

Biodiversity position statement

How SEPA delivers its biodiversity duties

Introduction

SEPA has clear statutory duties (under the Nature Conservation (Scotland) Act 2004, Conservation (Natural Habitats, Etc.) Regulations 1994, and the Water Environment and Water Services (Scotland) Act 2003) to protect and safeguard biodiversity through its regulatory functions. This position statement aims to clarify what biodiversity means for SEPA and how we deliver our biodiversity duties.

Biodiversity is the variety of life on earth. Scotland's biodiversity includes more than 90,000 species, and they combine with climate and geology to create the habitats and ecosystems that shape our country. Biodiversity is essential to sustaining the natural systems that provide vital goods and services to society. As demonstrated in Table 1, this includes the food, water supply, nutrient recycling and carbon sequestration, economic prosperity, health and well-being. Scotland's natural assets provide services worth at least £17 billion per year (Williams et al, 2003¹).

Table 1. How biodiversity underpins the supply of all ecosystem services

Category of service ²	Type of service	Example: relevance to Scotland's biodiversity
Supporting services	Soil formation, nutrient cycling, primary production	Scottish peat bogs (carbon storage)
Provisioning services	Food, fresh water, fuel wood, fibre, biochemical, genetic resources	Salmon fishing, whisky industry, timber production, shell fish farming, marine fisheries
Regulating services	Climate, disease, water regulation and water purification	High quality drinking water from surface waters, coastal saltmarsh and estuaries (flood defence)
Cultural services	Spiritual and religious, recreation, aesthetic, inspirational, educational, sense of place, cultural heritage	Wildlife tourism, enjoyment of nature, climbing, hill walking, shooting, boating and water sports

The Convention of Biological Diversity³, adopted at the 'Earth Summit' Rio in 1992, identifies the ecosystem approach as a key principle for the conservation of biodiversity. Current reviews of global and UK biodiversity targets will emphasise the ecosystem based approach to biodiversity, and conservation action in support of ecosystem services. As Scotland's environmental regulator, protecting land, air and water, SEPA has a key role to play in safeguarding Scotland's habitats and species and protecting ecosystem services. There are duties and opportunities to fulfil this role through environmental licensing, river basin management planning and flood risk management. In addition, SEPA's role in safeguarding biodiversity contributes significantly to the building blocks of wider sustainable development and climate change responsibilities.

¹Williams, E., Firn, J. R., Kind, V., Roberts, M., & McGlashan, D. (2003). *The value of Scotland's ecosystem services and natural capital*. European Environment, 13(2), 67-78

²The Millennium Ecosystem Assessment (MA) is a research program that focuses on ecosystem changes over the course of decades, and projecting those changes into the future. Launched in 2001 with the support of the United Nations.

³www.cbd.int

Delivering for biodiversity

SEPA has a specific duty, as placed on all public bodies by the Nature Conservation (Scotland) Act 2004, to further the conservation of biodiversity through exercising its various functions. We have four main remits for delivering our biodiversity duty:

- **Regulation**

As an environmental regulator, we set regulatory standards to protect Scotland's environment and safeguard biodiversity. Potential impacts on biodiversity are considered in regulatory decision-making.

- **Working in partnership**

We work in partnership with organisations, businesses and individuals to raise awareness of and integrate biodiversity protection into partnership projects, plans and developments.

- **Influencing**

We work with industry and business to provide advice, guidance and raise awareness of environmental responsibilities and influence practice which protects Scotland's biodiversity. We support Scottish Natural Heritage in protecting designated sites that are particularly important for nature conservation.

- **Developing the evidence base**

We undertake monitoring and research to develop and improve our understanding of the environment, its sustainable use, and to drive environmental improvements which benefit biodiversity.

Regulation

As an environmental regulator, SEPA is responsible for setting standards in environmental licences which protect and help improve water, land and air and the natural services these systems provide. All regulatory decisions should take account of potential impacts on biodiversity and opportunities for biodiversity enhancement. Table 2 provides examples of how we work to protect biodiversity through our regulatory regimes.

Table 2. Examples of biodiversity protection through regulatory regimes

Regime	Examples of biodiversity protection
Water Environment Water Services Act 2003; Diffuse Pollution Regs; Controlled Activities Regulations	<p>Under the EC Water Framework Directive, the Water Environment (Controlled Activities) (Scotland) Regulations 2005 gives SEPA responsibilities for regulating activities in the aquatic environment. In particular, we assess the implication of activities on biodiversity in designated sites (SSSIs, SACs, SPAs) through our nature conservation procedure for environmental licensing. General Binding Rules (GBR) and licence conditions are set to safeguard biodiversity. For example, we may set more stringent conditions to protect sensitive species such as freshwater pearl mussel, and licence conditions may be set on discharges to protect marine habitats, seagrass and coastal lagoons which are vulnerable to eutrophication.</p> <p>SEPA protects wetlands that derive their water from a ground water source from significant damage. Engineering and surface water abstraction licences take account of impacts on wetlands and the function they fulfil in the wider water environment.</p> <p>Diffuse Pollution Regulations - for example compliance with GBR 20 'no cultivation of land within 2m of surface water or wetland' may deliver additional benefits for both freshwater and riparian biodiversity, e.g. allowing riparian woodland regeneration.</p>
Pollution Prevention and Control Regime	<p>Atmospheric deposition of nitrogen and sulphur dioxide can potentially affect the integrity of protected designated sites. PPC permitting of intensive agricultural units can help to reduce harmful ammonia emissions to heathlands, peatlands and unimproved grassland, thus safeguarding their vulnerable plant and animal species. Current biomonitoring work using higher plants, bryophytes and lichens is helping SEPA to understand better the ecological response to nitrogen enrichment.</p> <p>Pollution Prevention and Control (PPC) permitting of landfill sites can avoid excessive dust release, thereby preventing plants being smothered or potential changes to soil chemistry, which could impact on soil biodiversity.</p> <p>PPC permits cover industrial discharge to, and associated abstraction from, coastal waters and are assessed so that they minimise impacts from thermal and heavy metal inputs, or even salt-water intrusion into coastal habitats, and their effects on biodiversity features.</p>
Waste Management Licensing (Scotland) Regulations 2006	<p>Waste Management Licensing (WML) regulations and Sludge (use in agriculture) Regulations regulate the application (both location and quantity) of organic material and sewage sludge to land to ensure soil and land quality.</p> <p>SEPA is working with Dumfries and Galloway Council to incorporate biodiversity into the regulatory monitoring of gas points as part of a former landfill site's restoration plan. Gas monitoring access tracks will be managed for butterfly habitat.</p> <p>We regulate the handling and disposal of waste material from invasive non-native plant species, eg Japanese knotweed, New Zealand pygmy weed.</p>

Working in partnership

SEPA's priorities for biodiversity conservation focus on the critical threats facing biodiversity in Scotland; climate change, fragmentation and loss of habitats, impacts of pollution and invasive non-native species. These threats need to be addressed at a functional ecosystem scale through an integrated partnership approach. Working in partnership with organisations and communities, we aim to raise awareness of and integrate biodiversity protection into plans and projects, such as through the river basin management planning process, Scottish Biodiversity Forum (SBF), green networks like the Central Scotland Green Network, and local biodiversity partnerships.

Table 3. Examples of how SEPA works in partnership to integrate biodiversity protection into strategies, plans and projects

Partnership	Delivering benefits for biodiversity
River basin management planning – area advisory groups	<p>The river basin management planning (RBMP) process and the co-ordination of actions through area advisory groups provide an ideal mechanism to deliver biodiversity improvements. The River Basin Planning for Habitat Networks Project, a current partnership in the Clyde Valley, is looking at ways of aligning RBMP requirements with wider benefits for habitat networks and biodiversity and of formulating RBMP actions which deliver multiple benefits.</p> <p>Invasive non-native species are considered a significant water management issue; in some areas the presence of certain aquatic alien species has resulted in water bodies being classified at less than good status. All partners involved in area advisory groups are working to address this and prevent further deterioration.</p>
Priority catchments	SEPA's work on priority catchments provides an opportunity to integrate benefits for biodiversity within measures and restoration programmes; for example, promoting wetland creation and expansion to improve water quality.
Scottish Biodiversity Forum	SEPA is a key partner in the delivery of the Scottish Biodiversity Strategy, influencing actions within biodiversity partnerships at UK, national and local level. We are represented on all Scottish Biodiversity Forum ecosystem groups, acting as Chair for the Marine and Coastal, and Freshwater and Wetland ecosystem groups and the Scottish Wetland Forum. The ecosystem groups seek to co-ordinate partner activity and deliver action through an ecosystem approach for priority habitats and species.
CAMERAS (a co-ordinated agenda for marine, environment and rural affairs science)	SEPA is one of seven Scottish Government agencies responsible for co-ordinating CAMERAS, a joint approach to aligning Scotland's science resource to better address government policies and priorities.
Marine Scotland (Scottish Government Directorate)	SEPA is a delivery partner of Marine Scotland. Established in April 2009, Marine Scotland is the lead marine management organisation in Scotland. SEPA's Marine Science Team works closely with Marine Scotland to integrate core marine functions involving scientific research, compliance monitoring, policy and management of Scotland's seas.

Partnership	Delivering benefits for biodiversity
UK Lakes Habitat Group/ environmental improvement action plans	As joint lead of the UK Lakes Habitat Group, SEPA has made considerable progress in delivering lake habitat targets. We recently established seven local environmental improvement action plan loch partnership groups, covering 31 lochs across Scotland. The aim of the action plans is to work in partnership to pursue local catchment projects to address pressures (eutrophication, pollution, non-native invasive species, etc) to improve loch ecology and help safeguard priority plant assemblages.
Water Framework Directive (WFD) – Technical Task Groups	Protecting the water environment and, thus, water dependent biodiversity, is a fundamental requirement of WFD implementation. SEPA leads on several UK technical task teams (including the Freshwater Task Team and Wetland Task Team) responsible for developing a consistent approach to UK guidance and standards.

Influencing

Through plans, policies and promoting best practice, SEPA aims to help business and industry understand their environmental responsibilities and influence practice which protects Scotland's biodiversity. This includes planning authorities, other regulators, regulated bodies, specific sectors and the general public.

Sustainable Urban Drainage Systems (SUDS) are a legal requirement for all new developments. We advise planning authorities and developers to influence SUDS design to deliver the greatest benefit to biodiversity. We also have a responsibility to protect biodiversity through our role as a statutory consultee in the development planning process, and through a Scotland Environmental and Rural Services (SEARS) arrangement. Through this arrangement, we provide planning advice on specific issues affecting notified features of designated sites to planning authorities, via Scottish Natural Heritage (a SEARS partner). Scottish Natural Heritage is responsible for planning advice in relation to the conservation of European protected species and designated sites.

We also develop guidance, often in collaboration with partners, which incorporates good practice for biodiversity alongside air, land and water protection. For example:

- soil quality protection, design and operation of intensive agricultural installations;
- restoration of landfills and remediation of contaminated land.

In addition, we contribute to the production of publications that provide best practice advice for ponds, pools, and lochans, hydropower developments, fen management, and wind farm constructions. We also work with other public bodies to influence funding mechanisms that support projects which benefit biodiversity, such as scoring criteria within the Scotland Rural Development Programme, and SEPA's River Restoration Fund.

Further evidence of SEPA's commitment to biodiversity can be seen in our approach to encouraging and protecting biodiversity in and around SEPA offices and grounds. SEPA's Internal Environmental Policy 'Greening SEPA' contains a commitment for all SEPA offices with grounds to implement a biodiversity action plan by March 2011.

Developing the evidence base

SEPA has a duty to monitor and report on the state of Scotland's environment and to use the scientific information obtained from monitoring and research to inform regulatory decisions that protect the environment and biodiversity. We undertake research to develop a sound science and knowledge base, so that we can better understand environmental responses and drive environmental improvement. Recent biodiversity-related research projects include:

- control of *Elodea Canadensis/nuttallii* in priority mesotrophic lochs;
- palaeoecological study of seven mesotrophic lochs;
- Wetland Inventory, which maps wetlands across Scotland;
- wetland monitoring in five pristine (low nutrient) wetlands;
- the development of biomonitoring techniques to assess impacts on protected sites from intensive agricultural units.

Working with other public bodies we are also jointly responsible for co-ordinating CAMERAS, a shared approach to aligning Scotland's scientific activities (marine, rural, environmental science) in a way that avoids duplication and promotes collaboration between organisations in addressing government policies and priorities.

The future

SEPA will co-ordinate delivery of its biodiversity duties through three of its four corporate outcomes:

- Scotland's environment is protected and improving.
- Scotland's environment is understood and SEPA is an influential and respected authority.
- Scotland is preparing for a sustainable future and is taking steps to limit climate change.