

## Summary of the Study “The Huchen *Hucho hucho* in the Balkan region”

The Huchen or Danube Salmon is one of the most enigmatic species of Europe's freshwater fauna. It is a sensitive indicator species for some of the most ecologically valuable rivers in the Danube drainage. Historically, the species was wide-spread across the entire Danube basin. Since the late 19<sup>th</sup> century, however, Huchen populations declined by two thirds and the remaining populations are now highly endangered by hydropower development. But knowledge on the distribution of the Huchen on the Balkan Peninsula has been incomplete. In this study, we review the actual occurrence of Huchen in the Balkan region. A total of **1822 river km supporting self-sustaining populations** of Huchen in the Balkan region have been identified, **making the region the global hot spot for the species**. These populations are found in 43 rivers or distinct river reaches in Slovenia, Croatia, Bosnia-Herzegovina, Serbia and Montenegro. About 65% of all Huchen rivers globally are located in these countries, highlighting the importance of Balkan Rivers for the survival of the species. Core areas, representing the largest and healthiest Huchen populations have been identified for each country and include the **Sava River** and its tributaries in Slovenia, the **Kolpa / Kupa River** along the Slovenian-Croatian border, the **Una River** along the Croatian-Bosnian-Herzegovinian border, the upper **Drina River** and its tributaries in Bosnia-Herzegovina and Serbia, and the **Lim River** in Montenegro. The Balkans harbour nearly all major habitats for Huchen in terms of size. In this region we find six of the seven > 100 km long river reaches representing Huchen habitat globally (Sava, Kolpa/Kupa, Una, Sana, Drina & Lim rivers).

**The major threat to these populations is a massive hydropower development plan.** Practically all Huchen Rivers are targets of substantial hydropower exploitation. **A total of 93 dam projects** were identified directly in river reaches supporting Huchen and a large number of additional projects are located in tributaries or headwater reaches upstream of Huchen habitat that will invariably degrade environmental conditions downstream. If these dams would be constructed, **at least 1.000 km of Huchen habitat** would be drowned by reservoirs or severely degraded by hydropeaking below the dams. If these plans are carried out, **we predict that at least 60-70% of the Balkan population and about 35-40% of the global population of Huchen would be lost** with the remaining populations being small and severely fragmented and eventually no longer able to survive in the long term.

We urge that the remaining free-flowing Balkan rivers holding self-sustaining populations of Huchen be left undammed, and efforts be made to restore former rivers reaches where Huchen once occurred but are now absent. We emphasize that Huchen, as an apex predator, is an indicator of relatively healthy riverine ecosystems. These systems provide a number of ecosystem services and are home to a large number of species, including at least 16 fish (such as the sculpin, zingel and streber) that are themselves legislatively protected. **The existence of Huchen and these species with such hydropower development is incompatible.**

For governments, this data is paramount to fulfilling their conservation commitments, as the Huchen is protected by the EU Natura Habitats Directive and the Bern Convention and is a key species for achieving the goals of the EU Water Framework Directive.