

# SEPA & Biodiversity

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# SEPA & Biodiversity

**Why?**

**Who?**

**What?**

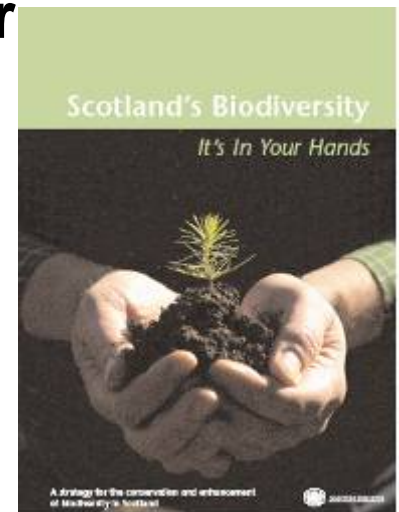
# SEPA & Biodiversity

**Why?**

# WHY? The Biodiversity Duty

## *Nature Conservation (Scotland) Act 2004* *Responsibility in relation to wider biodiversity*

**“It is the duty of every public body and office-holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions.”**



# Government policy for SEPA



- Statutory Duty to further the conservation of biodiversity quality by taking **full account of the impact of its decisions** on biodiversity.
- Ensure that its **regulatory** action considers impacts on biodiversity and **minimises those impacts** wherever possible.

# Government policy for SEPA

- SEPA will also assist in monitoring and delivering the actions and outcomes identified in the **UK Biodiversity Action Plan** relevant to Scotland.



# Government policy for SEPA

- Contribute to the **Scottish Biodiversity Strategy**



# Water Framework Directive - WFD

- **Good Ecological Status**
- Protect and enhance the status of aquatic ecosystems
- **Biodiversity** - the water status is defined by four biological quality elements specified in the WFD:
  - i) Phytoplankton,
  - ii) Macrophytes,
  - iii) Invertebrates and,
  - iv) Fish



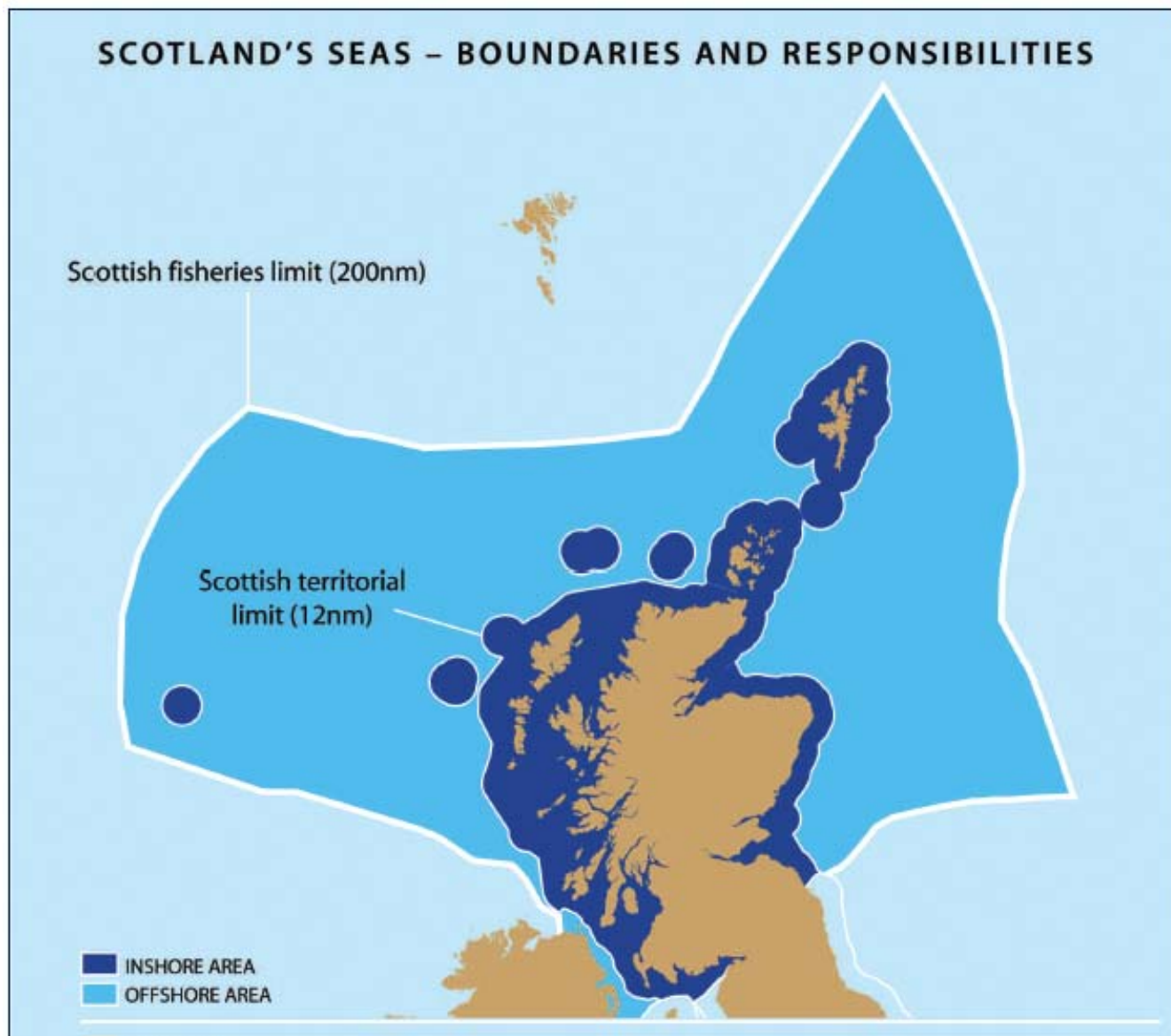
# WFD

- Protection **Natura 2000** sites  
**Maintain and enhance**  
**Supporting habitats for wildlife**
- Achieving **wider environmental**  
**objectives**

**Key pressures** driving biodiversity loss. In particular:

- Eutrophication/organic pollution
- Hydromorphological changes
- Habitat fragmentation
- Acidification
- Toxic pollution
- Effects of alien species
- Water abstraction

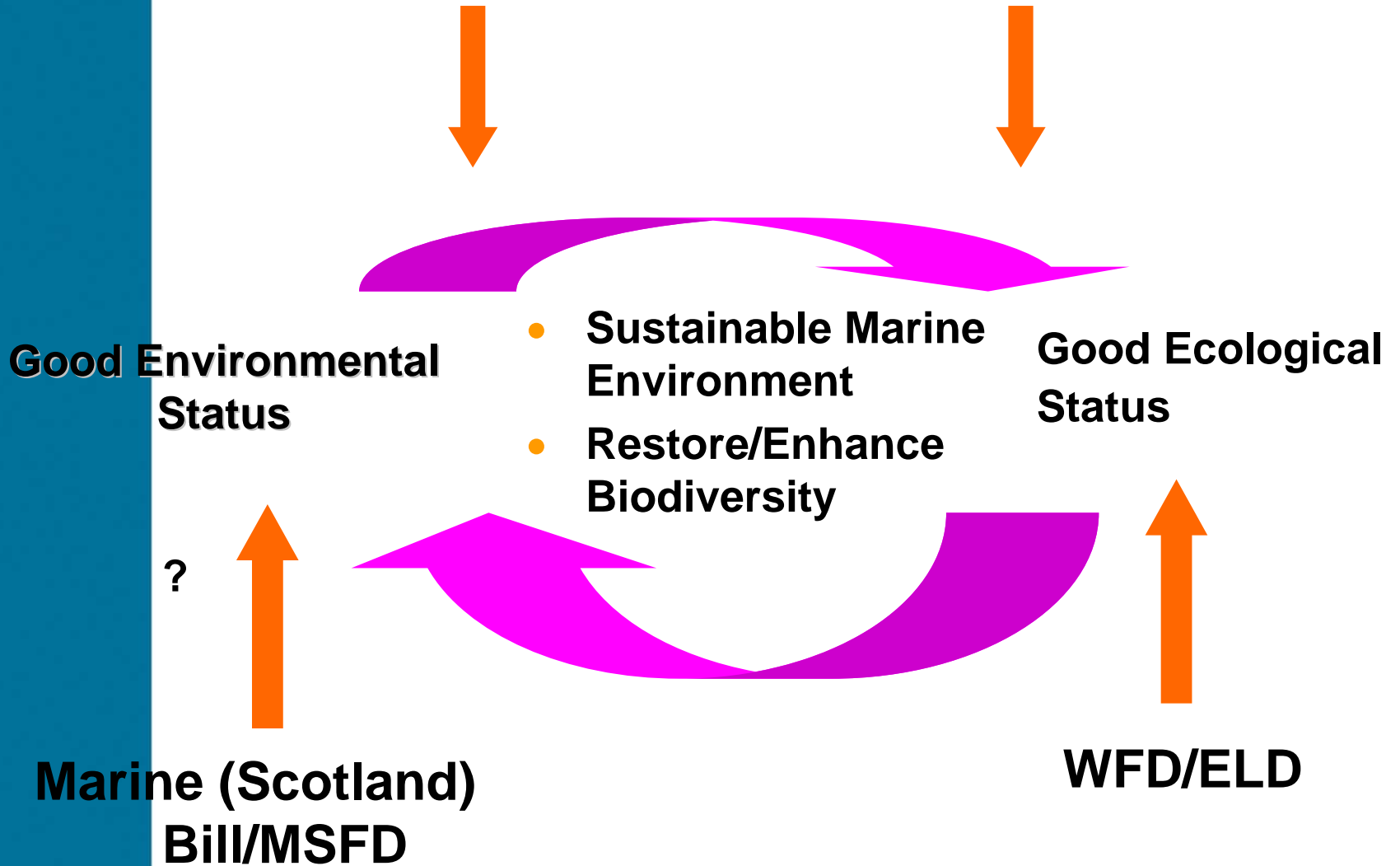




- 3 Nautical Miles

# Scottish Biodiversity Strategy Marine & Coastal Ecosystem Plans

# Sustainable Scotland Scotland Performs



# SEPA & Biodiversity

**WHO?**

# WHO?

## Biodiversity Technical Group (BTG)



- Provides support to SEPA staff on delivery of Biodiversity duties
- Specialist ecologists:
  - Marine & Coastal
  - Wetlands
  - Terrestrial
  - Soils

# BTG - Delivering biodiversity

- Link UK & LBAP actions to **SEPA remits** & Biodiversity delivery
- Biodiversity staff to **provide support** - develop guidance, co-ordinate input to LBAPs, disseminate latest information, provide training for SEPA staff.
- Improve **communication** links by providing feedback and sharing best practice within SEPA and partnership organisations



# **BTG - specialists provide a range of Guidance**

- **Biodiversity Homepage:**
  - **guidance on legislation**
  - **lists advice for habitats and species**

**Used by Ecologists, planning, LBAP contacts, environmental protection team**



## **BTG - specialists provide advice**

**The UK BAP lists are ever growing**

**BTG - specialists provide a range of advice - e.g., lists SEPA priority habitats and species for effective action**

# UK BAP Marine Priority Species List:

- [\*Ammodytes marinus\*](#) Lesser Sandeel; [\*Amphianthus dohrnii\*](#) Sea-fan Anemone; [\*Anotrachium barbatum\*](#) Bearded Red Seaweed; [\*Aphanopus carbo\*](#) Black Scabbardfish; [\*Archnanthus sarsi\*](#) Scarce Tube-Dwelling Anemone; [\*Arrhis phyllonyx\*](#) a deep-sea shrimp; [\*Ascophyllum nodosum ecad mackaii\*](#) Wig Wrack or Sea-loch Egg Wrack; [\*Atrina fragilis\*](#) Fan Mussel; [\*Balaenoptera acutorostrata\*](#) Minke Whale; [\*Balaenoptera borealis\*](#) Sei Whale; [\*Balaenoptera musculus\*](#) Blue Whale; [\*Balaenoptera physalus\*](#) Fin Whale; [\*Caretta caretta\*](#) Loggerhead Turtle; [\*Centrophorus granulosus\*](#) Gulper shark; [\*Centrophorus squamosus\*](#) Leafscrapper shark; [\*Centroscymnus coelolepsis\*](#) Portuguese dogfish; [\*Cetorhinus maximus\*](#) Basking Shark; [\*Clupea harengus\*](#) Herring; [\*Coryphaenoides rupestris\*](#) Roundnose grenadier; [\*Cruoria cruoriaeformis\*](#) a red seaweed; [\*Dalatias licha\*](#) Kitefin shark; [\*Delphinus delphis\*](#) Common Dolphin; [\*Dermochelys coriacea\*](#) Leatherback Turtle; [\*Dermocorynus montagnei\*](#) a red seaweed; [\*Dipturus batis\*](#) Common skate; [\*Edwardsia timida\*](#) Timid Burrowing Anemone; [\*Eubalaena glacialis\*](#) Northern right whale; [\*Eunicella verrucosa\*](#) Pink Sea-fan; [\*Fucus distichus\*](#) Brown Algae; [\*Funiculina quadrangularis\*](#) Tall sea pen; [\*Gadus morhua\*](#) Cod; [\*Galeorhinus galeus\*](#) Tope shark; [\*Gitanopsis bispinosa\*](#) an Amphipod Shrimp; [\*Globicephala melas\*](#) Long-finned pilot whale; [\*Grampus griseus\*](#) Risso's dolphin; [\*Halicystus auricula\*](#) a stalked jellyfish; [\*Hippocampus guttulatus\*](#) Long snouted seahorse; [\*Hippocampus hippocampus\*](#) Short snouted seahorse; [\*Hippoglossus hippoglossus\*](#) Atlantic halibut; [\*Hoplostethus atlanticus\*](#) Orange roughy; [\*Hyperoodon ampullatus\*](#) Northern bottlenose whale; [\*Isurus oxyrinchus\*](#) Shortfin mako; [\*Lagenorhynchus acutus\*](#) Atlantic white-sided dolphin; [\*Lagenorhynchus albirostris\*](#) White-Beaked Dolphin; [\*Lamna nasus\*](#) Porbeagle shark; [\*Leptopsammia pruvoti\*](#) Sunset Cup Coral; [\*Leucoraja circularis\*](#) Sandy ray;
- [\*Lithothamnion corallioides\*](#) Coral Maërl; [\*Lophius piscatorius\*](#) Sea monkfish; [\*Lucernariopsis campanulata\*](#) a stalked jellyfish; [\*Lucernariopsis cruxmelitensis\*](#) a stalked jellyfish; [\*Megaptera novaeangliae\*](#) Humpback Whale; [\*Merlangius merlangus\*](#) Whiting; [\*Merluccius merluccius\*](#) European hake; [\*Mesoplodon bidens\*](#) Sowerby's beaked whale; [\*Mesoplodon mirus\*](#) True's Beaked Whale; [\*Micromesistius poutassou\*](#) Blue whiting; [\*Mitella pollicipes\*](#) Gooseneck Barnacle; [\*Molva dypterygia\*](#) Blue Ling; [\*Molva molva\*](#) Ling; [\*Orcinus orca\*](#) Killer Whale; [\*Ostrea edulis\*](#) Native Oyster; [\*Pachycerianthus multiplicatus\*](#) Fireworks anemone; [\*Pachycordyle navis\*](#) Brackish hydroid; [\*Padina pavonica\*](#) Peacock's tail; [\*Palinurus elephas\*](#) Crayfish, Crawfish or Spiny Lobster; [\*Phoca vitulina\*](#) Eastern Atlantic harbour seal/common seal; [\*Phocoena phocoena\*](#) Harbour Porpoise; [\*Phymatolithon calcareum\*](#) Common Maërl; [\*Physeter catodon\*](#) Sperm Whale; [\*Pleuronectes platessa\*](#) Plaice; [\*Prionace glauca\*](#) Blue shark; [\*Raja undulata\*](#) Undulate ray; [\*Reinhardtius hippoglossoides\*](#) Greenland halibut; [\*Rostroraja alba\*](#) White or Bottlenosed skate; [\*Scomber scombrus\*](#) Mackerel; [\*Solea solea\*](#) Sole; [\*Squalus acanthias\*](#) Spiny dogfish; [\*Squatina squatina\*](#) Angel shark; [\*Stenella coeruleoalba\*](#) Striped dolphin; [\*Styela gelatinosa\*](#) Loch Goil Sea Squirt; [\*Swiftia pallida\*](#) Northern Sea Fan; [\*Tenellia adspersa\*](#) Lagoon sea slug; [\*Thunnus thynnus\*](#) Blue-fin tuna; [\*Trachurus trachurus\*](#) Horse Mackerel; [\*Tursiops truncatus\*](#) Bottlenosed dolphin; [\*Ziphius cavirostris\*](#) Cuvier's beaked whale.
- Source:  
<http://www.ukbap.org.uk/NewPriorityList.aspx>



# UKBAP Priority Habitats List:

- Blue mussel beds Coastal and Floodplain Grazing Marsh Coastal saltmarsh Coastal Sand Dunes Coastal Vegetated Shingle Cold-water coral reefs Deep-sea sponge communities (New habitat) Estuarine rocky habitats (New habitat) File shell beds (New habitat) Fragile sponge & anthozoan communities on subtidal rocky habitats (New habitat) Horse mussel beds Intertidal chalk Intertidal mudflats Intertidal under-boulder communities (New habitat)
- Machair Maerl beds Maritime Cliff and Slopes Mud habitats in deep water *Sabellaria alveolata* reefs *Sabellaria spinulosa* reefs Saline lagoons Seagrass beds Seamount communities (New habitat) Serpulid reefs Sheltered muddy gravels Subtidal chalk Subtidal sands and gravels Tide-swept channels



# SEPA priority lists



## Species

- *Ascophyllum nodosum* ecad *mackaii*
- *Ostrea edulis* (Oyster)
- *Funiculina quadrangularis* (Tall sea pen)

# SEPA priority lists



## Habitats

- Coastal Saltmarsh
- Coastal Sand Dunes
- Maerl Beds
- Modiolus Beds
- Mudflats
- Seagrass (*Zostera*)
- Saline Lagoons
- Tidal Rapids
- Sublittoral Lands and Gravel
- Serpulid Reefs
- Coastal Vegetated Shingle

# SEPA & Biodiversity

**What?**

# Scottish Biodiversity Strategy - Objectives

**Species & Habitats:** To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats

**People:** To increase awareness, understanding and enjoyment of biodiversity, and engage many more people in conservation and enhancement

**Landscapes & Ecosystems:** To restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice

**Integration & Co-ordination:** To develop an effective management framework that ensures biodiversity is taken into account in all decision making

**Knowledge:** To ensure that the best new and existing knowledge on biodiversity is available to all policy makers and practitioners.



# What?

SEPA's biodiversity duty is **delivered through** SEPA's functions.

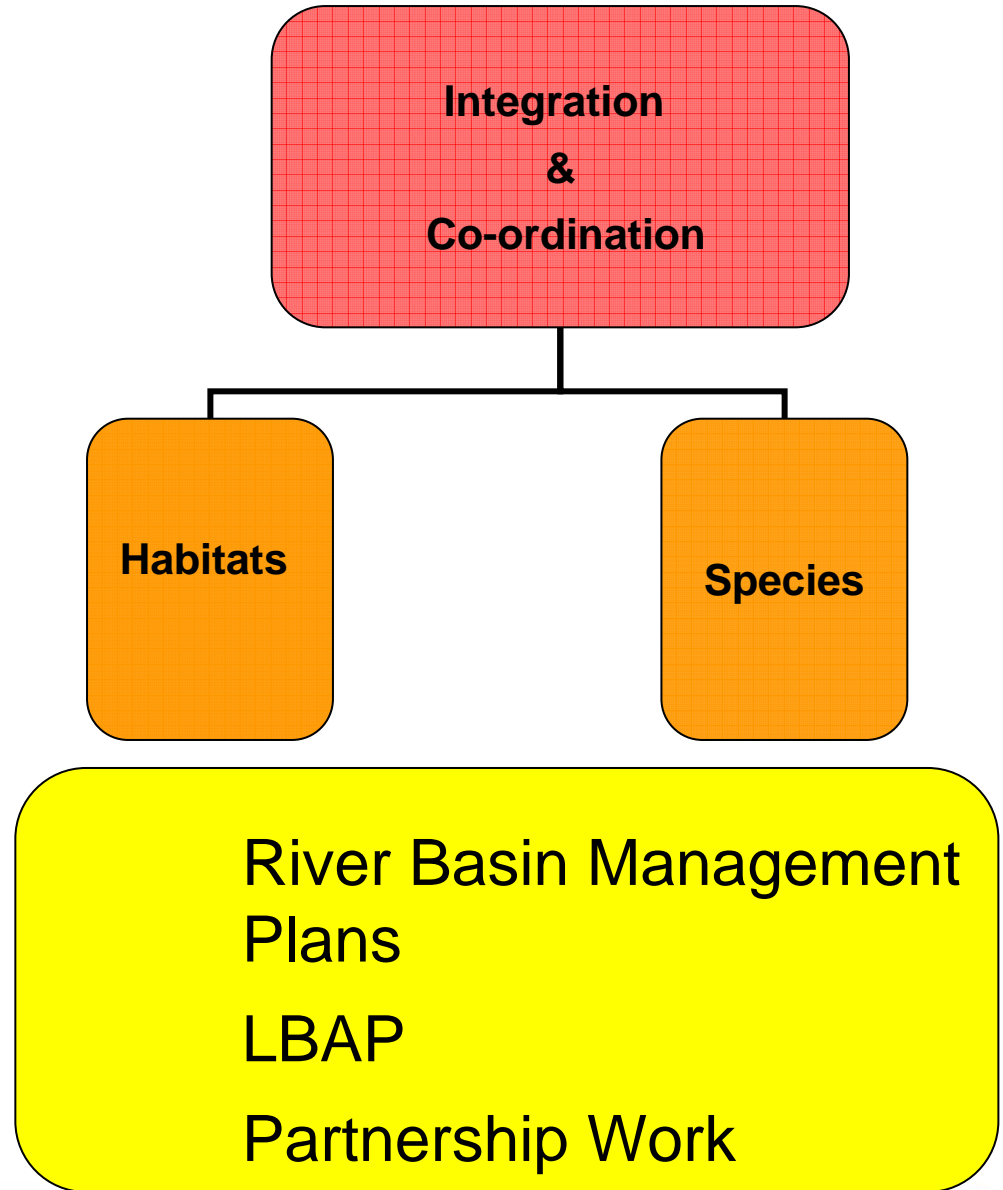


## Responsibilities & Remits



# Delivery of biodiversity duty:

- Biodiversity management



# River Basin Management Plans

- Tackle **WFD pressures**
- Identify **benefits for biodiversity**
- WFD Implementation for protecting biodiversity in **context of other existing plans**

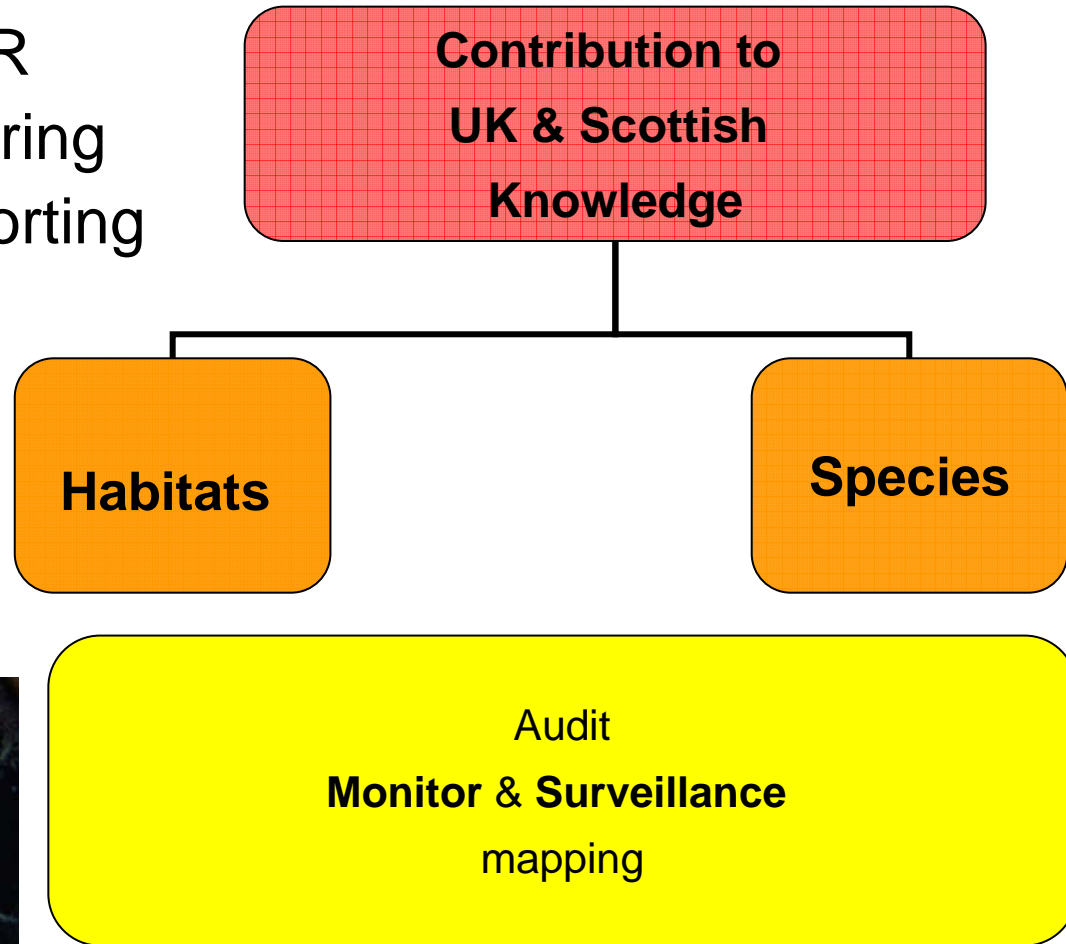
e.g. Restoring wetlands as part of flood management schemes is an opportunity to reverse the decline, and achieve targets for national biodiversity action plans.

The first river basin management plans have to be prepared by end of 2009



# Delivery of biodiversity duty: Knowledge

- WFD
- OSPAR
- Monitoring & Reporting



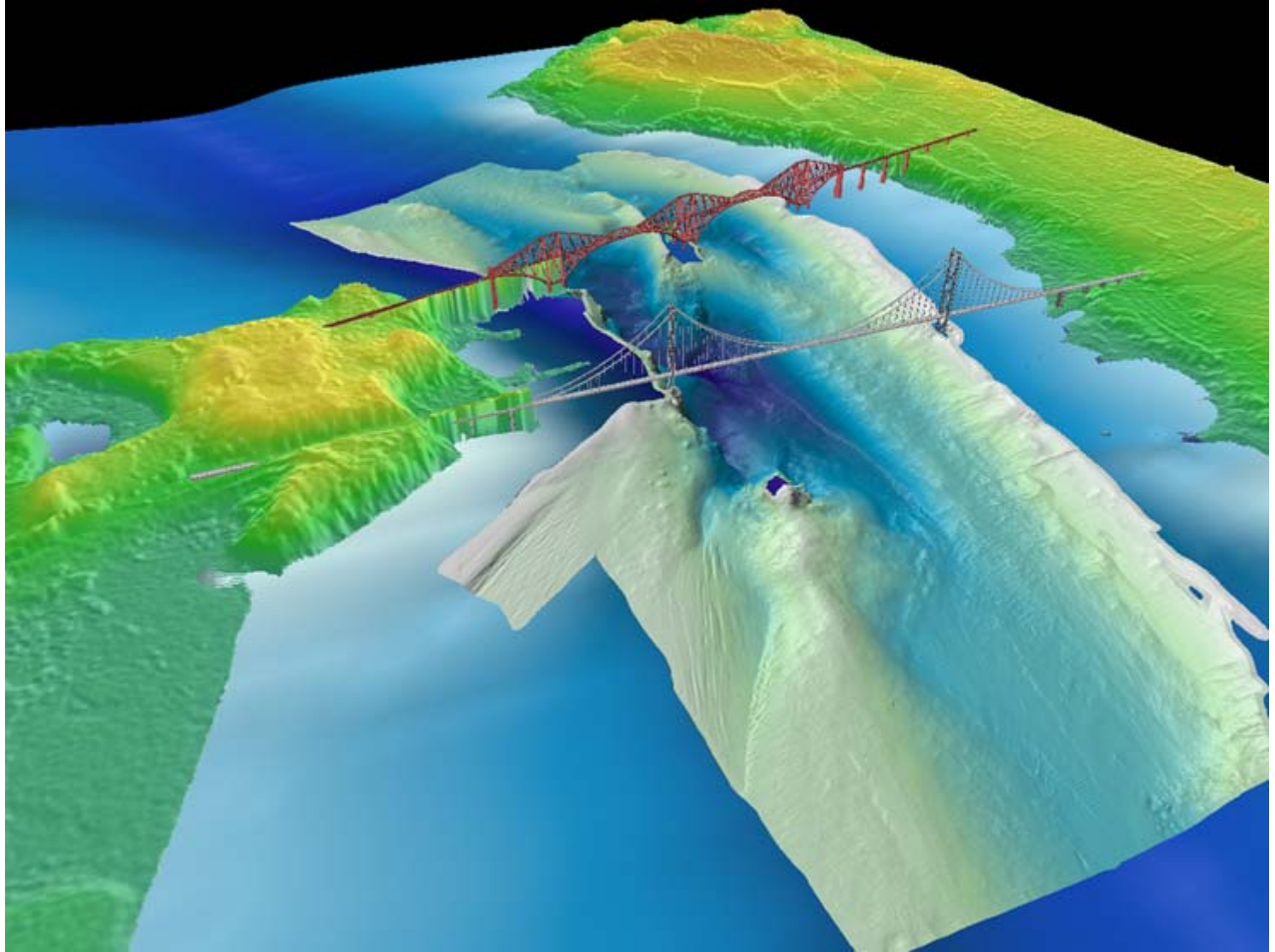
# Gathering information

Catalog ID: 1010010003471802 Acq Date: Sep. 24 2004 Lat/Long: 56.36803° / -2.88923°

Off Nadir Angle: 14° Target Azimuth: 138° Cloud Cover: 10% Environmental Quality: 90

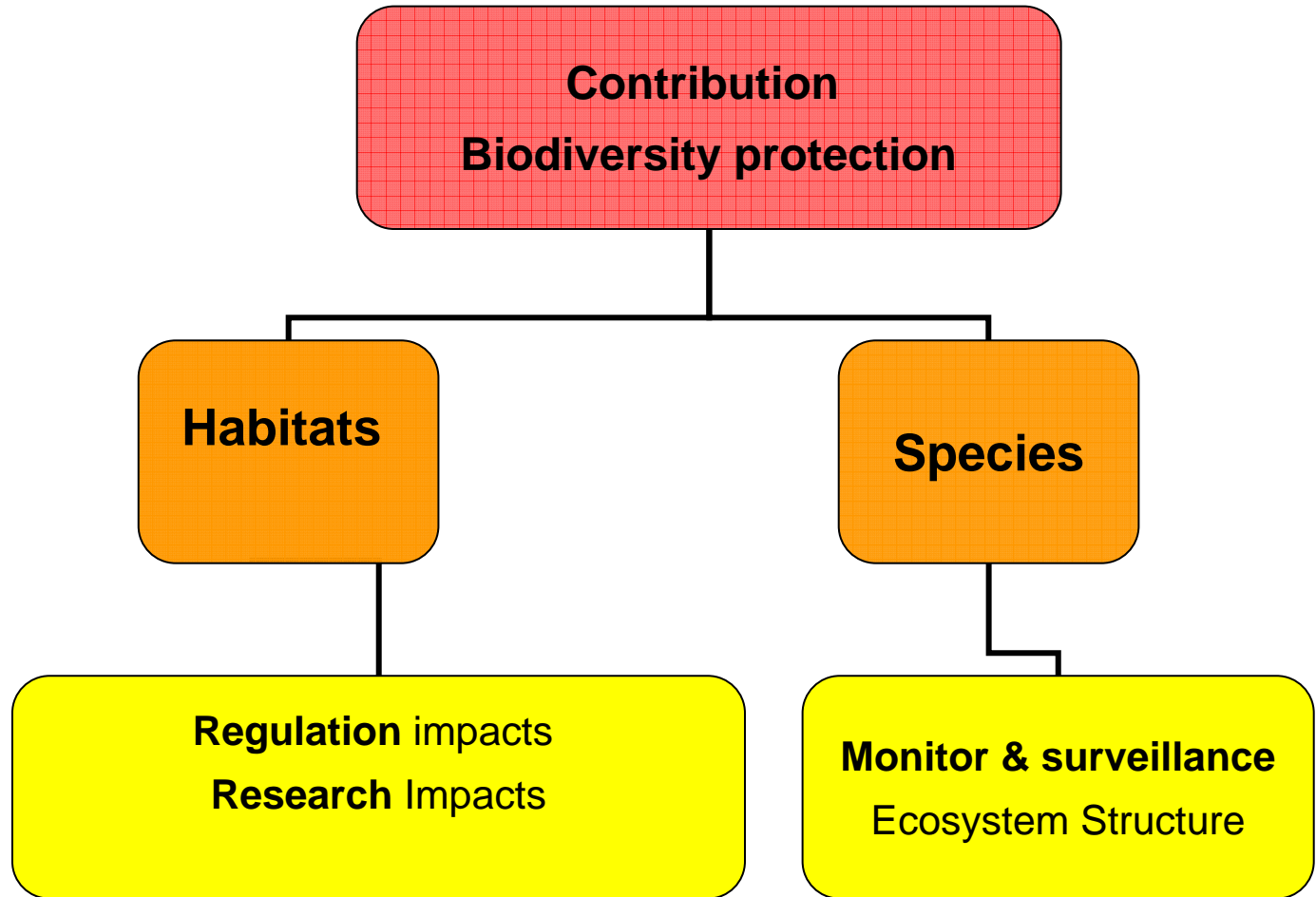


# Sharing Knowledge & Information

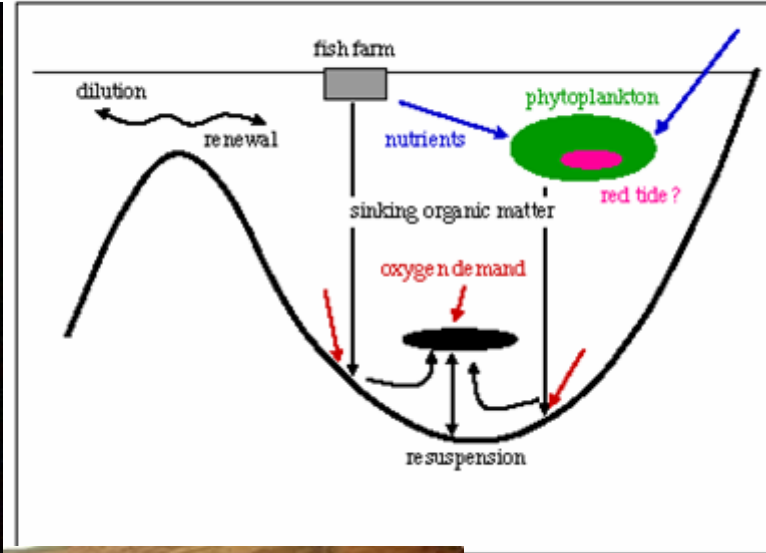


# Delivery of biodiversity duty: Halt the Loss

- Understand impacts

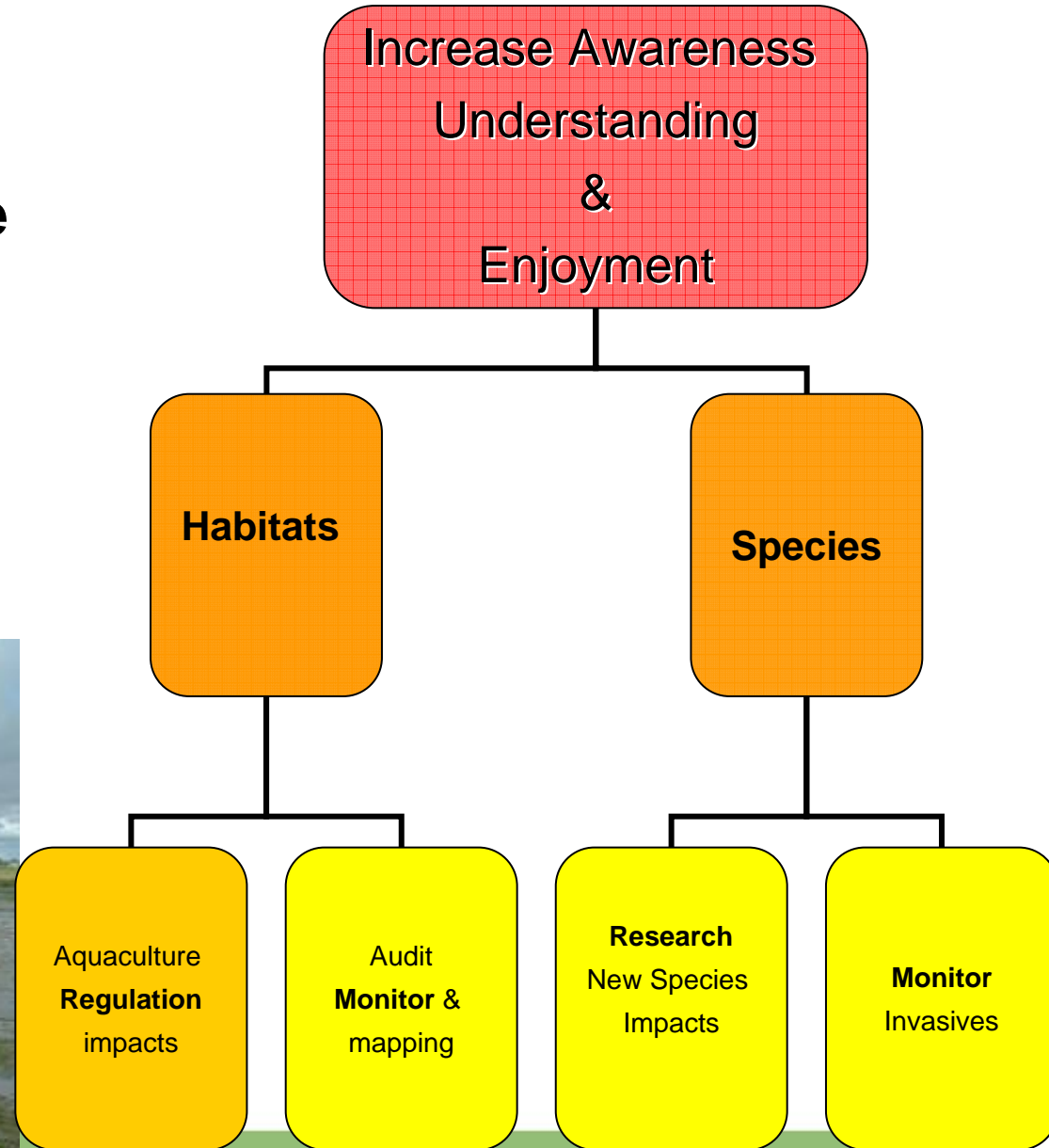


# Aquaculture - Maerl



# Delivery of biodiversity duty: People

- **Good Practice**



# Delivery of biodiversity duty

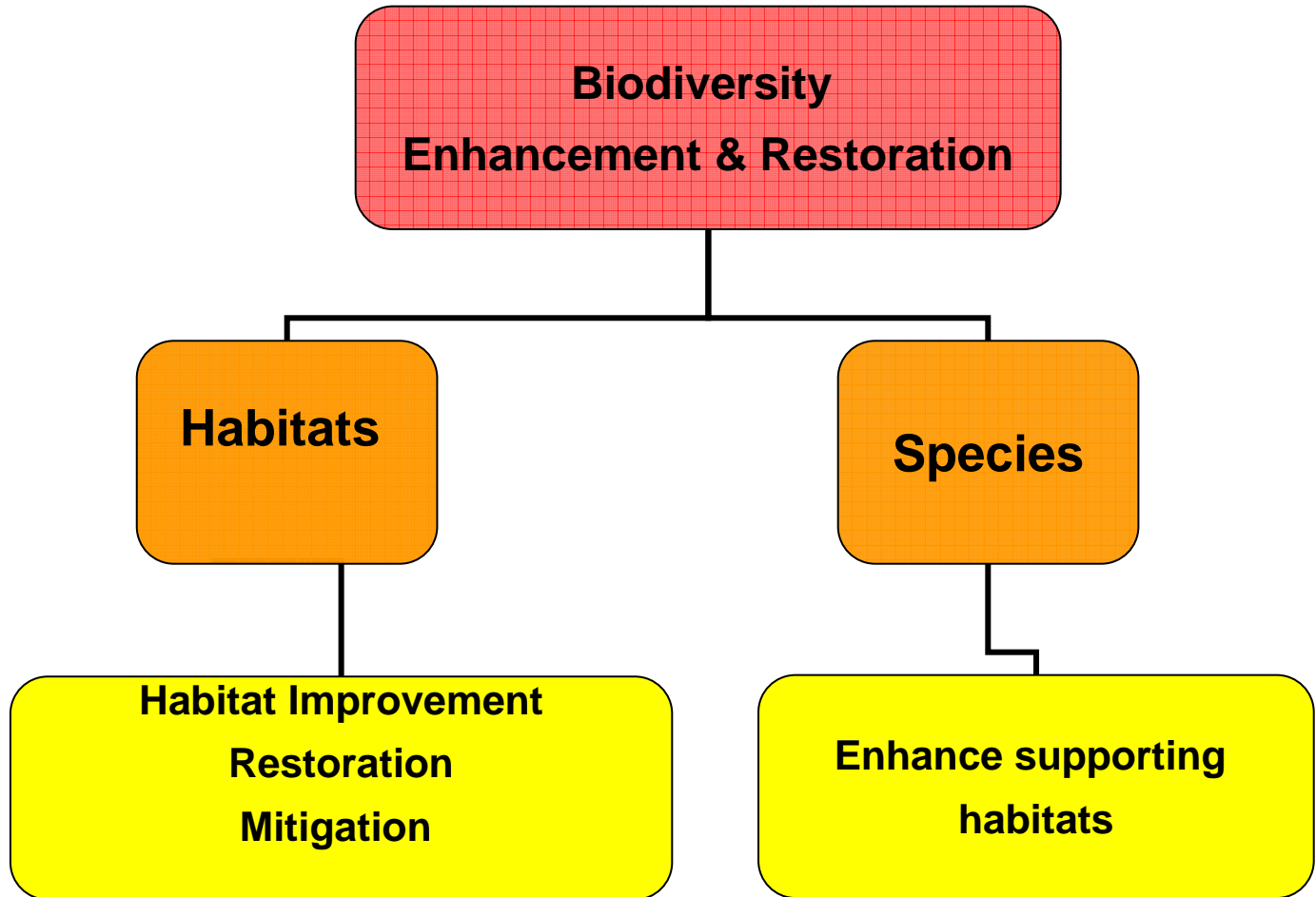


- Protection of biodiversity during survey



# Delivery of biodiversity duty: Landscapes & Ecosystems

- **Opportunities**



# Water Environment Restoration Fund

## Restoration of sites for species & habitats

- **Biodiversity Improvement:**
  - Contribute towards achieving Water Framework Directive objectives
  - Deliver improvements restore the condition of Scotland's water environment e.g., wetlands, estuaries and coasts
  - Deliver a wide range of environmental, social and economic benefits
  - Partnership projects with third parties.
  - SEPA funds others to deliver environmental improvements



# Water Environment Restoration Fund

## Restoration of sites for species and habitats



### **Projects likely to be funded:**

- Coastal Re-alignment
- Saltmarsh re-creation
- Sand dune management
- Strandline management
- Mussel and Native Oyster bed restoration
- Soft engineering coastal protection

## Water Environment Restoration Fund

- proposed for the next 3 financial years. It will contribute to SEPA's responsibilities

WFD

Flooding & Climate Change

Biodiversity Duty



# SEPA & Biodiversity

- **Why?** Biodiversity Duty & Legislative Drivers
- **Who?** – SEPA specialists, SEPA Staff, External Partnerships
- **What?** – Statutory & Non-Statutory Duties, Ecosystem Based Approach, Good Practice & Partnerships