

Danube River Basin Management Plan



Part A – Basin-wide overview Update 2021 - Maps

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LEGEND

- Danube River Basin District (DRBD)
- Danube River
- Tributaries (with catchment area > 4,000 km²)
- Lake water bodies (with surface area > 100 km²)
- Transitional water bodies
- Coastal water bodies
- Canals
- ▶ Competent authority
- National borders

Cities:

- 100,000 - 250,000 inhabitants
- 250,000 - 1,000,000 inhabitants
- > 1,000,000 inhabitants

0 50 100 200 km

Scale: 1 : 4,500,000
(Scale 1: 6,000,000 in A4 landscape paper format)

Elevation

0 50 100 200 350 500 700 1,000 1,300 1,600 2,000 2,400 3,000 m

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LEGEND

- Alps
- Dinaric Western Balkan
- Helenic Western Balkan
- Eastern Balkan
- Central Highlands
- The Carpathians
- Hungarian Lowlands
- Pontic Province
- Eastern Plains

Cities:

- 100,000 - 250,000 inhabitants
- 250,000 - 1,000,000 inhabitants
- > 1,000,000 inhabitants

Danube River Basin District
 Danube River
 Tributaries (with catchment area > 4,000 km²)
 Lake water bodies (with surface area > 100 km²)
 Transitional water bodies
 Coastal water bodies
 Canals
 National borders

0 50 100 200 km

Scale: 1 : 4,500,000

(Scale 1: 6,000,000 in A4 landscape paper format)

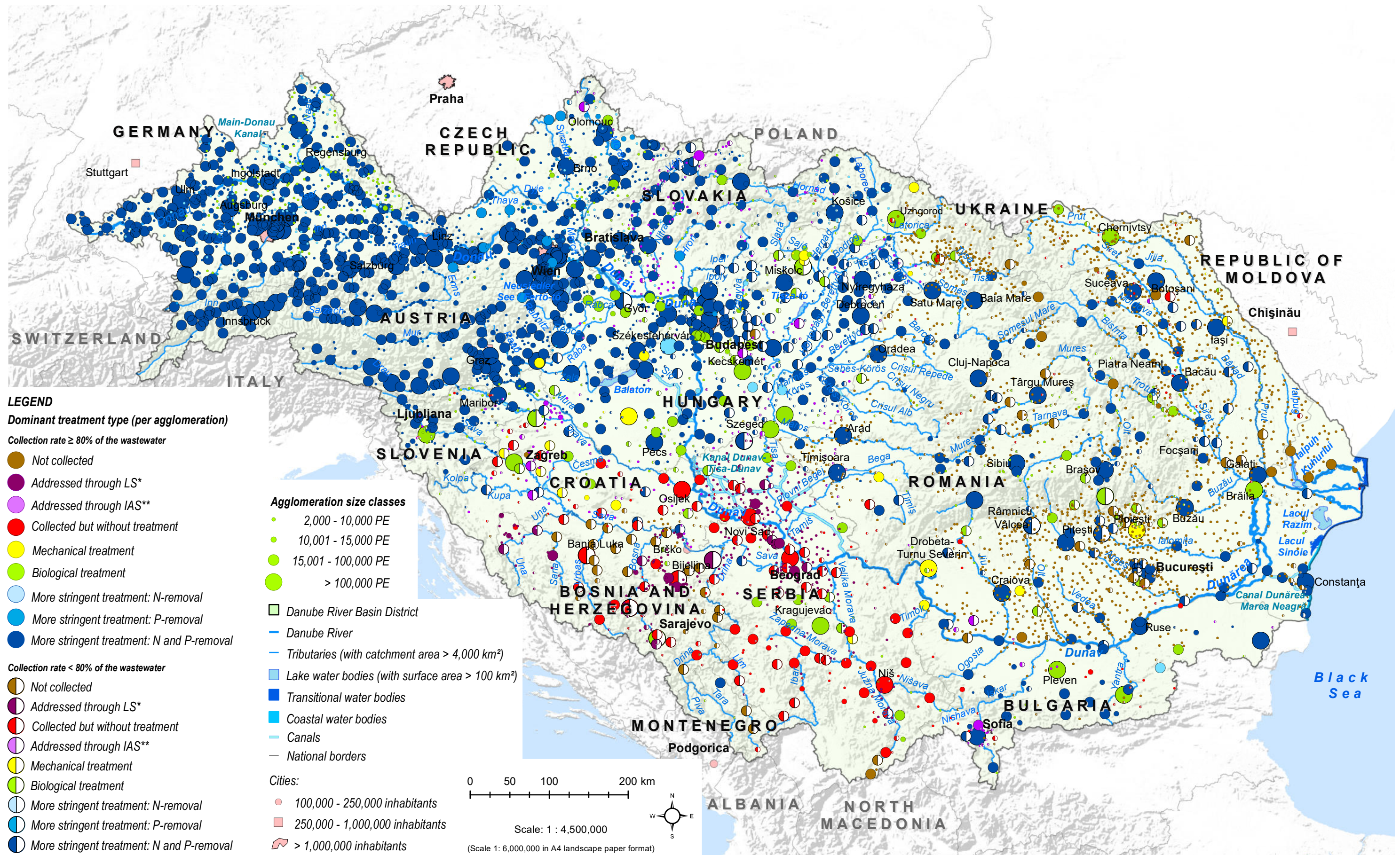
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* LS: Local Systems used for wastewater collection and local treatment (cesspools, septic tanks, small domestic wastewater treatment plants, watertight tanks). LS are applicable only for non-EU Member States.

** IAS: Individual and other Appropriate Systems as defined by the UWWTD (septic tanks with drain fields, small domestic wastewater treatment plants, watertight tanks).

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* This map shows the main industrial facilities, waste management facilities, and urban and industrial wastewater treatment plants - that are reporting direct hazardous substances release to water (Reference Situation 2017/2018)

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The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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The nitrogen emission values (aggregated on AU level on Map 7a), are here disaggregated to land use class units. The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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The phosphorus emission values (aggregated on AU level on Map 7a), are here disaggregated to land use class units. The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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*This map represents preliminary modelling results produced by the Danube Hazard m3c project based on incomplete database and an initial modelling approach. The database, the model and the results will be updated in 2022. Emission estimates were based on basin-wide data for contributions from agriculture and the natural background. Emissions from mining activities could not yet be estimated.

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* Accident Hazard Sites are operating industrial and energy production facilities, with high potential risk of accidental pollution.

** Water Hazard Index (WHI) quantifies the accident hazard, considering the amount and hazardousness of the processed substances at the respective facility, without taking into account the safety measures implemented.

*** Protected Areas as defined by the EU Bird Directive, EU Habitat Directive, and other Protected Areas for water-dependent species and water related habitats.

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* Preliminary database only, data have not been approved officially by RS and SI yet.

** Tailings Hazard Index (THI) quantifies the hazard potential of each TMF, considering the TMF capacity and management conditions, stored tailings toxicity, natural conditions (seismic activity and flooding), and stability of a dam slope.

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* Hydromorphological Assessment of 10-km Danube river stretches, carried on during the Joint Danube Survey 4 (JDS4)

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* On transboundary river water bodies, restoration measures are reported separately for each country and may differ from each other. In case of overlapping symbols of restoration measures, they are drawn on top of each other in this order (top to bottom): Not yet implemented, Partly Implemented by 2021, Fully implemented by 2021, Not necessary - GES/GEP achieved, No data available

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* This map illustrates full water bodies which are affected by significant water abstractions. The exact locations of individual abstractions are not visualised.

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* Significant hydrological alterations with water level fluctuation >1m/day or known/observed negative effects on biology. This map illustrates full water bodies which are affected by hydropeaking. The exact locations of individual pressures from hydropeaking are not visualised. On transboundary river water bodies, restoration measures are reported separately for each country and may differ from each other. In case of overlapping symbols of restoration measures, they are drawn on top of each other in this order (top to bottom): Not yet implemented, Partly Implemented by 2021, Fully implemented by 2021, Not necessary - GES/GEP achieved, No data available

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* The barriers are related to different water uses. More detailed information is available in the chapter 2 of the DRBMP Update 2021.

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This map illustrates morphological conditions of full water bodies which are affected by morphological alterations. The exact locations of individual water body alterations are not visualised. On transboundary river water bodies, values of morphological classes are reported separately for each country and may differ from each other. In case of overlapping symbols of morphological classes, they are drawn on top of each other in this order (top to bottom): 4-5, 2-5, 3, 1-2, 1.

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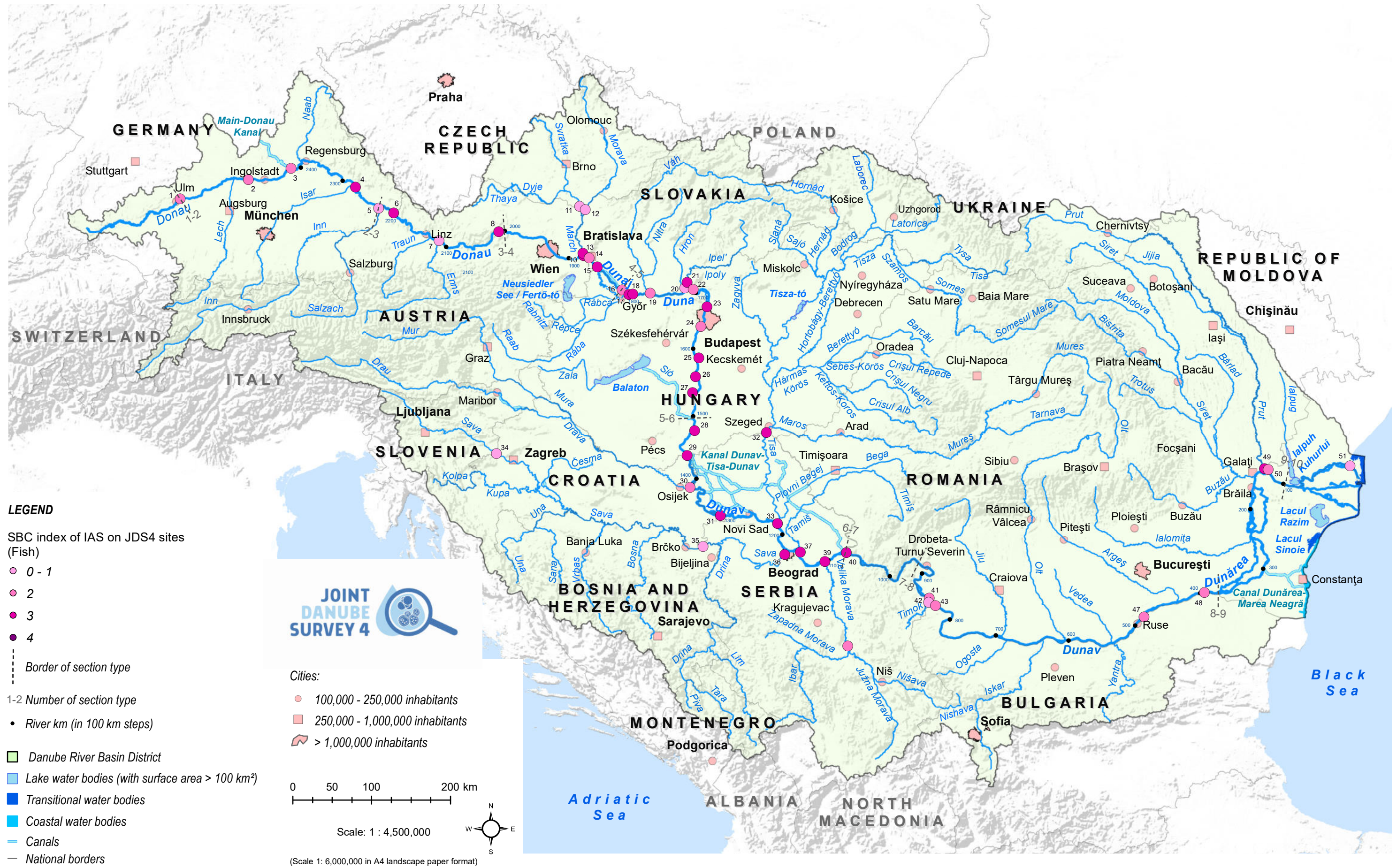
Future infrastructure projects can have multiple purposes, e.g. the main purpose of the project "Straubing-Vilshofen" in Germany is twofold: improvement of flood protection, and navigation. Please note that the EIA study in relation to the Fast Danube Project (including the Impact Assessment on Water Bodies) is an ongoing process, and only its completion will conclude or not on WB deterioration.

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This map illustrates the relative abundance of the Invasive Alien Species sampled on the Joint Danube Survey sites.

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*Surveillance Monitoring 1 provides an assessment of the overall surface water status in the Danube River Basin District.
 **Surveillance Monitoring 2 provides an assessment of long-term trends of specific pollutants and of loads of substances transferred downstream the Danube.

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On transboundary river water bodies, types of surface water bodies are reported separately for each country and may differ from each other. In case of overlapping symbols, they are drawn on top of each other in this order (top to bottom): Artificial - Heavily Modified (Final then Provisional) - Natural (Final then Provisional) - No designation performed.

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On transboundary river water bodies, status of surface water bodies is reported separately for each country and may differ from each other. In case of overlapping symbols, they are drawn on top of each other, in this order: higher confidence is shown on top, and in case that status assessments have the same confidence, the following ranking should be applied (top to bottom): Bad - Poor - Moderate - Good - High - Unknown. In case that assessments have the same confidence and status, the following ranking should be applied (top to bottom): Artificial - Heavily Modified (Final then Provisional) - Natural (Final then Provisional) - No designation performed.

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* According to Directive 2013/39/EU: i.e., without brominated diphenylethers, polyaromatic hydrocarbons, tributyltin compounds, perfluorooctane sulfonic acid and its derivatives, dioxins and dioxin-like compounds, hexabromocyclododecanes, heptachlor and heptachlor epoxide, mercury. On transboundary river water bodies, status of surface water bodies is reported separately for each country and may differ from each other. In case of overlapping symbols, they are drawn on top of each other in this order: higher confidence is shown on top, and in case that status assessments have the same confidence, the following ranking should be applied (top to bottom): Failing - Good - Unknown.

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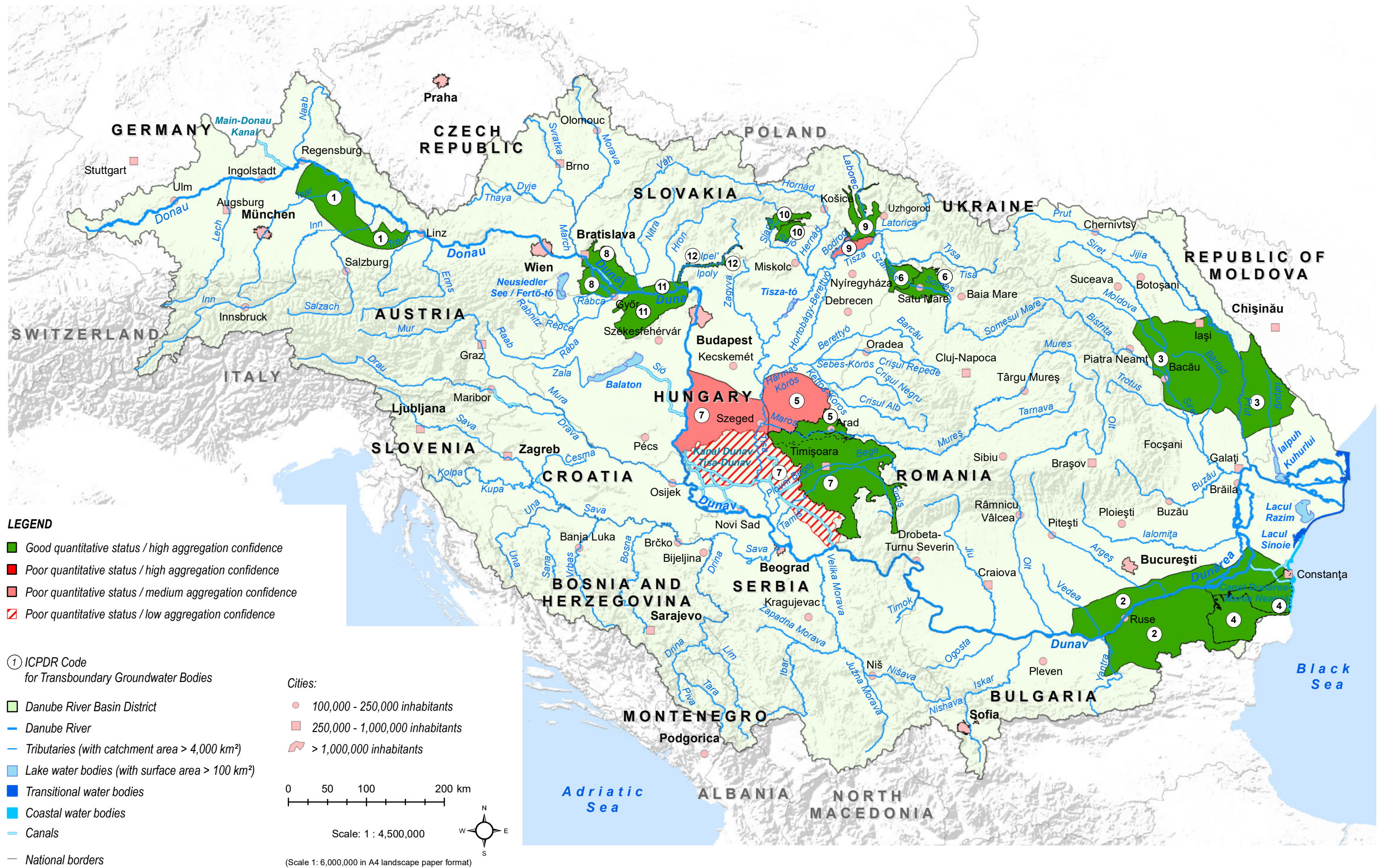
* According to Directive 2013/39/EU: i.e., without brominated diphenylethers, polyaromatic hydrocarbons, tributyltin compounds, perfluorooctane sulfonic acid and its derivatives, dioxins and dioxin-like compounds, hexabromocyclododecanes, heptachlor and heptachlor epoxide, mercury. On transboundary river water bodies, status of surface water bodies is reported separately for each country and may differ from each other. In case of overlapping symbols, they are drawn on top of each other in this order: higher confidence is shown on top, and in case that status assessments have the same confidence, the following ranking should be applied (top to bottom): Failing - Good - Unknown.

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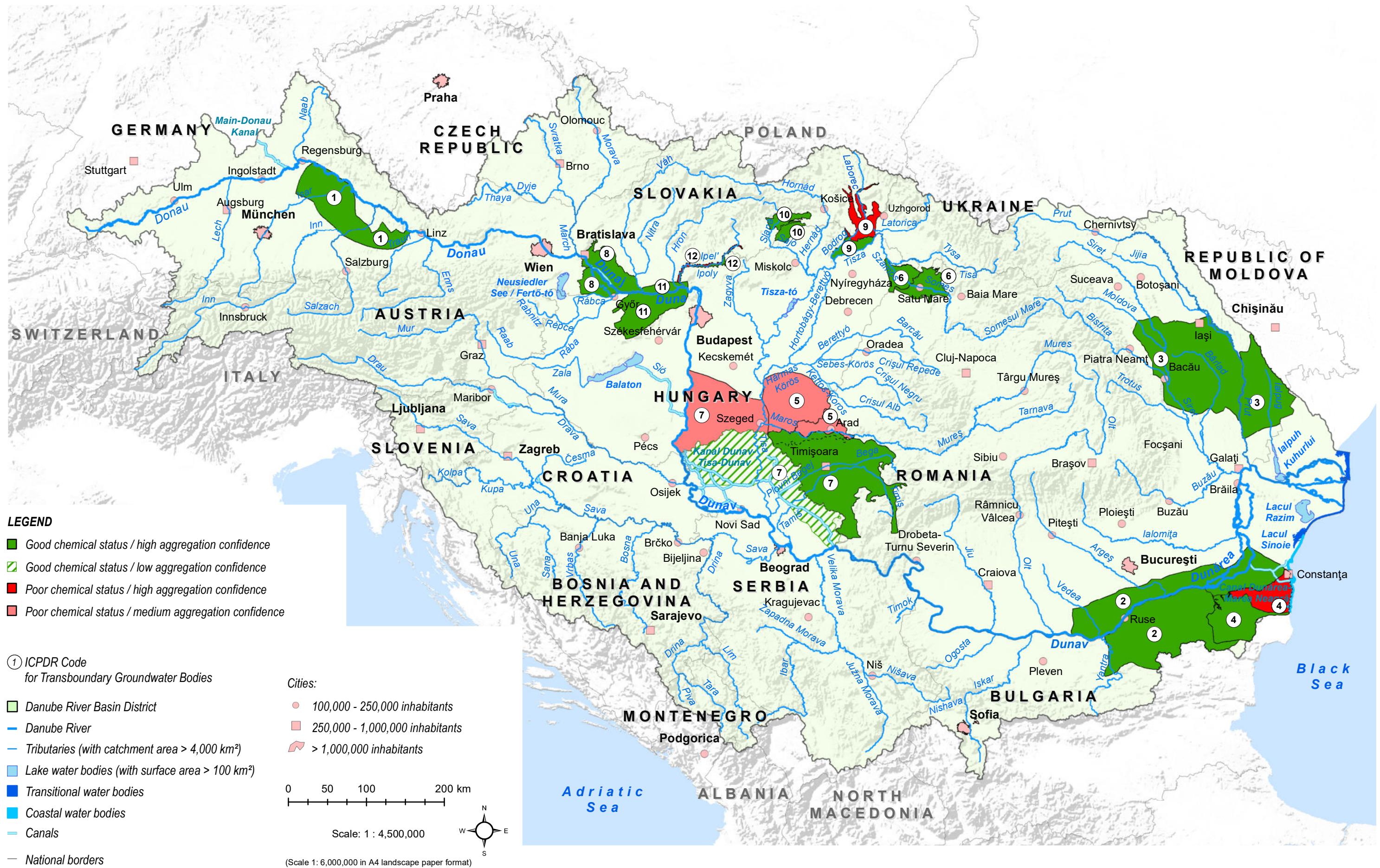
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The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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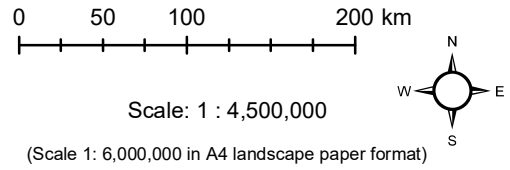
LEGEND

- Good ecological status/potential already achieved in 2021
- Exemption in accordance with EU WFD Article 4(4)
- Exemption in accordance with EU WFD Article 4(5)
- Exemption in accordance with EU WFD Article 4(7)
- Not indicated (only for EU countries)
- Not applicable (only for non-EU countries)

Cities:

- 100,000 - 250,000 inhabitants
- 250,000 - 1,000,000 inhabitants
- > 1,000,000 inhabitants

■ Danube River Basin District
— National borders



Please note that the EIA study in relation to the Fast Danube Project (including the Impact Assessment on Water Bodies) is an ongoing process, and only its completion will conclude or not on WB deterioration. Data reported for RS is not based on an official WFD Article 4(7) application as there is no transposition of WFD Exemptions in national water law yet. On transboundary river water bodies, exemptions for surface water bodies are reported separately for each country and may differ from each other. In case of overlapping symbols, they are drawn on top of each other in this order (top to bottom): Exemption 4(7) - Exemption 4(5) - Exemption 4(4) - Not indicated - GES/GEP already achieved in 2021 - Not applicable.

This ICPDR product is based on national information provided by the Contracting Parties to the ICPDR (AT, BA, BG, CZ, DE, HR, HU, MD, ME, RO, RS, SI, SK, UA) and CH. EuroGlobalMap data from EuroGeographics was used for all national borders except for AL, BA, ME where the data from the ESRI World Countries was used; Shuttle Radar Topography Mission (SRTM) from USGS Seamless Data Distribution System was used as elevation data layer; data from the European Commission (Joint Research Center) was used for the outer border of the DRBD of AL, IT, ME and PL.



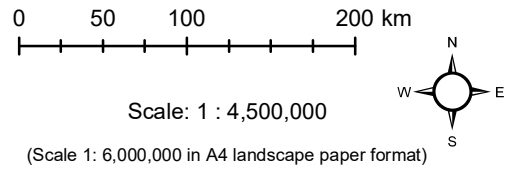
LEGEND

- Good chemical status already achieved in 2021
- Exemption in accordance with EU WFD Article 4(4)
- Exemption in accordance with EU WFD Article 4(5)
- Not indicated (only for EU countries)
- Not applicable (only for non-EU countries)

Cities:

- 100,000 - 250,000 inhabitants
- 250,000 - 1,000,000 inhabitants
- > 1,000,000 inhabitants

- Danube River Basin District
- National borders



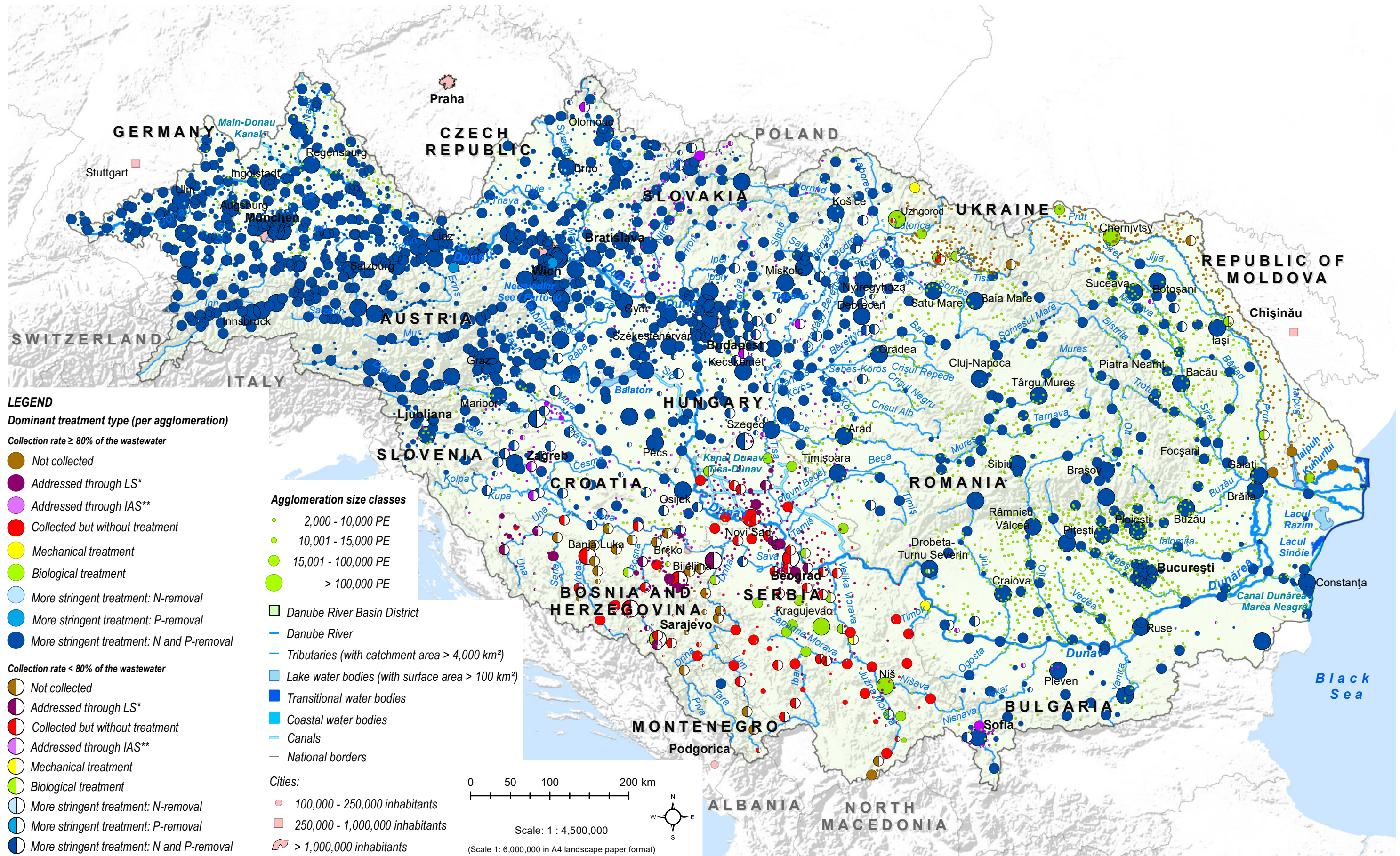
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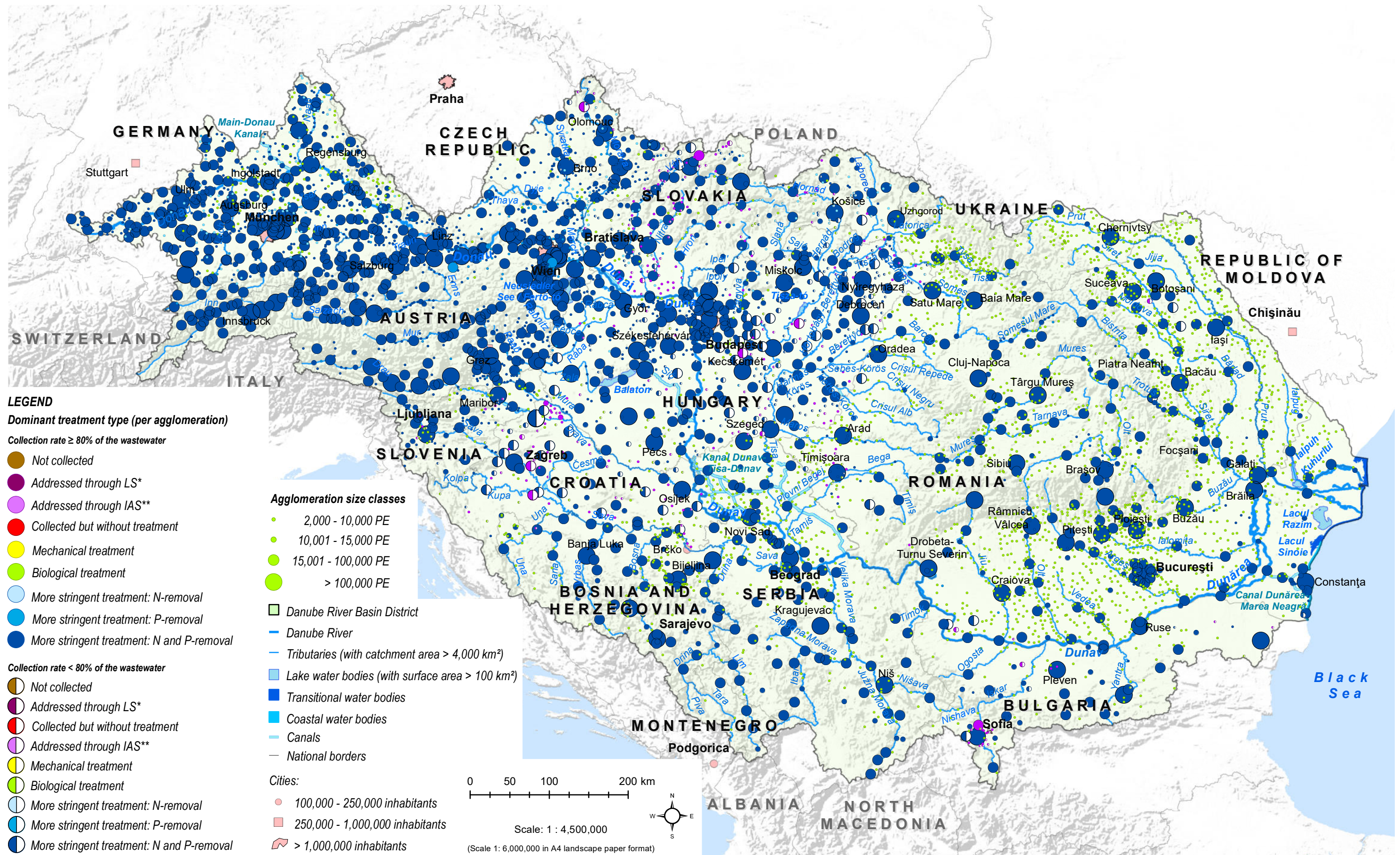
The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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* LS: Local Systems used for wastewater collection and local treatment (cesspools, septic tanks, small domestic wastewater treatment plants, watertight tanks).
 ** IAS: Individual and other Appropriate Systems as defined by the UWWTD (septic tanks with drain fields, small domestic wastewater treatment plants, watertight tanks).

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This map illustrates the NVZ data available as of 2016-2019, provided by the countries under the European Commission's reporting requirements for the EU Nitrates Directive.

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The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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The nitrogen emission values (aggregated on AU level on Map 32a), are here disaggregated to land use class units. The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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The phosphorus emission values (aggregated on AU level on Map 32c), are here disaggregated to land use class units. The explanation of the aggregation confidence is given in the DRBMP Update 2021.

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LEGEND

Impoundments - restoration measures*

- Already implemented by 2021
- Implemented by 2027
- Not implemented by 2027
- Not necessary for achievement of GES/GEP
- No data available

- Danube River Basin District
- Danube River
- Tributaries (with catchment area > 4,000 km²)
- Lake water bodies (with surface area > 100 km²)
- Transitional water bodies
- Coastal water bodies
- Canals
- National borders

Cities:

- 100,000 - 250,000 inhabitants
- 250,000 - 1,000,000 inhabitants
- > 1,000,000 inhabitants

0 50 100 200 km

Scale: 1 : 4,500,000

(Scale 1: 6,000,000 in A4 landscape paper format)

* On transboundary river water bodies, values are reported separately for each country and may differ from each other. In case of overlapping symbols of transboundary impoundments, they are drawn on top of each other in this order (top to bottom): Not implemented by 2027, Implemented by 2027, Already implemented by 2021, Not necessary for GESGEP, No data available.

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* On transboundary river water bodies, values are reported separately for each country and may differ from each other.

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* On transboundary river water bodies, restoration measures are reported separately for each country and may differ from each other. In case of overlapping symbols of restoration measures, they are drawn on top of each other in this order (top to bottom): Not yet implemented, Partly Implemented by 2021, Fully implemented by 2021, Not necessary - GES/GEP achieved, No data available.

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In case of overlapping continuity interruption symbols, they are drawn on top of each other in this order (top to bottom): Not implemented by 2027, Not yet determined, Implemented by 2027, Already implemented by 2021, Not necessary for GESGEP, Not applicable.

This ICPDR product is based on national information provided by the Contracting Parties to the ICPDR (AT, BA, BG, CZ, DE, HR, HU, MD, ME, RO, RS, SI, SK, UA) and CH. EuroGlobalMap data from EuroGeographics was used for all national borders except for AL, BA, ME where the data from the ESRI World Countries was used; Shuttle Radar Topography Mission (SRTM) from USGS Seamless Data Distribution System was used as elevation data layer; data from the European Commission (Joint Research Center) was used for the outer border of the DRBD of AL, IT, ME and PL.



* On transboundary river water bodies, restoration measures are reported separately for each country and may differ from each other. In case of overlapping symbols of restoration measures, they are drawn on top of each other in this order (top to bottom): Not implemented by 2027, Not yet determined, Implemented 2027, Already implemented by 2021, Not necessary for achievement of GES/GEP, Not necessary (river morphology is near-natural to slightly altered).

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The ecological prioritisation approach (Part A) is not meant to substitute the similar national approaches, but to outline the basin-wide perspective. Low restoration priority indicated on the basin-wide level does not imply that no measures should be undertaken on the national level, as all fish species need open river continuity. On the other hand, ecological prioritisation is only one of the many aspects in deciding which measures to adopt and implement. Final decision will be taken at the national level.

This ICPDR product is based on national information provided by the Contracting Parties to the ICPDR (AT, BA, BG, CZ, DE, HR, HU, MD, ME, RO, RS, SI, SK, UA) and CH. EuroGlobalMap data from EuroGeographics was used for all national borders except for AL, BA, ME where the data from the ESRI World Countries was used; Shuttle Radar Topography Mission (SRTM) from USGS Seamless Data Distribution System was used as elevation data layer; data from the European Commission (Joint Research Center) was used for the outer border of the DRBD of AL, IT, ME and PL.