Foreword

The Arctic Institute is pleased to offer this supplementary issue of *Arctic* on the remote sensing of arctic environments, featuring articles from the first symposium designed to specifically focus on the application of remote sensing techniques in northern environments. Special credit is due to the Department of Renewable Resources of the Government of the Northwest Territories and the Canada Centre for Remote Sensing, Energy, Mines and Resources Canada for providing the funding for this publication and to Helmut Epp and Steven Matthews, the co-chairmen of the First Circumpolar Symposium on Remote Sensing of Arctic Environments, for coordinating the submission of the manuscripts to *Arctic*.

Once the articles were received by the Arctic Institute, they underwent the standard peer review and revision processes of all *Arctic* manuscripts. We are pleased that of the original 27 submissions, 22 manuscripts survived the peer review and revision processes to be included in this special supplementary issue of *Arctic*. This is a strong testament to the quality of the papers and the dedication of the authors in taking on the often difficult task of reworking a symposium presentation into a scholarly article able to withstand rigorous peer review.

There is no doubt that remote sensing technology is rapidly emerging as an important tool in natural resource management, not only in northern environments, but globally. We trust that this special issue of *Arctic* will facilitate communication among the international community of northern scientists concerning the current and potential uses of remote sensing in renewable and non-renewable resource management and will provide a baseline upon which future northern remote sensing symposia can build.

Karen M. McCullough
Editor, Arctic

Introduction

The papers in this supplementary issue of *Arctic* emerged from the First International Circumpolar Symposium on Remote Sensing of Arctic Environments held in Yellowknife, Northwest Territories, 1-3 May 1990.

From 1987 to 1990 personnel from the territorial government, the federal government and the private sector were trained in remote sensing techniques and applications as part of a remote sensing technology transfer program operating in the Northwest Territories. Demonstration projects were undertaken in a variety of fields and the results showed that remote sensing can be an important tool in natural resource management in the North. In order to share the knowledge and experience gained from this program and to exchange information on other programs in the circumpolar regions, a symposium was organized.

This was the first symposium to deal specifically with remote sensing applications in northern environments, and the results proved to be of interest to scientists, scholars, and professionals involved in renewable and non-renewable resource management. It provided a forum for the exchange of current applied international research, the presentation of new technologies, and the advancement of international cooperation in the circumpolar regions of the world. The seven plenary sessions focused on the application of remotely sensed data to resource monitoring and management and included facilities and programs, remote sensing techniques, oceanography, hydrology, snow and ice, wildlife and wildlife habitat, geology, forestry and vegetation, and radar remote sensing.

Over 80 scientists from Greenland, Norway, Denmark, the United States, Great Britain, and Canada attended the three-day symposium, which was jointly sponsored by the Department of Renewable Resources, Government of the Northwest Territories, and the Canada Centre for Remote Sensing, Energy, Mines and Resources Canada.

Dr. David Suzuki, renowned Canadian environmentalist, was the guest speaker at the symposium banquet. Suzuki gave a very thought-provoking talk on man and the environment and commented that we must "use all the technological tools we have [including remote sensing] to save the planet."

We wish to thank the speakers, session chairs, exhibitors, committee members, and supporting staff. Their efforts made the symposium a great success and the papers in this issue possible. This was the first of, we hope, many symposia at which northern scientists will be able to share their knowledge of the uses of remotely sensed data and geographic information systems.

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