



COMPARING YOUR DATA WITH OTHER TERRITORIES

A short introduction to the R4R tool

June 2014



COMPARE YOUR RECYCLING PERFORMANCES !

The R4R online tool allows **comparing your recycling performances with other territories**. It is based on a common method elaborated by the R4R partners to make local statistics comparable.

This starting guide will provide **the main information needed to use the online tool and guidance on the R4R methods**.

MAIN FUNCTIONS OF THE ONLINE TOOL

The R4R online tool allows creating a set of data for a given territory (municipality, region, country...). It gives access to different reports depending on the data the user chooses to input:

- The **identification of territories sharing comparable external factors**;
- The **comparison of recycling performances** for 16 waste fractions;
- The **comparison of local waste strategies** and of the sets of instruments implemented in the different territories.

Therefore, it allows to identify well-performing territories and to identify specific local instruments making these high performances possible.

HOW TO ACCESS THE ONLINE TOOL?

The online tool is accessible on the following address: <https://services.ovam.be/r4r/pages/login.xhtml>. On this page you can create a new account that will allow you create your territory. As soon as your account is validated, you can access the online tool homepage where the different functions of the tool are presented.

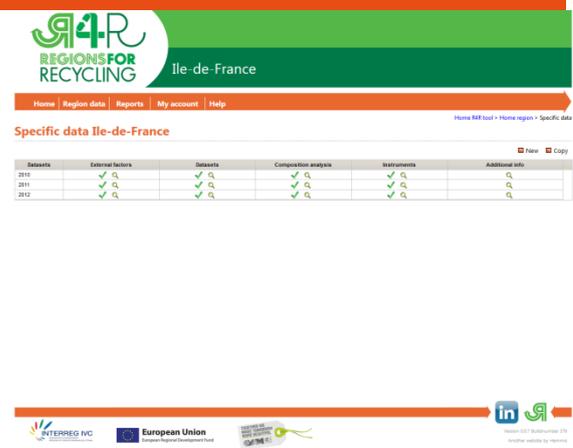
To gain access to comparisons, the first step is to **create a new "region"** by choosing "My account/register new region". Before doing so, make sure the region you want to register has not been created by a colleague to avoid creating duplicate accounts for the same territory. If you create a region, you have to ask a validation from the administrator of the R4R online tool: Under "my regions", select the region that you created, scroll down and push on the bottom 'request to verify authorization'. An e-mail will now be send to the administrator to verify your authorization for the region. As soon as this is done, you receive an email to log in again.



Once your region is validated, you can manage the users that can work on its data and provide more information regarding the region by clicking on “Region data” and then “manage general information about the region”. If you do not want the name of your region to appear on the reports made by other regions, you can check the “anonymous region” box.

INPUT YOUR OWN DATA

You can access this part by clicking “Region data” and then “Manage specific data for each year”. On this page, you will first need to create an annual set of tables by clicking “new” and keying in the year you want to add. Then, you will be able to input different types of data. Before specifying the different sets of data, it is important to note that data sets need to be “validated” to be used in comparison methods. Therefore, as soon as you have completed a set of data, click on the box “completed” to make it available to other users. If you make any changes to a data set, you have to tick “completed” again.



The different sets of data are the following:

- **External factors:** they are factors that impact waste recycling but on which your region has limited to no influence on (such as density). The only mandatory data to be filled in in order to use the tool are population (that is used to calculate per capita indicators) and your region’s area. Other indicators are optional but will then give you access to filters for you to identify comparable territories. Specific guidance and definitions are given in the following document.
- **Composition analysis:** here you can input data regarding the composition of your residual fraction. Filling in this part gives you the access to specific indicators such as recycling potential. If the data has been measured specifically for your territory, choose the “measured” option. If you use national average or other data, specify them as “estimated”.
- **Local instruments:** this will allow you to detail your local waste strategy. You must first choose the instruments used in your territory by clicking on “add instruments”. Then, more specific information can be input by clicking on the small magnifying glasses next to each instrument. Filling in this section will allow you to compare your local strategy with others through “instruments reports”. Specific guidance and definitions are given in [this document](#).
- **Additional information:** you can upload a pdf file (such as an annual report) to provide more information regarding your territory.

The last category “datasets”, requires further explanations.

MAKE YOUR STATISTICS COMPARABLE WITH THE R4R METHOD

The “datasets” section allows to key in your own waste statistics. The goal of the R4R method is to allow territories to present their data in a homogeneous and consistent way so that they can **compare the quantities going to recycling** (including material and organic recovery), **by waste fraction**. The idea is to ensure that territories are comparing **the same scope of waste** (e.g. municipal waste) and that comparisons are made **on common grounds regardless the way waste are sorted out** into recyclable fractions (i.e. separation at the source or mixed fractions sorted out in sorting plants).

THE SCOPE OF MUNICIPAL WASTE

The common definition for “municipal waste” partners have agreed on is the one proposed by Eurostat:

- **All the waste generated by households** (regardless who collects it, i.e. including accredited bodies, retailers, social organisations...);
- **Non-household waste collected by or on behalf of the municipalities**, including commercial waste, waste generated by municipalities and waste from schools, hospitals, institutions... only if they are collected by or on behalf of municipalities;
- **Non-household WEEE and batteries similar to the ones generated by households collected by or on behalf of accredited bodies.**

Therefore, commercial waste and waste generated by local authorities have to be included as long as they are managed together with household waste. **Several fractions are excluded**, such as **construction and demolition waste, end-of-life vehicles, water treatment sludge and sewage sludge**. A common framework of 16 waste fractions was also determined:

- paper and cardboard (P&C)
- metal
- glass
- plastic
- multilayer packaging
- bio-waste
- wood (excluding pruning wood which is considered as green waste)
- textiles
- tyres
- used cooking oils
- mineral oils

- WEEE
- Batteries
- medicines
- (other) hazardous waste
- digestate (coming from Mechanical Biological Treatment - MBT)

The principle of the R4R method is to break down municipal waste quantities into these 16 material waste fractions and depending on their final treatment. More specific information regarding the scope is available [here](#).

DESTINATION RECYCLING

One of the difficulties with the comparison of different waste statistics is the inconsistent use of the term “recycling” which can be either used to qualify sorted waste or second hand materials that are actually used by manufacturers as a substitute for raw materials. To avoid these confusions, the partnership has decided to invent a new term “Destination Recycling” (DREC) that **includes all separated, homogeneous waste fractions sent to recycling by public authorities, either sorted at the source or in sorting facilities**. “Recycling” includes:

- **Recyclable materials** sent to manufacturers to be used as new material in the production process or sold to companies trading materials;
- **Organic waste** (either bio-waste separated at the source or digestate outside of MBT plants) **sent to composting or anaerobic digestion plants if the compost is effectively used on land or for the production of growing media**.

Three other destinations are also possible: incineration with energy recovery, incineration without energy recovery and landfilling.

WHAT DATA HAVE TO BE REPORTED IN THE R4R METHOD?

As seen above, only **municipal waste** (as described above) excluding construction and demolition waste, sludge and end-of-life vehicles has to be reported. For each of the 16 fractions, data have to be reported according to:

- **The sorting stage:**
 - separated at the source;
 - separated in a sorting centre;
 - separated in a bulky waste sorting centre;
 - separated in a residual waste sorting centre;

- separated in a MBT plants;
- **The destination:**
 - DREC;
 - Incineration with energy recovery;
 - Incineration without energy recovery;
 - Landfilling;

Therefore for each material fraction **both quantities separated at the source and output of sorting centres have to be reported**. Any stream composed of mixed fractions sent to a sorting centre must not be considered in the reporting tables. In the R4R terminology, **only 2 fractions are "mixed fractions"**:

- **"Residual waste"**, including:
 - Mixed residual waste collected at the source (door to door, bring banks...);
 - Contamination (residual fraction) from sorting centres and MBT plants going to incineration or disposal;
 - RDF from MBT going to energy recovery;
- **"Bulky waste"**, including:
 - Mixed bulky waste collected door-to-door or on request and sent directly to incineration or landfilling;
 - Mixed combustible or incombustible fractions from civic amenity sites going directly to incineration or landfilling;
 - Contamination (residual fraction) from bulky waste sorting centres going to incineration or landfilling.

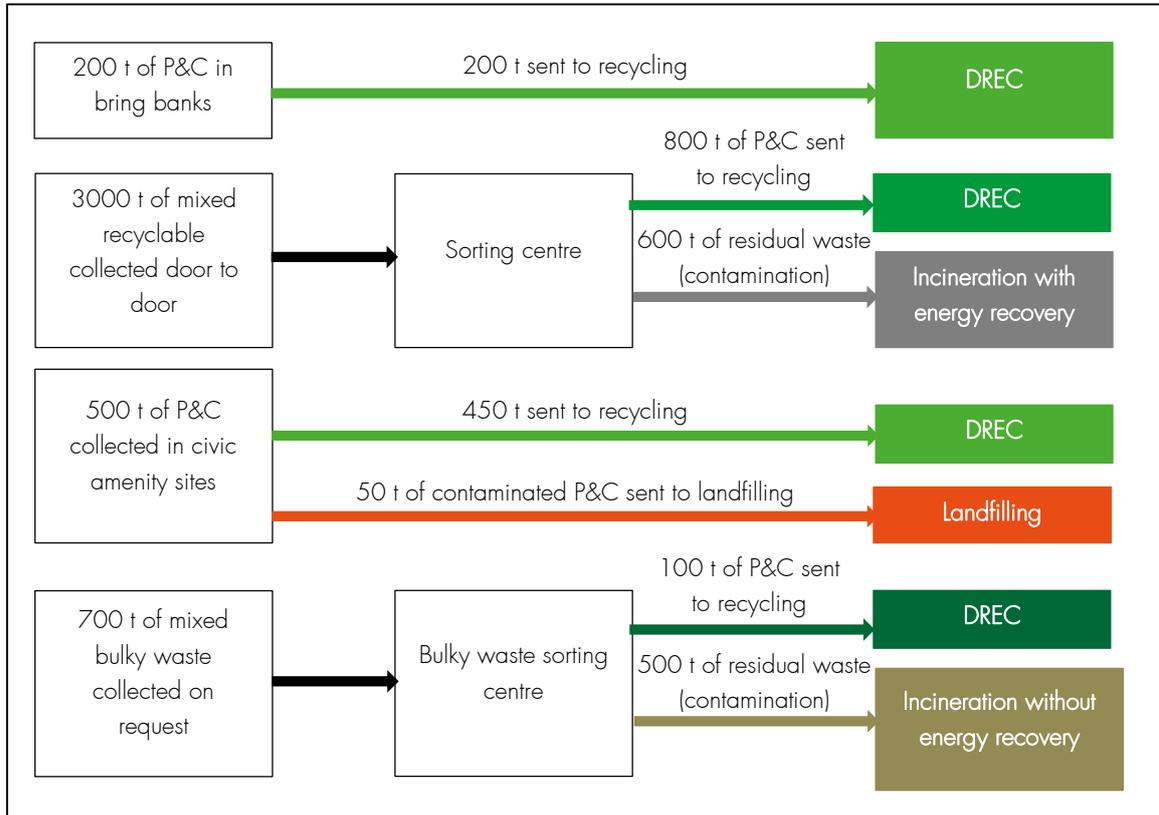
It can be interesting to draft a flow diagram in order to determine what quantities have to be reported. A short example is presented below.

EXEMPLE: HOW TO REPORT PAPER AND CARDBOARD QUANTITIES?

This example is about a local authority who sorts out paper and cardboard in different ways:

- Part of the population has access to bring banks for paper and cardboard;
- Part of the population has a door-to-door collection for mixed recyclable fractions (paper and cardboard, metal and plastics);
- Civic amenity sites include a specific container for cardboards;
- Part of the population has access to a collection on request for bulky waste. Bulky waste are collected on the kerbside as a mixed fraction and sent to bulky waste sorting centres.

This situation can be sketched as follows:



This very situation has to be reported according to the R4R method as shown in the tables below (the colours of the cells match the ones in the diagram):

waste stream	sorting stage	Treatment	Amount (tonnes)
Paper and cardboard (P&C)	separated at source & selectively collected (one waste stream not mixed with other waste streams)	DREC	650
		incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	
		Landfill	50
	output sorting facility	DREC	800
		incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	
		Landfill	
	output sorting facility for bulky waste	DREC	100
		incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	
		Landfill	
	output sorting facility for residual waste	DREC	
		incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	
Landfill			
output MBT	DREC		
	incineration with energy recovery (R1)		
	incineration without energy recovery (D10)		
	Landfill		

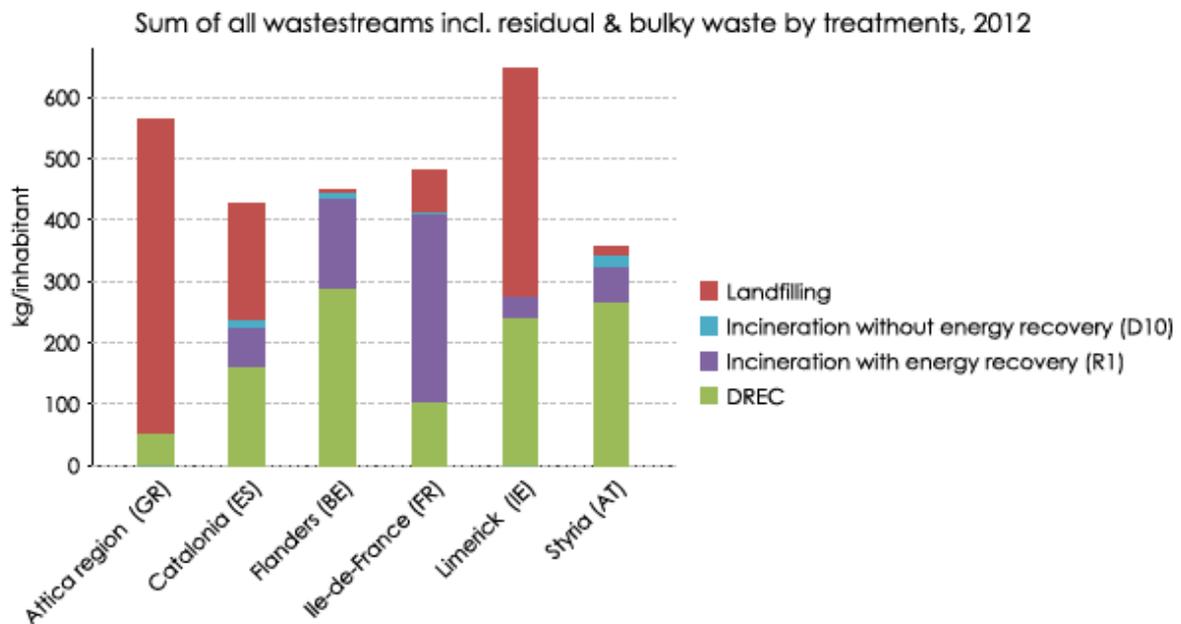
waste stream	sorting stage	Treatment	Amount (tonnes)
residual waste	residual waste going directly to landfill/incineration	incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	
		Landfill	
	output sorting facility going to landfill/incineration	incineration with energy recovery (R1)	600
		incineration without energy recovery (D10)	
		Landfill	
	output sorting facility for residual waste going to landfill/incineration	incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	
		Landfill	
	output from MBT going to landfill/incineration	incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	
		Landfill	
bulky waste	bulky waste going directly to landfill/incineration	incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	
		Landfill	
	output sorting facility for bulky waste going to landfill/incineration	incineration with energy recovery (R1)	
		incineration without energy recovery (D10)	500
		Landfill	

A more detailed description of the method can be found here: http://www.regions4recycling.eu/upload/public/Reports/R4R_municipal-solid-waste-scope.pdf

USE THE ONLINE TOOL TO COMPARE YOUR DATA

There are different reports:

- Data reports:** Two types of reports are available: benchmark reports allow you to compare data among different territories, while “evolution reports” provide graphs displaying the evolution of recycling in one territory. Filters options make it possible to display territories according to their “external factors”. You can then choose for several territories (depending on their available data for the selected year). Then, you have to choose one specific indicator along with a specific waste fraction. Data are provided either via a pdf file or with a csv file that you can then open in excel. More details about the indicators are available [here](#).
- Instruments reports:** Here you can make a selection of (sub) categories and/or target groups or select specific instruments and then select the territories you want to compare. You can also make instruments reports on the same page as “benchmarking reports”. More details about local instruments can be found [here](#).



REGIONS**FOR**RECYCLING