Art 17).

When normalising the figure by the national population reported to Eurostat for 2020, the expected annual investment costs per capita for installing and renewing waste water collecting systems and treatment plants for Poland amount to **EUR 20/inhabitant/year**, which is significantly below the EU27 average of **EUR 35/inhabitant/year**.

¹⁰ <https://www.oecd-ilibrary.org/sites/6893cdac-en/1/3/3/index.html?itemId=/content/publication/6893cdac-en&csp=6d99cab0ab4541869c1dfa4bc5a155f4&itemIGO=oecd&itemContentType=book#section-d1e3528>

Figure 6. Expected annual investments (new and renewed) reported by each Member State in 2020 (only MSs with values are included) [EUR per inhabitant¹¹ per year]¹²



¹¹ Eurostat data: inhabitants at 1 January 2020.

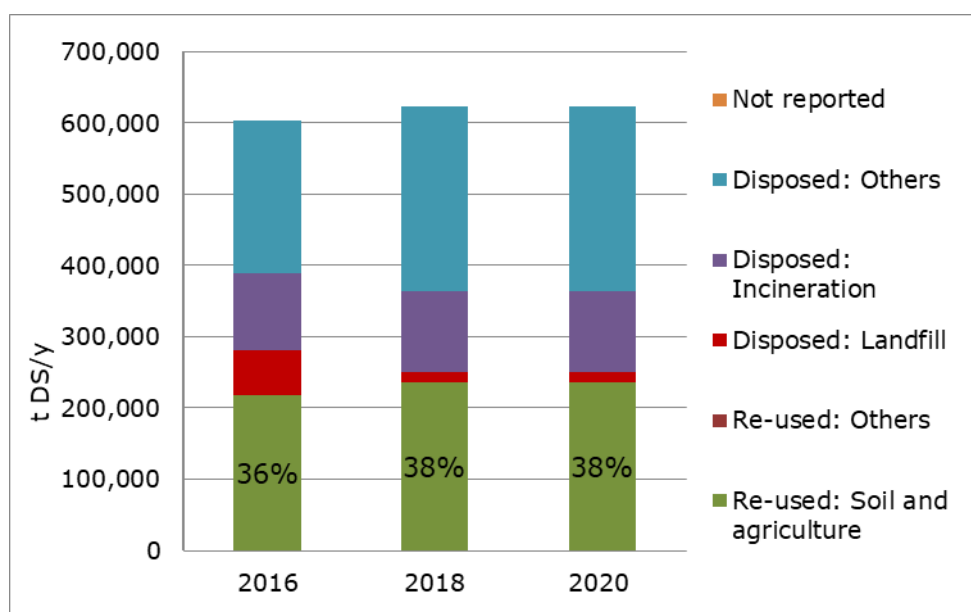
¹² Portugal, Spain and Sweden reported only investments on new infrastructures; consequently, the investments for these Member States are underestimated.

7. Sewage sludge

For the reference year 2020, Poland reported the reuse and disposal of **623,266 tonnes** of sewage sludge. In the previous reporting period (2018) the country reported exactly the same quantity (623,266 tonnes): it is therefore likely that the reporter copied the 2018 figure for the 2020 reporting.

In addition, the quantities per treatment are exactly the same. The sludge is mainly disposed of for **“other purposes”** not further specified (**41 %**), by **incineration (18 %)**, or re-used in **soil management** (hereafter **“soil and agriculture”** - **38 %**).

Figure 7. Sewage sludge disposal and reuse in Poland [% of sewage sludge reused in category “soil and agriculture”]¹³



No information was reported on waste water reuse or storm water overflows by Poland. However Poland stated that sewage treatment plants use treated sewage mainly for watering green areas and in the process of sewage sludge treatment (e.g. for washing belts in sludge presses).

¹³ NB: Not reported = destination unknown