



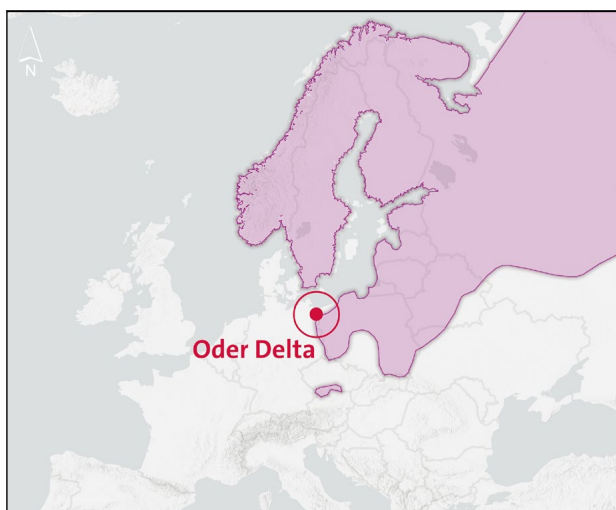
ERLEND HAARBERG

## Does the transportation network limit the westward migration of elk?

*Between Germany and Poland lies the Rewilding Oder Delta transboundary area – one of Europe’s most important crossroads for biodiversity. With around 4.500 km<sup>2</sup> on both sides of the Oder lagoon, this area is a central node for the successful east-west migration of wolves, elk, bison, and lynx.*

### **Historical range of the elk**

As the largest living deer species to inhabit our planet, the elk (*Alces alces*) once thrived abundantly through the temperate latitudes of Eurasia and North America northwards to the forest tundra. However, habitat loss, hunting and poaching of this species led its extinction in Western and Central Europe probably by the Early Middle Ages (around 1000 AD). Only a few individuals were able to survive in the easternmost forests of today’s Poland, being the western edge of its natural range by then.



*Current range of European elk.*

### **A species’ setback in the post-war era**

Elk populations suffered from poaching and hunting most notably during and after times of war which was also the case for Polish populations in the post-World War II period. By then, the elk was thought to be critically endangered.

Since then, improved conservation measures together with local reintroduction efforts helped the species to slowly recover. The demographic expansion continued yet unsustainable harvest posed a considerable threat to the population, and eventually the population declined by 70% back in the 90s. Many of the established subpopulations in Western and Central Poland became extinct again.

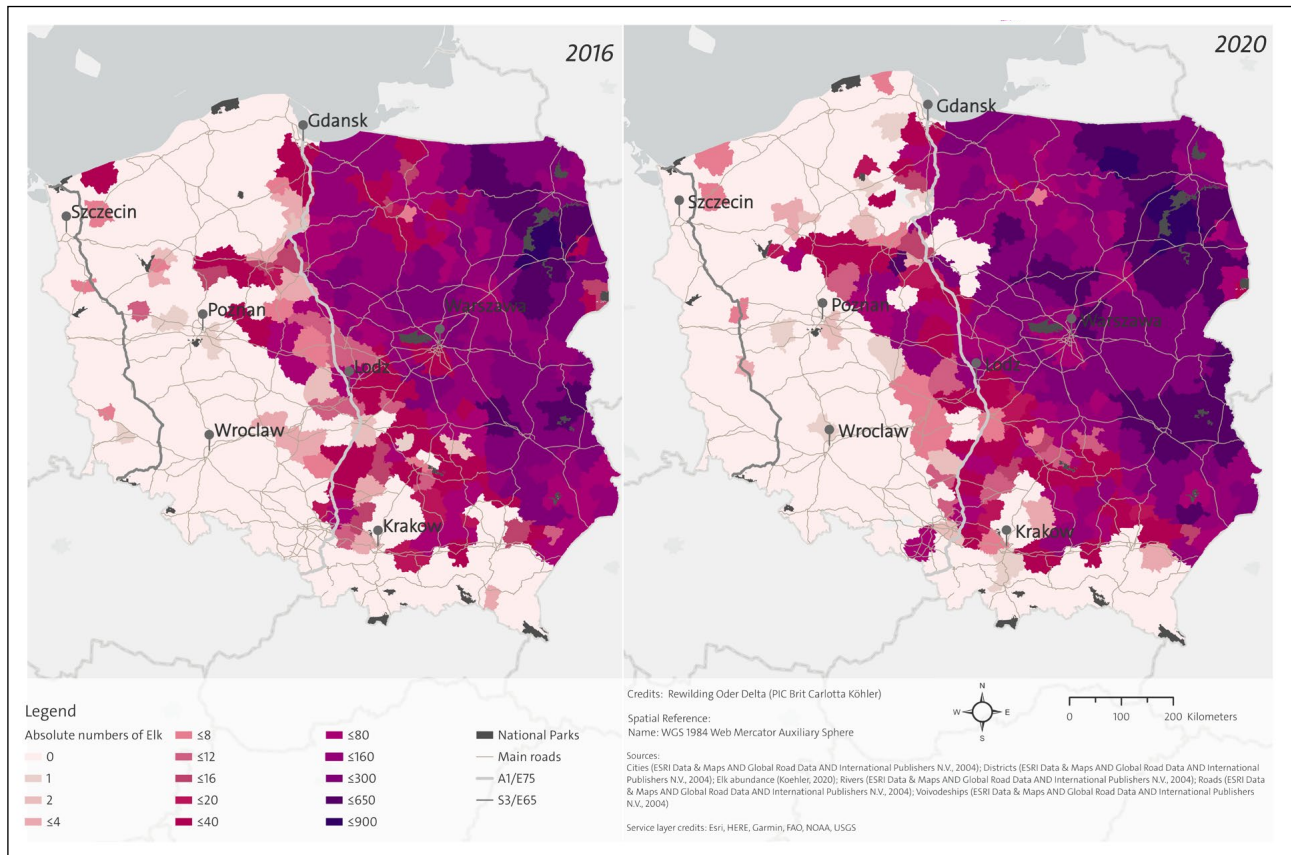
### **A comeback in the 2000s**

Fortunately, Poland introduced a moratorium for elk hunt in 2001 and the population recovered from 1.500 animals to current estimates of 28.000.

Whilst the species begins to disperse further west from its origins in Eastern Poland that still holds the highest elk abundance, the Oder Delta may provide a new safe home for the elk. With fluctuating numbers, individuals already begun to thrive in the north eastern parts of this area. As the Oder Delta is a transboundary area between Poland and Germany, there is no doubt that this species is on the move towards new territories on the German side.

## Population trends

As of 2020, it seems that the majority of the island populations established in Western Poland are under severe pressure. However, the main source population in Eastern Poland continues to grow and shows a forward push westwards. If this action takes its course, it is likely that this species migrates further to the West and occupies new territories in Germany.



Elk abundance in Poland.

## Risks

This picture of a growing elk population which expands its range seems threatened by the development of transport networks. Of particular concern is the upgrade of the S3/E65 highway which runs from the south of Poland to cross the Oder Delta area at its northern end where the population has expanded between 2017–2019 to nearly 80 and fell down back below 2016 numbers in 2020 (ca 25).

Whilst green bridges have been included as part of the highway development, it is essential to monitor elk numbers and movements to better understand and support the natural range expansion.



## Opportunities

In total, the elk population westside of the A1/E75 numbers around 800 individuals in 2020 – while in 2016 there were only 400 animals present. This forward push of the main population is yet only 120 km away from the Polish-German border.

However, the dramatic population changes of the small population in the Oder Delta, and threats, such as highway upgrading and illegal poaching require efforts to enhance monitoring and identify major obstacles to better support a successful wildlife comeback of this iconic species.