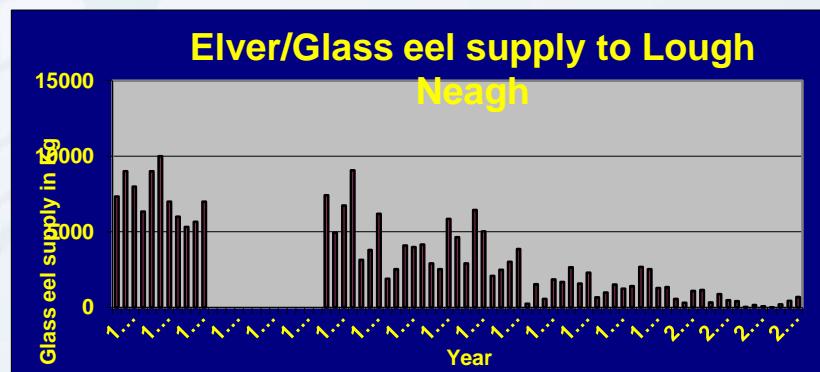


A simplified approach to monitoring glass eel –

Robert Rosell*, Derek Evans *
and Stewart Rosell

***Agri- Food and Bio-Sciences Institute for NI**

Northern Ireland does its share of large scale Eel recruitment monitoring – The major index monitoring site , River Bann



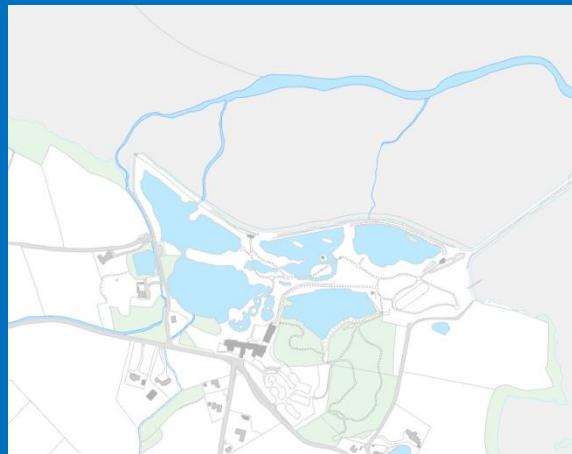
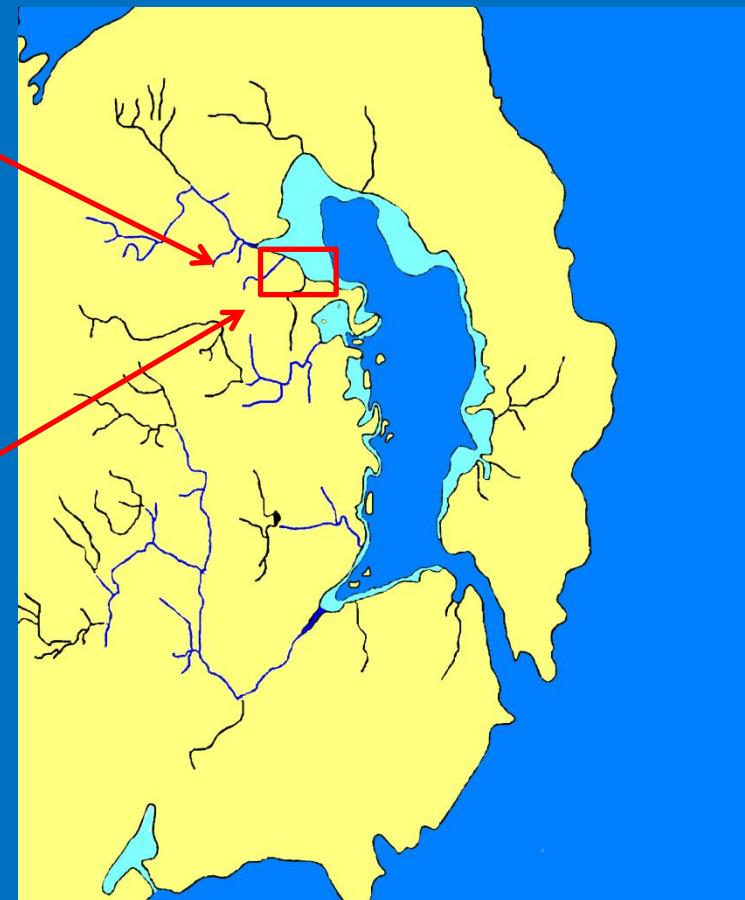
But what of all the smaller sites ?



Monitoring Glass eels the old way: Towing nets along quay walls at night
Laborious, cold, time consuming, expensive, hazardous



It all depends on the site
– A new method needed
for smaller sites



Ponds on the edge of Strangford Lough, Co Down



Exit from freshwater pond through Sea Wall, on to Mudflats



Keeping one pond as Fresh water requires flap valve in sea wall
–(note adjacent saline pools have free eel access)



Makes an ideal counting site for arriving glass eel. Dip netting in 2010 shows glass eel congregating



Several designs of settlement sampler tried



Before settling on this latest version –
fits into 25 cm square frame , 25 cm deep frame sampling net

Census method

- Deploy bundle of net sampler (January)
- Weekly, visit, shake out glass eel into net
- Count glass eel and carry over sea wall,
- Release in ponds







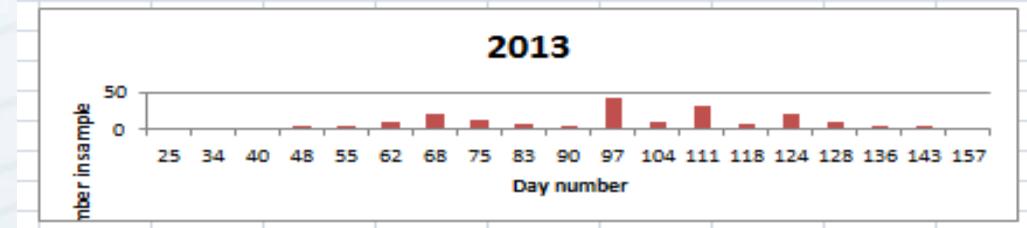
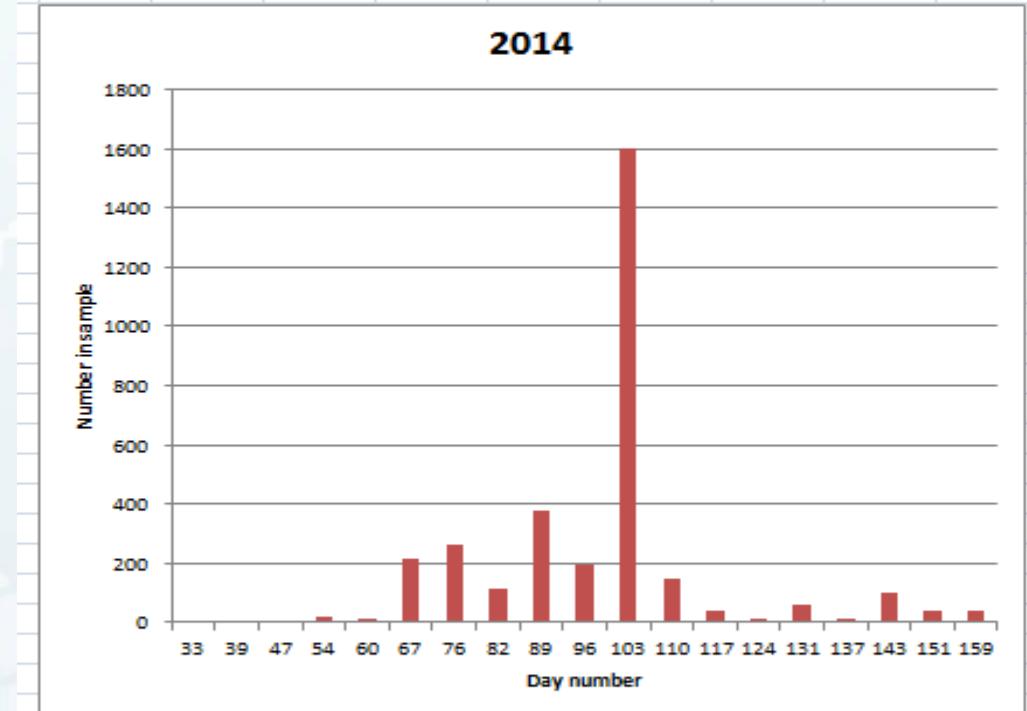
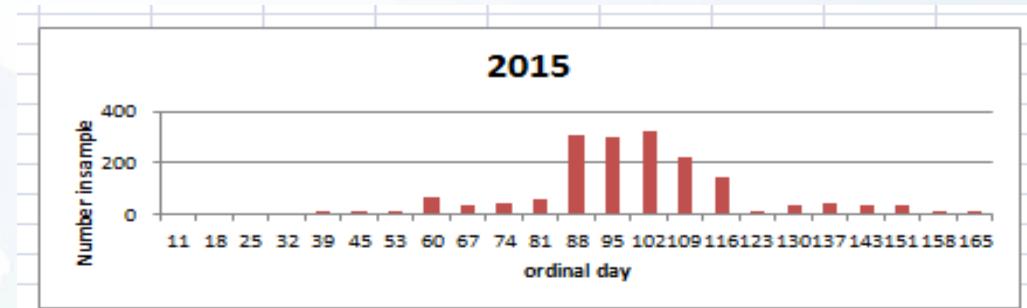
Data generated

Timing of arrival

Relative number

Pattern of arrival

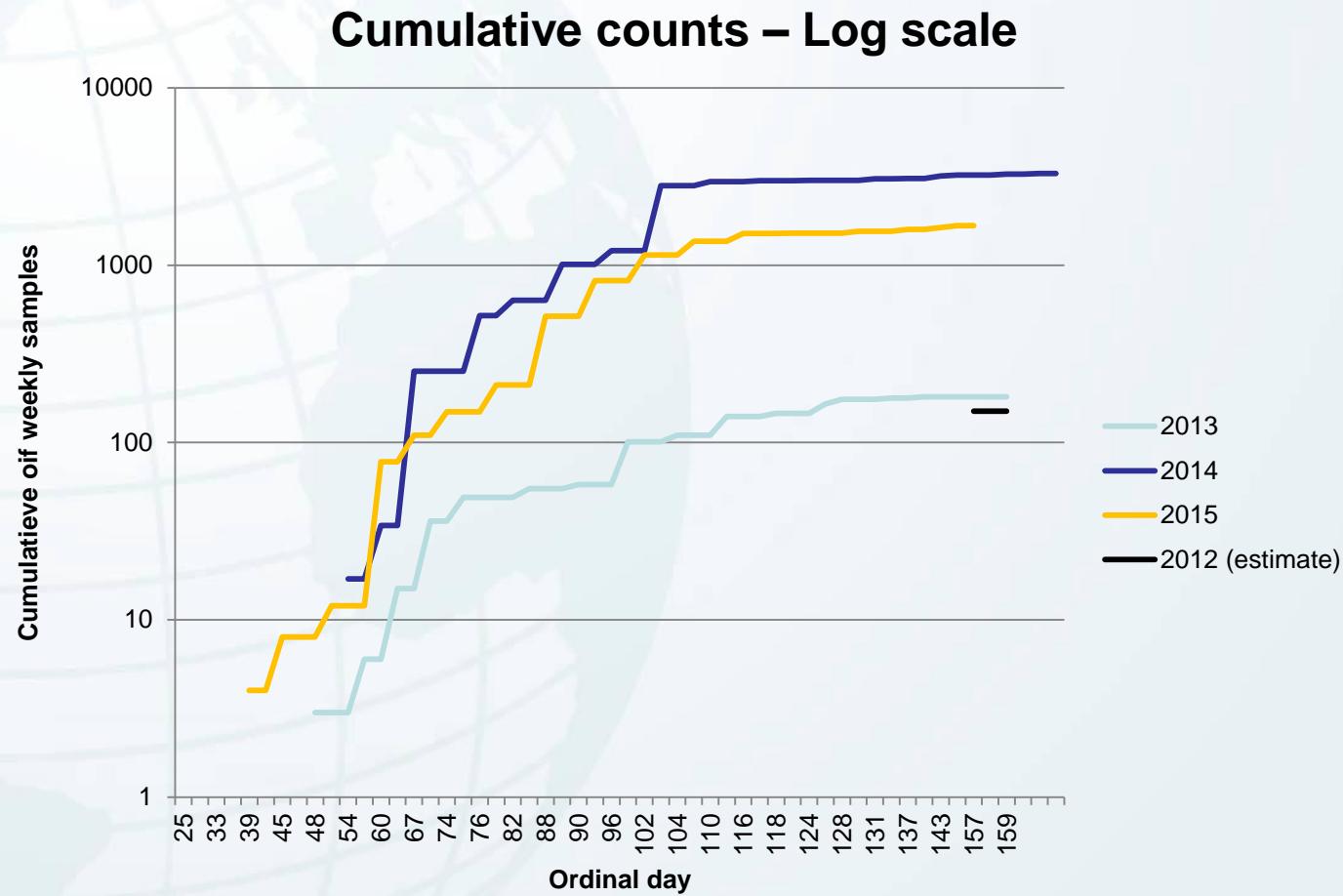
Number in sample



Days from January 1st

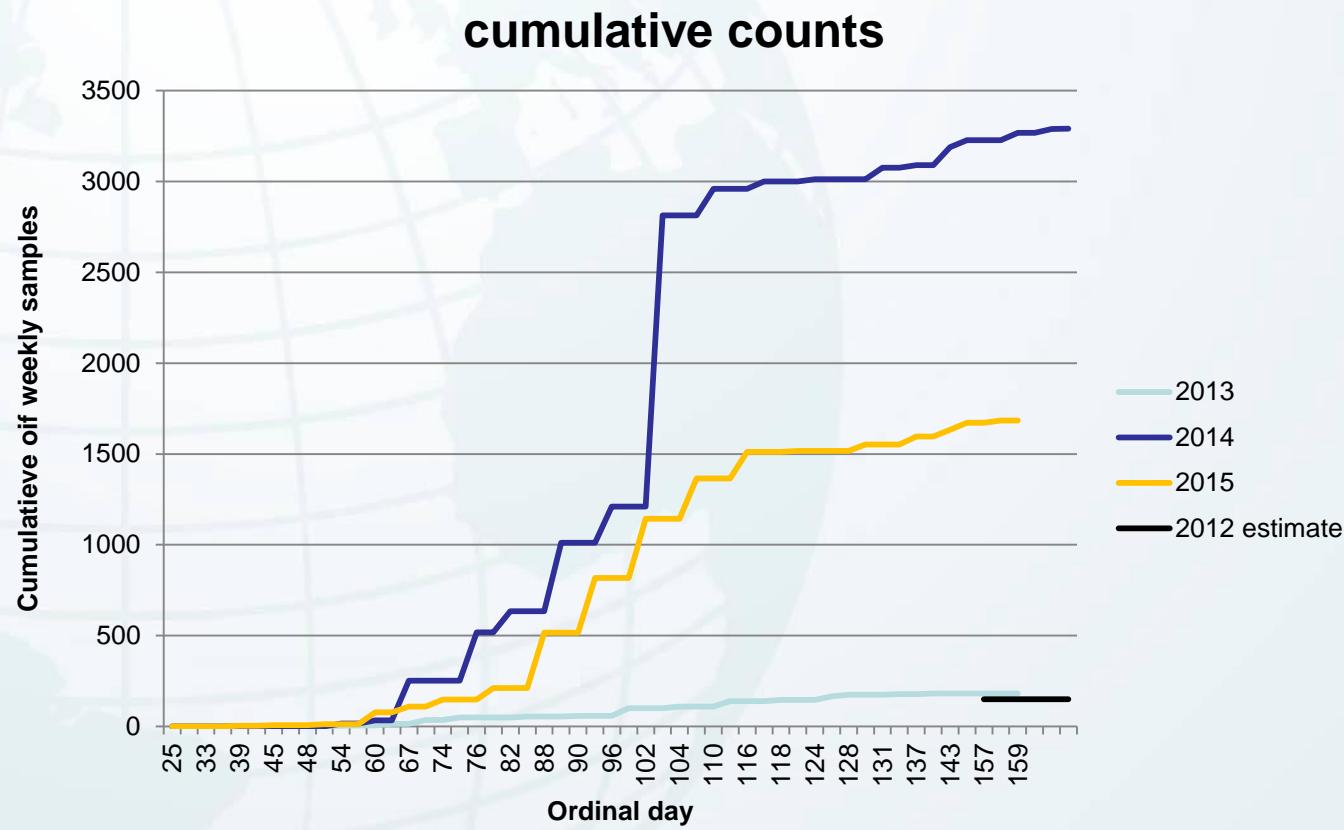
Data generated

Quantity of glass eel (log scale)

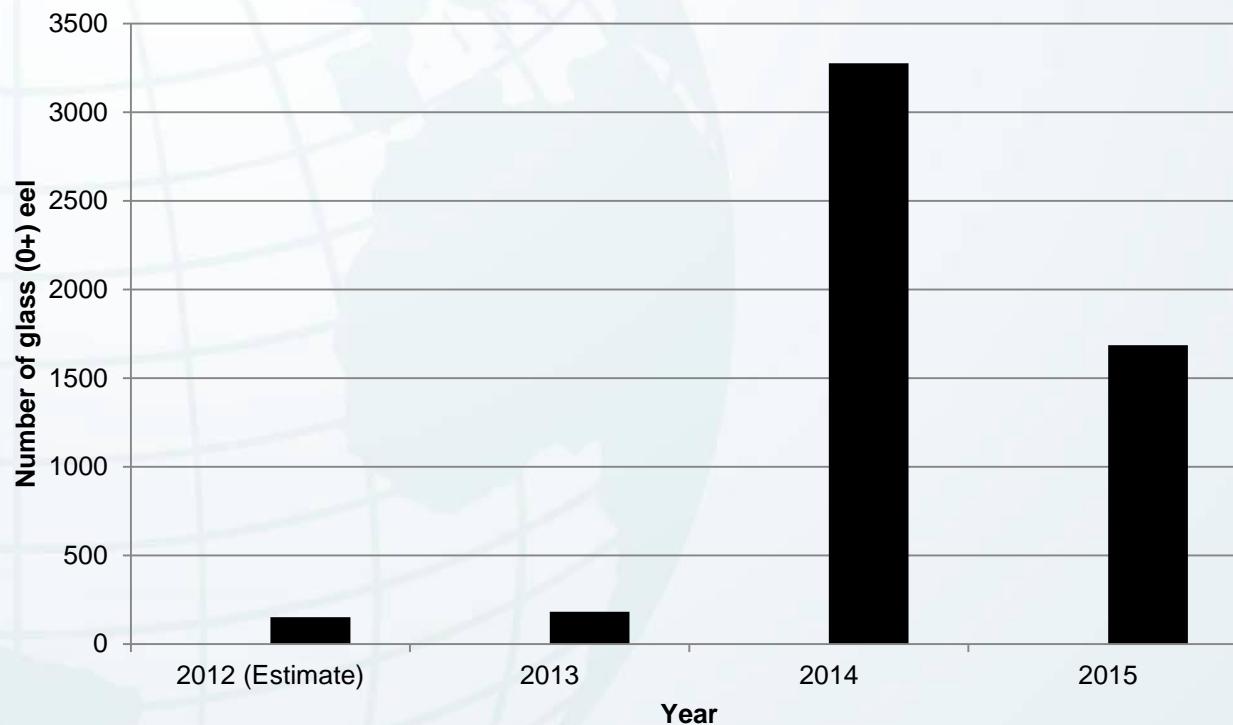


Data generated

Quantity of glass eel (linear scale)



Core basic data - annual counts



First arrivals are true glass eel (First week february)



Finishing in May/June as year 0 brown elvers/ bootlaces





One sampler can hold at least
(record to date) 1000 glass eel





Also noted significant numbers of 3 spined stickleback moving into freshwater to spawn, and older bootlace eel (max size to date 30 cm)



New sites trialled, for glass eel /elver 2015 (red dots)

Other opportunities (Green dots) with sampling history for possible expanded network to study arrival routes...

Health Warning

- Legal permissions are required
- Glass eel fishing is a regulated activity under EU law, and even for non commercial monitoring of recruitment, conservation, and assisting glass eels over barriers, permissions are required from state agencies to sample and handle glass eel, and operate within the Law in the UK, Ireland and other EU countries.



Release site
stocking density average 2013-15
Circa 300 Glass Eel / Hectare

In conclusion



A simple, low tech means of gathering valuable data, which
Could form the basis of a network of monitoring sites