



IMC Masterplan for migratory fish in the Meuse catchment

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Master Plan Migratory Fish – IMC

- ▶ 2011 - IMC adopted a master plan for the recovery of migratory fish in the R. Meuse catchment



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Aim:

1. Inventory of migration barriers + potential habitats for migratory fish (eel – salmon – seetrout)
2. Inventory of national legislation & management plans + scientific & technical exchange of information
3. Common goals & actions for the rehabilitation of migratory fish

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- ▶ 2011 - IMC adopted a master plan for the recovery of migratory fish in the R. Meuse catchment

Common goals & actions:

1. Rehabilitation of upstream migration
2. Development of habitat for reproduction & growth
3. Re-introduction / stocking of migratory fish
4. Rehabilitation of downstream migration
5. Fisheries measures
6. International collaboration & reconciliation

Masterplan Migratory Fish - IMC

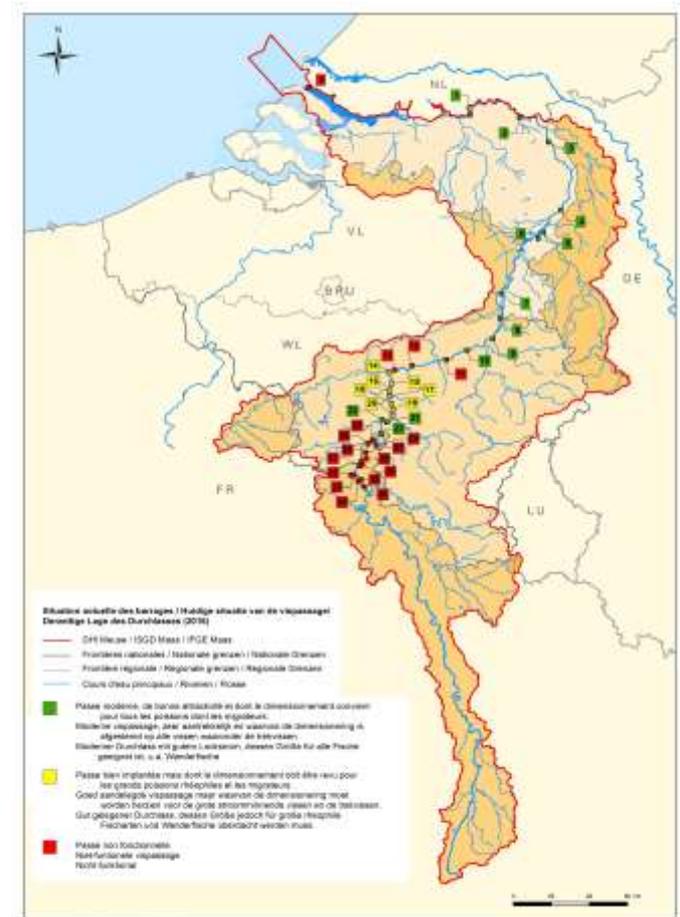
- ▶ Yearly report of the actions taken by countries & regions

Masterplan Migratory Fish - IMC

- ▶ Yearly report of the actions taken by countries & regions
- ▶ Collation of actions and monitoring results from the catchment

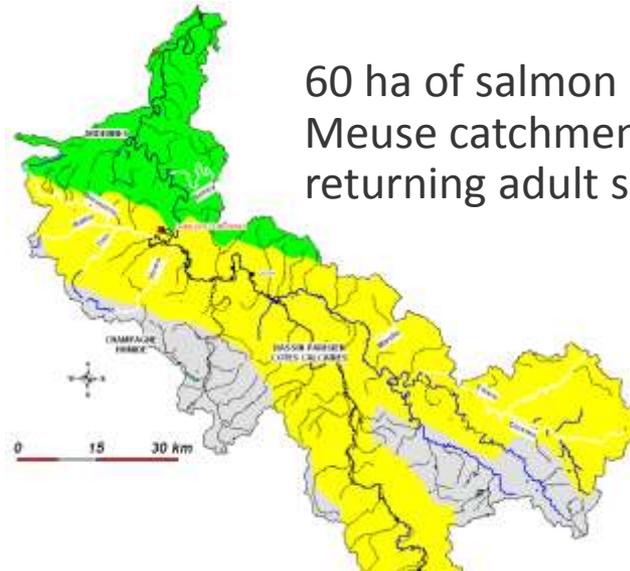
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- ▶ Yearly report of the actions taken by countries & regions
- ▶ Collation of actions and monitoring results from the catchment
- Upstream migration main axis R. Meuse:
 - 36 barriers
 - 13 fish passes + Kier



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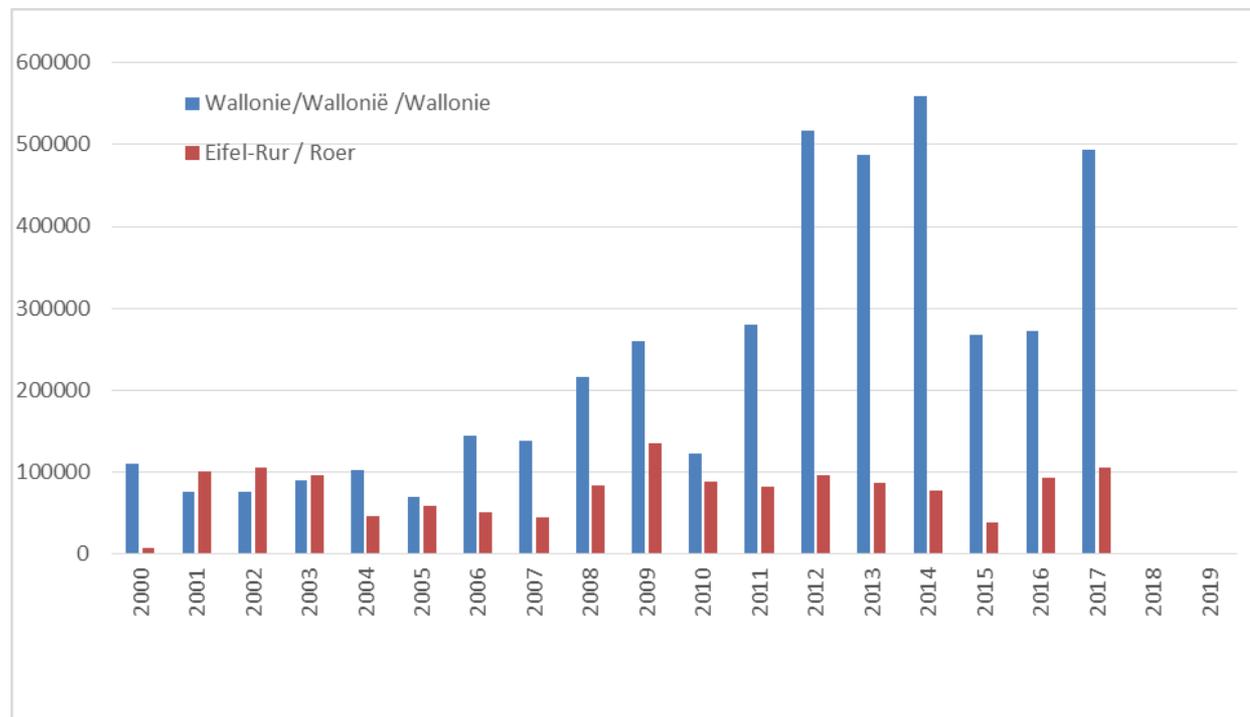
- ▶ Yearly report of the actions taken by countries & regions
- ▶ Collation of actions and monitoring results from the catchment
- Habitat for reproduction and growth
 - Lage amount of salmon habitat in Belgian & French Ardennes (Ourthe/Amblève - Semois)



60 ha of salmon reproduction habitat in the French R. Meuse catchment = possibility for population of 3600 returning adult salmon !

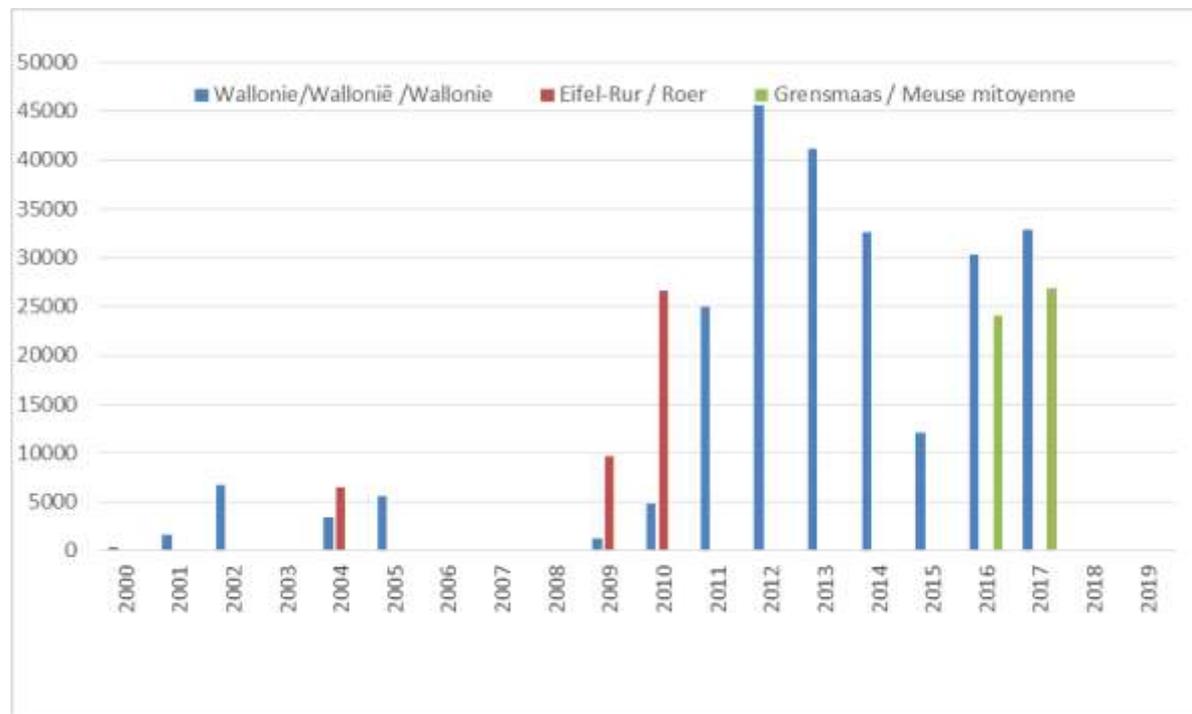
Masterplan Migratory Fish - IMC

- ▶ Yearly report of the actions taken by countries & regions
- ▶ Collation of actions and monitoring results from the catchment
 - Release of juvenile salmon (0+ fry)



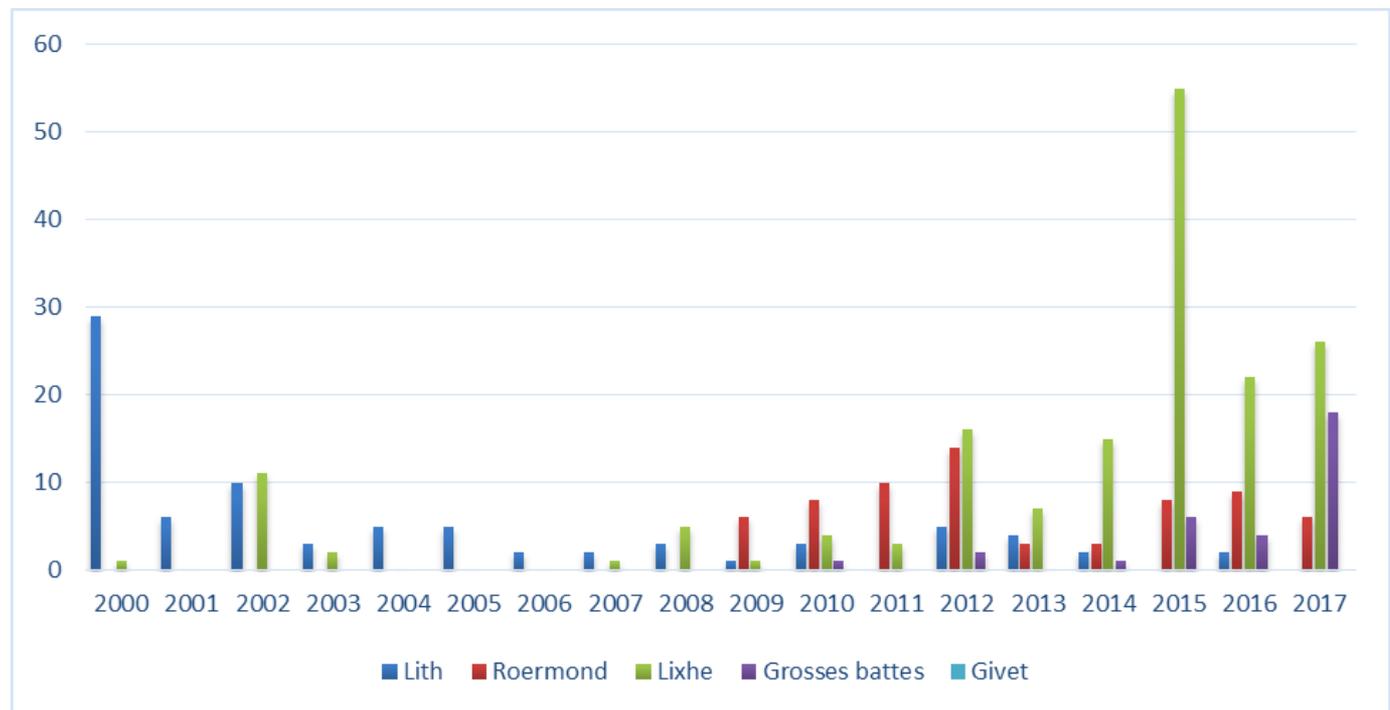
Masterplan Migratory Fish - IMC

- ▶ Yearly report of the actions taken by countries & regions
- ▶ Collation of actions and monitoring results from the catchment
 - Release of salmon smolt



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- ▶ Yearly report of the actions taken by countries & regions
- ▶ Collation of actions and monitoring results from the catchment
 - Returning adult salmon



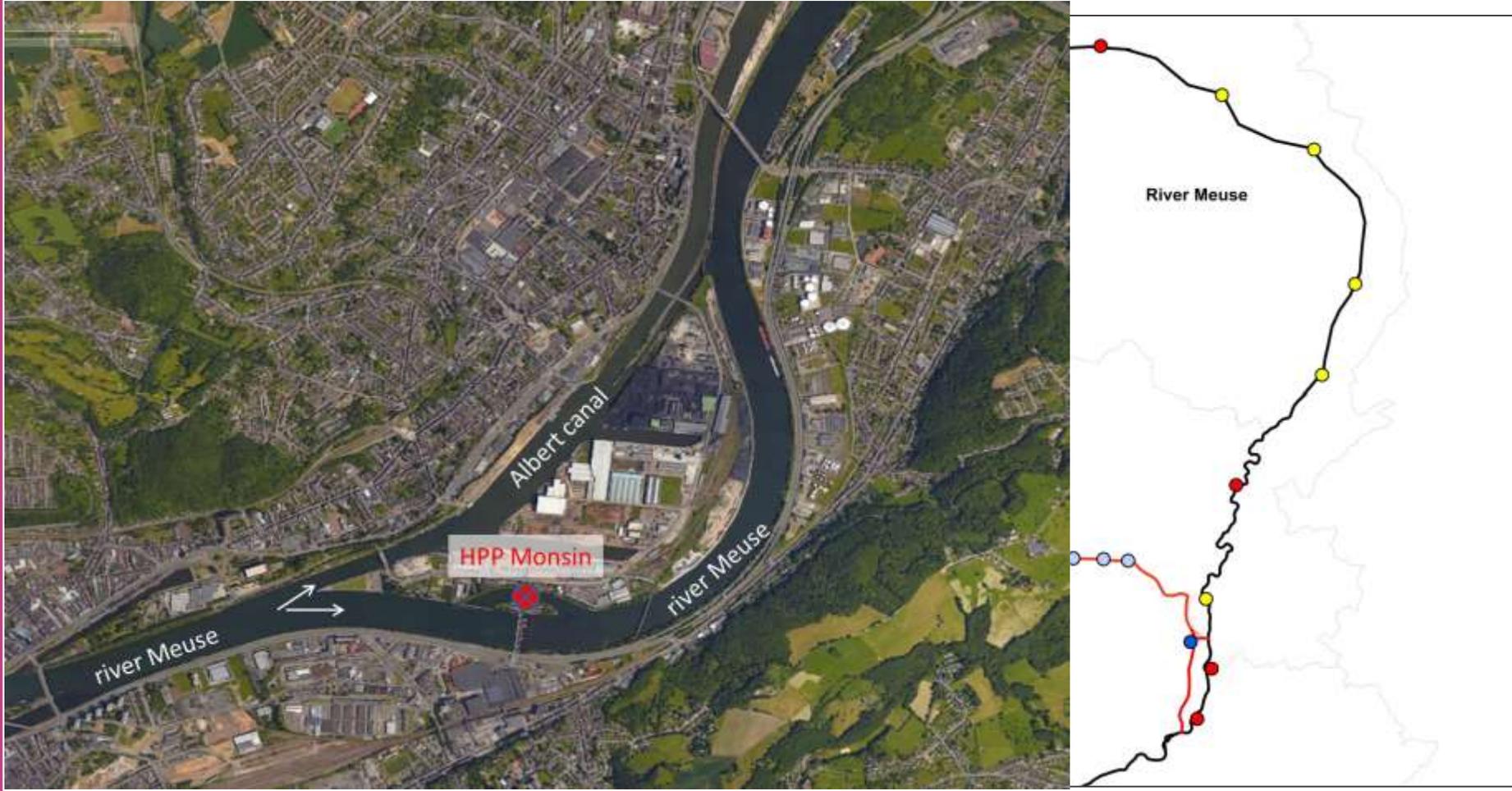
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- ▶ Yearly report of the actions taken by countries & regions
- ▶ Collation of actions and monitoring results from the catchment
 - International collaboration & reconciliation
 - transport of adult salmon for captive breeding
 - follow-up research actions
 - exchange of information between regions and with ICPR



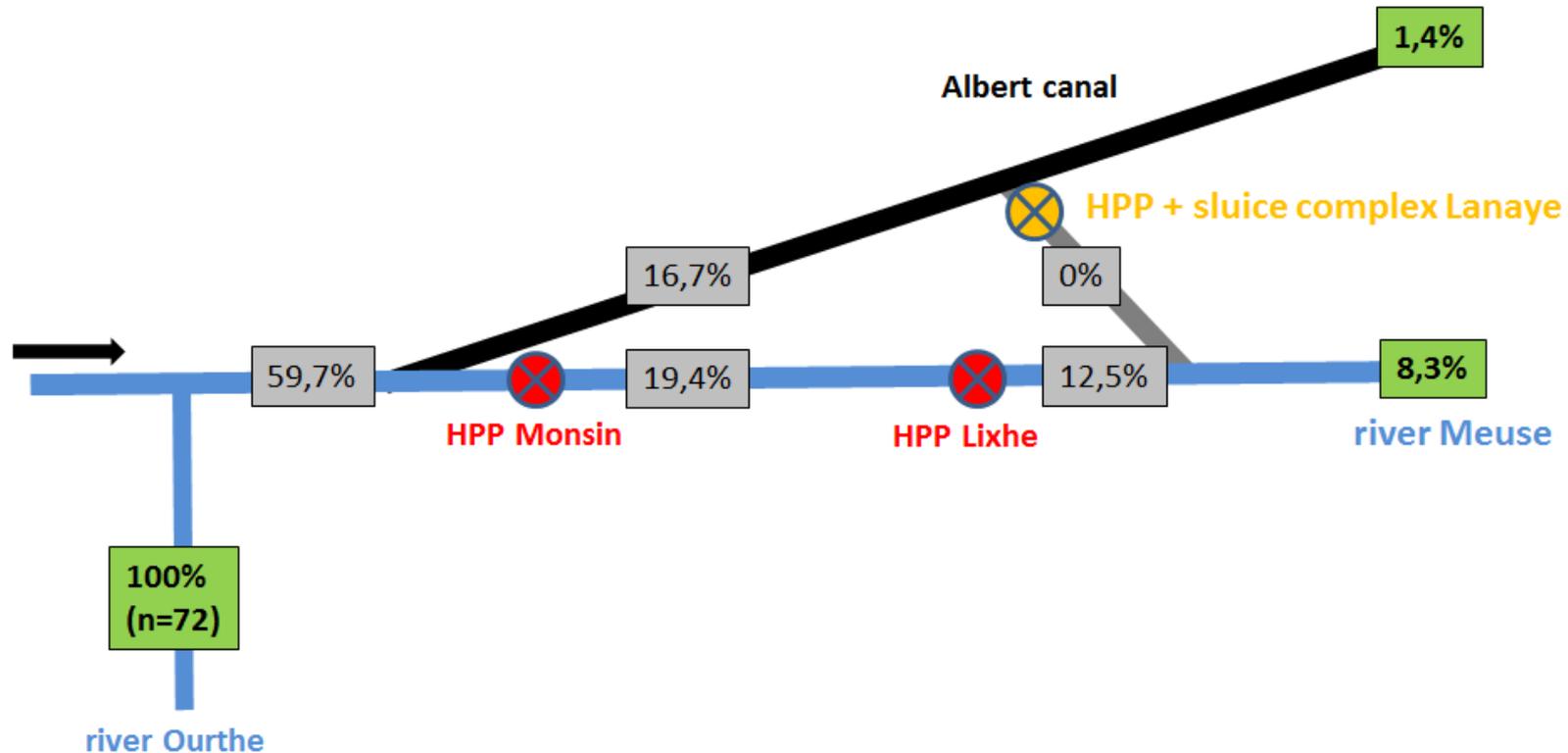
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- ▶ Focus on downstream migration as “issue” for rehabilitation
Collaboration RWS – INBO - ULg



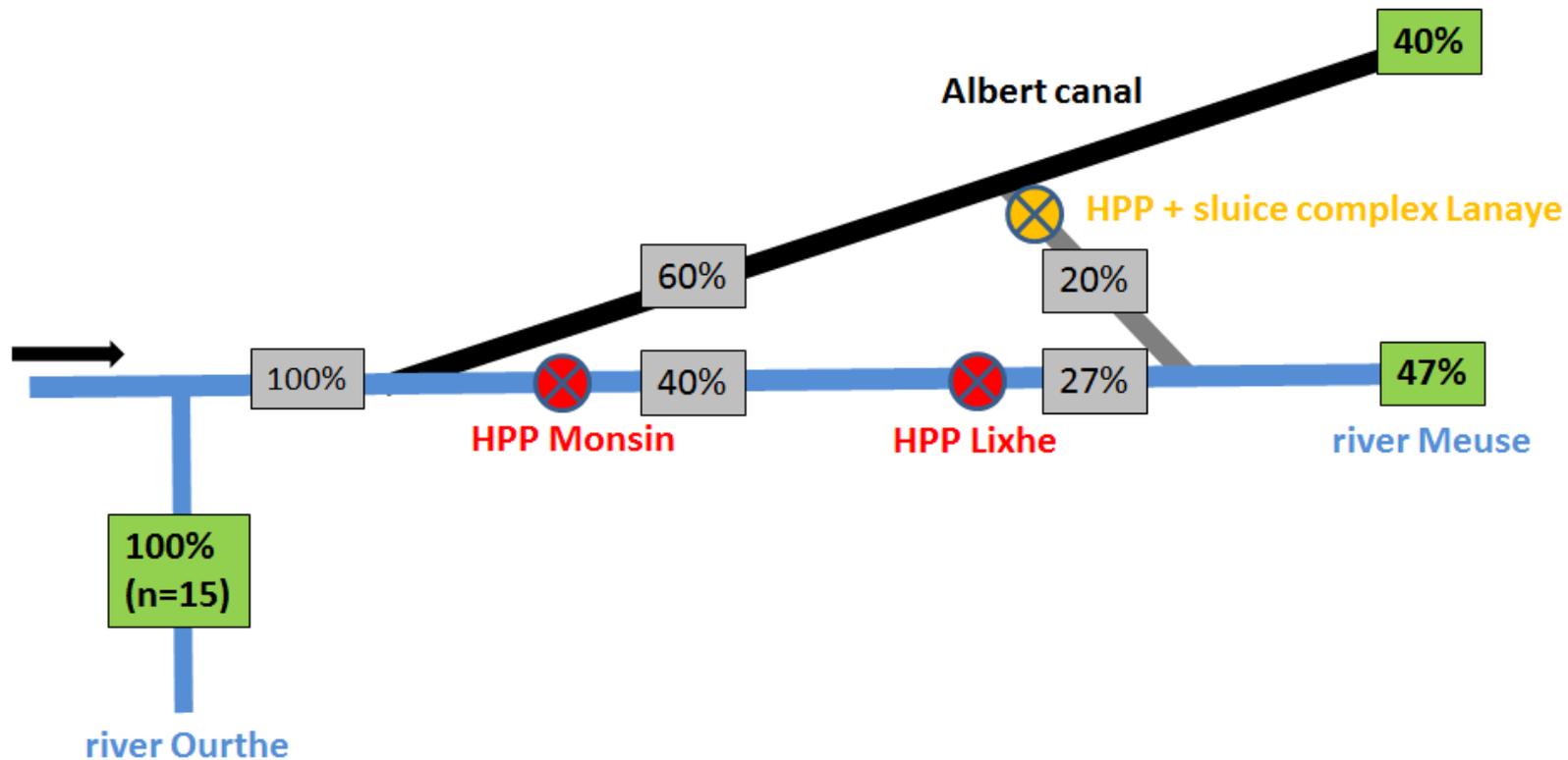
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- ▶ Focus on downstream migration as “issue” for rehabilitation
Acoustic telemetry on salmon smolt from R. Ourthe (2015-2017)



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- ▶ Focus on downstream migration as “issue” for rehabilitation
Acoustic telemetry on silver eels from R. Ourthe (2015-2017)



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- ▶ Focus on downstream migration as “issue” for rehabilitation
Nedap trail telemetry on salmon smolt from R. Berwinne (2008)



Salmon smolt from R. Berwinne

Haringvliet - North Sea	26 % (N=6)
Meuse - Bergsche Maas	43 % (N=10)
Meuse - Lith (HPP)	43 % (N=10)
Meuse - Balgoij	43 % (N=10)
Meuse - Sambeek	52 % (N=12)
Meuse - Linne (HPP)	60 % (N=14)
Meuse - Stevensweert	83 % (N=19)
Meuse - Itteren	91 % (N=21)
Berwinne	100 % (N=23)

Conclusions from the follow-up

- ▶ Large investments in upstream passage in the Meuse catchment
- ▶ Delays in upstream passage targets (main river + affluents)
- ▶ Issues with efficiency of (some) upstream passage facilities
- ▶ Many “obstacles” for downstream passage (canals, weirs & HPP)
- ▶ Downstream passage is recognised as a problem for rehabilitation
- ▶ Studies, pilots & licenses to improve downstream passage
 - Life4Fish: downstream passage facilities & turbine renovelling
 - 50-50 % flow for turbine & weir during smolt migration
 - VLH turbines in France

Conclusions from the follow-up

- ▶ Increased international collaboration on salmon re-introduction
- ▶ Doubling of salmon & sea trout stocking (Wall & NRWF) since 2012
- ▶ Increase in returning adults since 2015
- ▶ Escapement of smolt from R. Meuse catchment is currently very low (1 to 2 % R. Ourthe smolt) resulting in still low return rates for adult salmon
- ▶ Prospects for the future: Kier, improvements in up- and downstream migration...
- ▶ Will we reach the goal of 300 returning adult salmon per (sub)catchment ?

**Will the next decade bring us
“the great leap forward”
for migratory fish in the River Meuse?**



Thank you