

THE UNIVERSITY OF BRITISH COLUMBIA

ITEM 09a



December 13, 2006

**OFFICE OF THE DEPUTY VICE-CHANCELLOR AND
VICE-PRESIDENT, ACADEMIC AND RESEARCH**
3333 University Way
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To: Okanagan Senate

From: Dr. Doug Owram, Deputy Vice-Chancellor

Re: Okanagan Sustainability Institute

I am pleased to make the following recommendation to the Senate:

That the Senate approve and recommend that the Board of Governors approve the establishment of the inter-faculty Okanagan Sustainability Institute at the University of British Columbia Okanagan, effective January 1, 2007.

This new interdisciplinary and multidisciplinary Institute will support basic and applied research, scholarship and creative work relevant to the long-term sustainability of the Okanagan region and beyond.

**A PROPOSAL TO THE UBC OKANAGAN SENATE FOR
ESTABLISHMENT OF THE:**

OKANAGAN SUSTAINABILITY INSTITUTE

An Institute of the University of British Columbia Okanagan



OKANAGAN

Final Draft, 30th November 2006.

Executive Summary

The Okanagan Sustainability Institute (OSI) will be a University of British Columbia Okanagan (UBCO) Senate-approved inter-Faculty institute whose mission includes basic and applied research, scholarship and creative work relevant to the long-term sustainability of the Okanagan region and beyond. The Okanagan is one of the fastest growing and developing regions in Canada, and as such, the future sustainability of human activity and environmental quality in the region is in question. Despite its prosperity, the region is prone to numerous social, economic and environmental challenges and these could well increase in the future. UBCO contains a wealth of expertise and resources that could be directed at addressing sustainability concerns, and a research-oriented institute within UBCO would serve to meld the imperative of a livable and sustainable future with the capacity for basic and applied research, scholarship and creative work in support of that imperative.

The OSI will be composed of membership from interested and actively engaged faculty at UBCO, richly complemented by an array of partnerships that activate and build capacity outside of the University. Interdisciplinary and multidisciplinary collaborations will be strongly encouraged as will problem-based approaches and alternative methodologies. Emphasis will be placed on the development of partnerships and collaborations through which priorities could be set, needs defined, and support in various forms obtained. Among the objectives of the OSI is the generation of information, knowledge, methods and processes that will assist regions in future planning and development. At the same time, there will be a requirement to produce results that will advance formal knowledge and practice in a variety of disciplines and professions.

This proposal presents the OSI mission, its purpose, objectives, context, rationale, and scope. In addition, it suggests a governance and administrative structure that allows for faculty-based decision making in defining the overall agenda and future direction of the OSI. A selected, non-exhaustive, non-representative bibliography is included to illustrate that many of the key sustainability issues have already received serious attention in the past and that there is an information base upon which to build the OSI.

Introduction

The creation and development of an Okanagan Sustainability Institute (OSI) at the University of British Columbia Okanagan (UBCO) is proposed. The general purpose of the OSI will be to harness and focus the expertise and resources at UBCO on sustainability issues and problems in the surrounding region, as well as in other regions by way of comparative studies, and at the provincial, national and international scales by way of broader context whenever appropriate. The Okanagan region, like the rest of the world, has undergone intensive population growth, demographic change, economic development, and environmental alteration over the past Century. The pace of change has accelerated in the past 25 years to the point where our future sustainability may be in jeopardy given existing limitations and future pressures on natural resources, social services, health care services, and overall urban-rural infrastructure, and in light of environmental variability, climate change, and global uncertainty.

Sustainable development requires informed decision making, which in turn requires accurate information and up-to-date knowledge. The mandate of the OSI will include the conduct of interdisciplinary research necessary to generate and deliver such knowledge in a manner that will assist informed decision making and planning. Improved understanding of the local issues in the Okanagan will have application elsewhere, while the experiences drawn from other regions could equally be applied in the Okanagan context. Basic research in the social, physical, natural and health sciences as well as the humanities is clearly fundamental to any sustainability agenda, but this research has shown that the interactive effects between human and environmental factors often are not well understood, although they are central to understanding, managing and planning sustainable development. Thus, the OSI will employ an interdisciplinary approach to basic and applied research, scholarship and creative work and encourage rigorous examination of the interaction of all scholarly endeavors relevant to sustainability.

Mission

The mission of the Okanagan Sustainability Institute will be to contribute to a sustainable future through basic and applied research, scholarship and creative work relevant to the long-term sustainability of the Okanagan region and beyond. The knowledge emerging from the OSI will be relevant and practically useful to decision makers and stewards of the public trust, and will also contribute to our broader understanding of sustainability. As such, the mission of the OSI is consistent with and is reinforced by the Vision Statement for the UBC system, which states:

“The University of British Columbia, aspiring to be one of the world’s best universities, will prepare students to become exceptional global citizens, promote the values of a civil and sustainable society, and conduct outstanding research to serve the people of British Columbia, Canada and the world.”

Purpose and Objectives

The purpose of the Okanagan Sustainability Institute will be to bring together the diversity, expertise, and intellectual resources of the faculty of UBCO in an interdisciplinary framework, using multi-disciplinary methods and techniques, to address sustainability issues. In order to achieve this vision, the OSI will serve as a facilitator by enabling new opportunities for collaboration among members and partners as well as by taking on leadership roles in areas of considerable faculty strength or on issues of critical importance to the region. The OSI will address issues that range across all disciplinary areas including the physical and natural sciences, social sciences, health professions, the humanities and creative arts, as well as the engineering and management professions, thereby providing basic information, new knowledge and interpretations, and practical solutions relevant to planning and managing for sustainability. In addition, the OSI may develop “operational” services such as an access (entry) point for information and information exchange, a resource centre for technical expertise and facilities, and a venue for meetings, workshops, training and educational forums. The OSI will facilitate and complement, rather than duplicate, existing and emerging degree programs in the established academic units of UBCO.

Specific objectives for the OSI might include any or all of the following:

- To facilitate basic and applied research, scholarship and other creative work on topics relevant to sustainability of the Okanagan and regions elsewhere.
- To actively disseminate the results of the research, scholarship and creative work in both academic and public venues.
- To collaborate with the academic and administrative units of UBCO to undertake further development and enhancement of the human, information, infrastructure and technical resources necessary to achieve its mission.
- To develop and enhance partnerships, collaborations and dialogue with agencies and offices of all levels of government including First Nations, regional and local non-governmental organizations, and other community-based stakeholders relevant to its mission including women’s organizations.
- To engage and collaborate with other institutes, centres, and groups at UBCO including, for example, the Centre for Species at Risk and Habitat Studies, the Okanagan Regional Chemical Analysis Centre, the Centre for Population and Health Services Research, the Allied Social Research Centres, and others.
- To seek financial assistance through contracts and grants from various councils, agencies and client organizations, and to seek financial contributions from donors and in-kind support from partners and collaborators.
- To develop the capability to serve as an information and technical resource centre.
- To foster the development at UBCO of significant modeling expertise and capacity in support of sustainability decision-support systems.
- To hold, facilitate and participate in public forums, information sessions, workshops, conferences and other non-degree training and educational activities, as well as to provide a vehicle for its members to interact with colleagues and agencies nationally and internationally.

- To facilitate and provide in-kind support to existing and emerging academic programs and curriculum development of UBCO and its sister institutions that are of relevance to sustainability, including development of interdisciplinary and graduate programs.
- To monitor and analyze the discourse, ethics and aesthetics around sustainability, how concepts and language related to sustainability are defined, employed and co-opted by various world views and interest groups, and how these have contributed to current sustainability crises.
- To be proactive as well as reactive: for example by taking a leadership role in a sustainable community development project in the Okanagan, and supporting local as well as global initiatives of women's organizations in the development of sustainable practices.
- To produce an annual report that will include a "State of the Okanagan Region" component for public dissemination as a means to track progress toward a more sustainable future for the Okanagan.

Context and Rationale

The regional context and the presence of UBCO provide the rationale for the establishment of the Okanagan Sustainability Institute. UBCO brings to the region a wealth of knowledge and expertise in its researchers, scholars, writers and artists, along with its existing and developing physical and technical facilities and information resources. The institution is a valuable and accessible resource in addressing the future sustainability of this and other regions, and moreover, it has an obligation and responsibility to the local community in which it is situated and embedded.

The Okanagan is a place of great scenic beauty, diverse climatic conditions, high biodiversity, and a wealth of human and natural resources. As such, it has been a focal point for population growth, urbanization, industrial development in such desirable sectors as high tech manufacturing and other knowledge intensive activities, specialized and value-added agriculture and horticulture, and all-season tourism and recreation. In terms of all measures, it is one of the fastest growing and developing regions in Canada. As one example of the rapidity of this growth, the population of the City of Kelowna increased from less than 20,000 in 1971 to 110,000 today. Such rapid growth and development in a constrained intermontane environment brings into question the future sustainability of existing practices and growth strategies. It is this question that provides a challenge for residents and officials in the region, and together with the presence of UBCO, provides the rationale for the establishment of the OSI.

The question of future development in the Okanagan region is brought into focus by several key issues, examples of which include:

- Meeting the exceedingly high and growing demand for high quality water when sources are limited and variable and the quality can be easily compromised.
- Establishing strategies for responding to the current infestations of mountain pine beetle and western pine beetle in the region's forests.

- Addressing the increasing risk from, and vulnerability to, environmental hazards as a result of population growth, urban expansion, adoption of specialty crops, expanding transportation, and environmental variability and change.
- Ensuring maintenance and enhancement of the high levels of biodiversity (in terms of both species and habitats) present in the region in the face of rapid growth and development.
- Regulating rural to urban land conversion so as to retain agricultural and horticultural capacity and reduce erosion of biodiversity.
- Addressing the many inter-jurisdictional issues and conflicts related to the planning and management of the land resource base.
- Addressing the challenges that arise in a rapidly growing and developing community and economy, including those pertaining to fair access to educational services, health care, social services and affordable housing, and recognizing that inequality of access to these is a sustainability issue.
- Managing and alleviating the growth in vehicle numbers and its impacts, such as increased travel time, road crashes, greenhouse gas emissions, decreased air quality, and negative effects on community cohesiveness and neighbourhood accessibility.
- Establishing a sustainable economic growth and development trajectory that might help to mitigate, but at least is balanced against the environmental and social costs that it creates.
- Addressing the determinants of human health and welfare, and promoting enhanced wellbeing into the future.
- Developing effective ways of disseminating information to decision makers and stewards of the public trust, while also recognizing that the imaginative processes of art, story, and other creative activities can be equally important in promoting the value of sustainability.
- Addressing the issues of cultural sustainability, both of First Nations and other inhabitants of the Okanagan, in the face of globalization and massive immigration, through tools such as cultural resource management.

These are but a few examples of issues and problems facing the Okanagan region, reflecting concerns in many other regions globally. Some have been of concern for a long time, others are becoming more acute. Experience with similar issues elsewhere may help to address those in the Okanagan which, in turn, will add to the breadth and depth of knowledge in general. A selected bibliography is included later as a further illustration of some issues.

Thus, the context of the Okanagan region provides numerous opportunities for innovative research, scholarship and creative work that would advance knowledge and understanding. It is much like a living laboratory, and as such, curiosity-driven enquiry by itself is insufficient. Equal emphasis must be placed on the search for solutions to the problems referred to above through application of information, knowledge and understanding. Furthermore, it will be necessary to engage in research where UBCO and the communities in general will share a voice in definition of the issues to be addressed, the methods employed, and the use of the results to produce positive outcomes. With this

rationale and by taking this approach, the OSI will have a unique opportunity to contribute to the betterment of its immediate region. It will also allow a significant contribution to be made to our understanding of rapid growth and development, and its planning and management for sustainability, in similar regions globally.

Scope

“Scope” refers to the geographical area, time dimensions, and subject areas covered. Building consensus on the scope of the OSI will help to constrain and focus the range of activities to a set of reasonably manageable projects with some prospect of successful engagement. Nevertheless, it is equally true that the scope will likely change and evolve as the OSI itself defines its priorities in the first few months after Senate approval and gradually evolves in response to growing capacity, changing expertise, identification of new community needs, changing issues and priorities, and as knowledge is gained and understanding evolves. In defining scope, the intent is not to limit flexibility and exclude individual interests, but rather to provide some initial sense of direction. In fact, it may be that through the eventual definition of scope and in dealing with its ongoing evolution, the OSI will establish its unique qualities and contributions. For the purposes of this proposal, the following assumptions and principles will inform the scope of the OSI in its early stages of evolution:

- The primary geographical focus of the OSI should be regional, with significant attention logically being directed toward the Okanagan given that UBCO is situated within this region. Nevertheless it is critical to recognize that any region under study, by necessity, will need to be considered within its many contexts. Thus, interactions with neighbouring regions will at times be critically important as will the idea of nested systems, viewing regions within larger provincial, national, and global contexts.
- The primary temporal focus of the OSI should be the present and the future. However everything has a history, and the past dimensions of an issue or problem can be as, if not more, important in its understanding and in coming to explanations. Furthermore, historical awareness is key to cultural and ecological sustainability, and has important political and social implications. Therefore, historical and pre-historical analyses will serve complementary roles in specific studies undertaken through the OSI in the sense that they can inform our future, which must be the primary concern for any sustainability agenda.
- Given the commitment to an interdisciplinary approach, the subject area focus of the OSI shall be broadly inclusive. It is expected that as the work of the OSI evolves, expertise from all the academic units of UBCO would become engaged in specific projects. Cross-disciplinary membership in the OSI will be encouraged both internally and externally (via partnerships). Furthermore, by adopting a “regional sustainability” theme the OSI will have the opportunity to make a substantive contribution to sustainability work nationally and internationally.

Partnerships and Community Resources

The interdisciplinary nature of the OSI will provide an opportunity to create meaningful and robust partnerships and collaborations with units, programs and individuals within UBCO and with local, regional, provincial, national and international governmental, non-governmental and scientific and scholarly organizations. Based on internal and external consultation, UBCO has already created a robust and widely adopted *Academic Plan*. The imperatives of the *Academic Plan* inform all the operations and research activities of the university which are inherent in UBCO's plan to create "an intimate learning community, an integrated research community, a locally responsive and globally conscious community, and a flexible, adaptable and sustainable community". The vision of UBCO will provide all participants in the OSI the opportunity to be academically engaged in applying their research, scholarship and creative work to relevant issues locally and globally.

Preliminary discussions with potential partners have created an interest in the OSI for reasons such as expanded opportunities for collaborative research, joint supervision of students, facilitation of community interaction, and development of local capacity. Potential partners and activities include for example:

- Environment Canada (identification of six or seven science priorities which this agency hopes will lead to significant research activity and action items in the Okanagan; use of the Okanagan as a test site for a new land-use planning model).
- BC Ministry of the Environment (conducting of an extensive groundwater survey and inventory of all wells in the Okanagan).
- City of Kelowna (collaboration with the OSI and affiliated students on sustainability projects such as the Central Okanagan Transit and Multi-modal Corridor Plans and long range joint planning with the City of Vernon).
- Okanagan Nation Alliance (capacity building that will facilitate more extensive participation and representation in decision-making venues and greater self-determination).

Other preliminary discussions have taken place with Fisheries and Oceans Canada, the Pacific Agri-Food Research Centre (PARC) in Summerland, the South Okanagan–Similkameen Conservation Program (SOSCP), Interior Health, the Regional Districts, and other affiliated groups such as the Nature Conservancy as well as various educational institutions (University of Oregon, Oregon State University, Western Washington University).

Governance and Administrative Structure

The OSI will be a Senate-approved, inter-Faculty institute and therefore subject to UBC policies and procedures governing centres and institutes. The following paragraphs propose an administrative structure that will allow the OSI to establish itself quickly and to set policies and rules for operations. Through the Activities and Strategic Directions

Steering Committee (see below), the proposed administrative structure can be easily altered to suit the membership in ways that this proposal is unable to anticipate.

The operations of the OSI will be managed by a **Director** who reports to the Chair of the **OSI Decanal Steering Committee**. This Committee is comprised of the Associate Vice-President Academic & Research and the Deans (or their designates) of the three or four Faculties which are most invested in the OSI, and is chaired by the AVP A&R. The Director will also hold a senior academic appointment in a relevant discipline housed within one of the participating Faculties. Normally, the Institute's budget will reimburse the Director's home Faculty a suitable portion of the Director's salary. The Director's responsibilities will include the day-to-day administration of the OSI including financial matters, supervision of OSI staff, oversight of OSI resources and infrastructure, liaison and collaboration with Institute members, writing of an annual report and preparation of budget proposals, and general representation of the OSI within UBCO and the external communities.

The proposed administrative structure of the OSI is summarized graphically in Appendix 1. The Director will receive advice pertaining to day-to-day administration and budget of the OSI from the **Operations and Budget Advisory Committee (OBAC)**. The OBAC will consist of six members elected from the general membership of the OSI (as defined below), one of whom will be elected by the six OBAC members to serve as Committee Chair. The Director will serve as an ex-officio member of the OBAC. In contrast to the advisory function of the OBAC, the **Activities and Strategic Directions Steering Committee (ASDSC)** is a decision-making body that establishes priorities, policies, and procedures for the OSI. It also defines the range and nature of OSI activities including research projects, community outreach, partnership arrangements, and other matters pertaining to long-term strategic planning. The ASDSC will consist of the Director (who will Chair the ASDSC and is a voting member) and six other voting members elected from the general membership of the OSI (as defined below). The Chair of the OBAC will be an ex-officio (non-voting) member of ASDSC so as to facilitate efficient and transparent communication among the two bodies. At its discretion, the ASDSC may invite one or more partners to serve on the ASDSC in ex-officio capacity (typically as non-voting participants). The ASDSC has no authority over the OBAC, with the latter serving entirely at the discretion of the Director, but it does have the authority to redefine itself and its relationship to the general membership and OSI partners.

The Director, in consultation with both the ASDSC and the OBAC, will form an **External Communities Advisory Committee (ECAC)** consisting of individuals drawn from various organizations and bodies outside of UBCO to provide broad advisory oversight for the OSI. The Chair of the ECAC will be elected from the Committee membership and the OSI Director will serve in an ex-officio capacity. The ECAC will meet once or twice per year.

At least once per year, all members, partner representatives, and ECAC members will meet in the form of the **OSI General Council** to hear the annual report and to provide advice and recommendations on the operations of the OSI. Invitations should be

extended to the broader community (e.g., mayors, Regional District chairs, Band chiefs) to attend the General Council in order to assess the needs of our external neighbours. The General Council will be chaired by the OSI Director. In its early deliberations, the ASDSC may decide to use the General Council as the main decision-making authority for the OSI by way of requiring General Council ratification of ASDSC proposals regarding policies, procedures, and Constitutional amendments. Should this be found desirable, then the ASDSC will need to articulate who has voting privileges and how a quorum is to be defined.

Membership

The OSI will be a broadly inclusive Institute and anyone holding a continuing faculty appointment in the UBCO Faculties of Creative and Critical Studies, Education, Health and Social Development, Management, the School of Engineering, and the Barber School of Arts and Sciences is eligible to become a *Member*. The main requirement for membership is active participation, which might for example include some combination of the following activities: attending meetings, serving on committees and sub-committees, engaging in an active research or education program consistent with the mandate of the OSI, acknowledging OSI support in publications, applying for grants under the auspices of the OSI, and becoming involved in community activities on behalf of the OSI.

Membership will be reviewed on an annual basis by the Director, and all members will be required to submit a one-page (maximum) annual summary of past and future activities relevant to the OSI, which will be kept on file. Anyone who is accepted as a member: (1) has full voting privileges; (2) is eligible to be nominated for and elected to OSI committees and sub-committees; (3) may avail themselves of various service provisions from the OSI as they become available; and (4) may formally identify themselves as OSI members whenever and wherever appropriate.

Members of the OSI will retain their full-time appointments in their home academic units. It is not anticipated that academic appointments will be made directly to the OSI.

Membership in the OSI will be determined initially through expressions of interest from UBCO faculty to the Director. Such expressions of interest should include an endorsement from the Head of the faculty member's academic unit as evidence of full disclosure regarding potential conflict of interest or conflict of commitment. Once the Institute is functioning, applications for new memberships will be considered on the basis of research, scholarly, and creative excellence and productivity in areas relevant to the mission of the OSI, although the criteria are subject to careful definition by the ASDSC. Application for membership should be made to the ASDSC, which then forwards a recommendation to the Director.

The OSI will also encourage the participation of *Partners*, who are identified as individuals or organizations wishing to be formally affiliated with the OSI. Partners

might include graduate and undergraduate students at UBCO; Faculties, centres, institutes and faculty at UBC Vancouver; faculty and staff at other post-secondary institutions such as Okanagan College; research or administrative personnel affiliated with provincial or federal agencies, non-governmental organizations and community groups; and any other individual who might find benefit in OSI activities. Partners will also include organizations and agencies that wish to establish a formal relationship with the OSI (through a Memorandum of Agreement) or a working affiliation with an OSI member or cluster of members. Partners will not have voting privileges (unless granted such via the ASDSC), nor will they be able to avail themselves of various service provisions except through an operational partnership with an OSI member or a formal Memorandum of Agreement approved by the Director (in consultation with the OBAC). Partners (and their representatives) will not be eligible to serve on the Operations and Budget Advisory Committee, but they will be able to do so in a non-voting capacity on the Activities and Strategic Directions Steering Committee. They may formally identify themselves as OSI partners whenever and wherever appropriate.

Funding

In its initial stages, the revenue requirements for the Okanagan Sustainability Institute will be minimal and the funding will derive from the UBCO general purpose operating budget under the auspices of the AVP A&R. Faculty members will serve on a voluntary basis and will not receive remuneration. The largest funding commitment at this stage is the appointment of an OSI Director, the process for which is currently underway and is being supported through the Irving K. Barber School of Arts and Sciences via a vacant faculty position. Additional resources will need to be committed to the creation of an office, including the office space, equipment, and supplies necessary to conduct day-to-day business, as well as secretarial support. Beyond this the OSI would have to become competitive for operating expenses, including equipment, staff support, expanded space, etc. in opportunities that arise within the UBCO system. Clearly, faculty enthusiasm for a sustainability agenda under the auspices of the OSI will be critical in making the case for such resource allocations.

The major sources of funding for the research and outreach activities of the OSI will come from sources external to the University. At this stage, it is anticipated that sources could include but not be limited to funds in the form of grants, contracts and contributions from: granting councils and agencies (SSHRC, NSERC, CIHR, Canada Council, Canada Foundation for Innovation, Canada Research Chairs and any equivalents at the provincial level), government agencies (Agriculture Canada, Fisheries and Oceans, Natural Resources, Environment Canada, Parks Canada, and provincial equivalents), non-governmental organizations (National Geographic, Sierra Club, Ducks Unlimited, Columbia Basin Trust), as well as corporations, businesses and individuals. Grants from federal granting councils contain a provision for contributions to the parent institutions in lieu of overhead charges in order to help cover indirect costs of research and scholarly activity. If the OSI is successful in acquiring such grants, it would be eligible to make a claim on the provision for indirect costs subject to AVP A&R approval. Contracts and

“fees-for-services” arrangements generally allow for the charging of indirect costs (overhead), depending on the contracting organization. Such recovered revenues for indirect costs could provide the OSI with added discretion in administration of its budget. Of course, all these arrangements are subject to the policies and procedures governing grants, contracts and contributions of the parent institution (UBC and UBCO) and the funding and client organizations.

A critical task for the Director and the ASDSC is to establish a robust business plan for the first five years of operation of the OSI as well as an implementation strategy. To maximize the likelihood of success, strong faculty input is required. The effort should begin as soon as possible after Senate approval is secured, the membership is identified, elections have taken place, and a permanent Director is recruited.

Existing Resources

In support of the OSI, UBCO can bring to bear considerable human resources and information resources. The existing faculty complement includes the breadth and depth of expertise needed to carry out the research, scholarship and creative work necessary for achieving the mission of the OSI (Appendix 2). Indeed, many faculty members have been and are currently engaged in work that is highly relevant and of a very high standard. Adequate information resources are available in print form at UBCO as well as UBC’s Vancouver libraries through the Document Delivery Service (Appendix 3). A wealth of information is available through electronic access to library holdings at UBC and other institutions (Appendix 3). Such electronic access is of critical importance for a wide range of relevant and current periodical holdings. Space to house the OSI is limited but the needs are small at present. Appendix 4 shows examples of some of the physical resources which are available to support the research of the OSI.

Future Needs

The most immediate and pressing need is for UBCO Senate approval, in principle, of the establishment of the Okanagan Sustainability Institute. Following this, the appointment of a permanent Director must be completed. Under the Director’s leadership an implementation plan should be developed and set in motion. Identification and establishment of office space and secretarial support would be included in the plan. The most immediate funding issues must be dealt with, followed by the development of a business plan for the Institute. Other matters that should form part of an implementation plan would include the identification of responsibilities for development of project proposals and funding requests, external liaisons and partnerships, membership, etc.

In the medium and long term, future needs will include the development of an operating and project funding base, the acquisition of equipment and technical support for data collection, storage, analysis and display (GIS and remote sensing, scenario modeling

etc.), the development of an information resource centre capability, and so on. With such developments will come requirements for new space, infrastructure and technical staff.

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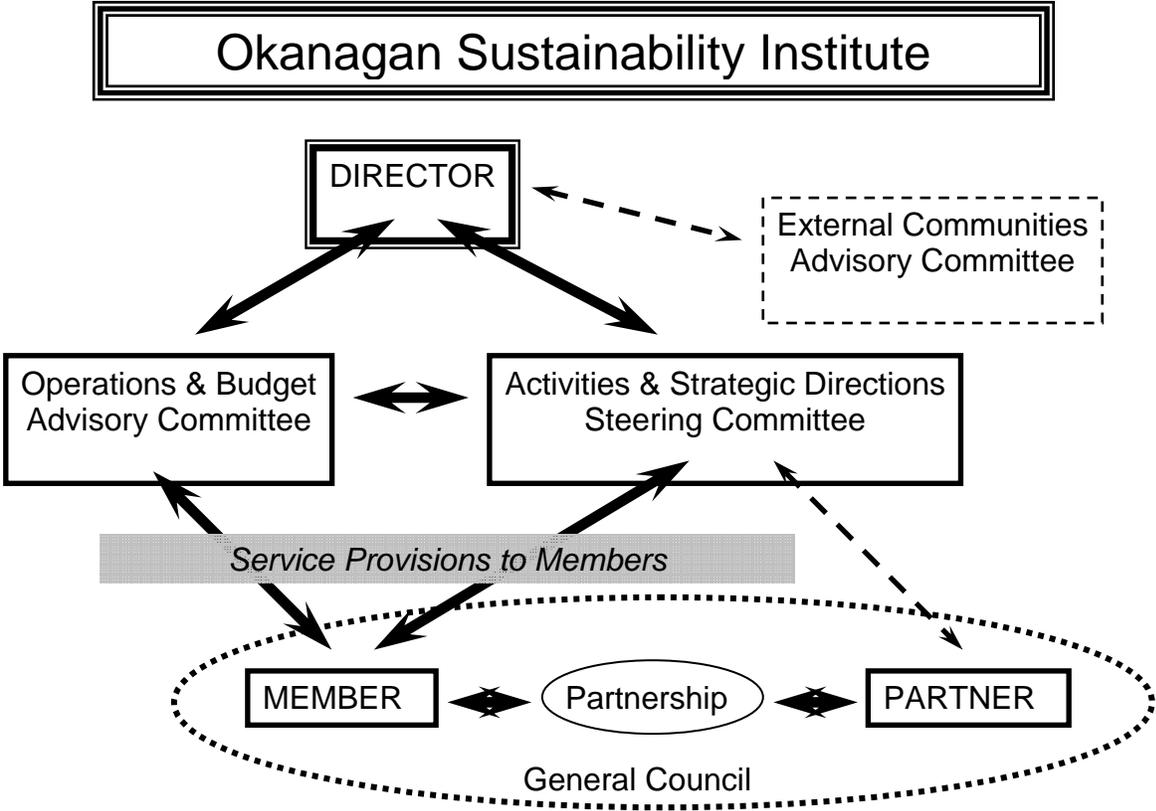
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Appendix 1: Administrative Structure of the OSI.



Appendix 2: Sample List of Potential OSI Members.

NAME	POSITION	DISCIPLINE	FACULTY / SCHOOL	EMAIL
AGUIAR, Luis	Associate Prof	Sociology	IKBSAS	luis.aguiar@ubc.ca
BAUER, Bernard	Professor	Earth and Environmental Sciences/Geography	Dean, IKBSAS	bernard.bauer@ubc.ca
BAUSCHKE, Heinz	Associate Prof.	Mathematics and Statistics	IKBSAS	heinz.bauschke@ubc.ca
BUDGEN, Claire	Associate Prof. & Director	Health and Wellness	Health and Social Development	claire.budgen@ubc.ca
CARLAW, Ken	Associate Prof.	Economics	IKBSAS	kenneth.carlaw@ubc.ca
CHEN, Yuan	Associate Prof.	Earth and Environmental Sciences	IKBSAS	yuan.chen@ubc.ca
CORBETT, Jon	Assistant Prof.	Geography	IKBSAS	jon.corbett@ubc.ca
CURTIS, Jeff	Associate Prof.	Earth and Environmental Sciences	IKBSAS	jeff.curtis@ubc.ca
DAVIDSON, Alan	Associate Prof.	Health Studies	Health and Social Development	alan.davidson@ubc.ca
DE SCALLY, Fes	Associate Prof.	Geography	IKBSAS	fes.descally@ubc.ca
DESPRES, Blane	Associate Prof.	Education	Education	blane.despres@ubc.ca
DURALL, Dan	Associate Prof.	Biology	IKBSAS	daniel.durall@ubc.ca
ESTERBY, Sylvia	Associate Prof.	Mathematics and Statistics	IKBSAS	sylvia.esterby@ubc.ca
FRENCH, Diana	Associate Prof.	Anthropology	IKBSAS	diana.french@ubc.ca
GABIAS, Paul	Associate Prof.	Psychology	IKBSAS	paul.gabias@ubc.ca
GABORA, Liane	Assistant Prof.	Psychology	IKBSAS	liane.gabora@ubc.ca
GONZALES, Tirso	Assistant Prof.	Indigenous Studies	IKBSAS	tirso.gonzales@ubc.ca
GRAUER, Lalage	Associate Prof.	English	Creative and Critical Studies	lalage.grauer@ubc.ca
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HODGES, Karen	Assistant Prof.	Biology	IKBSAS	karen.hodges@ubc.ca
HOLMES, Nancy	Associate Prof.	Creative Writing	Creative and Critical Studies	nancy.holmes@ubc.ca
JANMAAT, John	Associate Prof.	Economics	IKBSAS (arriving 2007)	john.janmaat@acadiu.ca

KAVANAGH, Trudy	Assistant Prof.	Geography	IKBSAS	trudy.kavanagh@ubc.ca
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LAWRENCE, Ramon	Associate Prof.	Computer Science	IKBSAS	ramon.lawrence@ubc.ca
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MOMER, Bernard	Associate Prof.	Geography	IKBSAS	bernard.momer@ubc.ca
MURCH, Susan	Assistant Prof.	Chemistry	IKBSAS	susan.murch@ubc.ca
NELSON, Louise	Professor	Biology	IKBSAS	louise.nelson@ubc.ca
NICHOL, Craig	Assistant Prof.	Earth and Environmental Sciences	IKBSAS	craig.nichol@ubc.ca
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WEI, Adam	Associate Prof.	Earth and Environmental Sciences	IKBSAS	adam.wei@ubc.ca
WRZESNIEWSKI, Piotr	Associate Prof.	Philosophy	IKBSAS	piotr.wrzesniewski@ubc.ca
WYLIE, Peter	Associate Prof.	Economics	IKBSAS	peter.wylie@ubc.ca

Appendix 3: Summary of Information Resources.

The holdings of the entire UBC Library system, accessible through the Document Delivery System at the UBC Okanagan campus, provide an enormous information resource on Sustainability. A keyword search of “sustainability” and “sustainable” for example results in 921 titles in the UBCO Library and 8436 titles in the libraries of the Vancouver campus. There are numerous additional holdings in more narrowly focused subject areas relevant to sustainability; the table below shows some of these areas as an illustration of the holdings available.

<i>Fields/keywords bridging the social and physical/natural sciences</i>	Total	UBC-O Library
Sustainable development	2380	241
Water resources	2060	141
Natural/environmental hazards		
Individual hazards		
Floods	32	5
Tornadoes	13	5
Hurricanes	18	3
Mercury	27	0
Environmental degradation	261	21
Green development	8	2
Environmental studies	1741	81
Environmental geography	11	3
Environmentalism	126	32
Human ecology	991	441
<i>Fields/keywords in physical/natural sciences</i>		
Resources development and management	106	18
Environmental impact analysis	172	28
Ecosystems	1756	305
Sustainable agriculture	441	41
Biological diversity	721	126

Agrodiversity	4	1
Species at risk	269	8
Endangered species + individual species	763	119
Aquatic ecology	305	30
Forest ecology	1413	153
Protected areas	579	28
Environmental sciences	749	105
Air pollution	2656	138
Green technology	44	4
Ecohydrology	6	3
Renewable energy	821	31
Conservation		
Individual resources on species		
Forest conservation	488	71
Soil conservation	694	26
Conservation biology	159	44
Energy conservation	2029	51
Nature conservation	826	121
Honeybee - conservation	1	0
Hazardous wastes	62	4
<i>Fields/keywords in the social sciences and humanities</i>		
Social impact assessment	75	6
Environmental ethics	274	61
Environmental philosophy	7	7
Environmental justice	108	32
Environmentalism	512	161
Deep ecology	65	33
Resource economics	207	10
Environmental economics	419	181
Urban and regional planning	17	3
Indigenous ecological knowledge	1	0
Resource extraction	46	9

History of the environmental movement	33	19
Environmental literature	5	1
Environmental policy	5216	663
Green movement	220	70
Anti-environmentalism (rhetoric)	3	2
Ecocriticism	21	3
Environment (art)	62	4
Earthworks (art)	31	5
Ecology in literature	78	17
Nature (aesthetics)	194	36
Nature in literature	498	68
Nature photography	60	6

E-journal access through the UBC Library system is also a vitally important resource. Coming up with a number of e-journal titles relevant to Sustainability is problematic since e-journals tend to be grouped by other very broad subject areas (e.g. Environmental Sciences). A keyword search for “sustainability” results in 13 e-journal titles with the term sustainability in their title. Countless other e-journals in a wide variety of disciplines contain articles relevant to Sustainability, as evidenced by searches using *Environmental Sciences & Pollution Management*, *Web of Science*, *EnviroNetBase*, *GeoBase*, *Humanities Index*, and *Academic Search Premier*.

Appendix 4: Examples of Existing Infrastructure, Resources and Equipment.

Examples of existing resources and equipment on the UBCO campus which would help support the mission of the Okanagan Sustainability Institute include:

- Species at Risk and Habitat Studies Centre
- Okanagan Regional Chemical Analysis Centre
- Optimization and Computational Analysis Lab
- Allied Social Research Centres
- GIS Centre for Watershed Ecosystem Sciences
- Fragment Analysis and DNA Sequencing Services Laboratory