



River Almond,  
Cramond



Firth of Forth

# Strategy for the Selection & Prioritisation of Priority Pollutants

Dr Ian Ridgway, SEPA, 24 November 2015

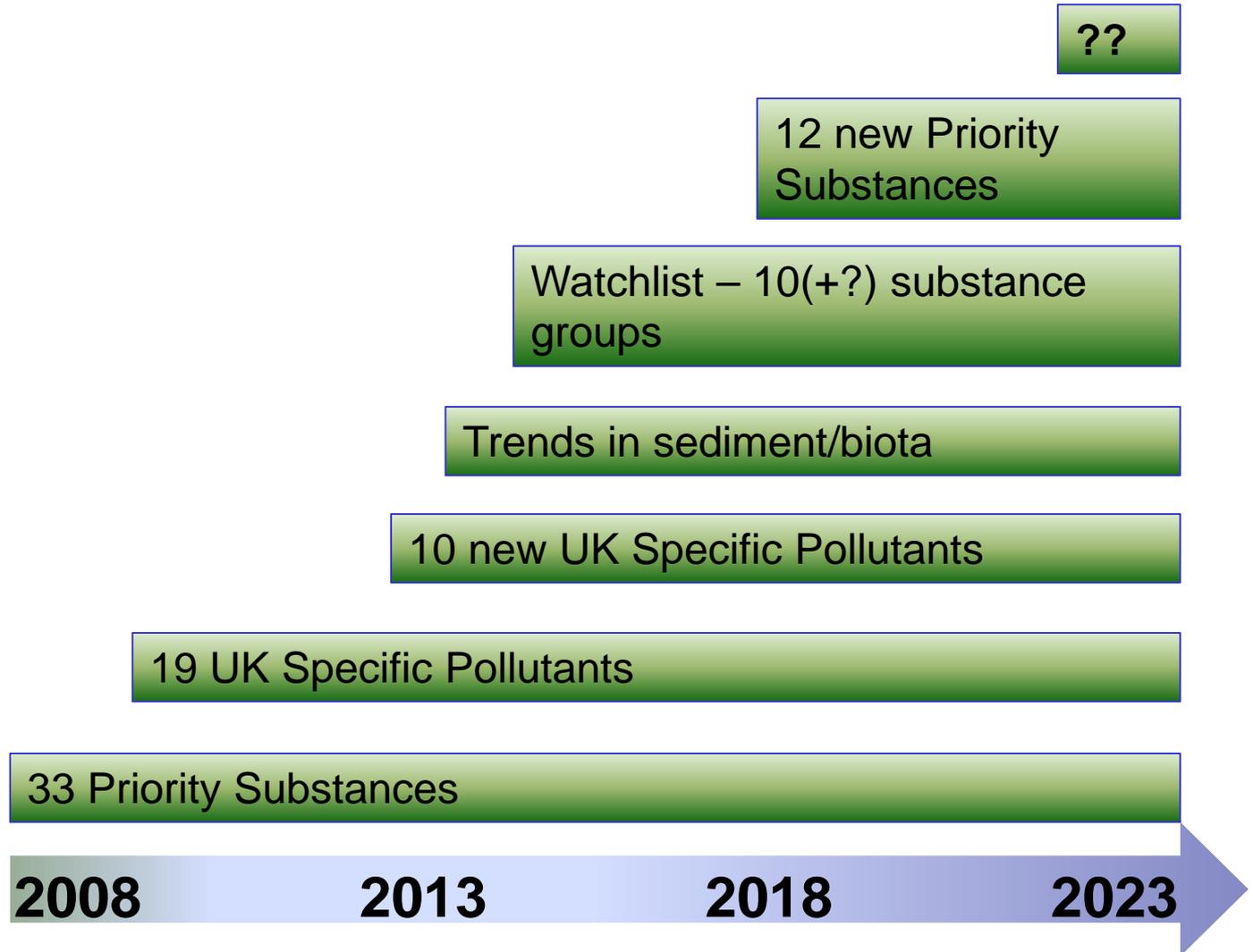


Union Canal

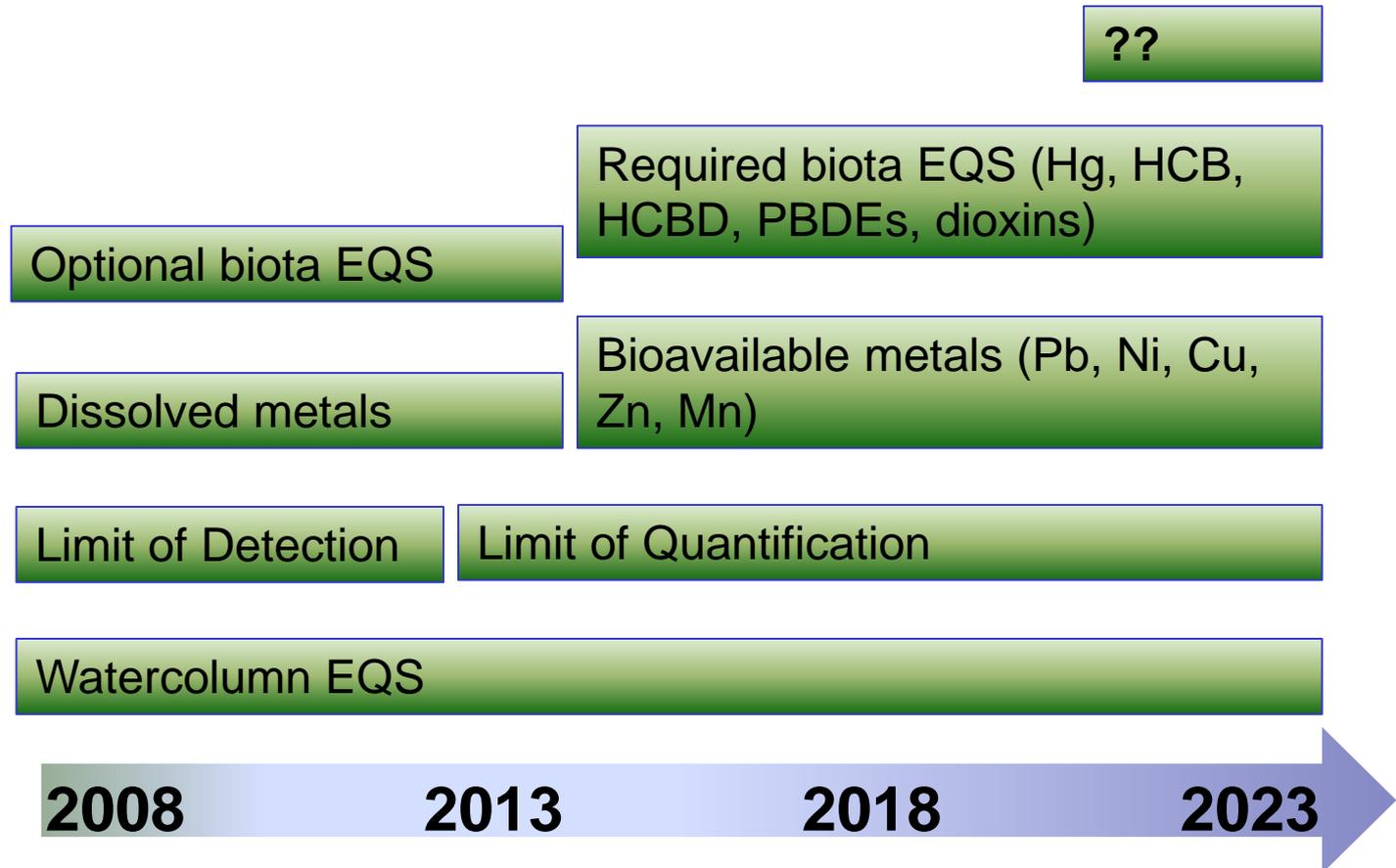


Water of Leith

# WFD Timeline - Increasing Requirements

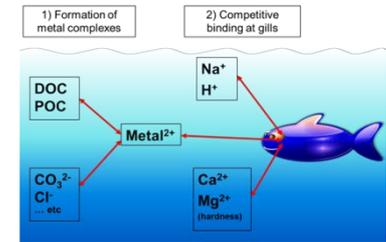
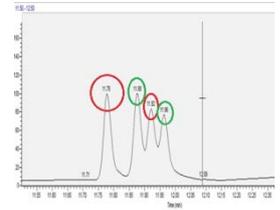


# ...with increasing complexity



# Some 2013/39/EC challenges

- **Limit of Quantification**
  - Major implications across the board
  - how to use “mixed” datasets?
- **Bioavailable metals EQS**
  - pH, DOC, hardness required
  - More sampling and analysis
  - How to fill datagaps?
- **Biota EQS**
  - Practicalities – enough fish & tissue, long term sustainability?
  - Data treatment - trophic level transformation?
  - Ethical questions (protected species)

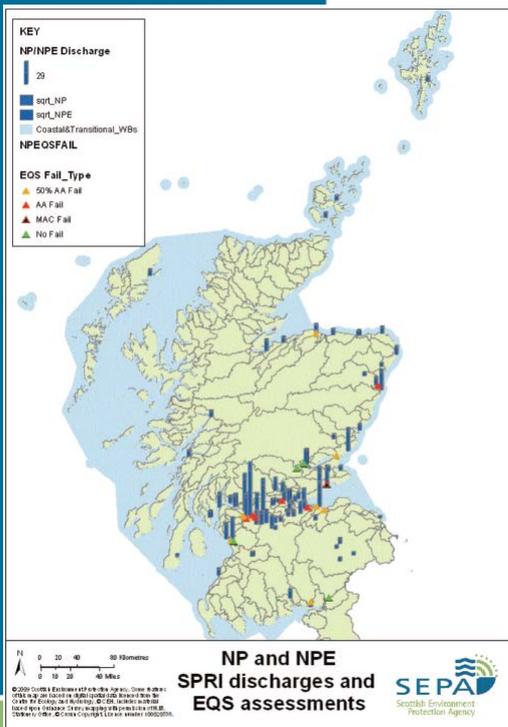


# SEPA's approach: 1. Prioritising chemicals of national concern

- IMPRESS guidance
- “extended universe” = 925 chemicals
  - “surface water universe” = 432 chemicals
  - Estimate PEC score
  - Estimate PNEC score
  - Highest risk score included nonylphenol, Cd, Pb, triclosan, DEHP, HBCDD

Chemical prioritisation:  
ranking chemicals of concern  
to Scotland's environment

Phase 1: surface waters  
8 December 2009



# SEPA's approach: 2. Targeting Specific Issues

- Lots to do, need to be clever with resources
- Are we asking the right questions?
- Communication: “data rich and information poor”
- Delivering what we need, not always what is required



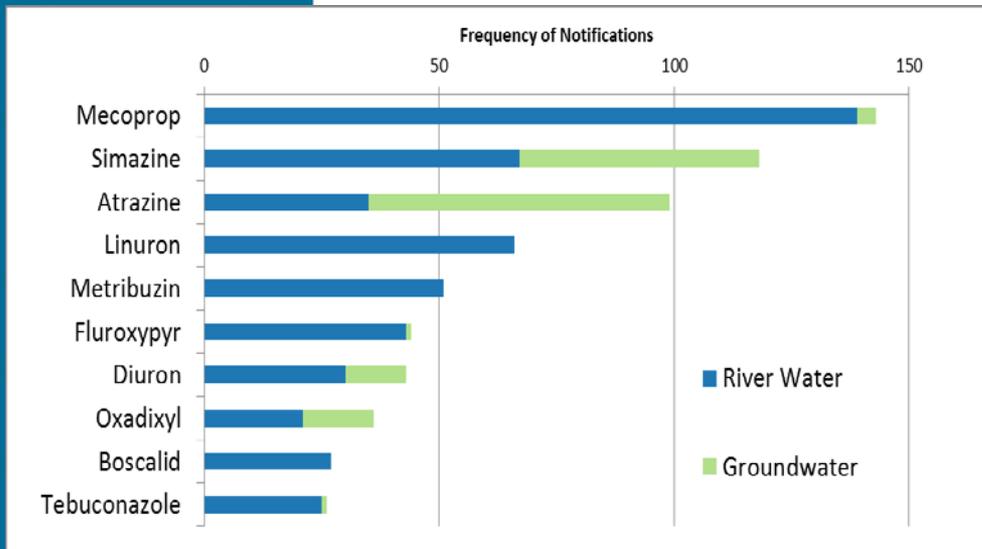
# SEPA's Campaign Approach



- Key to the “Campaign approach” is how we identify priorities for action and who we work with to get results
- Identify priorities from:
  - New Regulatory Requirements (EU, UK or national)
  - Issues identified by partners, “hot topics”
  - Existing SEPA Priorities

# Campaign Approach a WFD Example: Pesticides

- **Step 1: Define the questions**
  - What pesticides are potential risks in the Scottish environment?  
What are the priorities?



**Detection of pesticides not authorised for use in the UK or above 75% of the Drinking Water Standard**

- Can we justify modifying our monitoring approach for WFD and other drivers?
- What evidence is needed to support regulatory action, if any?

# Campaign Approach Outputs



**Pesticide Monitoring Review**

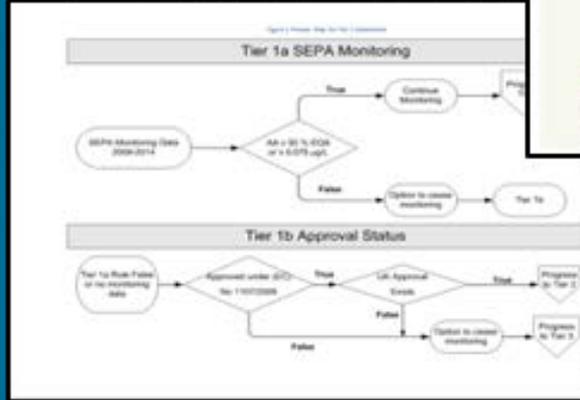
**Introduction**  
We have devised a pest monitoring scheme to ensure there is a need for pesticides to monitor any change in pest status and use a variety of insecticide and fungicide.

**Method**

**Tier 1**

**Tier 1A**  
The method uses all surface water features that are checked and monitored using the standard 100m x 100m grid. If there are features from drainage or water courses, if it is then the process will need to be modified. All water courses will be monitored. The use of 100m x 100m grid water courses will be monitored. The use of 100m x 100m grid water courses will be monitored. The use of 100m x 100m grid water courses will be monitored.

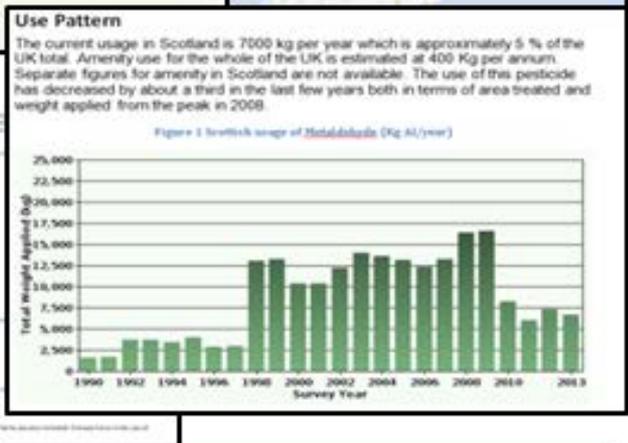
**Tier 1B**  
The method uses all surface water features that are checked and monitored using the standard 100m x 100m grid. If there are features from drainage or water courses, if it is then the process will need to be modified. All water courses will be monitored. The use of 100m x 100m grid water courses will be monitored. The use of 100m x 100m grid water courses will be monitored.



**Use Pattern**

The current usage in Scotland is 7000 kg per year which is approximately 5 % of the UK total. Amenity use for the whole of the UK is estimated at 400 Kg per annum. Separate figures for amenity in Scotland are not available. The use of this pesticide has decreased by about a third in the last few years both in terms of area treated and weight applied from the peak in 2008.

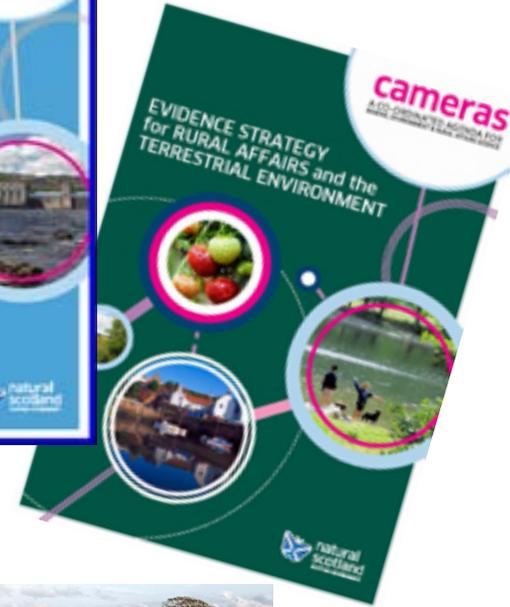
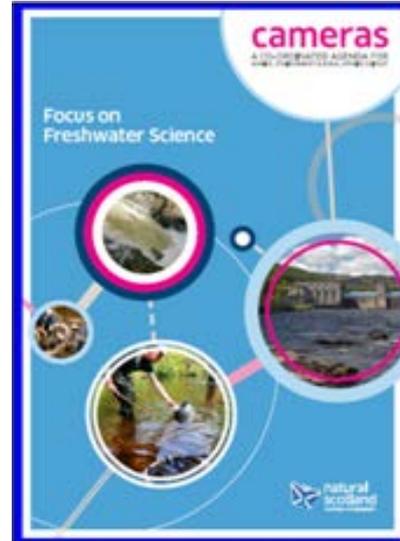
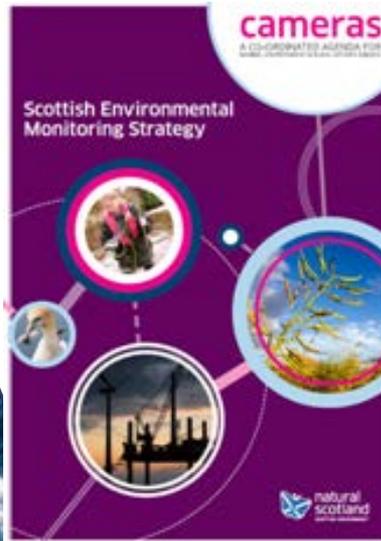
**Figure 1 Scottish usage of Metolaldehyde (Kg AI/year)**



Survey Year	Total Weight Applied (Kg)
1990	1000
1991	1000
1992	1000
1993	1000
1994	1000
1995	1000
1996	1000
1997	1000
1998	1000
1999	1000
2000	1000
2001	1000
2002	1000
2003	1000
2004	1000
2005	1000
2006	1000
2007	1000
2008	15000
2009	15000
2010	10000
2011	10000
2012	10000
2013	10000

# cameras

A CO-ORDINATED AGENDA FOR  
MARINE, ENVIRONMENT & RURAL AFFAIRS SCIENCE



marinescotland



Scottish  
Water  
Always serving Scotland



Scottish Natural Heritage  
All of nature for all of Scotland



Food Standards  
Scotland

For safe food and  
healthy eating



Forestry Commission Scotland  
Coimisean na Coilltearachd Alba



# CAMERAS and Hazardous Substances

- SEPA is committed to work with CAMERAS partners and other monitoring organisations to ensure Scotland has the data it needs on the presence of- and environmental issues associated with- hazardous substances in Scotland's environment.



- A flexible monitoring approach, not constrained by SEPA's capabilities, so Scotland monitors; right substance, right place, right time, through partnership working and collaboration.
- Across the whole environment



# Working with partners



## Wildlife Disease & Contaminant Monitoring & Surveillance Network

*Perfluorinated compound (PFC) concentrations in northern gannet eggs 1977-2014: a PBMS report*



### Perfluorinated compound (PFC) concentrations in northern gannet eggs 1977-2014: a Predatory Bird Monitoring Scheme (PBMS) report

L.A Walker, M.G. Pereira, E.D. Potter, S. Lacorte Bruguera<sup>1</sup> & R.F. Shore<sup>2</sup>

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### Mercury (Hg) concentrations and stable isotope signatures in golden eagle eggs 2009-2013: a Predatory Bird Monitoring Scheme (PBMS) report

L.A. Walker, H.K. Grant, D. Hughes<sup>1</sup>, A.J. Lawlor, M.G. Pereira, E.D. Potter, & R.F. Shore<sup>1</sup>

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## Predatory Bird Monitoring Scheme



# Horizon Scanning



## The Process

What have we done to get to this point?



- SEPA's process involves scanning current evidence base & projections, issues objectively prioritised
- Issues assessed by relevant SEPA "expert" to provide a central view of their importance
- Internal peer review to provide "sense check"

