

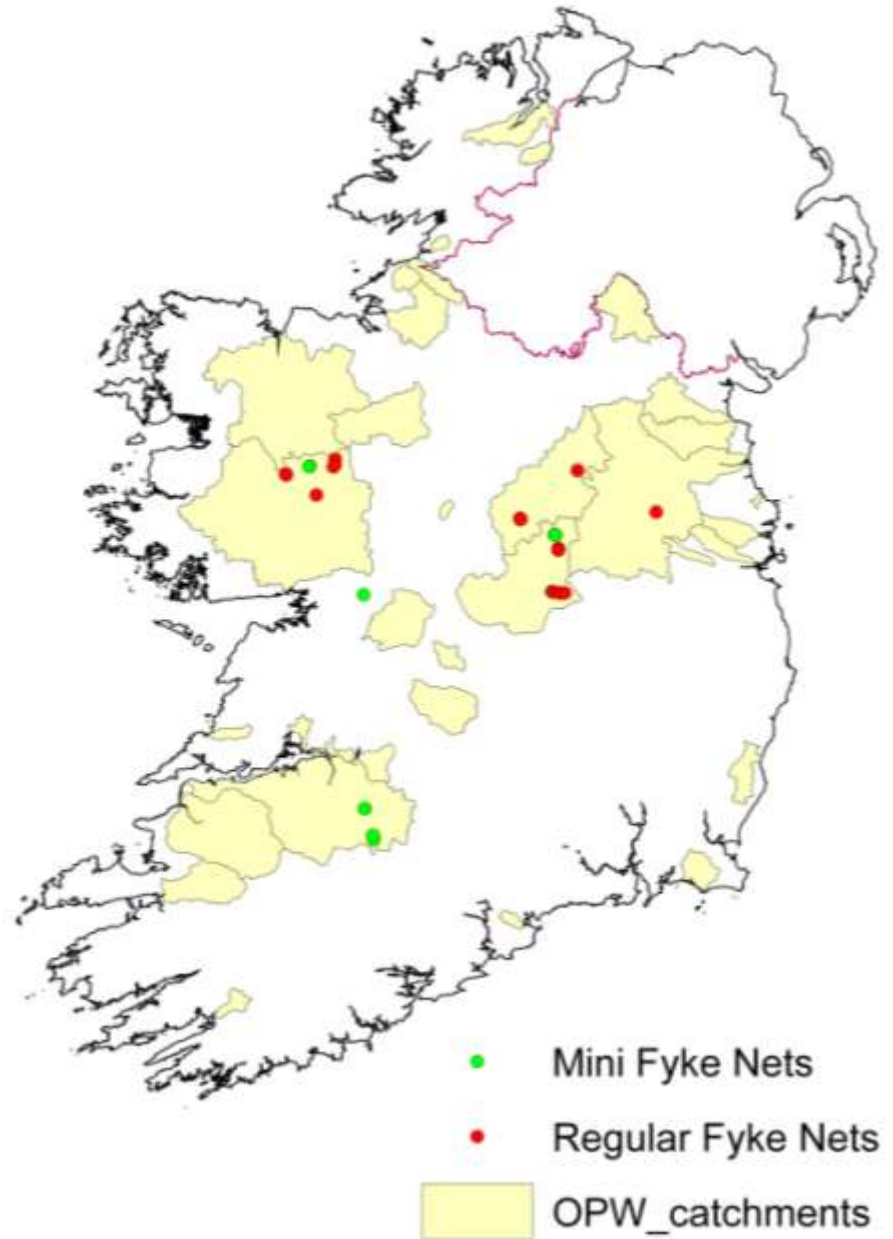
White clawed crayfish populations and channel maintenance in arterially drained Irish rivers



by Rossa O Briain (IFI)



Fyke net sites 2007-2014



Crayfish Habitat





Arterial Drainage

- 1945 drainage act
- Agricultural land improvement, circa 250,000 hectares
- Flood control
- OPW legislated to maintain channels
- 11,000km of channel
- 2000km every year (5 year cycle)

Arterial Drained Channels



Iascach Intíre Éireann
Inland Fisheries Ireland

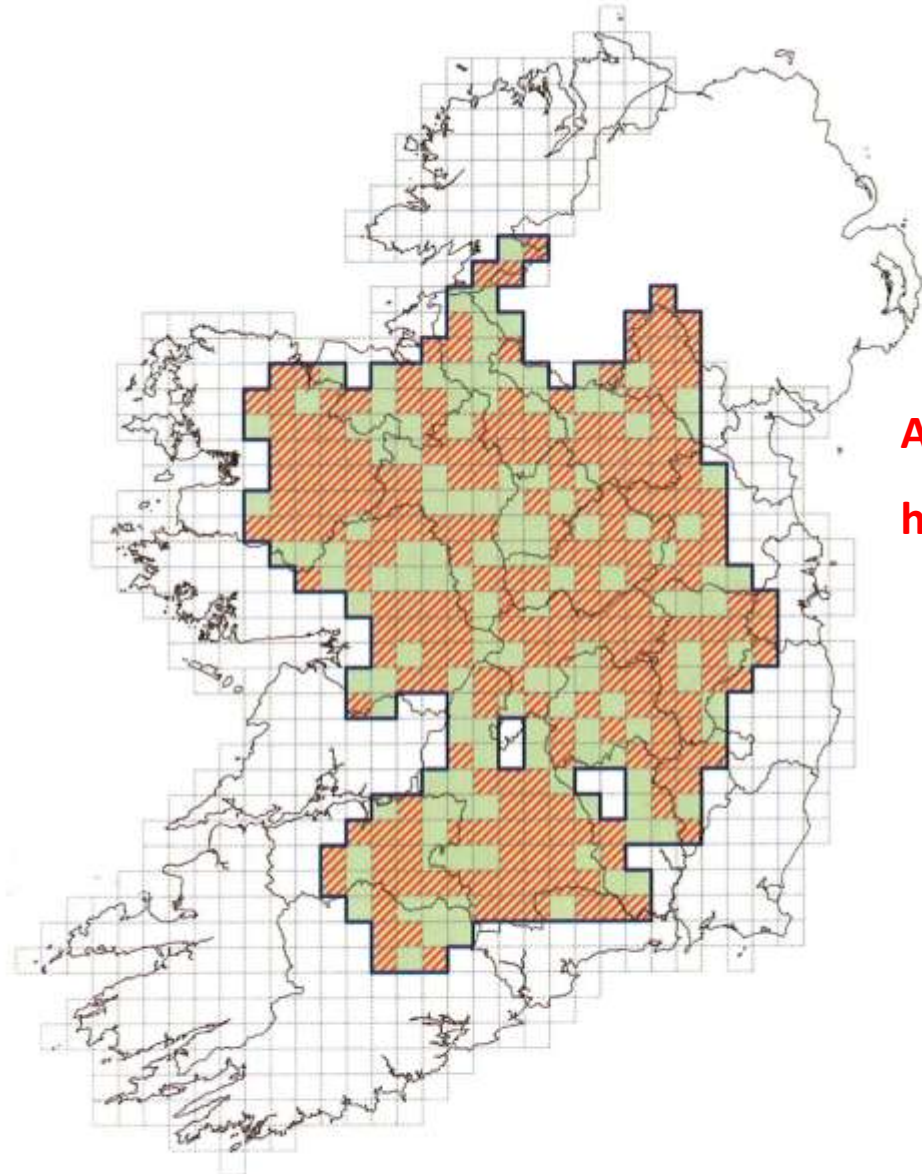
Channel maintenance



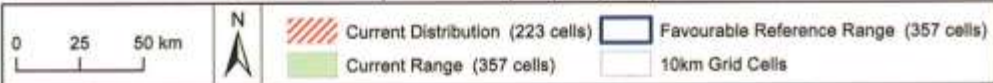
Management of aquatic and bank vegetation - **“low importance”**

Dredging/ sediment removal- **“low importance”**





WHITE-CLAWED CRAYFISH - *Austropotamobius pallipes* (1092)



Article 17 status assessment under the habitats directive, NPWS (2013)

ASSESSMENT SUMMARY:

CONCLUSION	2007	2013
Range	Inadequate	Favourable
Population	Inadequate	Favourable
Habitat for the species	Inadequate	Favourable
Future Prospects	Inadequate	Inadequate =
Overall Status	Inadequate	Inadequate =
Reason for change	No genuine change	

Methods

BACI design

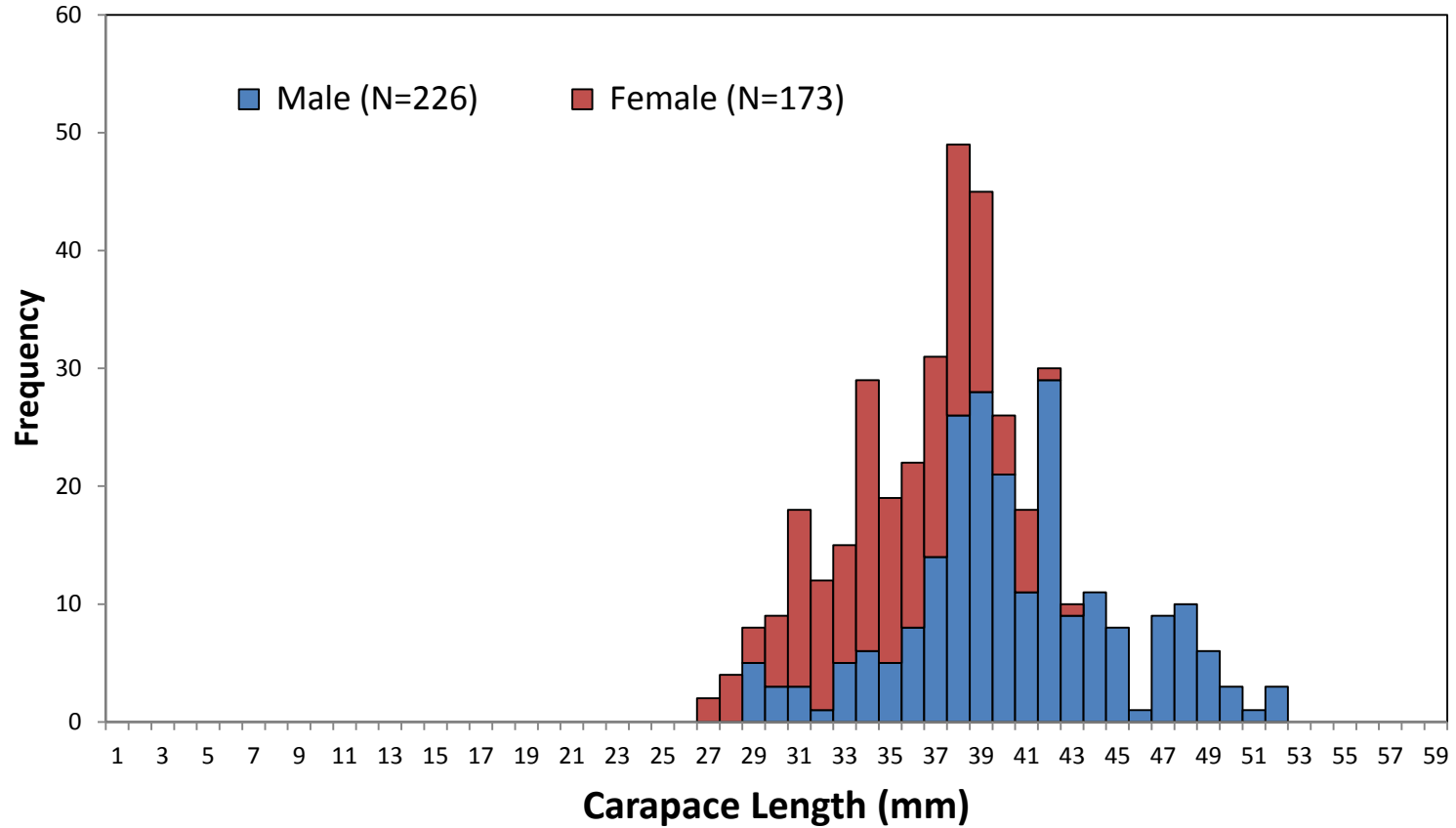
Pre and post channel maintenance

- Reach sampling (100-150m)
- Fyke nets x 5
- 24 hours



Fyke nets = effective sampling method for adult crayfish

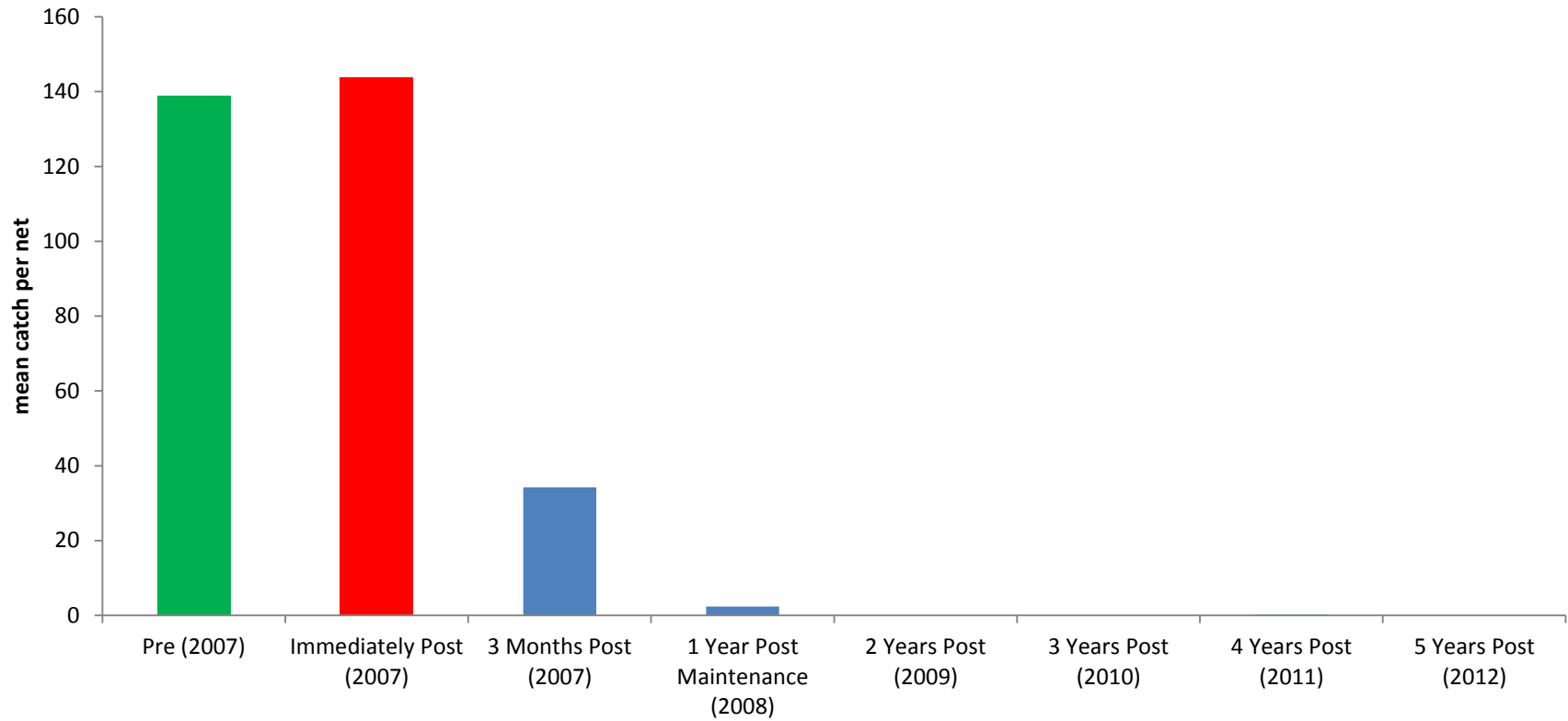
C1(1) (Brosna) Length Frequency Distribution in site 1, 2007





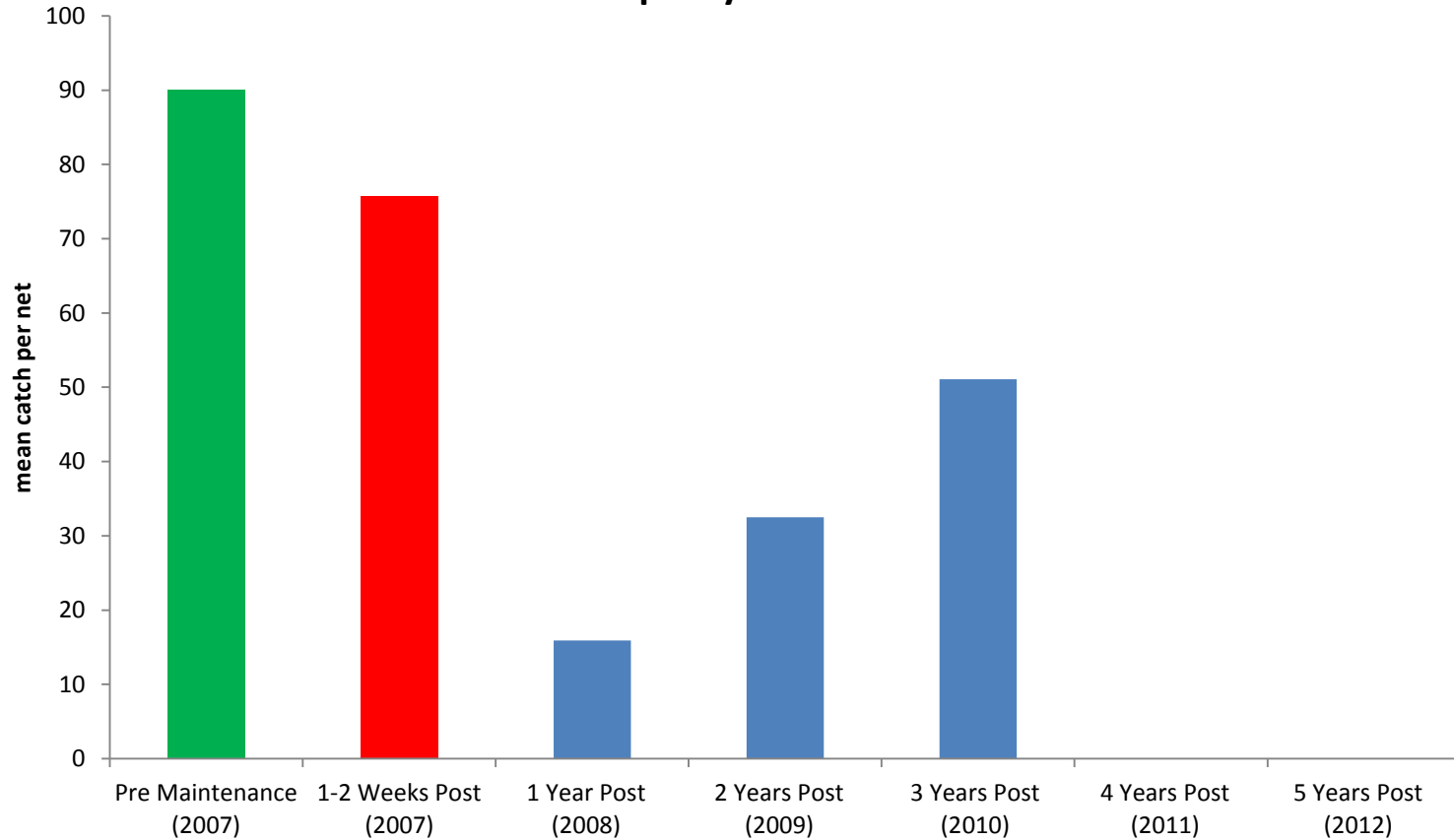
Response 1

Glore CPUE per fyke net 2007-2012



Response 2

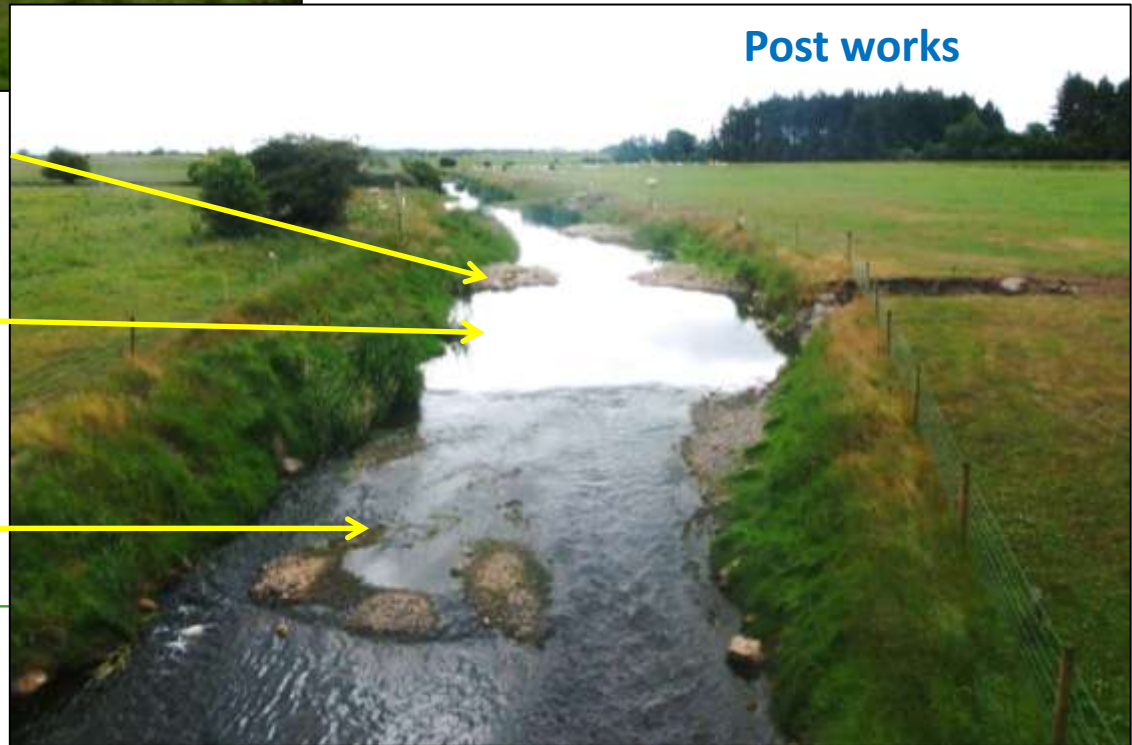
Brosna CPUE per fyke net 2007-2012



Pre works



Post works



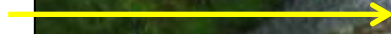
Deflectors



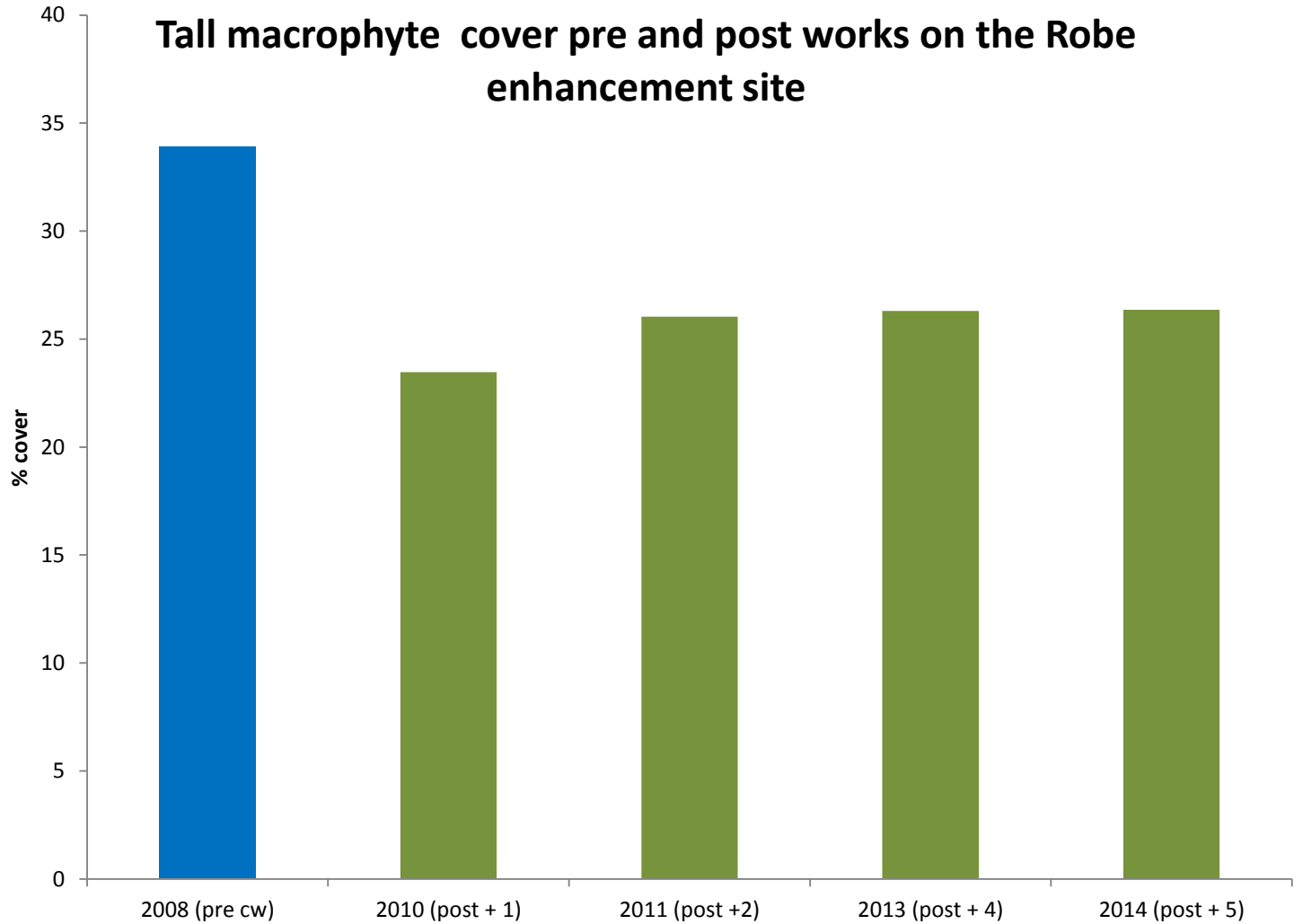
Pool



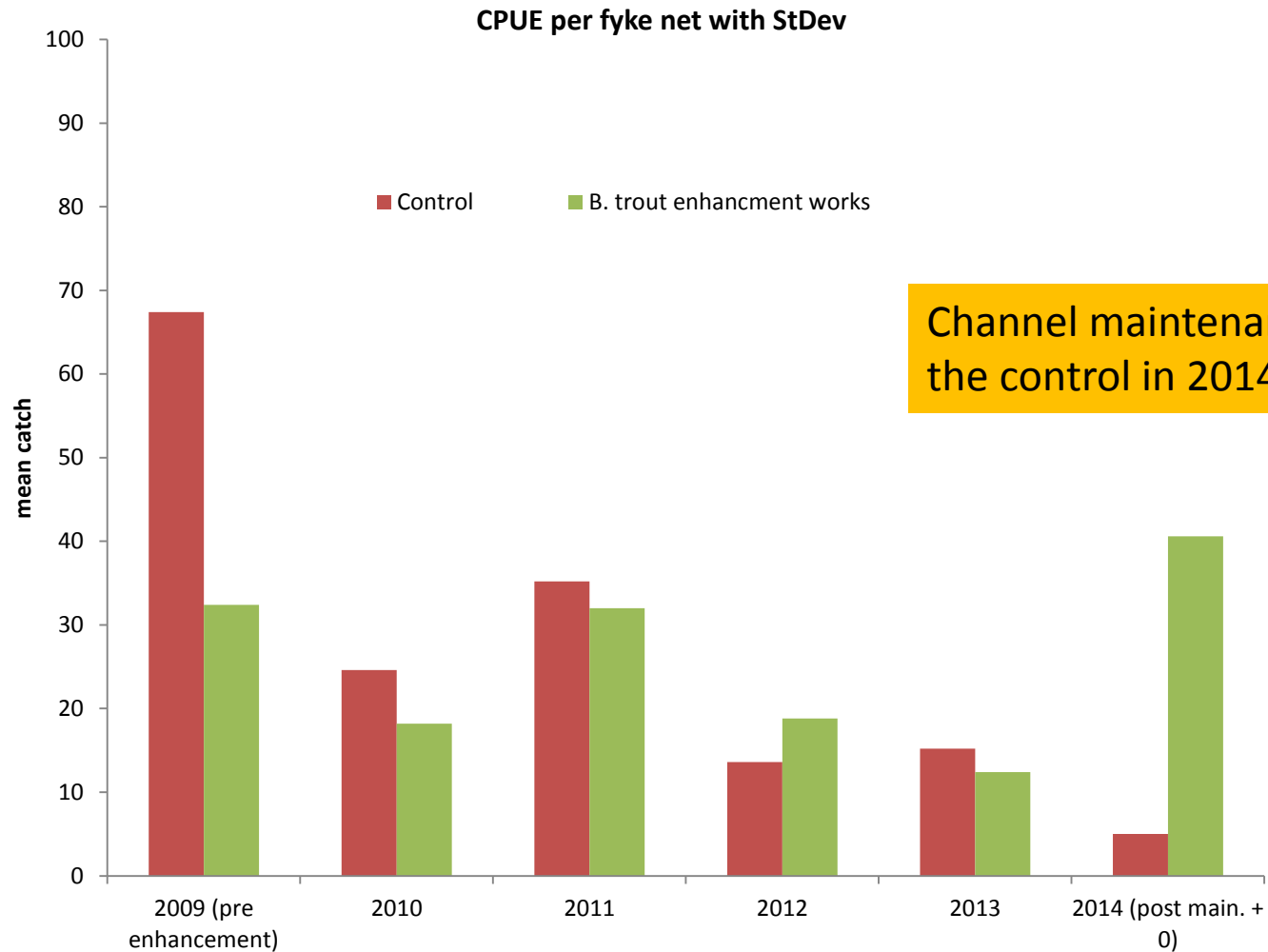
Gravel shoal



Tall macrophyte cover pre and post works on the Robe enhancement site



Fisheries Enhancement for Brown Trout



Control, pre maintenance, 2013



Control, post maintenance, 2014



Conclusions

1. Fyke nets

- Adult crayfish
- Complimentary method required for juveniles

2. Channel maintenance impact

- Short-medium
 - 2 Reponses
 - Long term cumulative impact ?? – further investigation
 - Silt/Vegetation management = “**low importance**” ??
- River versus National

Acknowledgements

OPW for funding

IFI staff past and present