Escapement Success and Patterns of Downstream Migration of Female Silver Eel *Anguilla anguilla* in the River Meuse

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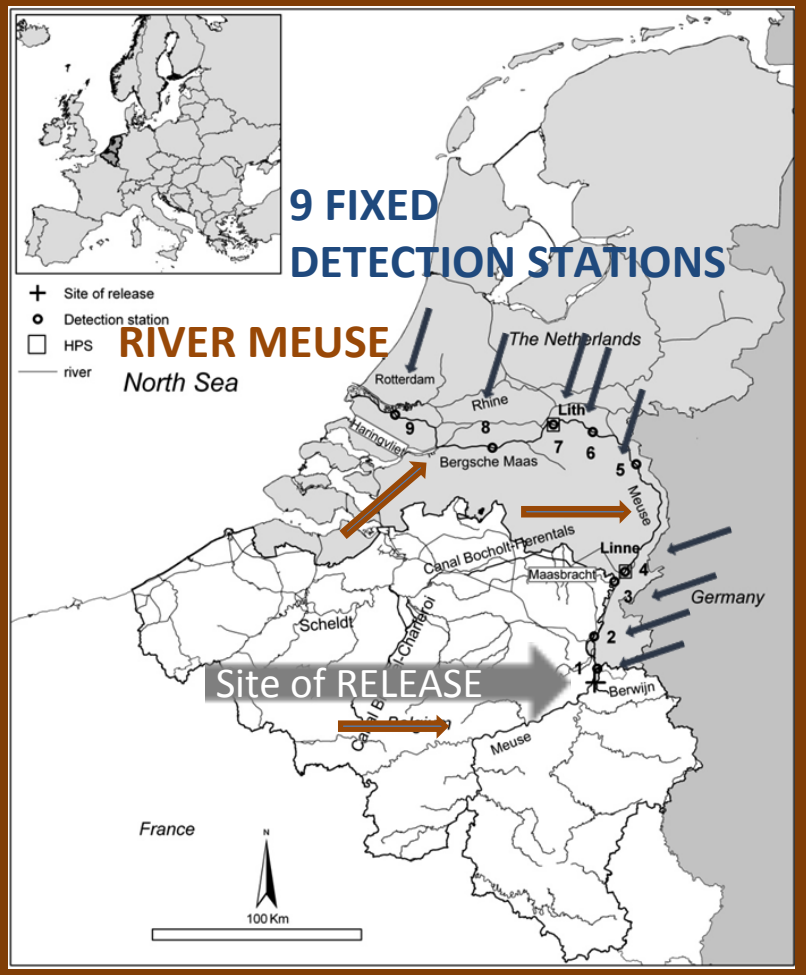
Downstream migration of female silver eel was studied by remote telemetry in the lower part of the River Meuse (Belgium and The Netherlands)

METHODS

N=31 eels (LT 64-90cm) were implanted with active transponders and released in 2007 into the River Berwijn, a small Belgian tributary of the River Meuse, 326 km from the North Sea.

Eel position was followed using a combination of 9 fixed detection stations and manual tracking (NEDAP system).



IMPLANTING
ACTIVE TRANSPONDERS

MANUAL TRACKING

RESULTS

From August 2007 till April 2008 13 eels (42%) started their downstream migration and were detected at two or more stations.

Mean migration speed was 0.62 m/s (or 53 km/day).

Only two eels (15%) arrived at the North Sea, the others being held up or killed at hydroelectric power stations, caught by fishermen or by predators or stopped their migration and settled in the river delta.

A majority (58%) of the eels classified as potential migrants did not start their migration and settled in the River Berwijn or upper Meuse.

CONCLUSION

The EU recovery plan (EU, 2007) has set a silver eel escapement goal at 40% of the historic biomass production.

In the case of the Belgian part of the Meuse eel management unit this goal amounts to 21.2 tons of silver eel escapement, which is currently not met.

This study suggests that eels from the transboundary Meuse have an escapement rate of approximately 15% and presumably HPS and fisheries within the Meuse delta are causing losses to silver eels during their downstream migration.

Hence, reductions in the mortality of migrating silver eels are urgently needed to meet the escapement goals.

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