

IEMR Research

Highlights

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Inside this Issue

- 1 Welcome to the Institute
- 2 Meet the Board of Directors and SRC
- 3 Research Highlights: Harlequin Ducks Caribou Projects
- 3 Flight Track Analyses
- 4 Effects of Noise on Wildlife Conference IEMR Staff

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Welcome to the Institute

Overview

The Institute for Environmental Monitoring and Research was established by the Federal Government in 1995 to oversee the environmental monitoring of allied flight training at CFB Goose Bay, Labrador.

The Institute held its inaugural meeting in December 1996. As an advisory body reporting to the Ministers of National Defence and Environment, it is the Institute's mandate to:

- Focus on the protection of the environment, and within the concept of sustainable development, to support the viability of the military flight training program;
- Provide independent verification of environmental effects as well as expertise and advice in structuring adequate monitoring and mitigation measures; and
- Foster a level of trust amongst all groups affected by the military training program.

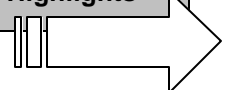
In the event that studies show that significant impacts are occurring which cannot be mitigated or justified, the Institute can recommend that appropriate action be taken to address the situation, including that military flying activities be limited or phased out.

Specifically, the objectives of the Institute are to:

- Initiate, coordinate, support and conduct environmental research, monitor effects and propose mitigation measures associated with the activities of the military training over Labrador and north eastern Quebec, consistent with the results of the Environmental Assessment and Review;
- Foster the inclusion or incorporation of Aboriginal environmental knowledge and cooperation in research and monitoring activities amongst the Department of National Defence (DND), scientific establishments, research institutions, consultants and universities interested in the mandate and objectives of the Institute.
- Promote a better understanding and flow of information to the public on the work of the Institute.

The work of the Institute has evolved from the development of research priorities and partnership agreements with the affected parties to reviews of existing datasets and identification of the gaps in knowledge. Several projects have been initiated and we are pleased to bring you a summary update of the present research conducted by the IEMR and its partners.

Please read on for the
IEMR Research Highlights



RESEARCH HIGHLIGHTS

◆ HARLEQUIN DUCKS

Ian Goudie, a Ph.D. candidate at Memorial University of Newfoundland conducted a pilot study at Fig River during the spring and summer of 1999. The focus of Mr. Goudie's work is to investigate the effect of low-level flying on breeding Harlequin ducks. It has been proposed that a second year of this study will begin in the late spring of this year.

Mr. Goudie has published an extensive first year progress report. The Institute is pleased to announce that this report is available on the IEMR Website. *

◆ LAC JOSEPH CARIBOU

The Institute has embarked upon its first in-house field program with the launching of the Lac Joseph Caribou project this month. The goal of this study is to document the density-distribution of woodland caribou in the southern section of the Military Training Area (MTA) and adjacent areas to the west of the MTA. The study will provide invaluable data as to the overlap of the MTA with caribou populations south of the Churchill River. A caribou survey south of the Churchill River has not been undertaken within the past decade. Important questions as to the relative abundance, movements and distribution of caribou in this region remain unanswered. Moose densities and distribution will also be explored. This project will provide some clarity to these issues, from which the Institute can evaluate the priority it should give to caribou and moose in the southern portion of the MTA. The preliminary findings of the

survey will be presented at the Board of Director's meeting in February.

The Institute has completed an analysis of the radio-telemetry

dataset for Lac Joseph caribou collected in 1998-1999 by the Government of Quebec, the Government of Newfoundland and Labrador and DND. The data suggest that Lac Joseph caribou make little use of the MTA, however, study design and data collection problems hamper the interpretation of these data and limit their usefulness to the IEMR. Nevertheless, the data analyses provides useful information on the movement ecology and range use of the herd and provides a springboard for the Lac Joseph caribou project presently being conducted. These analyses will be presented at the upcoming Board meeting. *

◆ GEORGE RIVER CARIBOU

In September 1999, the Institute received the satellite-telemetry dataset for the George River caribou herd from the two provinces. The Institute staff have completed collating and inspecting these data. At present, the research team is nearing completion of the GIS and statistical analyses of the seasonal occurrence of radio-collared George River caribou within the MTA. In particular, the Institute is determining the proportion of total satellite telemetry locations, radio-collared caribou, and locations per radio-collared caribou within the boundaries of the old MTA (pre-1996) and reconfigured MTA (since 1996). This analyses will determine if the reconfiguration of the MTA did shift low-level flying training activities away from the herd. Additionally, statistical analyses will determine if there has been a change in the herd's use of the northern portion of the MTA, which was closed to low-level flight activities in 1996. To date,

over 300 GIS maps have been produced from the extensive datasets. These maps are now being interpreted and statistically analyzed. It is expected that a detailed report will be presented to the Caribou (Science) Technical Committee in May. *

◆ RED WINE MOUNTAINS CARIBOU

The Institute is currently undertaking a comprehensive analysis of the existing radio-telemetry dataset for the Red Wine Mountains caribou herd. These analyses are investigating differences in movements, space use and calving site fidelity of radio-collared animals in relation to the 1996 reconfiguration of the MTA. With the reconfiguration, the entire range of the herd is now over-flown, the effects of which are unknown. Further the IEMR is investigating mitigation strategies which can better protect the herd from over flights. Although most of the data needed has been extracted from the dataset, research has not concentrated on the Red Wine Mountains caribou herd over the past few months. The project will shift back into a priority position over the next two months. It is envisioned that a progress report will be completed by late-April. *

◆ FLIGHT TRACK ANALYSES

The Institute has undertaken a rudimentary but essential step in understanding the spatial and temporal patterns in use of the MTA by jet-fighters. The present analyses focused on addressing methodological issues/impediments, mapping the annual variation in spatial use, and determining daily and seasonal patterns in flight intensity. These analyses are complete and will also be presented this month. *

Meet the Members of the Board of Directors and Scientific Review Committee

The Institute has a primary interest in working with all parties affected by low-level flying, and thus the organizations and agencies which comprise the board reflect the sectors of the Quebec/Labrador community with interests in military flying activities at CFB Goose Bay.

Members of the IEMR Board are:

Innu Nation
Mr. Daniel Ashini

Town of Happy Valley-Goose Bay

Acting Mayor Judy O'Dell

Labrador Inuit Association
Ms. Isabella Pain

Central Labrador Economic Development Board Inc.
Ms. Hilda Letemplier

Inuit of Nunavik*
Mr. Stas Olpinski

Municipalité régionale de Caniapiscau (Québec)
Mr. Robin Bélanger

Labrador Métis Nation
Mr. Carter Russell

Town Office – Churchill Falls
Mr. Kenneth Dalley

Mamit Innuat
Mr. Guy Bellefleur

Goose Bay Office
Mr. Frank Young

5 Wing Goose Bay
Colonel Paul McCabe

Government of Newfoundland and Labrador
Mr. Rex Goudie

Government of Québec
Mr. Denis Vandal

Environment Canada
Dr. George Finney

Naskapi Nation of Kawawachikamach*
Mr. John Mameamskum

*Rotational two-year basis.

Chair of the Board

Dr. Louis LaPierre was appointed Chair of the Board in May 1996. Since 1970, Louis LaPierre has been professor of Wildlife and Environmental Ecology at the Université de Moncton where he currently holds the K.C. Irving Chair in Sustainable Development and is Director of the Master's program in Environmental Studies. He was also director of the Environmental Science Research Centre at this same university between 1990 and 1994.

As a concerned citizen and active member of several environmental groups, he has dedicated the past 30 years to the protection of the environment on a provincial, national and international scale. In addition to chairing the Board of Directors and SRC of the Institute for Environmental Monitoring and Research he is currently President of the Fundy Model Forest. Dr. LaPierre has received numerous awards for his unfailing commitment to his community and profession.

Scientific Review Committee

The members of the Scientific Review Committee consists of a group of recognized experts in fields related to the types of impacts anticipated from the low-level flying program, selected for their demonstrated knowledge and research profiles on issues related to the northern ecosystem and its people. The members of the Committee are:

Dr. Louis LaPierre, Université de Moncton - Institute Chair
Dr. Fred Roots, Environment Canada
Dr. Jean Huot, Université Laval
Mr. Gerry Parker, Canadian Wildlife Service
Dr. Anne Storey, Memorial University of Newfoundland
Dr. George Wenzel, McGill University
Dr. David Schneider, Memorial University of Newfoundland (on sabbatical)

The members of the SRC carry out the following roles:

- ❖ Serve as a scientific advisory group to the Board;
- ❖ Provide scientific support to Board members;
- ❖ Provide scientific direction and support for the monitoring and research activities of the Board;
- ❖ Establish the peer review process for all scientific publications from the Institute;
- ❖ Ensure scientific accuracy and integrity, define the precise goals and objectives for all monitoring and research activities undertaken by the Institute;
- ❖ Ensure the relevance of the proposed monitoring and research activities on an annual basis;
- ❖ Analyze and assess the results of the monitoring and research activities on an annual basis;
- ❖ Advise the Board on the monitoring and research priorities.

Effects of Noise on Wildlife

The Institute will host a conference on the effects of noise on wildlife in August of this year. The conference will be held in Happy Valley-Goose Bay. The objective is to review the present state of knowledge on the impact of noise on animals in their natural habitat. It is hoped that eminent scientists from around the globe will gather in Labrador to discuss the impact of noise on wildlife and in particular aircraft induced noise. The agenda will cover such areas as:

- ❖ Recent research on impacts from noise on population dynamics,
- ❖ breeding behaviour, territorial disturbances, migration patterns, etc.
- ❖ Methodology and tools which are being used to study the

impact of noise on wildlife; and

- ❖ Mitigation measures which have been initiated in order to reduce or eliminate impacts from noise disturbances.

This conference promises to be an exciting and interesting forum for an exchange of knowledge and ideas amongst this discipline's leading scientists.

Pre and post-conference tours are being organized to give participants an opportunity to explore the scenic beauty and cultural heritage of Labrador.

Information on the conference can be obtained from the Institute through Rondine Cabot, Coordinator at iemrhvgb@cancom.net / (709) 896-3266 or by visiting the IEMR website at:

[Http://www.uccs.mun.ca/~iemr](http://www.uccs.mun.ca/~iemr). *

Don't forget to register early. Space is limited for the conference and tours.

COMING IN THE APRIL ISSUE:

- Economic Impact of Military Flight Training in Labrador and Northeastern Quebec
- Caribou (Aboriginal) Technical Committee
- IEMR Community Liaison Project with the First Nations
- More on Caribou and Waterfowl
- Other Projects

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**Natasha Voisey
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**Rondine Cabot
Conference Coordinator**

IEMR Research Highlights

Information for this issue of the IEMR Research Highlights was provided and compiled by Thomas Jung and Donna Paddon. Watch for the next issue in April. If you have any suggestions or comments on the highlights or if you have information you would like to see included, please get in touch with Donna at the address provided on the front of the newsletter.