

# IAATO Biosecurity Procedures for Deep Field and Air Operators

## International Association of Antarctica Tour Operators (IAATO)

### Introduction:

Antarctica is an isolated continent, believed to be largely free of introduced disease and non-native species. Antarctic visitors have the potential to introduce alien species or micro-organisms (e.g., viruses, bacteria, parasites, yeasts, fungi) not present in the native flora and fauna. We must all work together to prevent their transfer into and around Antarctica to protect its unique ecosystems.

Aware of this, and of their obligation to Annex II, Article 4 to the Protocol on Environmental Protection to the Antarctic Treaty which forbids the introduction of non-native species to Antarctica, IAATO members developed mandatory biosecurity procedures for all IAATO operations. Regularly reviewed and updated, these procedures have become a recognized cornerstone of IAATO Member's actions to advocate and promote the practice of safe and environmentally responsible private-sector travel to the Antarctic.

These procedures are for IAATO deep field and air operators. We ask you to be fully familiar with them and take strict steps to ensure they are followed. We strongly encourage you to:

Create a checklist that is tailored for your operation and includes these procedures as a minimum;

Ensure there are means to clean field clothing and equipment at all appropriate stages of your operation;

Where necessary, use a suitable biodegradable broad-spectrum disinfectant such as Virkon S1

It is strongly recommended that crew and staff sign a declaration, similar to the sample at the end of the document;

Be fully aware of other IAATO wildlife watching and visitor management procedures that exist to protect Antarctic wildlife from the introduction and spread of disease.

### Definitions:

**'Visitors' refers to anyone visiting Antarctica including air crew, pilots, staff, scientists, contractors, guides and guests.**

**'Vehicles' describes all wheeled, tracked or skied machinery, both powered or unpowered, that moves or is moved over ice and/or ice-free areas.**

This document supplements and does not replace existing biosecurity procedures and advice issued through the Antarctic Treaty System, by your National Competent Authority or IAATO. There are additional procedures and resources to be aware of in the Biosecurity section of the IAATO Field Operations Manual.

IAATO Operators must, to the maximum extent possible, make every effort to prevent the introduction of species and micro-organisms to Antarctica and their transfer between distinct biogeographic regions, field/visitor sites or research stations



## Pre-departure Checks:

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Operators should also refer to and comply as far as practical with COMNAP's Checklists for supply chain managers of National Antarctic Programmes for the reduction in the risk of transfer of non-native species in the Biosecurity section of IAATO's Field Operations Manual.

### Cargo Packing Area

- If applicable, ensure areas immediately surrounding warehouses/stores free from weedy plants;
- Containers washed inside and out, particularly if they have been standing empty in stores;
- Minimise loose and palletised cargo;
- Wooden crates and pallets meet International Plant Protection Commission Standards
- Cargo stored inside where possible;
- Warehouse doors closed where possible;
- Install insect traps if necessary
- Take care not to contaminate cleaned equipment and containers before loading onto vessels or aircraft as far as practically possible;

### For aircraft travelling to Antarctica

- Inside aircraft is clean
- Landing wheels or skids clean and free of visible soil or plant material
- Doors closed whenever possible
- Fumigate cargo holds after loading;
- Insecticide available on board in case insects are discovered in flight

### For vehicles being used in Antarctica

- Inspected and clean of all visible soil and biological material
- Disinfect any equipment that may have been used in areas with livestock or of known disease risk;
- Use high pressure steam/hot water cleaning where practicable;
- Treat vehicle accessories, such as forks and buckets, in a similar manner;
- Brush/vacuum vehicle interiors including points of contact such as mats and upholstery;
- Take care not to contaminate cleaned vehicles before loading onto vessels or aircraft.
- Use vehicle storage facilities to minimise recontamination prior to transport, if available.

### For supplying food to Antarctic destinations

- Provide a designated clean area for packing food;
  - Packing area is rodent-free, packaging is rodent proof;
  - Containers are washed inside and out;
  - Install flying and crawling insect traps;
  - Ensure produce is free of soil;
  - Refrigerate fresh produce;
  - Implement quality checks on food to ensure no insect or fungal infestation before loading
  - Avoid sourcing out of season produce;
  - Ensure packaging is secure, particularly for meat and poultry products to prevent accidental release.
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## For visitors and gear going to Antarctica

- All visitors thoroughly briefed on the importance of having decontaminated boots, clothing and equipment before departing for Antarctica;
- Staff/crew who work in other polar or alpine climates, have been hiking, farm visiting or in an area of known disease risk should be particularly vigilant before any expedition.
- Supply new clothing where practicable;
- Supply clothing and footwear not used in other polar or alpine climates if possible;
- Ensure all outer clothing, equipment and footwear is cleaned to remove organic material
- Disinfect all footwear and equipment likely to be in contact with the ground;
- Use a suitable biodegradable broad-spectrum disinfectant such as Virkon S1
- Pay particular attention to items with Velcro (avoid if possible);
- Visually check all bags, footwear, boot treads, and clothing (particularly socks, over trousers and hoods) to remove organic material and seeds. Turn out pockets in clothing.
- Provide a vacuum cleaner to clean clothing and equipment;
- Pay attention to tripod feet, trekking poles, ice and rock-climbing hardware, and equipment bags.

## In Antarctica:

### For Aircraft

Take particular care that equipment, landing wheels or skids are clean when travelling near animal colonies, between different visitor/field sites, research stations or bio-geographical areas in Antarctica;

Avoid bare ground or areas with organic material wherever possible;

Equipment and containers, including ISO containers and boxes/crates, should not be moved from one Antarctic site to another unless they are thoroughly decontaminated before arrival at a new location.

### For Vehicles

Avoid travelling across bare ground or areas of organic material, such as faecal matter, wherever possible.

Inspect vehicles regularly inside and out to ensure they are free of soil and biological material. This is particularly important if vehicles are being transported, including on sleds, between different visitor/field sites, animal colonies or research stations in Antarctica. Disinfect vehicles and equipment if necessary.

Take particular care to keep vehicle and sled points of contact clean such as running boards, floor mats and upholstery;

### For Traverses

Tractors, sleds, equipment and containers, including ISO containers and boxes/crates, should not be moved from one Antarctic site to another unless they are found to be cleaned of soil and biological material (see above) before arrival at a new location. Disinfect vehicles and equipment if necessary (e.g they have been in contact with faecal matter, guano or seal placenta).

### For Visitors and Gear

Remind visitors of the importance of inspecting and decontaminating clothing, footwear and equipment between visitor/field sites, animal colonies and research stations.

Avoid walking in concentrations of organic material such as guano, seal placenta or faeces.

Thoroughly clean footwear and equipment before and after visits to animal colonies.

Use a suitable biodegradable broad-spectrum disinfectant (such as Virkon S) where practicable. Make every effort to ensure boots and clothing dry out after treatment because desiccation is an important mode of controlling some micro-organisms.

Remind visitors that proximity to wildlife has the potential for transmitting zoonotic disease, such as highly pathogenic avian influenza and coronaviruses. Maintaining the advised minimum distance of at least 5m from wildlife will help prevent transmission. This distance may need to be increased if other procedures, wildlife behavioural response or the situation requires this to be further.

Place equipment as far from groups of animals or possible. Ensure loose items are secured and cannot blow away. Be aware of areas where animals exit colonies or water.

Take care to avoid trampling damage to lichen and moss in exposed rock areas.



## **Waste Management**

- Secure waste to prevent accidental spillages and prevent access by wildlife;
- Clinical waste should be stored in special containers;
- Label hazardous waste
- Strictly contain foods and food wastes, particularly poultry products, to prevent them entering the environment;
- No food to be consumed near wild life areas such as petrel or penguin colonies;
- Strictly manage human waste to prevent it entering the environment;
- Only use designated toilet facilities and arrangements

