# BIOSECURITY IN SOUTH GEORGIA & THE SOUTH SANDWICH ISLANDS

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## 1.Introduction

South Georgia & the South Sandwich Islands (SGSSI) are globally significant for biodiversity and environmental integrity. The Territories support some of the largest and most intact wildlife populations on the planet, including approximately five million seals of four species, and an estimated 65 million breeding seabirds representing more than 30 species. These populations are not only remarkable in scale, but also of outstanding international conservation importance, with many species highly dependent on the continued ecological integrity of the islands and surrounding marine environment.

The remoteness of the Territories, their harsh climate, and their limited human footprint have historically provided a strong natural barrier against ecological change. However, these same characteristics also mean that once ecological damage occurs, recovery is slow, uncertain, or in some cases impossible. In island systems such as South Georgia, the introduction of a single non-native species, pathogen, or disease can have profound and long-lasting consequences.

Environmental stewardship is central to the governance of SGSSI and biosecurity is a foundational component of this approach. It underpins efforts to protect native wildlife and ecosystems, sustain the environmental values on which research, fisheries, and tourism depend, and inspire responsible engagement with one of the world's most extraordinary natural places.

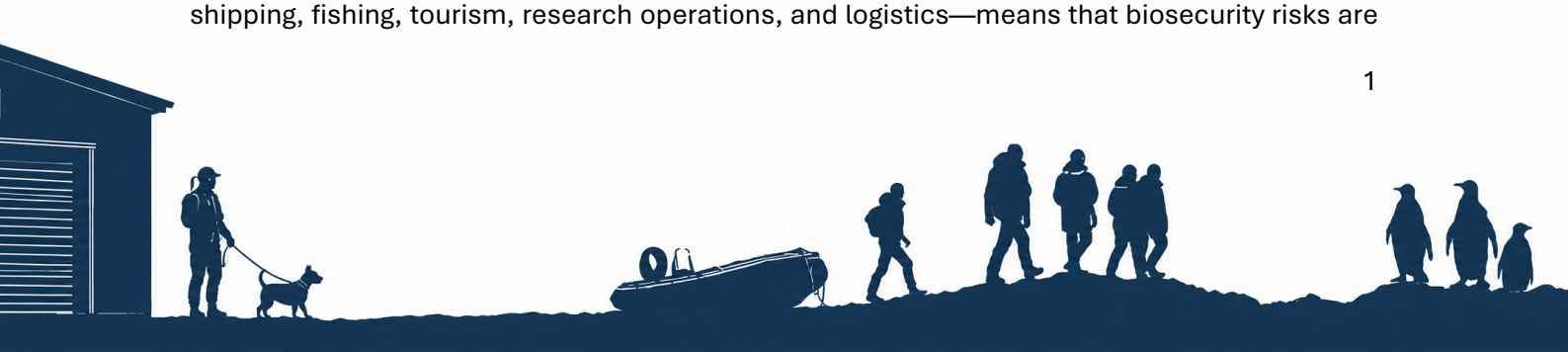
## 2. Why Biosecurity Matters

Biosecurity refers to the collective measures taken to prevent the introduction, establishment, and spread of non-native species, pests, and diseases that could harm the environment, economy, or human activities. For South Georgia & the South Sandwich Islands, biosecurity is not a peripheral consideration: it is one of the most critical determinants of long-term environmental security.

Biosecurity infringements are widely recognised as one of the greatest risks to the future sustainable management of the Territory. Non-native species can disrupt food webs, predate native species, introduce novel diseases, alter habitats, and undermine decades of conservation investment. In many island environments globally, invasive species have been the primary cause of biodiversity loss and ecosystem collapse. South Georgia's relative ecological intactness makes it both highly valuable and particularly vulnerable.

The increasing scale and complexity of human activity in the Southern Ocean region—including shipping, fishing, tourism, research operations, and logistics—means that biosecurity risks are





no longer hypothetical. Every vessel movement, cargo transfer, landing operation, and personal item has the potential to act as a pathway for non-native species or disease.

Biosecurity therefore relies not on a single control point, but on the cumulative effectiveness of many actions taken by many different people, often well before arrival in the Territory.

## 3.Purpose of Standard Operating procedures

A series of Standard Operating Procedures (SOPs) have been developed to provide a clear, consistent framework for managing biosecurity risks across all activities associated with South Georgia & the South Sandwich Islands. It sets out the principles, responsibilities, and procedures required to reduce the likelihood of biosecurity threats reaching or becoming established in the Territory.

The SOPs serve several key purposes:

- to explain **why biosecurity controls are necessary** in the SGSSI context;
- to set out the **expectations and responsibilities** of all user groups;
- to support compliance with relevant legislation, including the *Wildlife and Protected Areas Ordinance (2011, as amended)*;
- to promote a shared culture of **biosecurity awareness and stewardship**.

Failure to adhere to the measures outlined in the SOPs may be used as evidence in enforcement actions under applicable legislation. However, the primary intent of the SOPs is not punitive, they are intended to support prevention, consistency, and shared responsibility, recognising that effective biosecurity depends on informed and cooperative behaviour across all sectors.

## 4. Shared Responsibility

Biosecurity in SGSSI is a shared responsibility. While GSGSSI sets policy, standards, and regulatory requirements, the effectiveness of biosecurity measures ultimately depends on the actions taken by vessel operators, contractors, researchers, tour operators, crew, and visitors.

Many biosecurity risks can only be effectively managed **before arrival** in the Territory, through good planning, cleaning, packing, and awareness. Once a risk reaches South Georgia, options for mitigation are far more limited and often costly.

The SOPs therefore emphasise:

- early intervention;
- prevention over response;
- transparency and accountability;
- proportionality based on risk.



By working collaboratively, it is possible to maintain high biosecurity standards without unnecessarily restricting legitimate activities.

## 5. The Biosecurity Continuum

Effective biosecurity operates along the entire **biosecurity continuum**, from pre-departure planning through to post-visit monitoring and response. No single measure is sufficient on its own. Instead, protection is achieved through multiple layers of control, each reducing risk at different stages.

These stages include:

- **Pre-border controls**: planning, cleaning, packing, certification, and risk assessment undertaken before departure for the Territory;
- **Border inspections**: checks conducted on arrival, including inspection of vessels, cargo, equipment, and personal items;
- **Post-border monitoring**: surveillance, reporting, and follow-up actions to detect and respond to any incursions;
- **Incursion response**: rapid action to contain, eradicate, or manage threats should they arise;
- **Review and improvement**: ongoing evaluation of biosecurity performance and emerging risks.

Education, awareness, legislation, and continuous review underpin all stages of this continuum (Figure 1).

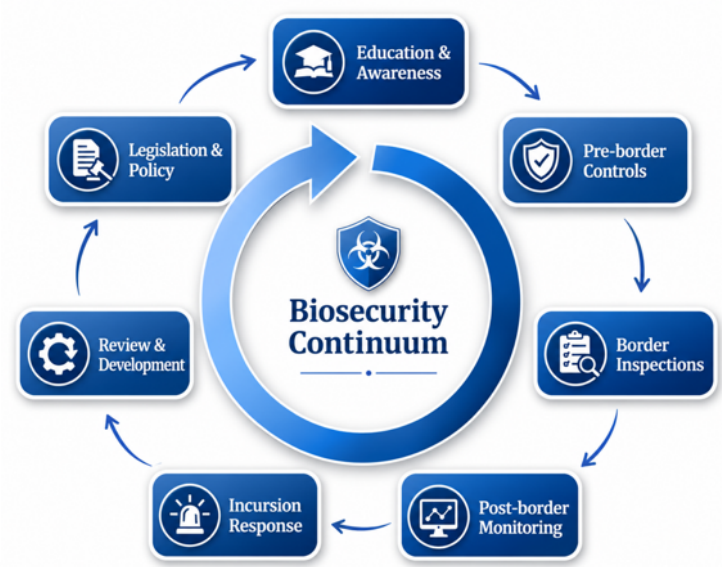



*Figure 1. Effective biosecurity operates along the entire biosecurity continuum.*

The SOPs are designed to operate within this framework, ensuring that controls are applied at the most effective points and that responsibility is clearly understood.

## 6. Understanding the Risk

To ensure that biosecurity measures remain proportionate, targeted, and evidence-based, GSGSSI draws on scientific risk assessment and horizon scanning. A Horizon Scanning exercise undertaken by the GB Non-Native Species Secretariat used a structured, expert-led consensus approach to identify species that pose the greatest potential risk to South Georgia, based on:

- likelihood of arrival;
- likelihood of establishment and spread;
- potential impacts on biodiversity, the economy, and human activities.

This work highlights that the most significant threats are not limited to large or obvious species. Small invertebrates, plant propagules, pathogens, and microbes—often transported unintentionally—can pose equal or greater risk.

The species identified through this process represent, in effect, *"South Georgia's most unwanted"*. The purpose of the biosecurity measures in this Handbook is to ensure that these risks are addressed systematically, consistently, and as far upstream as possible.



*Table 1 South Georgia's most unwanted*

| Species | Common_names | Group | Impact | | |
|---|---|---|---|---|---|
| | | | bio | econ | hlth |
| *Mytilus chilensis (?)* | Chilean mussel | Marine | x | | |
| *Mytilus edulis (?)* | Blue mussel | Marine | x | | |
| *Botryllus schlosseri* | Colonial Ascidian | Marine | x | | |
| *Carcinus maenas* | European Shore Crab | Marine | x | | |
| *Ciona intestinalis* | Ascidian | Marine | x | | |
| *Halicarcinus planatus* | Decapod | Marine | x | | |
| *Mytilus galloprovincialis* | Mediterranean mussel | Marine | x | | |
| *Undaria pinnatifida* | Asian kelp | Marine | x | | |
| *Bugula neritina* | Ruby bryozoan | Marine | x | | |
| *Austromininus modestus* | Darwins Barnacle | Marine | x | | |
| *Codium fragile subsp fragile* | Green sea fingers - Green Alga | Marine | x | | |
| *Ascidiella aspersa* | European sea squirt | Marine | x | | |
| | | | | | |
| *Rattus rattus* | black rat | Mammal | x | x | |
| *Mus musculus* | house mouse | Mammal | x | x | |
| *Rattus norvegicus* | brown rat | Mammal | x | x | |
| | | | | | |
| *Forficula auricularia* | European earwig (from Falklands) | Dermaptera | x | | |
| *Hypogastrura manubrialis* | springtail | Springtail | x | | |
| | | | | | |
| *Acaena lucida* | | Plant | x | | |
| *Carex trifida* | | Plant | x | | |
| *Leptinella plumosa* | | Plant | x | | |

## 7. Continuous Improvement and Review

Biosecurity is not static. Changes in climate, shipping patterns, technology, and human activity mean that risk profiles evolve over time. GSGSSI therefore undertakes regular review of biosecurity operations in collaboration with stakeholders, including operators and delivery partners, to identify emerging threats and improve control measures.

The SOPs are reviewed and updated as part of that process to ensure it reflects current best practice, operational experience, and scientific understanding.

## 8. Using the SOPs

Detailed SOPs and guidance are tailored to different activities and pathways. These procedures are necessarily specific and, in some cases, demanding. Their purpose is to reduce risk to a level that is appropriate for one of the world's most sensitive and valuable island ecosystems.

By understanding the principles set out in this introduction, users will be better placed to apply the SOPs consistently, effectively, and with an appreciation of their importance.

Protecting South Georgia's environment is a collective endeavour. Robust biosecurity is one of the most powerful tools available to ensure that the Territory's extraordinary wildlife and ecosystems endure for generations to come.