

AN ACTION COORDINATED BY :



Une voix pour la nature

Letterkenny
Republic of Ireland

15th February 2013

Marie Capoulaire
Pierre-Yves Pasco

Programme LIFE+

FRESHWATER PEARL MUSSEL CONSERVATION IN THE ARMORICAN MASSIF

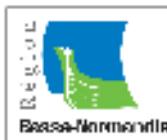
LIFE09 NAT FR 000583

Practical implementation : highlight on the Bonne Chère stream

www.life-moule-perliere.org/accueilmoule.php

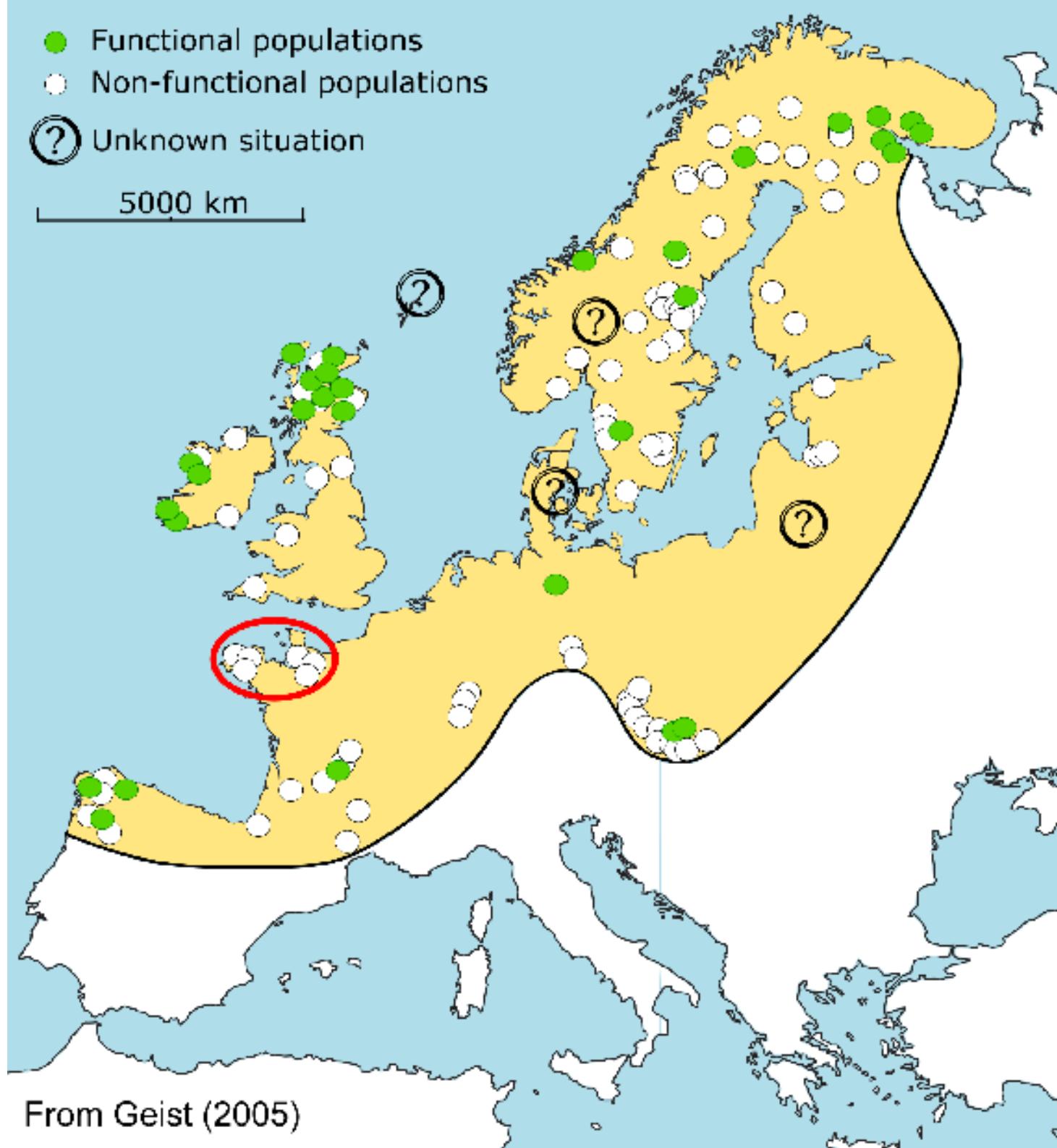


COLLINES NORMANDES



- Functional populations
- Non-functional populations
- ?(circle) Unknown situation

5000 km



From Geist (2005)



Natura 2000 "Monts d'Arrée"
Operator Armorique Regional
Nature Reserve
900 pearl mussels in 2011



Natura 2000
"Headwaters of the Blavet
and Hyères rivers"
Operators CCKB / CCCA^[2]
250 pearl mussels in 2011



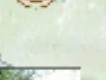
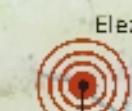
Natura 2000
"Scorff and Sarre rivers,
Pent-Calleck forest"
Operator Syndicale
of the Scorff river basin
Hulce¹ of the CTMA^[3]
Synciale of the Blavet
river valley
1900 pearl mussels in 2011



Natura 2000
"Basin of the Airou river"
Operator SIAES^[4]
220 pearl mussels in 2011



Natura 2000 "The valley of the
Barthon river and its affluents"
Operator Normandie-Maine
Regional Nature Reserve
269 pearl mussels in 2011



Six watercourses in safe hands

The six main pearl mussel populations that remain in the Armorican Massif have been identified and have been included in the conservation programme. They are located on Natura 2000 sites, which is a prerequisite to be eligible for the LIFE+ programme actions. Although they have various conservation status, most of them are exclusively made up of old individuals.

Populations
without turnover

Populations
with little but recent turnover

Main actions

**Environmental
restoration**

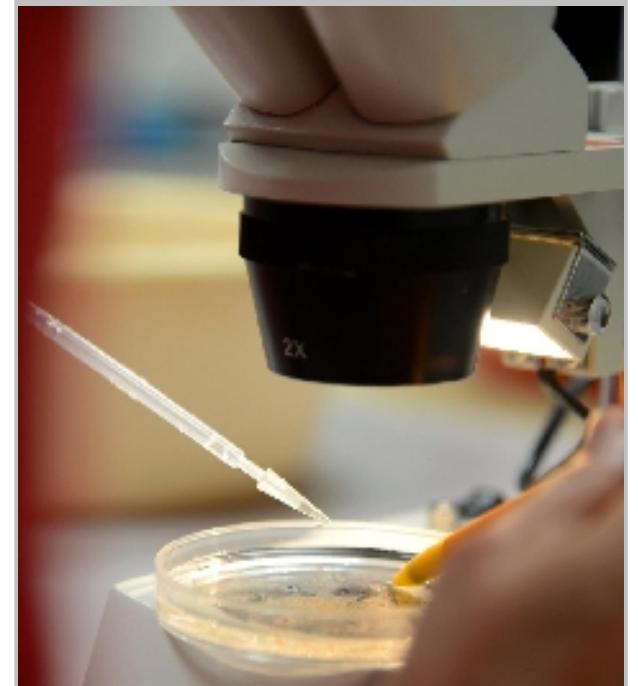
= Extra LIFE



**Environmental
control and survey**



**Ex-situ conservation
and reinforcements**





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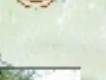
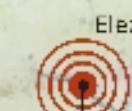
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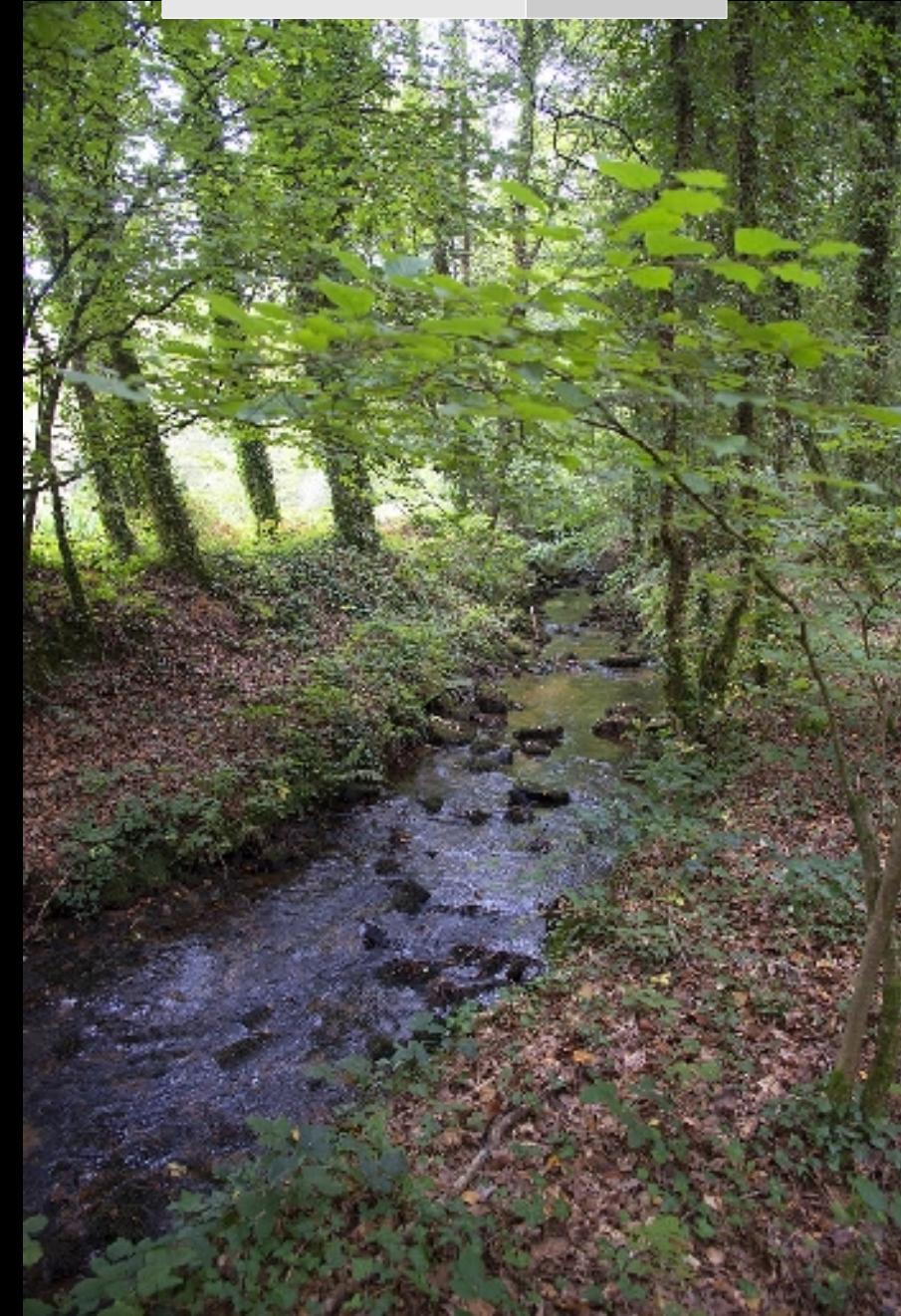
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Populations
without turnover

Populations
with little but recent turnover

Bonne Chère



Surface of the catchment (ha)

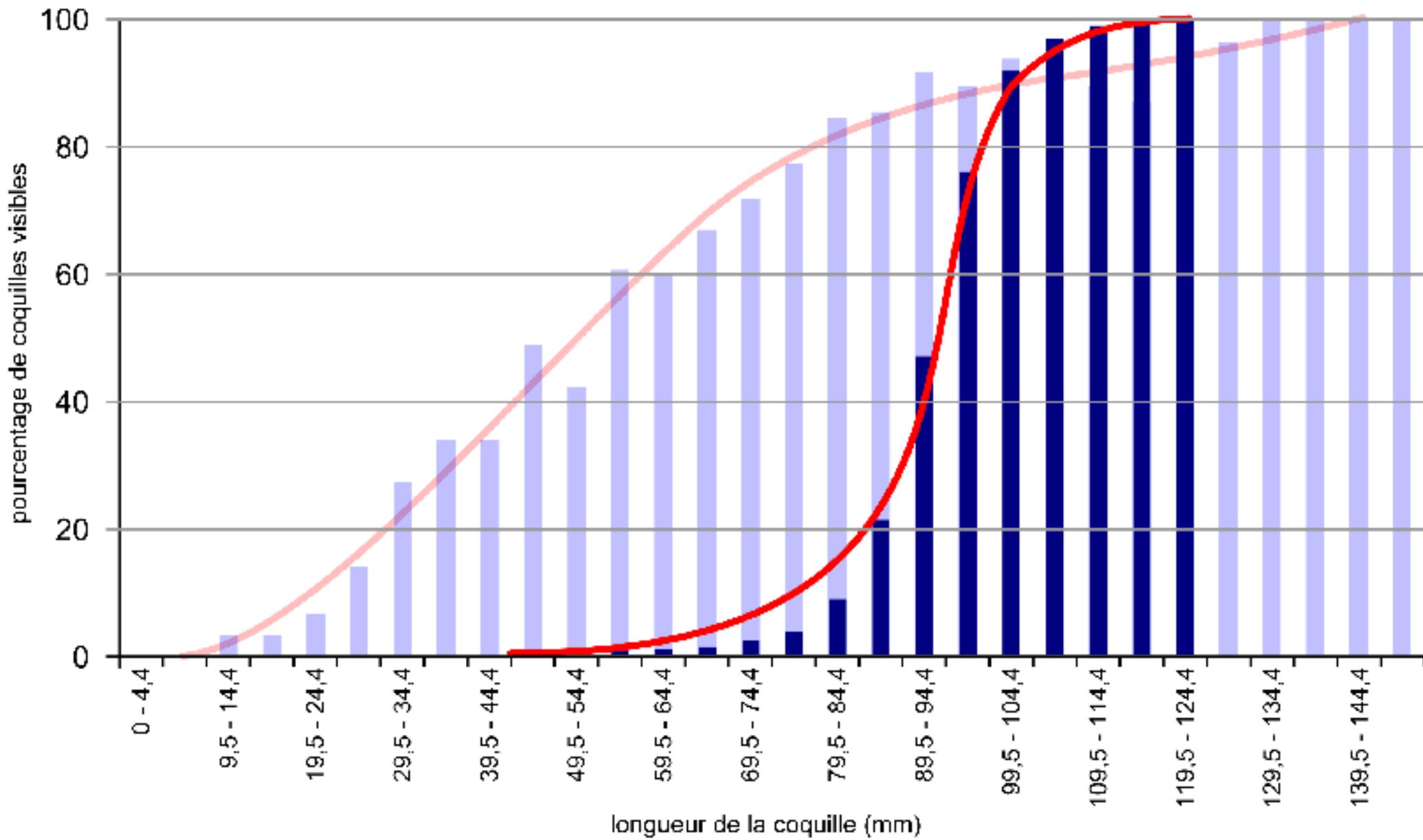
1 737,3

Total linear with tributaries (km)

26,7







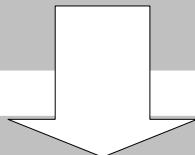
Light chart : functional population (from Degerman, 2009)

Dark chart : Bonne Chère population in 2009 (900 individuals measured)

Black point inventory

Maps of black points

- based on existing data
- on field observations
- by under catchment

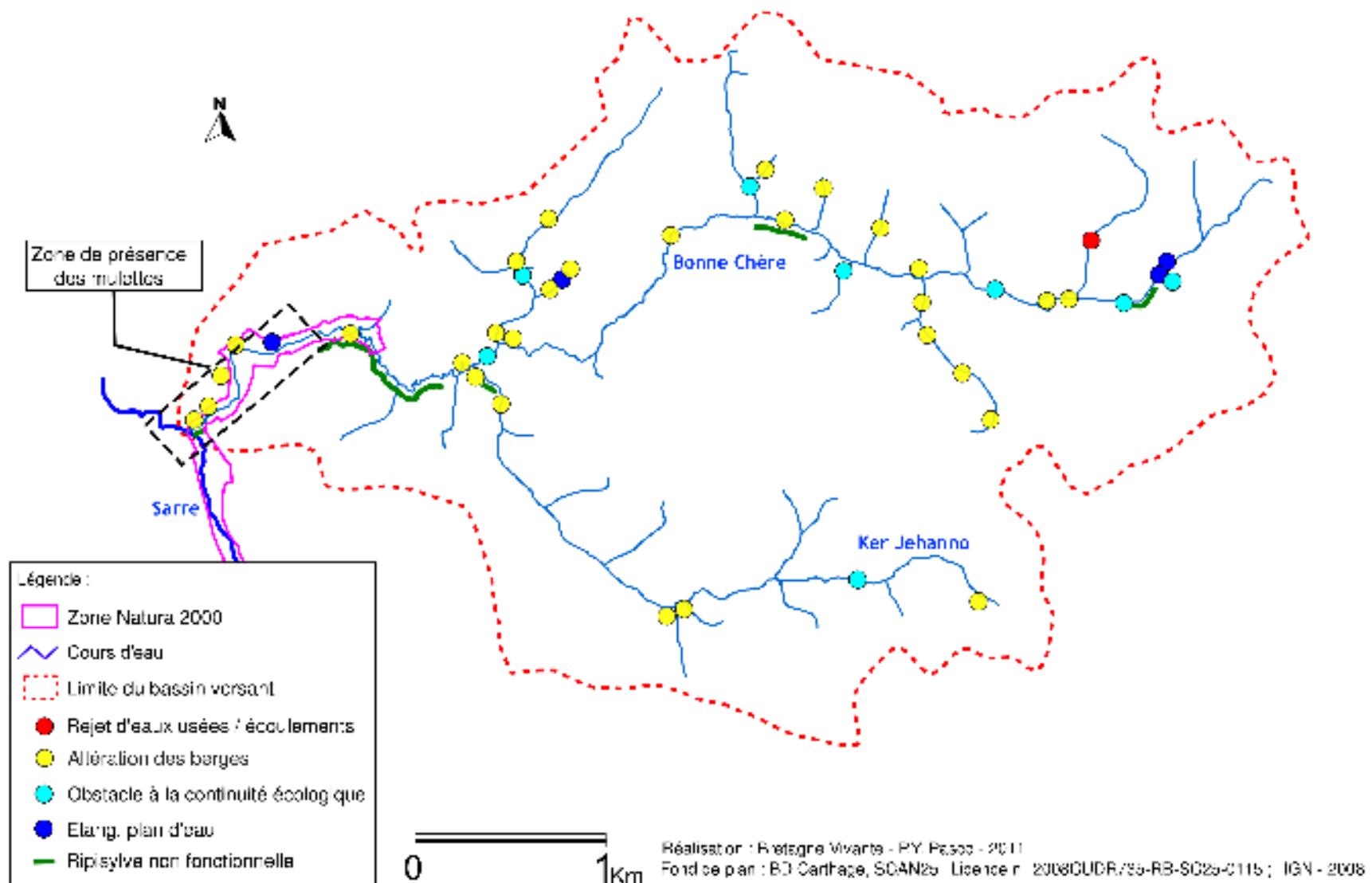


Management plans

- with dialogue
- action list
- protection of sites
- continuity of LIFE actions



Points à résoudre pour améliorer le fonctionnement de la population de moules perlières
sur le bassin versant du ruisseau de Bonne Chère



Actions conducted in a « river restoration contract »



Riparian trees maintenance



Suppresion of migratory barriers

Actions conducted in a « river restoration contract »



Plantations (shadow)



Willow weaving (river bank protection from cattle)

Actions conducted in a « river restoration contract »



Supply of nose pump

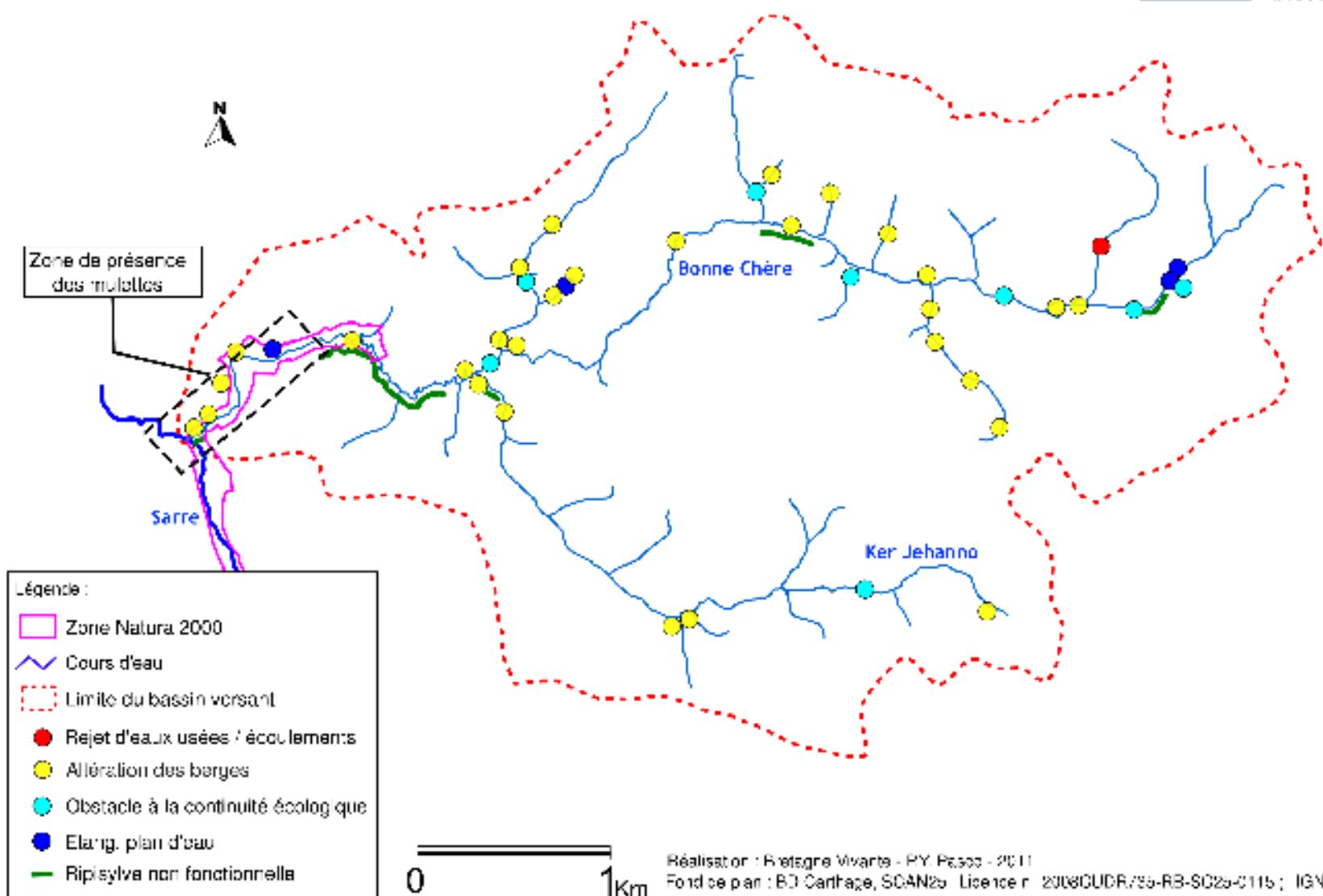


Fences + plantations



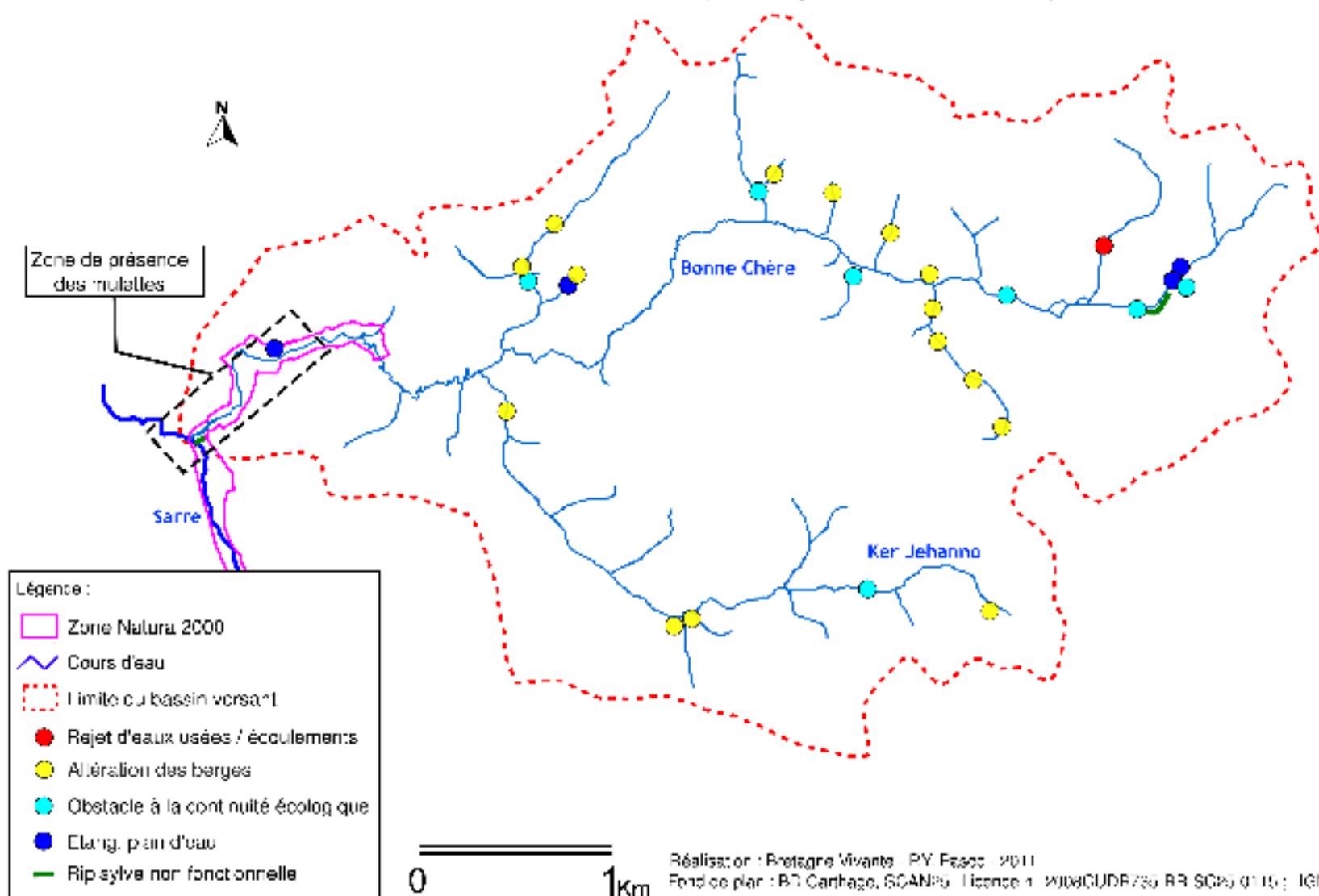
Thanks to owners and farmers for their welcoming.
Thanks to the support of the city of Guern and Malguenac.

Points à résoudre pour améliorer le fonctionnement de la population de moules perlières
sur le bassin versant du ruisseau de Bonne Chère



Réalisation : Bretagne Vivante - PY.Pasco - 2011
Fond de plan : BD Cartilage, SCAN25. Licence n° 2008CUDR/BG-BB-S02a-C115 ; IGN - 2008

Points à résoudre pour améliorer le fonctionnement de la population de moules perlières
sur le bassin versant du ruisseau de Bonne Chère (mise à jour décembre 2012)



Réalisation : Bretagne Vivante - PY Fasec - 2011
Fond de plan : BD Carthage, SCANDIS - Licence 1.000000000-BB-S00000116 ; IGN - 2008

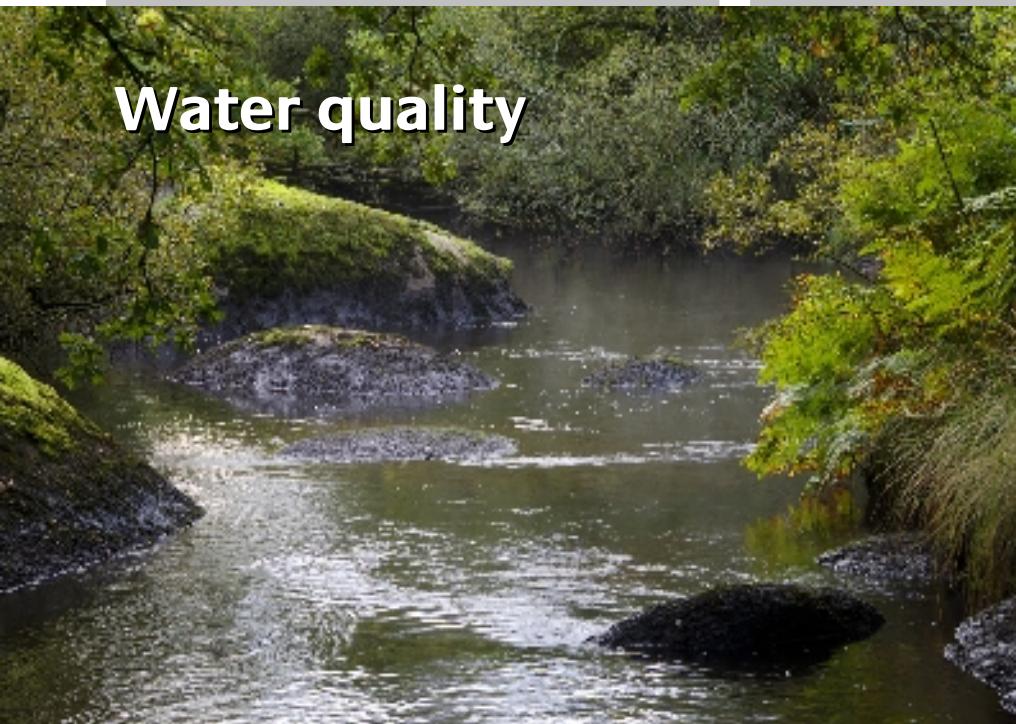
Control & assess environment quality

Assess in long time period
Characterize

Look for favourable habitats

Detect any problems

Water quality



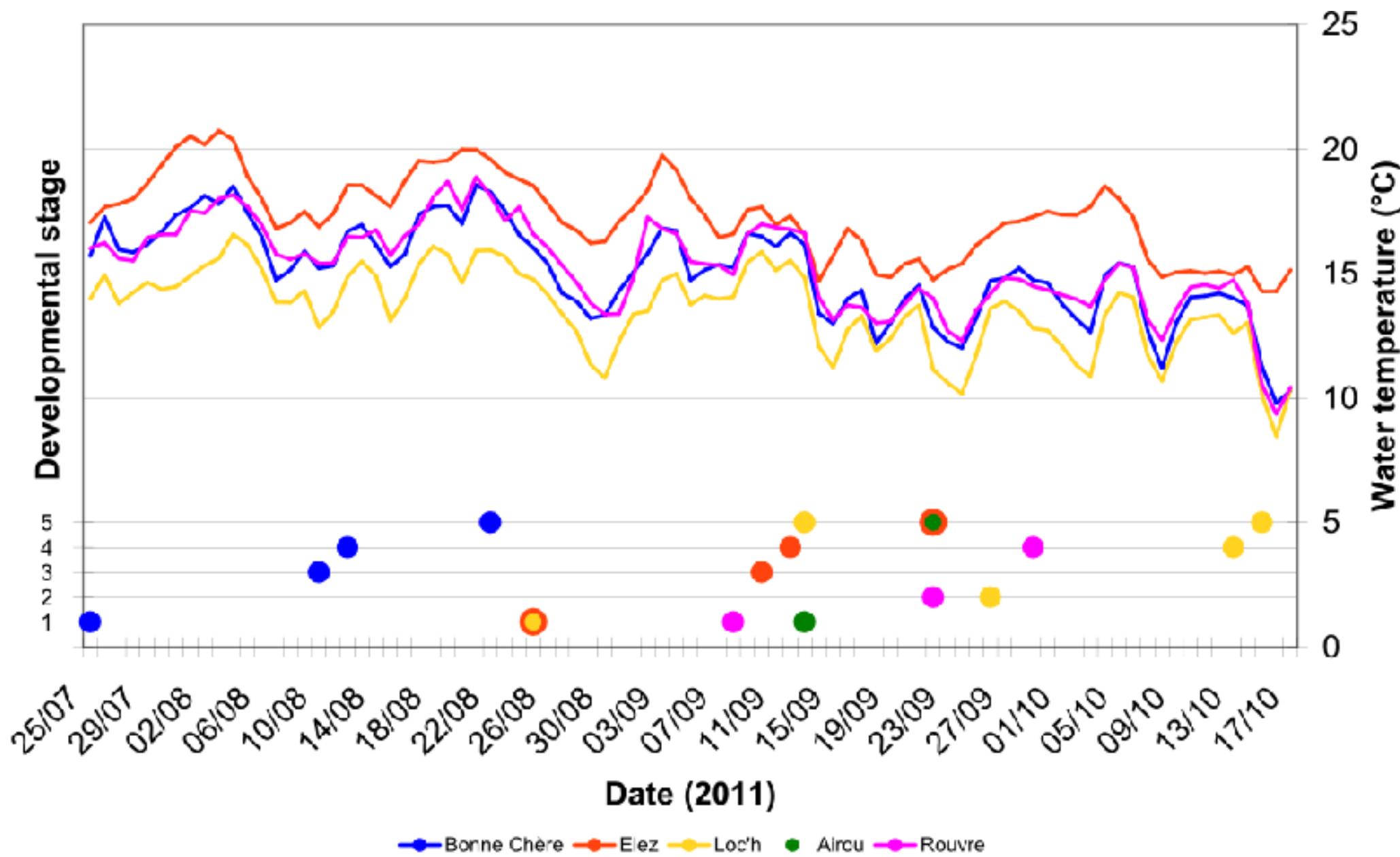
Sediment quality

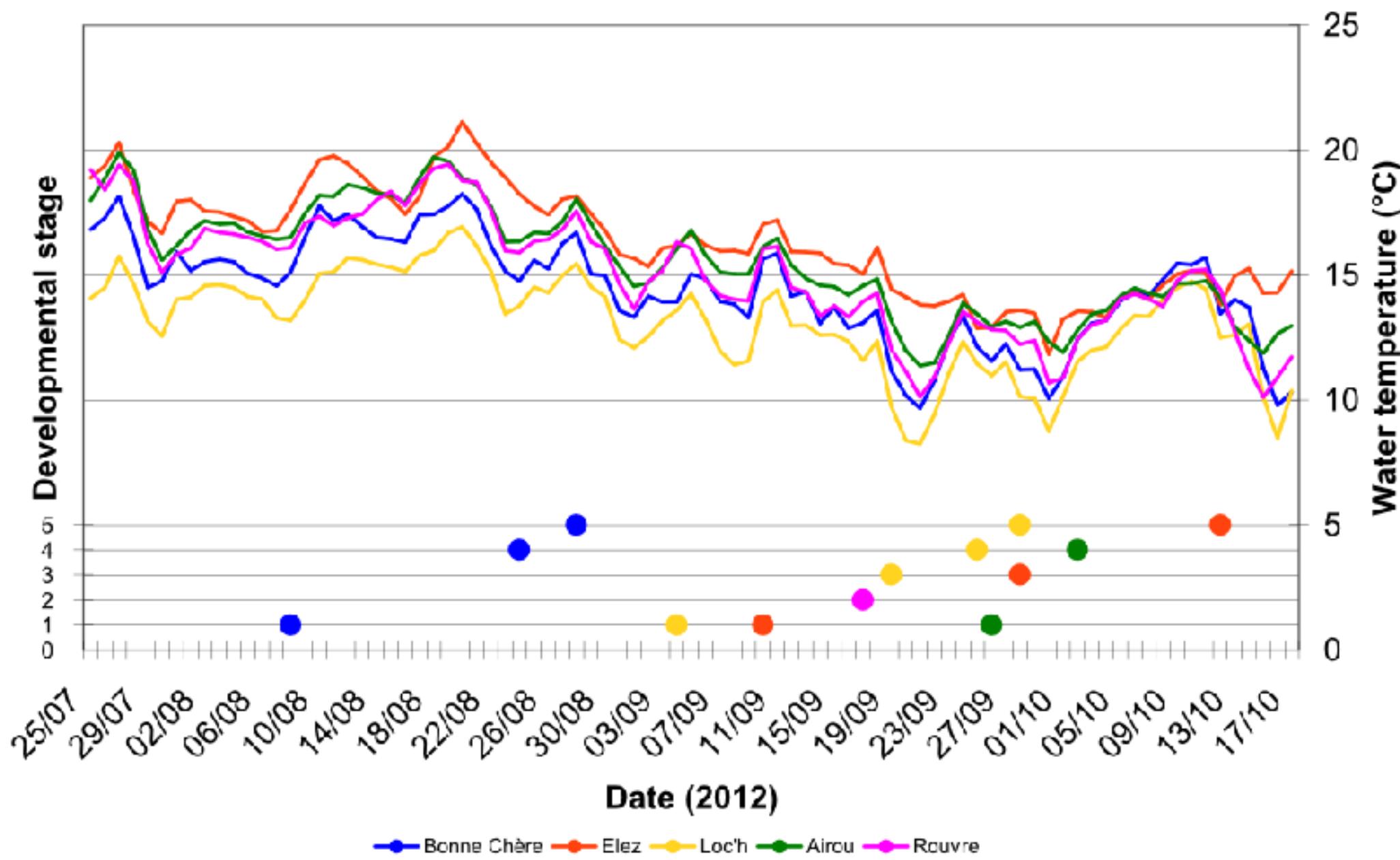


About water quality

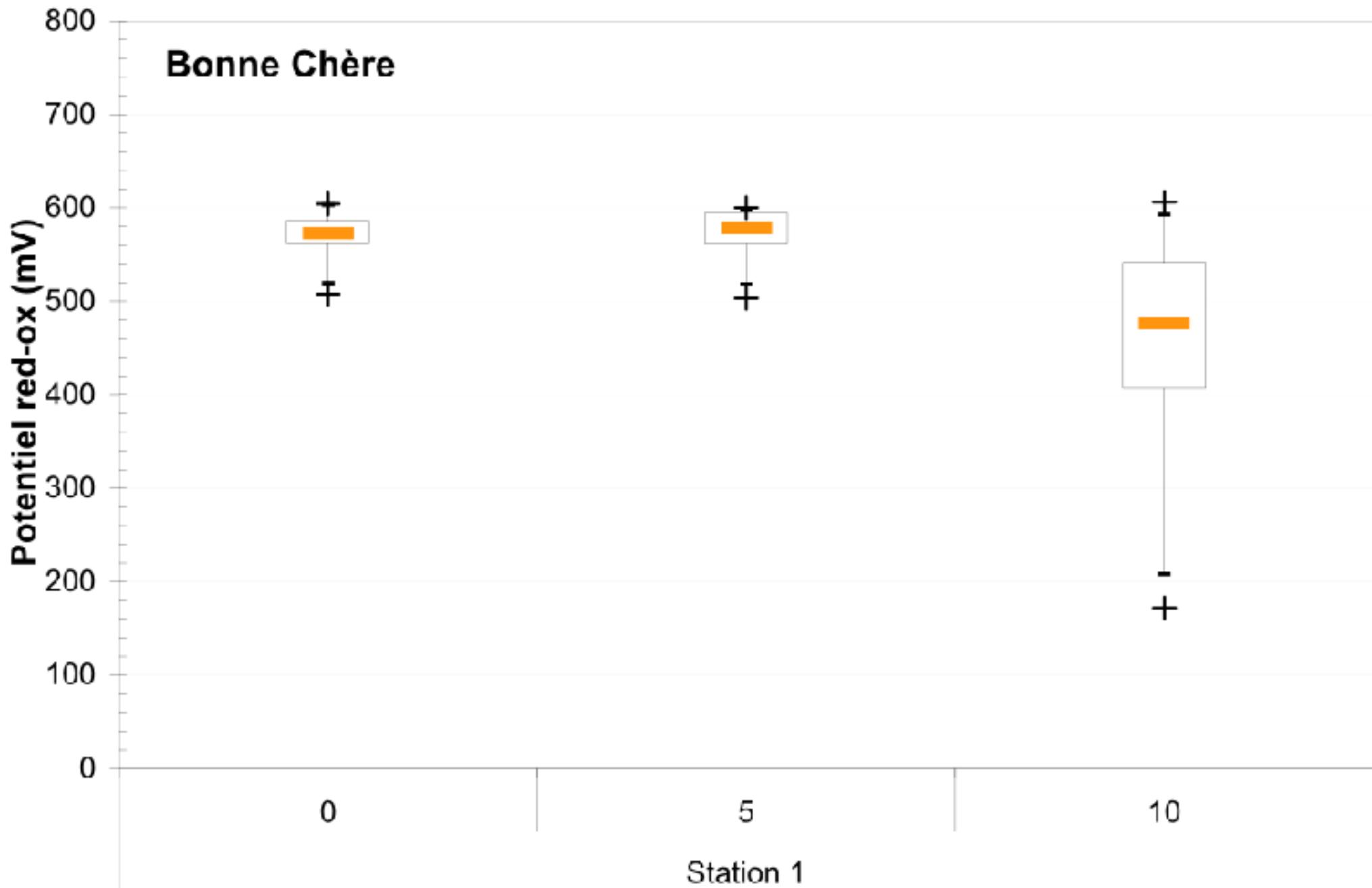
N-NO ₃	5 mg/L
P-PO ₄	0,028 mg/L
pH	6,69
Conductivity at 20°C	137 µS/cm
Saturation oxygen	94 %







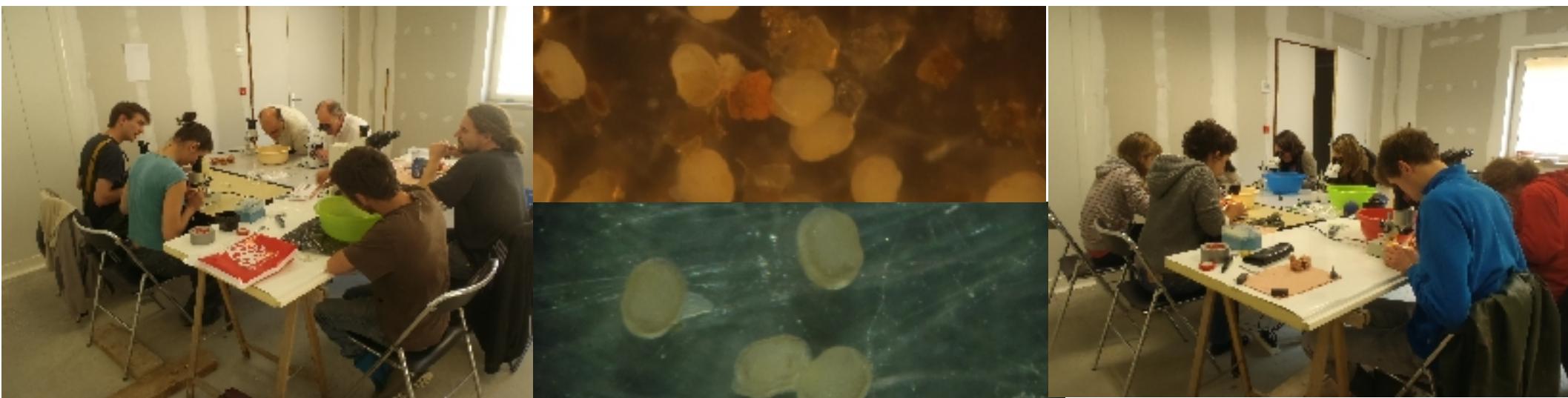
Bonne Chère

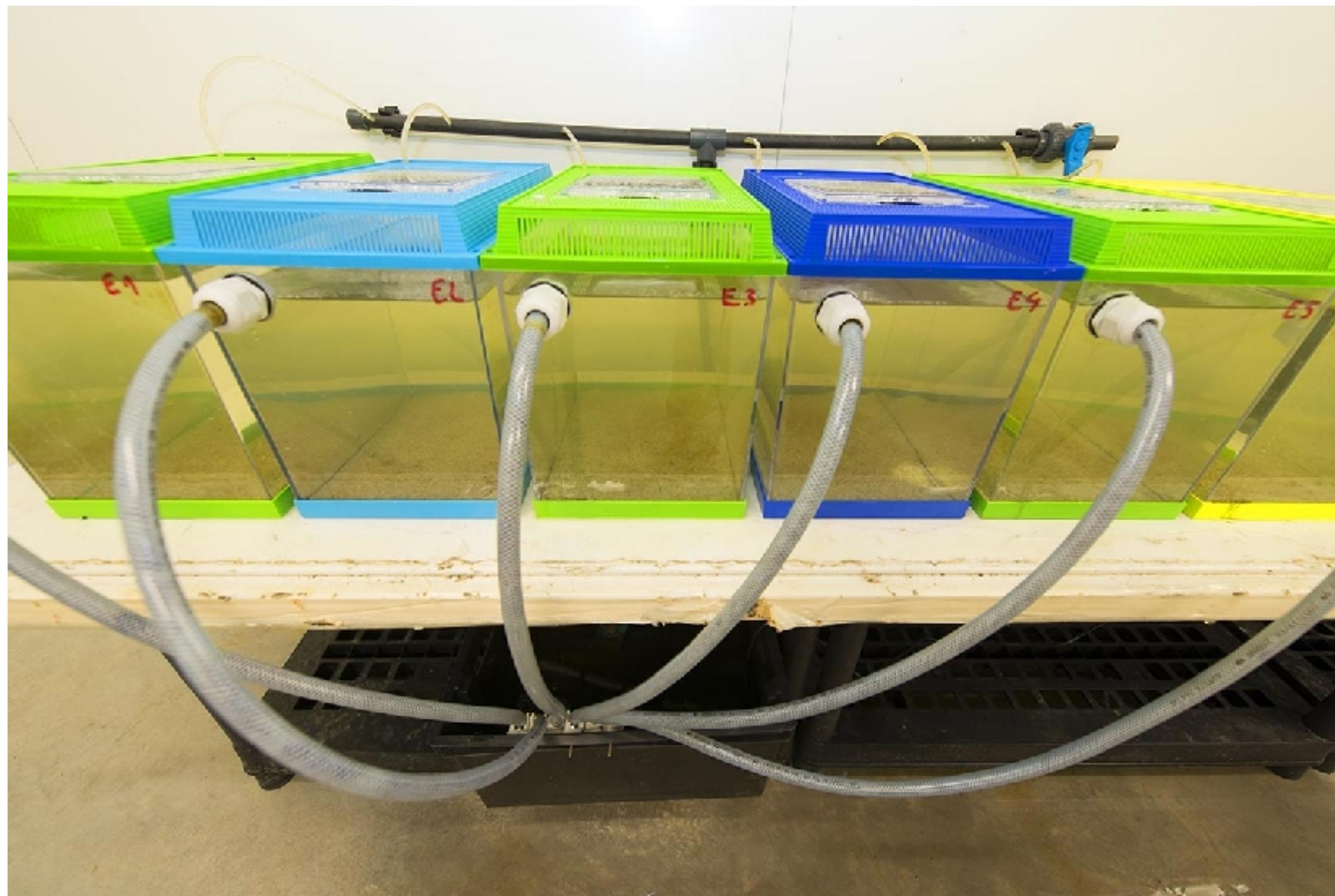


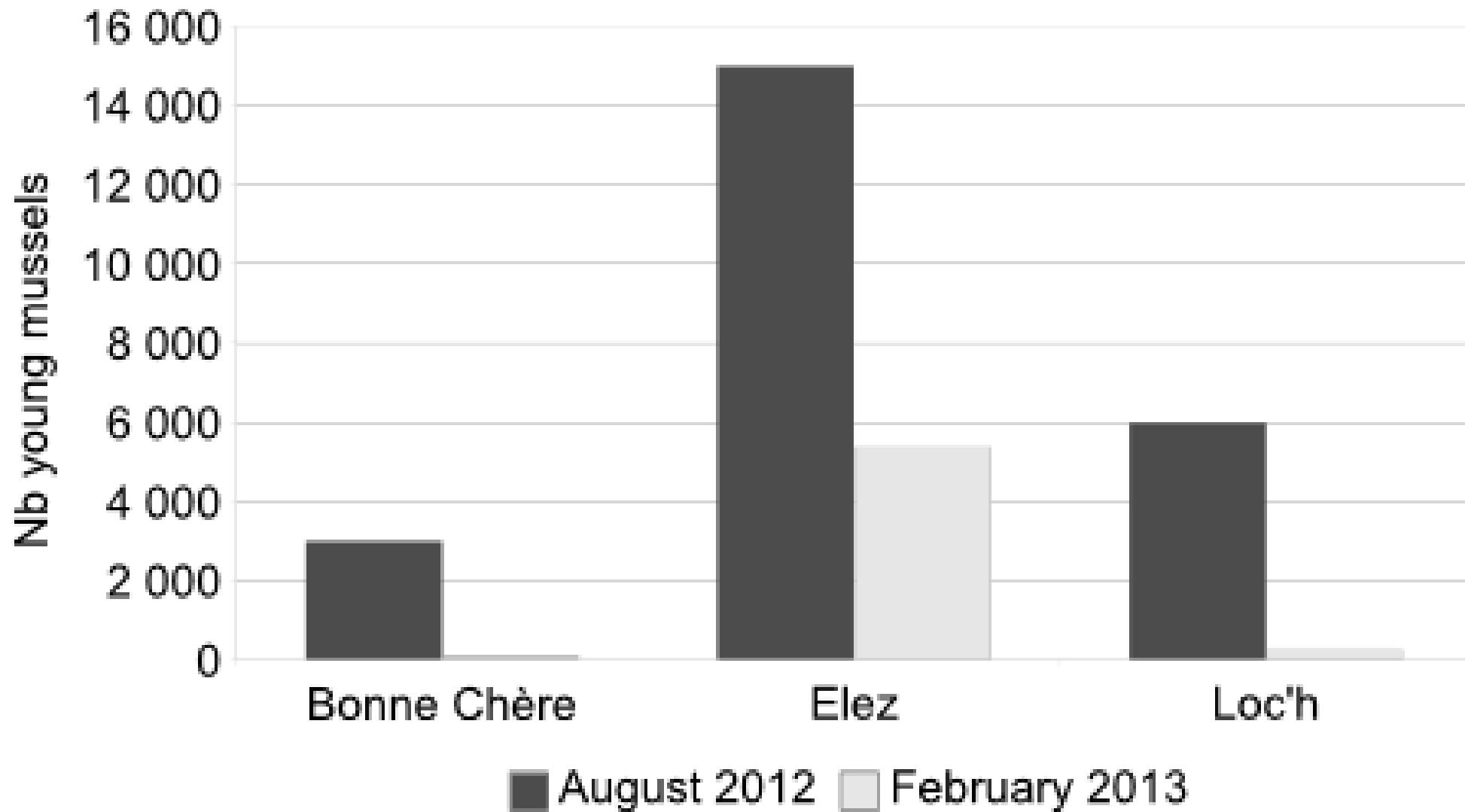
Collect of young mussels

June 2012

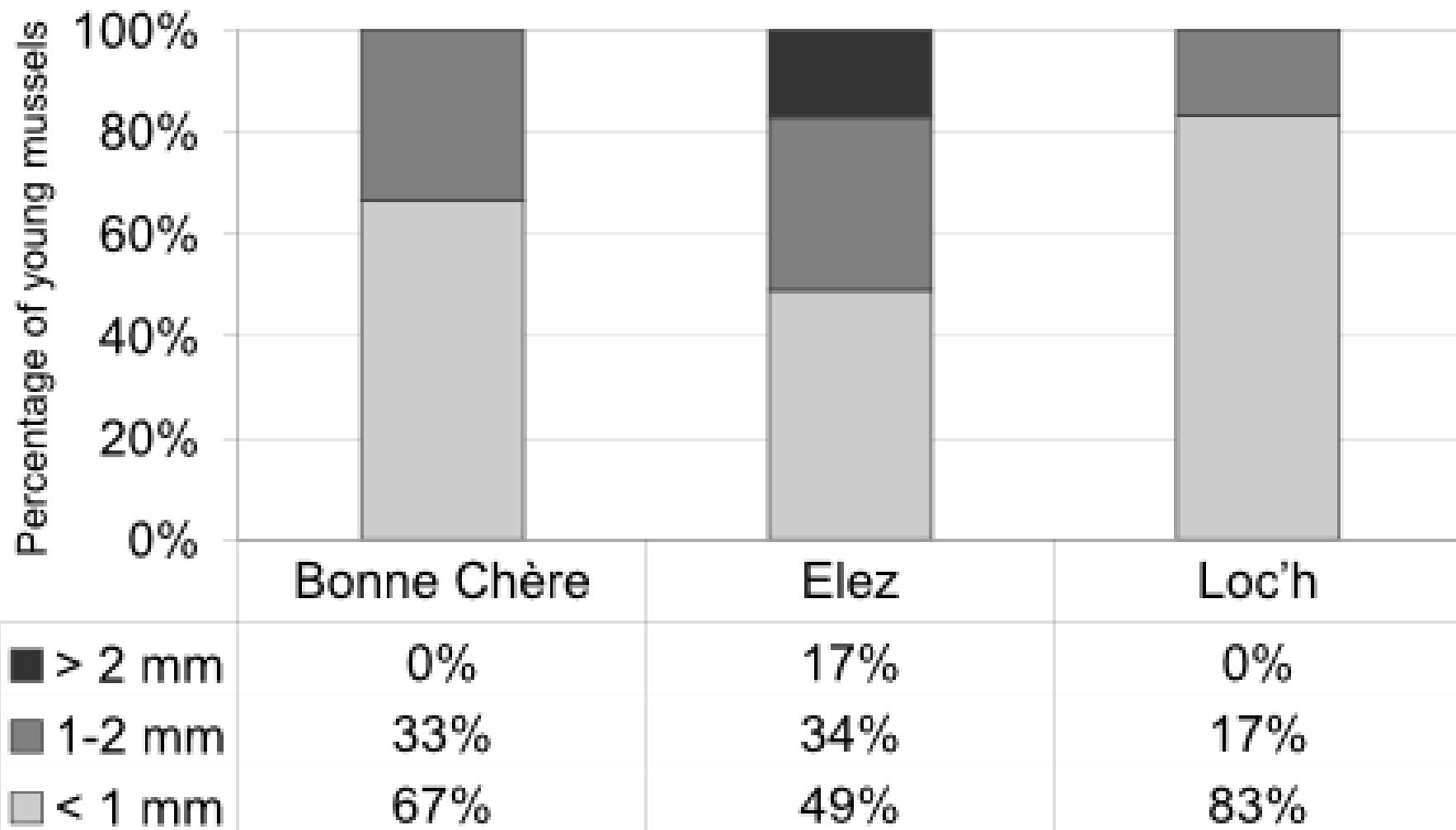
	Period of collect 29/05-29-06	Estimation au 01/08		Nb of mussels reinforced		Estimation au 13/08
Bonne Chère	several millions	3 000		-		-
Elez	several millions	10-15 000		5 millions ?		10-15 000
Loc'h	10 000	8 000		1000		6 000







Extrapolation of the number of young mussels based on sorting of a substrat sample in February 2013 : 39 for Bonne Chère, 5380 for Elez and 254 for Loc'h



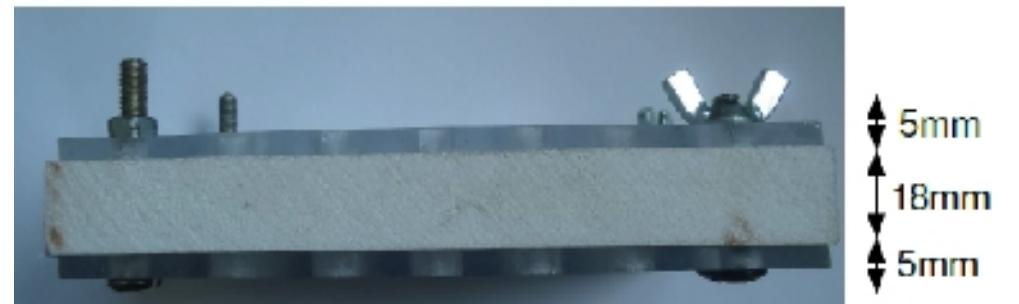
Average size of young mussels in February 2013

Reinforcements

Directs



In situ



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Thank you



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