



A Strategy to Achieve Green Sustainable Economic Development in the Okanagan and Similkameen Valleys



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Contents

Summary	v
1.0 Introduction	1
1.1 Background	1
1.2 Project Objectives	2
2.0 Project Context	5
2.1 Political and Jurisdictional Context	5
2.2 Social Context	6
2.3 Environmental Context	13
2.4 Hopes and Concerns for the Future	16
3.0 The Economy of the Project Area	17
3.1 Brief Economic History	17
3.2 Labour Force	18
3.3 Sub-Regional Distinctions	21
4.0 Green and Sustainable Development	23
4.1 Steps in Preparing the GSED Strategy	23
4.2 What is Green and Sustainable Development?	23
4.3 A Vision of Green, Sustainable Economic Development in the OSV	27
4.4 Growing Green Sustainable Enterprises	29
4.5 Criteria of Sustainable Enterprises	32
5.0 Identifying Green and Sustainable Businesses in the OSV	35
5.1 Businesses Identified by Study Participants	35
5.2 Industries Targeted by Regional Strategies	36
5.3 Linkages Among Sustainable Businesses	37
5.4 What is the Purpose of Economic Development?	41
6.0 The OSV's Strengths and Weaknesses	42
6.1 The Region's Economic Development Strengths	42
6.2 The Region's Economic Development Weaknesses	43
6.3 Challenges to Achieving Green Economic Development	46

Table of Contents continued

7.0	The Elements of a Strategy for Green Sustainable Economic Development	52
7.1	Assumptions Behind the Strategy	52
7.2	Strategic Objectives	53
7.3	Monitoring Progress Toward Sustainable Economic Development	56
8.0	Alternatives for Delivering the GSED Strategy	57
8.1	Perspectives on Program Delivery Needs	57
8.2	Description of Program Delivery Alternatives	58
8.3	Criteria for Evaluating Alternatives	63
8.3.1	Required General Characteristics of GSED Delivery Approaches.....	63
8.3.2	Detailed Criteria for Evaluating GSED Delivery	64
8.3.3	Reflecting the Diversity of OSV Communities	65
8.3.4	Workshop Review of GSED Delivery Approaches.....	66
8.3.5	The Steering Committee: Recommended Delivery Approach	71
8.4	GSED Recommendations	73
9.0	Next Steps	75

List of Tables

Table 1	Rates of population growth have declined since the 1990s	6
Table 2	Dramatic growth of the OSV and provincial populations 1976 – 2026	7
Table 3	The OSV population is aging dramatically	8
Table 4	All OSV age cohorts grow, but older cohorts grow fastest	9
Table 5	Sources of income – 1996 (BC Stats)	11
Table 6	1996 Percentage of self employment and non self-employed full time workers in the labour force	11
Table 7	Unemployment in OSV exceeds provincial and national rates	12
Table 8	Employment insurance beneficiaries in the OSV exceed provincial levels	12
Table 9	The rate of employment insurance recipients is lowest in the northern OSV and highest in the south	13
Table 10	1995 Average employment incomes	13
Table 11	Most people in the OSV work in the service sector	19
Table 12	Labour force occupational structure – 1996	19
Table 13	Education levels in the OSV leave room for improvement	20
Table 14	Kelowna’s education levels compare well with other communities	20
Table 15	Stages of corporate response to environmental issues	31

Table 16	Regional strategies and surveys identified a variety of potentially sustainable industries	36
Table 17	Potential synergies among sustainable business opportunities	38
Table 18	Potential target sustainable businesses	40
Table 19	Economic development strengths of OSV identified in economic strategies and the GSED survey	43
Table 20	Economic development weaknesses of the OSV	44
Table 21	Economic development service coverage of the OSV	51
Table 22	Major elements of the GSED program	54

List of Figures

Figure 1	Green Sustainable Economic Development project study area	4
Figure 2	Graphic depiction of growth and aging of OSV population, 1986-2031	7
Figure 3	Percentage of population per age group	10
Figure 4	Old and new views of sustainability	25
Figure 5	Evolution of the British Columbia economy	26
Figure 6	A vision of a green, sustainable future in the OSV	28
Figure 7	Schematic linkages among sectors in grape and wine production	37
Figure 8	Approach 1: Status quo	59
Figure 9	Approach 2: Small, OSV-wide economic development agency	60
Figure 10	Approach 3: Status quo with sustainability	61
Figure 11	Approach 4: Regional economic development agencies	62
Figure 12	Question 1: All towns, cities and businesses throughout the OSV should have access to professionally provided “Four G” services	67
Figure 13	Question 2: Economic development program providers throughout the OSV should work together to eliminate gaps and overlaps in services	67
Figure 14	Question 3: Economic development activities in the OSV would be more effective if local areas cooperate rather than compete with each other for businesses and jobs	68
Figure 15	Question 4: Local control over economic development services is more important than having full coverage in the OSV	68
Figure 16	Question 5A: Economic development services should be organized on an OSV-wide basis	69
Figure 17	Question 5B: Economic development services should be organized on a regional district basis	69
Figure 18	Question 5C: Economic development services should be organized on a municipal basis.....	70

Figure 19	Question 5D: Economic development services should be organized on an other basis	70
Figure 20	Steering Committee-recommended interim GSED delivery structure	72

Appendices

Appendix A	Terms and Concepts Related to Sustainability	77
Appendix B	Some Initiatives Related to Sustainability in the OSV	81

References	82
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Summary

The Central Okanagan Regional District, North Okanagan Regional District, Regional District of Okanagan Similkameen, and the Government of Canada have begun work on a Green Sustainable Economic Development (GSED) project. The purpose of the GSED project is to:

Identify ways that the three regional districts can collaborate to achieve development that protects the environment and conserves land, air, and water, and protects livability.

This report examines economic, demographic, and environmental conditions in the Okanagan and Similkameen Valleys (the OSV), and outlines a strategy for achieving more sustainable, environmentally sound economic development.

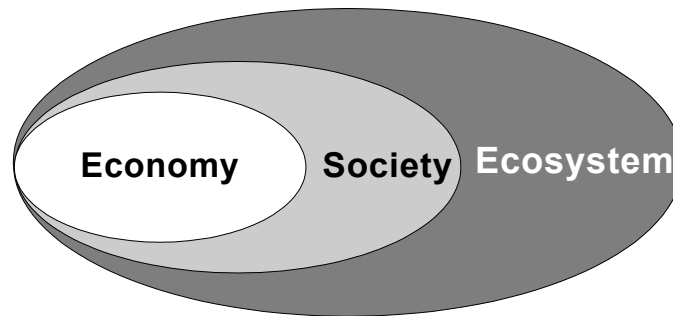
Through examination of reports and data, and the conduct of a survey of interested parties, the report found that:

- residents value the OSV for its environmental quality and lifestyle opportunities, and recognize its limited economic prospects,
- the present population of about 364,000 is expected to approach 500,000 in the next 30 years at the present growth rate of about 2 percent per year,
- the median age of the population is advancing, and the aging population will become a dominant consideration in economic development planning and the provision of services in coming decades,
- income from pensions forms a much greater proportion of income in the OSV than in the rest of British Columbia,
- employment income in the OSV is nearly 15 percent lower than in the rest of British Columbia, and the unemployment rate is higher,
- the greatest percentage of the OSV's labour force works in retail trade, manufacturing, health and social services, accommodation, and construction,
- education levels among the OSV population are similar to those elsewhere in British Columbia and in other "high tech" centres in North America, and
- major environmental issues are associated with economic activity and land development, and include water supply and quality, air quality, urban sprawl, and loss of biodiversity.

Sustainability deals with balancing environmental, social, and economic activities. In the case of the OSV, sustainability means seeking full and meaningful employment in occupations that protect the environment and enhance the region's communities.

The GSED Vision for the OSV is:

Vision of green, sustainable economic development



A quality environment *IS* our economic future

The GSED report contains criteria for determining the sustainability of enterprises in the OSV. A variety of primary, secondary (manufacturing), and service industries, plus not-for-profit organizations (research and educational institutes) are examined and a list of target enterprises presented.

The greatest obstacles to achieving green, sustainable economic development are:

- isolation of the OSV from major markets,
- a fragile natural environment requiring protection and restoration,
- competition rather than cooperation among jurisdictions,
- infrastructure limits (roads, water supply, waste management),
- lack of a “critical mass” of groups of similar businesses,
- poor subregions and marginal businesses that lack investment capacity,
- sprawl that threatens the environment, local servicing budgets, and quality of life,
- excessive bureaucracy and lack of “business friendliness,”
- ignorance of sustainability concepts,
- lack of creativity and foresight in developing effective solutions, and
- gaps and overlaps in the work of the large number of organizations encouraging economic development in the region.

To attain the goals of green, sustainable economic development, the following “Four G” elements have been identified:

Growing—Encouraging success and growth of green enterprises already located in the OSV,

Greening—Aiding OSV enterprises to understand and apply sustainability concepts in their decisions and operations,

Guarding—Retaining successful green businesses in the OSV, and

Getting—Seeking the relocation of green businesses from other regions. “Getting” should be conducted only when efforts to create and retain “home grown” green businesses are complete.

Associated with these GSED elements, the study outlines indicators to monitor progress toward sustainable economic development.

A review of the draft GSED Strategy by 150 business, government, First Nations, and nongovernmental organization members at a workshop held on January 22, 2003, produced the following results:

- The principles of sustainability are widely accepted.
- All economic development decisions in the OSV should be consistent with sustainability.
- Residents, businesses, governments, and students require better education with regard to sustainability and green economics.
- Economic development services should be available in all parts of the OSV.
- The special challenges facing rural communities need to be considered in economic development planning.
- Consistent OSV-wide delivery of GSED services is preferred, as long as local interests are reflected and bureaucracy is minimized.

The Steering Committee developed an organizational framework for delivering Greening, Growing, and Guarding services throughout the OSV. This approach should be seen as an interim step that in the future will also include Getting in a comprehensive, collaborative regional delivery system. A specific study of implementation steps should be conducted soon to ensure that GSED services are delivered in an effective, efficient manner, and that the momentum built during this strategic planning phase is not lost.

A Strategy to Achieve Green Sustainable Economic Development in the Okanagan-Similkameen Region

*The question of the century is:
How best can we shift to a culture of permanence,
both for ourselves and for the biosphere that contains us?*

Edward O. Wilson, *The Future of Life*, 2002

1.0 Introduction

1.1 Background

The Okanagan and Similkameen valleys are among Canada's most attractive and diverse regions. Ecologically, the Okanagan and Similkameen region's richness is reflected in its large number of rare and endangered species, and in its variety of aquatic and terrestrial habitat types. Socially and economically, the region is equally varied, supporting urban and rural lifestyles, and industries that include agriculture, forestry, manufacturing, tourism, and education. The region was a home for aboriginal people for thousands of years, and a destination for Euro-Canadian settlers since the 1800s.

Today, 317,000 people live in the region, which features dozens of local, regional, and provincial jurisdictions. This large number of jurisdictions may be responsive to local concerns, but taking coordinated action on topics of regional interest has proven to be difficult. The Okanagan and Similkameen region faces substantial challenges in protecting values that make the region special while building a bright future for present and future residents.

In 1993, the *Charting a Course for the Okanagan* project identified a variety of economic development, social, environmental, and infrastructure issues affecting the North and Central Okanagan and Okanagan-Similkameen Regional Districts. Participants in a "Council of Councils" workshop (primarily local elected representatives) agreed that a coordinated approach was necessary to successfully managing these regional issues.

The Okanagan-Similkameen region has achieved some success in taking a basin-wide approach to managing issues; the Okanagan Basin Water Board is an example. The North Okanagan

Regional District, Central Okanagan Regional District, and Okanagan-Similkameen Regional District recognize that much more could be achieved in response to the serious challenges facing the Okanagan and Similkameen Valleys if agreement could be reached on collaborative approaches to planning and action. In the realm of economic development, these three regional districts, with support of Western Economic Diversification Canada, prepared and issued a request for proposals to prepare a Green Sustainable Economic Development strategy. This report has been prepared in support of the strategy.

1.2 Project Objectives

The Green Sustainable Economic Development (GSED) Project is intended to:

Identify ways that the three regional districts can collaborate to achieve development that protects the environment and conserves land, air, and water, and protects livability.

Sen. Ross Fitzpatrick

By more effectively coordinating economic development efforts, substantial benefits can accrue to all jurisdictions in the region. Environmentally sound and socially responsible economic development can improve the quality of life for residents while protecting the natural and social values that attract people—and businesses—to the region.

Funding and structure. Funding for the strategic planning project was provided by Western Economic Diversification Canada and from the Central Okanagan Regional District, Okanagan-Similkameen Regional District, and North Okanagan Regional District. A Steering Committee of government and Community Futures Development Corporation representatives guided the technical elements of the project. Westland Resource Group was retained to analyze conditions in the region and to prepare project reports. Businesses, industry associations, educational institutions, and representatives of all levels of government were contacted as part of the study. The project was conducted between June, 2002 and March, 2003.

Study area. The GSED Project covers the North Okanagan Regional District, Central Okanagan Regional District, and Okanagan-Similkameen Regional District. Throughout this study, the study area will be referred to as the Okanagan and Similkameen Valleys, or OSV. All land, water, and communities in the OSV are included in the study (Figure 1).

GSED products. The GSED strategy will result in the following deliverables:

- A description of the conditions in the region that affect sustainability (population, economic structure, environmental conditions and issues).
- A summary of responses to interviews and surveys

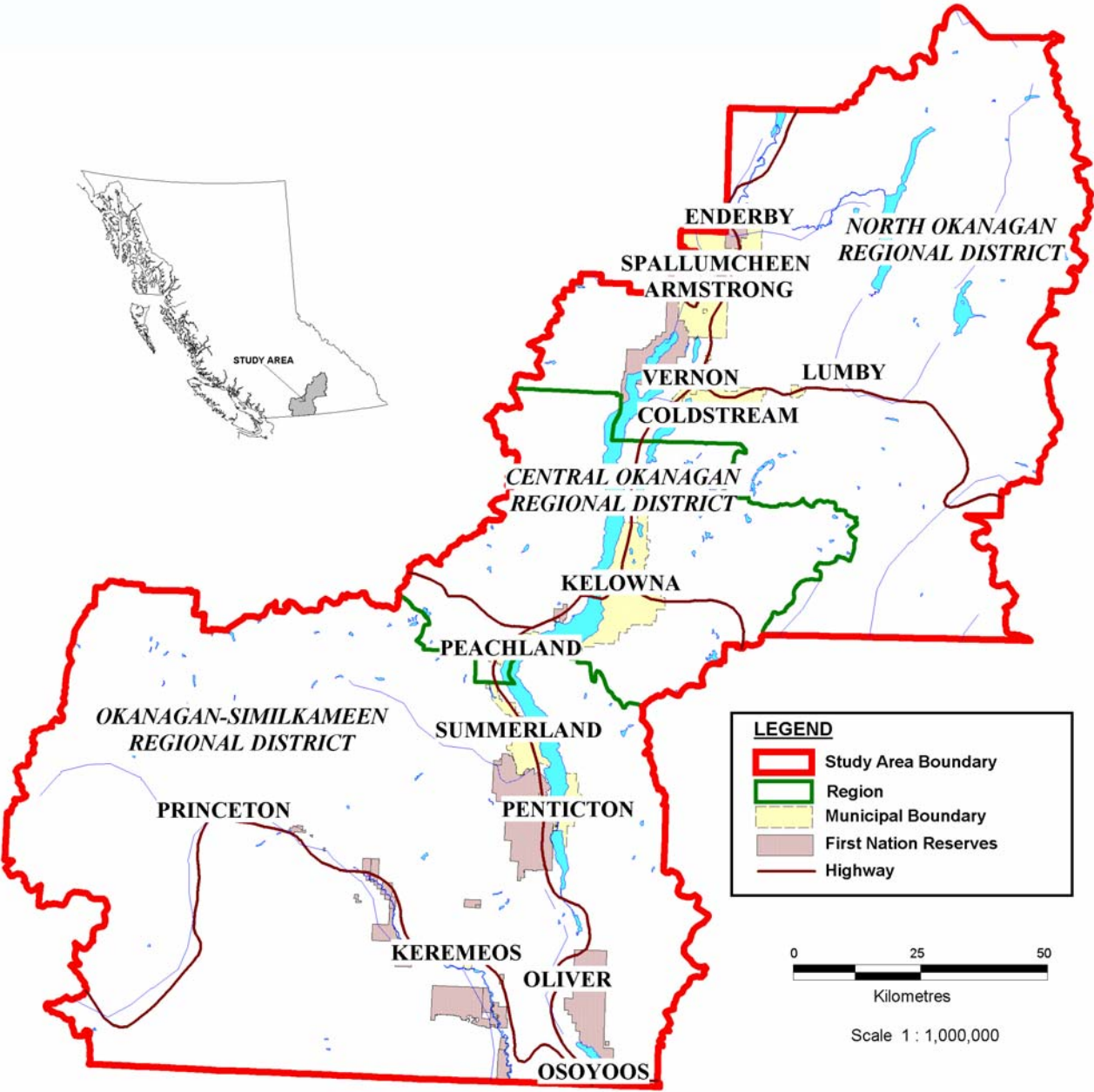
[The OSV is] a great place to live if you can make a living.

Survey respondent

conducted as part of the GSED.

- A vision statement describing a desirable, sustainable, economic future for the region.
- A strategy for attaining sustainable economic development.
- An organizational structure and an action plan for implementing the study's recommendations.

Figure 1
Green Sustainable Economic Development project study area



2.0 Project Context

2.1 Political and Jurisdictional Context

The GSED study area is made up of three regional districts, Okanagan-Similkameen, North Okanagan, and Central Okanagan, covering 2,195,426 ha (21,954 km²). This large area (roughly four times the size of Prince Edward Island) constitutes about 2.4 percent of the area of British Columbia. Each regional district is governed by a Board of Directors, elected to represent electoral areas and appointed by member municipalities. The Okanagan-Similkameen Regional District has 18 board members, the North Okanagan Regional District has 13 board members, and the Central Okanagan Regional District has 10 board members.

Regional districts in British Columbia, which operate under the laws of the local Government Act, have jurisdiction in a variety of topic areas, some of which are specified in the Act and others that occur in response to local needs:

- Land use planning, including preparation of Official Community Plans for rural areas
- and, as requested, in smaller municipalities.
- Regional Growth Management planning.
- Economic development planning.
- Resource management (including water and watershed management and air quality).
- Building inspection and building bylaw enforcement.
- Public works and services including water, sewage, garbage, recycling, pest control.
- public transit, street lighting.
- Regional parks and recreation services.
- Animal and weed control (important functions in the Okanagan).

First Nations reserves are not under the jurisdiction of regional districts, but have their own governance system. The Okanagan Nation Alliance provides higher level governance functions, including economic development. There are 34 First Nations reserves in the OSV, covering approximately 62,831 ha, or 6.4 percent of the region's area. The First Nations provide a variety of land use, infrastructure, and social services in their communities.

Regional District Boards are a venue for communication and the coordination of activities in municipalities and rural areas. Due to the unique influence they have on regional cooperation and planning, regional districts are well suited for implementing the GSED project.

2.2 Social Context

Demographics. In 2001 the population of the OSV totaled 317,397, approximately 7.7 percent of British Columbia’s population. The rate of population growth in the study area is generally higher than that of the province (Table 1). Most growth in the region is from in-migration rather than natural increase. This influx of new residents is partly explained by the popularity of the area as a retirement location; the median age is significantly higher than the provincial median.

Table 1
Rates of population growth have declined since the 1990s

Year(s)	Rates of population growth from previous year, in percent				
	OSV	Okanagan-Similkameen	Central Okanagan	North Okanagan	British Columbia
1993	4.6	4.1	5.6	4.0	2.9
1994	4.0	4.0	3.7	4.4	3.1
1995	2.3	1.7	3.2	2.0	2.8
1996	2.1	0.9	2.9	2.5	2.6
1997	2.3	1.6	3.0	2.3	2.0
1998	0.9	-0.01	2.2	0.4	1.0
1999	0.6	0.5	0.9	0.4	0.8
2000	1.3	0.1	2.5	1.4	0.9
2001	1.3	0.3	2.4	1.2	0.8
2002	2.1	1.4	2.8	2.0	1.2

Source: BC STATS

Natural increase (births minus deaths) has been declining as a component of population growth in the area. For example, in the 1997 there were more deaths than births in the South Okanagan, Penticton, Keremeos, and Princeton Local Health Areas. The Central Okanagan Regional District has the highest proportion of population growth from natural increase in the OSV. Between 1991 and 1998 natural increase contributed an average of 26 percent to the population increase in the region, compared to 74 percent for in-migration.

The trend of population increase is expected to continue in coming decades. The historic and projected populations for the OSV and British Columbia are shown in Table 2. During the late 1980s and early 1990s the OSV experienced considerable growth; there was a 40 percent increase in population between 1986 and 1996. Since then the level of increase has slowed, but is projected to remain steady over the next 20 years.

Table 2
Dramatic growth of the OSV and provincial populations 1976 – 2026

Year	Okanagan-Similkameen	Central Okanagan	North Okanagan	OSV		British Columbia	
				Population	% Change	Population	% Change
1976	52,674	72,925	47,993	173,592		2,533,793	
1986	61,010	92,776	56,906	210,692	21.4	3,004,074	18.6
1996	78,750	141,912	74,344	295,006	40.0	3,882,043	29.2
2006	86,932	179,799	85,494	352,225	19.4	4,383,004	12.9
2016	98,212	218,856	103,016	420,084	19.3	5,051,717	15.3
2026	109,066	256,937	119,018	485,021	15.5	5,672,438	12.3

Source: BC STATS P.E.O.P.L.E model

Figure 2
Graphic depiction of growth and aging of OSV population, 1986-2031

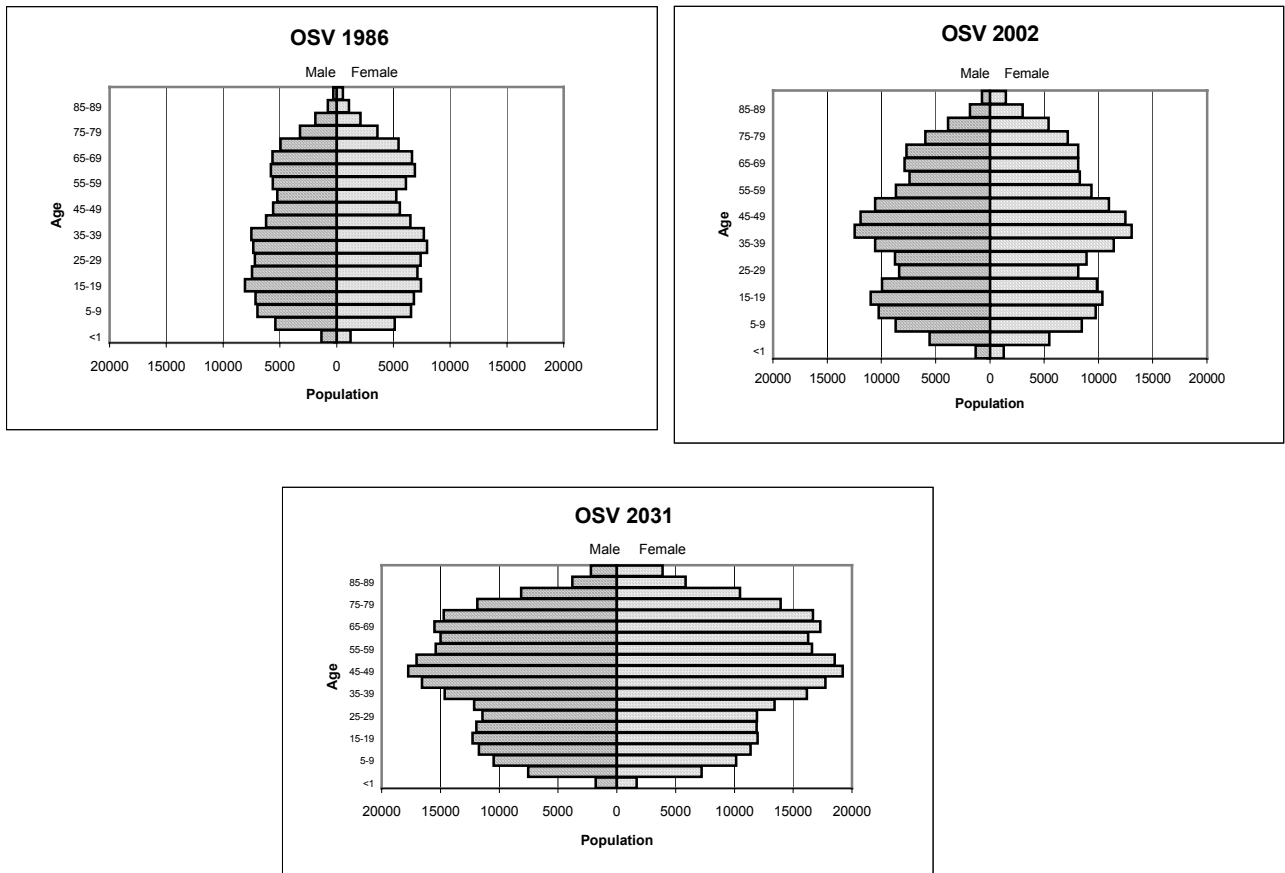


Figure 2 shows the age-sex structure of historic population and projected change in the OSV between 1986 and 2031. In 1986 the dominant age groups were less than 40 years old, and the population pyramid is shaped like a bell. By 2002 the shape of the graph had changed and a much larger proportion of the population clustered in the 35–50 cohort. In 2031, the projected

shape of the graph is likely to be an inverted bell with a large portion of people in the 50 - 70 age range, a reversal of the 1986 pattern. The graphs also show a larger number of women than men in the OSV, especially over 50 years of age.

The aging population can be clearly seen when examining the dramatic shift in the median age of OSV residents. By 2031 the median age of the OSV is projected to rise to 48, an average of 11 years older than the 1986 median of 37 (Table 3). The RDOS, with an estimated increase in median age of 12 years, has the largest projected increase in the OSV; in 2031 the median age in the RDOS will be 50 years old. Table 3 also demonstrates the projected changes in the structure of the OSV population. Between 1986 and 2031 the percentage of the population between birth and age 39 will decrease by 16 percent, while the percentage of the population aged 40 and above will increase by 16 percent.

Table 3
The OSV population is aging dramatically

Year	Median age of residents (years) in each jurisdiction			
	OSV	NORD	CORD	RDOS
1986	36.6	38.0	36.5	38.2
2002	41.8	40.9	40.6	45.5
2031	47.7	46.7	46.7	50.3
1986 – 2031 change	+ 11	+ 9	+ 10	+ 12

This increasingly older population will affect the region’s economy in several ways. As the population ages, the dependency ratio¹ increases and the proportion of earners decreases. With this aging of the population, a growing proportion of adults in the region may not work, or work part time to supplement pension incomes. While retired people generally bring money into the region in the form of pensions and investments, they also place higher demands on certain services, especially medical care. Supporting other services, such as schools, may become more difficult in an economy driven by an older population.

The requirements of an aging population will also likely result in a shift in occupational structure toward the service sector. Demand will grow for staff to provide health care to the elderly (nurses, physiotherapists, home care attendants) and for persons providing home services (e.g. gardening, house retrofits for wheelchair access, handy-man services).

¹ Dependency ratio = the ratio of the combined child population (aged 0 to 14) and elderly population (aged 65 and over) to the working age population (aged 15 to 64).

An aging population will also compete for use of recreational resources (e.g. public swimming pools and fitness centres) and will demand public transportation services with increased frequency and more extensive and personalized routes, especially to health and recreation centres. These demands will require expanded municipal services and employment.

The job market will in turn be changed by growth in older cohorts, especially retirees, who will seek part-time employment in the service sector and will compete with other part-time job seekers (for example, high school and college students).

An older population may be less receptive to certain economic development initiatives because they may perceive such development as a threat to their retirement lifestyle. Much of the older population in the OSV relocated there upon retirement, and most pension funding comes from outside the region. Therefore, economic problems in the region may not directly affect retirees' incomes and they may not see the benefit of supporting economic development in the region.

Table 4
All OSV age cohorts grow, but older cohorts grow fastest

Year	Age Group	Population	% of Total Population
1986	0-19	56,093	27
	20-39	59,648	28
	40-64	58,786	28
	65+	36,165	17
2002	0-19	72,170	23
	20-39	75,996	24
	40-64	105,254	33
	65+	61,357	20
2018	0-19	76,426	19
	20-39	99,445	24
	40-64	143,737	35
	65+	87,350	22
2031	0-19	86,187	18
	20-39	103,546	21
	40-64	170,146	35
	65+	124,332	26

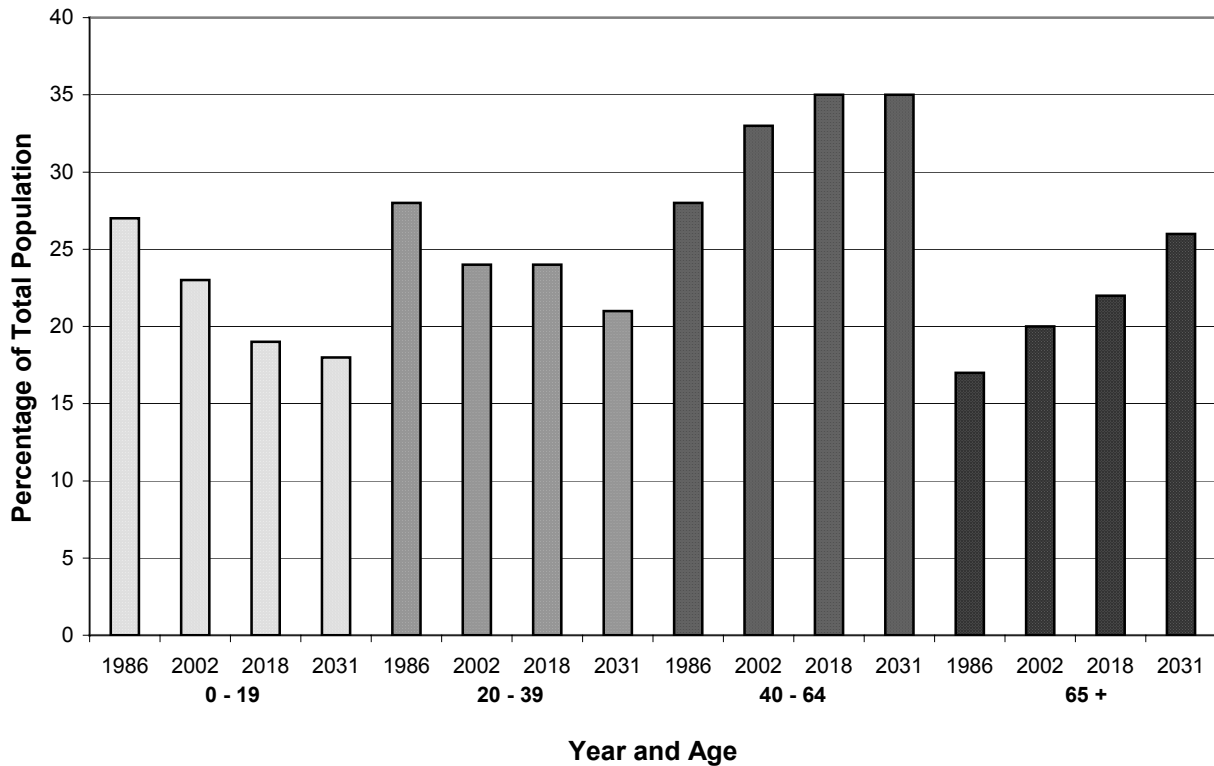
On the other hand, a large population segment of retired people results in a fairly stable economic base since fluctuations in industry activity, and especially natural resource based industry, have little impact on their incomes. Seniors' expenditures on retail goods and services,

while often modest, are usually maintained over time. Retirees are also a valuable source of volunteers because they generally have more spare time than the rest of the population. If properly organized, volunteers can provide valuable services to the community.

There is some overlap between the OSV’s role as a vacation destination and as a retirement destination. Many of the recreational activities that are popular for retirees, such as golf, also draw tourists to the area. Vacationers who have a positive experience in the OSV may decide to return to the area for retirement.

Figure 3 shows that in coming decades the proportion of the population in younger cohorts (less than 40 years) will decline. The 20-39 year old group forms households, develops careers, and spends substantial portions of their incomes on education, housing, and child rearing. The “middle aged” cohort, 40-64 years, will plateau during the next 30 years. This high-earning group stabilizes the economy, leads businesses and institutions, and makes important decisions about the future of the region. The seniors population grows at a rate that matches the decline in the 0-19 age group. Seniors vote in elections and can be expected to exercise growing influence over policy. Despite this shift in the demographic makeup in the OSV’s residents, it is important to remember that the numbers of people in all groups—even the young—are forecast to grow substantially in coming years.

Figure 3
Percentage of population per age group



Income. Incomes in the OSV tend to be lower than provincial averages. The lower wages can be attributed to seasonal employment, a shift to service sector jobs, and the high number of retirees (more inclined to take part time work to supplement pension incomes). Table 5 shows the main sources of income in the OSV. Because of the area's large retirement base, the percentage of income from pensions is much higher than the provincial average - up to 11 percent higher in the Okanagan-Similkameen Regional District. There is also a higher rate of self-employment in the study area (Table 6), which could also contribute to the lower income levels.

Table 5
Sources of income - 1996 (BC Stats)

Area	Employment (%)	Pension (%)	Investment (%)	Self-Employed (%)	Other (%)
OSV	58	18	10	5	10
Okanagan-Similkameen	52	22	11	4	11
Central Okanagan	60	16	10	5	9
North Okanagan	61	15	8	5	11
British Columbia	66	11	9	5	8

Table 6
1996 Percentage of self employment and non-self-employed full time workers in the labour force

	OSV	Central Okanagan	North Okanagan	Okanagan-Similkameen	British Columbia
% Self-employed	17.7	16.4	17.1	19.7	14.5
% Full Time All Year (not self employed)	43.3	44.5	43.2	42.4	47.8

Unemployment. The OSV displays a higher level of unemployment than the rest of the province of British Columbia. Table 7 shows that the OSV's rates of unemployment in the 15 and over age group exceed provincial rates in every year since 1996, and only once does the OSV rate fall below the national rate.

Table 7
Unemployment in OSV exceeds provincial and national rates

OSV Unemployment Rates, Age 15 and Over						
Jurisdiction	1996	1997	1998	1999	2000	2001
OSV	11.2	8.9	8.5	9.9	9.7	9.7
British Columbia	8.7	8.4	8.8	8.3	7.2	7.7
Canada	9.6	9.1	8.3	7.6	6.8	7.2

Throughout 2000 and 2001, the proportion of OSV residents receiving employment insurance averaged 4.2 percent of the working age population, 40 percent higher than the 3.0 percent rate for the province (Table 8).

Table 8
Employment insurance beneficiaries in the OSV exceed provincial levels

Total unemployment insurance beneficiaries as a percentage of population aged 19-64					
	RDOS	CORD	NORD	OSV	BC
Sep. 2000	2.6	2.8	2.6	2.7	2.2
Dec. 2000	5.4	4.4	4.0	4.6	3.1
Mar. 2001	6.1	5.1	4.5	5.2	3.3
Jun. 2001	3.7	3.8	3.9	3.8	2.8
Sep. 2001	2.9	3.6	3.4	3.3	2.7
Average:	4.5	4.2	3.9	4.2	3.0

Employment insurance recipients were least common in the northern part of the OSV during this period, while the south had the highest proportion of recipients.

The proportion of the working age population receiving employment insurance is substantially higher in the OSV than the rest of British Columbia. Table 9 shows that in March 2002, 5.4 percent of OSV residents received employment insurance, 25 percent more than for British Columbia as a whole. The rate among 25-54 year olds was 30 percent higher than the provincial rate. Employment insurance recipients are much more common in the southern part of the OSV than in the central or northern areas.

Table 9
The rate of employment insurance recipients is lowest in the northern OSV and highest in the south

EI Beneficiaries as a percentage of the total population, March 2002				
	19-24	25-54	55-64	Total 19-64
North Okanagan	5.1	5.8	2.9	5.2
Central Okanagan	5.4	5.6	3.2	5.2
Okanagan Similkameen	5.7	6.8	3.1	5.9
OSV	5.4	6.1	3.1	5.4
British Columbia	3.9	4.7	2.7	4.3

As shown in Table 10, income levels for the study area are somewhat lower than the provincial average, though this does not necessarily mean that quality of life is lower. As discussed previously, lower income is related to the high number of retirees and part time employees combined with higher than provincial rates of self-employment and seasonal employment.

Table 10
1995 Average employment incomes

	OSV	Central Okanagan	North Okanagan	Okanagan-Similkameen	British Columbia
Income	\$23,761	\$24,724	\$23,910	\$22,649	\$27,903

2.3 Environmental Context

People have long been attracted to the environmental amenities of the OSV. The warm climate, inviting lakes, and bountiful recreation opportunities attract tourists and permanent residents. Respondents to the GSED survey emphasized the importance of lifestyle opportunities and other quality of life considerations in the things they valued about living in the OSV. Many factors contribute to quality of life, including personal health, household income, environmental conditions, and available services. Services include water, sewers, roads, energy, schools, waste disposal, and medical facilities.

As the population in OSV has grown, concern for the state of the environment has increased. The spread of urban and industrial activities and the increasing use of motor vehicles have contributed to water and air quality degradation. In addition, urban expansion to accommodate growing populations encroaches on wildlife habitat and alters the natural environment.

The state of the environment is an indicator of quality of life. The environment is linked to social and economic welfare; combined, these factors are the pillars of sustainability. Draining and straightening of rivers caused massive environmental changes when the watercourses of the

OSV were altered in the 1920s, 1950s and 1960s to control flooding and to drain land for agriculture. Although the altered hydrology benefited agriculture and made settlement easier, a high price was paid in lost wildlife habitat. A similar dilemma is faced now with pressures to develop land and to use lakes as a water source to serve growing populations.



Some the OSV's greatest attractions: beaches, clean water, landscape, and sunshine.

Water, which has always been a major issue in the OSV, is expected to continue to grow as a major global issue in this century. Of the total precipitation in the Okanagan Basin of 554 mm/year, only about 62 mm or 11% flows through the basin; the rest is lost to evapotranspiration, percolation into deep aquifers, or human use (Huby 2002). Chemical run-off from agriculture, combined with sewage related effluents and storm drains have resulted in high levels of phosphorus and other chemicals entering water bodies in the region. With limited water available for human use, and demand growing with population and economic activity, water management is a major, and contentious, issue in the OSV.

Among the water topics related to sustainable economic development in the OSV are:

- appropriate pricing,
- use of water for golf courses, domestic, and agricultural purposes,
- agriculture-urban conflicts over water supplies and prices,
- water quality (lake eutrophication, metals and nutrients in urban and agricultural runoff),
- global climate change, and
- human use versus water for survival of fish.

The issue of water and water management is of paramount importance and should come above all others.

Survey respondent

The arid conditions in the Okanagan or Similkameen render any wasteful or polluting use of water economically and environmentally damaging, so such practices should be considered unsustainable.

Both residents and planners cite water supply and quality as a top priority in the OSV, and most areas have identified the need to address water supply issues regionally. In 1974 the Okanagan Basin study recommended one agency or board be given the responsibility of managing the water supply in the Okanagan. Almost thirty years later little progress has been made toward this goal, although some communities are attempting to coordinate distribution authorities.

Orchards, vineyards, and other types of agriculture are heavy water users. Irrigation consumes more water than all other uses combined. A growing population combined with already taxed water systems has water managers worried.

Protecting the environment is seen as a financial burden rather than a benefit to business sustainability.

Survey respondent

Drawing further upon lake water is one solution, but has serious consequences. Fish, wildlife, vegetation depend on the water levels of lakes and streams, and recreation and tourism activities also require adequate water supply and quality. It is important that agencies consider the linkages between human consumption of water and the environment before making decisions.

The quality of drinking water has been a concern for decades, especially in Okanagan Lake. In the 1980s and 1990s municipalities eliminated much of the phosphorus in effluent discharged into lakes through upgrades to sewage disposal and wastewater treatment centres. Still, growing populations will cause the total amount of effluent to rise, with unknown effects to water quality. In addition, malfunctioning and poorly designed septic tanks contribute further to pollution levels.

Storm drains and agricultural runoff are two sources of pollutants and phosphorus that continue to be of concern in the OSV. Storm drains carry pollutants such as oil, antifreeze, cleaners, pesticides, paint and paint thinners from urban centres into the OSV's water bodies. Runoff from agricultural and forestry activities add considerable amounts of phosphorus to lakes, thus causing excessive algae growth and, in turn, reduced oxygen for fish and an unpleasant smell and taste in water.

Motor vehicles are the dominant form of transportation in the study area. The region is connected by a road system that emphasizes north-south mobility. In recent years congestion, delays, and air quality issues have grown in the area. Kelowna has had the most noticeable problems. A dispersed pattern of low-density residential and commercial land uses is the primary cause of traffic congestion. The high numbers of visitors driving in the Okanagan in the summer contribute to already congested conditions. Providing high levels of service to these visitors is important because of the revenue they bring to the region. For these reasons, transportation planning is a regional issue that will have a profound effect on quality of life and future economic conditions in the OSV.

There are several approaches to alleviating these transportation issues, including encouraging the use of transit, bicycling, car-pooling, and walking. The most important and effective method of reducing car-dependency and traffic is to create compact, mixed use, pedestrian and bicycle friendly land use development patterns.

Of particular relevance to the GSED project, environmental and economic issues have come together:

“We have in the past been concerned about the impacts of economic growth upon the environment. We are now forced to concern ourselves with the impacts of ecological stress—degradation of soils, water regimes, atmosphere, and forests—upon our economic prospects. We have in the more recent past been forced to face up to a sharp increase in economic interdependence among nations. We are now forced to accustom ourselves to an accelerating ecological interdependence among nations. Ecology and economy are becoming ever more interwoven....”

World Commission on Environment and Development. *Our Common Future* 1987: 5

2.4 Hopes and Concerns for the Future

It is evident from the GSED survey that many people feel passionately about defending the quality of life and the environment of the OSV. Population growth, economic development, governance, pollution, land use issues, and the protecting lifestyle opportunities of the region are the main concerns for the future sustainability of the OSV. Traffic congestion and polluted waters are not anyone’s vision for the Okanagan, and most respondents desired the preservation and restoration of the environment for future generations. The remainder of the report describes what a sustainable economy in the OSV might entail, and outlines actions that can be taken to achieve that brighter future.

[We need to develop] this philosophy (approach) at a valley, community and "individual" basis. For individuals this means a switch in culture from consuming to conserving; and training and educating a workforce that will be employed by the businesses and services we attract.

Workshop Participant

3.0 The Economy of the Project Area

3.1 Brief Economic History

The economy of the OSV was historically based on primary industries: agriculture, forestry, and mining. More recently the economy has grown to include value-added secondary industries such as the manufacture of log houses and food and beverage products. In addition to promoting the long established climate- and scenery-dependant tourism industry, Okanagan governments have sought to diversify the economy by attracting high-tech industries such as communications, electronics, and information-based companies. The Okanagan economy relies more on transfer payments (mainly pensions) and primary production (mainly agriculture) than does the British Columbia provincial economy.



The many faces of agriculture in the OSV. From fruits and grapes to forage and livestock, the region is second only to the Fraser Valley in value of agricultural production in British Columbia.

Linkages among economy, environment, and society. Despite recent growth in advanced technology industries, the Okanagan economy still relies heavily on natural resources. Tourism, a major source of revenue in the Okanagan, relies on attractive, clean, and accessible environment. Ski hills, lakes, rivers, orchards, vineyards, and distinctive landscapes draw visitors to the region. Forestry and mining still play a role in the economy, but agriculture, primarily vineyards and orchards, is becoming the dominant resource-based industry in the Okanagan.

Conflicts sometimes arise between economic activities in the study area. Whereas primary and secondary industries boost the regional economy, the resulting resource consumption, land conversion, and pollution have a direct impact on other important sectors of the economy, particularly tourism. Under the prevailing land use model, industrial and residential pressures to develop agricultural land remain high. The Okanagan is second only to the Fraser Valley in agricultural production in British Columbia, and

This environment actually provides economic development opportunities rather than present obstacles.

Workshop Participant

inappropriate urban development and resource use will threaten this important sector of the regional and provincial economy.

Another aspect of the Okanagan economy that makes it unique is the large proportion of retired residents. As a result, a higher portion of the population depends on income supplements in the form of pensions or investment income (Table 5), and demands services geared toward an aging population, such as specialized health care.



Although contributing less to the regional economy than formerly, forestry occurs throughout the OSV. As it seeks sustainability, the forest industry faces challenges of international trade barriers and the need to reduce impacts on landscapes and ecosystems

3.2 Labour Force

The industries that employ the highest number of people in the study area also employ a large proportion of lesser skilled workers. Table 11 shows the number of people employed by industry, and Table 12 shows the proportion of people in management, professional, technical, and lesser skilled categories in the OSV and in British Columbia. It should be noted that some employment categorized as “manufacturing” includes such activities as lumber milling and food products. These jobs depend on the raw materials provided by primary industry, such as forestry and agriculture.



Commuters approach the Highway 97 Bridge. Traffic congestion is bad for tempers, the economy, and the environment.

Table 11
Most people in the OSV work in the service sector

Detailed Labour Force Occupational Structure – 1996 (BC Stats)								
Industry	OSV		Okanagan-Similkameen		Central Okanagan		North Okanagan	
	# Workers	% of labour Force	# Workers	% of labour Force	# Workers	% of labour Force	# Workers	% of labour Force
Retail Trade	19,385	14.4	4,510	13.5	9,860	14.6	5,015	14.9
Manufacturing	14,980	11.1	3,160	9.4	7,180	10.7	4,640	13.8
Health/Social Service	14,335	10.7	3,960	11.8	6,940	10.3	3,435	10.2
Accommodation	12,235	9.1	3,420	10.2	6,210	9.2	2,605	7.7
Construction	12,135	9	2,475	7.4	6,975	10.4	2,685	8
Other Services	11,320	8.4	2,600	7.8	6,045	9	2,675	8
Agriculture	7,830	5.8	3,245	9.7	2,650	3.9	1,935	5.8
Education	7,600	5.7	2,025	6.1	3,620	5.4	1,955	5.8
Business	6,395	4.8	1,265	3.8	3,700	5.5	1,430	4.3
Wholesale Trade	5,480	4.1	960	2.9	3,245	4.8	1,275	3.8
Government	5,250	3.9	1,725	5.2	2,390	3.5	1,135	3.4
Transportation	4,085	3	905	2.7	2,070	3.1	1,110	3.3
Communication	3,440	2.6	560	1.7	1,960	2.9	920	2.7
Finance / Insurance	3,495	2.6	765	2.3	1,895	2.8	835	2.5
Real Estate	2,900	2.2	690	2.1	1,685	2.5	525	1.6
Logging / Forestry	2,500	1.9	680	2	605	0.9	1,215	3.6
Mining	1,030	0.8	495	1.5	305	0.5	230	0.7
Fishing/Trapping	40	0	15	0	10	0	15	0
Total Labour Force	134,435	100	33,455	100	67,345	100	33,635	100

Table 12
Labour force occupational structure – 1996 (BC Stats)

Area	Management (%)	Professional (%)	Technical Trades* (%)	Lesser Skilled** (%)
Okanagan-Similkameen	9	11	26	54
Central Okanagan	10	11	29	50
North Okanagan	8	11	29	53
British Columbia	10	14	28	49

* Technical Trades include finance and insurance administration, health and science technologists, and other high skilled occupations.

** Also includes intermediate skilled occupations, such as primary manufacturing, and lesser skilled trades such as the service industry.

The OSV has fewer professionals and a higher percentage of lesser skilled workers than the provincial average.

Education levels in the OSV are similar to those of the province. The North Okanagan has the highest percentage of the population without high school and post secondary education (Table 13). When Kelowna is compared with other cities that are considered sustainable, it has the lowest percentage of the population over 25 with a high school education (Table 14). Kelowna is in the middle range of cities in terms of population without post secondary education.

[The OSV has] low regional demographic education levels, thus reducing the desirability of this region to attract new businesses and preventing growth of existing businesses.

Survey respondent

To effectively move into the “new economy,” a better educated and more highly skilled workforce is needed, and is achievable by attracting more educated and skilled migrants, and by offering educational alternatives for the existing workforce. This is to some extent a circular problem: more skilled workers are needed to attract businesses that require high skilled workers, but it is difficult to attract high skilled workers without the appropriate jobs. An important objective of any economic development enterprise in the OSV will be to help organize the education resources in the region to meet the needs of local industry. Success in this educational objective will help the OSV attract new businesses and to retain existing businesses. Such success will depend on the ability to bring together business leaders and education providers.

Table 13
Education levels in the OSV leave room for improvement

Area	% of Population Age 25-54:		Avg. % of 18 yr. olds who did not graduate from high school 1999-2001	% of population age 15-24 attending school full time
	without high school diploma	without diploma or post secondary degree		
Okanagan-Similkameen	28	50	29	49
Central Okanagan	23	46	31	50
North Okanagan	27	52	22	50
British Columbia	23	46	27	52

Table 14
Kelowna’s education levels compare well with other communities

Location	Percent of population over 25 years old:	
	with high school diploma	with a post secondary degree
Kelowna	69	46
Waterloo, Ontario	78	56
Raleigh, NC	85	46
Napa, CA	83	31
Boise, ID	86	33

3.3 Sub-Regional Distinctions

The three regional districts in the study area have different environmental and industrial characteristics. The Okanagan-Similkameen is geared towards tourism-based industries, the Central Okanagan has more business-related industries, and the North Okanagan emphasizes manufacturing and logging industries (Table 11).

Of the three regional districts in the study area, the Okanagan-Similkameen Regional District has the greatest percentage of its labour force employed in the agricultural and accommodation industries. Orchards and vineyards are the primary forms of agriculture in the area, both of which are tourism oriented. The Okanagan-Similkameen also has the highest proportion of retired people in the study area, a condition that could be linked to its high employment in the health and social service industries.

The economy of Princeton differs from that of the remainder of the OSV. Mining and logging were the primary employers, but both declined in importance between 1991 and 1996. Accommodation, food, and beverage is now the largest single sector, and other services form the fastest growing components of Princeton's generally depressed economy. The Lower Similkameen Valley (Keremeos, Cawston) bear similarities to the Southern Okanagan, as both areas depend on agriculture and have a high proportion of retired residents.



Sprawl threatens the viability of agriculture, raises servicing costs, increases car dependency, and harms the region's aesthetics. Higher density, well-designed alternatives are being pursued in the OSV, maintaining the construction industry and strengthening communities.

The Central Okanagan Regional District employs a higher percentage of the labour force in business-related industries than the other two regional districts in the study area. These industries include communication, finance, insurance, real estate, and general business. Kelowna has attracted more advanced technology and business services than other cities in the OSV.

The North Okanagan Regional District has the highest percentages of logging and manufacturing industries in the study area. It also has the lowest percentage of employees in the accommodation industry. Several small communities in the north have suffered from declines in the forestry sector and are seeking ways of diversifying their economies.

4.0 Green and Sustainable Development

4.1 Steps in Preparing the GSED Strategy

The strategy for green and sustainable economic growth has been developed in six stages:

1. Define what is and is not a green sustainable business.
2. Identify businesses in the OSV that can be said to be green and sustainable; compare this list with those businesses that are targeted by present economic development strategies and other businesses that fit within the Regional economic context; identify potential business targets.
3. Identify the Region's strengths and weaknesses from an economic development perspective.
4. Based on task 3, identify necessary elements for an economic development strategy that will target the businesses identified in task 2.
5. Prepare alternative GSED delivery methods for review by the Steering Committee and other government, business, and nongovernmental groups.
6. Combine the elements into strategic recommendations that can achieve support throughout the Region and that stakeholders will want to implement.

4.2 What is Green and Sustainable Development?

The concept of sustainability became widely used in the 1980s as a response to criticism of development projects that produced short-term benefits, but were long-term failures. Environmental, social, and even economic conditions were sometimes worse after these projects than they had been before. In North America, sustainable development (or, more recently, sustainability) came to be associated with enterprises that are successful in creating jobs without causing environmental harm and social impacts.

Environmental harm caused by human economic activity has been categorized as:

1. *Depletion* of resources such as water, clean air, fisheries, old growth forests, or productive soils,
2. *Pollution* of land, air, and water, and including eutrophication, ozone depletion, and climate change, and
3. *Expulsion* of species and ecosystems, characterized by declining biodiversity and extinctions, and including reduced cultural diversity (Winsemius and Guntram 2002: 27).
4. In response to the social and environmental weaknesses of prevailing models of economic development, the Brundtland Commission in *Our Common Future* (1987) penned the now-famous definition of sustainability:

“Sustainable development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.”

Throughout the 1990s, others have elaborated on the meaning of sustainability.

"[Sustainable production and consumption is] the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations"

Symposium: Sustainable Consumption. Oslo, Norway; 19-20 January 1994.

"Sustainable production and consumption involves business, government, communities and households contributing to environmental quality through the efficient production and use of natural resources, the minimization of wastes, and the optimization of products and services"

Edwin G. Falkman, *Waste Management International. Sustainable Production and Consumption: A Business Perspective*. WBCSD, n.d.

“Sustainability is an economic state where the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment to provide for future generations. It can also be expressed in the simple terms of an economic golden rule for the restorative economy: Leave the world better than you found it, take no more than you need, try not to harm life or the environment, make amends if you do”

Paul Hawken, *The Ecology of Commerce* 1994.

These definitions and descriptions of other terms that are commonly used in analysis of sustainability issues are contained in Appendix A.

These definitions have common themes of “doing more with less,” or, in some cases, “doing *less* with less,” and respecting the ecological and social realms that can be affected by our actions.

Although sustainability is often presented as a matter of prudence, even of common sense—that you should not destroy the basis of your own existence....concern about sustainability must be based on moral obligations toward future generations, not just personal self-interest.

Simon Dresner *The Principles of Sustainability*

In the 1990s, British Columbia created the Round Table on the Environment and the Economy to examine sustainability issues. The Round Table concluded that:

- “Our future economic prospects are lower than the level we have grown to expect,

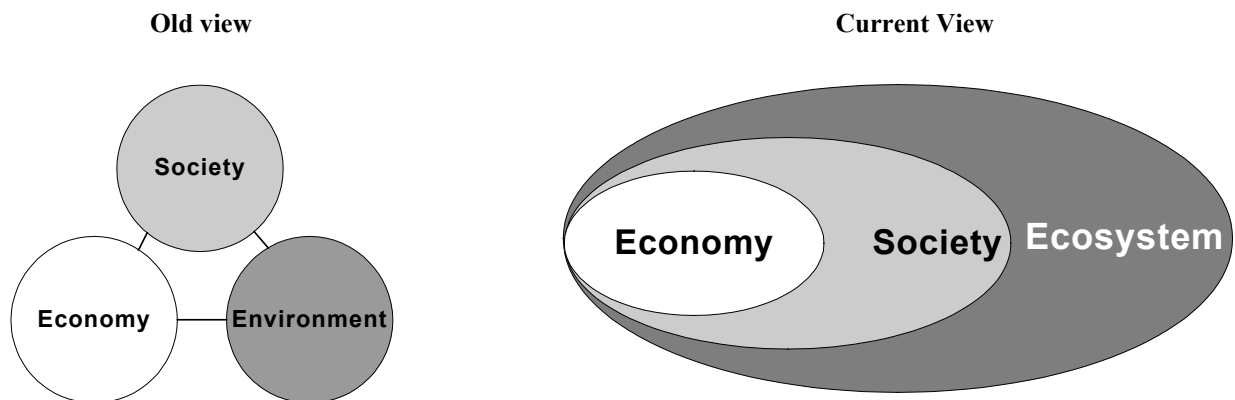
- Environmental and social factors have not previously been considered in the traditional measures of economic prosperity, and
- Escalating conflicts over resource use, increasing population size, an aging population, disparity of wealth distribution, and the need to live within our ecological and social limits all indicate that present patterns of human activity and trends in expectations are not sustainable” (Round Table 1995).

The view of sustainability has evolved since the British Columbia Round Table identified the “three legs of a stool” model of the relationship between environment, economy, and society (Figure 4). In recent years, analysts have come to realize that the economy is not independent, but is only a part of human society and culture, and that both society and economy are “nested” in a much broader ecosystem that includes physical (soil, water, air, landscape) and biotic (plants and animals) components of the Earth. The move from an anthropocentric view, in which human desires trump ecological considerations, to a more holistic view of the world has not been painless, and the debate continues about humans’ rightful place in the ecosphere.

For every person in the world to reach present U.S. levels of consumption with existing technology would require four more planet Earths.

Edward O. Wilson, 2002

Figure 4
Old and new views of sustainability



Society’s expectations regarding environment and economy tend to evolve over time. Maslow’s familiar hierarchy of human psychological needs has been reinterpreted to describe society’s “environmental hierarchy of needs” (Winsemius and Guntram 2002). The four environmental needs that people seek sequentially are:

1. *Food, clothing, and shelter*, provided by the use of resources from the environment, and jeopardized by non-sustainable use of these resources,
2. *Safety and security* that can be placed at risk by contamination, disease, and conflict over land and resources,
3. *Quality surroundings*, such as a green and healthy landscape or neighbourhood, that can be threatened by resource extraction, unwise industrialization, and urban sprawl, and
4. *Quality ecosystems* that grow in social importance as people recognize that we are part of the ecosystem, that our personal and social well being rely on healthy functioning ecosystems, and that protecting ecosystems is an ethical imperative.

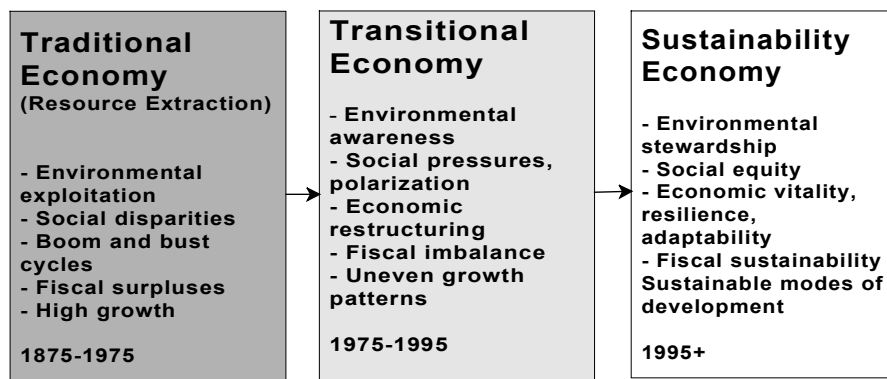
Some areas [in the OSV] are still at bottom level of Maslow's hierarchy.

Workshop Participant

If the economy falters and people lose their jobs, then priorities can shift *down* the ladder as people (and governments) become more concerned with the ability to pay for food and shelter than protecting fish habitat or air quality.

Moving from present conditions to a more sustainable future will require profound evolution of our economic structure. Figure 5 shows three “categories” of economy: traditional, transitional, and sustainability. Although the British Columbia Round Table optimistically hoped that we would be entering the sustainability economy by 1995, it is clear that achieving sustainability is still a long-term goal in most places. Some regions are still struggling to base their economy on traditional resource extraction, even as they experience the social dislocation and environmental degradation that accompanies that course.

Figure 5
Evolution of the British Columbia economy



4.3 A Vision of Green, Sustainable Economic Development in the OSV

Respondents to the GSED survey provided many ideas about what would constitute a green and sustainable region. Clean water, clean air, less urban sprawl, less regulatory burden (red tape), more socially responsible businesses, and more caring for the land were all themes raised by survey respondents. The survey revealed widespread understanding of the links between economy, environment, and society. The GSED program clearly needs to express the broad demand for achieving economic development that protects and enhances the “quality of life” in the OSV in all its richness. Quality of life in the OSV covers a wide variety of human perspectives, including:

- Well-paying, rewarding jobs that do not deplete the environment,
- Fish in the streams,
- Caring, inclusive, well-designed communities,
- Access to a healthy outdoor lifestyle—boating, hiking, skiing, fishing, golf—and healthy local foods and clean water,
- Maintaining the attractive agricultural landscape and a strong agricultural sector,
- Integrating tourism, agricultural, high-tech businesses,
- Caring for children—including job-oriented education and training—and seniors,
- Encouraging enterprises that respect the OSV’s values and commit to staying in the region, and
- Protecting the plants and animals that are indigenous to the OSV.

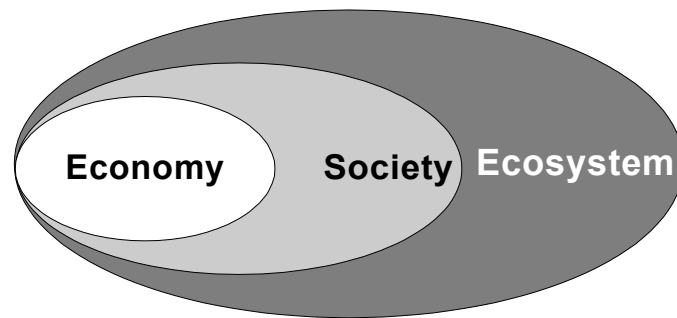
Absolutely no decision should be made without considering the ecosystem.
Workshop Participant

If public is properly educated - they will create a green culture and thus will embrace and pursue these goals.
Workshop Participant

Some representatives of rural areas expressed the view that green economic development is a frill that they can ill afford, and that any development – sustainable or not – would be welcome. This view is a clear expression of those near the bottom of the environmental hierarchy described in Section 4.2.

To provide clear direction to the GSED program, and to reflect the quality of life perspectives of OSV residents, the Steering Committee developed a vision of green, sustainable economic development in the OSV. The GSED Steering Committee discussed a variety of vision statement elements before agreeing that the following phrase and graphic described their vision best.

Figure 6
A vision of a green, sustainable future in the OSV



A quality environment IS our economic future

What will the future be like in the OSV be like as we move toward a green and sustainable economy? The following description of a desirable, attainable future is offered to provide some hints.

Life with a green economy in the OSV

The economy in the Okanagan and Similkameen Valleys will be characterized by businesses that are non-polluting, invest in their staff, and have a long-term commitment to environmental stewardship and social responsibility in their communities. The agricultural sector will be a model of modern intensive, non-polluting farming that is profitable, wildlife-friendly, and water conserving. Agrotourism and ecotourism, based on a biodiverse natural and agricultural landscape, will complement cultural tourism events and attractions throughout the region. These sectors benefit from clean water that is used carefully, priced properly, and treated like the precious substance that it is.

The local technology sector will support other industries and will be supported by research and development facilities in the region. Innovation and entrepreneurial spirit will characterize businesses in the region and attract investment from around the world.

Mixed use, compact communities will become common, fostering high-quality design, creating people-friendly neighbourhoods, reducing motor vehicle trips, and minimizing sprawl. Governments and First Nations will collaborate with each other and with business to achieve sustainability goals while reducing regulatory burdens and interjurisdictional conflicts. The region will be home to a stable, well-paid workforce with increasing education and skill levels.

Progress toward a more sustainable future will be revealed in an active program of protecting and restoring the region’s fragile yet productive ecosystems, with results that will attract visitors and support researchers into new environmental technology. The “Sustainability Charter,” signed by all governments and most businesses, will be credited for motivating a regional partnership on their promising journey toward sustainability.

It's fine for us to develop a vision but if the market (consumer) doesn't buy in, then the vision will not succeed.

Workshop Participant



Investment in public facilities in urbanized areas and in greenways pays dividends in terms of jobs, pride in communities, fitness, and attractions for visitors.

4.4 Growing Green Sustainable Enterprises

All enterprises, whether public sector or private sector, for-profit or not-for-profit, must adopt the green sustainable ethic if the OSV is to truly become a green sustainable economy. Many enterprises - whether government department or corporate headquarters - experience difficulty in making the transition to new ways of working. Responses to environmental issues typically move through a set of stages (Table 15):

- *Reactive.* At the beginning of the response to an environmental issue, governments and businesses typically dismiss environmental risks as exaggerated, and publicize the cost (in dollars and jobs) of protecting the environment. Industry, special interest, and environmental groups lobby government for and against legislation. If new or more stringent regulations are imposed, public and private sector enterprises reluctantly apply “band aid” technical solutions (stack scrubbers, catalytic converters) to comply with regulations.

The community at large, the whole valley, has to be involved in creating consistency in the sustainability of the economy.

Workshop Participant

- *Functional.* At the functional stage, private and public sector enterprises seek ways of reducing costs or gaining competitive advantage as they comply with escalating levels of regulation. Environmental protection responsibilities move from technical staff to a higher level of line managers.
- *Integrated.* The integrated approach begins as enterprises see that cooperation with other groups (the public, special interest groups, NGOs, research institutes) is necessary to successfully manage environmental impacts. Government policy moves from regulation to more economic incentives (taxes, levies, deposits, tradable emissions rights) to integrate environmental costs into market pricing.
- *Proactive.* Finally, senior management (and shareholders in the case of private sector enterprises) realize the need for profound changes in the way businesses, governments and institutions operate if the vision of a sustainable future is to be attained. “The proactive response requires deep organizational change. It involves the transformation of the organization’s culture into one driven by an environmental vision, in which all management actions are directed by a quest for value through harmony with the environment. The path to sustainability can be scary, since the very nature of the business might be challenged. Maybe the service or product—say, cars or detergents (as we know them today)—is inherently incompatible with sustainability if the global atmosphere or waters are not able to carry the burden (Winsemius and Guntram 2002: 16-17). Government may find that the basic premise of their plans and policies is inconsistent with sustainability.

Our environment cannot be sacrificed for development.

Workshop Participant

We have to look at our assets that are here to stay and encourage and enhance them: clean air and water, agriculture, tourism, forestry and fisheries.

Survey Respondent

Table 15
Stages of corporate response to environmental issues

Stages:	<i>1. Reactive</i>	<i>2. Functional</i>	<i>3. Integrative</i>	<i>4. Proactive</i>
Objective:	Comply with regulations	Cost effectiveness	Integration into “normal” strategy	Vision-driven culture
Activities:	Minimize cost and inconvenience through end-of-pipe measures	Optimize process solution	Stretch responsibility to product “shadow”	Need for harmony drives all actions
Lead responsibility:	Specialist staff	Line managers	Middle managers	Top managers
Time horizon:	Ad hoc	Investment cycle	3-5 years	10 years, dynamic

(Source: Winsemius and Guntram 2002)

Growing green sustainable enterprises in the OSV depends on continuing education of business, government, and non-governmental organization leaders and managers, who then have the courage to institute positive change.

Managers must not only be convinced that enterprises that take the leap to proactiveness will see that sustainable operations make them more competitive and profitable. Those involved in GSED must help these enterprises learn how to make the leap.

Companies need to be financially secure to revamp their approach to providing a product or service (see the four stages of the environmental hierarchy in Section 4.2). “As a rule, companies are not successful because they are green: they are green because they are successful” (Winsemius and Guntram 2002: 20). These “green” companies are in a position to lobby for *more stringent* controls or enforcement, because it “levels the playing field” with lax competitors.

Lack of profitability is the most severe obstacle to efficient environmental protection. Legislation by itself will not do the trick—a company will not be able to comply with environmental standards unless it can afford to make the necessary investments

Helmut Maucher, CEO, Nestle

In establishing a vision in a proactive business, top management may need to consider radical departures from previous models. Can a car company deliver transportation without the internal combustion engine? Can a forest company provide building products without cutting trees? Can a developer provide housing without consuming more raw land? Can a government design and implement planning policies and tax regimes that encourage residential and commercial

development without the by-products of sprawl and congestion? In moving toward this more proactively sustainable level, enterprises must consider the viability of new options, along with issues of competition, financing (often difficult for new concepts), and regulatory and bureaucratic obstacles to change.

Correctly reading the signals from government and society is important. For example, if a business assumes that regulation is coming and invests in actions to reduce environmental harm or to gain an early competitive advantage, the company may suffer financial damage if the regulation fails to materialize. If governments get too far “ahead of the electorate” in advancing a sustainability agenda, political ramifications at the polls could be significant.

BC Hydro and some other large firms have adopted a “triple bottom line” reporting program to track economic, social, and environmental performance. Such an approach to monitoring and reporting sends a message to top management and to shareholders about the company’s commitment to sustainability. Small firms may not be able to afford a formal triple bottom line reporting program, but considering the social and environmental implications (both direct and indirect) of a company’s activities can lead to increased awareness of issues and lay the groundwork for a more integrated or even proactive approach to sustainability.

I find it amazing that new independent business can actually function in BC at all.

Survey respondent

By improving operation of the physical plant, enterprises can realize environmental and economic benefits. Energy-conserving light bulbs, energy-efficient construction, and cogeneration of energy and heat can greatly reduce operating costs while reducing emissions and energy consumption. In the manufacturing sector, redesigning products can greatly improve material intensity, thereby reducing costs of materials, storage, and shipping.

4.5 Criteria of Sustainable Enterprises

For the purposes of the GSED, the following criteria have been established to assess whether an enterprise operates in ways that are consistent with the principles of sustainability. These criteria will be used to help to develop a strategy for a green, sustainable economy in the OSV.

- Private sector enterprises achieve sustained profitability without reliance on resources specially provided by government, or externalized costs borne by the environment or the public.
- Government and non-profit enterprises make efficient use of taxpayer-provided finances.
- An enterprise’s processes, use of materials, and products do not reduce the area of natural ecosystems in the region or elsewhere.

- An enterprise's processes, use of materials, and products do not impair the function of natural ecosystems, harm species, or contribute to socially harmful results.
- Industrial processes and products minimize the use of energy, materials, land, and water.
- Enterprises contribute to the creation and functioning of complete, compact communities.
- Enterprises invest in the safety, skills, knowledge, and well being of their employees.
- The physical plant and operations of enterprises consider and protect the interests of neighbouring land users.

The criteria apply to two aspects of enterprises:

- a. The characteristics of the enterprise's products or activities, and
- b. The way in which the enterprise operates.

Some enterprises are inherently unsustainable. For instance, coal-fired power plants consume too many resources and generate too much

The cost of protecting the ecosystem will always be more than people are currently willing to pay.

Workshop Participant

pollution to be considered sustainable. It is hard to conceive of the manufacture of internal combustion engines or military land mines as sustainable, regardless of the manufacturing process employed or the treatment of a company's employees. For the purposes of this GSED study, the question of what kinds of products are consistent with sustainability will be left to the residents of the OSV. The GSED will focus instead on the way enterprises operate.

Poor management, facility location, or human relations could render any enterprise unsustainable. For example, research institutes, consulting firms, or clean manufacturing plants located far from communities, so that all employees must drive to and from work, are not sustainable. Medical facilities that fail to dispose of waste carefully or that are poorly integrated into neighbouring communities are not sustainable. Recreation or tourism activities that result in noise or water pollution (such as some water craft) or destruction of native plants (such as off-road vehicles) are not sustainable. Agricultural operations that use wasteful irrigation techniques, excessive amounts of pesticides and fertilizers, or convert remnants of undisturbed ecosystems to farmland are unsustainable. Forestry based on logging the few remaining stands of old-growth timber, clearcutting to stream margins, or cutting at rates above long range sustained yield is not sustainable.

To be sustainable an enterprise must focus on products and services that are environmentally benign, socially responsible, financially self-sustaining, and economically viable, and must conduct its operations in the same way. Few existing enterprises (private or

public sector) could satisfy all seven sustainability criteria. This failure is hardly surprising, given the relative newness of the sustainability concept, and the confusing signals sent by markets, regulators, and society with regard to the importance of sustainable methods of operation.

Without appropriate ecologically sensitive economic development in this valley, sustainable development is unlikely to happen.

Workshop Participant

5.0 Identifying Green and Sustainable Businesses in the OSV

5.1 Businesses Identified by Study Participants

As part of the GSED program, a survey was undertaken of people and organizations in the project area that expressed interest in economic development and sustainability. The results of this survey formed the basis for much of this report. In one question, respondents were asked to give examples of existing businesses in the project area that they considered green and sustainable. The respondents identified the following types of businesses:

- Agriculture, including farm gate sales
- Agricultural processing (e.g., wine, fruit juices, and other products)
- Forestry
- Light industry, including manufacturing using wood
- Avionics and aircraft repair and maintenance
- Tourism (golf, skiing, winery tours, culture, agrotourism)
- Retirement services
- Healthcare
- Post-secondary education
- Technology industries, including call centres
- Financial services
- Government offices
- Consulting and related knowledge-based services.

Do not always equate progress with growth.

Survey respondent

The following businesses were also identified during the interview program as having the potential to support moves toward sustainability:

- Research Institutions
 - Dominion Radio Astrophysical Observatory (DRAO, Penticton)
 - Pacific Agrifood Research Centre (PARC, Summerland)
 - Sterile Insect Release Program (SIRP, Osoyoos)
 - Forestry Research Centre (FRC, Vernon)
- Fisheries enhancement and fishing (as a tourism activity), and
- Sustainable utilities – wind farms, solar power, recycling.

Do these businesses meet the definition of green sustainability presented in Section 4.5? In terms of their products or services, all of these businesses can be considered consistent with the

sustainability criteria. Their means of production, use of resources, facility location, and human relations will be a primary determinant of whether they satisfy the criteria.

5.2 Industries Targeted by Regional Strategies

It is useful to compare the responses from the surveys and interviews with the industries targeted in the economic development strategy documents issued by CORD, RDOS and Greater Vernon Economic Development. This comparison is presented in Table 16.

Table 16
Regional strategies and surveys identified a variety of potentially sustainable industries

Industry	Survey Responses & Interviews	Official CORD Strategy	Official Greater Vernon Strategy	Official RDOS Strategy
<i>Primary Industries</i>				
Agriculture	Yes			
Forestry	Yes		Yes	
Fisheries	Yes			
Energy (solar, wind)	Yes			
<i>Secondary (Processing) Industries:</i>				
Agricultural Processing	Yes		Yes	Yes
wineries	Yes			Yes
Sunripe	Yes			
Light Manufacturing	Yes		Yes	
wood	Yes		Yes	Yes
other	Yes			Yes
Aircraft repair, avionics	Yes	Yes	Yes	
<i>Service Industries:</i>				
Tourism	Yes		Yes	Yes
golf	Yes			
skiing	Yes			
wine	Yes			
agricultural	Yes	Yes	Yes	
farm gate sales	Yes	Yes		
Services to Retirees				
healthcare	Yes			
financial services	Yes			
continuing education	Yes			
High Tech				
call centres	Yes	Yes	Yes	Yes
software		Yes		
multimedia		Yes		
telecommunications				Yes
Govt. Offices	Yes			
Research Institutes	Yes			
Education				
medical school		Yes		
Retail and Commercial		Yes	Yes	Yes

This comparison shows only one case where all three strategies target the same industry: retail and commercial development. CORD and Greater Vernon both targeted airport-based industry, and the interviews indicate that Penticton is also examining the potential of its airport facilities. CORD’s strategy targets technology and call-data-operations centres. RDOS and Greater Vernon both target agricultural processing, light manufacturing, and tourism.

Enterprises in these industries have the potential to meet the criteria for being green and sustainable.

5.3 Linkages Among Sustainable Businesses

What other types of businesses would link with or fit synergistically with the above-noted industries and meet the green sustainable criteria? As an example, Figure 7 shows the net of relationships that can grow among the various sectors involved in the production of grapes and wine. Research organizations provide information to producers on grape varieties, production techniques, and demand for various grape products. Researchers advise wineries on production technology and marketing, and provide the service sector (offering wine tours, bed and breakfasts, and associated “cultural” tourism) with information on operations and marketing. Vineyards demand equipment, land, water, and agricultural supplies in order to produce grapes, some of which go to wineries. The wineries produce bottled wine for domestic sale or export, and support wine tours. The service industry helps support wineries, and has strong links to other tourist infrastructure, such as golf courses, restaurants, hotels, and transportation. Such a network of supportive enterprises creates what some analysts call a “cluster.”

Figure 7
Schematic linkages among sectors in grape and wine production

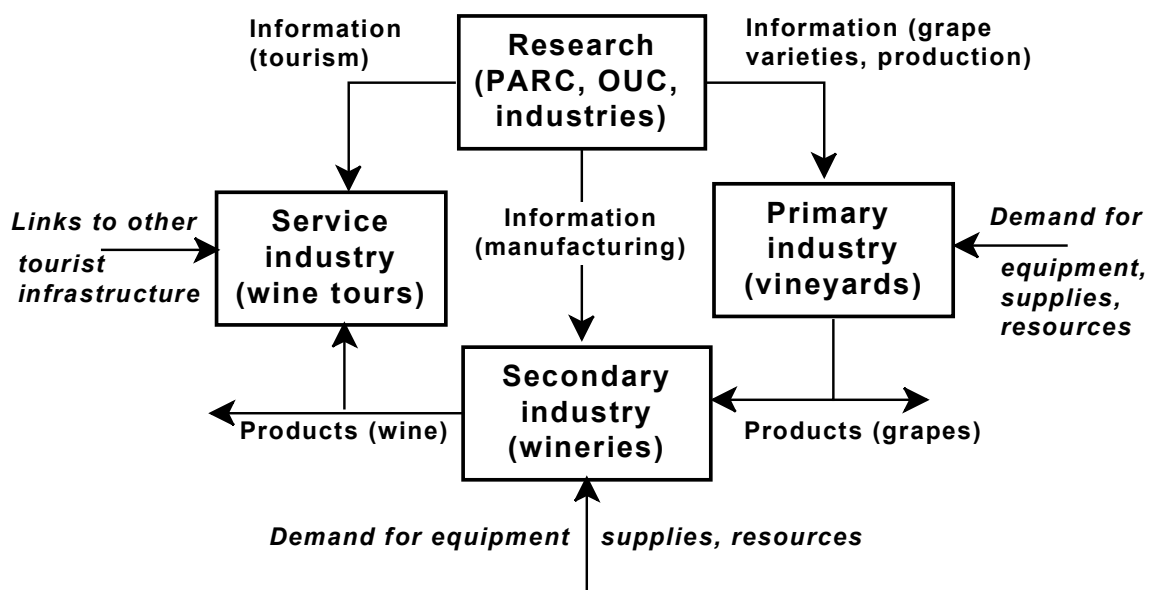


Figure 7 is a simple representation of linkages among potentially green industry sectors. The reality is more complex and has links to government, water utilities, and other institutions. Table 17 presents a simplified (and not rigorously categorized) chart indicating the business flows from primary (extractive) industry through secondary (processing) industry to tertiary (service) industry for various sectors. Table 17 also notes research activities that are or could be applied to each sector. If properly operated, the industries can be capable of meeting the green sustainable criteria.

Table 17
Potential synergies among sustainable business opportunities

Research	Primary Industry (production of basic material)	Secondary Industry (Processing of basic material)	Tertiary Industry (services flowing to/from)
Forest Research Centre	Forestry	manufacture of wood products including furniture, homes, crafts	computer programming, equipment manufacturing
Agricultural Research: SIR, PARC	Agriculture (fruits, vegetables, cattle)	wineries, SunRipe	wine tourism, agri-tourism, farm gate sales, equipment manufacture, farm suppliers
Astrophysics (DRAO)		telecommunications products	consulting services, computer programming, electronic device manufacture
Research into gerontology	seniors / retirees		health care, retirement services, assisted living, financial advisory services, continuing education
Research into resource management, hospitality training	natural resources (lakes, mountains, etc)		tourism activities (golf, skiing) and destinations, hotels, restaurants, retail outlets, crafts
Avionics		Aviation - avionics, aircraft servicing, training	

Pure research on its own may also have direct industrial and business linkages and advantages. For example, the Dominion Radio Astrophysical Observatory (DRAO) undertakes world-class research into, among other things, wireless telecommunications. The Observatory's new building is designed to accommodate incubator start-up companies. Community awareness and promotion of the work being carried out by DRAO could potentially lead to the manufacture of specialized telecommunications products and software and, perhaps, to a consulting sector.

The area's large population of seniors and retirees offers potential for the provision of services such as specialized health care (private and public), financial services and continuing education for seniors. This sector could be further enlarged if the area could attract funding for research into gerontology and other age issues, perhaps through OUC.

The natural beauty, climate, and recreational attributes of the project area have made it a magnet for tourists. The area offers the full range of recreational activities (boating,

In order to attract entrepreneurs, [we] need some focus on liveability of neighborhoods, commercial cores.

Workshop Participant

swimming, fishing, golf, skiing, and biking) that make it a year-round tourist destination. In the last few years, the development of the winery sector in terms of product excellence and recognition and in terms of the creation of winery tours, tastings, and restaurants, has added another attraction. The winery-based tourism concept is being expanded to agrotourism in general. This industry shows the potential to make use of backward linkages (e.g., research into resource management at OUC; development of a new hotel school or hospitality training centre catering to needs province-wide and beyond) and to further development of hotels, restaurants and the retail sector.

Aviation-based businesses are receiving considerable attention throughout the project area. Kelowna's airport is the main passenger airport in the region. A major aircraft servicing and avionics firm is located there. In Vernon, a citizen's group has undertaken a Federally-funded study to assess the potential to use the Vernon airport as the centre of a training school for persons desiring a career in aircraft maintenance. Penticton is also marketing its airport facilities.

Forestry, supported by the Forest Research Centre in Vernon, is of economic importance especially in the northern portion of the project area. It holds the potential for processing wood into furniture, prefabricated homes and parts, crafts, and so. Resource processing appears to be underdeveloped in the OSV.

A list of target industries is presented in Table 18. These industries fit within the OSV's social, economic and environmental context and meet the green sustainable criteria.

Table 18 also shows the employment generated by each industry per \$1,000,000 of output. Employment generation ranges from 7 to 8 person-years (telecommunications, aircraft) to more than 21 person-years (tourism). This is only one measure of the benefits that can flow from economic expansion.

[We] need to include tools like tax incentives and tax shifting. GSED is closely tied to land use patterns.

Workshop Participant

Table 18
Potential target sustainable businesses

Business or Industry	Rationale	Direct and Indirect Employment per \$1,000,000 Output *
Manufacturing of wood products	Value added of existing activity; can be done on a small/medium scale; moderate use of energy, low use of water	15.8 person-years
Agricultural processing	Value added of existing activity; can add to agri-tourism base; research institute (PARC)	10.5 person-years
Wineries	Expansion of industry; tourism spin-offs; major lifestyle attribute	8.9 person-years
Health care – private service providers, goods and services designed for seniors	Large population of seniors; likely increase in range of private services available; high employment generator	15.7 person-years
Tourism – hotels, resorts, restaurants, wineries; hospitality training centre	Large existing base and growing reputation; year round destination; high employment generator	21.1 person-years
Cultural tourism	Builds on existing attractions of wineries, art galleries, First Nations cultures, and pioneer history in the OSV	
Ecotourism	The Kettle Valley Railroad, for cyclists, skiing, hiking, fishing, and other outdoor activities has long been a mainstay of tourism in the OSV	
Aircraft / Aviation servicing, training, high tech avionics	Three airports with different interests; existing industry base	7.6 person-years
Telecommunications / wireless special products	Proximity to DRAO, scientists, incubator facility	7.2 person-years
High Tech - call centres, software, multimedia, communications	Region-wide interest	14.4 person-years
Post secondary education and research	OUC and technical training enterprises can create a post-secondary “cluster” in the OSV	15.0 person-years
Ecosystem restoration	Requiring highly technical knowledge and specialized agronomic and engineering techniques, restoration can support technical firms	Unknown

Source: Horne, G. and T.Q. Zhuang, British Columbia Provincial Economic Multipliers and How to Use Them, B.C. Ministry of Finance and Corporate Relations, 2001

5.4 What is the Purpose of Economic Development?

In pursuing economic development, it is important to understand the reasons why such an activity is considered important. The following reasons why economic development is important in the OSV were identified by some of the region's leaders in economic development and government.

- Economic development can reduce dependency of economies on transfer payments, real estate and construction, or similar “single sector” sources of income.
- The decline of employment in the resource sector demands shifts to more sustainable forms of economic activity.
- Sustainable economic development can increase the resilience of economies to shocks and changes in external events (such as the softwood lumber dispute, or declines in some sectors or industries).
- The main cities in the OSV provide retail, educational, and other services to smaller communities. Hence, the larger centres benefit from the health of small communities.
- With a green and sustainable economy, the OSV could benefit from exports based not only on farm and forest products, but also increasingly from products and services based on research and development, and the expansion of Okanagan University College.

It is a well-known political rule that the people who will gain from any policy usually won't thank you, while the losers will never forgive you.

Simon Dresner *The Principles of Sustainability*

Some sustainability experts raise thought-provoking questions, such as, “Will economic development make people happier?”

“Economic growth itself does not seem to bring happiness, except very temporarily. After a short time, people get used to their new standard of living and go back to being as (un)happy as they were before, but at a higher level of consumption.”

Richard A. Easterlin 1996.

Others ask us to consider the very basis of “development:”

“In sustainable development, do we mean “human development by improving education and health, or material consumption through economic growth?”

Simon Dresner 2002: 68

These questions will need to be considered by residents of the OSV as they make decisions on the future of economic development in the region.

6.0 The OSV's Strengths and Weaknesses

6.1 The Region's Economic Development Strengths

The shift towards secondary manufacturing, high-tech industry, and an increased emphasis on tourism has helped diversify the Okanagan economy. These industries not only expand the scope of the economy, but also increase the sustainability of the region's economy.

The Okanagan is blessed with a warm climate and a wide array of natural features that attract people to the region. The OSV is within three hours of two major urban centres, providing a large pool of people to attract as visitors. The lakes, mountains, and natural beauty are the foundation for the economically important tourism industry and the growing film industry. Agrotourism is another draw for tourists. Orchards and especially wineries are increasingly important components of the tourism economy in the OSV.

Help local business to strengthen locally, the business grows and creates employment.

Workshop Participant

Research, technology, agriculture, and tourism are examples of established industries that are helping move the OSV towards sustainability. These industries serve as a foundation and as role models for future economic development.

The increasing perception of the value of inter-regional cooperation is also a positive trend in the OSV. Undertaking the GSED project signals the willingness of the Regional Districts and other levels of government to work together in seeking sustainable solutions to economic development problems.

What do business people appreciate about the project area and what strengths can be built upon? Table 19 presents a list of strengths identified by survey respondents and interviewees, as well as those noted in regional economic development strategy documents.

Without growth, improving the lot of the poor would require bringing down the rich, which is politically difficult.

Simon Dresner *The Principles of Sustainability*

Three strong attributes are clearly recognized by the survey respondents, interviewees, and the regional economic development strategies:

1. Quality of life (lifestyle, climate, environment, education)
2. Airport facilities, and
3. Cost competitiveness (overall and specifically in terms of labour costs, property costs, costs of living).

Table 19
Economic development strengths of OSV identified in economic strategies and the GSED survey

Strengths	Survey Responses	CORD	Greater Vernon	RDOS
Quality of life	Yes		Yes	Yes
Climate	Yes			Yes
Environment	Yes			Yes
Growing population				Yes
Educational institutions			Yes	Yes
Health services				Yes
Cost competitive		Yes		
Full range of business services	Yes			
Stable business community	Yes			
Skilled labour force	Yes			Yes
Low labour costs	Yes	Yes	Yes	
Proximity to US market		Yes		Yes
Airport facilities		Yes	Yes	Yes
Low cost of living	Yes	Yes		
Low property prices	Yes	Yes		Yes
Lack of traffic congestion			Yes	
Vibrant agriculture	Yes		Yes	Yes
Vibrant tourism	Yes		Yes	Yes
Vibrant wine industry				Yes

These strengths should form the basis for the GSED strategy.

6.2 The Region’s Economic Development Weaknesses

What are the weaknesses or problems in the business environment that should be overcome if economic development opportunities are to be realized? Table 20 presents a list of weaknesses identified by survey respondents and interviewees, and weaknesses noted in regional economic development strategy documents.

Survey respondents identified four major concerns about the business environment:

1. Government bureaucracy and red tape
2. Traffic congestion
3. Low wages (as a problem for citizens)
4. Urban sprawl

These perceived weaknesses should be addressed as part of the green sustainable economic development strategy.

Table 20
Economic development weaknesses of the OSV

Weaknesses	Survey Responses	CORD	Greater Vernon	RDOS
Urban sprawl, strip development	Yes			
Red tape and bureaucracy	Yes		Yes	
Uncreative thinking	Yes			Yes
High airport tax for short hauls	Yes			
Highway congestion	Yes			Yes
Low wages	Yes			
Low education levels	Yes			
Lack of foreign language availability for tourists	Yes			
Lack of venture capital	Yes			
No jobs for educated youth	Yes			
Lack of zoned or serviced industrial land			Yes	Yes
ALR constraints on development				Yes
Lack of cooperation in promotion	Yes			Yes
Lack of broadband connectivity				Yes
Lack of awareness of attributes			Yes	Yes
Lack of retail diversity			Yes	
Perceived as retirement community			Yes	
"Tired" infrastructure			Yes	
Unionized workforce			Yes	

Even though the survey was targeting economic development, two of the four issues raised most often by respondents dealt with land use planning: urban sprawl and traffic congestion. These results indicate a high degree of sophistication among respondents, who have made the sustainability link between urban form and economic development.

The following list of obstacles to achieving green sustainable economic development is based on the consultants' review and on responses to the GSED survey.

- *Isolation.* The surrounding mountains that provide the sunny, warm weather in the valleys also isolate the OSV from markets in the Lower Mainland. Building transportation links through the mountains is—and always has been—expensive and difficult. The rise of the Internet and global communications can help to overcome this physical isolation, but the shipment of goods requires efficient modes of transportation.

“The less government meddling in the Okanagan, the better. Leave business alone to get on with the task of building an economy and not constantly worrying about compliance to government regulations”

Survey respondent

- *Fragile environment.* The attractive and biodiverse environments in the OSV are also easily harmed. The historical record of draining, ploughing, and paving over wetlands and other spectacularly productive ecosystems is not positive (e.g., 85 percent of original wetlands have been eliminated), and a change in ways of seeing and valuing natural systems, of protecting remnants natural areas, and restoring key ecosystem components will be a necessary part of any sustainability strategy. A sustainable economic development strategy must recognize and protect the fragile environmental values of the OSV.
- *Competition rather than cooperation.* Many regional initiatives in the past have foundered on the rocks of interjurisdictional competition and jealousy. Achieving the promise of green, sustainable economic development will demand a high—and unprecedented—level of cooperation among jurisdictions over the long term.

Local government needs to lead by example

Workshop Participant
- *Infrastructure.* Traffic bottlenecks (particularly in Kelowna) and limitations to air service were noted as limits to economic development. Environmental protection will require continued investment in water supply and waste management infrastructure.
- *Lack of “critical mass.”* Industries as diverse as farming and biotechnology benefit from agglomerations of similar businesses and associated support industries and suppliers. The lack of a “critical mass” of businesses limits economic development, especially in smaller centres.
- *Poor areas and marginal businesses.* If businesses are struggling just to stay solvent, they lack capital to invest in their human or physical resources. Survey respondents noted that there are too many marginal businesses in the region. The resulting low-paying jobs cause many young people to leave the region for places with more profitable businesses and lucrative salaries.
- *Population growth and poor planning.* Survey respondents noted that the combinations of population growth and faulty planning in the OSV have given rise to urban sprawl, traffic congestion, air quality problems and water problems. Pressures to develop ALR land have been steadily increasing as urban centres have grown outwards. Transportation in the OSV is car-oriented, and sprawling communities reflect this mode of transportation. The development of outlying lands furthers this dependence on automobiles and hinders economic provision of transit.

Get government out of our business pockets. Client satisfaction often slips to second priority in favour of regulatory compliance.

Survey respondent
- *Bureaucracy.* Over-regulation by government and a lack of awareness of business needs and practices were identified as limits to obtaining or creating successful business. Whether this perception is true or not, government must work to change it. Regulatory burdens usually affect small or start-up companies more than big chain stores and corporations.

- *Ignorance of sustainability.* This criticism was leveled both at business (for depleting resources) and government (for encouraging sprawl and unsustainable land use practices). Governments should not equate “growth” with “progress.”
- *Lack of creativity and foresight.* New ideas and approaches are needed to create a bright future, rather than persisting with conventional approaches to economic development.

6.3 Challenges to Achieving Green Economic Development

Factors affecting economic development in the region. The OSV faces a variety of challenges in achieving green, sustainable economic development. The following factors affect the ability to achieve desirable economic development.

- The region is very diverse. For example, physical and economic conditions in the Princeton area are quite different from those in the Okanagan or Similkameen basins. The study area includes three drainages: (1) the Similkameen drainage, (2) the Okanagan drainage, and (3) lands north of Enderby that drain into the Thompson and Fraser systems.

Finish a plan and then enact it with powerful tools to make it happen.

Survey respondent
- Some rural areas feel “left out” of economic development initiatives and exploited by the larger urban centres. For example, in the North Okanagan Regional District, only the Greater Vernon area has full-time economic development officials. In RDOS, only the municipalities of Penticton, Oliver, Summerland and Osoyoos have access to full-time economic development services. Only CORD offers full-time professional economic development services to all areas in the regional district. In NORD and RDOS, therefore, many municipalities and rural areas lack access to economic development services and are left out of development initiatives. Community Futures Development Corporations do provide services throughout each of the three regional districts.
- The economic development functions in the OSV operate independently of each other, thus there is no effective coordinating of economic development activities. Enhancing cooperation is likely to reduce duplication of economic development activities and to the improve cost and human resource efficiencies. The need for cooperation and coordination among economic development operations was one of the factors that led to the GSED study being undertaken.

[GSED needs a] coordinated approach to ensure our small communities don't get lost in the "big picture"

Workshop Participant
- Land management policies of First Nations on reserve lands have not always been clearly articulated. The uncertainty associated with unresolved First Nations land claims affect economic and planning decisions.

Water quality and quantity affect economic development. The Okanagan Basin Water Board's activities require broad support from throughout the region, and obtaining such broad support can prove challenging.

- The many jurisdictions (Federal, Provincial, Local, First Nations, Irrigation Districts) can confound efforts to create a uniform approach to economic development (or land development).
- Protected areas are important in the region, but definitions of what constitutes a protected area are often unclear.
- Air quality affects health and the desirability of the region for settlement and business.
- Reliance on a limited number of transportation corridors (primarily north to south, not east to west) affects land use and economic development in the region. Although people and groups differ on whether an improved highway system is feasible or desirable, a better way of managing mobility in the region is needed.
- NAFTA problems, such as the softwood lumber dispute, can unexpectedly affect economic development strategies, increasing the need for a diversified economy.

[Government should] force or encourage all development projects to adhere to sustainability principles and regulations.

Survey respondent

People interviewed as part of the GSED identified several obstacles to the process of achieving green economic development.

- “Silos” of government agencies, constituting nodes of discrete responsibilities, limit communication and coordination. Agencies must consider the impacts of their decisions on businesses and on the use and sustainability of resources. Silos must be broken down.
- Collaborative institutions need to be created with a mandate broad enough to truly manage a resource or a problem. The holistic nature of sustainability is at odds with the compartmental nature of institutions and regulations.
- Green economic development will require acceptance by parties not involved in the GSED project. Communications are key.
- A challenge to green development is a lack of a venture capital network to fund green initiatives. Government support for entrepreneurship is often limited, and should be strengthened.
- Mutual education and idea sharing among businesses, regulators, and investors is important.

[Government should] develop a common vision of what sustainability should look like in the Okanagan Valley, based on ...the state of the environment and future trends, and the economic and social factors that apply.

Survey respondent

- Sustainable employment requires job training that must accompany inevitable changes in job growth. This training should precede the need for shifts in employment.
- The OSV must reduce barriers to greening and keeping local businesses. Retention and recruitment of new businesses are both part of the green sustainable economic development.

The structure of economic development services in the OSV. Success of the GSED initiative will require the active support and collaboration of interests and enterprises having an interest in economic development. Research conducted as part of this study also identified the following list of organizations having an interest in, or ability to contribute to, economic development in the OSV:

Region-wide organizations:

Okanagan University College
 Innovation Forum
 Columbia Mountain Open Network
 Thompson Okanagan Tourism Association
 Okanagan Film Commission
 Okanagan High Technology Council
 Okanagan Science and Technology Council (Silicon Vineyard website)
 Interior Lumber Manufacturers Association
 Interior Value Added Wood Association
 Pacific Agrifood Research Centre
 Okanagan/Shuswap Manufacturer’s Association
 Okanagan Similkameen Boundary Fisheries Partnership

[GSED] must be flexible to meet varying needs. Utilize existing resources on a more cooperative basis as adequate resources are being applied now, but not effectively.

Workshop Participant

North Okanagan organizations:

Community Futures Development Corporation, North Okanagan
 Armstrong-Spallumcheen Chamber of Commerce
 Enderby District Chamber of Commerce
 Airport Training Council – Vernon
 Greater Vernon Economic Development Office
 Greater Vernon Services Commission
 Downtown Vernon Association
 Community Futures Development Corporation of the North Okanagan
 Vernon Women in Business
 Lumby District Chamber of Commerce
 North Okanagan Home-Based Business Association
 Okanagan Indian Band Economic Development Office

Central Okanagan organizations:

Economic Development Commission for the Central Okanagan
Community Futures Development Corporation of the Central Okanagan
Lake Country Chamber of Commerce
Kelowna Chamber of Commerce
Peachland Chamber of Commerce
Westbank District Chamber of Commerce

Okanagan-Similkameen organizations:

Community Futures Development Corporation of the Okanagan Similkameen
Destination Osoyoos
Osoyoos Business and Community Development Centre
Osoyoos Chamber of Commerce
Penticton and Wine Country Economic Development Services
Penticton Economic Development Services
Penticton Chamber of Commerce
Oliver and District Economic Development Society
Oliver District Chamber of Commerce
Summerland Chamber of Economic Development and Tourism
Summerland Economic Development Commission
Princeton District Chamber of Commerce
Okanagan Falls Chamber of Commerce
Osoyoos Indian Band Development Corporation
Similkameen Country Development Association

These organizations are involved in a variety of initiatives related to sustainability in the OSV (Appendix B). The breadth of these activities suggests that many groups are already committed to a sustainable future in the region. The groups' experience with such initiatives will prove valuable in advancing the actions recommended as part of the GSED project.

Business change will require (1) education as to the benefits, (2) incentives to move forward to greening objectives, and (3) a consistent regulatory environment throughout service area.

Workshop Participant

This long list of parties having an interest in economic development (45 in this list alone) highlights one of the weaknesses of economic development in the OSV: fragmentation and competition. Effective economic development (green or otherwise) will require a more efficient structure and clearer organization of economic development initiatives in the OSV. In discussions with representatives of some of the listed organizations, it became clear that communication among the groups is limited (in part due to the sheer number of organizations) and the mandates of the organizations often overlap.

The overlapping mandates are combined with gaps in provision of services and information associated with green, sustainable development (Table 21). As noted earlier in this report, some areas of the OSV clearly have less access to economic development services than others. Finally, some economic development staff expressed frustration at small memberships and

inadequate funding. These problems may be symptoms of the proliferation of economic development organizations in the OSV.

The method and level of involvement of these organizations in any GSED initiative adopted in the OSV will be determined by their perceived interest in sustainable development, their available staff and financial resources, the nature of specific GSED actions required, and the organizations' willingness to collaborate with each other in achieving sustainability goals.

*Look down the road - if we don't
make changes we'll end up being
California.*

Workshop Participant

Table 21
Economic development service coverage of the OSV

Community	Regional District	Economic Development Officers	Economic Development Committees	Chamber of Commerce	Community Futures Development Corporations
Grindrod	NORD				✓
Enderby	NORD		✓	✓	✓
Ashton Creek	NORD				
Armstrong	NORD		✓	✓	✓
Vernon	NORD	✎			✓
Coldstream	NORD	✎			✓
Lumby	NORD			✓	✓
Cherryville	NORD				
Spallumcheen	NORD			✓	✓
Silver Star Mountain	NORD	✎			✓
Falkland	NORD	✎		✓	
Kelowna	CORD		+	✓	✓
Peachland	CORD		✓ +	✓	✓
Joe Rich / Ellison	CORD		+		✓
Winfield	CORD				✓
Woodsdale	CORD				
Okanagan Centre	CORD				✓
Lakeview Heights	CORD				✓
Oyama	CORD				✓
Lake Country	CORD		+	✓	✓
Westside	CORD		+		
Westbank	CORD			✓	
Summerland	OSRD	✓	✓ X	✓	✓
Penticton	OSRD	✓	✓ X	✓	✓
Princeton	OSRD		X	✓	✓
Hedley	OSRD		X		✓
Cawston	OSRD		X		✓
Oliver	OSRD	✓	✓ X	✓	✓
Keremeos	OSRD		X		✓
Okanagan Falls	OSRD		✓ X	✓	✓
Osoyoos	OSRD	✓	X	✓	✓

- ✓ Service provided
- ✎ Served by the NORD Economic Development Manager
- ✚ Served by the CORD Economic Development Commission
- ✗ Served by the OSRD Economic Development Committee

7.0 The Elements of a Strategy for Green Sustainable Economic Development

7.1 Assumptions Behind the Strategy

The GSED strategy is based on the following assumptions:

- Most existing businesses in the OSV are owned by local entrepreneurs. The economic development cost to retain an existing green sustainable business is low. These businesses have roots in the community and probably will not leave the region as a result of some other jurisdiction’s marketing efforts. Experience from other regions has shown that “home grown” businesses are less likely to relocate than those that come to an area from elsewhere.

- Most new businesses in the OSV will be created by people already living here or by people who move here and then decide to start a business. The economic development cost to help local people start new businesses is moderate. These new entrepreneurs have new roots in the community and are likely want to keep their businesses here.

If we are to attract those individuals to establish business, the liveability of neighbourhoods must be retained and improved.

Workshop Participant

- The success rate of traditional economic development efforts to attract businesses from their current base of operations is low, while costs are high. However, with a targeted marketing campaign based on a “green” concept, it is possible to increase the success rate somewhat, although costs will still be high. Creating a fertile environment for businesses to locate in the OSV will make business recruitment easier, and many will choose to locate in the region without recruiting.

- The GSED efforts should include:

- a. Helping existing businesses to develop and expand in a green and sustainable manner,
- b. Helping residents establish new businesses in the OSV,
- c. Keeping successful green businesses in the OSV by providing the support and nurturing that expanding and new businesses need to grow in a green sustainable manner, and
- d. Attracting green businesses presently located elsewhere to relocate or to expand to the OSV.

Growth and sustainability come from within.

Workshop Participant

- All four GSED elements are important, and resources should be allocated to them on a roughly equal basis. The actual distribution of resources among the four elements may differ throughout the region, reflecting priorities and circumstances in the varied communities. Care needs to be exercised, however, to ensure that recruiting new businesses does not dominate economic development efforts and

We shouldn't waste money to make [business] stay. All we can do is provide a positive environment to make people come.

Workshop Participant

funding priorities.

- Green, sustainable economic development support services should be available throughout the OSV, not just in larger communities.

7.2 Strategic Objectives

Based on these assumptions, the objectives of the strategy are described by the following “Four Gs”:

1. **Growing** – The OSV already has a substantial number of green and “greenable” businesses and institutions. By creating supportive and nurturing conditions that facilitate growth of existing and new enterprises, the OSV can foster “home-grown” sustainable economic development by retaining existing businesses and encouraging new business creation from within the community.

2. **Greening** – To move toward sustainability, all businesses, institutions, and households in the OSV need to become more environmentally aware, practice conservation of resources (water, land, air, energy, materials), and act in a socially responsible manner. Greening applies to businesses and institutions already in the region. Approached properly, greening will improve the competitive position of successful businesses and foster the growth of environmental support industries, research, and even exportable technology.

Grow in greener industries. Make existing industries greener.

Workshop Participant

3. **Guarding** – Jurisdictions in the OSV have a strong interest in retaining the successful green enterprises located in the region. Even successful businesses may be “pulled” away by incentives offered by other regions, and little can be done to prevent such attractive offers from being made. OSV jurisdictions can, however, avoid “pushing” businesses away through unsupportive policies and attitudes, and failure to take steps to encourage green businesses to stay in the region for the long term.

4. **Getting** – Attracting new private and public sector enterprises to the OSV should build on current strengths and should be undertaken on a region-wide basis. Particular emphasis and resources should be made available for small and rural communities that lack a core of successful businesses. The cornerstone of the tactical “Getting” approach should be to target individual businesses and public sector enterprises that are seeking areas in which to locate stand-alone facilities, or enterprises that can support existing businesses.

Getting should involve finding the best suited [businesses] for our area.

Workshop Participant

Table 22 presents a summary of the elements of the GSED strategy. These strategic elements apply to attaining a green and sustainable regional economy, regardless of the mechanism chosen to deliver the program.

[GSED needs the] 4 "Cs" - Complete coordination, cooperation and commitment from everyone involved.

Workshop Participant

Table 22
Major elements of the GSED program

	Greening	Growing	Guarding	Getting
Objective	Make existing enterprises more sustainable	Encourage growth of green enterprises, consistent with sustainability principles	Retain successful green enterprises in the OSV	Recruit other green enterprises to locate in the OSV region
Organizational requirements	<ul style="list-style-type: none"> ◆ Coordinated regional message. ◆ Business and government mechanisms to implement and encourage green, sustainable attitudes 	<ul style="list-style-type: none"> ◆ Coordinated regional message. ◆ Regional mechanisms to enhance business growth 	<ul style="list-style-type: none"> ◆ Ensure all regulatory agencies are involved ◆ Collaboration among regulators and business is necessary 	<ul style="list-style-type: none"> ◆ Coordinated effort to market the region’s green and business-friendly outlook and opportunities ◆ Create a central agency for approving new companies’ environmental policies
Actions	<ul style="list-style-type: none"> ◆ Adopt Green Development Charter for private and public sector enterprises ◆ Develop green and sustainable operation guidelines for public and private sectors ◆ Identify and eliminate policies and regulations that are inconsistent with sustainability ◆ Publicize and encourage green and sustainable planning for smart growth of communities at municipal and regional levels 	<ul style="list-style-type: none"> ◆ Commit to removing obstacles to business growth ◆ Establish a green venture capital program ◆ Implement a green purchase program from all levels of government ◆ Coordinate a skills and education program with OUC and secondary schools in region ◆ Establish a research based incubator program with NRC, OSTEC, and OUC 	<ul style="list-style-type: none"> ◆ Establish a Regional Business Retention Program targeting firms thinking of leaving the region ◆ Ensure federal, provincial, regional, and municipal policies encourage green business retention ◆ Implement green purchase program from all levels of government ◆ Implement annual reviews of regional policies affecting businesses 	<ul style="list-style-type: none"> ◆ Identify “target businesses,” especially those that could support “clusters” in the OSV ◆ Market the region’s strengths to new firms ◆ Focus on regional strengths (technology, agricultural science, tourism, liveability) ◆ Prepare a marketing plan that has measurable objectives ◆ Have regional coordination for marketing the entire region

	Greening	Growing	Guarding	Getting
	<ul style="list-style-type: none"> ◆ Provide education and tax incentives linked to “green business practices” ◆ Establish best practices “Green Enterprise Award” ◆ Develop print and electronic reports on green business practices locally, nationally and internationally 	<ul style="list-style-type: none"> ◆ Implement annual reviews of policies of all levels of government that affect businesses ◆ Offer a wide range of practical business seminars using local business leaders 	<ul style="list-style-type: none"> ◆ Chambers of Commerce and OSTEC work together to provide information on green business opportunities to local business ◆ Initiate “Green Contributor Award” for enterprises that grow and stay in the OSV 	<ul style="list-style-type: none"> ◆ Target specific firms rather than using a shotgun approach ◆ Enhance current “Silicon Vineyard” for entire region and use in all marketing initiatives ◆ Develop a guide for green sustainability, including education, incentives, and enforcement, and adopt it as part of Getting process. ◆ Prepare a comprehensive plan for OSV region as a whole, identifying key economic and environmental features, amenities, and supporting infrastructure.
Organizations involved	<ul style="list-style-type: none"> ◆ Municipalities, regional districts ◆ Chambers of Commerce, OSTEC, OUC ◆ Local industry leaders and organizations ◆ Federal government agencies ◆ Community Futures 	<ul style="list-style-type: none"> ◆ Municipalities, regional districts, provincial governments ◆ OUC ◆ Investment community ◆ Chambers of Commerce, OSTEC ◆ Community Futures, BDC 	<ul style="list-style-type: none"> ◆ Municipalities, regional districts, provincial governments ◆ Chambers of Commerce, OSTEC ◆ Local industry leaders ◆ Community Futures 	<ul style="list-style-type: none"> ◆ Chambers of Commerce, OSTEC, other private sector organizations ◆ Major private firms ◆ Politicians ◆ Federal government ◆ Community Futures ◆ First Nations ◆ Economic development corporations ◆ The Innovation Forum
Timing	Implement as soon as appropriate delivery mechanism is determined			

7.3 Monitoring Progress Toward Sustainable Economic Development

Monitoring is an important element of any economic development program. With regard to the GSED project, the following topics have been identified as potential indicators of success of the program.

- Greater profitability and stability of local businesses,
- Increased job creation in appropriate sectors,
- Enhanced cooperation among jurisdictions,
- Cleaner air, cleaner water, and increased populations of rare, threatened, and endangered species,
- Increased investment in appropriate sectors,
- Increased diversification of the economy and jobs,
- Cost-effectiveness of economic development efforts,
- Reduced energy use and waste generation per capita,
- Greater understanding and support for the philosophy of sustainability by regional residents,
- Increased education and training opportunities, accompanied by higher labour force education and skill levels,
- Greater global recognition of the Okanagan and Similkameen region for its green, sustainable economy,
- The demographic characteristics of the population are more balanced,
- Stream and lake water quality improvements,
- Reduced vehicle kilometers traveled, total and per capita, and
- Increased building and population density in the hearts of communities, and declines in construction elsewhere.

Accept that a period of transition is needed to move from the current "non-green" state to the proposed "green" state. Second to this is the need for a base measurement of the current green state and then set achievable targets for the future green state.

Workshop Participant

Agencies that could monitor and report on these indicators include OUC, HRDC, and Economic Development Offices in the OSV.

Because changes in economic development conditions often occur slowly, extensive surveys need be done only every five years. A brief annual update on activities and baseline statistics (employment, numbers and kinds of firms, descriptions of sustainability-related programs) could be published to maintain the GSED program in the public mind and on political agendas.

To aid in the social debate, this whole idea (GSED) should move into the schools and start with children. The children will educate their parents fast enough.

Workshop Participant

8.0 Approaches to Delivering the GSED Strategy

The content of the GSED program can be considered separately from the method of implementing the program. This section of the report examines alternative approaches to delivering the GSED program, focusing on ways of organizing economic development services in the OSV.

8.1 Perspectives on Program Delivery Needs

The alternative approaches to delivering the “Four G” programs are designed to respond to the following issues:

- Sustainability issues (i.e. Greening) are not being dealt with adequately anywhere in the OSV now,
- Some areas of the OSV are without adequate economic development services covering the Growing, Guarding, and Getting functions,
- Meeting the sustainable economic development challenges efficiently and cost effectively will require coordinated action among all levels of governments, the private sector, NGOs, and other interested groups,
- The current institutional framework for economic development is severely fragmented. Although in CORD one agency handles all economic development issues, in RDOS, five separate municipalities now have full-time economic development officials, and in NORD only the Greater Vernon area has an economic development agency,
- The critical economic development functions of Greening, Growing, Guarding and Getting are diverse and require a broad range of technical expertise. Small, under funded, or under staffed offices cannot deliver the full range of expertise needed, and
- Changing government structures is time consuming and detracts from doing the work; it should be avoided unless the benefits justify the change.

Estimating the capital and recurrent costs associated with each GSED delivery approach is premature. Delivery costs are affected by many factors, including the types and phasing of programs implemented, whether or not some municipalities would wish to continue with their own EDO activities even under a OSV-wide or regional district approach, and the scope and rate of program implementation.

It has not been possible to collect accurate cost data on existing economic development activities in the OSV, so no analysis of the cost-effectiveness of present activities could be conducted. If a more unified approach to economic development is taken (compared to the status quo), the costs of more complete coverage for all communities in the OSV, plus the costs of new Greening and Growing programs, are likely to be offset by the efficiencies achievable by having fewer organizations and by the likelihood of obtaining greater federal and provincial funding.

8.2 Description of Program Delivery Alternatives

The success of economic development initiatives depends largely upon the effectiveness of implementation. To provide a basis for discussion by the Steering Committee and by workshop participants, four alternative approaches to delivering GSED services were developed:

1. The Status Quo,
2. A single, OSV-wide Economic Development Agency (with sub-offices delivering Greening, Growing, Guarding, and Getting services),
3. The status quo with the addition of a sustainability office, and
4. Three separate Economic Development Agencies (one in each regional district).

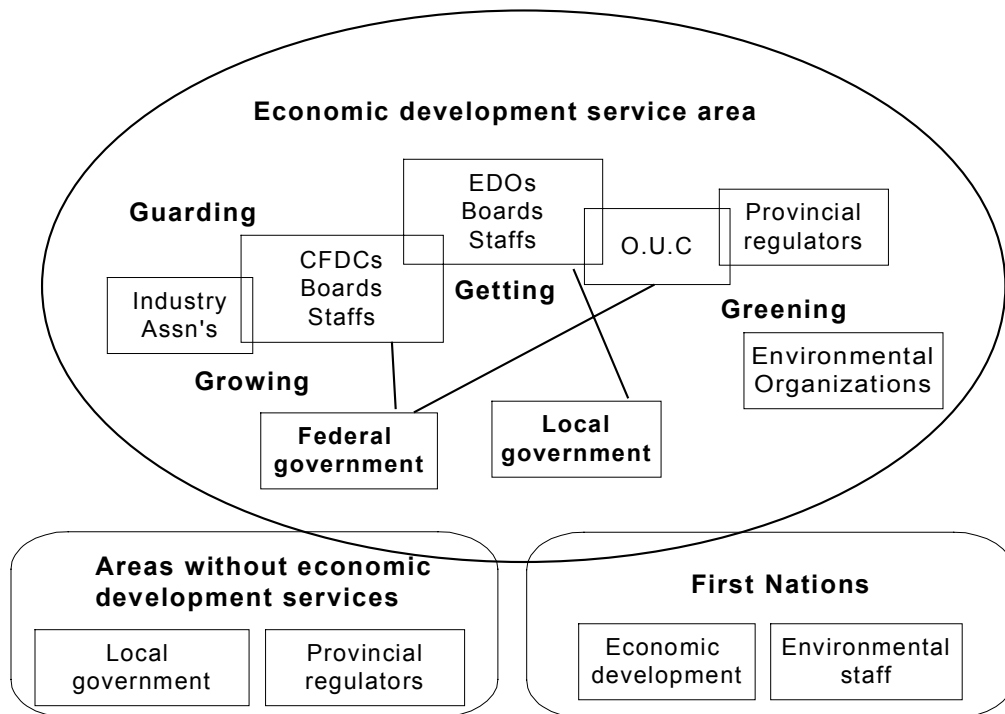
Each of these approaches will be discussed in turn.

Approach 1: Status Quo

Under this approach, the existing economic development officials throughout the OSV would deliver the sustainability programs. EDO officials in CORD, Greater Vernon and in several communities in RDOS would continue with their present duties. Training of economic development personnel to facilitate delivery of “Greening” programs would be provided through the regional districts; training programs might also be offered for the “Growing” and “Guarding” functions if desired.

The prevailing conditions are characterized by a large number of organizations having an interest in economic development in the OSV, each with separate mandates and sources of funding. Gaps and overlaps in coverage exist; some areas of the region have limited access to support in creation of a green, sustainable economy. Competition for “Getting” new businesses may be substantial. Figure 8 represents the structure of the Status Quo approach.

Figure 8
Approach 1: Status quo



Approach 2: Single OSV-Wide Economic Development Agency

Under this approach, all green economic development activities in the OSV would come under the jurisdiction of a single new economic development agency (EDA). This organization, under the day-to-day management of an Executive Director, would serve as the coordinating body for all efforts directed at achieving the objectives of this strategy. The EDA would report to a Board of Directors representing the entire OSV; for example, the Board could comprise three members from each regional district (one elected representative, one business representative, and one institutional or nongovernmental organization representative) and a First Nations representative. The EDA would be funded on a per capita basis by the regional governments.

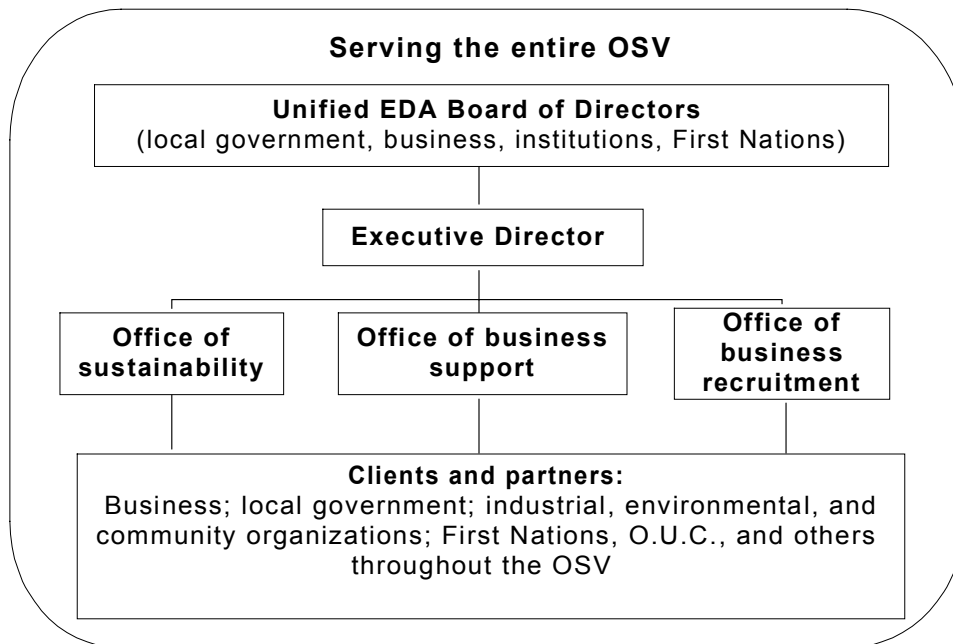
All green economic development activities of the three regional governments would be funnelled through this agency. Rather than having individual economic development officials represent specific regions or municipalities, staff responsibilities would be based on program requirements (sustainability, business support, recruitment).

An EDA office would be established and maintained in each Region, with staff in each office having specific subject, rather than geographic, responsibilities. For example, the Office of Sustainability could be located in Vernon, with staff responsible for “Greening” programs throughout the OSV. Offices of Business Support (Growing and Guarding) and Business Recruitment (Getting) would be sited in other cities. It is envisioned that existing EDO staff in

the three regions would be employed by the EDA, although perhaps carrying out different functions than at present. Training and outreach programs would be established for each of the “Four G” programs.

The organizational structure of such a single, OSV-wide economic development agency should minimize gaps and overlaps in service throughout the OSV, and be designed to support the GSED’s “Four G” program. Such an organization is represented graphically in Figure 9.

Figure 9
Approach 2: Single, OSV-wide economic development agency

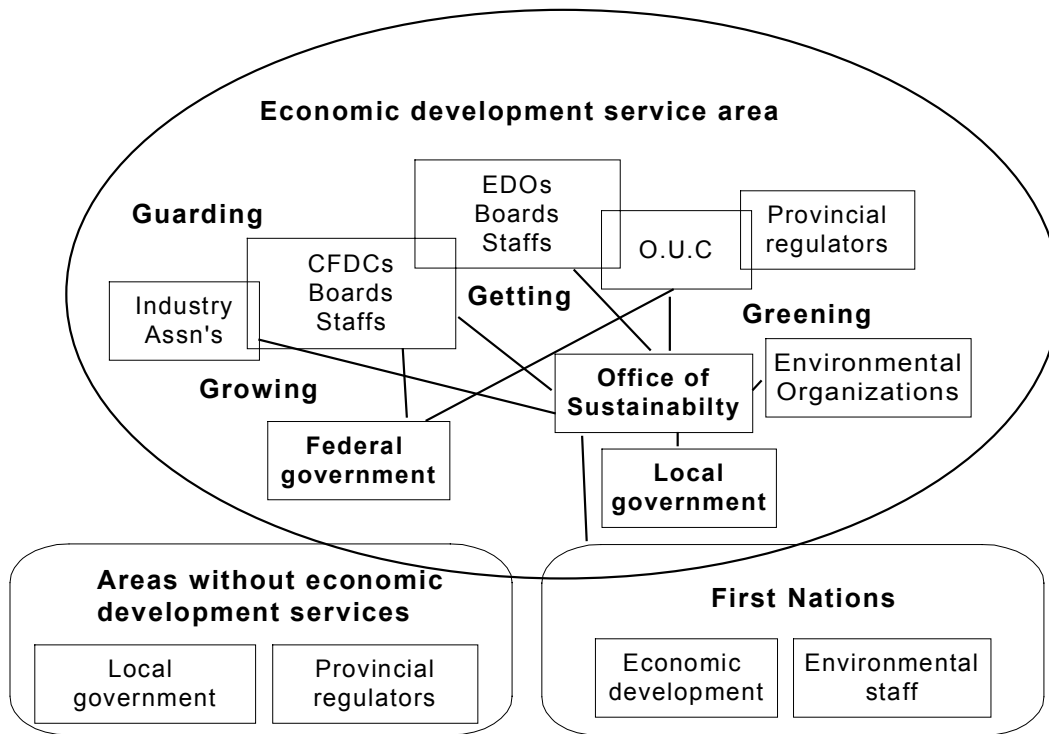


Approach 3: Status Quo Plus Parallel Sustainability Office

Under this approach, the three Regional Districts would establish a single Office of Sustainability to carry out the sustainability programs across the OSV. Economic development programs (consistent with Growing, Guarding, and Getting) would continue to be carried out by the existing EDOs, CFDCs, and other economic development organizations. The regional districts would seek ways of ensuring that economic development actions taken by the variety of agencies in the region are compatible with sustainability concepts. The goal would be to develop cooperation between local economic development staff and the Office of Sustainability. Obtaining serious commitment to green, sustainable development by building on the existing economic development delivery system is likely to prove challenging.

The weak organizational linkages of the status quo would remain intact under this approach, with the delivery of sustainability services overlaid on this structure (Figure 10).

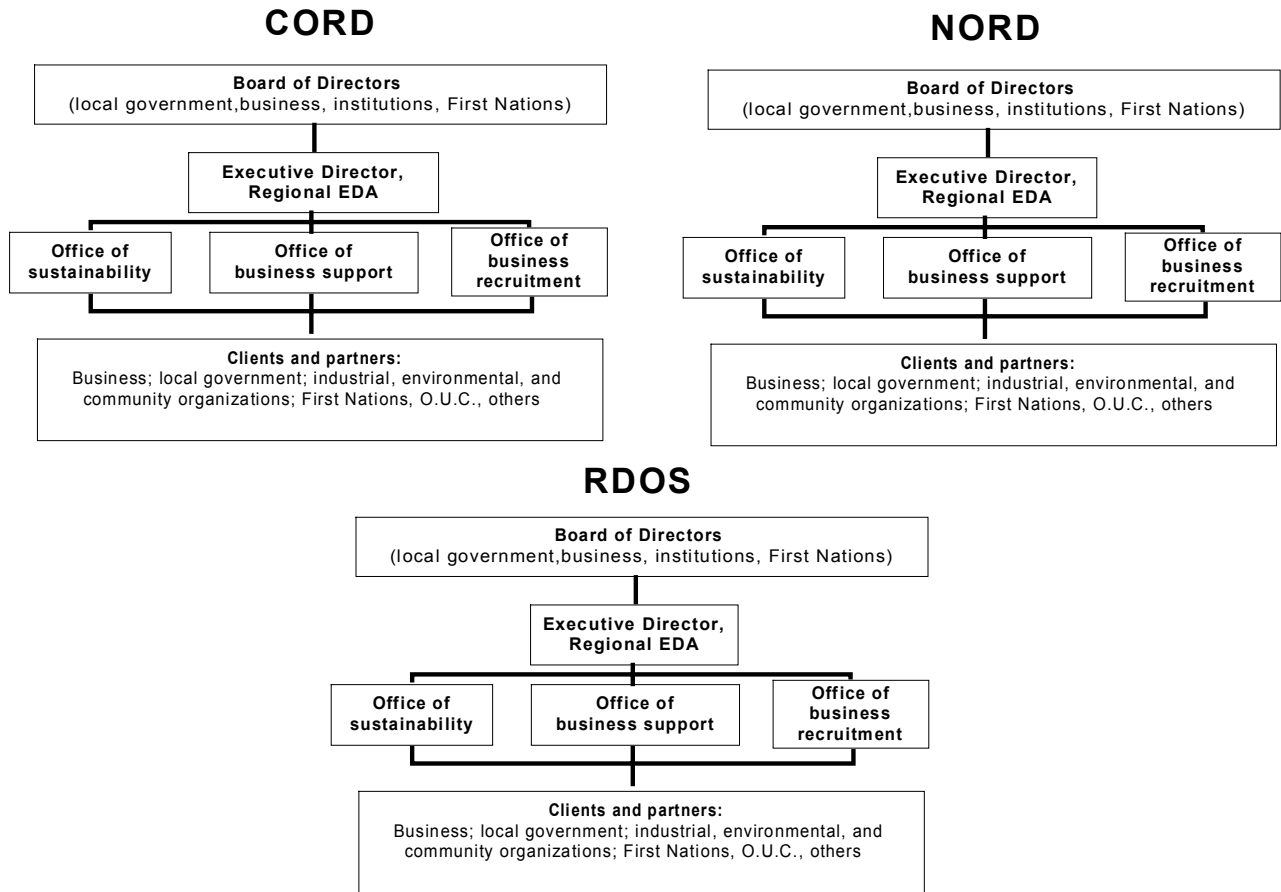
Figure 10
Approach 3: Status quo with sustainability



Approach 4: A Single Economic Development Agency in each Regional District

Under this approach, the economic development functions in each Regional District would be organized along the lines of the single, OSV-wide economic development agency presented in Approach 2. The OSV would thus have three independent EDAs, each with its own offices of sustainability, business support, and business recruitment (Figure 11).

Figure 11
Approach 4: Regional economic development agencies



Under any of these approaches, it is envisioned that key interested private and public sector organizations would become involved in program formulation and delivery. For example, Okanagan University College might be persuaded to take a major role in sustainability program development and delivery.

It is important to note that these approaches illustrate two substantially different approaches (multiple competing and overlapping organizations under the status quo versus a single, comprehensive, OSV-wide organization under the single EDA approach) plus two intermediate approaches. Many other possible variations are possible, as are a variety of governance and administrative options for each approach.

8.3 Criteria for Evaluating Alternatives

At the January 22, 2003 GSED workshop, participants expressed strong support for the concepts of green, sustainable economic development. Participants made it clear that all economic development initiatives should be consistent with principles of sustainability, and that GSED services should be provided throughout the Okanagan and Similkameen Valleys with gaps and overlaps in service eliminated. Competition among jurisdictions and groups seeking economic development was seen as harmful, and should be replaced by cooperation.

As noted earlier in this report, a large number of groups and agencies are involved in delivering economic development services in the OSV today. Changes to the method of providing economic development services will need to be made in the context of the existing institutions, and with consideration of the effects on their functions and personnel.

The remainder of this report focuses on how GSED delivery methods have been assessed, and on how the Steering Committee developed a recommended delivery mechanism.

8.3.1 Required General Characteristics of GSED Delivery Approaches

Through the process of developing the GSED program and hearing from workshop participants, it became evident that delivery mechanisms must have the following characteristics:

Collaborative

- Groups and agencies involved in GSED communicate effectively
- GSED activities are coordinated for maximum benefit throughout the region
- Competition among jurisdictions and agencies is replaced by cooperation

Complete

- All Four G services are provided.

Equitable

- GSED services are delivered throughout the OSV
- Programs are sensitive to local issues and differences:
 - Recognize rural and urban concerns
 - Recognize local uniqueness
- A broad range of interests is represented in decision-making.

Accountable

- Performance of GSED service delivery is monitored for:
 - Cost effectiveness
 - Responsiveness to local needs

- Service to business, community
- Environmental protection.
- The effectiveness of achieving all Four Gs is measured.

8.3.2 Detailed Criteria for Evaluating GSED Delivery

The preceding section describes requirements for GSED program delivery. This section provides a list of detailed criteria that can be used to evaluate suggested delivery approaches. The following criteria were designed to indicate how well each delivery approach meets the goals of the GSED, and are intended for use by the Steering Committee in preparing an organizational structure and detailed implementation plan.

1. **Comprehensive.** All green sustainable economic development topics (the Four Gs) should be available to all jurisdictions throughout the OSV:
 - Does the approach adequately cover the full range of sustainable economic development functions?
 - Does the approach reduce fragmentation?
 - Will all municipalities in the OSV have access to sustainable economic development resources?
 - Does the approach allow for characteristics and interests of small communities and rural areas to be represented?

2. **Coherent.** The structure brings all resources involved in sustainable economic development in the OSV into a constructive relationship:
 - Does the approach eliminate gaps and duplication?
 - Does the approach enable each sustainable economic development institution to have a clear set of objectives and the mandate to achieve them?
 - Does the approach enable regional districts to effectively coordinate all green and standard sustainable economic development activities?

3. **Effective.** Each economic development institution has the resources and capability to fulfill its responsibilities effectively:
 - Does each institution have the financial and human resources to fulfill its responsibilities?
 - Is the structure likely to meet GSED strategy objectives of improved economic performance and enhanced sustainability?
 - Does the approach provide organizational flexibility?
 - Does the approach enable regional districts to monitor the sustainable economic development agencies and hold them accountable for their performance?

- Will the structure be understandable and accessible to businesses desiring assistance or exploring establishment in the OSV?
- Does the approach enable the OSV to maximize funding from government sources?
- Does the approach offer the potential for cost efficiency?

4. **Implementable.** The creation and operation of the approach is feasible:

- Will the organizational change required to make the approach operable be minimized?
- Is the approach likely to be accepted by those required to implement it?
- Is the approach likely to be accepted by the private sector, NGOs, industry associations, other levels of government and other stakeholders?
- Is the approach likely to be accepted by the general public?

8.3.3 Reflecting the Diversity of OSV Communities

This report has emphasized the diversity of the physical and cultural landscape of the OSV. Implementation of the GSED Strategy needs to vary locally, so that it can reflect the particular characteristics, concerns, opportunities, and priorities of communities and sub-regions in the OSV.

Similkameen is different socially, economically. Different problems and issues from the Okanagan.

Workshop Participant

Portions of the OSV where the economy is depressed may need additional help to transform or reinvigorate their economic base. Regional cooperation may be a key to this change. For instance, some regional district services that need not be centrally located, such as emergency dispatch centres, may be relocated to small, rural areas in need of an economic boost. Approaches and relative costs related to “Getting” or “Growing” businesses in small communities may differ from those in larger centres.

A single GSED organization, with its operations dispersed throughout the OSV, has several advantages for small or rural communities. Whereas many rural areas today lack access to GSED functions, under a single umbrella organization, all parts of the OSV would have “Four G” services. The per capita cost of a single organization is likely to be lower than the per capita costs of a multitude of small, under-funded organizations, making a regional function more affordable to small communities. A regional organization would be more able to support rational location decisions by businesses seeking to locate in the OSV than is likely under the present pattern of competing interests. An OSV-wide body could effectively advocate for small, rural areas, and could help to ensure that benefits of economic development do not flow only to large centres, an issue that presently is of concern in small communities. Equity in representation could be achieved by ensuring that representatives from small communities or rural areas sit on any Board responsible for delivering GSED services.

OSV must work together more! Larger communities must offer assistance to smaller communities

Workshop Participant

8.3.4 Workshop Review of GSED Delivery Approaches

Workshop participants were asked a series of questions about GSED delivery. Prior to answering the questions, they had the opportunity to review the four delivery approaches outlined in Section 8.2, and discussed the implications of the delivery approaches with their peers from business, government, First Nations, academia, and nongovernmental organizations.

In summary, the graphs on the following pages show that:

- 90% of respondents agreed that “All towns, cities and businesses throughout the OSV should have access to professionally provided 4Gs services,”
- 94% of respondents agreed that “Economic development program providers throughout the OSV should work together to eliminate gaps and overlaps in services,”
- 90% of respondents agreed that “Economic development activities in the OSV would be more effective if local areas cooperate rather than compete with each other for businesses and jobs,” and
- 22% of respondents agreed and 58% disagreed that “Local control over economic development services is more important than having full coverage in the OSV.”
- In terms of how economic development services should be organized:
 - 31% agreed that services should be provided on an **OSV-wide** basis,
 - 25% agreed that services should be provided on a **Regional District** basis,
 - 10% agreed that services should be provided on a **municipal** basis, and
 - 9% agreed that services should be provided on some **other** basis (often a combination of the other approaches).

Figure 12

Question 1: All towns, cities and businesses throughout the OSV should have access to professionally provided "Four G" services

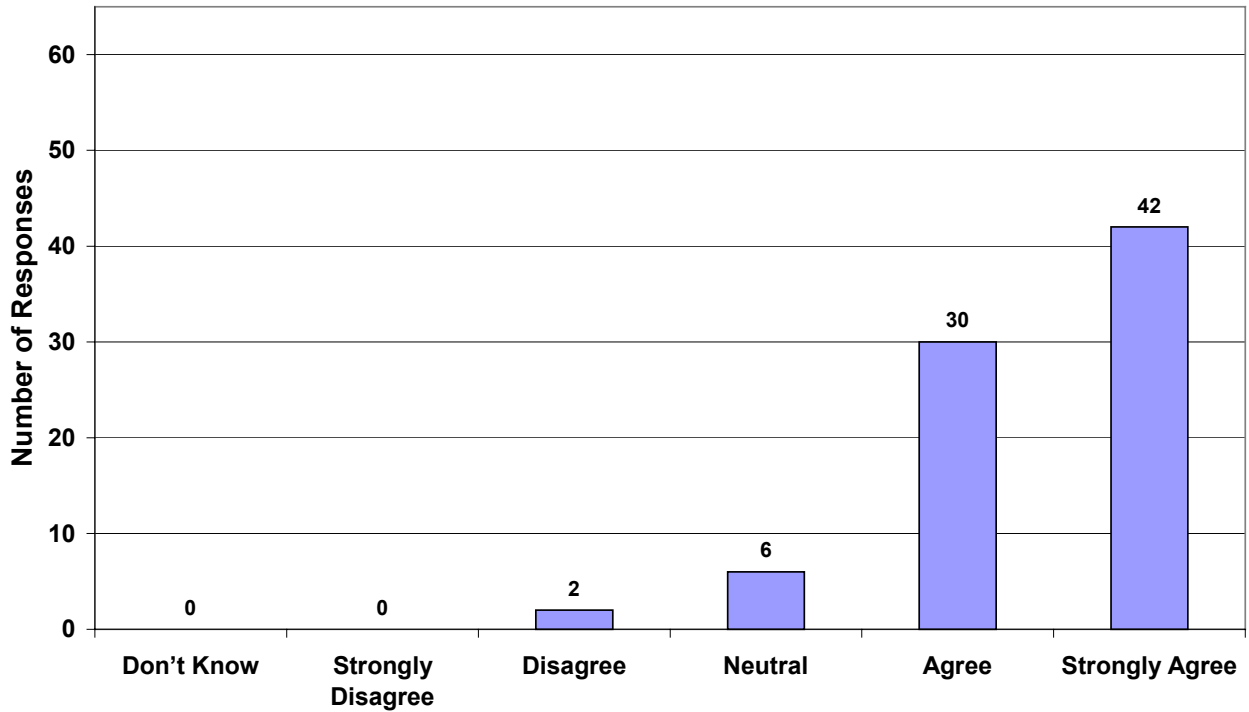


Figure 13

Question 2: Economic development program providers throughout the OSV should work together to eliminate gaps and overlaps in services

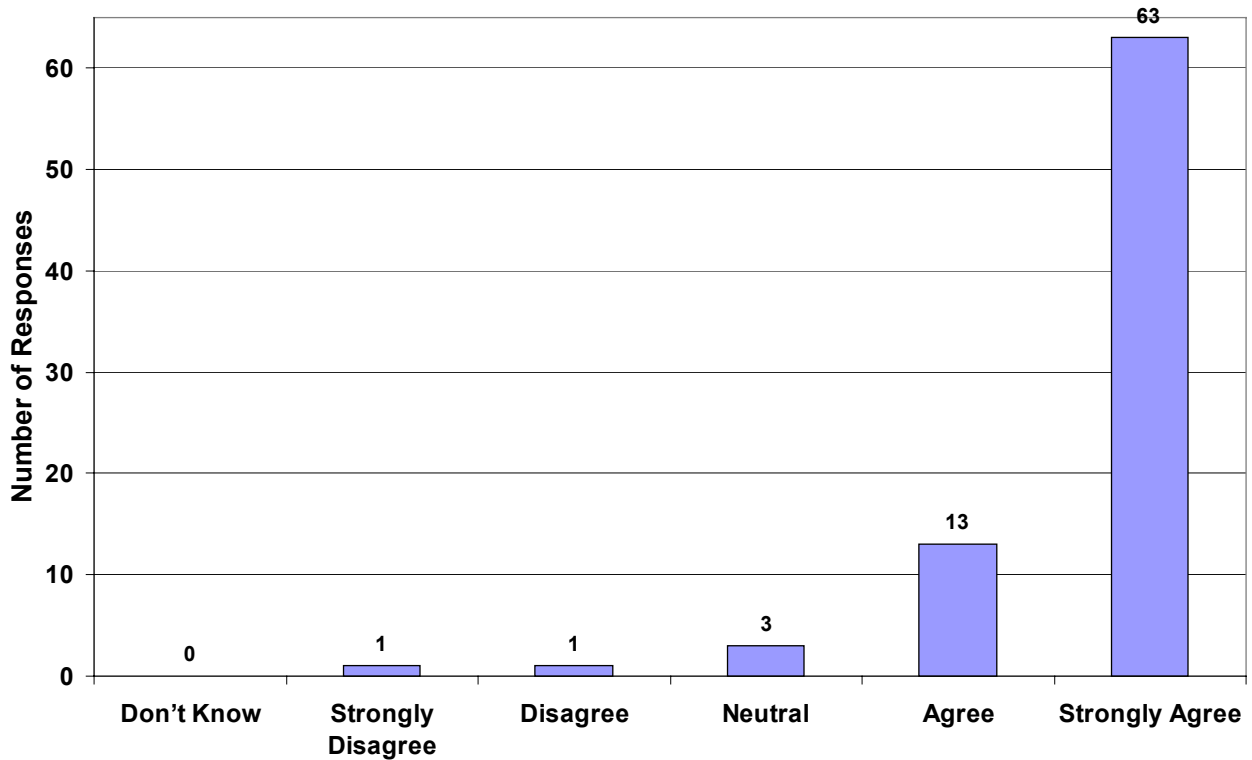


Figure 14

Question 3: Economic development activities in the OSV would be more effective if local areas cooperate rather than compete with each other for businesses and jobs

Total # of Responses = 81

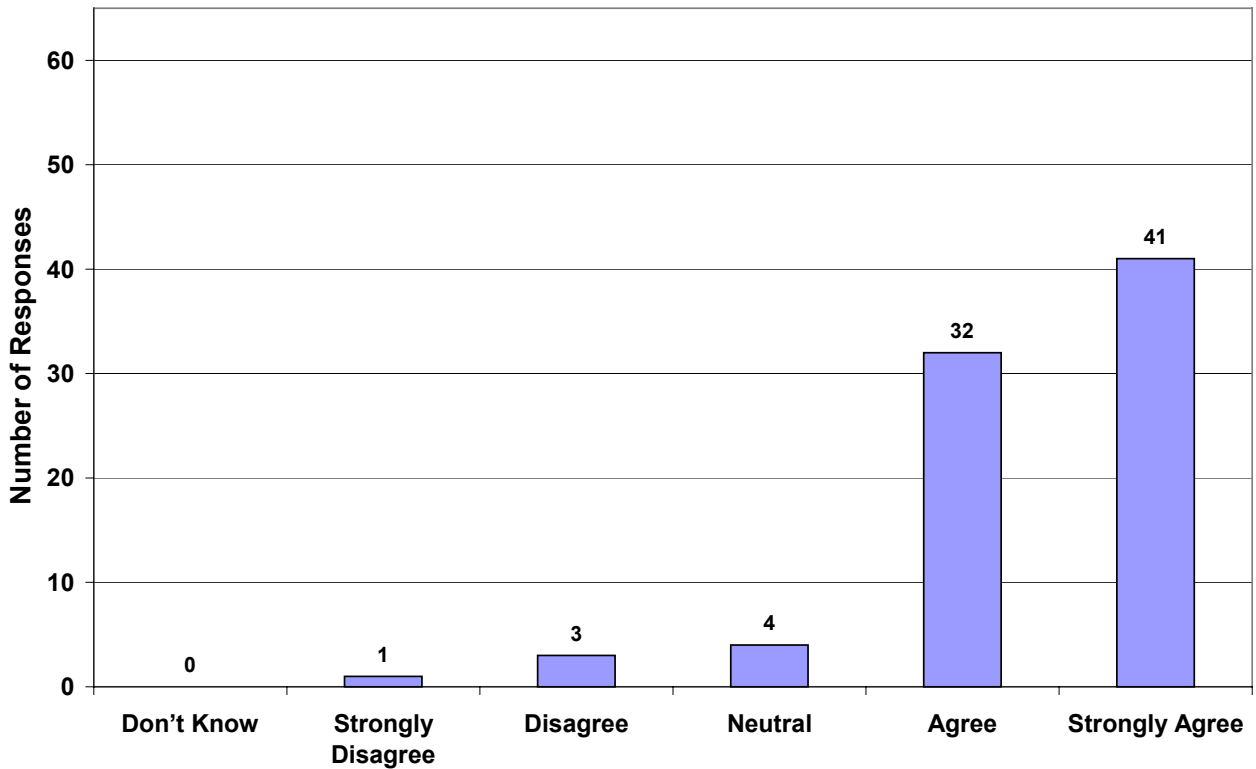


Figure 15

Question 4: Local control over economic development services is more important than having full coverage in the OSV

Total # of Responses = 77

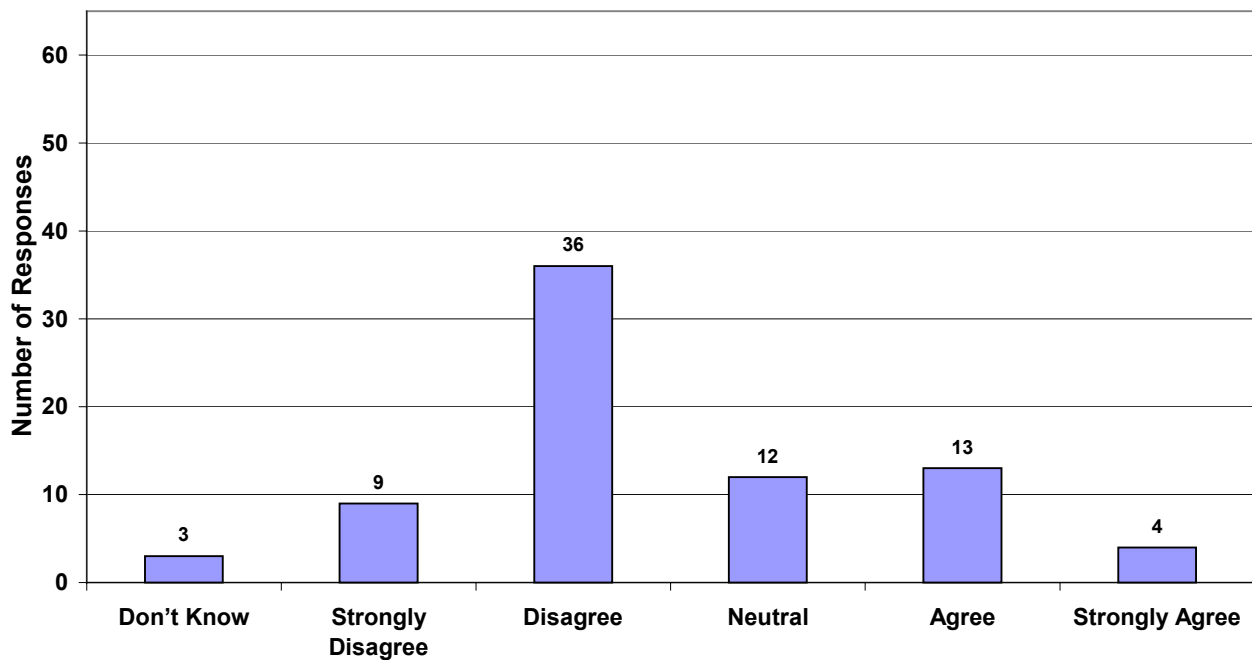


Figure 16
Question 5 A: Economic development services should be organized on an OSV-wide basis

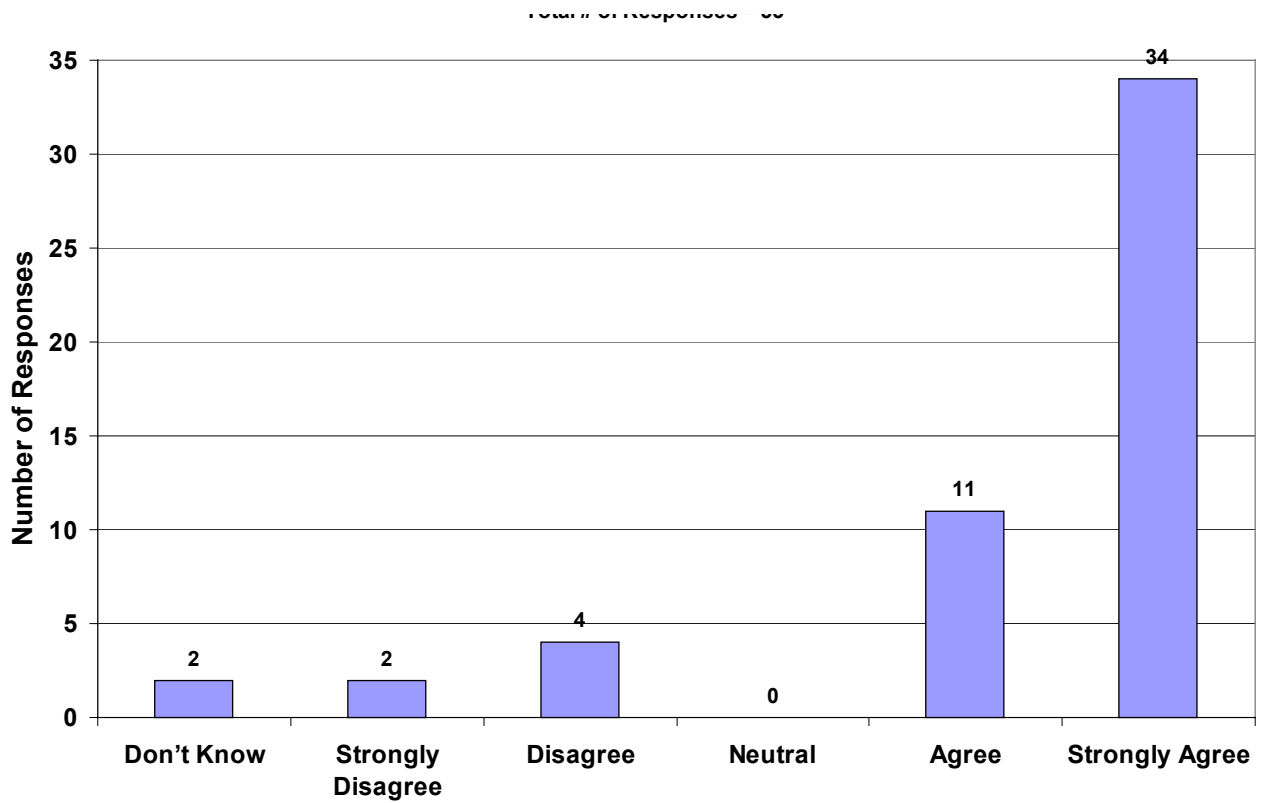


Figure 17
Question 5 B: Economic development services should be organized on a regional district basis

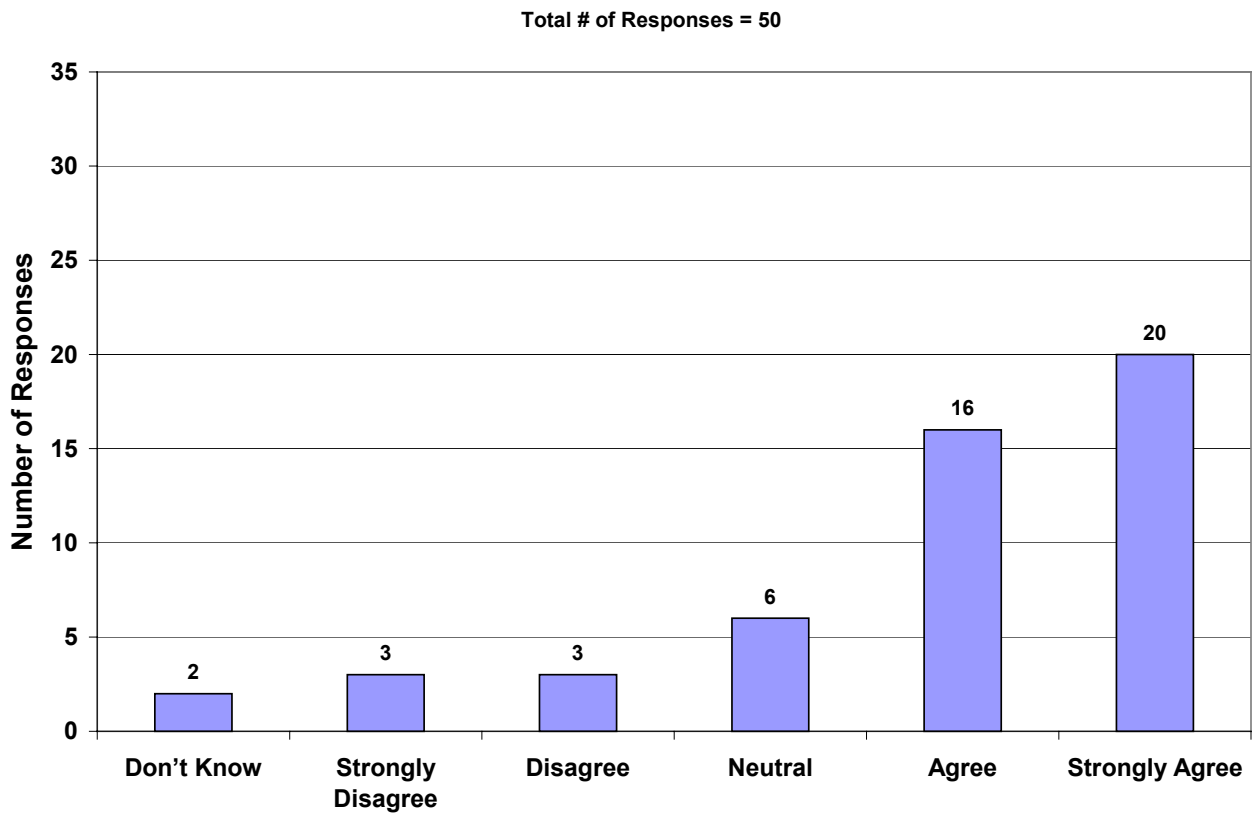


Figure 18
Question 5 C: Economic development services should be organized on a municipal basis

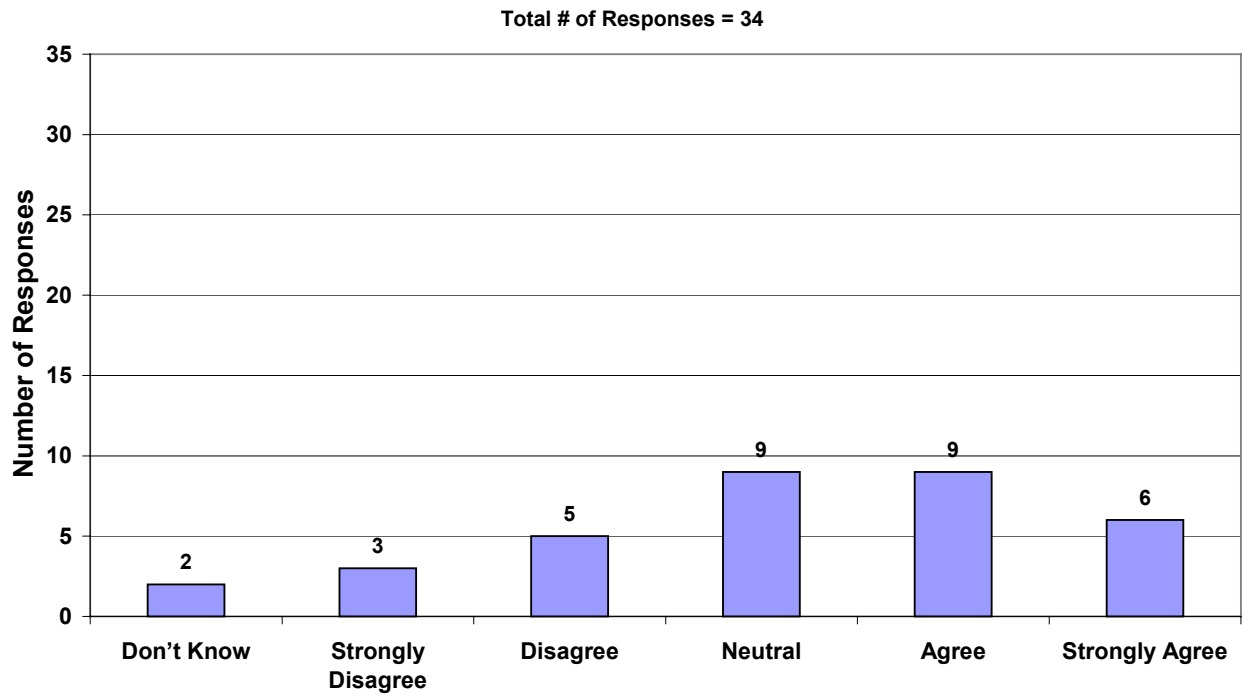
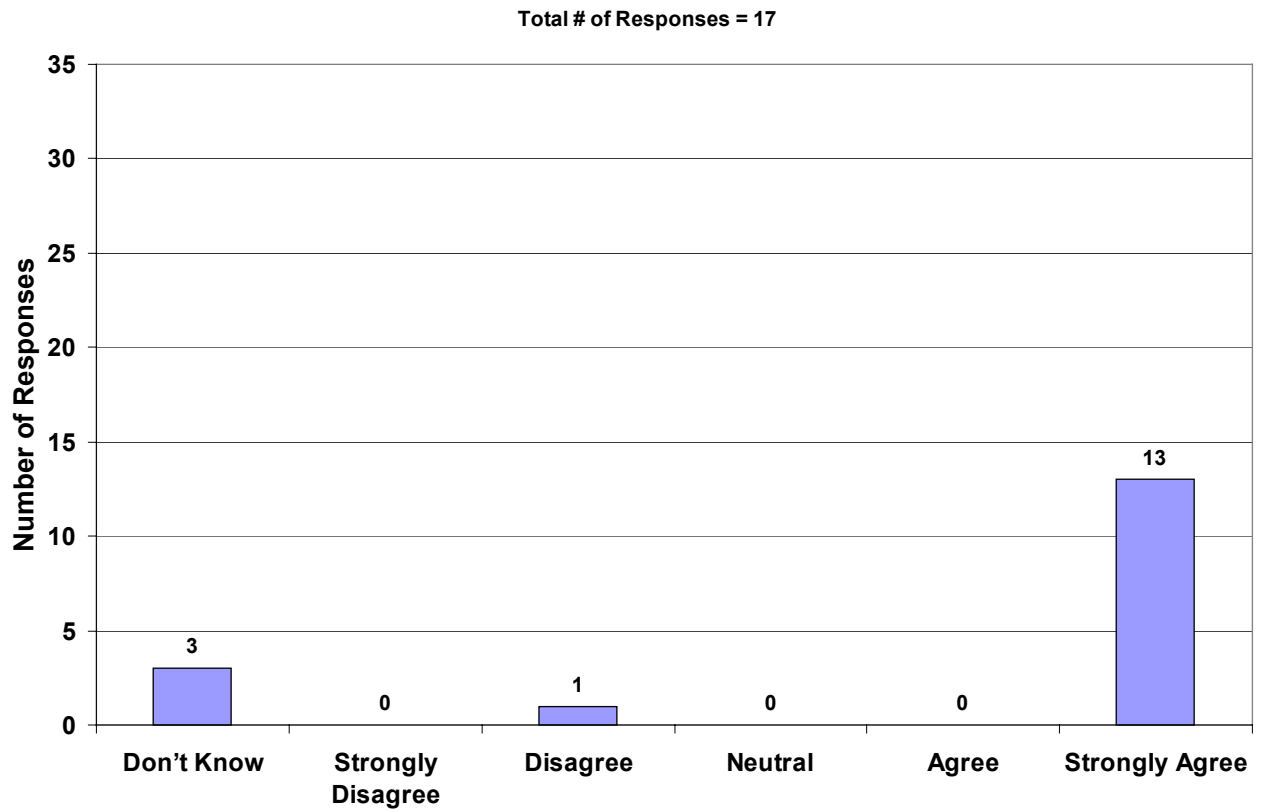


Figure 19
Question 5 D: Economic Development services should be organized on an other basis



8.3.5 The Steering Committee: Recommended Delivery Approach

The GSED Steering Committee, at its meeting of February 14, 2003, reviewed the results of the Workshop and suggested a delivery mechanism that provides OSV-wide services for the Greening, Growing and Guarding functions. Local communities would continue the current practice of providing business recruitment (Getting) services through Economic Development Commissions, Chambers of Commerce, etc.) (Figure 20).

The delivery of the first Three Gs (Greening, Growing, and Guarding) would involve the establishment of a new economic development agency operated jointly by the three Regional Districts and other key interests (Figure 20).

Under this approach, an Executive Director would be hired to coordinate the provision of Greening, Growing and Guarding services and to coordinate economic development initiatives throughout the OSV (e.g. the Cluster Study, Transportation Study, and so on). The Executive Director would be responsible for ensuring that initiatives are consistent with green sustainable economic development principles

[GSED needs a] body to co-ordinate and facilitate and promote the strategy, such as Community Futures since this is part of their mandate, they are non-political, and have OSV-wide coverage.

Workshop Participant

The Executive Director would report to an Executive Board of Directors comprised of elected and administrative representatives of each Regional District, Federal and Provincial governments, First Nations, and Chief Executive Officers of selected key industries, Okanagan University College, and the head of a nongovernmental environmental organization. Membership in the Executive Board would be kept as small as possible, consistent with broad representation of GSED interests in the OSV. Geographic equity, and small and large community representation should also be considered in selecting Executive Board members.

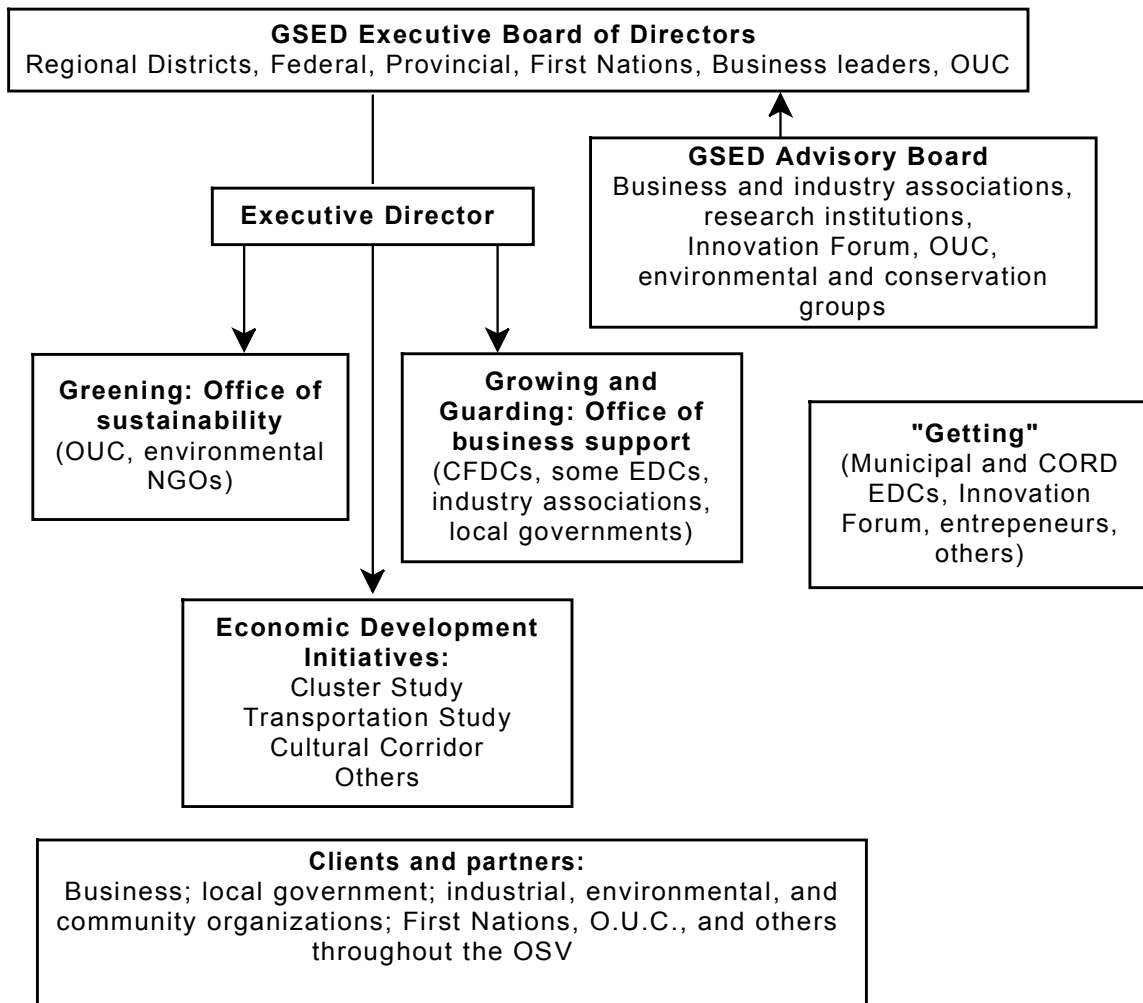
A GSED Advisory Board would be established to provide technical advice to the Board. The Advisory Board would have broader representation than the Executive Board, and could be comprised of representatives from:

Develop a structure that provides a physical presence and reflects entire valley i.e. board of directors from industry, government, first nations and executive director as full time presence.

Workshop Participant

- Industry associations (Okanagan Science and Technology Council, BC Fruit Growers Association, the Wine Institute, the Okanagan Manufacturers Association, the Cattlemen's Association, Thompson-Okanagan Tourism Association, etc.),

Figure 20
Steering Committee-recommended interim GSED delivery structure



- Environmental and community associations (including groups operating under the aegis of the Okanagan Nation Alliance),
- Research institutes (such as the Pacific Agricultural Research Station, the Dominion Radio Astrophysical Observatory, and Okanagan University College),
- Groups representing small communities and rural areas,
- Heads of businesses that have (or could develop) a key role in achieving GSED, and
- Heads of institutions that have activities related to GSED (hospitals, schools, water utilities, the Okanagan Basin Water Board).

The Steering Committee suggests that the Greening, Growing, and Guarding functions could be provided by existing organizations under contract to the Executive Board. For example, OUC could provide the Greening programs and Community Futures Development Corporations and some Economic Development Commissions could provide Growing and Guarding services. The

mechanisms by which the Three G services would be delivered (and, importantly, how they would be effectively coordinated) will require further study.

Funding for the day-to-day operation of GSED program delivery would be provided primarily by the Regional Districts, although start-up and even long-term funding could be sought from federal and provincial sources. Funding for specific initiatives or projects conducted by the GSED Executive or by other groups would be provided primarily by non-Regional District sources (federal and provincial funding, private sector initiatives, and nongovernmental organization fundraising).

[GSED needs] an area-wide approach that is supportive to green industry and ensures good representation of individual municipalities / regional districts.

Workshop Participant

8.4 GSED Recommendations

This project has resulted in the following recommendations for pursuing green sustainable economic development in the OSV:

1. The Vision for a green, sustainable future of the OSV—*A quality environment IS our economic future*—should guide economic, land use, and environmental planning throughout the region.
2. Enterprises in the OSV should be financially self-sustaining, and economical viable, focus on products and services that are environmentally benign and socially responsible, and should conduct their operations in the same way.
3. The eight criteria of sustainable enterprises should be used to guide:
 - The strategic and operational planning of businesses, governments, and institutions, and
 - Decisions regarding the kinds of enterprises encouraged to locate and operate in the OSV.
4. Green, sustainable enterprises in the OSV can fall in to a variety of categories, including:
 - Agriculture and agricultural processing,
 - Manufacturing and other light industry,
 - Tourism,
 - Health care,
 - Retirement services,
 - Research and education,
 - Financial services,
 - Consulting and related knowledge-based industries,
 - Sustainable utilities (energy, recycling, water conservation), and
 - Sustainable forestry.

This study area is within Okanagan Nation territory... This participation must be meaningful and include aboriginal people at beginning stages - do not wait for First Nations to react.

Workshop Participant

Linkages among and within these sectors should be encouraged and strengthened, creating “clusters” of vigorous, locally-beneficial industries.

5. Economic development in the OSV should be based on the four pillars identified in this study:

- Greening
- Growing
- Guarding
- Getting.

Recognize importance of working together.

Workshop Participant

6. Based on the consultant’s research, input from workshop participants, and suggestions made by the Steering Committee, it is recommended that the GSED Strategy be implemented on an OSV-wide basis.

7. The organizational approach proffered by the Steering Committee offers a reasonable approach for meeting the strategic goals on an OSV-wide basis for three of the four Gs: Greening, Growing and Getting.

In terms of the fourth G, Getting, it appears that the time is not right for providing such services on an OSV-wide basis. Indeed, since the commencement of this study, more communities in RDOS have decided to retain their own economic development officers. This occurrence will reduce the number of communities without self-provided Getting services, but other communities that cannot afford their own economic development officers will remain without access to such services. The proliferation of economic development groups may also increase the competition among Regional Districts and municipalities chasing businesses and jobs, reducing the impact of any future OSV-wide branding and marketing initiatives.

Competition among communities for jobs might override principles of sustainability.

Workshop Participant

To achieve the goals of equitable, effective economic development in the OSV, therefore, the coordinated Greening, Growing and Guarding approach should be vigorously implemented as an interim step toward an OSV-wide economic development agency that would also provide business recruitment and marketing services (Getting) to all communities.

9.0 Next Steps

Attaining the goals of green sustainable economic development will require persistence in attaining the goals of GSED, and diligent coordination of groups involved in economic development program delivery. The following steps are suggested to move the GSED program toward implementation. In the immediate term Table 23 presents timeframes for actions leading up to a Steering Committee decision on how to proceed with a GSED program.

The Steering Committee's approach to delivering GSED involves the participation of various organizations outside the purview of the Regional Districts (e.g. Community Futures, Western Diversification, OUC), some of which are not represented on the Steering Committee. It is important to contact officials of the potentially-involved organizations in order to determine:

- their interest in participating,
- their level of agreement with the goals and objectives of GSED,
- their organizational and corporate ability to participate,
- the sources and levels of funding that they would require, and
- the human resources available to provide program functions throughout the OSV.

Similarly, it is important that the Chief Administrative Officers of the three Regional Districts meet to explore:

- How the delivery organization can be legally established,
- Who would be responsible for income, salaries, and expenses,
- How operating and program funding would be obtained (including discussions of how much and on what basis each Regional District would contribute to the operations).

All levels of government should contribute somehow to encourage "Green Economic Development"

Workshop Participant

Prior to proceeding, it will also be important to meet with representatives of the Innovation Forum, Cultural Corridor project, and designers of the upcoming Transportation Study to determine if they would or could allow the GSED Executive Director to manage or otherwise influence their projects, as suggested by the Steering Committee. Representatives of Western Economic Diversification in Vancouver should be contacted to discuss the level of support and involvement that could be provided.

If the Steering Committee wishes to take preliminary steps toward implementing the GSED (perhaps by creating the Executive Board, Advisory Board, and Executive Director), it will be necessary to undertake the following tasks:

1. **Develop implementation options.** The Steering Committee suggested that a corporate structure for the GSED may be appropriate, but other alternatives may also be suitable. Other models should be reviewed in terms of the implications of their use in the OSV. During this stage, it will be important to liaise with legal counsel for the regional districts to identify issues associated with creating an economic development institution, and steps needed to comply with applicable legislation and regulation.

There needs to be a separate implementation plan, which can incorporate the Four G's principles. Start small and build momentum. Besides, whoever funds the implementation plan will determine the structure.

Workshop Participant

2. **Convene a Steering Committee meeting.** The Steering Committee members (and, perhaps, other potential Executive Board members) should be invited to review and discuss the implementation options drafted in Task 1, and other aspects of GSED implementation.

3. **Prepare detailed implementation actions.** Based on decisions reached at the Steering Committee meeting, a set of detailed implementation actions should be drafted, including:

- steps for amending the Letters Patent of the regional districts, if necessary,
- funding formulas, financial management methods, and accounting procedures,
- actions to nominate, designate, and replace members of the Executive and Advisory Boards,
- recommended voting or other decision processes on the Executive Board,
- defining the duties of the Executive Director, and recommending recruiting procedures, and
- establishing relationships with implementing agencies such as Economic Development Commissions, Community Futures Development Corporations, the Innovation Forum, Okanagan University College, and others.

4. **Circulate actions list to Steering Committee.** A set of draft implementation actions should be circulated to the Steering Committee for review and approval.

For the GSED program to succeed, it needs to have support at the local, federal, and provincial levels. Business and economic development interests will also need to accept and support green, sustainable development and efficient delivery of economic development services. This report is an initial step on the path to a more sustainable and secure future for the Okanagan and Similkameen Valleys.

Just do it - enough talk.

Workshop Participant

Appendix A

Terms and Concepts Related to Sustainability

DEFINITIONS

"[Sustainable production and consumption is] the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations."

Symposium: Sustainable Consumption. Oslo, Norway; 19-20 January 1994.

"Sustainable production and consumption involves business, government, communities and households contributing to environmental quality through the efficient production and use of natural resources, the minimization of wastes, and the optimization of products and services."

Edwin G. Falkman, Waste Management International. Sustainable Production and Consumption: A Business Perspective. WBCSD, n.d.

"The emphasis of sustainable production is on the supply side of the equation, focusing on improving environmental performance in key economic sectors, such as agriculture, energy, industry, tourism and transport. Sustainable consumption addresses the demand side, looking at how the goods and services required to meet basic needs and improve quality of life - such as food and health, shelter, clothing, leisure and mobility - can be delivered in ways that reduce the burden on the Earth's carrying capacity."

Nick Robins and Sarah Roberts, Changing Consumption and Production Patterns: Unlocking Trade Opportunities. International Institute for Environment and Development and UN Department of Policy Coordination and Sustainable Development, 1997.

"Sustainability is an economic state where the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment to provide for future generations. It can also be expressed in the simple terms of an economic golden rule for the restorative economy: Leave the world better than you found it, take no more than you need, try not to harm life or the environment, make amends if you do."

Paul Hawken, *The Ecology of Commerce*.

"Growing environmental concerns, coupled with public pressure and stricter regulations, are changing the way people do business across the world. Industry is on a three-stage journey from environmental compliance, through environmental risk management, to long-term sustainable development strategies."

International Institute for Sustainable Development

"Sustainability is to leave future generations as many opportunities as, if not more than, we have had ourselves."

Serageldin

“Sustainable development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.”

Brundtland Commission

"Sustainable consumption implies that the consumption of current generations as well as future generations improves in quality. Such a concept of consumption requires the optimalization of consumption subject to maintaining services and quality of resources and the environment over time."

Dr. Emil Salim, The challenge of sustainable consumption as seen from the South. In Symposium: Sustainable Consumption. Oslo, Norway; 19-20 January 1994.

Sustainability Concepts

Carrying capacity is the maximum number of individuals of a defined species that a given environment can support over the long term. The notion of limits is fundamental to the concept of carrying capacity. However, our limited understanding of complex, non-linear systems leads to uncertainty in calculating carrying capacity in relation to humans. Some argue that the concept is meaningless as free market conditions and technological innovation can extend limits indefinitely.

The steady state economy is a human economy characterized by constant population, capital stocks and rate of material/energy throughput such that there is sustainable equilibrium between human activities and the environment. While these elements are constant, "cultural capital" can change; thus a distinction is made between growth (quantitative) and development (qualitative).

Environmental utilization space or ecospace is the capacity of the environment to support human activities by regenerating renewable resources and absorbing waste. The boundaries of environmental utilization space are determined by the patterns and level of economic activity. A distributional element can be added by allocating ecospace at a national or per capita level, and is thus useful in illustrating present inequities.

Ecological economics goes beyond conventional conceptions of scientific disciplines and attempts to integrate and synthesize many different disciplinary perspectives in order to achieve an ecologically and economically sustainable world.

Ecological footprint is the area of land and water required to support a defined economy or population at a specified standard of living. Industrialized economies are considered to require far more land than they have, thus, through trade, impacting on resources in other countries. Also known as 'appropriated carrying capacity', this concept also incorporates the distributional aspects of sustainable production and consumption.

Ecological rucksack is the total weight of material flow 'carried by' an item of consumption in the course of its life cycle. Like the ecological footprint, the ecological rucksack concept deals with displaced environmental impacts but has a more technical focus. It is concerned with reducing material intensity and resource inefficiency.

Eco-efficiency is the more efficient use of materials and energy in order to reduce economic costs and environmental impacts. This is widely considered a pragmatic approach, particularly among business, but it has been noted that improved unit efficiency does not necessarily lead to lower consumption levels. Economic output may rise with constant or reduced resource inputs.

MIPS (material intensity per service unit) is an indicator based on the material flow and the number of services or utilizations provided. Reducing the MIPS of a product is equivalent to increasing resource productivity.

Factor Four is the idea that resource productivity should be quadrupled so that wealth is doubled, and resource use is halved. The concept has been summed up as "doing more with less". It is argued that this would result in substantial macro-economic gains.

Factor Ten is the idea that per capita material flows caused by OECD countries should be reduced by a factor of ten. Globally, claim proponents, material turnover should be reduced by 50 percent, but because OECD countries are responsible for material flows five times as high as developing countries, and world population is inevitably increasing, the OECD has to set long-term targets well beyond the more conservative Factor Four target.

Natural capital is an extension of the economic notion of capital (manufactured means of production) to environmental 'goods and services'. It refers to a stock (e.g., a forest), which produces a flow of goods (e.g., new trees) and services (e.g., carbon sequestration, erosion control, habitat). Natural capital can be divided into renewable and non-renewable; the level of flow of non-renewable resources (e.g. fossil fuels) is determined politically.

Natural resource accounting and green GDP are alternative systems of national accounting and performance measures, which incorporate ecological and human welfare considerations. They are a way of better understanding the implications of economic activity for environmental integrity and human well-being. However, placing a monetary value on pollution and resource extraction is controversial and presents methodological difficulties.

Environmental debt is the cost of restoring previous environmental damage as well as the cost of recurring restoration measures. Unless measures are taken to alleviate environmental degradation, environmental debt continues to rise and the burden is transferred to future generations. However, some environmental damage such as species extinction is not restorable, and therefore cannot be included in the environmental debt.

Industrial ecology uses the metaphor of metabolism to analyze production and consumption by industry, government, organizations and consumers, and the interactions between them. It involves tracking energy and material flows through industrial systems, e.g. a plant, region, or national or global economy.

Inter-generational equity is the principle of equity between people alive today and future generations. The implication is that unsustainable production and consumption by today's society will degrade the ecological, social, and economic basis for tomorrow's society, whereas sustainability involves ensuring that future generations will have the means to achieve a quality of life equal to or better than today's.

Intra-generational equity is the principle of equity between different groups of people alive today. Similarly to inter-generational equity, intra-generational equity implies that consumption and production in one community should not undermine the ecological, social, and economic basis for other communities to maintain or improve their quality of life.

Sustainable building is the use of design and construction methods and materials that are resource efficient and that will not compromise the health of the environment or the associated health and well-being of the building's occupants, builders, the general public, or future generations.

Sustainable production is the creation of goods and services using processes and systems that are non-polluting, conserve energy and natural resources, are economically efficient, are safe and healthful for workers, communities, and consumers, and are socially and creatively rewarding for all working people.

Appendix B

Some Initiatives Related to Sustainability in the OSV

Initiative	Group(s) involved
Okanagan Air Shed Coalition. Coalition of OSRD and CORD to work together to improve air quality	OSRD, CORD
Economic Development Commission. Supports economic development in the region	CORD
Free vehicle emissions testing clinic: tests cars to see if they will pass the test	CORD
Fish awareness day at Mission Creek Regional Park	CORD
Household hazardous waste round up: a place to safely dispose of hazardous household waste.	CORD
Okanagan Cultural Corridor Project: Initiative to improve and promote tourism	CORD
Waste Reduction and Recycling Program: Curbside & drop site recycling and public education	NORD
Electoral Areas B and C bylaw restricting open burning in an attempt to improve urban air quality	NORD
Greater Vernon Master Water Plan: water utility infrastructure improvement and expansion project to ensure economic, sustainable water supplies	Greater Vernon Water Utility
Okanagan Basin Water Board	CORD, NORD, OSRD
"Keep your Community Free of Litter" children's environmental postcard design contest	OSRD
Great Okanagan Wood Stove Exchange Program: rebates for the replacement of wood burning stoves for cleaner appliances.	OSRD
Environmental Mind Grind: Trivia contest for students on Earth Day	OSRD
Program to reduce the use of toxic pesticides used to control codling moth	Okanagan-Kootenay Sterile Insect Release Program
Educational and information initiatives promoting environmental awareness and participation among the general public.	Okanagan Similkameen Conservation Alliance
Growth Management Strategy	CORD
Speaker series: Talks on water quality and environmental topics.	Okanagan Similkameen Conservation Alliance
Meadowlark Festival	Okanagan Similkameen Conservation Alliance
Strategic Planning Document: partnerships with orchardists & hotel chains.	The Wine Institute
Sterile insect release	BC Fruit Growers Assoc
Promote deer fencing	BC Fruit Growers Assoc
Pilot project to reduce burning	BC Fruit Growers Assoc
Habitat conservation, increase conservation awareness, promote land stewardship, promote ecologically sustainable land use	South Okanagan Similkameen Conservation Program
Not-for-profit corporation whose goal is to provide fairly priced telecommunications infrastructure to the people of the Columbia Basin for residents, educational institutions, and businesses.	Columbia Mountain Open Network
Spokane Canada Celebration: two day celebration of Okanagan products / companies	Economic Development Commission (CORD)
Business Retention and Expansion Program	Economic Development Commission (CORD)
Young Entrepreneurs Awards	Economic Development Commission (CORD)
Small business training workshops	Community Futures Development Corporation
Youth entrepreneurship program	Community Futures Development Corporation
Self employment benefits program	Community Futures Development Corporation
Greater Vernon Economic Development Partners: advisory panel to develop, promote economic development	Greater Vernon Services Commission
Okanagan Film Commission promotional actions	Okanagan-Similkameen Community Futures Development Corporations

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