

2023–2024 Biosecurity Instructions

For IAATO Office Representatives, Expedition Leaders,
Field Staff, Vessel Masters and Officers

Emergency Contact Information

IAATO Emergency Line (Monitored 24hours): +1 401 608 2090
Incident Reporting (non-Emergency): operations@iaato.org
shipscheduler@iaato.org

Key IAATO Contact Information for the 2023-24 Season:

Ship Scheduler Assistance: shipscheduler@iaato.org
Online Assessment questions and feedback: operations@iaato.org
FOM Sync App or Polar Guide App feedback: operations@iaato.org

2023-24 SEASONAL MUST DOS OF AVIAN INFLUENZA

- Make sure guests are prepared for disruption to planned voyage activities due to HPAI before they leave home.
- Read the 2023-24 Biosecurity Instructions
- Ensure biosecurity procedures are carried out to the highest level.
 - Decontamination procedures must be carried out between regions.
 - Onboard the vessels, it is imperative that all organic material is removed from boots and other equipment before Virkon S (or equivalent) is applied.
 - Virkon S must be allowed to dry to be effective.
- A Pre-Landing Assessment **MUST** be carried out prior to any landing.
- 5 meters/15 feet distance must be maintained from Antarctic Wildlife
- Do not lie down, kneel/crouch, or sit at sites with wildlife.
- Never pick up/handle dead wildlife.
- Do take photos or videos to record what you saw to support further investigations.
- Do take note of the location(s).
- Do report as suspected cases to your EL, IAATO, and home office immediately.
- Operators must create specific standard operating procedures (SOPs) for scientists they are working with, especially scientists who work with RPAS. Operators are responsible for sharing their internal SOPs with appropriate personnel.
- **WHEN IN DOUBT DO NOT LAND**

Overarching Biosecurity Obligations (FOM Section 7 – Biosecurity)

IAATO's mandatory biosecurity and wildlife watching procedures are a recognised cornerstone of our commitment to safe, environmentally responsible travel. We remind you of the biosecurity obligations laid out in the IAATO Field Operations Manual, Section 7.

In addition, for the 2023–2024 season, you are required to follow special procedures to mitigate the introduction and spread of avian influenza:

Special note for the 2023-24 season: As of September 11, due to COVID and HPAI, IAATO Vessels will not interact with occupied National Antarctic Program Stations for tourism visits, unless it is for authorised logistical assistance or special projects. Any changes to policies will be announced as information becomes available.

1. Avian influenza

Since 2021 the increasing intensity of highly pathogenic avian influenza (HPAI) H5N1 outbreaks has resulted in the death of hundreds of thousands of seabirds around the world. Marine mammals, including seals and sea lions, have also been affected. At the time of writing, over 500,000 seabirds and over 20,000 sealions have died in Chile and Peru alone and the disease has been confirmed in Tierra del Fuego. It is highly likely that it will arrive via animals migrating to and from the Antarctic and sub-Antarctic with serious implications for wildlife.



Great Skua killed by HPAI, RSPB Scotland

The SCAR Antarctic Wildlife Health Network (AWHN) has advised that there is a high risk that HPAI will arrive in Antarctic and sub-Antarctic regions during the 2023-24 austral summers.

Assume HPAI will arrive and maintain the highest biosecurity possible.

Be prepared for the closure of visitor sites and/or regions for extended periods.

1.1 Avian Influenza Biosecurity Procedures

The following actions should be followed for the 2023–2024 season and are in addition to IAATO's standard biosecurity procedures. They do not replace domestic governmental regulations and are subject to change pending advice from experts.

- i. **Information for guests:** IAATO also strongly encourages Operators to work with their home offices, field staff and partners to share information about IAATO's response to the disease including **the reality that sites/regions may be closed for extended periods this season**. This will help promote a consistent response to managing guest expectations.
 - To help prepare guests for IAATO's response to HPAI during the 2023–2024 season, IAATO circulated a document to members in July 2023 for incorporation into pre-departure information. <https://iaato.org/field-staff-resources/avian-influenza-response-2022-23/>
- ii. **Decontamination between Regions:**
 - A thorough biosecurity decontamination **MUST** be done between **ALL** gateways, the interior of Antarctica and maritime regions (including but not limited to the Falkland Islands (Islas Malvinas), South Georgia, the Antarctic Peninsula, and Ross Sea).
 - Onboard the vessels, it is imperative that all organic material is removed from boots and other equipment between landings before Virkon S (or equivalent) is applied.
 - Virkon S must be allowed to dry to be effective.
- iii. **Assessing landings & visits to wildlife colonies:**
 - All operators must perform a pre-landing assessment (For further information see section 1.2 below).
 - It is recommended to allow for, at minimum, a full half hour (30min) for this assessment when planning timings for operations.
 - If signs of HPAI are detected (section 1.2), **do not proceed**.
 - Follow IAATO's Procedures Upon the Discovery of a High or Unusual Mortality Event (FOM Section 7 – Biosecurity).
 - Never touch animals, dead or alive unless you have a permit that specifically includes wildlife with suspected disease;
 - **ALWAYS** keep at least 5 meters/15 feet (5m/15ft) from wildlife.
 - If a landing cannot be made without keeping at least 5m/15ft from groups of wildlife, the landing must be aborted.
 - If wildlife chooses to approach people, take appropriate action to ensure the minimum distance of 5m/15ft is maintained where it can be safely done so.



- **Do not sit, kneel/squat or lie down on the ground or snow,**
- **Do not** leave any equipment or packs on the bare ground or snow, close to animal activity or faecal matter
 - A tarp is acceptable to store shore-stranding equipment on.

iv. Other Considerations

- A list of camping sites focused on areas without wildlife for the 2023-24 season can be found FOM Section 02.
 - This list may not cover all the camping sites ever used; if an Operator has another site they would like to use, it is permissible as long as Avian Influenza Protocols are followed
- **Do not bum slide** at sites with wildlife. Bum sliding, like camping, should only be done at sites without wildlife.
- Operators supporting researchers who are authorised or permitted to be in direct or close contact (less than 5m/15ft) with animals should ensure the researchers are aware of the latest advice for mitigating transmission of zoonotic disease including SARS-CoV-2 and HPAI. Operators must have SOPs with onboard scientists.
- Where staff must handle seabirds strikes, appropriate PPE must be worn including face masks and gloves.
 - Staff should follow their Operator Standard Operating Procedure (SOP) on using PPE and protocols on bird strikes.
 - Operators should ensure this equipment is available for staff if operating in areas where seabirds are at risk of landing on ships.

1.2 Considerations for Pre-landing assessment for HPAI

Different species have different levels of susceptibility to the disease. While little is known about symptoms in Antarctic wildlife, we can assume that clinical signs reported in mammals and seabirds in other areas of the world may be exhibited in Antarctica.

Experienced ornithologists, guides, naturalists and researchers will be especially adept at spotting atypical behaviour in wildlife which can be integrated into a site evaluation prior to any visit. They can also assess if the numbers of dead or sick wildlife differ from what is anticipated for the time of year (e.g. normal chick mortality), site (number of affected animals relative to the local population size) or season (e.g. if food availability is expected to be low).

The following information is a guide. In an outbreak, it would be expected that several of these signs could be exhibited by different individuals:

- Neurological signs:
 - Walking or swimming in circles;
 - Stumbling or walking without coordination (frequently reported in Great Skuas)
 - Abnormal posture, such as wings outstretched and hyperextension of the neck (reported in Sandwich terns)
 - Severe backward arching of head, neck and/or spine
 - Tremors and seizures (frequently reported in Humboldt penguins and South American sea lions)
 - Partial paralysis and difficulties in locomotion (reported in sea lions in Chile and Argentina)
 - Severe drooping of neck
- Other;
 - Experts in South Africa report that sick penguins look sick – hunched over, depressed, lethargic.
 - Respiratory distress; Rapid breathing, mouth breathing, coughing sounds, sneezing, gurgling, rattling.
 - Specifically in sealions: excessive nasal discharge and/or drooling
 - Specifically in eyes of seabirds, including penguins: crusty, droopy, cloudy eyes. Excessive eye watering. Redness and inflammation. Repetitive, uncontrolled eye movement.
 - Unusual, sudden and rapid increase in the number of animals found dead between site visits;

1.3 Response to a suspected HPAI event

If an HPAI is suspected:

- 1. Expedition Leader (EL) is the first point of contact and should be told first if HPAI is suspected.**
- 2.** EL to contact IAATO Immediately via shipscheduler@iaato.org or the Emergency number (IAATO will contact relevant stakeholders nearby)
- 3.** EL Contact Operator Home Office
 - a.** The home office should contact the Operator's National Competent Authority.
- 4.** Follow **IAATO's Procedures Upon the Discovery of a High or Unusual Mortality Event.**
 - Do not enter colonies and abort a visit if signs of HPAI are seen or suspected;
 - Do not collect or touch dead, sick or dying wildlife;
 - Potentially contaminated clothing, footwear and equipment must be disinfected as soon as possible;



1.4 If suspected, appropriate information to provide to IAATO

- OrganismID
- Date
- Time in UTC
- Location including name of site and coordinates (use a GPS if available)
- Name of observer, organisation and vessel (if applicable)
- Area affected,
- Species (Scientific name) present, age class and sex ratio, and which one(s) seem(s) affected by the outbreak (if available)
- Indication of the number of animals involved – if possible, count the dead and dying and estimate the percentage of each among the colony
- Length of observation (how long were you present at the site taking note of behavioural signs)
- Any behavioural signs noted, and
- Photographs and/or videos of unusual behaviours, but also of groups of apparently healthy and unhealthy/dead individuals.

If a landing was conducted and later the presence of HPAI suspected, all clothing and footwear should be cleaned and disinfected using Virkon S, (or equivalent).

2. Non-native species transmission

Research indicates that field staff, along with scientists and science support personnel, are more likely to transport non-native species than tourists. It is believed that this is due to field staff and scientists using the same clothing and gear in other areas of the world. Please make sure you CLEAN YOUR OWN GEAR and try to have Antarctic-specific gear so you do not have to clean after each non-Antarctic landing or port call. The study found that camera bags and backpacks were the primary source of transmittal. Remember: Take it new or take it clean.

Introduction of non-native species is one of the highest priority concerns in Antarctica due to increased human activity, coupled with a potentially more hospitable environment caused by warming, particularly in the Peninsula region.

- i. We remind operators to follow biosecurity procedures and to include the vacuuming of clothing prior to landing in the Antarctic
 - Remember that in addition to the first thorough bio-security cleaning before arriving in Antarctica, comprehensive cleaning should also take place between distinct regions (e.g., between Falkland Islands (Islas Malvinas) and South Georgia; between South Georgia and Antarctica; Antarctic Peninsula and The Ross Sea).
 - Remember to remove pet hair, rocks and pebbles (which could be seeds), and any other material foreign to Antarctica.
- ii. The Bio-Security Declaration in the updated *IAATO Boot, Clothing and Equipment Decontamination Procedures* for Marine Operations should be completed in each region, by everyone going ashore, including all passengers, staff, and crew.
- iii. Deep Field and Air Operators are strongly recommended to have their crew and staff sign a declaration similar to that given in *IAATO Biosecurity Procedures for Deep Field and Air Operators*.
- iv. Care should be taken to decontaminate boots, clothing, hiking poles, tripods, bags, etc., before and after each landing to mitigate any potential introduction of non-native species or cross contamination. Boot-washing stations should be located at the head of the gangway or close to where passengers embark and disembark the vessel.

Where aircraft are used, similar procedures should be in place.

- v. COMNAP has developed a checklist for providers to help ensure activities are 'bug-free' (FOM-Section 7 *Biosecurity*). COMNAP have also prepared a training module on non-native species. Alongside the checklist these are particularly useful for air/land operators. There are also additional guidelines for the cleaning of vehicles. This is intended for any operators taking ATVs, skidoos, etc., into the field.

Disinfectants

- i. A suitable biodegradable broad-spectrum disinfectant is recommended such as Virkon® S. It must be allowed to dry on equipment between landings.
- ii. At this time, Virkon S is considered the best practice in the Antarctic for biocides. IAATO continues to work with manufacturers, scientists, and stakeholders to research alternatives which could be used.

A poster outlining the IAATO Don't Pack a Pest is available for download, (FOM Section 19) and it is mandatory to display these guidelines to clients near boot-washing stations.

The Committee for Environmental Protection (CEP) has updated the manual for prevention of the introduction for non-native species. The manual includes references to the various protocols that are in place across the Antarctic community, including IAATO's.

3. Special Note about South Georgia Biosecurity Inspections (FOM Section 13)

All visitors should note the following when planning a shore excursion:

- i. Boot washing is obligatory for all persons **prior to going ashore and again when returning to the ship**. Boots must be cleaned to remove dirt and seeds and then dipped in an approved biocide (e.g. Virkon S).
- ii. Clothing inspections and boot washing must be overseen by a competent member of the expedition team. For visits, this must be either a member of the expedition staff or an appropriate crew member. The Visit Permit holder is responsible for ensuring that this inspection is carried out. All external surfaces of footwear, which will be worn ashore, must be washed.

Depending on the South Georgia COVID-19 protocols, Government Officers may inspect boot washing facilities and procedures on visiting vessels (including yachts) and will inspect visitors, including staff and crew, before they disembark the vessel to ensure biosecurity protocols have been undertaken properly.

The Biosecurity Audit is a check undertaken by Government Officers, on vessels in respect of their compliance with biosecurity procedures, or more specifically the effectiveness of the procedures in place to reduce biosecurity risk.

Government Officers may also conduct a standardized inspection of clothing, footwear and bags to check for biosecurity risks.

The audit is scored as a percentage pass rate based on a statistically significant sample size.

Vessels with a pass rate of less than 85% are classed as unacceptable, and GSGSSI will require improvements to be made prior to the vessel's next landing. Such low scoring vessels will also be required to make first landing at Grytviken for future visits, until they have shown an improved result.

Vessels with a pass rate between 85-94% are classed as acceptable, but advice will be given to make further improvements where appropriate.

Vessels scoring pass rates of 95% or above are classed as good, and we hope that all vessels will strive to sit within this category.

Pass Rate Risk Thresholds	
100	Good
95	
94	Acceptable - Improvement Required
93	
92	
91	
90	
89	
88	
87	Unacceptable - Urgent Action Required
86	
85	
84	
65	
0	

Pass Rate Risk Thresholds

Cleaning Tips from the Field:

- To get complete buy in from the guests, start biosecurity briefings and checks early, especially if you are going to different regions, as multiple biosecurity checks and cleaning will have to take place.
- Assign a crew/staff member to be present at the gangway/side-gate to check guests as they depart and return to the ship.
- Especially on South Georgia beaches, have scrub brushes available before guests embark the small boats back to the ship. This will help with the initial cleaning. (If this method is used, be sure that brushes are appropriately cleaned upon return to ship.)
- Have the appropriate tools to assist – large paper clips and hand scrubbing brushes are a must. Pay particular attention to Velcro.

