# SUSTAINABLE CULTURAL AND NATURAL HERITAGE: SCOTLAND

Part Two: Environmental Threats and Challenges

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# INTRODUCTION

- United Nations 2030 Agenda for Sustainable Development (2015) – 17 goals
- Scotland's *Climate Ready*
- The tourism sector is not sustainable and more effective policy measures are required to find a way to reconsider the relationship between people and the environment
- Obstacles (e.g.):
  - Climate change is unpredictable
  - Stakeholder interests

**Key Questions – Part Two**

- How does climate change transform tourism from a development opportunity into a source of environmental risk for natural heritage?
- What are the limits of sustainable tourism, and who decides when those limits have been reached?
- Can nature-based tourism genuinely support conservation, or does it ultimately undermine the ecosystems it depends on?


# SUSTAINABILITY: A USEFUL TERM?



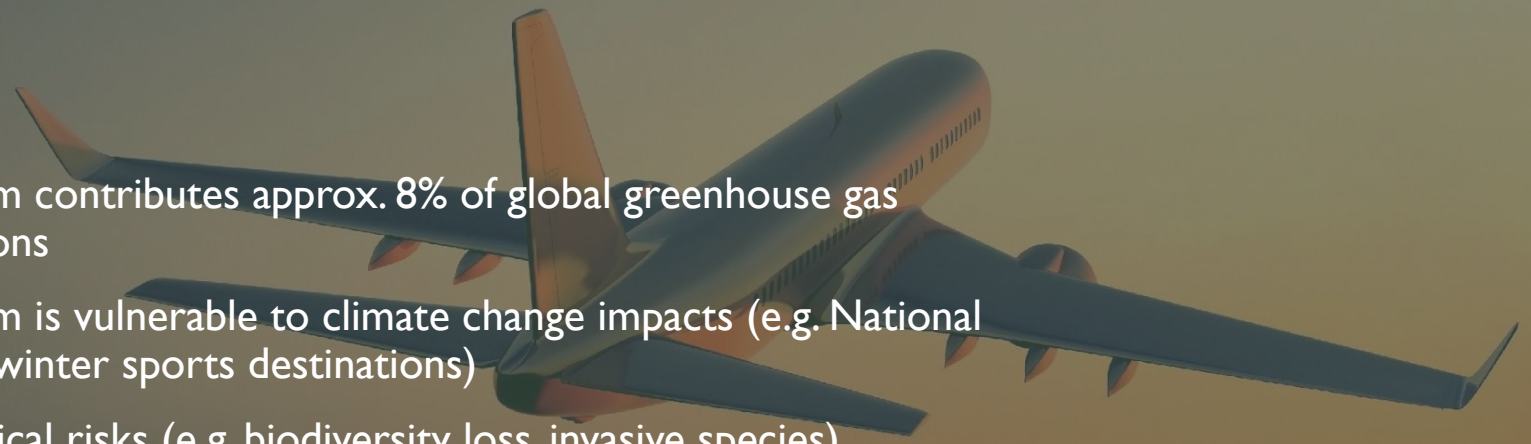
Originally, the concept sought to balance environmental protection with social and economic considerations through responsible resource management

the term has become ambiguous, particularly through politically motivated phrases such as ‘sustainable growth’ and ‘sustainable development’

related concepts such as eco-tourism, responsible tourism, and slow tourism

‘Greenwashing’

# TOURISM'S CARBON FOOTPRINT



- Tourism contributes approx. 8% of global greenhouse gas emissions
- Tourism is vulnerable to climate change impacts (e.g. National Parks, winter sports destinations)
- Ecological risks (e.g. biodiversity loss, invasive species)
- protected ecosystems are highly sensitive and lack resilience to rapid environmental change
  - E.g. Cairngorms National Park – struggling to meet the four statutory aims of the National Parks (Scotland) Act, 2000
- A reciprocal relationship:
  - tourism accelerates climate change through carbon emissions, while climate change reshapes tourism demand, seasonality, and destination competitiveness

- Transport – particularly aviation – is the largest source of tourism-related emissions, followed by accommodation
- In the UK, transport is the largest emitting sector, accounting for 24% of total emissions in 2020
- Climate Change Act (2008) the UK pledged to cut greenhouse gas emissions by 80% by the year 2050

# OVERTOURISM IN NATURAL ENVIRONMENTS: IMPACTS, LIMITS AND GOVERNANCE

- Sustainable tourism defined by WTO as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities"
- Many pressures experienced in cities, including congestion, pollution, anti-social behaviour, pressure on infrastructure, and rising cost of living, are also present in natural areas
- Overtourism places pressure on multiple elements of environmental carrying capacity, including water quality and availability, land use, sewage systems, and waste management. Common impacts include soil compaction and erosion, vegetation loss, habitat degradation, pollution, solid waste accumulation, and water shortages
- Wildlife is particularly vulnerable: increased human contact can disrupt animal behaviour, cause physical harm, and elevate stress levels
- Although visitors can bring environmental benefits – such as funding for conservation, protection of habitats, and greater public awareness – these advantages are contested. Critics argue that framing nature as an economic asset through a model of 'market environmentalism' risks undermining its intrinsic value and prioritising profit over genuine conservation outcomes

Scottish

# OVERTOURISM MITIGATION MEASURES

- Overtourism is a complex and context-specific problem with no universal solution
- It requires shared responsibility among stakeholders and management approaches tailored to the characteristics of individual destinations
- Two main mitigation strategies:
  - direct measures that control visitor numbers or spatial distribution (e.g. legal restrictions, visitor caps, permits, pricing)
  - indirect measures that seek to influence visitor behaviour (e.g. dispersal to other sites, visitor pledges)

# CASE STUDY: THE FAIRY POOLS, ISLE OF SKYE – ENVIRONMENTAL AND SOCIAL IMPACTS

- Series of waterfalls beneath Cuillin Mountains, Isle of Skye, Inner Hebrides
  - One of Skye's most visited attractions, alongside the Quiraing and the Old Man of Storr
- Skye Bridge, 1994
- Visitor numbers on Skye increased by 55% between 2014–2017, with Fairy Pools experiencing an 86% rise – from approx. 100,000 visitors in 2016 to 186,000 in 2018
- Environmental impacts, e.g. path erosion, vegetation loss, roadside parking damaging, littering, human waste pollution, traffic congestion on single-track roads
- Social impacts, e.g. rising housing costs linked to the growth of short-term lets, AirBnB
- SkyeConnect (DMO)

# CASE STUDY: ORKNEY – OVERTOURISM AND WILDLIFE IMPACTS

- Rich marine biodiversity and birdlife
- Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs), and Marine Protected Areas
- Wildlife sensitive to human disturbance. Increased visitor numbers, especially during the breeding season, can disrupt nesting seabirds through walking, photography, and the use of drones
- Mitigations – 'slow tourism' is being encouraged; guided tours; citizen science projects; transport management

# MARINE AND COASTAL TOURISM: NATURAL CAPITAL, WILDLIFE IMPACTS AND GOVERNANCE GAPS

- Marine wildlife tourism – e.g. whale watching, visiting seabird colonies, and coastal nature experiences
- Sustainability of this sector is threatened by degradation of the marine environment e.g. overfishing, plastic pollution, and wildlife disturbance
- MPA – Marine Protected Area
- Plastic pollution
- Seabirds
- a central paradox of overtourism: economic dependence on nature combined with insufficient protection of natural capital

# CAIRNGORMS NATIONAL PARK: OVERTOURISM AND VISITOR MANAGEMENT IN A PROTECTED LANDSCAPE

CNP – est. 2003 – the largest national park in the United Kingdom and one of two in Scotland, alongside Loch Lomond and the Trossachs

approximately 4,528 km²

Sites of Special Scientific Interest (SSSI)

Should national parks prioritise environmental preservation or public access and enjoyment?

Key impacts e.g. trail erosion, vegetation loss, soil compaction, disturbance to wildlife, particularly ground-nesting birds and fragile grouse populations, transportation, littering, illegal parking, drone use

Cairngorms National Park Authority (CNPA)

# REWILDING SCOTLAND: NATURE-BASED TOURISM BEYOND OVERTOURISM

- "Decade of Restoration" (2021–2030) policy
- rewilding as a potential framework for large-scale ecological recovery and future land management
- Rewilding initiatives aim to restore ecological processes rather than individual species through habitat regeneration and reduced land-use intensity
- aligns with evolving forms of nature-based tourism that emphasise slow travel, low-impact experiences, and meaningful engagement with landscapes
- Projects: Trees for Life's Dundreggan Estate , Glen Affric ; Cairngorms Connect

- From a tourism perspective, rewilding offers potential benefits.
  - First, it supports diversification away from iconic but saturated sites by creating new destinations rooted in ecological value rather than spectacle
  - Second, it attracts visitors motivated by conservation, learning, and participation, who tend to have lower environmental impacts and higher levels of environmental awareness.
  - Third, rewilding tourism can generate income streams that support ongoing restoration through guided experiences, accommodation, and conservation volunteering
- As Scotland's tourism sector continues to market its natural heritage, rewilding provides an opportunity to align conservation objectives with visitor experiences—provided growth is managed, impacts are monitored, and ecological limits are respected

# ST KILDA: MANAGEMENT OF FRAGILE HERITAGE


UNESCO WHS, 1986 – 'Mixed' status

Human occupation since the Bronze Age

Population evacuated in 1930

‘St Kilda’ Lizanne Henderson ©padeapix

Soay Sheep

# ST KILDA

- Management:
  - shared between National Trust for Scotland, Historic Environment Scotland, NatureScot, *Comhairle nan Eilean Siar*, and Ministry of Defence
  - protected by an unusually dense framework of national and international designations, including National Nature Reserve, Special Protection Area, Special Area of Conservation, and Scheduled Monument status
  - Despite this, St Kilda faces ongoing challenges relating to funding, staffing, climate change, marine pressures, and the long-term sustainability of its governance model
- Tourism in a fragile environment - Rather than expanding access, management has focused on limiting on-site visitation and developing alternative ways for people to engage with the site
- Proposed St Kilda Visitor Centre at Uig on Isle of Lewis
- St Kilda illustrates the outer boundary of sustainable tourism: where protection necessitates exclusion rather than accommodation
- St Kilda offers a stark contrast to destinations such as Skye and Orkney

Lizanne Henderson ©padeapix

# CONCLUDING REMARKS: REFRAMING TOURISM FROM CONSUMPTION TO STEWARDSHIP

First, stronger policy intervention is critical, including coherent frameworks that align tourism development with climate goals, even where this challenges growth-led models

Second, behavioural change is required: flying less, travelling more slowly, and normalising lower-carbon alternatives

Third, efficiency and infrastructure improvements—renewable energy, energy-efficient accommodation, and greener transport—must be accelerated