



EOW⁰⁸
European
Otter 2008
Workshop



 Centre de Recherche Public
Gabriel Lippmann



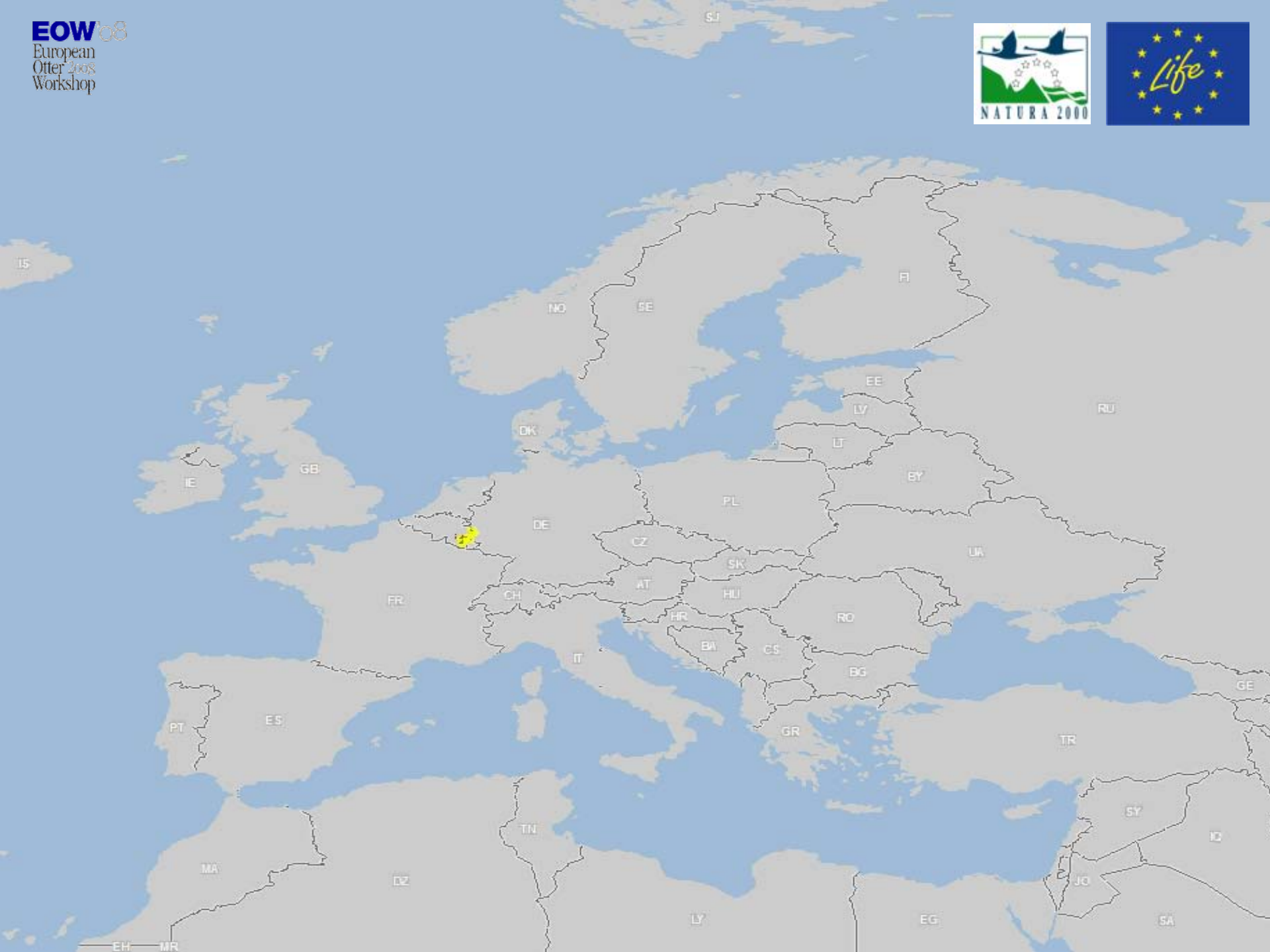
Life Nature Project Habitat Restoration for the Otter

5-11 October 2008

Slovenia

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¹ CRP-GL EVA-Department Environnement et Agro-biotechnologies Centre de Recherche Public - Gabriel Lippmann, Luxembourg





Project Life Nature Otter



Project area and partners (2005-2010)



Parc Naturel Haut-Sûre
Forêt d'Anlier



Parc Naturel des Deux
Ourthes



Naturpark Hohes Venn Eifel



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Naturpark Obersauer



Naturpark Our



Foundation Hëllef fir d'Natur

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Used methodology:

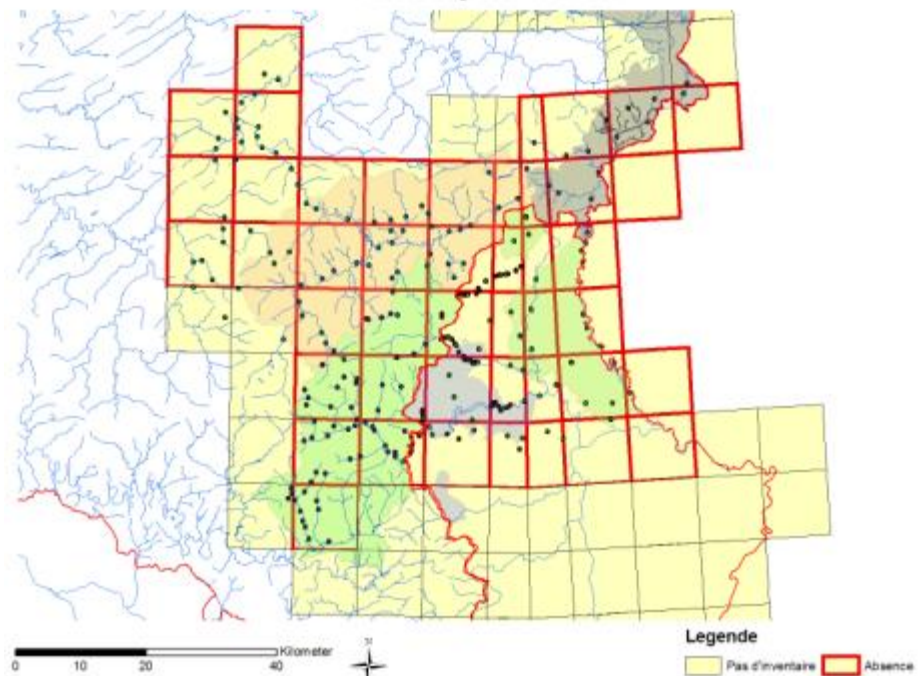
- ISOS
- ISOS simplified

Constitution of a “track observers network”

Otter tracks mapping








Results from 2007








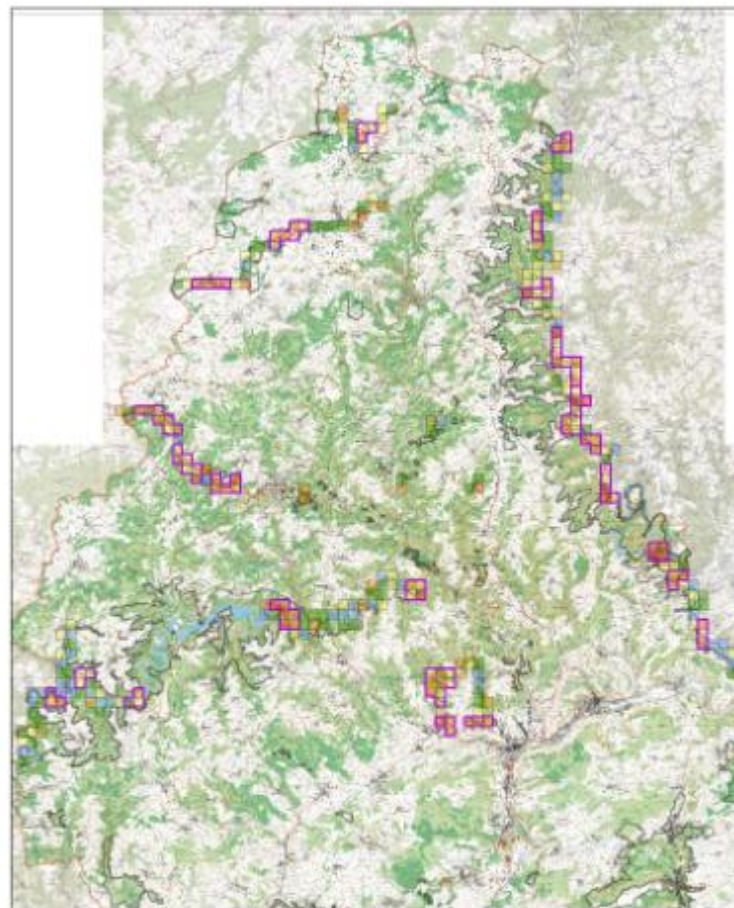
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Habitats Mapping

Number of remarkable structure	Pontentiality by square	
3		Excellent
2		Good
1		Medium
Structure to improve		Poor
No interesting structure		No

Restoration priority of the sector	Potentialities of the diffrent sectors
Maximal priority	
High priority	
Medium priority	
Low priority	
No priority	





Bioaccumulation in fishes:



Location of the fishing sites

Electric fishing

Species :

Stone loach (*Barbatula barbatula*)

Chub (*Squalius cephalus*)

Barbel (*Barbus barbus*)

Eel (*Anguilla anguilla*)



Analysis of heavy metals (cadmium, lead, platinum, chromium, mercury), pesticides like DDT (Dichloro-Diphenyl-Trichloroethane), DDE (Dichlorodiphenyldichloroethylene) and PCBs (polychlorinated biphenyls).



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Bioaccumulation in fishes:

Toxicity Levels:

50 ng/g FW <

50 ng/g FW > < 145 ng/g FW

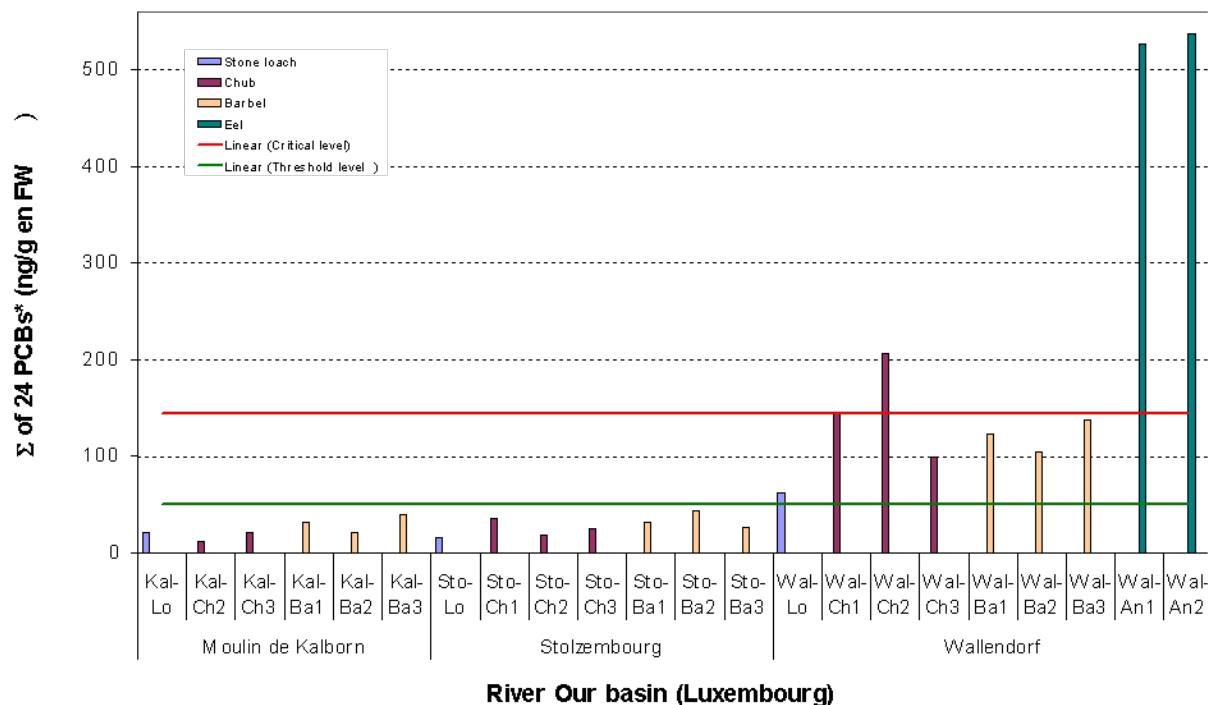
> 145 ng/g FW



PCBs

4 species, 3 individuals per species except for stone loach (10 individuals)

Fishes contamination by PCBs



* 24 PCBs calculated by extrapolation of the 7 PCBs tracers

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Bioaccumulation in fishes:

Toxicity Levels:

50 ng/g FW <

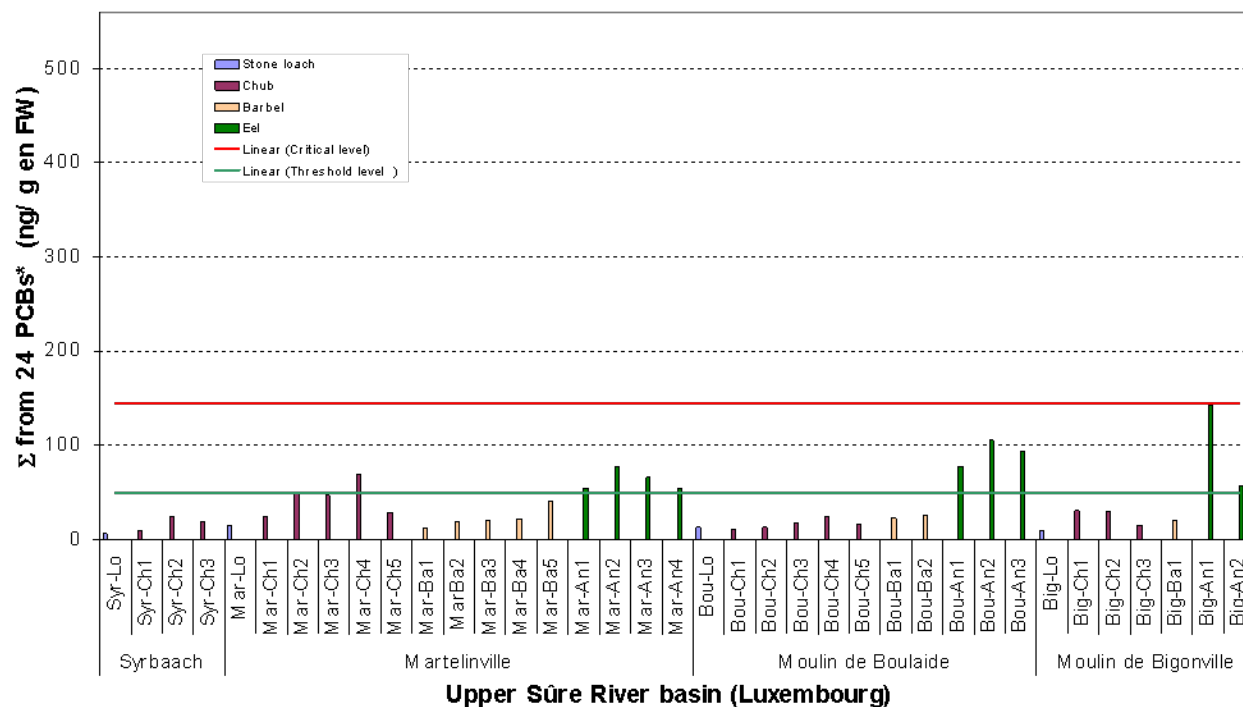
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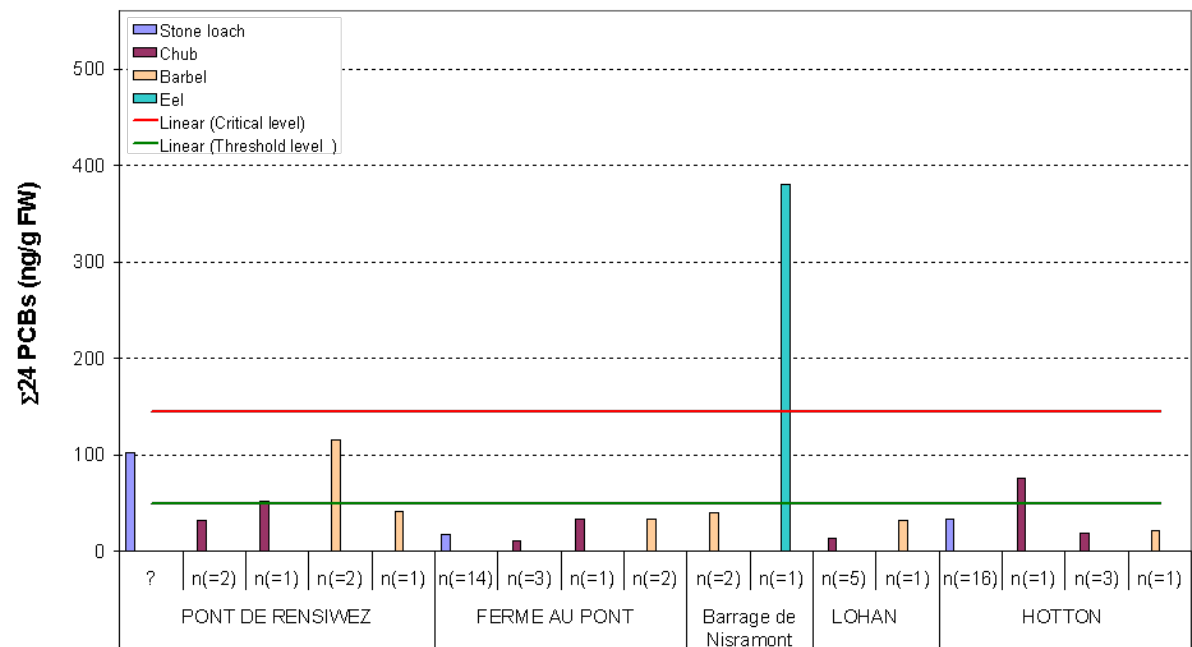
> 145 ng/g FW



PCBs

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Fishes contamination by PCBs



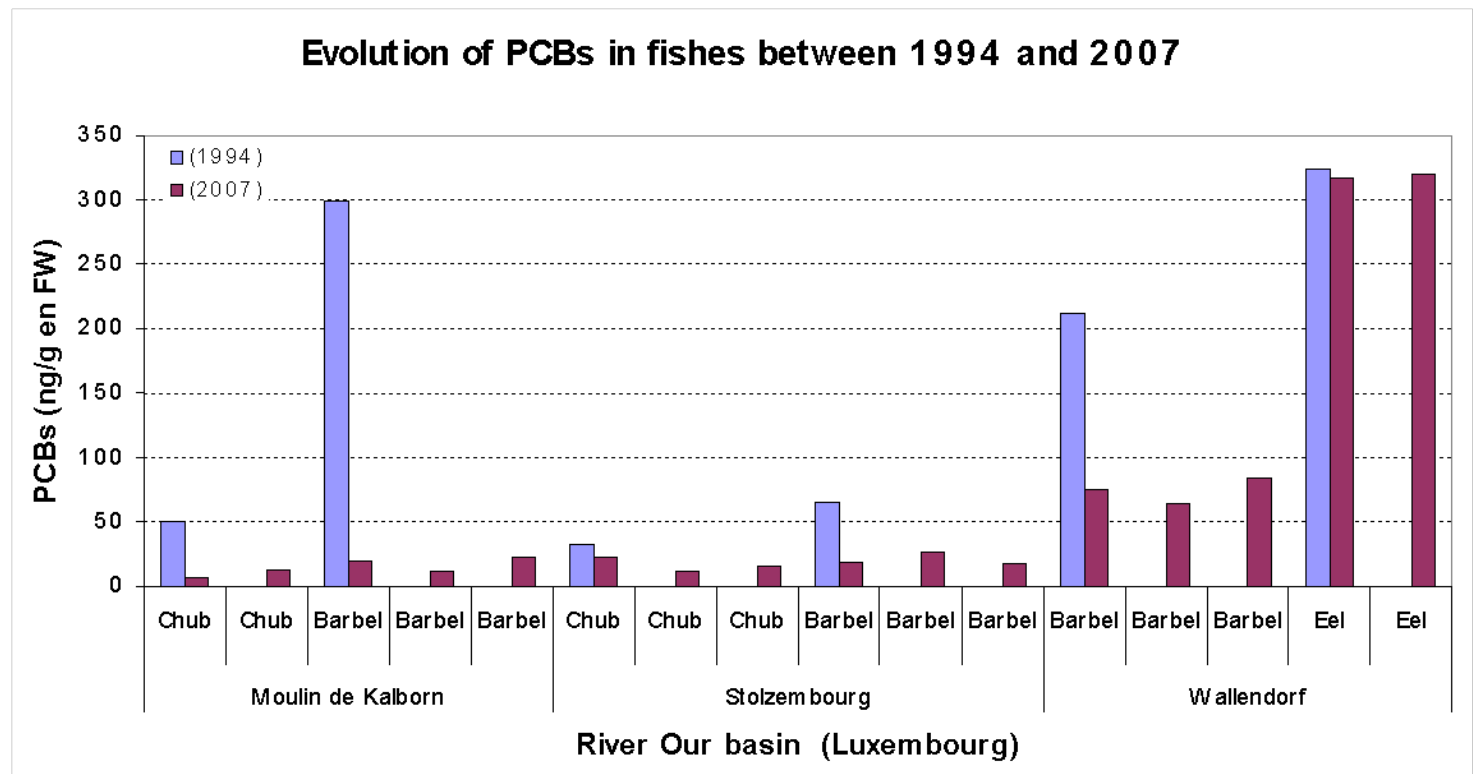
River basin Two-Ourthes (Belgium)

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Bioaccumulation in fishes:

Evolution of PCBs in fishes

Variation of the decreasing concentration between 4 to 10 times

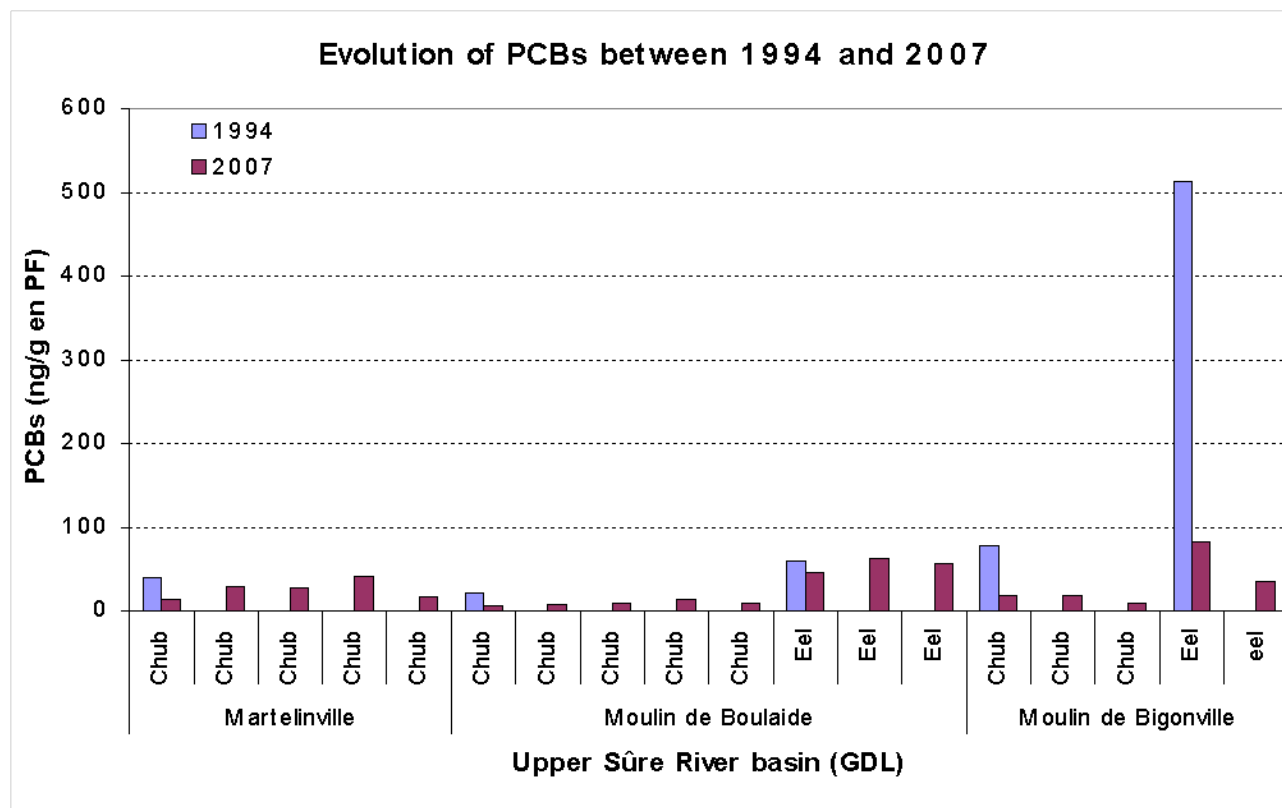


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Bioaccumulation in fishes:

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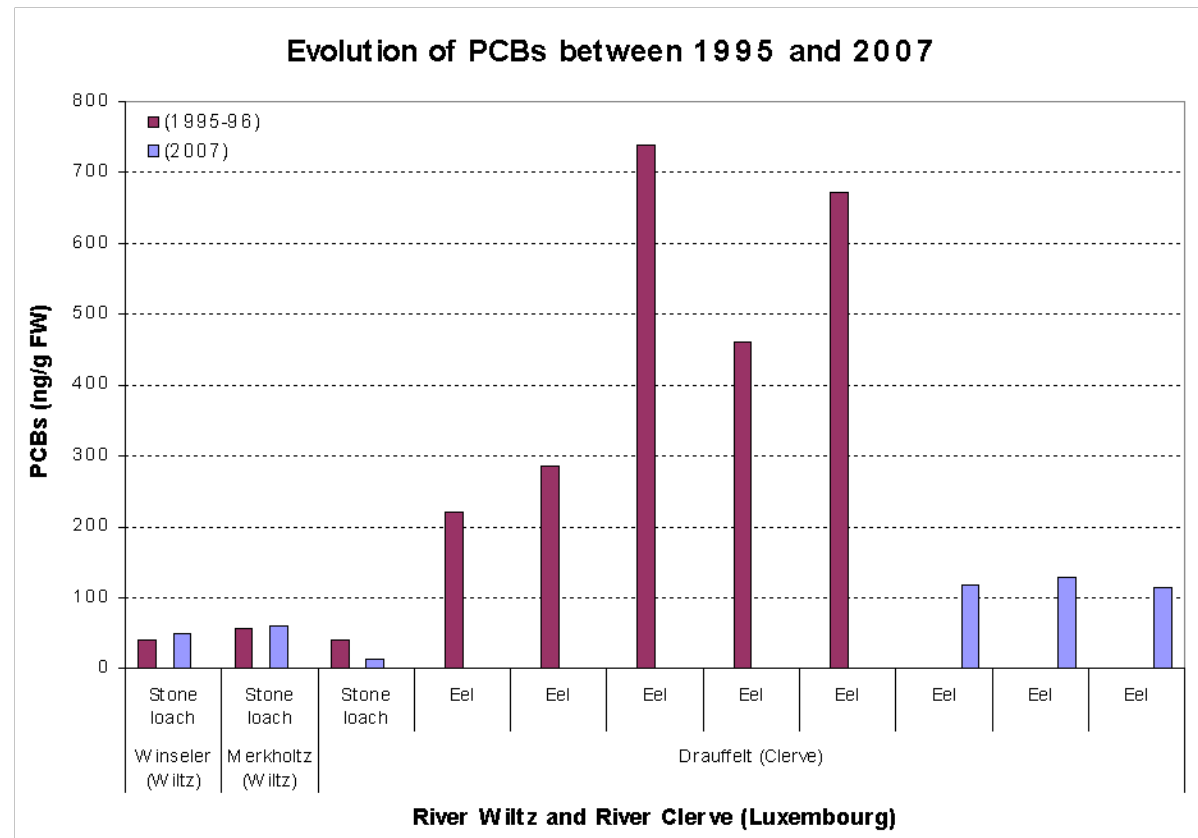


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Bioaccumulation in fishes:

Evolution of PCBs in fishes

Variation of the decreasing concentration between 4 to 10 times



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Bioaccumulation in fishes:

Toxicity Levels:

50 ng/g FW <

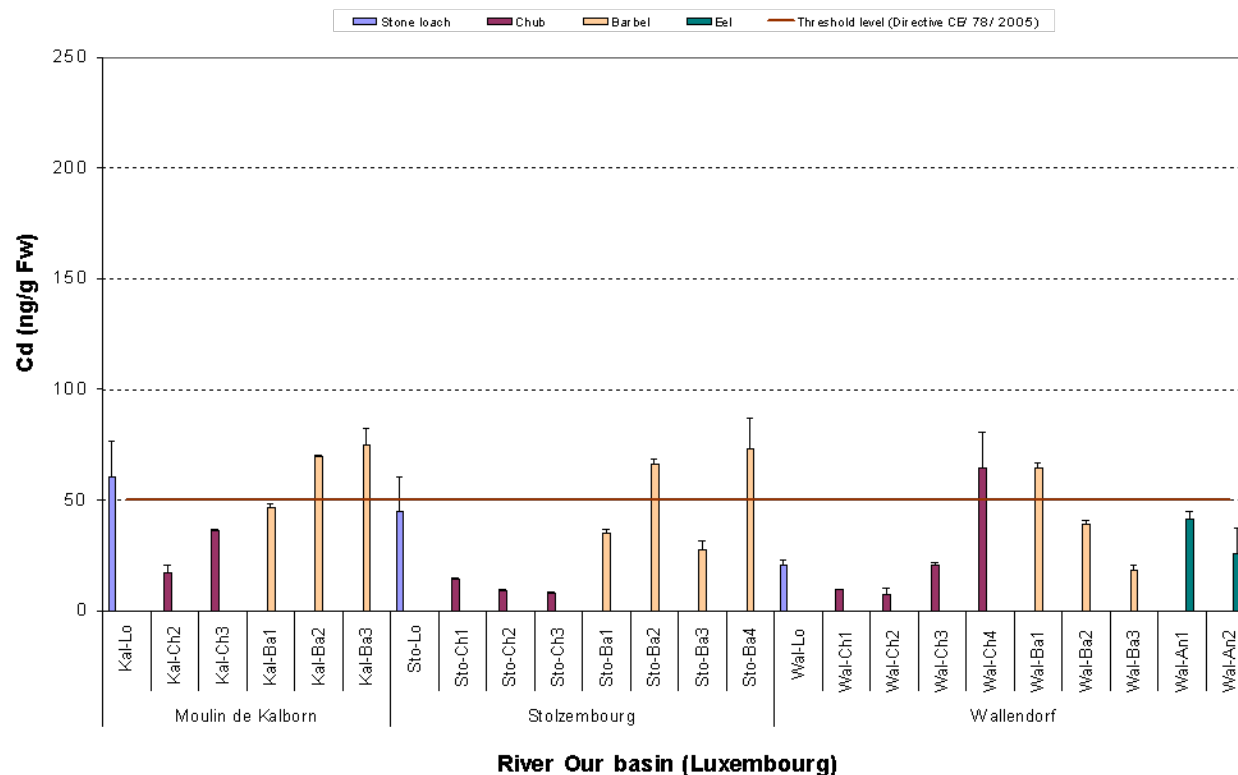
50 ng/g FW >



Heavy metals : Cadmium

4 Species, 3 individuals per species except for stone loach (10 individuals)

Fishes contamination by cadmium (Cd)



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Bioaccumulation in fishes:

Toxicity Levels:

50 ng/g FW<

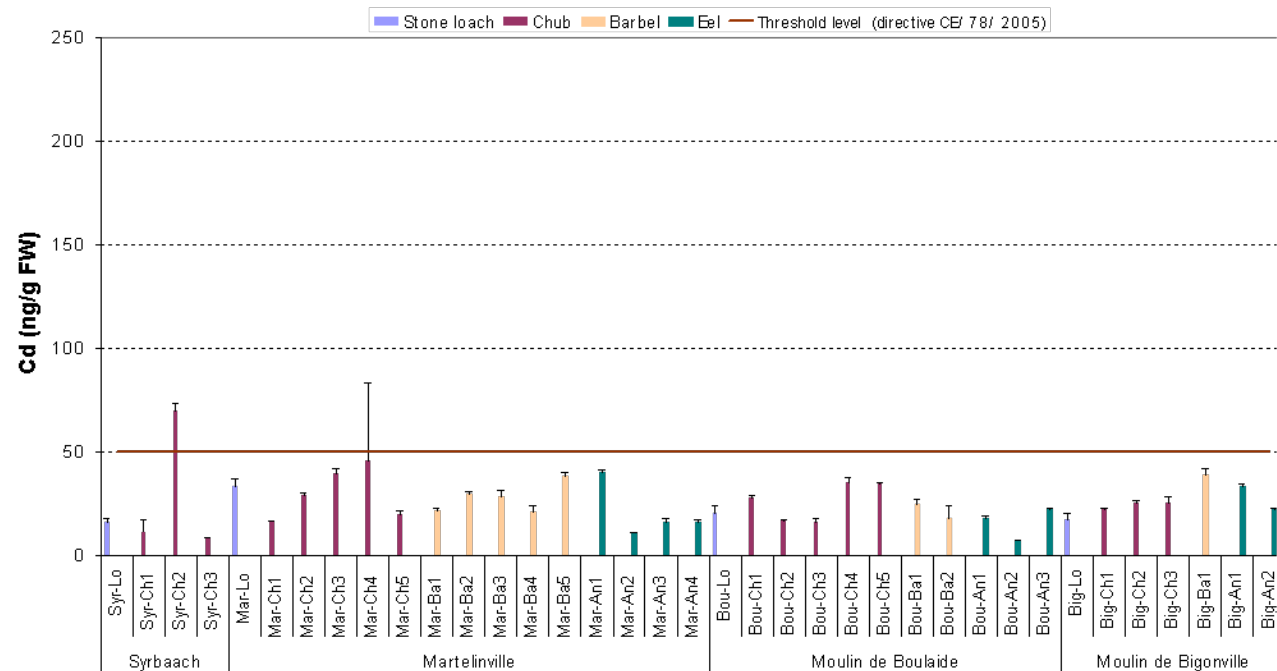
50 ng/g FW>



Heavy metals: Cadmium

4 Species, 3 individuals per species except for stone loach (10 individuals)

Fishes contamination by cadmium (Cd)



Upper Sûre River basin (Luxembourg)

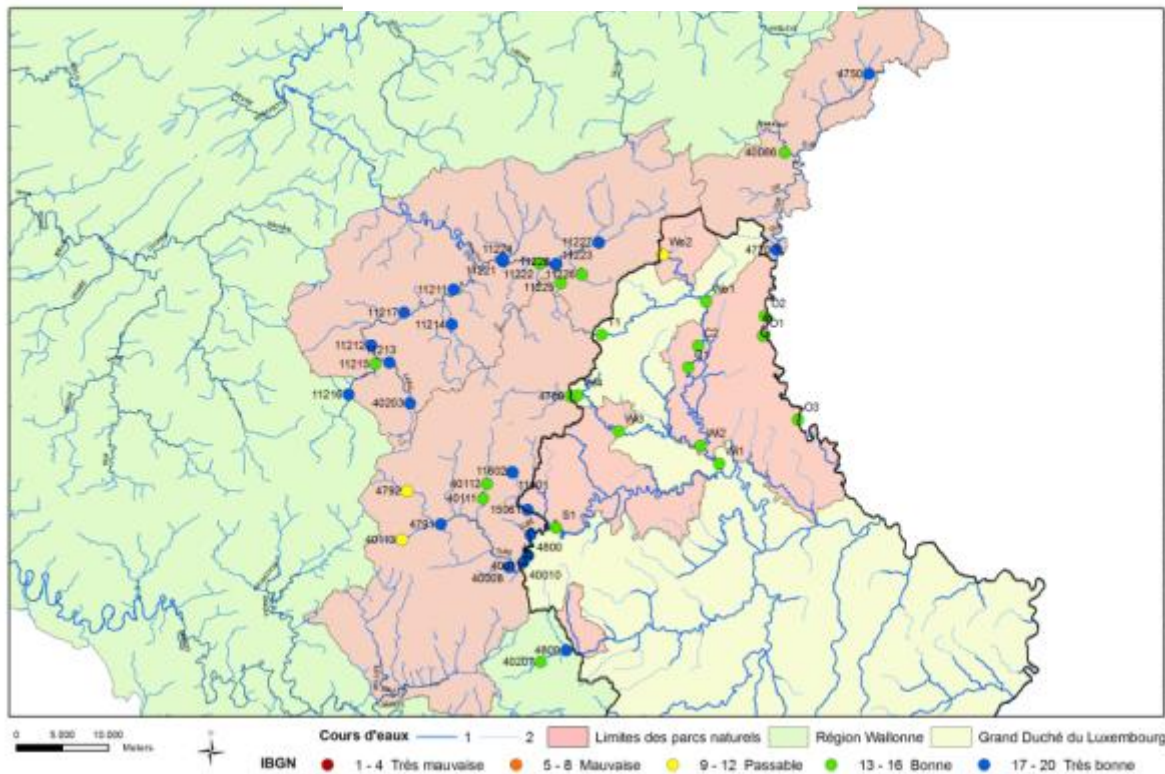


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Biological water quality:

The biological water quality is globally considered as good or very good in the study area !

Used methodology : Indice Biologique Global Normalisé (IBGN)



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Measures: conversion of 160 hectares of non-indigenous coniferous woodland



Before



After

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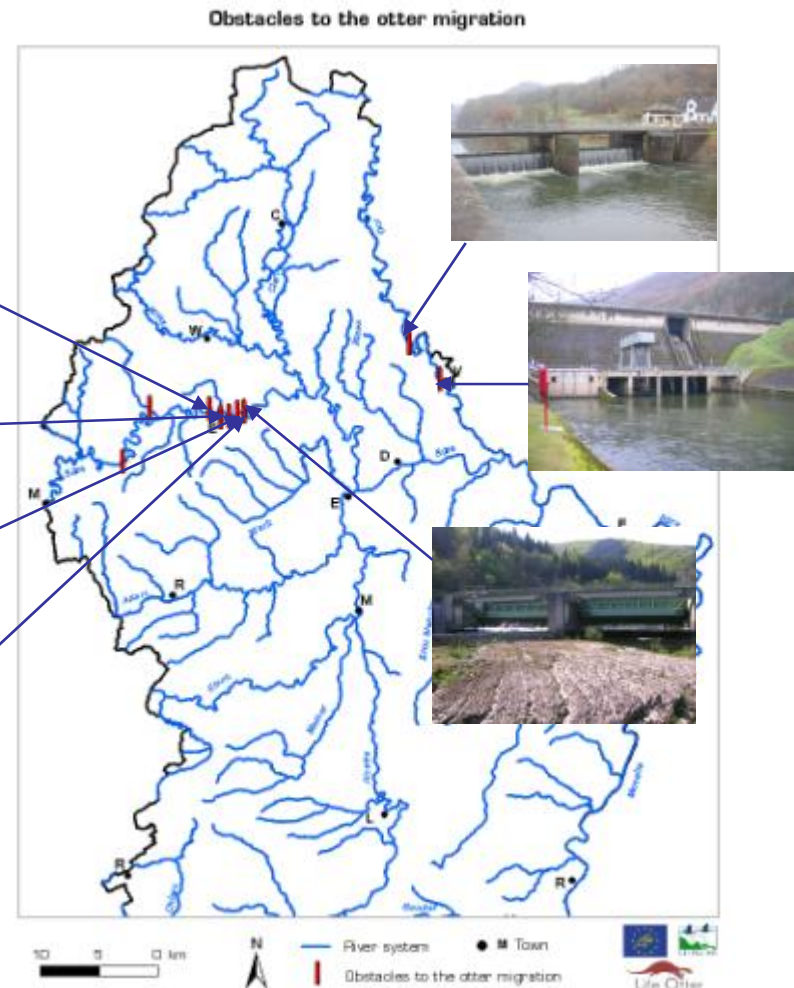
Measures: setting of wire fences (45 km) and cattle watering troughs or tanks (50) to protect river banks



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Obstacles to the otter migration:



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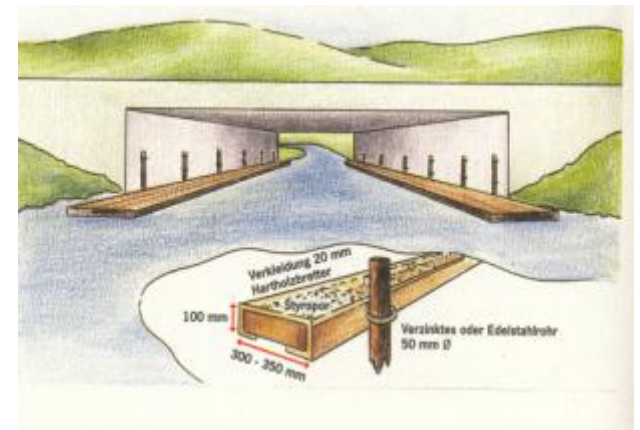
Measures: removing of migration barriers (9), creation of spawning areas (10) and building of ponds (30)



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Measures: installation of otter passages under bridges (9) and restoration of fish ladders.



(Otterzentrum, 2002)

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Measures: purchase of land to build up otter havens (30) and nature reserves (50 ha).



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Measures: inventory and management of invasive plant species (35 ha): the Giant Hogweed (*Heracleum mantegazzianum*), the Giant and Japanese Knotweed (*Fallopia sachalinensis* and *japonica*) and different Spireas (*Spirea* sp.).



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Measures: Awareness campaign for administrations, general public and users of the waterbodies (fishermen, farmers, etc.)



Hier sind wir

Oben: wo ist das?
Oben: wo steht das?
Oben: wo steht das?
Oben: wo steht das?
Oben: wo steht das?
Oben: wo steht das?
Oben: wo steht das?

Der Lebensraum des Fischotters

Oben: wo ist das?
Oben: wo steht das?
Oben: wo steht das?
Oben: wo steht das?
Oben: wo steht das?
Oben: wo steht das?
Oben: wo steht das?

Neuigkeiten

Oben: wo ist das?
Oben: wo steht das?
Oben: wo steht das?
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Zum Ende

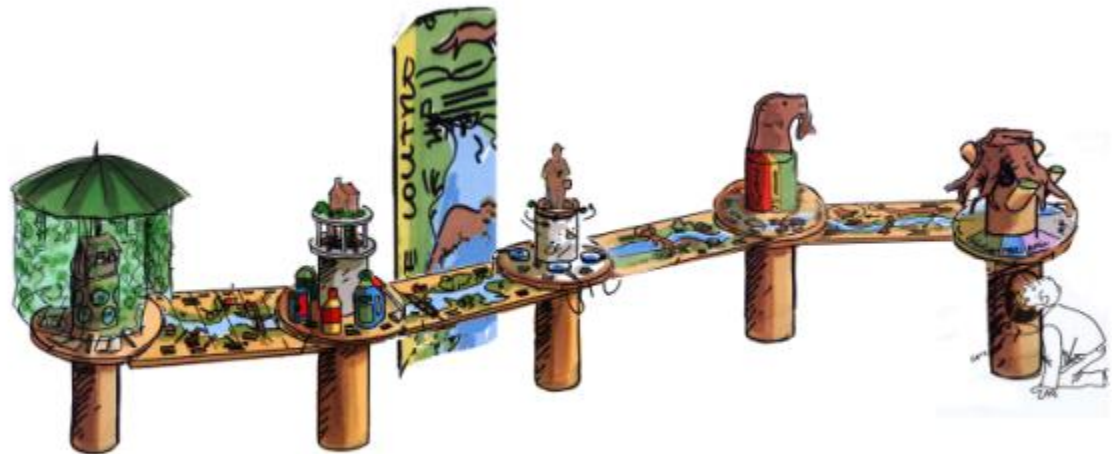
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Measures: Awareness campaign for administrations, general public and users of the waterbodies (fishermen, farmers, etc.)



Workshop in Botrange (B)



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L'association de l'association de l'association

Project of an otter exhibition

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For further informations:

www.loutres.eu

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Thank you
for your
attention

