

Forests along large plain rivers, such as the Tisa, are of great importance for people and nature – they are crucial for the preservation of drinking water sources, protect against floods and are a habitat for many plants and animals. However, these floodplain forests, as they are still called because they are located in the floodplain of rivers, are very few left in Europe. As much as 90% of their entire surface has disappeared, and what is left is often in critical condition. Floodplain forests are considered to be the most endangered natural ecosystems in Europe and are therefore designated as a “priority forest habitat type” in the European Habitats Directive.

In Europe, floodplain forests have been replaced in many places by tree plantations used for the wood processing industry. These are hybrids created by crossing American and European black poplar, which are more productive, ie produced in order to grow faster, be more resistant to diseases and could be cut sooner. In this way, entire ecosystems are disappearing, Sasa Rajkov, an ecologist from the Novi Sad Center for Biodiversity Research, told the Center for Investigative Reporting in Serbia (CINS).

A 2019 report by the European Environment Agency (EEA) states that some European rivers, including the Tisza, have lost almost 100% of their former floodplain.

Ornithologist Milan Ruzic from the Society for the Protection and Study of Birds of Serbia says that rarely a river in Serbia has changed as much as the Tisza, that people have kidnapped the flood zone and turned it into arable land and plantations. He believes that the hybrid tree was made, among other things, for the needs of the wood industry and that he does not favor those birds that are most valuable to us, most important, which are on national and global red lists, such as white-tailed eagle, black stork and various other species. A forest owl has a similar problem, he explains, which cannot find a hole in trees 30 cm in diameter and which will be cut down next year, or let it be in 40 years. She needs a tree that is at least 60-70 years old, where a hole has formed in which she can nest and use it for the next 20 years while eating rodents with her family, which, she notes, is a very important factor for the forest. multiplied by rodents.

Hybrid forests favor both non-native insects and plant species. According to the Provincial Institute for Nature Protection, these invasive species come from distant lands, so they have no enemies (parasites, diseases, etc.) and successfully compete with domestic species for resources (water, light, nutrients). They are capable of destroying natural plant communities by overgrowing and completely changing their habitats.

### **Reforestation is a trend in Europe, but not in Serbia**

Poplar in Serbia began to develop intensively in the middle of the last century, due to the

needs of industry. In the magazine Šume, published by the Public Company Srbijašume, in 2002, it was published that hybrid plantations accounted for 45% of forests in Vojvodina. The public company Vojvodinašume, which manages most of the state forests in Vojvodina, and the Waters of Vojvodina, which deal primarily with the protective function of floodplain forests (protection against floods, erosion and torrents), are asked about the plantations. These companies cooperate with the Institute for Lowland Forestry and Environment, and according to Marko Marinkovic, Executive Director for Forestry, Ecology and Development of Vojvodina Forest, that company is developing new varieties of hybrid poplars with the Institute.

However, Francine Hughes, an emeritus associate in teaching ecology and wetland conservation at Anglia Ruskin University in Cambridge, told CINS that if floodplain forests have lost the power to regenerate themselves, this can be achieved by rehabilitating areas where finds.

Although in March 2008, Vojvodinašume made a decision to ban the conversion of natural forests into hybrid plantations, they are still not working on their serious restoration, which is a trend in Europe and the world. In accordance with the Agreement on Cooperation with the Institute for Nature Protection of Serbia, Vojvodina forests are obliged to return a part of the plantations to natural forests. According to the Agreement, the Institute selects plantations which, after the expiration of the technical maturity of the tree, followed by its felling, should translate Vojvodina forests into natural forests.

Bojan Tubić, a forestry engineer in Vojvodinašume, says that the forests that have been returned to their natural forests are being managed as before:

“They are not under any protection, they are just a changed species, but they are still managed with measures that are determined for a specific species. If it is about e.g. white poplar, this includes clean cutting. These forests are certainly not left to some natural process of extinction. ”

Tubić adds that they tend to keep clonal poplars where they produce the highest yields, ie to return places that are not the most suitable for hybrid poplars to natural species (white poplar, field ash, pedunculate oak, etc.).

### **The ecological corridor of the Tisa river is endangered**

The ecological corridor represents the path, ie the connection between protected areas and ecologically important areas, which enables the free flow of animals and plants. The Tisa river makes up 20% of the surface of the ecological Tisa corridor, otherwise a corridor of international importance, while the rest consists of floodplain forests, defensive

embankments, but also former parts of the floodplain that are important for the functioning of the corridor. According to the data of the Provincial Institute for Nature Protection, natural floodplain forests of willow and poplar cover only 7% of the area of this corridor, while pedunculate oak forests make up only 0.14%. Parts of the Tisza Ecological Corridor are part of the European network of Natura 2000 protected areas, which will be implemented in Serbia upon accession to the European Union. Natura 2000 is the most important mission of the European Union's policy related to the conservation of natural and biological diversity.

However, the conversion of natural floodplain forests into hybrid plantations and "clean felling" directly threaten the passability of the ecological corridor which is then interrupted for forest habitat types.

Ana Iñigo and Pavol Polak, who run the Natura 2000 project in Serbia, say that the biodiversity of floodplain forests is unique and that many plant and animal species are closely linked to them. They point out that intensive management of forest plantations adversely affects the water regime, which is very important for the survival of floodplain forests, and believe that all relatively preserved parts of natural floodplain forests should be included in the list of potential Natura 2000 habitats in Serbia.

Source: cins.rs