A PROPOSAL

FOR THE CREATION

OF A

GLOBAL STUDIES RESEARCH CENTRE

AT THE

UNIVERSITY OF VICTORIA

May 1993

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A Proposal for the Creation of a Global Studies Research Centre at the University of Victoria

EXECUTIVE SUMMARY

1. The Global Studies Research Centre is designed to build on the history of interdisciplinary studies and community education at the University of Victoria.

2. The mission of the Centre is to facilitate major interdisciplinary research initiatives related to global environmental change and other issues of global concern, to promote interdisciplinary instruction and to engage in communication and outreach activities related to this theme.

3. The rationale for creation of the Centre is the need to integrate different spheres of knowledge in responding to the challenges of global crisis and change. The Centre will effect collaboration between research centres and institutes, teaching units and individual scholars on campus. It will also develop linkages with agencies and scholars off campus.

4. Administration of the Centre will be the responsibility of a Director with support staff. The Director will report to the Associate Vice-President Research. A Management Committee of UVic personnel will establish policies; an External Advisory Board will suggest research priorities and facilitate outreach, off-campus contacts and funding opportunities.

5. The building envisaged for the Centre is to be funded at a target level of $24M, one third contributed by the University Challenge Campaign. The building will serve as a central location for Centre activities and will house a number of the individual researchers and research groups involved in Centre programs.

6. The proposed schedule for development of the Centre extends over a period of 3-4 years.

7. Detailed illustrations of the type of major research issues that could be addressed through Centre programs are provided in an Appendix.

GLOBAL STUDIES RESEARCH CENTRE

UNIVERSITY OF VICTORIA

1. Introduction

Since its inception, the University of Victoria has been a leader in interdisciplinary studies and community education. Innovative programs in Environmental Studies, Liberal Arts and Women's Studies, and more recent initiatives in Contemporary Social and Political Thought, Earth and Ocean Sciences, Medieval Studies and World History are all evidence of a continuing commitment to integrative education in the Arts and Sciences. The same emphasis is apparent elsewhere in the University: in professional programs such as the multidisciplinary Master's program in Policy and Practice in Health and Social Services; in the ground-breaking collaboration between the Faculties of Fine Arts and Engineering in the Fine Arts Laboratory for Extended Media; and in the recent development of centres and institutes for interdisciplinary research (see Appendix I) in topics ranging from aging and indigenous arts to energy systems and environmental health. The University's cooperative education programs, distance education offerings and extension activities have been developed in part to make these resources of the University more broadly available to the community at large.

The Global Studies Research Centre is designed to build on this history and to enhance the University's effectiveness in addressing current dilemmas in an increasingly integrated world. An initial core issue will be global environmental change and the technological, social, ethical and other challenges to which it gives rise.

2. Mission

The mission of the Global Studies Research Centre is to facilitate major inter-disciplinary research initiatives related to global environmental change and other issues of global concern, to promote interdisciplinary instruction and to engage in communication and outreach activities related to this theme.

The Centre will initiate, coordinate and integrate research that addresses the complex interrelationships of the earth system, the environmental impacts of human activity, sustainable development, and the worldwide challenges of social, cultural and technological change. Specifically, the Centre will:

- foster interdisciplinary research involving science, technology, social science, humanities and the arts
- focus collaborative research activities on issues of global significance and concern
- provide interdisciplinary training for graduate, post-doctoral and other researchers.
- encourage interdisciplinary, team-teaching that focuses on global issues
- collaborate with other national and international centres and institutions
- disseminate the results of scholarly research to the wider research community and other groups through publications, seminars, work-shops and conferences
- improve linkages between the university and government, private and voluntary sectors through collaborative research and outreach activities
- marshal interdisciplinary and trans-sectoral expertise to provide timely studies, reports and advice

3. Rationale

Economic opportunities, socio-political problems and social learning do not occur strictly within disciplinary boundaries. None of the important themes of global studies can be studied or understood within the confiness of any single academic approach or method. Examples include:

- ocean-atmosphere interactions;
- the functioning of the biosphere;
- the dynamics of cultural and religious diversity;
- processes of economic integration and political fragmentation;
- the impact of technology and technological change on societies and the biosphere;
- social breakdown and communal violence;
- the global drive for self-determination among indigenous peoples;
- changing perceptions of ourselves, our art, our history and our society.

Yet it is vital to the survival of humanity and other species that these issues be perceived and studied as a whole and understood widely. It is for this purpose that the Global Studies Research Centre is being established on the foundations of the University's continuing commitment to interdisciplinary research, teaching and outreach.

The Centre will mobilize the diverse expertise both inside and outside the University required to address major global issues and to undertake the large-scale programs increasingly seen as necessary by, for example, the national research-funding agencies and the Canadian International Development Agency. The Centre will further help to foster an interdisciplinary perspective at the University by encouraging development of team-taught courses on issues of global interest and significance. At the

same time, the Centre will function as a coordinating, intelligence and briefing unit with a mandate to respond quickly to such demands as preparing materials for external sponsors, and organizing policy exercises, simulations and workshops.

The Centre will be housed in a building that includes both teaching units and research groups as well as coordinating and support structures. Some space will be available on a rotating basis for other groups and individuals associated with the Centre (see Section 5). The Centre's activities, however, will extend beyond this one building, to provide throughout the campus a creative environment for interactive and interdisciplinary inquiry into issues of global crisis and change.

Through its research programs the Centre will promote collaboration among a wide range of research centres and institutes at the University (which themselves bring the virtues of different academic disciplines to bear on global inquiry), teaching units, other agencies outside the University, informal groups of scholars and individual scholars with an interest in interdisciplinary studies. In addition, it will open up its work to students and to the wider community by establishing programs of communication and social learning. Further, the Centre will highlight the crucial relevance of such academic work for contemporary problems of collective decision and public policy.

In short, the Global Studies Research Centre represents a unique intellectual enterprise in which research and other educational initiatives starting from a scientific or technological focus will embrace the human dimensions, and conversely those originating in the humanities, arts and social sciences will include scientific and technological dimensions. Its creation will blend available expertise in new alliances to meet the multidimensional challenges

of global problems. Examples of major research issues that could be addressed through programs organized by the Centre are included in Appendix II.

4. Organizational Structure

Administration of the GSRC will be the responsibility of a Director with the support of Centre staff. The Director, who will be accountable to the Associate Vice-President Research, will chair the Management Committee of the Centre, and will solicit advice from an External Advisory Board. Involved in the activities of the Centre will be research centres/institutes on campus, academic teaching units, off-campus organizations and individual scholars designated as faculty affiliates of the Centre. Faculty affiliates may be organized in informal research or study groups.

Director:

The Director will be a regular or visiting faculty appointment (not concurrently a Director of another centre/institute on campus). The appointment will normally be full-time for a three-year renewable term. Renewal of the appointment will be on the recommendation of the Management Committee under an acting Chair. The recommendation will go through the Associate Vice-President Research to the Vice-President Academic and Provost.

Duties of the Director will include implementation of the mission statement of the Centre, in particular the initiation and coordination of research projects and the facilitation of cooperation between centres/institutes on campus, academic units, research agencies elsewhere, and faculty affiliates of the Centre with common research interests. The Director will also be

responsible for day-to-day management of the Centre, the solicitation of funding support, the organization of external communication and outreach activities, and for encouraging development of interdisciplinary courses related to global issues.

Office Staff:

Office staff will comprise a full-time administrative assistant to the Director and a full-time secretary.

Management Committee:

The Management Committee will establish policies of the Centre, including policies for space allocation within the GSRC building, major joint project approvals and relational linkages with other centres/ research institutes, academic units, outside agencies and faculty affiliates of the Centre. The Management Committee will comprise eight members as follows:

- The GSRC Director as Chair
- 4 representatives of research centres/institutes on campus, appointed by the Associate Vice-President Research in consultation with the Director
- 1 faculty affiliate elected by the faculty affiliates
- 1 representative of academic units involved in the work of the Centre, appointed by the Associate Vice-President Research in consultation with the Director
- The Associate Vice-President Research or designate in a non-voting capacity

Members of the Management Committee will have three-year, staggered terms.

External Advisory Board:

The External Advisory Board will suggest research priorities and opportunities, provide planning advice, assist in project fundraising, and provide contact with off-campus communities, including governments, non-governmental organizations, other community groups and the private sector.

The membership of the External Advisory Board will be flexible, most likely in the 6-10 range. Members will be appointed to three-year, staggered terms by the Associate Vice-President Research in consultation with the Director of the Centre.

5. GSRC Building

The building envisaged for the Centre is to be funded at a target level of $24m. One-third of this amount is being sought through the UVic Challenge Campaign, the remaining two-thirds of the cost to be funded from Provincial Government sources: one-third through the matching funds program and one-third through the University's Capital Plan.

The building might best be designed in a modular fashion to give identity to different groups in an atmosphere of communication and collaboration, and to provide for flexibility to meet changing needs. It is anticipated that occupancy will be dynamic, with groups moving in and out as issues and opportunities demand.

Apart from space within the building dedicated to research groups and academic teaching units, there will be general space (assigned directly to the Centre under the responsibility of its Director) for administration and reception, a boardroom, conference rooms, a lounge/reading room, an auditorium/exhibit area and storage. Meeting facilities and exhibit areas are considered

to be essential for the necessary collaboration and external communication involved in the Centre. Offices will also be required for research personnel, project officers and possibly such purposes relevant to the functions of the Centre as the editing of interdisciplinary journals based at the University. It is anticipated that there will be an interactive, audio-visual and computer network capability in the building to support the mission of the Centre in terms of research and outreach communication.

It is recommended that selection of groups/units to be located within the proposed building should be based on relevance to the mission of the Centre, the need for space, and potential for synergy with other occupants of the building. These criteria suggest that priority might be given in the first instance to the following groups (in alphabetical order):

- Centre for Earth and Ocean Research (CEOR)
- Centre for Electronic Arts and Culture (CEAC)*
- Centre for Environmental Health (CEH)*
- Centre for Public Sector Studies (CPSS)
- Centre for Sustainable Regional Development (CSRD)
- Centre for Studies in Religion and Society (CSRS)
- Environmental Studies Program (ESP)
- Institute for Integrated Energy Systems (IESVic)*
- School for Earth and Ocean Sciences (SEOS)

(* pending formal approval of their establishment)

It is emphasized, however, that the above list is in no way immutable and that, as new core research programs emerge, so occupancy of parts of the building is likely to change. At the same time, other centres/institutes (see Appendix 1), informal research/study groups and individual scholars involved

in the inter-disciplinary dialogue of the Centre may be housed in the building as space permits. Some may be allocated partial office and/or laboratory facilities to effect collaboration. For details of suggested space requirements, see Appendix III.

6. Schedule of Development

A proposed schedule for development of the Centre is included as Appendix IV.

APPENDIX 1

RESEARCH CENTRES/INSTITUTES AT THE UNIVERSITY OF VICTORIA

The Global Studies Research Centre will provide both stimulus and support for individuals, groups and research centres/institutes dedicated to inter-disciplinary global studies, or pursuing specialized research contributing to such studies. University of Victoria centres and institutes currently either approved or proposed include:

- *Centre for Advanced Materials and Related Technology*, which undertakes interdisciplinary research in new materials and their applications.
- *Centre on Aging*, which conducts basic and applied research on the life span of persons in all societies, but with particular emphasis on the later years of life.
- *Centre for Asia-Pacific Initiatives*, which studies public policy issues relevant to the Asia-Pacific region.
- *Centre for Earth and Ocean Research*, which conducts research in earth, ocean and atmospheric sciences at the University of Victoria and through collaborative ventures with federal and provincial laboratories and the private sector.
- *Centre for Electronic Arts and Culture*, which will conduct research and development in areas of electronic cultural exchange.
- *Centre for Environmental Health*, which monitors emerging techniques in molecular biology and biotechnology and applies these new technologies to a broad range of environmental problems.
- *Centre for Forest Biology*, which studies forest regeneration and biotechnology in response to environmental and social needs.
- *Centre for Indigenous Arts*, which will focus on teaching and research about indigenous cultural expression and responses of indigenous artists to global change.
- *Centre for Public Sector Studies*, which explores the formation of public policy and the delivery of public programs in the context of differing traditions, institutions and processes of government, from aboriginal to international.
- *Centre for Studies in Religion and Society*, which studies religion (including all world religions and the aboriginal traditions) in relation to science, ethics, social and economic development and other aspects of culture with a major thematic focus on the environment.

- *Centre for Sustainable Regional Development*, which conducts research on environmental, economic, institutional, social and cultural sustainability and its application to users regionally, nationally and internationally.

- *Humanities Centre*, which advances knowledge by focusing on questions concerning language, culture and moral values.

- *Institute for Dispute Resolution*, which aims at finding more just ways of resolving disputes in such diverse settings as labour relations, the family, the environment and natural resource development.

- *Institute for Integrated Energy Systems*, which conducts research in the development of energy systems that simultaneously support economic growth, cause minimal environmental intrusion and provide flexibility in response to technical, geopolitical and environmental change.

APPENDIX II

GLOBAL STUDIES RESEARCH CENTRE

ILLUSTRATIONS OF RESEARCH INITIATIVES

The Global Studies Research Centre will be a focal point for the many scholars associated with the University of Victoria who are committed to collaborative interdisciplinary research. The potential scope of the Centre's work can be illustrated by the examples below. These are derived from preliminary discussions among some of those who will participate, but obviously the range of future activities and contributors will extend beyond these initial examples.

The common theme underlying such examples is recognition that human activities organized within industrial systems and economic mechanisms form only part of the range of human relationships reflected in social institutions and communal structures, and these in turn are embedded in the larger web of relationships by which we all interact with other species and the biosphere itself. To study phenomena within any one of these domains demands attention to our knowledge and perceptions of all the others, and thus must draw upon contributions from many disciplines and many cultures.

Illustration 1: GLOBAL ATMOSPHERIC RISKS

Increasing concentrations of greenhouse gases in the atmosphere are widely thought to pose serious risks of global climatic change. Efforts to reduce emissions of such gases, however, might entail stringent regulations of important domestic industries, or dramatic reductions in material standards of personal consumption, particularly in the developed North—or perhaps will require only a transition to new technological pathways. Should Canada promote and commit itself to an international convention on climate change that entails concrete internationally enforceable targets for reductions in emissions of greenhouse gases?

This topical question poses extraordinary dilemmas. An uncertain global risk, anticipated on the basis of fragmentary observations in an imperfectly-understood and evolving physical system, is thought to threaten anonymous future generations. On the basis of this perceived risk, activists advocate costly investment in research and technological development with uncertain impacts, or government intervention risking substantial adverse consequences for the material well-being of many individuals, possibly requiring significant amendment to long-standing traditions of international relations and national sovereignty.

A research program to address such a question obviously demands contributions from many academic disciplines and attention to many linked issues; the following list identifies just a few.

The Sciences

In the complex earth-ocean-atmosphere dynamics which drive our natural environment, the consequences of increasing concentrations of greenhouse gases generated by emissions from anthropogenic sources are uncertain.

Research is needed into possible interactions of the "enhanced greenhouse effect" with other emissions and gases, with the formation of clouds, circulation of oceans, and dynamics of forest growth, not to mention the possible impacts of future climate change on human activities, and the possibilities for attenuating or reversing any of these processes. In addition the impacts of solar fluxes on plants, fish and animal species other than humans also require examination. Within the Global Studies Research Centre, groups such as the Centres for Earth and Ocean Research and Environmental Health, working with associated research bodies such as the Institute of Ocean Sciences and the new Ocean-Atmosphere Circulation Modelling Centre, or the proposed Canada Centre for Climate Modelling and Prediction, offer a critical mass of renowned scholars working in these fields.

The Technology

Any possibility of altering the impact of human activities on the atmosphere will rest importantly on technological innovation and new technological concepts such as the transition to a hydrogen economy, involving new visions of human relationships to technology and new perceptions of technological risks. At the University of Victoria, exploration and assessment of new technologies and their implications is a specialty of groups such as the Institute for Integrated Energy Systems and the Centre for Advanced Materials and Related Technologies.

The Social Sciences

Perceptions of environmental risks and of associated technologies are influenced by many considerations beyond the objective features or statistical risk estimates identified through scientific and engineering research. The framing of these problems will shape decisions on funding for new research or measures (such as new market instruments, regulation or exhortation) to alter the decisions and behaviour of firms and individuals. Acceptance of new technologies or new systems of property rights will reflect—and reshape—underlying cultural traditions, philosophies of science and attitudes toward consumption. The emergence of consensus, within a society or internationally, on measures for cooperation involving international redistribution of resources and possible surrender of sovereignty will demand new institutions and processes for conflict resolution. Studies of issues such as these are the responsibility of groups such as the Centres for Sustainable Regional Development, Public Sector Studies, Asia-Pacific Initiatives, Studies in Religion and Society, and the Institute for Dispute Resolution, which are already building impressive records of successful work in these areas.

The Humanities and the Arts

International agreements to alter conventional patterns of economic decision and production or consumption activity will reflect established patterns of thinking and accepted standards of conduct and responsibility, along with conventional images of self, society and nature. Codes of obligation to other people or future generations, balanced with ethical concerns for nature in its own right, shape the way the social challenges of future climate change are framed and possible responses assessed. The formation and transmission of such religious, cultural and ethical foundations of social behaviour, their evolution in response to practical experience and shifting social consciousness in dealing with emerging problems, and their integration with

social decisions, technological development and attitudes toward scientific evidence, are subjects of study in groups like the Centres for Studies in Religion and Society, Indigenous Arts and the Humanities.

The point of this illustration is that a responsible answer to this one apparently simple question posed above demands significant contributions from almost every domain of scholarship, not independently, but in a coherent and coordinated form which presses each of them beyond its existing boundaries.

Illustration 2: ECOSYSTEM HEALTH: MANAGING HUMAN ACTIVITIES IN THE PACIFIC COASTAL ECOSYSTEM.

Some of the most controversial questions facing contemporary communities and governments relate to the perceived risks associated with industrial discharges into surrounding ecosystems, or more generally to the impact of human settlements and resource industries on the environment. Should the Government of British Columbia, in response to concerns about environmental quality, intervene in the functioning of the regional economy?

By contrast with the previous example, this question focuses less on scientific and ethical concerns having to do with distant risks and future generations, and more on the intricate structure of human relationships and dependencies within a single region. Both, however, demand a balancing of these human concerns with the ethical significance attached to nature for its own sake.

The Sciences

The complex dynamics that make up the interacting components of coastal ecosystems are not well understood; nor are the effects of anthropogenic forces. Extensive research is needed to understand the effects of human activities on ecosystem function and human health. Studies would begin with the marine environment, where methods of physical, biological and biogeochemical oceanography are used to study the effects of discharges, and where impacts on fish and shellfish populations, the fisheries resource, and possible risks to human health are monitored. Other studies would extend to the terrestrial environment, where the impacts of human activity on groundwater quality, biodiversity and aquatic habitat must also be examined in order to obtain estimates of potential consequences for human and socioeconomic health. Such research is actively being pursued by the Centres for Earth and Ocean Research, Environmental Health and Sustainable Regional Development, and other groups at the University of Victoria.

In human populations, genetic effects (mutation and cancer) of industrial activities must be examined in occupationally and environmentally exposed individuals, and the psycho-social effects of both real and perceived environmental stresses studied. Of particular importance is assessment of the effectiveness of diverse approaches to mitigating the consequences of environmental stresses. Such studies require the cooperative efforts of geneticists, cancer biologists, epidemiologists and medical geographers, among others, as illustrated in ongoing work within the Centre for Environmental Health.

The Applied Sciences

Assessment of alternative technologies, known or proposed, for the reduction or transformation of discharges and other impacts of human activities is a crucial component of possible responses to the risks identified in the scientific work just described. In particular, full life-cycle appraisals and comprehensive analysis based on full environmental costing are key. Images of alternative technologies and perceptions of the risk they are seen to impose are important complements to empirical evidence and "objective" statistics in this analysis. Such work is currently undertaken by groups such as the Institute for Integrated Energy Systems or the Centre for Sustainable Regional Development, with important potential contributions from the Centres for Electronic Arts and Culture, Indigenous Arts and Studies in Religion and Society.

The Social Sciences

To study social decision processes involved in governing human activities with environmental impacts, it is necessary to identify the physical indicators of impacts on biodiversity and human health, and relate these to more general aggregate indicators of sustainability. It is necessary also to find better statistical descriptions of human activity levels, and relate these to the measures of effluent discharge or resource depletion used in the scientific analysis described above. With such statistical indicators of the physical relationships, it is possible to ask how changes in human activities might achieve future benefits in reduced discharges and hence improved human and ecosystem health (as measured by sustainability indicators). It is also possible to evaluate the costs in terms of lost jobs, social cleavages or other dimensions of socioeconomic tensions. These tasks of analysis and measurement are pursued by groups such as the Centres for Sustainable Regional Development and Public Sector Studies.

The Humanities and the Arts

The normative foundations on which to build such decision processes, weighing costs to one group against benefits to others, must come from the development of an appropriate epistemological framework, recognition of the particular relationships with nature which spring from cultural traditions, and appropriate ethical principles for balancing conflicting interests. Such issues are the domain of such Centres as those for Studies in Religion and Society, the Humanities and Indigenous Arts, and the Institute for Dispute Resolution.

Illustration 3: HEALTHY COMMUNITIES

Are the new approaches to community health really effective?

In 1975, Canada established itself as an international leader in the area of health with the publication of Marc Lalonde's report entitled *New Perspective on the Health of Canadians.* At its Alma Ata conference in 1979, the World Health Organization proclaimed Health for All by the Year 2000 as its goal. On this theme, a number of important initiatives were undertaken, including the Healthy Cities Project in the European Region. The project was stimulated by the Toronto Board of Health's centennial conference in 1984, in which innovative Canadian efforts at health promotion gained wide international recognition. Health and Welfare Canada has lately been encouraging such efforts under its Healthy Communities Programme, and the

Capital Regional Health District in British Columbia has become actively involved.

These initiatives are informed by a sense that health care has been overly medicalized, that environmental health has been neglected, that the connections between poverty and ill health have not received proper attention, and that people have not been encouraged individually or in their communities to take responsibility for their own health. The continuing fiscal crisis in the health care system is one sign of the problems to be addressed. However, there are deeper issues that relate to the character of our economy, the nature of our political system, and the philosophical assumptions of science and medicine. The effort to develop "healthy public policies" for "healthy communities" opens up a range of difficult issues that can only be addressed by interdisciplinary research.

Unlike most major universities, the University of Victoria has no medical school, although it has strength in selected areas of medical research. At the same time, it has strong research capacities in environmental health, gerontology, public health, nursing, health economics, health information sciences, the politics and sociology of health, bio-medical ethics, and the history and philosophy of science. Given a strong Centre, these resources could be mobilized for innovative interdisciplinary research.

The Sciences and Technology

One of the important themes in recent approaches to health promotion is that people have to take responsibility for their own health, and not rely on people in white coats to deliver it. This puts the role of science and technology at issue. On the other hand, there is equal concern about environmental effects on health, and it seems that many of these effects can only be monitored by advanced technology. Corrective measures frequently require sophisticated professional intervention of a kind that local communities cannot manage.

This raises the issue of the appropriate technologies for health promotion. Are there technologies that would be more conducive than the present ones to community-controlled health care? Could advanced technology be mobilized more effectively to enable families and individuals to monitor and promote their own health? What is to be learned from the technologies of health care in pre-modern and non-Western societies? Does a shift towards community health put at risk the scientific and technical advances that have come with the present system of medicalized health care?

At the University of Victoria, these issues are clearly questions of research for the Centre on Environmental Health, the Centre on Aging and the School of Nursing.

The Humanities and Social Sciences

The recent public television series on alternate forms of healing, hosted by Bill Moyers, pointed out the existence in other cultures of alternative concepts of health and how health is achieved and maintained. These need to be rigorously compared with the perspective provided by modern Western medicine. Included here would be the traditional wisdom of the Eastern religions (Taoism, Buddhism, Confucianism, Hinduism) with their stress on meditation and interdependence with the environment. The aboriginal

traditions also offer a quite distinct philosophy and practice of health within a community. These approaches to health need to be examined in relation to attempts to address health problems by the usual methods of modern medicine. The Centre for Studies in Religion and Society, the Centre on Aging and the Centre for Asia-Pacific Initiatives are well placed to engage in comparative studies of alternate models for Healthy Communities. Such research could add an important dimension to the B.C. Government Healthy Communities Program.

Economic and ethical issues interact with regard to a wide range of "health" issues. There are large policy questions such as how much of the gross national product can be spent on health care without the whole community losing its vitality? And at the level of community and clinic or hospital allocation of limited resources, how does one decide who receives treatment and who gets access to high-cost, high-tech treatments or diagnostic tests? At the bedside level, there are the ethical debates over such issues as "who pulls the plug and when". There are also economic and ethical issues associated with a range of technology issues at birth (e.g. the New Reproductive Technologies). This wide range of economic and ethical issues could be the focus of research involving the Centre for Studies in Religion and Society, the Centre on Aging, the Centre for Public Sector Studies, the Department of Economics and the Centre for Environmental Health.

Democratization is one of the major themes of the new approach to health promotion. However, there are as many conceptions of democracy as there are health promoters. This suggests the importance of critical scrutiny with respect to claims about democratization and personal empowerment. To what extent is the new approach just a variant of the old, with a new set of professionals in charge? Is the off-loading of responsibilities onto individuals and communities simply a means of relieving fiscal pressure, or is it a genuine effort to enable people to control their own lives? Does the new approach to health promotion have any discernible effect on people's self-esteem, their participation in community affairs, their economic activity, their local environment, or their personal health?

These questions cannot be pursued without taking proper account of cultural, religious and philosophical diversity. Nor can they be considered in abstraction from the economic, social and political context. Such research could engage the Centre for Public Sector Studies, the Humanities Centre, the Centre on Aging, the Centre for Studies in Religion and Society and the Centre for Sustainable Regional Development.

Illustration 4: MINE DEVELOPMENT AND WILDERNESS PRESERVATION

The value of a credible interdisciplinary research centre can be vividly illustrated by reference to two specific recent decisions on mine development in two different jurisdictions--the decision of the Commonwealth Government of Australia to prohibit mining in the Kakadu Conservation Zone and to incorporate the zone in Kakadu National Park, to the exclusion of the Coronation Hill mine proposed by the Coronation Hill Joint Venture, and the decision of the British Columbia Government to create a wilderness area in the Tatshenshini-Alsek region, to the exclusion of the Windy Craggy mine proposed by Geddes Resources.

The mining industry today operates on a global scale in world markets experiencing rapid change in all facets, from science and technology to political regimes, economic mechanisms and public perceptions of ecological risks. Exploration and location decisions thus face profound uncertainties in as aspects of operations, and the background information required to deal with them spans all disciplines, from growing knowledge of tectonic structures to changing perceptions of obligations to aboriginal peoples. A research program to provide the necessary briefing obviously demands attention to a number of linked issues; the following list identifies just a few such questions.

The Sciences

To address both the risks and the potential value of mine development, continuing research is needed not just into the geological/tectonic/ metallogenic setting for particular developments, but into the seismic activity which might, for example, generate risks of breaching containment ponds designed to deal with potential problems of acid rock drainage (the major technical uncertainty identified in the case of the Windy Craggy proposal). The chain of events by which such stresses might generate impacts on the ecological balance or sustainability of the region, and the potential magnitudes and significance of such impacts must be explored through physical, chemical and biological methods, and developed through toxicological and epidemiological studies. Little of the knowledge of eco-system dynamics necessary to appraise the potential risks, and to compare them against benchmarks established in respect of other risks, presently exists. Relevant research will fall into the programs of University of Victoria centres such as the Centre for Earth and Ocean Research, the Centre for Geographic Information Systems and Remote Sensing, the Centre for Environmental Health, and the Centre for Sustainable Regional Development.

The Technology

New technologies for exploration will reduce environmental impacts and increase the precision of the knowledge base available for investment decisions. Alternative energy systems based on more environmentally benign sources, and treatment techniques directed toward targets of zero pollution or zero discharges can reduce the risks of damage and the strength of objections to mind development. New communications technologies, advances in robotics and other advances in information and computing capabilities also will reduce both social and environmental stresses associated with new projects, and at the same time will alter the economics of development options. Work in these areas includes innovations in instrumentation in Centre for Earth and Ocean Research, in the Institute for Integrated Energy Systems and the Laboratory for Automated Computation and Information Systems Research.

The Social Sciences

The major uncertainty identified by the British Columbia Commission on Resources and Environment in its report to Cabinet on options for the Tatshenshini-Alsek area was that associated with environmental assessment and the mine development review process. The long review period, the uncertainty of outcome, and the ambiguity of the criteria on which a decision might be based all were sufficiently important considerations as to call into

question the economic viability of the proposed development. Basic research in the social sciences is addressed to examination of consultative mechanisms and assessment processes, analytical support to the negotiations that might be required in consensus-seeking mechanisms, changing criteria relating to environmental risks, changing regulatory mechanisms and their likelihood of achieving compliance, and more sophisticated techniques for estimation of the costs associated with unpriced resources or the values associated with intangible benefits. Research in environmental sociology and cultural anthropology is increasingly directed toward alternative perspectives on decision criteria, including traditional procedures of aboriginal cultures. Such research, pursued by centres such as the Centre for Sustainable Regional Development, the Centre for Asia-Pacific Initiatives, the Centre for Studies in Religion and Society, and the Centre for Public Sector Studies, thus can contribute to more reliable estimates of project costs, fuller appreciation of the prospects for stability in the political and economic context in which development is to take place, and better understanding of the institutional and cultural setting in which negotiations as to the appropriate balance between economic objectives and environmental risks must take place. Fuller understanding of the relevance and impact of international agreements and international commitments, and their translation from international to national, provincial or local levels of jurisdiction is also central in such work, and essential to enduring business decisions. Such topics are pursued by the Centre for Sustainable Regional Development, the Institute for Dispute Resolution, and the Centre for Public Sector Studies.

The Humanities

In Australia, the Prime Minister requested the resources Assessment Commission to assess options open to the Cabinet in dealing with the Coronation Hill mine development proposal. The critical issue in the subsequent decision to prohibit mine development was the testimony of three senior male native people as to the sacred character of the territory concerned, known as the 'sickness country'. Increasingly, conventional procedures for bringing scientific and technical evidence into social decisions are being questioned on the grounds that other interests, "other ways of knowing", and alternative criteria of rationality must be taken into account. Bodies of thought based on individual or collective rights are set against conventional philosophical argument or economic calculation based on customary consequential analysis as a foundation for social decisions. Not only the claims of aboriginal communities to traditional use rights, but also distinct practices of resource management based on different cultural foundations and alternative views of the relationships of individuals to Nature or to their community are coming to influence land use allocations or the granting of possibly competing rights of exploration or development. In remote settings, human rights questions and changing social expectations may impinge on employment practices and productivity. Such issues, and institutions developed for their resolution, are studied by groups such as the Institute for Dispute Resolution, the Centre for Studies in Religion and Society, the Centre for the Humanities, and the Centre for Indigenous Art.

APPENDIX III

GLOBAL STUDIES RESEARCH CENTRE
SUGGESTED SPACE REQUIREMENTS

	s.f.
Centre for Earth and Ocean Research	6000
Centre for Electronic Arts and Culture	3000
Centre for Environmental Health	11000
Centre for Public Sector Studies	1000
Centre for Sustainable Regional Development	4000
Centre for Studies in Religion and Society	3000
Environmental Studies Program	3000
Francis G. Winspear Chair for Research in Public Policy	1000
Institute for Integrated Energy Systems	4000
School of Earth and Ocean Sciences	55000
General GSRC space	15000
Partial occupancy - other groups	8000
	114000 n.a.s.f.

General GSRC Space would include:

	s.f.
Office, Director	200
Office, Administrative Assistant	150
Office, Secretary and reception area	400
Offices, Visiting Researchers	1500
Offices, PDF/Research Officers	750
Offices, Project Officers	600
Laboratories, project space	4400
Boardroom	600
Conference rooms	1200
Lounge/Reading room	1200
Auditorium/Exhibit space	3000
Storage	1000
	15000 n.a.s.f.

APPENDIX IV

GLOBAL STUDIES RESEARCH CENTRE
PROPOSED SCHEDULE OF DEVELOPMENT

	Cumulative Months from approved status
Approval of Centre by Senate	0
Appointment of Director	3-6
Appointment of staff	8
Commence CSRC research projects	9
Establish External Advisory Board	9
Completion of building requirement study	12
Appointment of architects	15
Completion of building design	24
Completion of construction	40
Expansion of CSRC research programs	43

Note: It is assumed that Senate approval will be provided in the 1993-94 academic year. The sequence of development phases tracks development to 1998. The actual schedule will in part depend on the success of the UVic Challenge fundraising drive and the appropriate negotiations with the Provincial Government to secure the matching funds.

lmt : 7 October, 1993