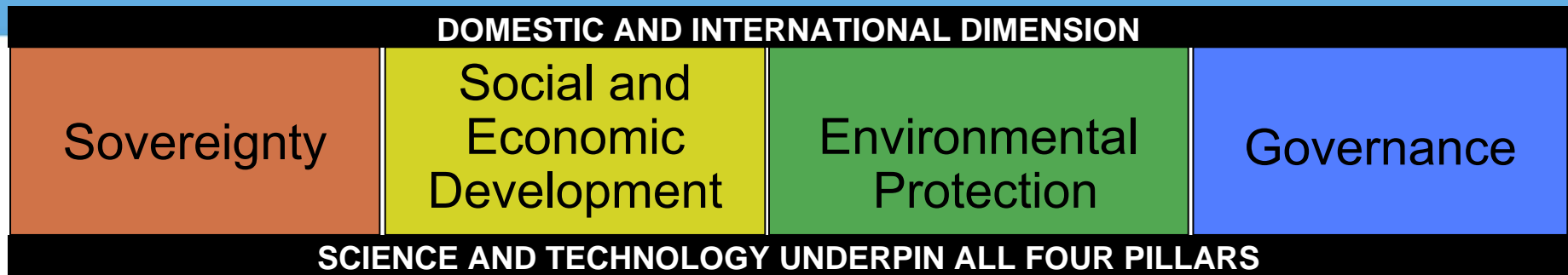


Building for Arctic S&T in Canada

ASSW 2011

Canada's High Arctic Research Station (CHARS)

- CHARS is a signature investment under Canada's Northern Strategy



Canadian High Arctic Research Station

Mandate: Station's Mission

To be a world-class research station in Canada's Arctic that is on the cutting edge of Arctic issues.

The Station will anchor a strong research presence in Canada's Arctic that serves Canada and the world.

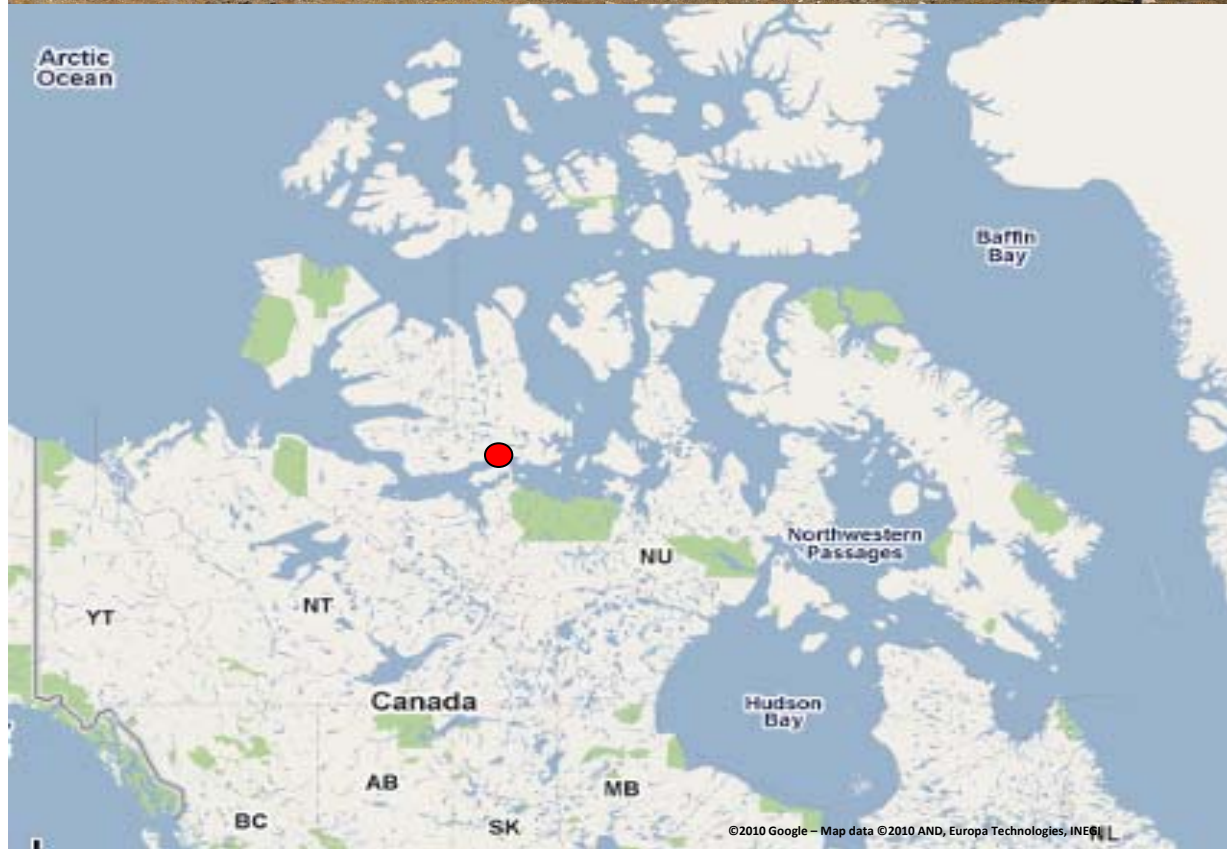
It will advance Canada's knowledge of the Arctic in order to improve economic opportunities, environmental stewardship, and the quality of life of Northerners and all Canadians.



Photos: Annie Moulin and Ed Struzik

<http://www.ainc-inac.gc.ca/ai/mr/nr/s-d2010/23441-eng.asp>

Cambridge Bay - Future Home of CHARs

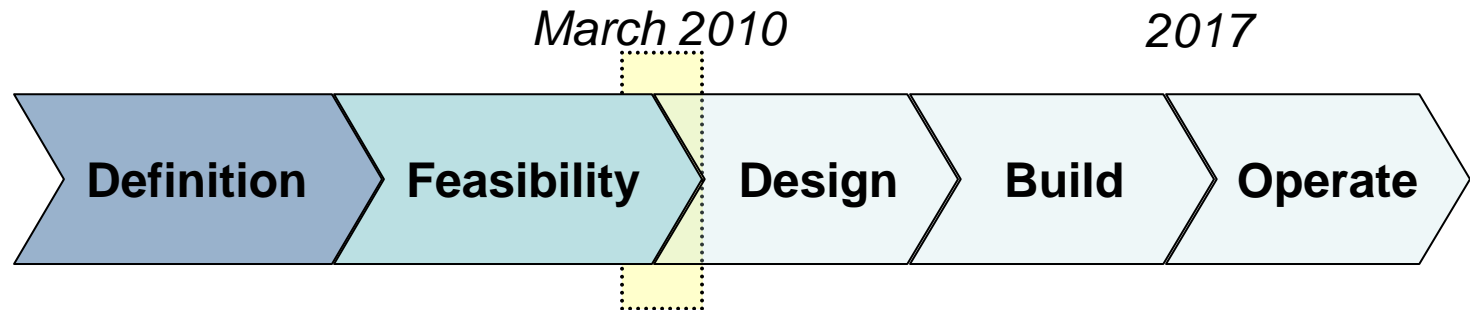


Canadian High Arctic Research Station

Three components to deliver on mandate:

1. World-class hub for Arctic S&T
2. S&T program that delivers excellence and relevance
3. Strong research network across Canada's vast and diverse North

Currently transitioning from the feasibility to the design phase



CHARS: a World-Class Facility

S&T Program

Will be interdisciplinary and will include:

- Research, modelling, and prediction
- Technology development and transfer
- Monitoring and surveillance
- Logistics
- Knowledge application
- Education, outreach, and training

Infrastructure

WORK

- Labs
 - GIS
 - Marine
 - Wet
 - Dry
 - Analytic
 - Computing
 - Mobile
 - Engineering
 - eHealth
 - Social science
- Tech incubator
- Workshops
- Experimental site
- Traditional knowledge centre
- Logistics
- Offices

INTERACT

- Meeting rooms
- Teaching space
- Video/conferencing
- eLearning
- Telecommunications
- Science centre
- Auditorium

RESIDE

- Accommodation
- Dining
- Recreation

STORE

- Data/Info
- Photos
- Maps
- Library
- Samples
- Equipment
- Specimens
- Vehicles
- Supplies

S&T Program focused on national priorities

Exercising Sovereignty	Environmental Stewardship and Climate Change
<ul style="list-style-type: none">▪ Efficient and effective monitoring and surveillance of Canada's vast Arctic▪ Effective management of Canada's Arctic waters under changing conditions▪ Improved response to, and mitigation of, environmental and other disasters	<ul style="list-style-type: none">▪ Effective environmental stewardship through greater knowledge of natural and human systems and their interconnections▪ Strengthened mitigation efforts through greater understanding of changes in the Arctic climate and the links to global systems, and increased capacity to adapt
Resource Development	Strong and Healthy Communities
<ul style="list-style-type: none">▪ Resource development that is economically and environmentally sound and promotes social development▪ Renewable resources and unconventional energy sources that contribute to greater energy security and sustainability	<ul style="list-style-type: none">▪ Improved infrastructure and diversified economic opportunities▪ Improved health outcomes and community wellness and resiliency

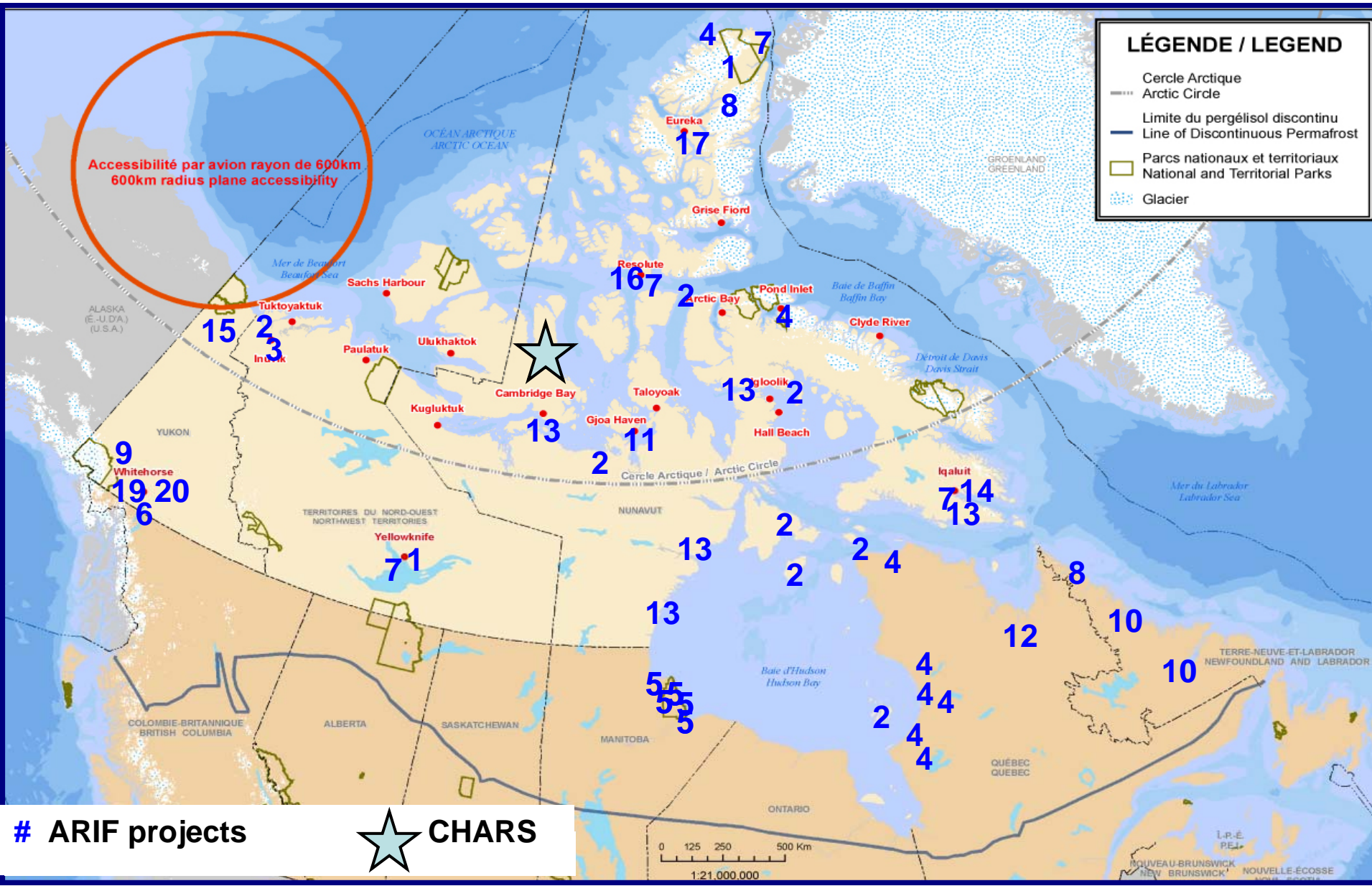
CHARS: Next Steps

- Finalize feasibility work
- Further develop the S&T Program and proposed governance
- Launch the competition for the design firm
- Select the lot(s) in Cambridge Bay
- Consultations



Photo: Annie Moulin

Strengthening the Network: Arctic Research Infrastructure Fund



ARIF Overview

- Canada's Economic Action Plan provided **\$85 million** over **2 years** to upgrade existing Arctic research facilities
- A total of **20 projects** at **46 different sites**
- Projects **cover significant geographic area** and there is substantial **variance in their scale** and complexity
- **Upgraded many facilities** built decades ago that had reached end of useable lifespan, as well as **contributed to creating new research capacity**
- Currently **2/3 of projects are substantively complete**, remaining projects will complete deliverables by March 31, 2011



ARIF Highlights



Photos: PWGSC and NRCan

Polar Continental Shelf Program

- The PCSP supports up to 165 research projects each year, involving over 1100 researchers.
- ARIF funding will allow PCSP to nearly double the capacity of the Resolute facility, accommodating an extended operational season.

Churchill Northern Studies Centre

- A new Northern Studies Centre that will more than double their footprint when completed
- A showcase for the construction of highly efficient, green buildings in Canada's North.



Photo: Paul Frame

ARIF Highlights

Kluane Lake Research Station

- long tradition of fostering major interdisciplinary science programs
- renovating and upgrading several existing buildings with increased accommodation, storage, as well as laboratory space at both the base site and associated field sites.



Centre d'Études Nordiques

- upgraded their network of research stations that stretches 4000km from northern Québec to Ward Hunt Island at the northern tip of Ellesmere Island.
- environmental and safety upgrades to accommodations, laboratory, and storage space at all eight facilities

ARIF Recipients

1. Institute for Circumpolar Heath Research, Northwest Territories

Project Lead: Arctic Health Research Network,
Northwest Territories

2. Arctic Migratory Bird Research Network

Project Lead: Environment Canada

3. Aurora Research Institute

Project Lead: Aurora College

4. Centre d'études nordiques (CEN) - SAON Network

Project Lead: Université Laval

5. Churchill Northern Studies Centre

Project Lead: Churchill Northern Studies Centre

6. H. S. Bostock Geological Core Library

Project Lead: Yukon Geological Survey

7. Health Canada Radiological Monitoring Network

Project Lead: Health Canada

8. KANGIDLUASUK Base Camp

Project Lead: Nunatsiavut Government

9. Kluane Lake Research Station

Project Lead: Arctic Institute of North America

10. Labrador Institute & Nunatsiavut Research Centre

Project Lead: Government of Newfoundland and
Labrador & Nunatsiavut Government

11. M'Clintock Channel Polar Bear Research Cabins

Project Lead: Queen's University

12. Nunavik Research Centre

Project Lead: Makivik Corporation

13. Nunavut Research Institute

Project Lead: Nunavut Arctic College

14. Nunavut Research Vessel

Project Lead: Government of Nunavut

15. Old Crow Research Facility

Project Lead: Vuntut Gwitchin Government

16. Polar Continental Shelf Program

Project Lead: Natural Resources Canada

17. Polar Environment Atmospheric Laboratory

Project Lead: Dalhousie University

18. Quttinirpaaq National Park

Project Lead: Parks Canada

19. Yukon College

Project Lead: Yukon College

20. Yukon Forestry

Project Lead: Government of Yukon

