Challenges for monitoring

Plymouth Sound & Tamar Estuaries

Kaja Curry, TECF Coordinator

Workshop aims

- Understand what monitoring is taking place
- Identify evidence gaps
- Explore collaborations to improve efficiency & share knowledge
- Plan future directions & next steps

…for the next 10 minutes

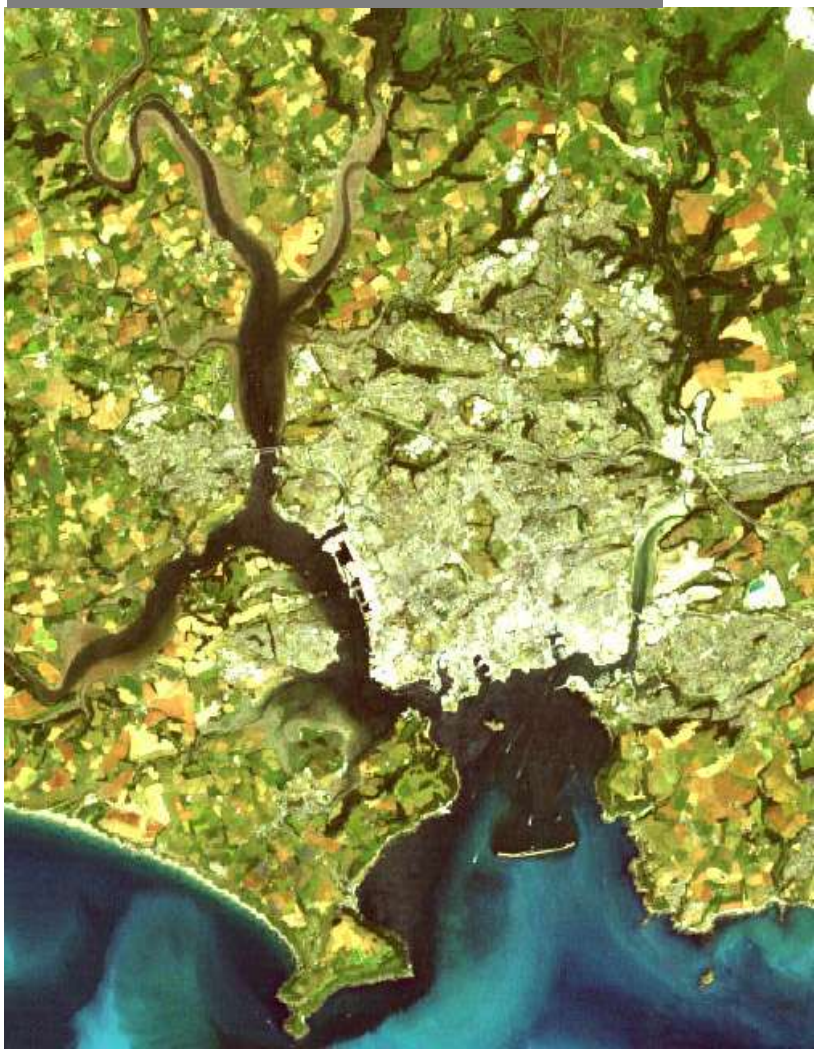
- Intro to EMS
- How we manage it
- Challenges of monitoring
- Can we do better?

Photo: Keith Hiscock

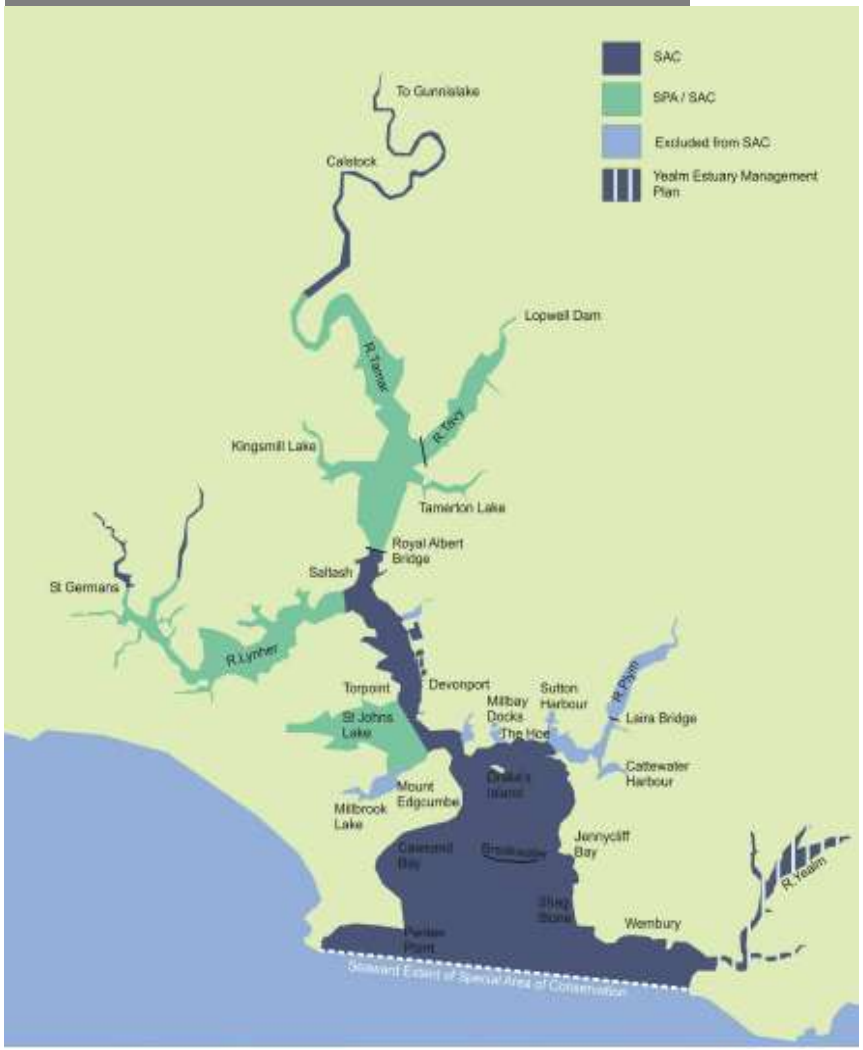
Plymouth Sound and Estuaries

TAMAR ESTUARIES CONSULTATIVE FORUM
OUR COMMON ASSET

1. Marine Environment



2. European Marine Site

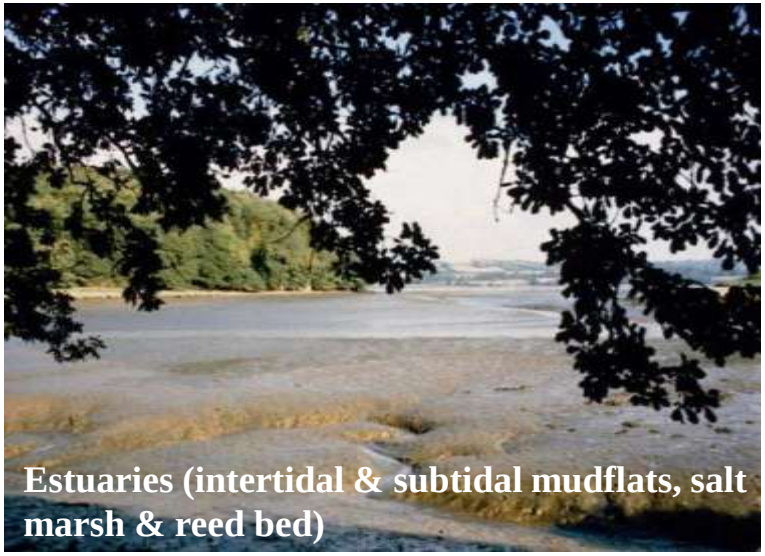


Habitats

Sandbanks, slightly covered by seawater (eelgrass beds & gravel & sand communities)

Sub tidal rocky reefs

Kelp forest communities



Estuaries (intertidal & subtidal mudflats, salt marsh & reed bed)

Common species








Important species


Okenia elegans
Nudibranch


Avocet


Egret


Allis shad
Alosa alosa

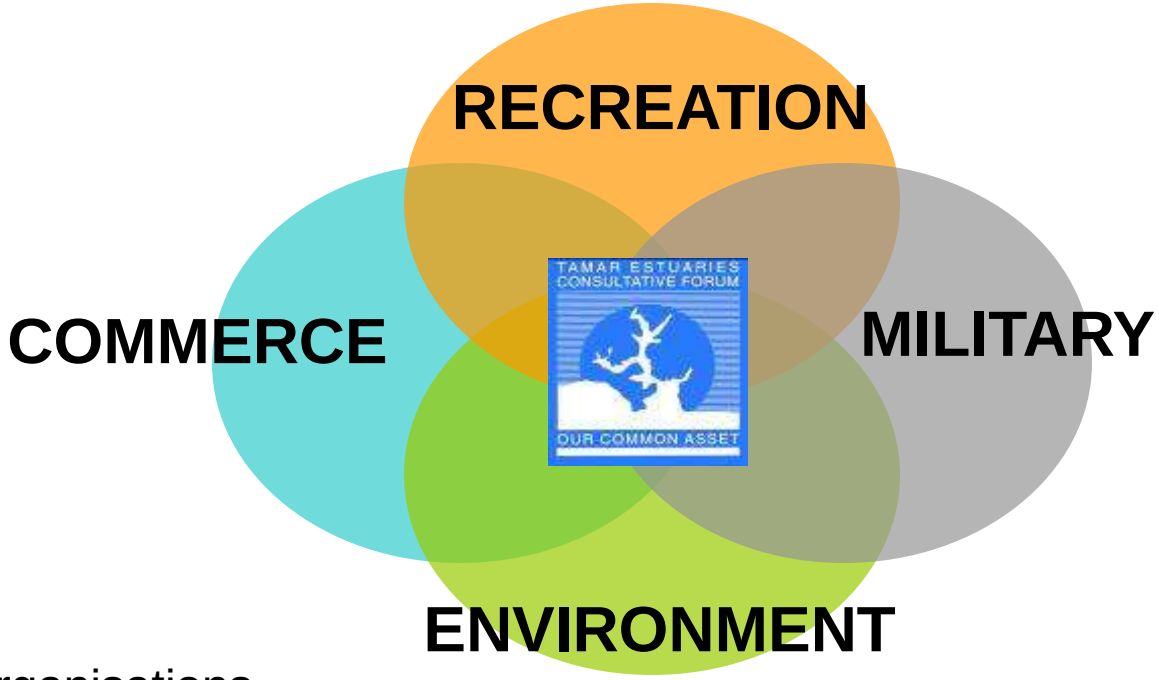

Rumex rupestris
Shore dock


Lutra lutra
European Otter


Atrina fragilis Fan Mussel

Human impacts

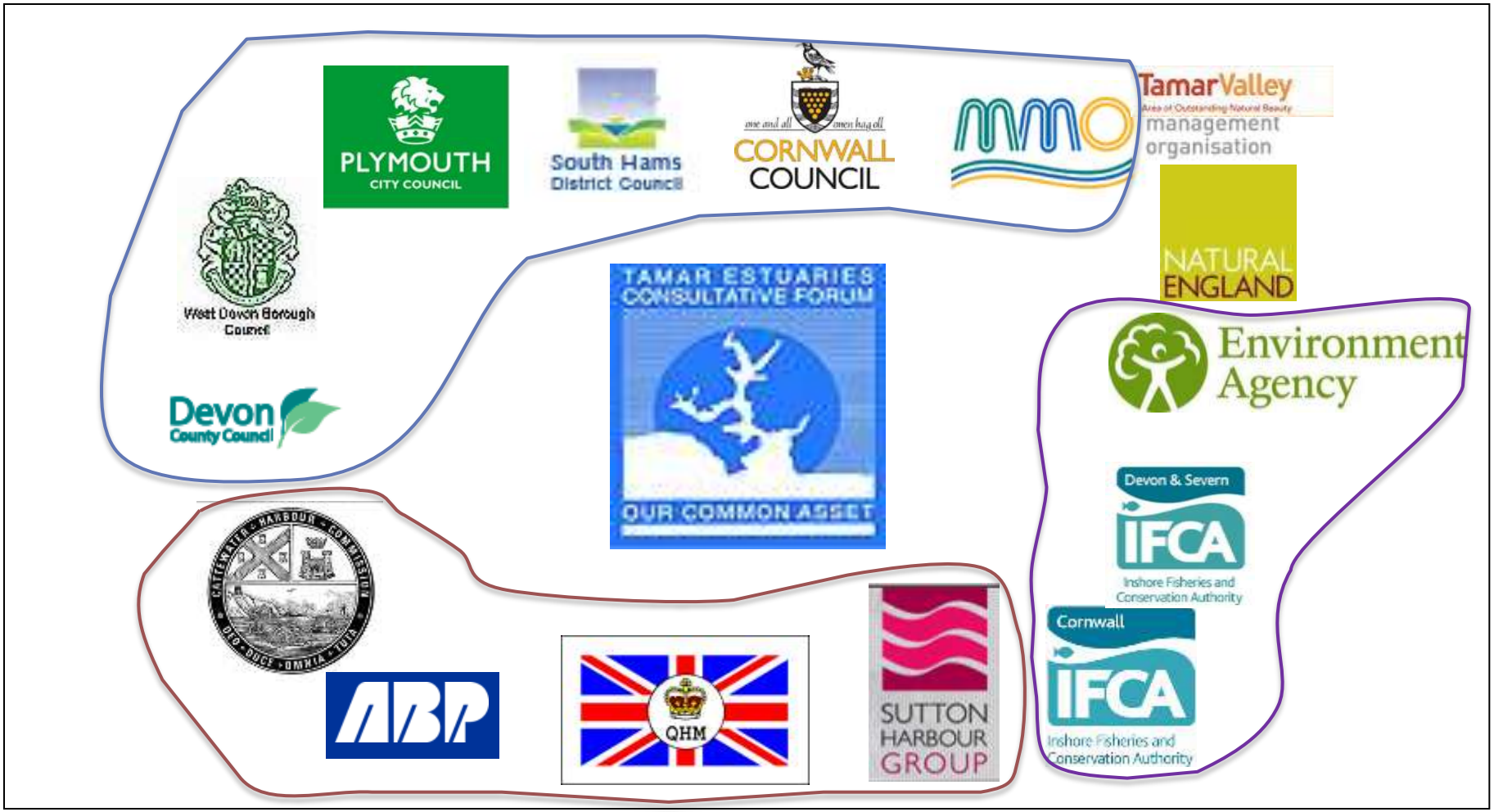
How Do We Manage it? Collaboratively…



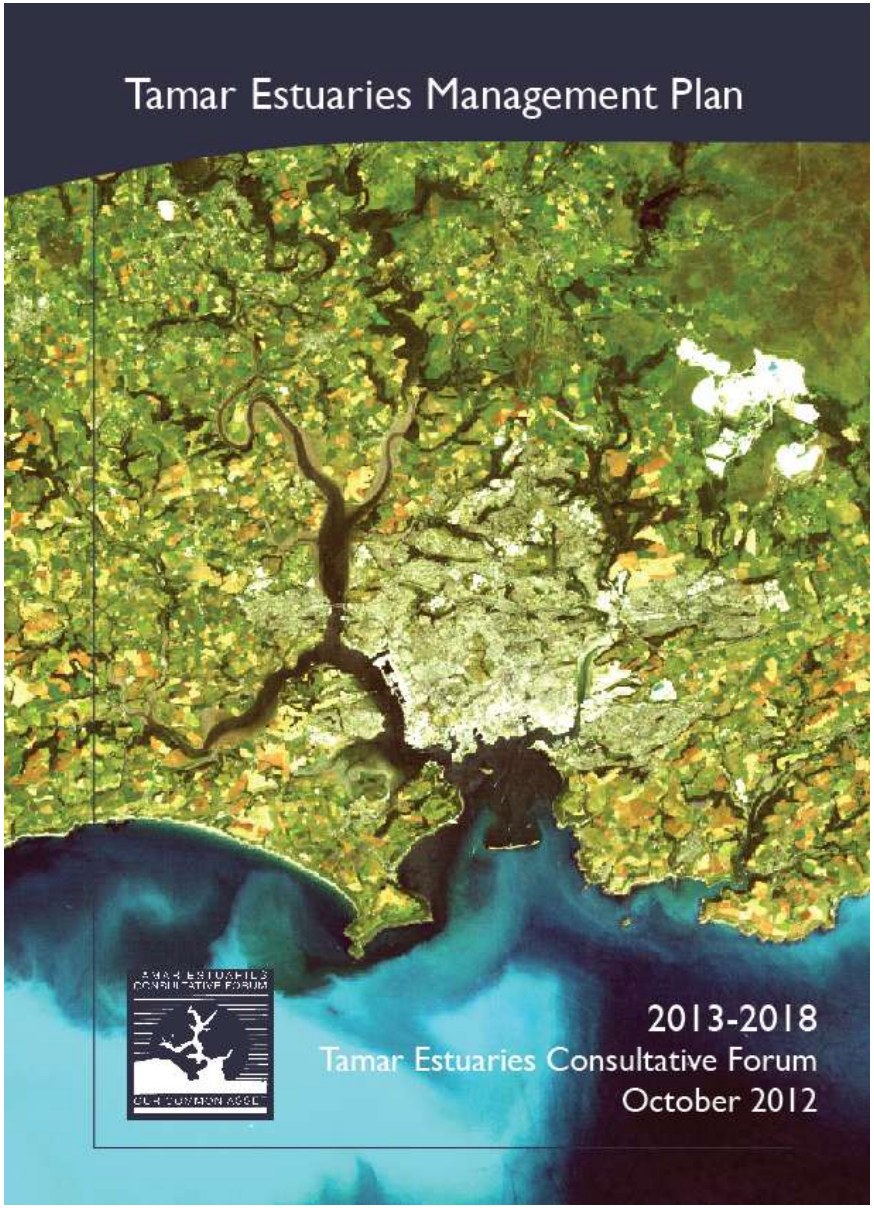
- 15 Organisations
- One Vision

'A sustainable future for the Plymouth Sound & Estuaries'

Tamar Estuaries Consultative Forum (TECF)



15 Partners



www.plymouth.gov.uk/tecf

Natural England's Risk Assessment

High Risk
Climate Change - inc Sea Level Rise, Increased Water Temperature, Increased Storminess (Not a direct anthropogenic activity)
Spread of non-native species e.g. Sargassum muticum & Spartina anglica
Ballast Water Discharge (Alien Spp.)
Medium Risk
Gill Nets
Historic, persistent banned toxic synthetic compounds e.g. TBT & PCBs.
Discharges from Historic Mine Waste & Industry
Discharges from Industry STWs & Road run-off – toxic & non toxic

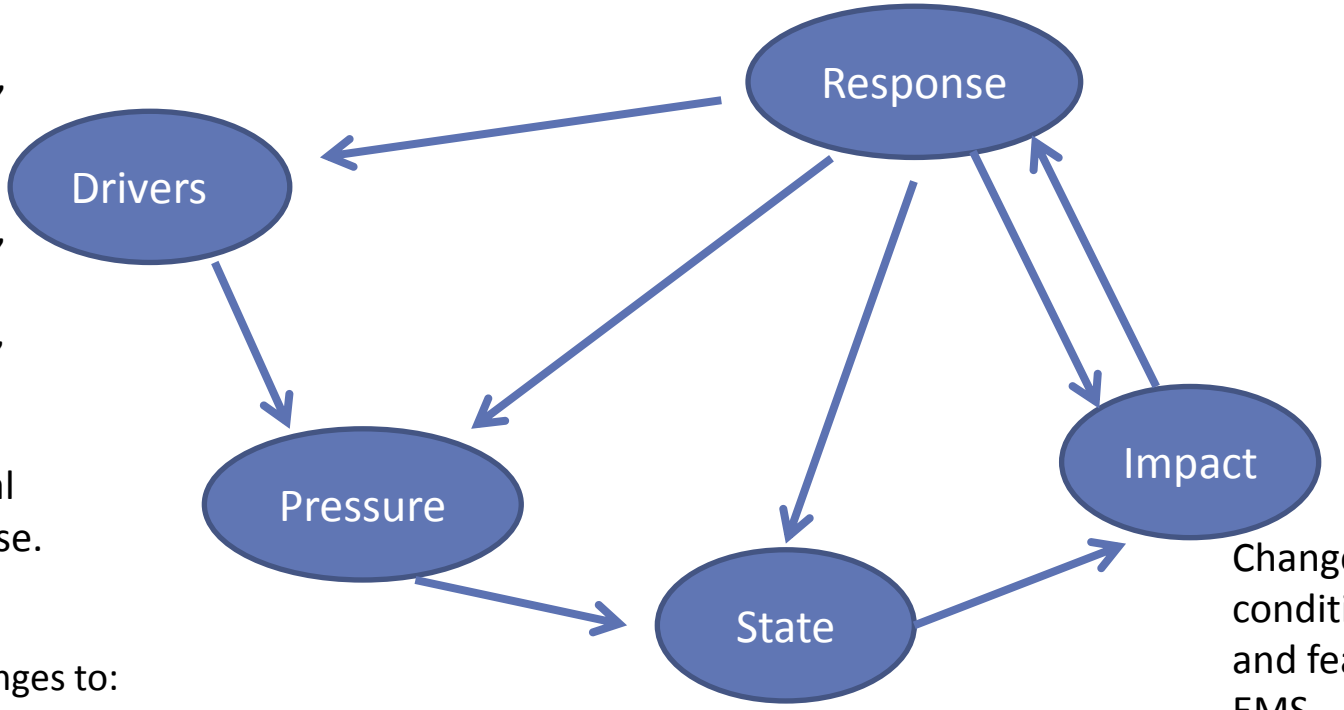
Medium Risk
Agricultural Run-off
Ship to Ship transfer of bulk chemicals
Chemical & Oil Transportation, Transfer, Fuelling and Bunkering by Ships & Pilotage
Chemical & Oil Spillage through Collision, Grounding, Stranding or Leaks
Control of sewage and garbage
Anchoring by Vessels with a Draught under 7.5m
Boat Maintenance / Beach berthing / Marina Activities
Discharges from boats
Marine Litter
Maintenance Dredging - inc extraction and agitation, water injection, plough dredging
Small-scale coastal development (industrial and residential) i.e. cumulative impacts of.
Pacific Oysters colonisation
Slipper Limpet colonisation

Integrated monitoring

- 6 year reporting cycle for the EMS;
- Favourable condition table
  - Focuses on Impacts
  - Feature & sub-feature
  - Attribute
  - Measure
  - Target

DPSIR Approach

Changes to population, transport methods, energy use, industry, agriculture, sewage systems, recreational use, land use.



Changes to:
- use of environmental resources;
- land use;
-pollutants

Changes to:
- Physical state
- Biological state
- ecosystems

Changes to condition of sites and features of EMS

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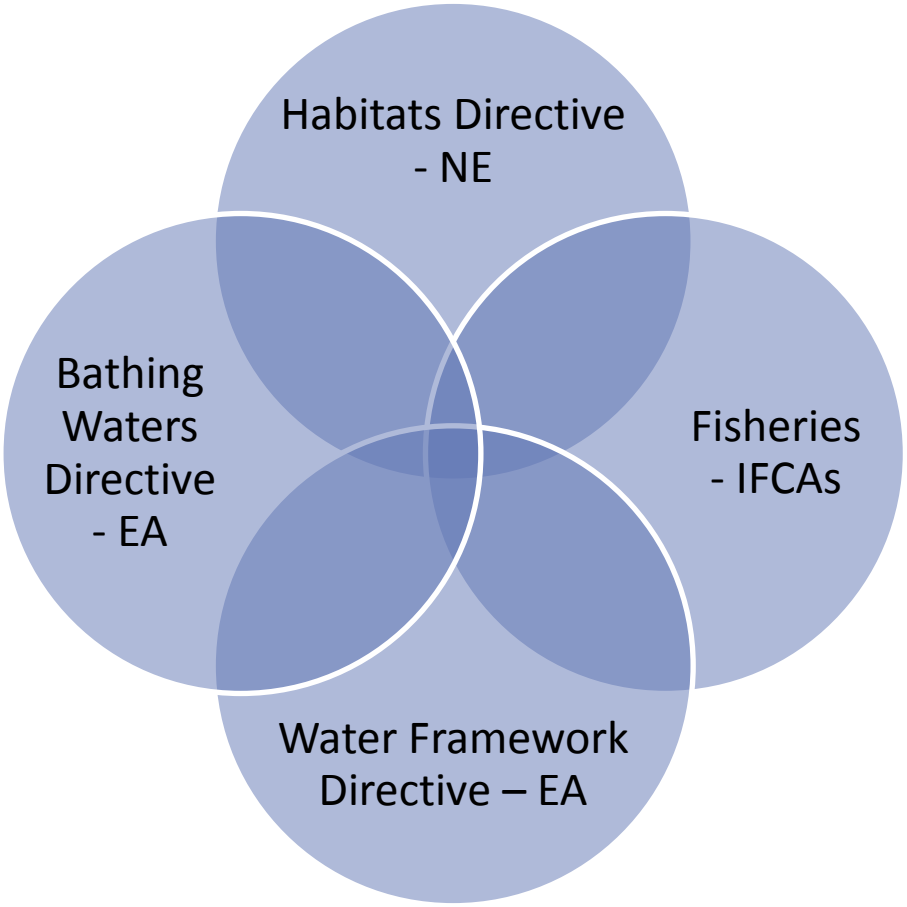
Other monitoring

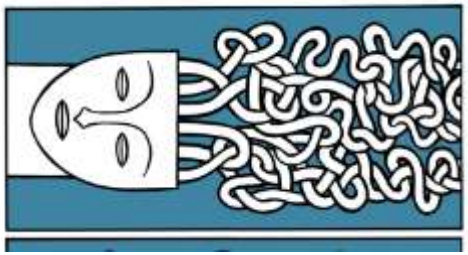


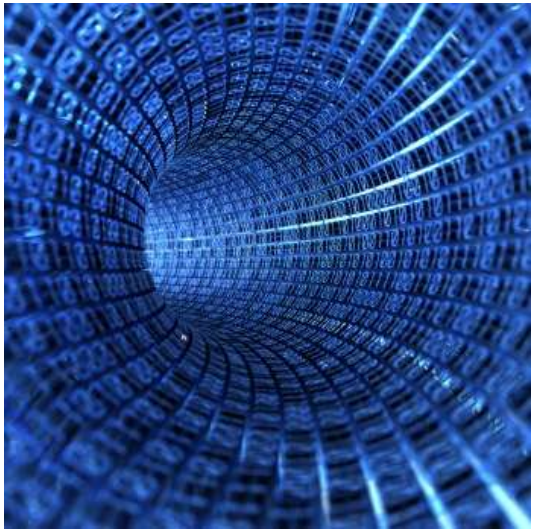
Key challenges

Risk Assessment

DPSIR Approach

We need your help





Benefits

- More effective & efficient monitoring
- Better adaptive management of estuary
- Quicker response time
- Science – policy link clearly demonstrated
- Students involved in real local issues
- Academic support for local environment demonstrated.

Thank you

www.tamar-estuaries.org.uk

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@TamarEstuaries

Workshop Questions

1. Identify evidence gaps – what **areas** do we have less information on?
2. What **type** of monitoring data do we need to focus on more (biology, sediment, hydrography)?
3. How can **collaborations** be formed to improve efficiency in monitoring?
4. What can we do to **better share** knowledge?

Identify top 3 priorities for each, along with who might lead.