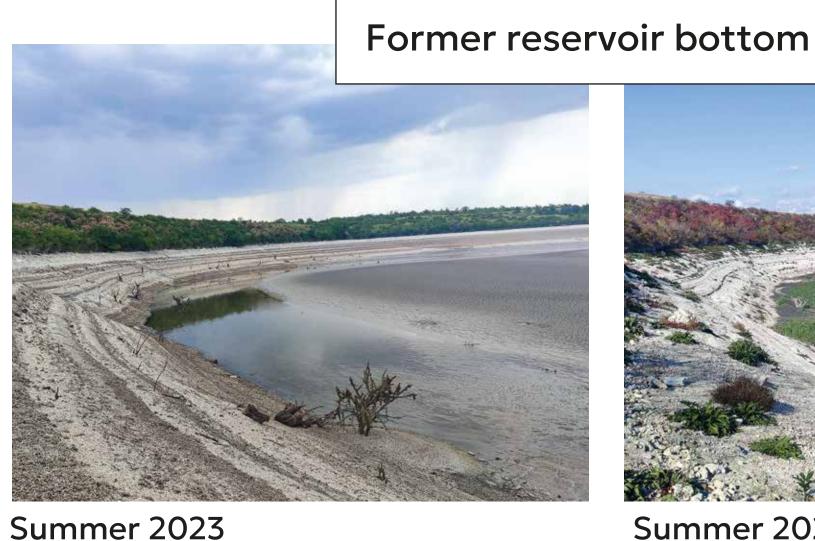
# Biodiversity Restoration After the Blast of Kakhovka Dam on Dnipro River in Ukraine

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### **Environmental consequences** of blasting the dam

On 6 June 2023, Russian forces destroyed the Kakhovka Dam, draining 14 km<sup>3</sup> of water from the 2115 km<sup>2</sup> reservoir.





Summer 2024

This act of ecocide caused severe damage to local communities, ecosystems, and species.

**Blast Consequences** 

## Floodplain Recovery

By summer 2024, 50% of the reservoir bottom was covered by young floodplain forests: native willows & poplars.



Summer 2025

- Over 260 vascular plant species recolonized the area.
- 33 habitat types have recovered most protected under the EU Habitats Directive.
- Estimated 40 billion willow seedlings germinated; about 200 million trees may remain as the ecosystem matures forming the largest wooded area in Ukraine's steppe zone.



**Restoration Brief** 

Within 10 years, the floodplain forest may store up to 120 million tons of CO<sub>2</sub> equivalent.

The First Expedition

- All benthic organisms in the reservoir were killed, and floodwaters carried downstream toxic reservoir-bottom sediments.
- Flooding affected 600 km<sup>2</sup> of protected areas downstream, threatening narrow-range endemic species with extinction.
- Freshwater fauna perished once flushed into the Black Sea, where 32,000 km<sup>2</sup> of water was affected by desalinisation, turbidity, and eutrophication.



### What Needs to Be Done

**Monitoring programs:** Vegetation (3 expeditions undertaken), fauna (birds, fish); tagging could help amid security constraints.

Policy engagement: Work with UkrHydroEnergo and banks financing recovery to ensure flood release and climatealigned ecosystem restoration. Community support: Help locals shift from reservoirdependent livelihoods to sustainable alternatives.

**Assess ecosystem services:** Biodiversity values, river connectivity and carbon sequestration included in restoration planning.

### Scenario development:

Design and promote nature-based post-war recovery options as national policy goals.

Revival of Lower Dnipro has the potential to become Ukraine's decisive contribution to meeting EU commitments to restore rivers to their natural state by 2030.

## **Promises and Chal**lenges to River Revival

Abundant spring floods in 2024 filled all historic floodplain lakes, but there is no agreement yet on environmental flow releases from the Dnipro hydropower reservoir cascade controlling the flow upstream.

Critically endangered Danube sturgeon (Acipenser gueldenstaedtii) resumed migrations from the sea to old spawning sites near Zaporizhzhya.

**Energy crops harvesting** 



UkrHydroEnergo Co. plans to rebuild the Kakhovka Hydropower Plant with increased peaking capacity — threatening both upstream and downstream ecosystems.

Proposals for a 60-km dyke aim to drain the floodplain for agriculture and energy crops uses— risking further loss of biodiversity.



**Revival Options** 



Further reading on Lower **Dnieper Revival on our** web-pages:





