

# TURNING THE TIDE

A Policy for Protection  
and Use of the  
Marine and Coastal  
Environment, 2019

For the *love* of Scotland



## **Purpose and Scope**

This policy outlines the importance of marine and coastal resources around Scotland in general and NTS properties in particular. It sets out the measures that NTS will implement to meet environmental challenges and safeguard their protection and sustainable use.

## **1. Introduction**

The sea has always been of crucial importance to Scotland – from the earliest mesolithic settlers who gathered shellfish around its coasts to the oil and renewables industries of the 20th and 21st centuries and marine tourism which is now the largest marine sector employer<sup>1</sup>. Some 90% of Scotland's territory is sea and around 70% of the UK continental shelf is Scottish. In 2016 the Scottish marine economy generated £3.8 billion GVA: accounting for 2.9 % of the overall Scottish economy<sup>1</sup>.

The coastline is both intricate and beautiful and the thousands of islands, almost a quarter of the European total, support distinctive human and wildlife communities. However, it is on the rich natural communities below the waves that Scotland depends for its wealth. Around half of all of the types of organism in Scotland live in the sea<sup>2</sup>. Long renowned for its fishing industry, Scotland still accounts for three-quarters of all landings of fish in the UK. Seabirds, too, depend on these fish and about 5 million nest around our shores – an estimated 45% of all of the seabirds in the European Union.

The National Trust for Scotland owns some of the most spectacular coastline in Scotland. In some cases, this extends down to the low tide level (See Appendix 1). These include St Kilda, the UK's only marine World Heritage Site. Together, these are home to about 20% of all of the seabirds breeding in Scotland, nearly 10% of the seabirds in the European Union. On St Kilda, alone, nests a quarter of the world's population of gannets. In addition to the scenic and wildlife resources on the coasts, the seas beyond the tideline are outstandingly rich. Four of Scotland's handful of marine Special Areas of Conservation and nine of the suite of Marine Protected Areas are immediately adjacent to NTS properties and St Abb's is the site of Scotland's only Voluntary Marine Reserve,

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<sup>1</sup> Scotland Marine Economic Statistics, Scottish Government (2016) <https://www.gov.scot/publications/scotlands-marine-economic-statistics/pages/5/>

<sup>2</sup> <https://www.gov.scot/publications/scotlands-seas-towards-understanding-state/>

declared because of its important reef communities and its stunning underwater topography (Appendix 2).

The National Trust for Scotland Order Confirmation Acts (1935 and 1938) confer an obligation to promote the *“permanent preservation... of lands and buildings of historic or national interest or natural beauty and .... of their natural aspect and features and animal and plant life”*. These were extended in the 1938 Act to include *“places”* of historic or national interest or natural beauty. While this is largely achieved through ownership of key properties, the Confirmation Acts make it clear that the responsibility to promote their conservation extends to all such features in Scotland, whether or not they are in Trust ownership.

The Trust owns some key components of the sea (stretches of the intertidal area – See Appendix 1) but most of the rest of the seabed (though not the overlying seawater) is owned by the Crown Estate. Furthermore, because of the great mobility of the sea, its features are strongly influenced by events and forces at some distance away. The internationally important seabird colonies on Trust properties depend fundamentally on the condition of their food supplies, obtained from the surrounding seas, and the sea surface on which they rest. It is therefore not possible to address their conservation in isolation without considering influences elsewhere in the sea. The Trust therefore has a role in the conservation of the wider marine environment.

The Trust has close connections and supports dependencies from local communities and businesses on the coast and sea. The Trust is supportive of the sustainable and wise use of marine resources and recognises the value that they bring to often remote and economically challenged communities. Our Conservation, Learning, Access and Enjoyment Principles<sup>3</sup> set out our general approach and they, along with development pressure, provide the context for our assessment of the challenges and opportunities.

## 2. Challenges

There are many challenges associated with the use of the marine environment. Some can be overcome by effective regulation and operating methods but others such as climate change require more holistic and global solutions.

*Climate change* – Has direct effects, such as increased sea temperatures, greater frequency of storm events, increasing acidification of seawater, and indirect effects, such as the changing distribution of prey species<sup>4</sup>. All of these have potential to have massive impacts on Scotland’s marine environment and coasts, some of which are already apparent. Our ability to counteract these changes is limited but includes reducing impacts from non-native species, minimising habitat loss and fragmentation

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<sup>3</sup> National Trust for Scotland, Conservation, Learning, Access and Enjoyment Principles (2018) [https://s3-eu-west-1.amazonaws.com/ws-nts/Production/assets/downloads/Conservation-Principles\\_NTS.pdf?mtime=20180531134658](https://s3-eu-west-1.amazonaws.com/ws-nts/Production/assets/downloads/Conservation-Principles_NTS.pdf?mtime=20180531134658)

<sup>4</sup> <https://www.gov.scot/publications/scotlands-seas-towards-understanding-state/>

and controlling impacts on species including disturbance. Monitoring the health and distribution of habitats and species is critical to our understanding of impacts.

*Fishing* – Is a regulated industry but can have a damaging impact on target and non-target species where it is not carried out sustainably. Several fishing techniques, notably the use of trawls and dredges, can damage seabed habitats or archaeological remains over wide areas<sup>5</sup>. Even the use of creels can entangle protected species, such as whales. Depletion of commercial fish stocks and habitat disruption can both have very far-reaching impacts on the functioning of marine ecosystems.

*Fish farming* – Is a significant industry in Scotland and with support from the Scottish Government is aiming to double its production by 2030<sup>6</sup>. The Trust is concerned about the sustainability of existing open cage systems and the ability of existing regulation and scrutiny to adequately limit and control impacts, especially in the context of this growth strategy. Open cage systems, produce large volumes of organic waste which smothers seabed habitats and causes wider nutrient enrichment<sup>7</sup>. Fin fish farming operations can release toxic therapeutic chemicals into the water column, often with widespread impact on marine life. Concentration of farmed fish leads to the release of elevated numbers of sea lice larvae into the water which infect wild salmon and sea trout, impacting populations (including in NTS-owned rivers) over wide areas potentially contributing to significant population declines<sup>8</sup>. Escaped farmed salmon which interbreed with neighbouring wild salmon leads to increased mortality<sup>7</sup> (through genetic introgression). Lethal control of predators such as seals and use of Acoustic Deterrent Devices disturb wildlife including cetaceans<sup>7</sup>.

*Renewable energy* – Poorly sited developments can result in killing seabirds through collision with wind turbines<sup>9</sup> and potentially underwater marine life through collision with tidal turbines; disturbance to seabed habitats and tidal flows through construction of hard infrastructure.

*Fossil fuel extraction* – can lead to major pollution events through failure of drilling infrastructure and shipping accidents.

*Tourism* – If unregulated or managed poorly can result in disturbance of cetaceans, basking sharks, seals and seabirds through the use of watercraft, drones and coastal access<sup>10</sup>. Large cruise ships can also be a source of pollution and carbon emissions.

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<sup>5</sup> <https://www.gov.scot/publications/management-scottish-inshore-fisheries-assessing-options-change/>

<sup>6</sup> <https://www2.gov.scot/Topics/marine/Fish-Shellfish>

<sup>7</sup> Review of the Environmental Impacts of Salmon Farming in Scotland. Report to Scottish Parliament January 2018.

<sup>8</sup> Effects of salmon lice *Lepeophtheirus salmonis* on wild sea trout *Salmo trutta*—a literature review EB. Thorstad, CD. Todd, I. Uglem, P. Bjørn, PG. Gargan, KW Vollset, E. Halttunen, S. Kålås, M. Berg, B. Finstad <http://www.intres.com/articles/aei2015/7/q007p091.pdf>

<sup>9</sup> <https://www.gov.scot/publications/vulnerability-scottish-seabirds-offshore-wind/>

<sup>10</sup> <https://www.nature.scot/professional-advice/land-and-sea-management/managing-coasts-and-seas/scottish-marine-wildlife-watching-code>

*Seaweed harvesting* – Mechanical harvesting (dredging) results in damage to kelp habitat structure and mortality of associated species. This can result in increased wave exposure through removal of protective kelp beds.

*Pollution* – Either from local sources (such as sewage outfalls, fish farming) or remote inputs (such as PCBs, heavy metals).

*Plastics, litter* – Pollution of the marine environment from plastics is a global phenomenon of high concern. It is resulting in the death of wildlife through entanglement and ingestion. Micro-particles can be toxic due to surface adsorption of chemicals – even affecting plankton and other micro-organisms<sup>11</sup>. Fishing gear is the dominant source of marine origin plastics globally<sup>12</sup> and in Scotland<sup>13</sup>.

### 3. Opportunities and Benefits

These challenges need to be met and through management, mitigation or elimination can be overcome providing opportunities for public and community benefit.

*Blue Carbon* – Living organisms in the sea, both attached to the seabed and in the water column, constitutes a major store of organic carbon that helps to mitigate climate change. Some of this is transferred to long-term storage in marine sediments. This can be depleted by fishing activities that result in damage to complex habitat structure<sup>14</sup>.

*Pollution* – Public awareness and political engagement is driving innovation and action to help map, reduce and remove marine litter. Opportunity exists to improve implementation of Scotland's Marine Litter Strategy<sup>15</sup> when it is reviewed in 2020. Integration of domestic terrestrial and marine litter strategies are critical as well as progress being made at international level.

*Sustainable commercial fishing* – Well-managed fisheries provide both food supplies and an income for coastal communities. Certain fishing techniques (such as diving or creel fishing), are less damaging and are compatible with other uses of the same area. More damaging fishing techniques need to be spatially managed to maximise ecosystem services and minimise disruption of other activities.

*Recreational angling* – Can provide substantial economic input to communities, as well as enjoyment for the participants. However, it depends on the presence of a surplus of large mature fish available to catch. Recreational sea angling used to be far more

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<sup>11</sup> Natalie Welden (2019) Understanding microplastic uptake and impacts in commercially important marine species. Proceedings of Scotland's International Marine Conference

<sup>12</sup> IUCN Marine Plastics Issues Briefing <https://www.iucn.org/resources/issues-briefs/marine-plastics>

<sup>13</sup> SCRAPbook 2018 marine litter results <https://scrapbook.org.uk/2018-results/>

<sup>14</sup> Proceedings of Scotland's International Marine Conference, February 2019

<sup>15</sup> Scottish Government marine Litter strategy <https://www.gov.scot/publications/marine-litter-strategy-scotland/pages/5/>



widespread than today but its decline in recent years has been blamed on the decline in inshore fish populations<sup>16</sup>. Freshwater angling, especially for salmon and sea trout, is particularly high-value, but depends on sufficient migratory adult fish returning from the sea.

*Recreational access* – The visitor economy is a major driver of Scotland's rural areas and the coastal zone attracts disproportional interest on account of its landscape value, concentration of visitor services and specialist activities such as diving, sailing, kayaking, outdoor swimming and wildlife viewing (seabirds, seals, whales, dolphins, basking sharks, etc.). These depend on maintaining high quality landscapes, thriving wildlife populations and tourist infrastructure such as accommodation. Opportunities exist within visitor services to inform and engage the public in the issues and wonder of the marine environment.

*Marine Protected Areas* – Protected areas provide the cornerstone of any effective conservation strategy<sup>17</sup>. As well as providing a magnet for tourism they are nursery areas for commercial fish species that allow the repopulation of neighbouring fisheries. The resulting higher biomass of plants and animals contributes to carbon storage.

*Coastal communities* – People living in coastal areas benefit from marine resources and have both a personal interest in and strong feelings for their conservation. As a major coastal landowner, NTS is deeply involved in these communities and can help to give voice to their concerns, both linking them to other coastal communities and also to other like-minded voices in Scotland.

## 4. Policy Statement

The Trust believes that the marine environment and the organisms that depend on it are a vital component of Scotland's natural heritage. Our coastal landscapes are outstandingly spectacular, nationally and internationally, and play a pivotal role in people's enjoyment. We will strive to ensure that the marine and coastal habitats and landscapes on and adjacent to our properties are conserved and managed to the highest standards. We will use our influence, both as a major stakeholder in coastal communities and in national policy debates, to champion the cause of marine conservation and secure change to improve the conservation status of all of Scotland's seas.

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<sup>16</sup> Technical Report: Economic Impact of Recreational Sea Angling in Scotland, Scottish Government (2009) <https://www2.gov.scot/resource/doc/280648/0084568.pdf>

<sup>17</sup> Katie Gilham (2019) Progress in developing the Scottish MPA network. Proceedings of Scotland's International Marine Conference

## 5. Policy Implementation

The Trust will:

- manage its coastal properties to the highest standard to ensure that they remain exemplars of best practice;
- engage with its neighbours in coastal communities and other users of the coastal and marine environment to encourage sustainable and integrated management for public benefit;
- seek to safeguard the finest marine environments around Scotland's coasts through legal protection and adequate enforcement by engagement in public debate, influencing and policy formulation;
- strive to educate the public, especially schoolchildren, about the value and importance of the marine and coastal environment, especially at our properties, publications, events and media work;
- provide and promote appropriate real and virtual access to Scotland's coasts, seas and wildlife.

## 6. Policy Guidance

### Seabirds

The largest and most direct interaction between the marine environment and NTS properties is with the seabird colonies.

- The Trust will monitor trends in seabird colonies and seek to understand the underlying causes of these.
- We will work to counteract threats to seabirds (e.g. marine litter, fisheries impact on food supplies).
- We will oppose inappropriately located developments where these threaten seabirds.

### Fish farming

Rivers running through NTS properties are home to significant populations of fish that migrate into the sea for part of their lives, notably salmon, sea trout and eels. These are subject to a number of pressures, including from fish farming and some fisheries practices. Fish farms can also cause damage to other marine habitats and species and introduce industrial structures into otherwise relatively wild places

- The Trust may object to fish farm developments that alter the character and diminish the quality of the visitor experience in protected landscapes and seascapes especially near Trust properties.

- We may also object where developments or practices threaten local salmonid populations or other nationally important marine habitats and species.
- We will contribute our knowledge to influence the fish farming industry and decision makers to ensure developments and the regulatory system supports sustainable operations which minimise impacts on the natural environment.

## **Fishing**

Marine habitats and species are impacted by damaging and unsustainable fishing practices.

- The Trust will seek to restrict the use of scallop dredges in sensitive and bio diverse areas of seabed as well as ensuring there is adequate enforcement of existing restrictions in protected areas.
- We will encourage detailed assessment of the spatial impact of fishing practices that damage the seabed and support the reinstatement of an inshore limit to bottom-towed fishing. We encourage Scottish Government to investigate how to transition to an inshore limit whilst sustaining coastal communities and commercial fishing.
- We will champion the establishment of appropriate protected areas to ensure habitats and species are adequately represented
- We support the creation of no-take zones.
- We will promote the introduction of strong legislation designed to protect marine habitats and species and ensure that it is enforced.

## **Litter**

Marine litter and other forms of pollution pose a widespread threat to marine ecosystems.

- The Trust will minimise sources of pollution, including sale of plastics, on its own properties and continue to clean up pollution arriving on its coasts.
- We will campaign to secure wider improvements in the control of pollution.

## **Visitors and Access**

With hundreds of thousands of visitors every year to our coastal properties the Trust has a responsibility to encourage and provide for responsible access. This, along with our other communication channels, presents an opportunity to raise awareness of marine conservation issues and provide incredible wildlife experiences.

- We will use our Conservation, Learning, Access and Enjoyment Principles to find an appropriate balance between the needs of wildlife and humans. Working within the Scottish Outdoor Access Code we will prioritise public safety and conservation where there are competing demands at our properties.



- The Trust will invest resources at its properties and in support of wider communication and education initiatives, to promote the contents of this policy, findings of our marine and seabird monitoring work and the stories of the places and people connected with our marine heritage.

### **Coastal communities**

Coastal communities have a close connection with the marine environment and depend on it in many ways for their enjoyment and prosperity. As a coastal landowner, the Trust is a member of these communities in many parts of Scotland. Where we have capacity and where it is consistent with our own policy positions;

- The Trust will contribute to the work of coastal community groups that seek to improve the management of marine and coastal resources consistent with its statutory purposes.
- We will help to reinforce their concerns in national debate and ensure that their impact is enhanced through joint working between coastal groups in different parts of Scotland.

### **Climate change**

Climate change poses the single greatest threat to marine ecosystems.

- The Trust will campaign for meaningful action to control climate change.
- The Trust will champion the protection and enhancement of Blue Carbon.

### **Landscape**

Coastal landscapes in Scotland of international importance and are critical to supporting visitor access and the tourist industry.

- The Trust will manage its coastal properties to preserve landscape value,
- We will oppose coastal developments that would alter the character and threaten landscape value of our properties and those with Conservation Agreements,
- We will seek to improve protection of coastal landscapes through influencing national policy.

## 7. Definitions

*Acoustic Deterrent Devices* – Devices that emit a loud underwater sound designed to keep seals away from fish farms but that also have a serious effect on whales and dolphins.

*Acidification* – The process of progressively increasing the acidity of sea water resulting from carbonic acid formed by increased quantities of carbon dioxide absorbed into the sea.

*Cetaceans* – Whales, dolphins and porpoises.

*Creels* – Traps, commonly made from net, that are baited and left on the seabed to catch crabs, lobsters and langoustines.

*Intertidal* – The area between High Water Mean Spring Tides and Low Water Mean Spring Tides, also known as the Foreshore.

*Introgression* – Changing the genetic composition of wild animals (or plants) as a result of inter-breeding with farmed animals escaping into the wild (in this context, mainly farmed Atlantic Salmon)

*Sealice* – Parasitic organisms (crustaceans) that infect the skins of wild and farmed salmon or sea trout and cause damage and, in high concentrations, death.

## Appendix 1

### Coastal Properties and Conservation Agreements

NTS Properties	Conservation Agreements
Arduaine	Cally Estate
Balmacara	Cardoness
Brodick	Drumbain
Burg	Drumshang
Canna	Dundonnell
Culzean <sup>1</sup>	Dunollie
Fair Isle <sup>1</sup>	Dunure
House of Dun	Durness
Inverewe <sup>1</sup>	E Links (N Berwick)
Iona <sup>1</sup>	Eilean Mhic Chrion
Kintail	Elie
Lumsdaine	Elie Ness
Mingulay	Genoch
Murray's Isles	Gosford
Parklea Farm	Inchmarnock
Rockcliffe	Inverlael
Rough Is	Kyle House
Shieldaig Island	Loch Shieldaig
St Abb's Head <sup>1</sup>	Ravenshall
St Kilda <sup>1</sup>	Rhubodach
Staffa	Rockcliffe
Strome Castle	Skelpick
Torridon <sup>2</sup>	Tongue
Unst <sup>1</sup>	W Links (N Berwick)

<sup>1</sup> At these properties NTS also owns the foreshore (extending to Low Water Mean Spring Tides).

<sup>2</sup> The Trust owns certain statutory rights (harvesting of mussels) on the foreshore

## Appendix 2

### Designated marine sites overlapping or adjacent to NTS properties

#### World Heritage Site

- St Kilda

#### Ramsar Sites

- Inner Clyde (Parklea, Geilston)<sup>1</sup>
- Montrose Basin (House of Dun)<sup>1</sup>

#### Special Areas of Conservation

- Berwickshire and North Northumberland (St Abbs)
- Lochs Duich, Long and Alsh (Balmacara; Kintail)<sup>1</sup>
- Mingulay reefs<sup>1</sup>
- Solway Firth (Rockcliffe)<sup>1</sup>
- St Kilda

#### Special Protection Areas (for birds)

- Canna
- Fair Isle
- Fetlar (Unst)
- Hermaness, Saxa Vord and Valla Field (Unst)
- Inner Clyde (Parklea, Geilston)<sup>1</sup>
- Mingulay and Berneray
- Montrose Basin (House of Dun)
- Solway Firth (Murray's Islands, Rockcliffe)
- St Abbs
- St Kilda

#### Biosphere Reserve

- Wester Ross (Coastal properties: Balmacara, Torridon, Kintail, Inverewe, Shieldaig Island, Strome Castle)

#### Marine Protected Areas (Nature Conservation)

- Fetlar to Haroldswick (Unst)<sup>1</sup>
- Loch Sunart and the Sound of Jura (Arduaine)<sup>1</sup>
- Lochs Duich, Long and Alsh (Balmacara; Kintail)<sup>1</sup>
- Small Isles (Canna)<sup>1</sup>

- South Arran (Brodick)<sup>1</sup>
- Upper Loch Fyne and Loch Goil (Crarae)<sup>1</sup>
- Wester Ross (Inverewe)
- Loch Carron (Balmacara, Strome Castle)<sup>1</sup>

### **Demonstration and Research Marine Protected Area**

- Fair Isle

### **Voluntary Marine Reserve**

- St Abbs and Eyemouth

### **National Scenic Areas (coastal)**

- East Stewartry Coast (Rockcliffe)
- Fleet Valley (Murray's Isles)
- Kintail (Kintail)
- Kyles of Bute (Tighnabruaich)
- Loch na Keal (Burg, Staffa)
- North Arran (Brodick)
- Shetland Isles (Fair Isle)
- Small Isles (Canna)
- St Kilda (St Kilda)
- Wester Ross (Inverewe, Shieldaig, Torridon)

### **Trust properties within 1km of the coast**

- Culzean Castle
- Newhailes
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<sup>1</sup> At these properties, the protected area lies adjacent to the NTS property with no overlap. On all others there is a partial overlap.



*Gannets above St Kilda sea stack. S Brooks*





## *OUR VISION*

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Scotland's heritage is valued by everyone  
and protected now and for future generations

## *OUR OBJECTIVES*

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To protect and care for Scotland's heritage

To provide opportunities for everyone  
to experience and value Scotland's heritage

To promote the benefits of heritage

To create an efficient and sustainable business  
which supports our conservation needs

## *OUR VALUES*

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**VIBRANT**

**CARING**

**INCLUSIVE**

**CURIOUS**

**BRAVE**

The National Trust for Scotland, Hermiston Quay, 5 Cultins Road, Edinburgh EH11 4DF  
Call us on 0131 458 0200 or +44 (0) 131 458 0303 from outside the UK email [information@nts.org.uk](mailto:information@nts.org.uk) visit [nts.org.uk](https://nts.org.uk)

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