

Federal Department of the Environment, Transport, Energy and Communications DETEC

Federal Office for the Environment FOEN Air Pollution Control and Chemicals Division http://www.bafu.admin.ch

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## **SwissPRTR FAQ**

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#### Benefits of the PRTR

#### How does the public benefit from the PRTR?

- The SwissPRTR creates transparency and makes it possible to identify national, regional and local correlations.
- The SwissPRTR creates environmental awareness, facilitates participation in environment-related decision-making and encourages communication.
- The SwissPRTR helps reduce pollutant emissions and thus provides sustainable support for the precautionary principle.
- The SwissPRTR contributes to the sustainable development of production facilities.

#### How does the PRTR benefit industrial facilities?

The SwissPRTR helps

- create transparency,
- provide a basis for management decision-making,
- enhance environmental efficiency and productivity,
- ensure social responsibility in relation to employees and the general public.

#### How does the PRTR benefit authorities?

- The SwissPRTR serves as the basis for developing long-term strategies and instruments used to control pollutant releases to air, water or land and transfers of waste and pollutants in waste water.
- The SwissPRTR is a forward-looking instrument intended to control sustainable management of pollutant releases and transfers of waste and pollutants in waste water.

### Data quality and possible interpretations

#### How representative are the data in SwissPRTR?

Under the PRTR Ordinance (PRTR-V), only facilities with specific installations are required to report data to SwissPRTR. Depending on the sector, facilities over a certain capacity threshold must report data on pollutant releases and waste quantities that exceed specific threshold values. Thus, the data of facilities with considerable releases or transfers is recorded.

Facilities under the capacity threshold or not exceeding the threshold values do not have to report any data. However, they are free to volunteer this information if they so desire. If a facility appears in SwissPRTR, it therefore does not necessarily mean that it has exceeded the threshold value for a pollutant release.

There are 86 pollutants with varying effects that must be reported. They may adversely affect health, have a negative impact on the environment or contribute to the greenhouse effect. No other pollutants besides these 86 are recorded in PRTR, even if they have similar characteristics.

#### What is the quality of the data assessed?

The data is collected through a variety of different methods, so the quality of the data varies accordingly. In compliance with the PRTR Ordinance, facilities report the best available data. This data may be based on measurements, calculations or estimates and as a result vary in accuracy and precision from facility to facility. This aspect of PRTR must be taken into consideration when comparing facilities.

Here is an example: loads are calculated based on recorded concentrations and quantities or exhaust gas volumes. An extrapolation of loads due to small volumes of releases with high concentrations of pollutants will be more precise than one calculated from large volumes with low concentrations (near the detection limit).

It is up to the facility owner to ensure that the data published in SwissPRTR are complete, based on consistent definitions and traceable.

#### What should be taken into consideration when interpreting the data?

Interpretations should take into consideration that only facilities with specific installations and releases above certain quantities are required to report their data. The installations and capacity thresholds can be consulted in Appendix 1 and the threshold values for pollutant releases in Appendix 2 of the PRTR Ordinance. Data under these thresholds may be reported voluntarily.

An analysis "by main activity" on the pollutant selection page shows the total releases in each case.

- If no geographical area is specified, then the table applies to all of Switzerland. The contribution of each activity to the releases is also indicated (in per cent).
  - o If data on all releases, including those from diffuse sources, are available, the total releases for the whole of Switzerland are calculated using models. The FOEN is responsible for them (see the "Diffuse sources" section). These totals include the releases from the reported point sources as well as those from facilities, households, agriculture, forestry, traffic and other sources that are not required to report. The release from diffuse sources listed corresponds to the difference between the calculated total and the reported point sources:

Diffuse sources = Total CH releases (from models) Point sources recorded in SwissPRTR

 If there is no data on releases from diffuse sources, then the indicated total and the breakdown into percentages apply to the reported point sources displayed:

Total releases = point sources recorded in SwissPRTR

• If a geographical area was specified, the values for the main activities for the selected geographical area are totalled. In this case, diffuse sources are not indicated, since this information is only available for all of Switzerland.

#### How can the data in SwissPRTR be used?

Due to the high reporting thresholds, the data provide an overview of the facilities required to report in a sector at a given point in time.

If the data in SwissPRTR is used for scientific purposes, the following characteristics of a PRTR should be taken into consideration:

- the facilities are responsible for the data they report;
- authorities may allow subsequent changes to be made to data that have already been published, provided they are justified;
- due to the restrictions regarding who is required to report, the dataset in PRTR is not complete;
- data reliability inevitably depends on the data collection method and therefore on the facility and the process recorded. For that reason, any comparison of data must allow for a measure of uncertainty which is not quantifiable.

The data contained in SwissPRTR are used to identify the geographical distribution of the largest point sources of specific pollutants, monitor temporal trends and develop long-term strategies for controlling releases. Data collection helps facilities optimise their processes and increase their efficiency by reducing or ceasing pollutant releases or waste.

### Reporting requirement

#### Which enterprises report their data to the PRTR?

An enterprise must report its data if it operates an installation that is listed in Annex 1 of the PRTR Ordinance. Capacity thresholds are also specified in Annex 1 for various installations: a thermal power plant must report its data only if it exceeds a capacity of 50 MW. There are also thresholds for individual pollutants, below which no report is required. These thresholds are specifically determined for each pollutant and listed in Annex 2 of the Ordinance. Due to the overall sound environmental performance of the facilities and the regulations on air and water pollution control, the thresholds are often not exceeded, which means that a report is not required.

#### Why are certain data confidential?

According to the PRTR Ordinance, a facility may request that its data be processed confidentially and not published as a result. This is authorized if there is reasonable private or public interest deemed worth protecting according to section 7 of the Freedom of Information Act (Öffentlichkeitsgesetz) of December 17, 2004.

## Significance of the pollutants and their release

### Why were these specific pollutants selected?

The list was compiled by a United Nations Economic Commission for Europe (UNECE) Working Group and defined in the 2003 Kiev Protocol for the Contracting Parties. This common list of pollutants is one of the conditions for the comparability of national pollutant registers. It therefore also contains substances whose use is restricted or forbidden in Switzerland.

#### Which pollutant releases are registered in the PRTR?

The PRTR contains regular, irregular and punctual releases that are made intentionally or unintentionally. The examples below should give a better idea of what these are:

- Carbon dioxide is the usual main product of combustion processes (along with water, which is not listed in the register). Other substances such as nitrogen oxides or carbon monoxide are produced as byproducts. Their proportions depend on the combustible and the conditions in which combustion occurs.
- Substances such as pesticides and road salt are deliberately used in the environment in order to achieve a specific result.
- Residues from households are treated by chemical and biological processes in wastewater treatment facilities. There, a portion of the organic material is broken down into simpler compounds, which is why treated water still contains large amounts of organic carbon and nutrients in the form of nitrogen and phosphorus compounds.
- A number of substances are otherwise released (lost) to the environment (during production processes and product use, due to corrosion and abrasion, disposed of as waste or released by accident).

#### Do the reported quantities of pollutants jeopardize health?

The pollutant register cannot directly answer that question. It helps transparency, serves as a basis for communication and makes it possible to ask more advanced questions. Some information about pollutants can be found in the description of each pollutant. The characteristics and possible effects of each pollutant vary greatly.

### Interpreting pollutant release figures

#### In which units are the figures indicated?

Specific data about pollutants, or releases to air, water or land and transfers of pollutants into waste water are indicated in kilograms per year (kg/a). These are absolute quantities. Dilution effects are not taken into account. Waste water and hazardous waste are indicated in tonnes per year (t/a).

#### Why are measurements, calculations and estimates used to obtain the figures?

According to the PRTR Ordinance, a method must be chosen that allows for the best possible information to be produced. Measuring emission levels is often difficult and time-consuming in practice, especially if the information is supposed to be valid for an entire year. Therefore, data from calculation models (e.g. based on substance balances or emissions factors) or estimates (based on assumptions and model calculations) are used. In many cases, measurements are not necessarily more precise than calculations or estimates.

# Does a reported pollutant quantity mean that the limit values will be exceeded when it is released?

No, the reporting requirement is independent from all limit values.

#### Releases from diffuse sources

#### What does "diffuse sources" mean?

Diffuse sources means all releases that have no specifically identifiable (punctual) source. Typical diffuse sources include traffic, but also households, which are scattered throughout the country. Other diffuse sources include agriculture, forestry, industry and commerce, though only those facilities that are not otherwise required to report are counted as diffuse sources. The releases from diffuse sources are calculated for each pollutant as the difference between the total for Switzerland and the releases reported by the facilities.

FOEN is responsible for calculating the releases from diffuse sources. It uses the most up-todate knowledge for this task obtained through surveys, calculations and models.

For more information, consult the following:

- in the section entitled "Releases from diffuse sources", under "Where do the data on releases from diffuse sources come from?"
- in the section entitled "Data quality and possible interpretations", under "Interpretation".
- on the Internet site of the Air Pollution Control and NIR Division of the FOEN: www.bafu.admin.ch/airpollution

#### Where do the data on releases from diffuse sources come from?

The data combine measurements and values obtained from models.

#### Air

The data are based on the international reporting on air and climate.

Data from the Air Pollution Control and Chemicals Division, Federal Office for the Environment (FOEN), Bern

#### Water

Calculations by the Water Division, Federal Office for the Environment (FOEN), Bern

The base data are the average values for the years 2005 to 2007 from the measurement station of Weil am Rhein, on the river Rhine. To extrapolate the Rhine values to the whole of Switzerland, they were multiplied by the factor 1.138, on the basis of Table 4.2 of the following publication:

 Jürg Zobrist, Laura Sigg, Ursula Schoenenberger: NADUF - thematische Auswertung der Messresultate 1974 bis 1998 (NADUF, National River Monitoring and Survey Programme - Thematic interpretation of the measurement data from 1974 to 1998), Schriftenreihe der EAWAG no. 18, ISBN: 3-906484-33-5, Swiss Federal Institute of Aquatic Science and Technology (EAWAG), CH-8600 Dübendorf-Zurich (Switzerland) 2004

### **Questions about waste disposal**

# Why do waste water treatment and municipal waste incineration plants release relatively large quantities of particular pollutants?

Municipal waste incineration and waste water treatment plants make important contributions to protecting the environment. Waste water treatment plants treat waste water from industry, trade and households. In doing so, the pollutant load is efficiently reduced so that the treated water can be discharged into natural waters. Many more pollutants would infiltrate the environment through uncontrolled incineration in domestic heating systems or illegal dumping than through incineration by municipal waste incineration plants.

In Switzerland, plants are generally on the cutting-edge of technology. However, since they are unable to completely eliminate all pollutants for chemical and technical reasons, certain quantities of pollutants or their decomposition products enter watercourses or the air. Both operators and authorities alike are aware of these releases, and they are monitored. That is how it is ensured that the appropriate limit values are respected.

In order to compare releases from waste water treatment and municipal waste incineration plants with the total quantities in Switzerland, both punctual and diffuse sources must be taken into account. Diffuse sources include transport, households and agriculture, as well as facilities that are not required to report to the SwissPRTR. By clicking on the buttons "Select pollutants" and then "Display by main activity" in the SwissPRTR database, it is possible to ascertain, for example, that over 90% of the nutrients, nitrogen and phosphorous that enter watercourses come from diffuse sources and less than 10% from waste water treatment facilities.

#### Are landfills required to report?

According to Annex 1 of the PRTR Ordinance, landfills are required to report their data if they have a capacity of more than 10 tonnes per day or a total capacity of more than 25,000 tonnes. Landfills for inert waste are excluded. Landfills that are no longer in operation are not required to report.

The thresholds for pollutant releases should also be noted. Landfills that are lined and equipped with gas wells often have no releases that must be reported since the values fall under the thresholds.

# Can waste incineration in a municipal waste incineration plant be considered recovery, if the combustion heat is used?

No, combustion is defined in the PRTR as "disposal," since the main purpose of a waste incineration plant is to dispose of waste. Naturally, it is very much appreciated when the heat produced in that process is then used to generate steam or electricity.

# Most Frequently Asked Questions of the Facilities in the First Year of Reporting

### Is the cosmetic industry subject to the reporting requirement?

No, as long as it is not operating an installation covered by Annex 1 of the PRTR Ordinance. In general the cosmetic industry only carries out mixtures and formulations.

# Asbestos remediation and transformation of an office building: must the resulting special waste be notified?

No, this is purely a construction project and has no direct relation to a production facility.

# Must the special waste resulting from the overhaul of an installation be reported?

Yes, the overhaul is part of the normal operation of an installation, even if it only occurs every 5 or 10 years.

#### Is the waste resulting from a flood subject to reporting requirement?

No, this waste is not directly related to the operation of the production plant.

# Special waste collected over a period of several years: can average data be reported?

No, the specific data must be reported in each case.

# Sum parameters (non-methane volatile organic compounds, NMVOCs): Must dichloromethane be reported both individually and in the sum of NMVOCs?

Yes, NMVOC pollutants must be reported both in the sum parameter and individually according to the list.