

① SYNTHESIS of existing data

➔ **Integration of cartographic data** about Canadian Forces Station Alert and DND property (ca. 150 km²).

➔ **Review of all biodiversity literature at Alert and northern Ellesmere:**

- Species lists.
- Species status (IUCN, COSEWIC, and SARA).
- Population trends and distributions.

➔ **Inventory of unpublished biodiversity data.**

② ACQUISITION of new field data

2.1 WILDLIFE INVENTORY

➔ **Inventory achieved by:**

- Motion cameras at anticipated biodiversity hotspots (e.g. Station sewage, ponds, and wet habitats).
- Observation transects (by foot and ATV).
- Opportunistic sightings by research team and Station residents.

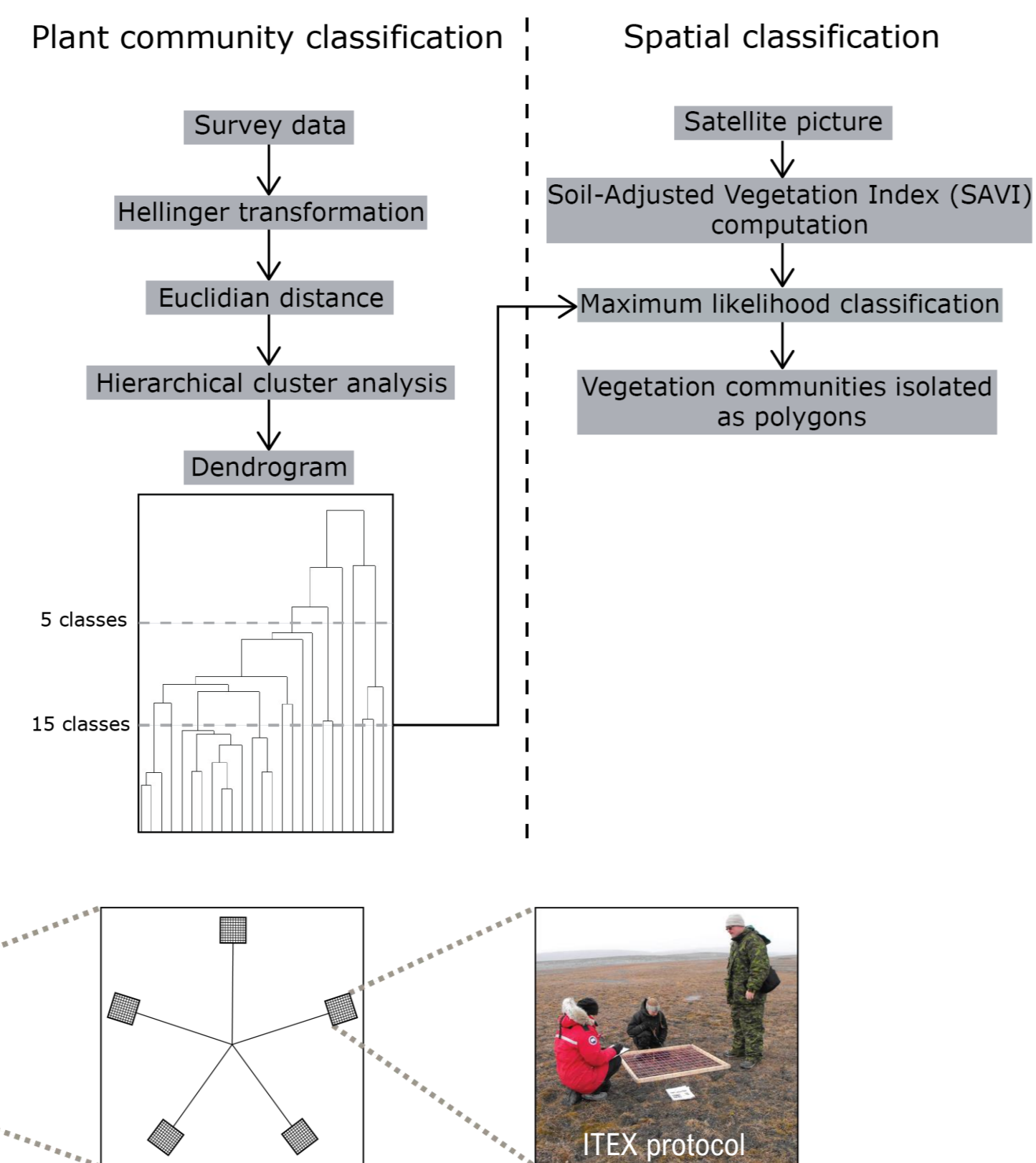
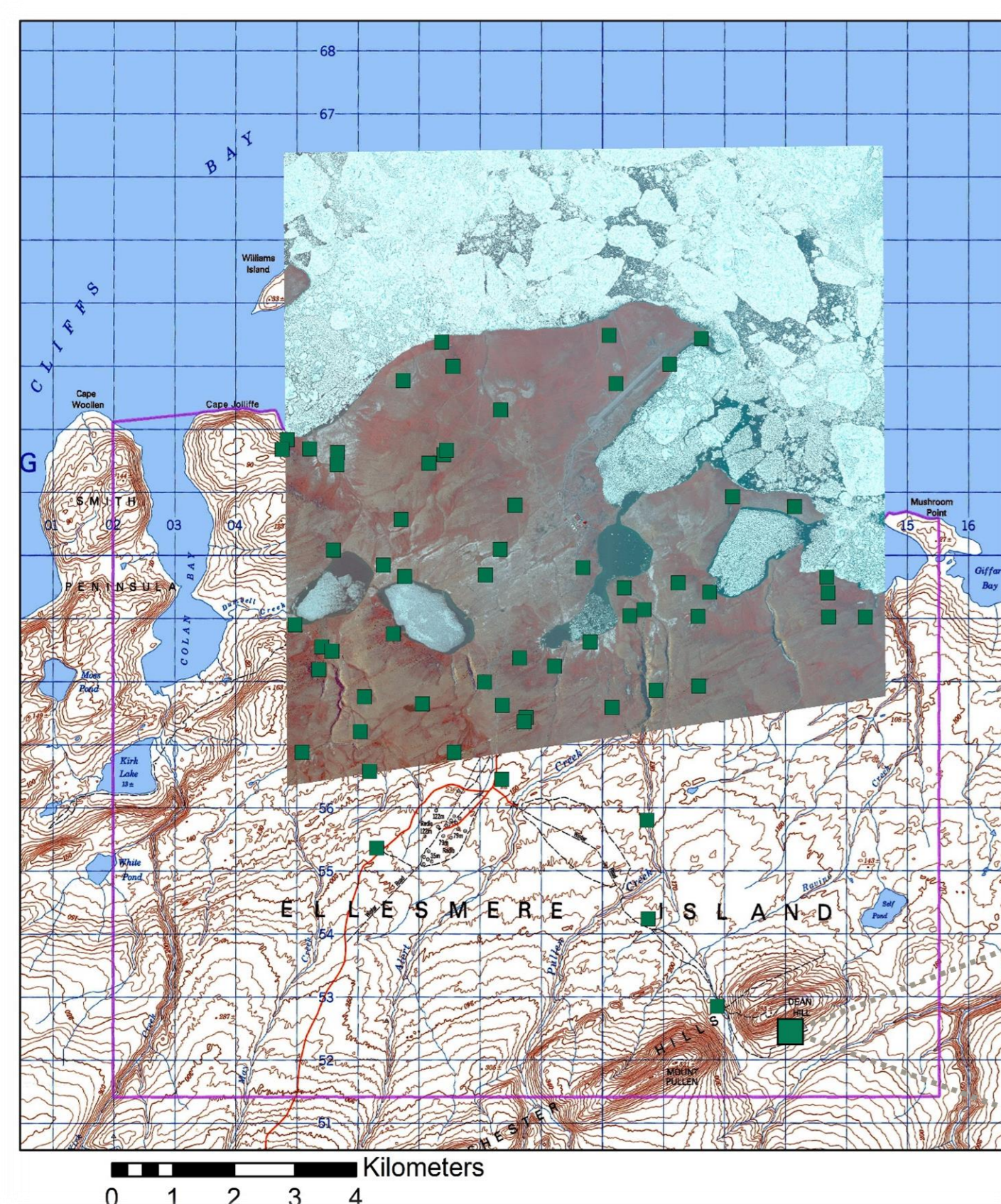


WHAT IS A BIODIVERSITY MANAGEMENT PLAN?
➔ A site-specific document outlining actions required to maintain or improve biodiversity values.

2.2 HABITAT MAP

➔ **Wildlife habitats mapped using plant community surveys and spatial classification:**

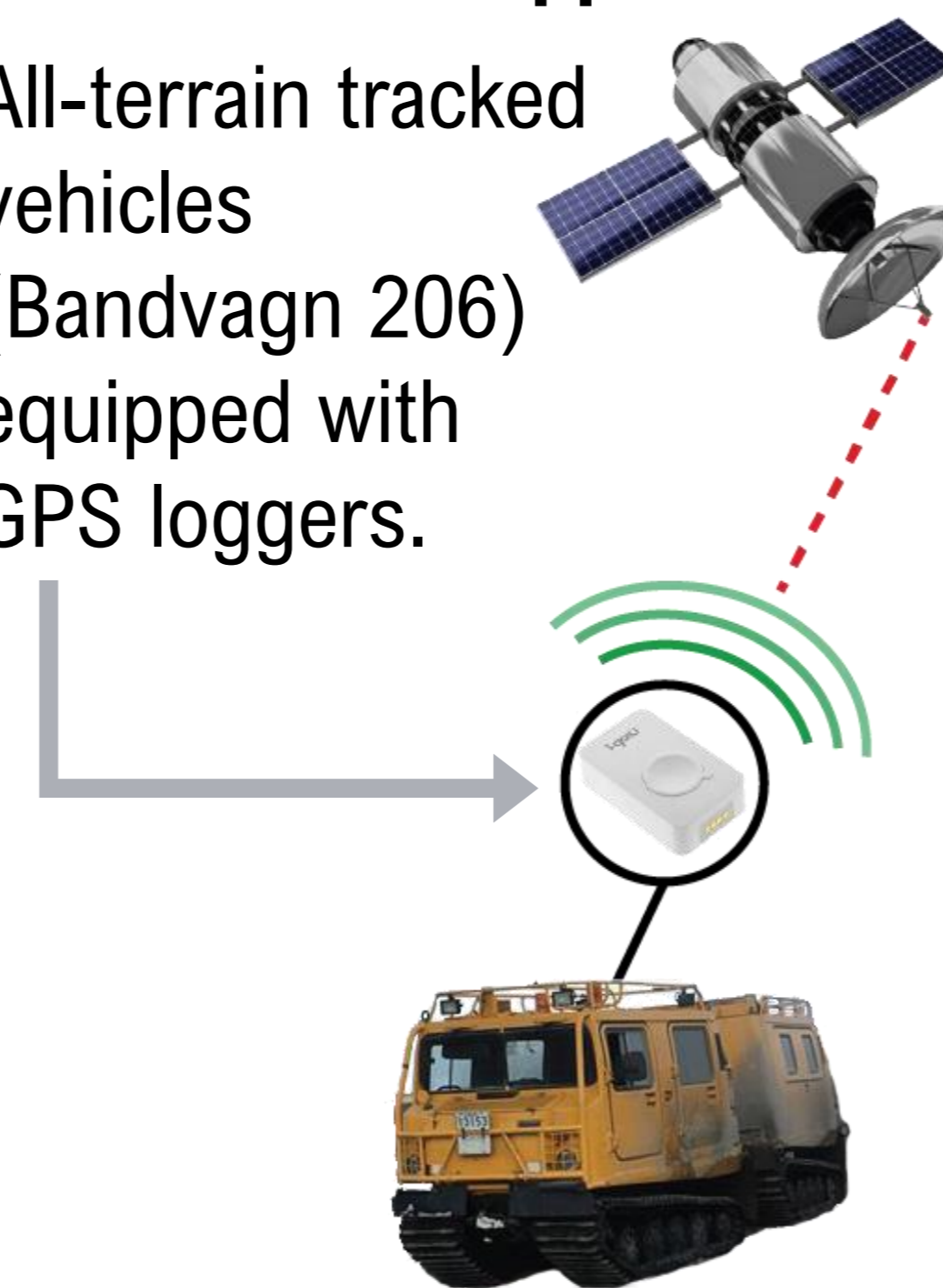
- Field survey of plant communities.
- Ecological and spatial classification of plant communities.



2.3 DISTURBANCE MAP

➔ **The spatial occurrence of human activities mapped:**

- All-terrain tracked vehicles (Bandvagn 206) equipped with GPS loggers.



A Biodiversity Management Plan for Canadian Forces Station Alert

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INTRODUCTION

In April 2018, a directive was released by the Department of National Defence (DND), requiring DND employees and members of the Canadian Armed Forces to avoid, mitigate or minimize impacts on wildlife at risk on Defence Establishments, in accordance with the Species at Risk Act (SARA). This directive has stimulated a collaboration between DND and UQAR to implement a Biodiversity Management Plan at the Canadian Forces Station Alert. To our knowledge, no such plan has been developed in a tundra ecosystem and methodologies need to be established.

We present here the first steps of this Biodiversity Management Plan.

③ ESTABLISHMENT of priority issues

➔ Preliminary wildlife inventories (summer 2018) have identified:

- 3 Species at Risk (SARA status).
- Species susceptible to becoming Species at Risk.
- Species playing a critical ecological role locally.

Species	IUCN status	COSEWIC status	SARA status
Ivory gull	Near threatened	Endangered	Endangered
Peary caribou	Vulnerable	Threatened	Endangered
Red knot	Near threatened	Special concern	Special concern
Long-tailed duck	Vulnerable	---	---
Ruddy turnstone	Least concern	---	---
Arctic Wolf	Least concern	---	---

④ Potential RECOMMENDATIONS

➔ **Reduction of human disturbance in critical areas?**

- The habitat map will be superimposed on the disturbance map to identify potential areas of conservation relevance.

➔ **Better sharing of information on local biodiversity?**

- Local biodiversity management may benefit from enhanced exchanges of information between scientists and community members.

➔ **Increased control on the Station sewage output?**

- The sewage produces an outfall stream which is a potential source of food and contaminants for birds.



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