

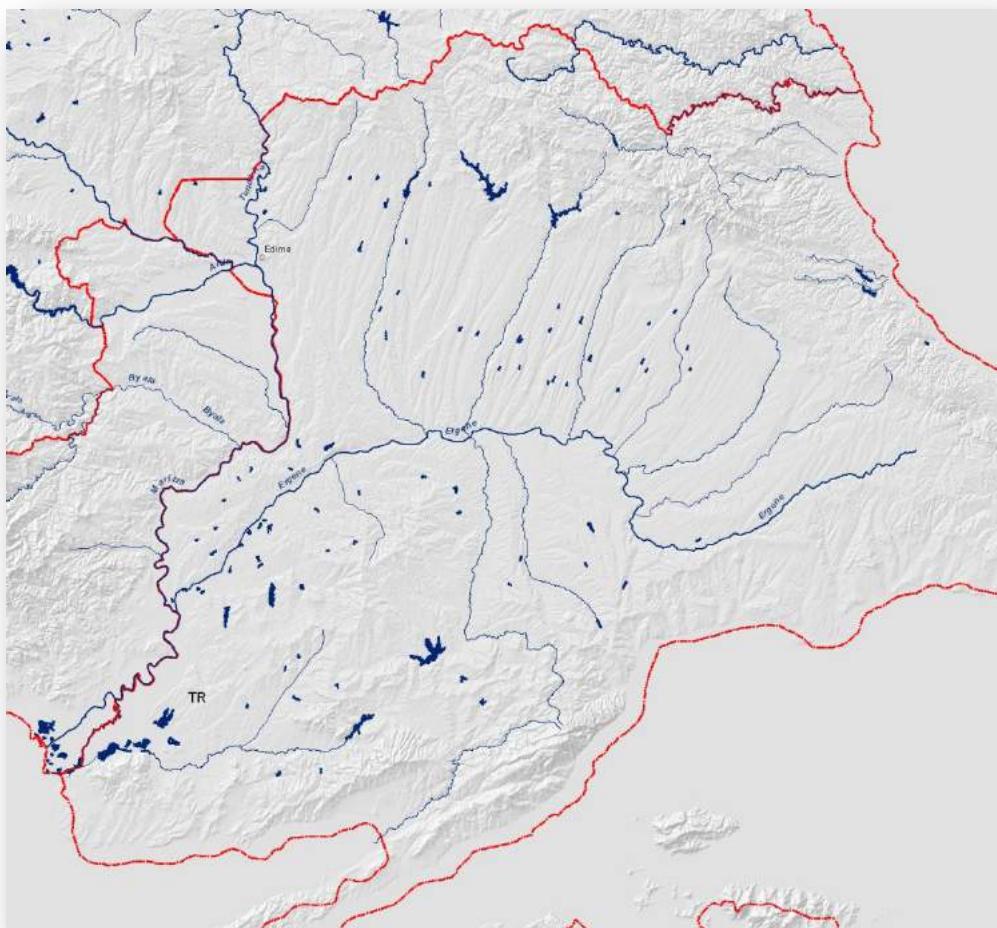


## **Outstanding Balkan River landscapes – a basis for wise development decisions**

**Turkey (European part only)**

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## **1. Hydromorphological intactness of rivers**

There are four classes characterising the different levels of hydromorphological intactness: Class 1 shows in blue colour near-natural conditions). Class 2-3 is characterised by slightly to moderately modified status, indicated in light green. Class 4 for river stretches which are extensively altered are orange and class 5 (red) indicates stretches with severely modifications in particular impoundments. Lakes and rivers outside of the project areas are visualised in dark blue.

### LEGEND

- Hydromorphological assessment
- Class 1: Near-natural
  - Class 2-3: Slightly to moderately modified
  - Class 4: Extensively modified
  - Class 5: Severely modified/ Impoundment
- Poljes, floodplains, estuaries/deltas (no assessment)
- Reservoirs mostly used for hydropower
- Other rivers and lakes (no assessment)
- State boundaries
- Major cities

Fig. 1: Legend for the hydromorphological assessment map on next page

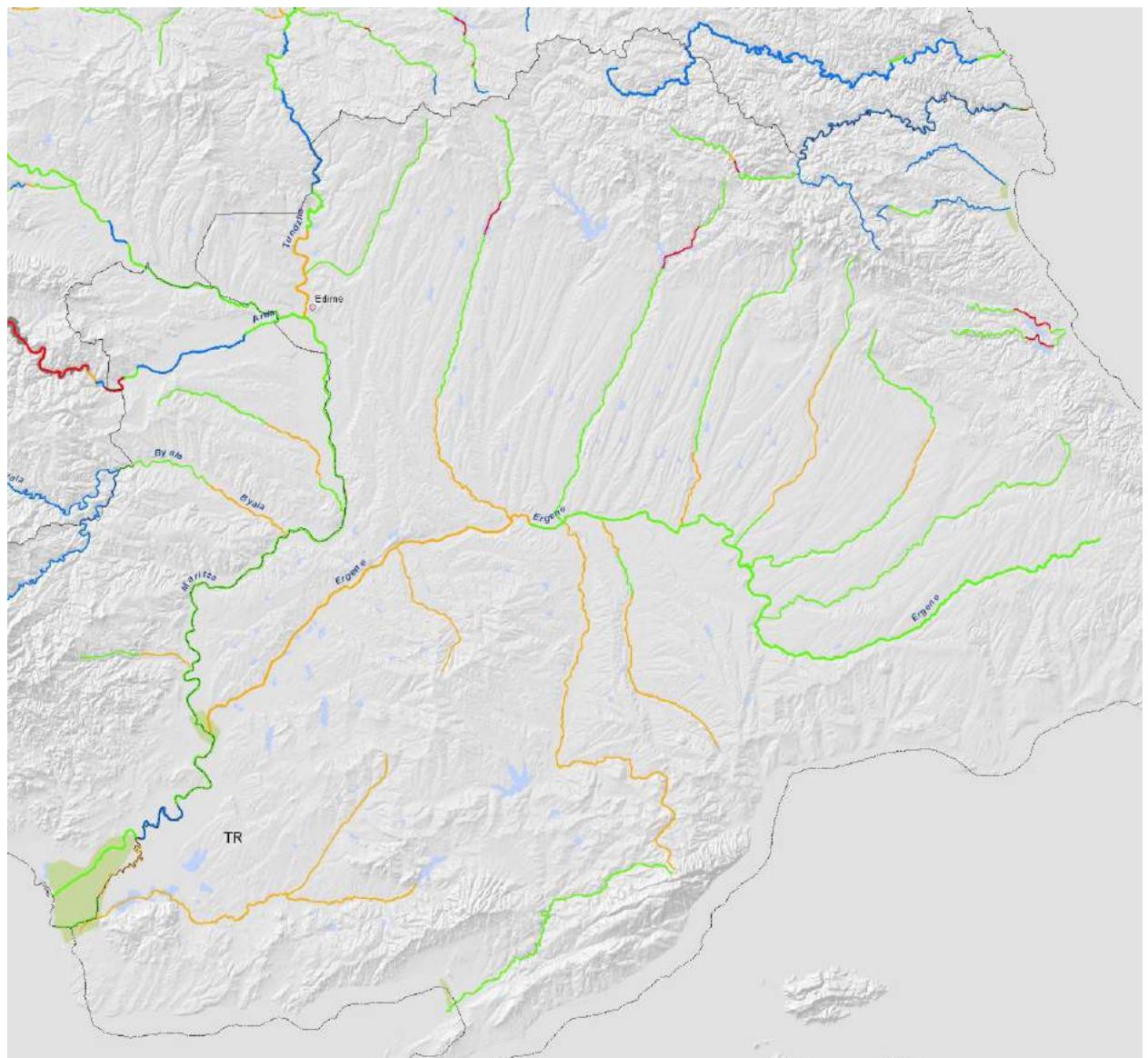


Fig. 2: Hydromorphological assessment for TR.

Only the northeastern part of European Turkey was considered. Some rivers like the lower Ada and the Rezovo river contributing to Black sea and building the border between Bulgaria and Turkey fall in the first class and are important examples for eastern Balkan rivers. At Maritsa good hydromorphological conditions prevails but tributaries like Ergene in the lowlands are more or less altered (class 2 - 4).

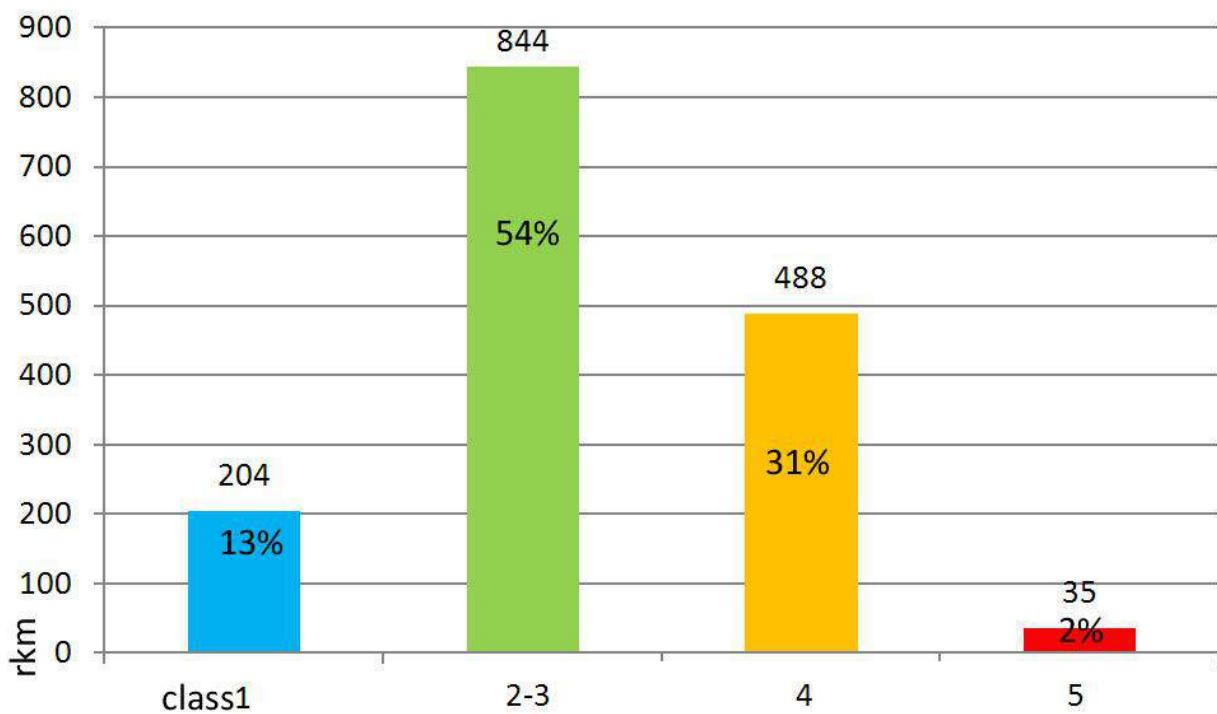


Fig. 3: Hydromorphological assessment in rkm and percentage for TR (remark: as only some European parts of Turkey are covered the results are not representative for entire country).

## **2. Protected areas, karst poljes, estuaries/deltas and important floodplains**

The inventory of protected areas contains in particular Natura2000 for EU Member States (EC 2010) and Croatia (State Institute for Nature protection Croatia 2010), national parks, biosphere reserves, nature reserves, EMERALD network areas (as far as available) and Important Bird Areas as well as Ramsar sites for other countries.

Major important floodplains were used continuously, meaning for the large rivers such as Danube, Drava and Sava they are subdivided in upper, middle and lower parts. In addition the map includes all assessed karst poljes, estuaries/deltas as well as other wetlands.

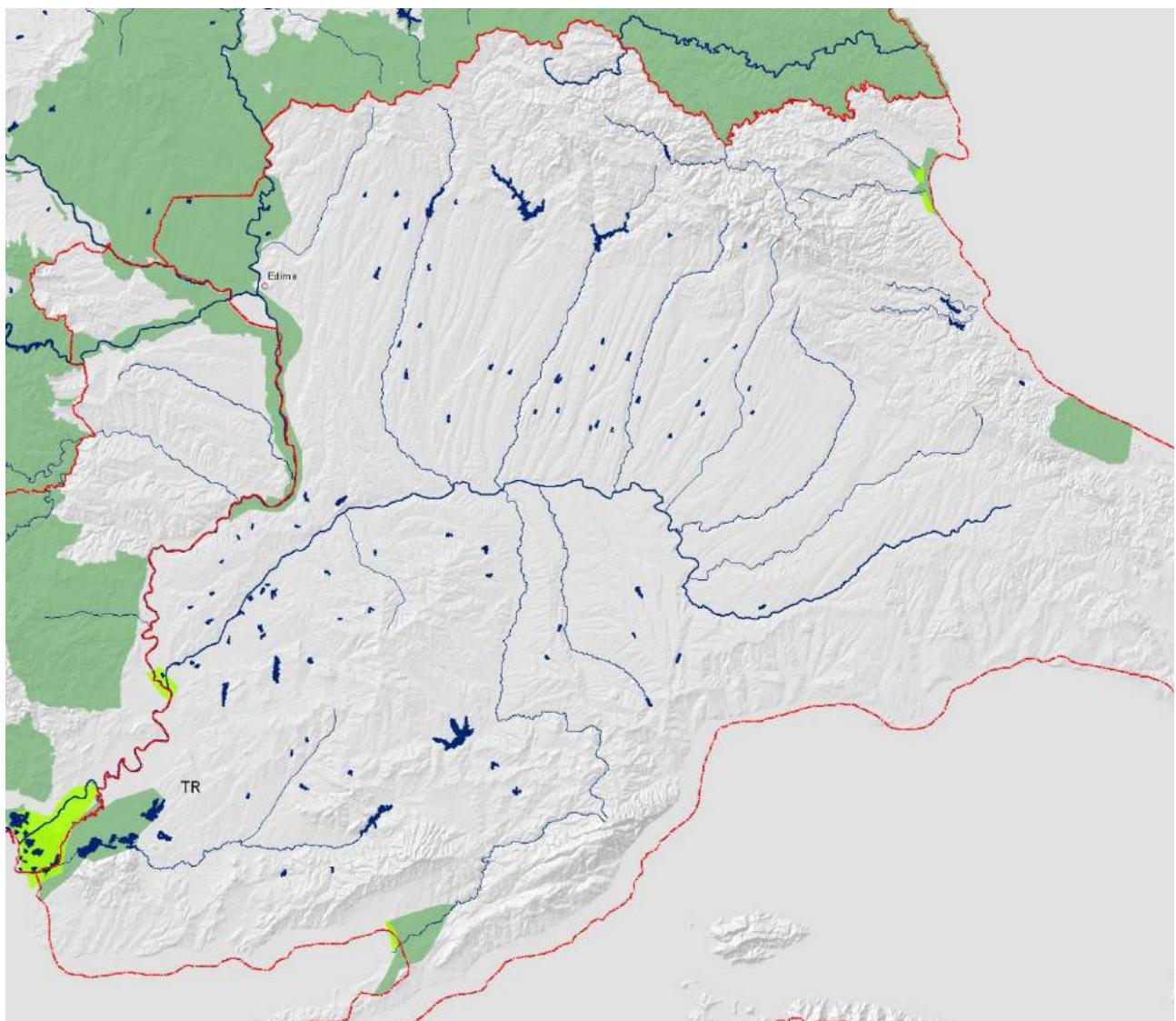


Fig. 4: Protected areas (incl. planned and proposed areas) in dark green (light green are poljes and large floodplain areas).

### 3. Conservation value of rivers

The conservation value is assessed in three levels: Very high conservation value (in blue), high conservation value (in dark green) and low conservation value (in light green). Karst poljes, major floodplains as well as deltas and estuaries with very high conservation value are visualized in dark blue-green and high conservation value in light green and low in light turquoise. Karst poljes and deltas are from particular interest for nature protection, therefore nearly all fall in the first two conservation classes.

	<b>Hydro-morphological assessment class</b>	<b>Conservation value</b> (assessment as result of overlay of hydromorphological assessment + protected areas + floodplains)
Class 1	Near-natural	<b>Very high</b>
Class 2-3	Slightly to moderately modified	<b>High</b> (river stretches crossing important floodplains/poljes/estuaries/deltas <b>or</b> overlapping with protected areas <b>or</b> both belonging to the “Very high” conservation value stretches)
Class 4	Extensively modified	<b>Low, but important for longitudinal continuum</b> (river stretches crossing important floodplains/poljes/estuaries/deltas <b>or</b> overlapping with protected areas <b>or</b> both belonging to the “High” conservation value stretches)
Class 5 Impoundments	Severely modified	<b>Not assessed</b>

Fig. 5: Definition of conservation value

### LEGEND

Conservation value for rivers (left) and poljes, estuaries/deltas and floodplains (right)

- Very high conservation value 
- High conservation value 
- Low conservation value 
- Impounded stretches and hydropower reservoirs
- Other rivers and lakes (no assessment)
-  State boundaries
- Major cities

Fig. 6: Legend for the map on conservation value on next page

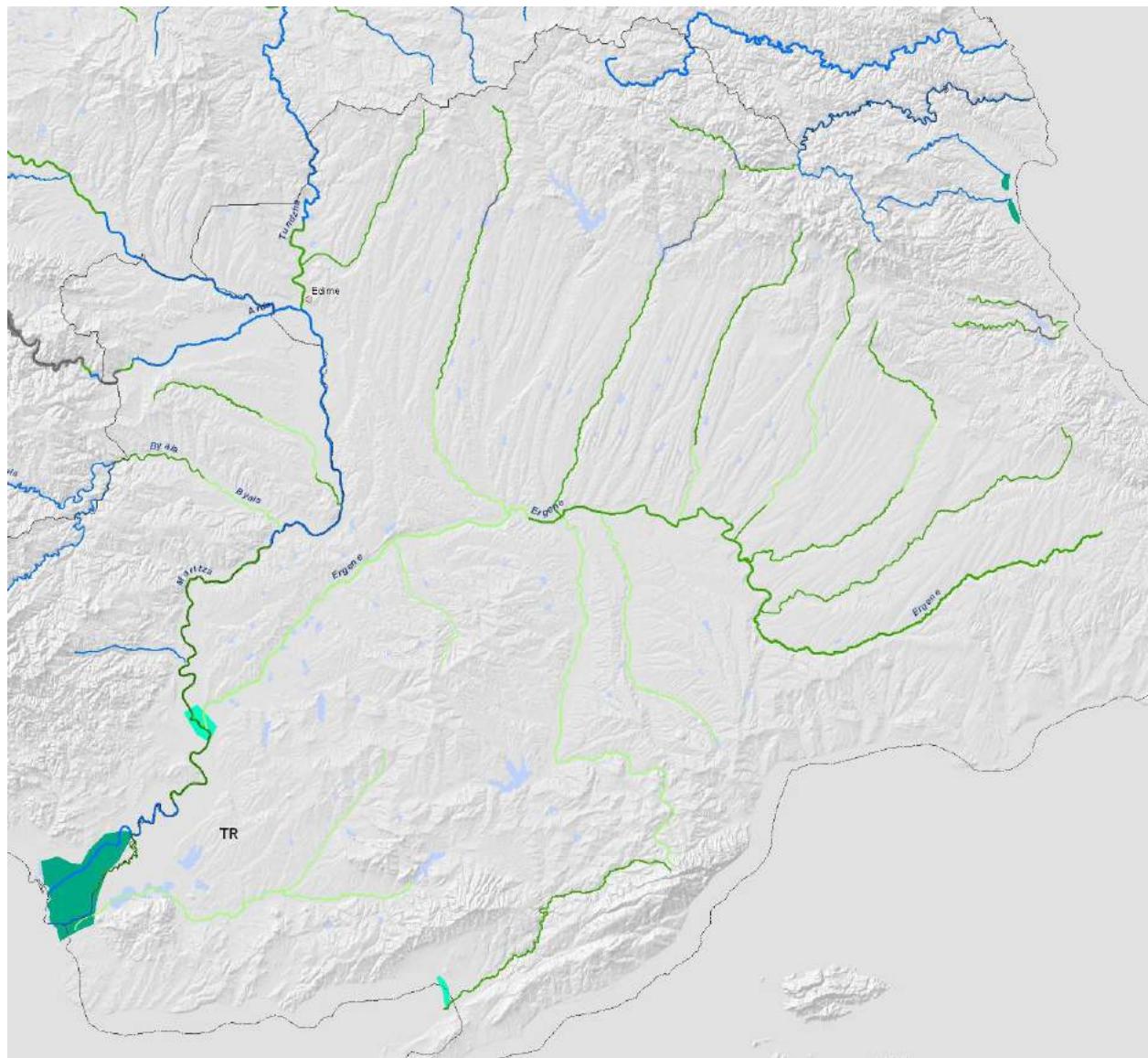


Fig. 7: Conservation value for TR.

Only the border rivers to Bulgaria and Greece fall into the very high class, the rivers on the plains are mostly intensively used for water supply.

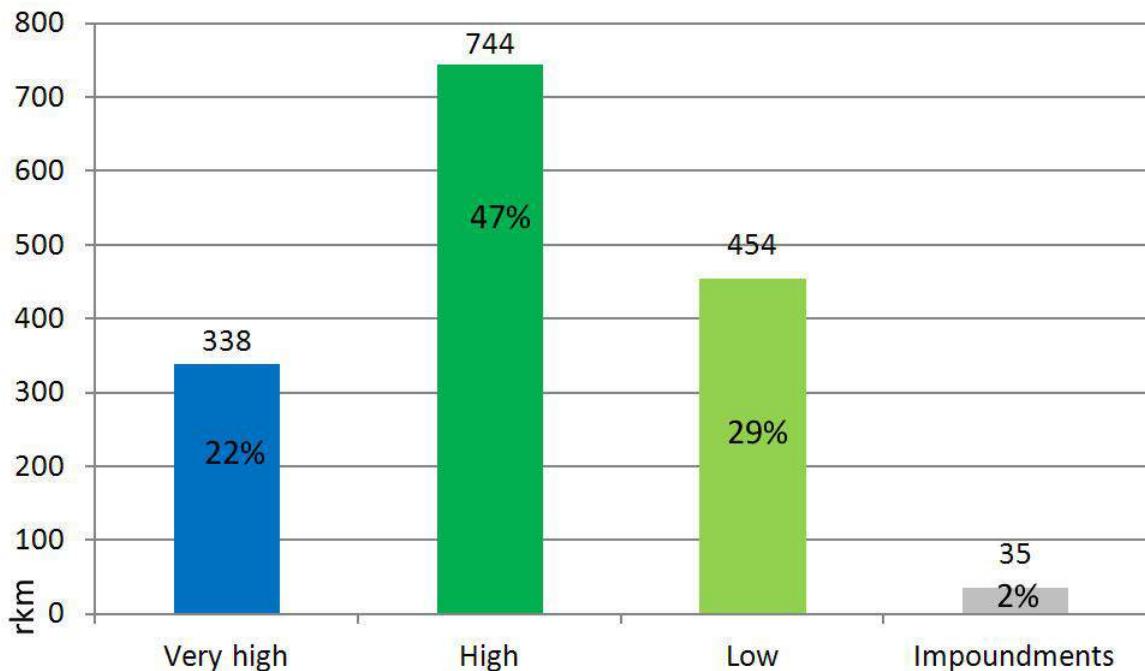


Fig. 8: Conservation value in rkm for TR (remark: as only some European parts of Turkey are covered the results are not representative for entire country).

#### 4. Hydropower plants

Hydropower plants were recorded firstly along the “status type” into “existing/operating”, “under implementation” and “planned”. Further dams are classified in three size classes: 1-10 MW, 10-50 MW, and > 50 MW.

##### LEGEND

- Hydropower plants:
  - Size classes: 1-10 MW, 10-50 MW, >50 MW
  - Existing/operating
  - Under implementation
  - Planned
- Poljes, floodplains, estuaries/deltas
- Reservoirs mostly used for hydropower
- Other rivers and lakes (no assessment)
- State boundaries
- Major cities

Fig. 9: Legend for the dam map on next page

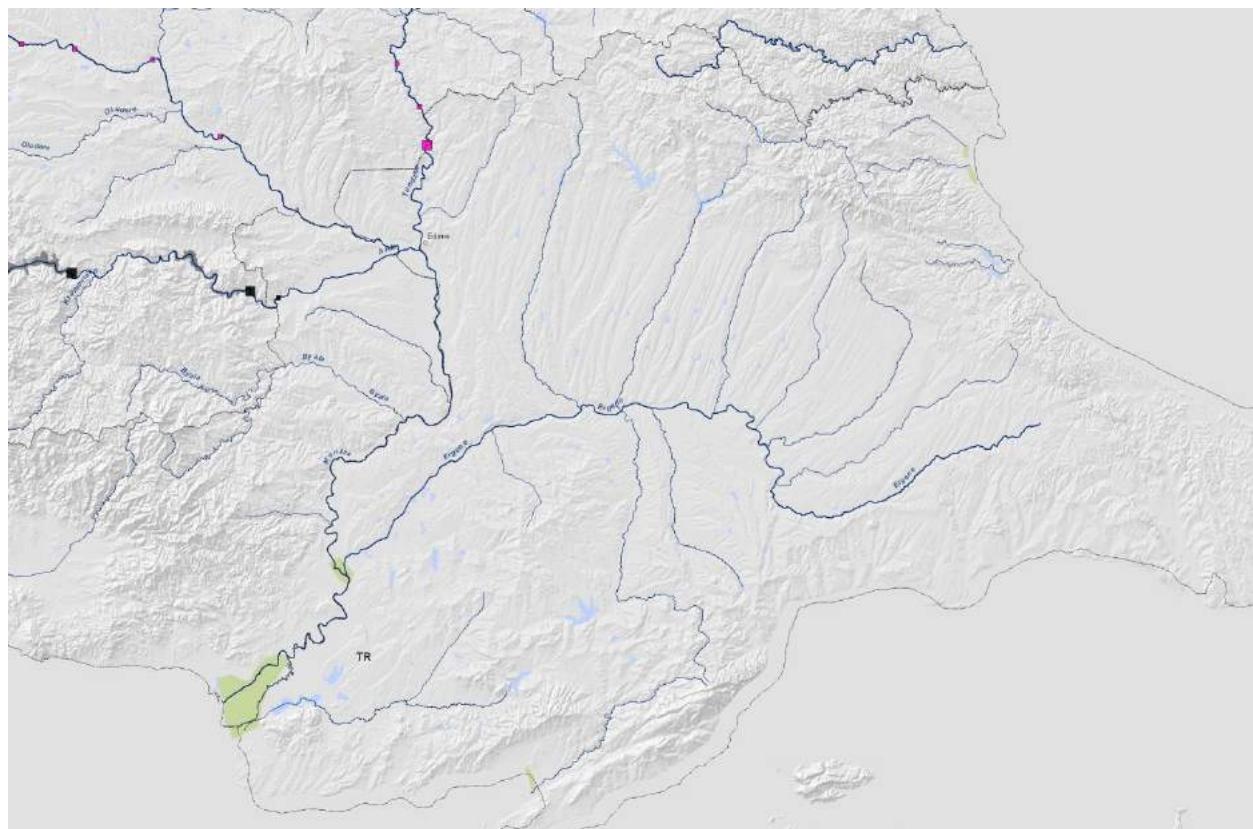


Fig. 10: Hydropower plants for TR.

One trans-boundary large multipurpose dam at the Tundzha is planned (flood protection for city of Edirne, hydropower production and irrigation water/ low water control even together with Greece agriculture. The planned project fall in the category “>50 MW”, no chart is added. Other reservoirs serve mostly for water supply.

##### ***5. Affected river stretches with conservation value by hydropower***

This chapter combines the information of the “Conservation Value” with the planned hydropower plants.

## LEGEND

Hydropower plants:

█ Size classes: 1-10 MW,  
10-50 MW, >50 MW

█ Planned

Conservation value for rivers (left) and poljes,  
estuaries/deltas and floodplains (right):

— Very high conservation value █  
— High conservation value █  
— Low conservation value █

Fig. 11: Legend for the “conflict map”

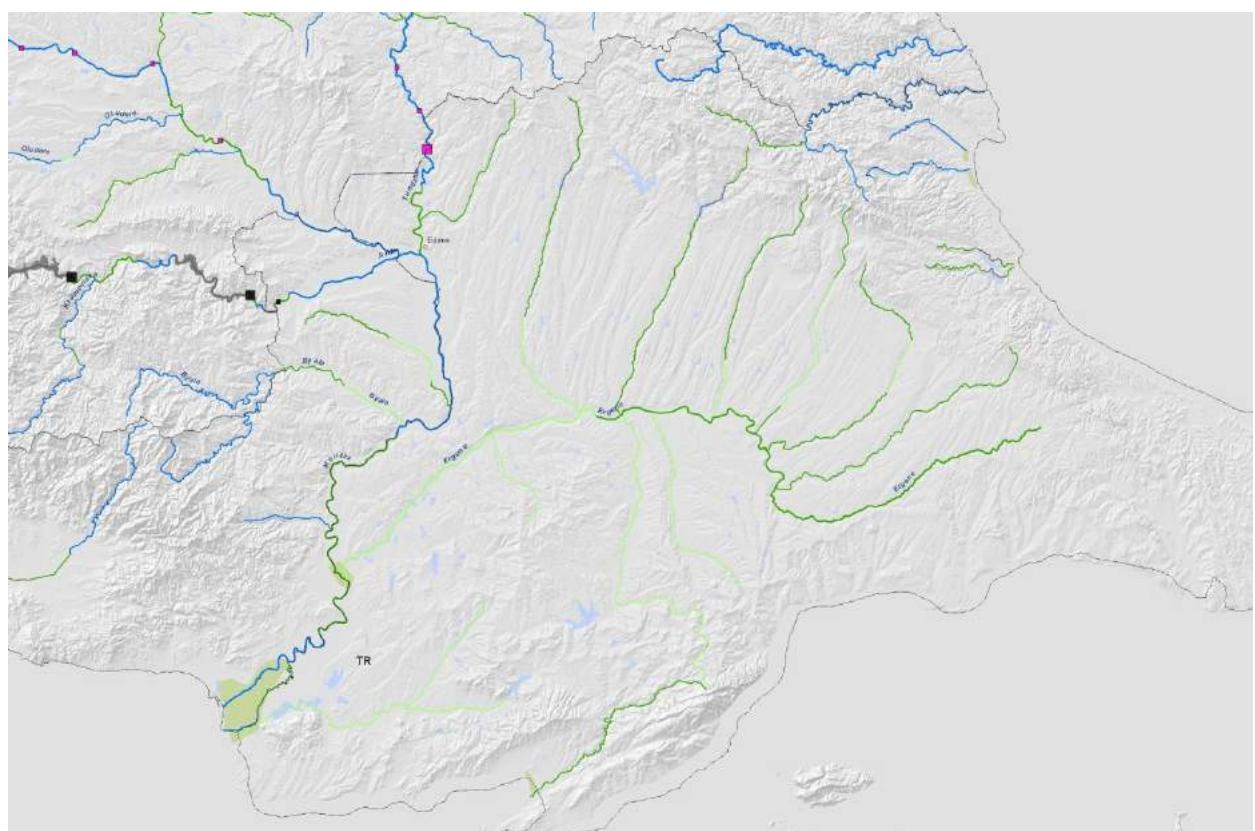


Fig. 12: Affected very high and high conservation stretches by planned hydropower plants for TR.

The one planned dam in Turkey (also planned for flood retention to prevent damages in Edirne) will impact a very high conservation value stretch (no chart is added). Other dam projects related to the drinking water supply for Istanbul would affect the “blue” border rivers to Bulgaria.

## *6. List of planned Hydropower dams*

ID_HP	Rivers Poljes	Name Location HPP	Installed MW	Affected River Jewel
TR/BG_HP_999	Tundzha	Suakacağı	>50	TR_RJ_222, TR_RJ_223

Pictures cover: User bobidavinci on Google Panoramio (Rezovo River, border to BG)

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