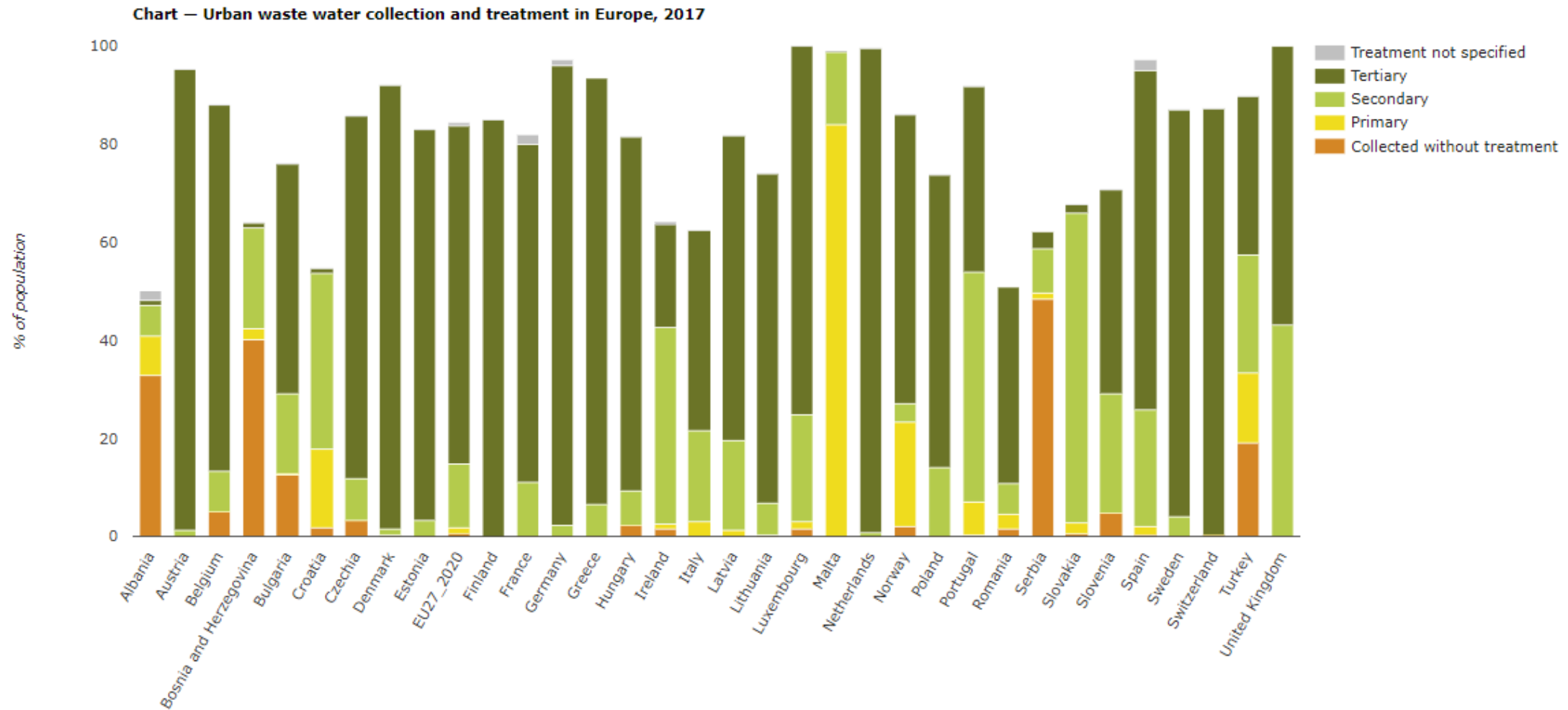
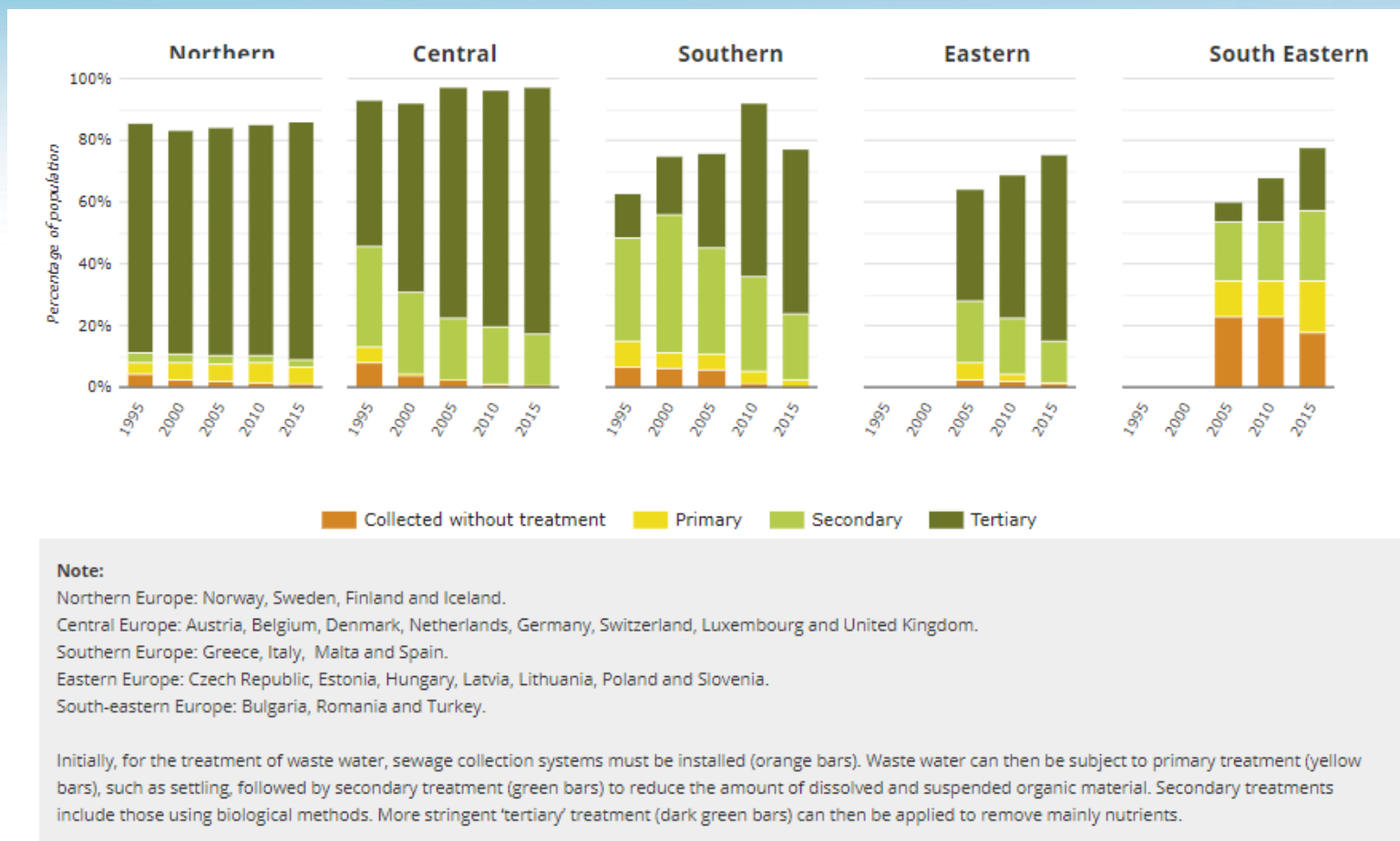


# Wastewater treatment & opportunities for decentralised NBS for wastewater treatment in SEEurope

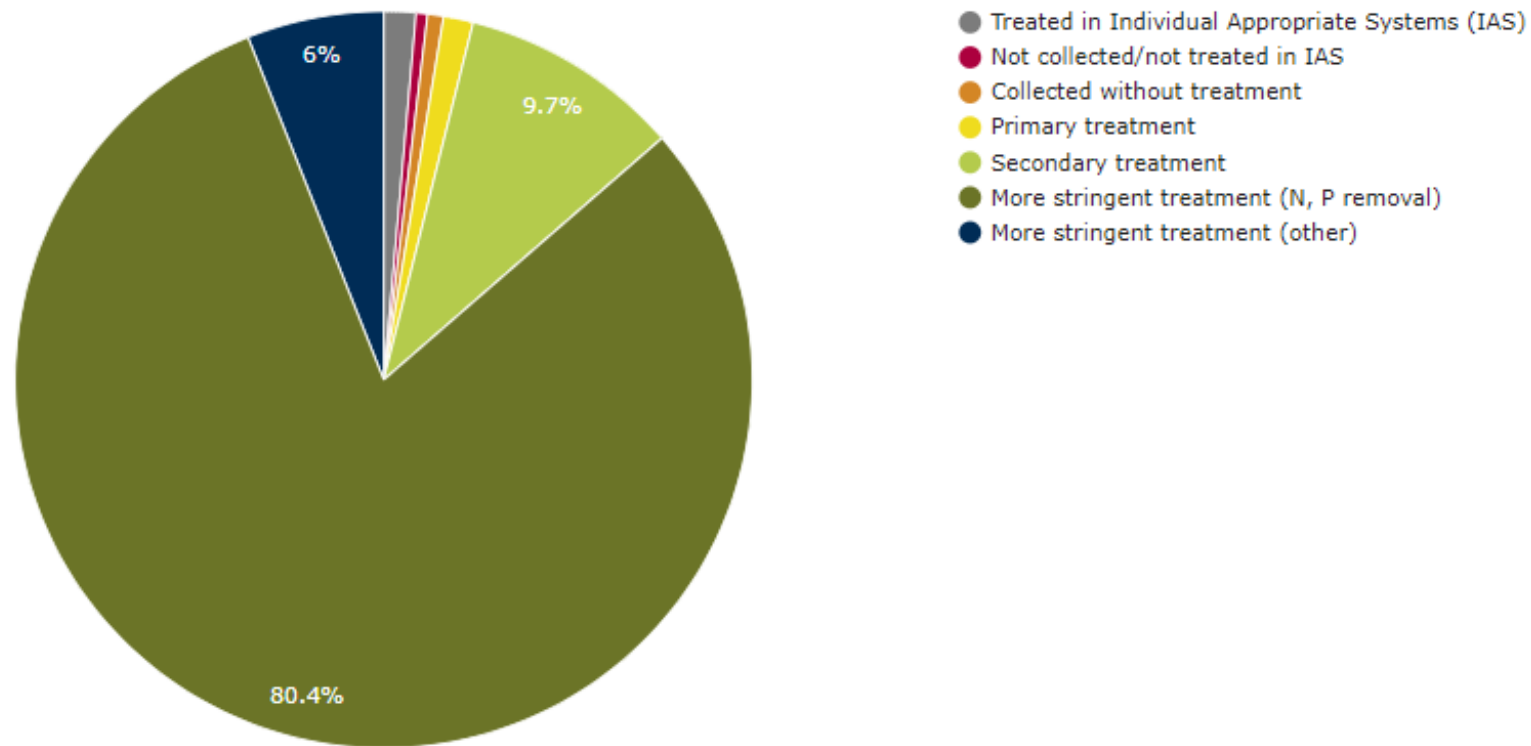
## Urban waste water collection and treatment in Europe



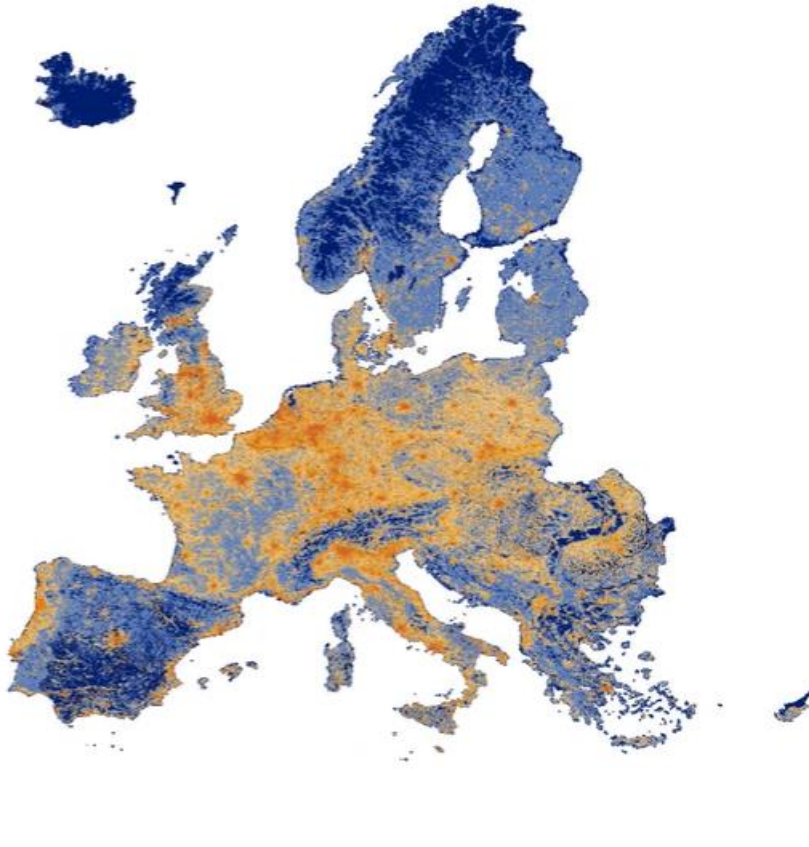
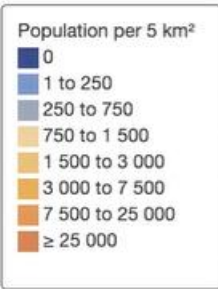
## Changes in urban waste water treatment in Europe



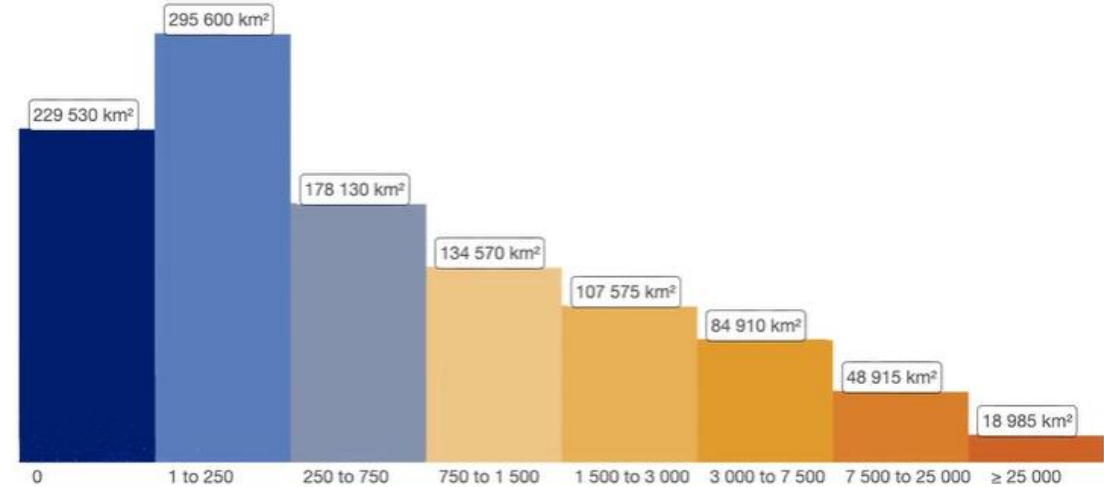
Urban waste water treatment in European "Big Cities" in 2016



# Population density



Area (in km<sup>2</sup>)

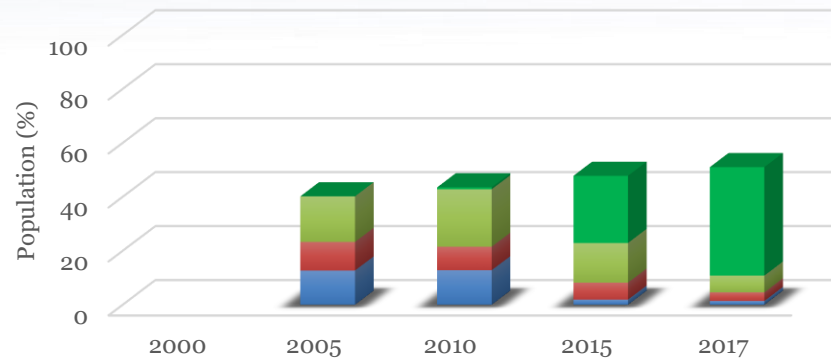


Population (number of people living per 5 km<sup>2</sup>)



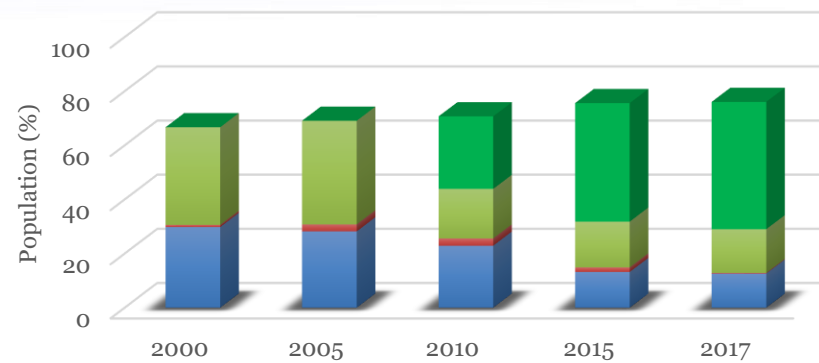
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 689817.

## Romania



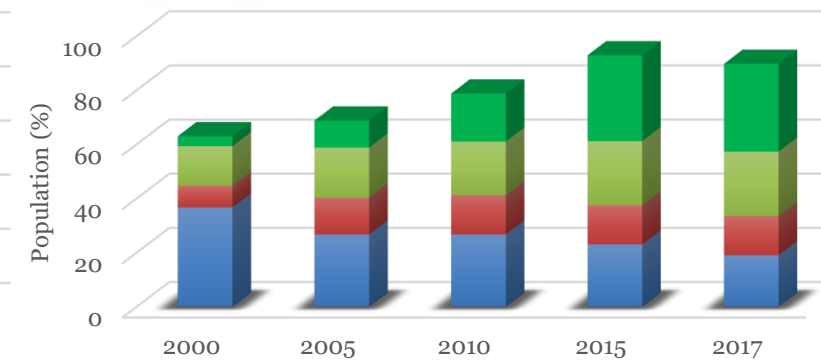
Collected without treatment:number Primary:number  
Secondary:number Tertiary:number

## Bulgaria



Collected without treatment:number Primary:number  
Secondary:number Tertiary:number

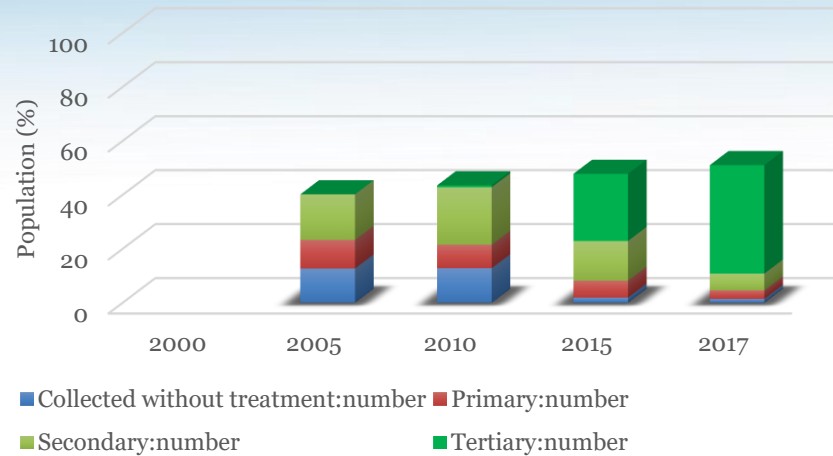
## Turkey



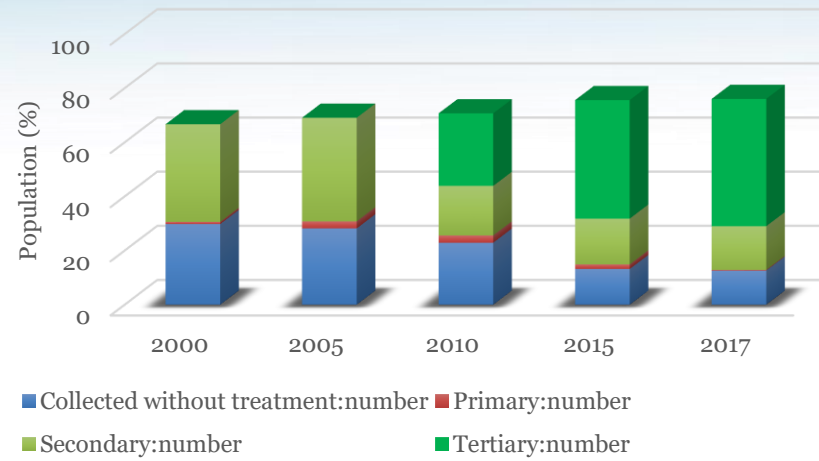
Collected without treatment:number Primary:number  
Secondary:number Tertiary:number



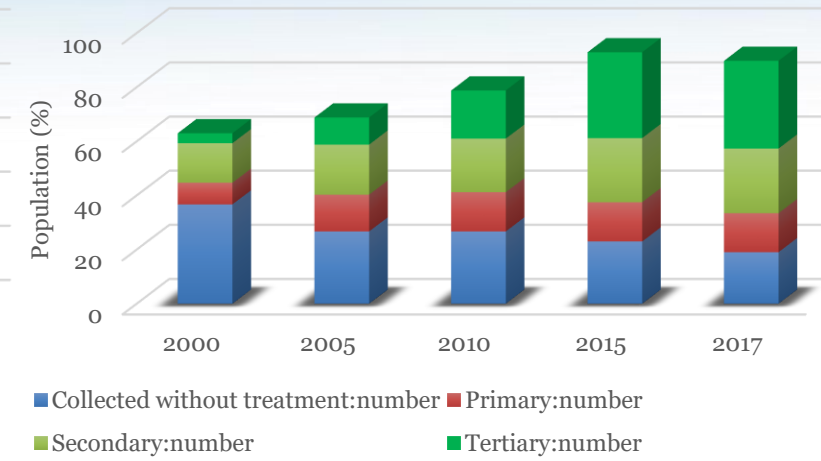
## Romania



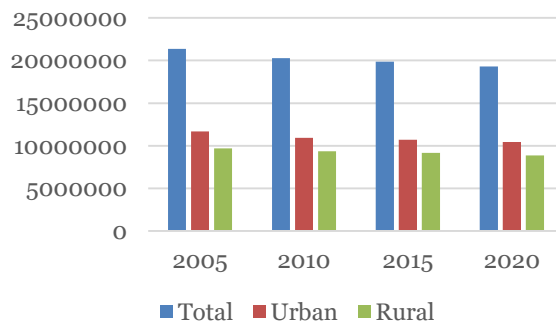
## Bulgaria



## Turkey



## Romanian population





# Number of agglomerations in EU28 and the generated organic pollution load that they discharge



	Total number of agglomerations (>2,000p.e.)	Total number of agglomerations 2000-10000 p.e.	Total number of agglomerations >10000 p.e.	Total number of agglomerations >150000 p.e.
EU15	17,910	10,940	6,970	546
EU13	5,659	4,071	1,588	116
<b>EU28</b>	<b>23,569</b>	<b>15,011</b>	<b>8,558</b>	<b>662</b>

	Total Load discharged from agglomerations (million p.e.)	Total load discharged from agglomerations 2000-10000 p.e. (million p.e.)	Total load discharged from agglomerations >10000 p.e. (million p.e.)	Total load discharged from big cities discharging >150 000 pe (million p.e.)
EU15	509	51	457	230
EU13	79	17	62	47
<b>EU28</b>	<b>588</b>	<b>68</b>	<b>519</b>	<b>277</b>

Facts and Figures about Urban Waste Water Treatment,



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 689817.



# Wastewater treatment

## two strategies



Autonomous sanitation



Collective sanitation

# The lumbrifilter

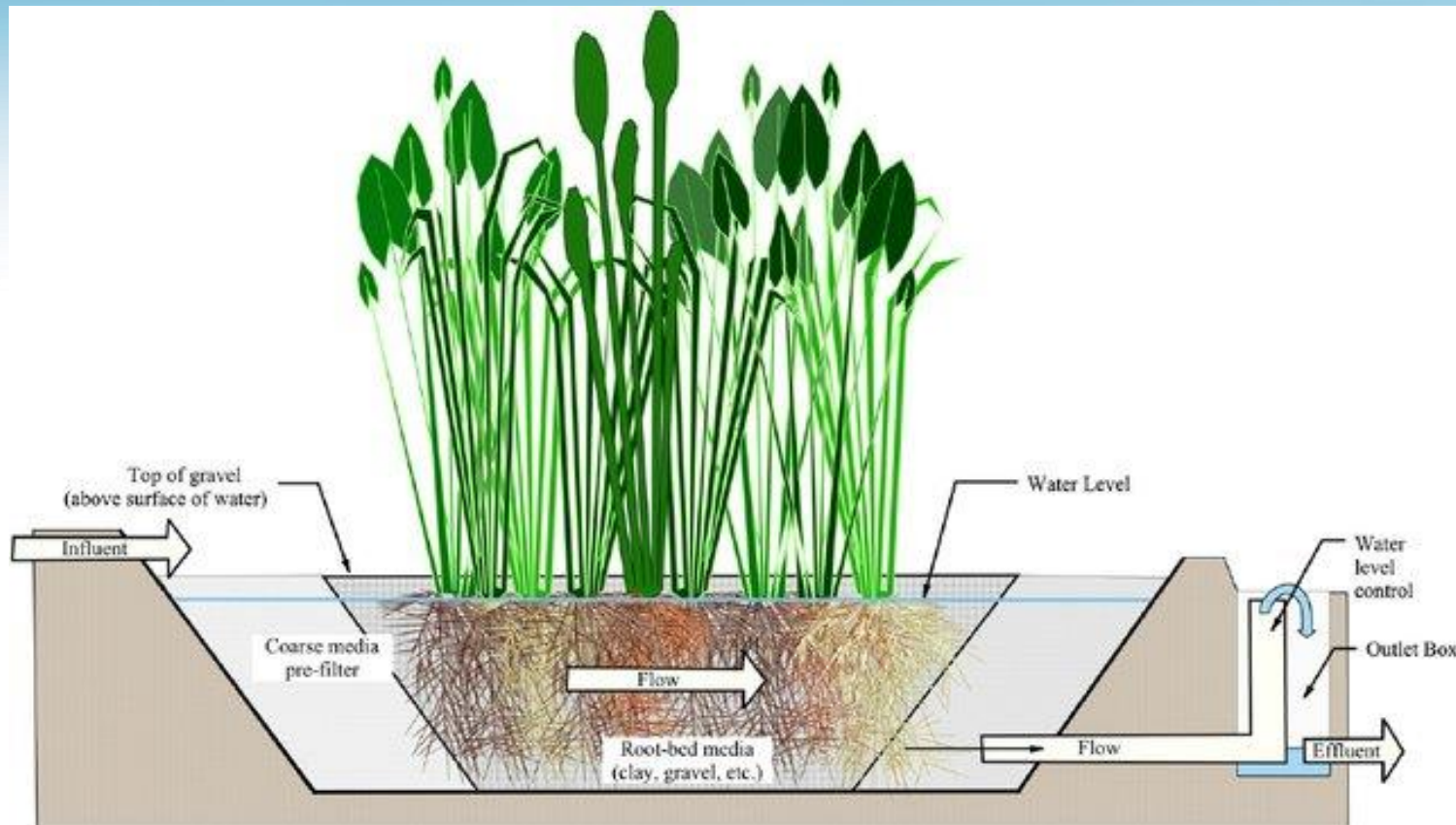


*Eisenia fetida* + *Eisenia andrei* + microorganisms  
(aerobic bacteria)

+

Specific substrate





White,S.A. 2013





Country	Site manager	Contact details
<b>Ecuador</b>	Nicolas Salmon	nsalmon@yes-innovation.com
<b>France</b>	Jean-Baptiste Dussaussois	jbdussaussois@nobatek.inef4.com
<b>India</b>	Tatjana Schellenberg	schellenberg@borda.org
<b>Ireland</b>	Eoghan Clifford	eoghan.clifford@nuigalway.ie
<b>Italy</b>	Pietro De Cinque	pietro.decinque@de5.it
<b>Peru</b>	Joshelyn Paredes-Zavala	joshelyn.pz@gmail.com
<b>Romania</b>	Costel Bumbac	costel.bumbac@incdecoind.ro
<b>Tanzania</b>	Evelyn Herrera Lopera	herrera@borda.org
<b>Turkey</b>	Serkan Naneci	serkan.naneci@ekodenge.com
<b>Scotland</b>	Anna Baran	anna.Baran@scottishwater.co.uk

<https://www.facebook.com/innoqua/>

<https://www.linkedin.com/groups/12148159/>



# Thankyou for taking part!

[www.innoqua-project.eu](http://www.innoqua-project.eu)



This project has received funding from the European Union's Horizon2020 research and innovation programme under grant agreement No.689817