

# Regional Sustainability Indicators Framework for South West Victoria



## Milestone 3b Report: Agreed Set of Indicators

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# Background

In South West Victoria, the need for indicators to measure progress to sustainability was identified in the South West Sustainability Blueprint (South West Sustainability Partnership, 2001). To address this need, Deakin University Warrnambool and Glenelg Hopkins Catchment Management Authority (GHCMA), and the other partners in the South West Sustainability Partnership, carried out the project *Catchment to Regional Scale Indicators of Sustainability* to identify a set of indicators for assessing the sustainability of South West Victoria (Wallis and Wallis, 2004). This project identified a set of priority indicators for the region, which had data available to assess trend and condition at the sub-catchment scale, across three pillars of sustainability: environmental, social and economic. These indicators were used to produce An Index of Regional Sustainability (AIRS). AIRS uses multiple criteria analysis to bring the indicators together producing an index of sustainability based on the relationships between the indicators and their impact on sustainability (Richards et al., 2007). AIRS was integrated into Geographical Information Systems (GIS) to enable mapping of sub-catchment sustainability to provide visually, information about the region's sustainability to policy makers (Graymore et al., 2007). However, an evaluation of this sustainability assessment revealed that no organisations in the region were using the assessment to inform policy or program development. The major barriers for adoption included, AIRS not being specific to industry and agency needs and the lack of clear guidelines for use (Wallis et al., 2010).

Following this, the Natural Assets Alliance of the South West Sustainability Partnership identified in the Priorities Direction Statement 2010-2012 (Natural Assets Alliance of the South West Sustainability Partnership, 2010), that further work was required to 'extend and fully integrate the SW Sustainability Indicators Program' (p7). Thus, the next stage for sustainability assessment in South West Victoria is the *Regional Sustainability Indicators Framework for South West Victoria* project is a partnership between University of Ballarat, Southern Grampians Shire Council and the Natural Assets Alliance of the South West Sustainability Partnership. The project is funded by the Victorian Local Sustainability Accord Round 4, through Department of Sustainability and Environment (DSE) and the South West Sustainability Partnership through the Natural Assets Alliance.

The aim of this project is **to review, establish and communicate an agreed set of sustainability indicators and a framework to deliver them**. This will be achieved by delivering the following core objectives:

- **Develop an agreed set of indicators** built on research done by Deakin University (2003-2010)
- **Test and evaluate** the use of this set of indicators to assess sustainability of South West Victoria at various spatial scales;
- **Develop a sustainability indicators framework** for communication of the region's sustainability, including **protocols for use**.
- **Develop a shared understanding of sustainability** in South West Victoria through the participatory process and communication of findings.

The method for this project will follow *Getting Started: A guide to developing regional sustainability indicators in Victoria* (Byrne et al., 2010) (developed by Dr Graymore and colleagues at Deakin University based on a review of over 30 sustainability indicator projects). *Getting Started* recommends a participatory process for sustainability indicator development involving the region's stakeholders including potential end users of the indicators. The use of a participatory process helps build ownership of the sustainability indicators framework among participants increasing the

likelihood of adoption of the framework developed (Gahin et al., 2003). At the same time, the process will build the capacity of participants through social learning, building a shared understanding of sustainability and the steps required individually and collectively to progress the region's sustainability (Gahin et al., 2003; Wallis et al., 2010). The project will provide the region with a framework for sustainability reporting, and protocols for use, to enable ongoing sustainability reporting in the region. If adopted for use by the region's stakeholders, this will provide information about the sustainability of the region that can be used to inform policy, collective action and individual behaviour change to progress the sustainability of South West Victoria. Furthermore, the project will provide a case study on how to develop and report on regional sustainability indicators for other regions across Victoria.

The first stage of the project has been completed: defining the framework (see Milestone 3a Report). This stage of the project included a workshop with stakeholder including the Project Executive and Project Reference Groups and invited DSE and Corangamite CMA staff. During the workshop, participants agreed on the framework for the sustainability indicators for South West Victoria. This included deciding that the project would develop a report card called '*The Great South West Community Report Card*' indicators based on the framework agreed to during the workshop (see Table 1 for the agreed framework). The next stage of the project (Milestone 3b), reported here, is to develop an agreed set of indicators for reporting on sustainability.

**Table 1: The framework for the Great South West Community Report Card (Graymore, 2011).**

<b>Specification</b>	<b>Agreed framework</b>
Sustainability vision	<i>"The Great South West is a great place to live, work and visit with great lifestyle choices. We are happy, healthy and well educated, and engaged in a thriving, multifaceted and resilient economy with a focus on 'clean green' goods. We value our environment and act together to ensure a healthy and beautiful environment for our community, and its visitors, to enjoy now and into the future."</i>
Purpose	<i>'To report on the sustainability of the region to Local Governments, local organisations, industry and community enabling informed decision making to enhance the region's sustainability'</i>
Audience	Primary audience: Local Governments (LG) in the region Secondary audience: LG customers, CMAs, Wannon Water and other organisations, businesses and industries in the region
Boundary	Six Local Government Areas (LGAs) – Glenelg, Moyne, Warrnambool, Southern Grampians, Corangamite and Colac-Otway Called ' <i>The Great South West</i> '
Sustainability model	Human-Ecosystem Linked model (Wackernagel and Yount, 1998) (Figure 1)
Reporting styles	One page report card called ' <i>The Great South West Community Report Card</i> ' Technical report Online interactive indicator reports
Type of assessment	Snapshot and trend where available
Regularity of reporting	Annually
Level of aggregation/data analysis	Aggregated index of LGA sustainability using a Wellbeing Index (Prescott-Allen, 2001) approach including reporting at indicator scale for report card, technical report and online interactive reports

*Table 1. continued*

Key issues	<ul style="list-style-type: none"> <li>• Degradation of natural ecosystems health and functioning</li> <li>• Changes in population</li> <li>• Impacts on economic wellbeing of labour and skills shortages and ability to retain staff</li> <li>• Community wellbeing issues such violent crime and family violence, health and resilience</li> <li>• Climate change impacts on the region</li> <li>• Services and infrastructure provision issues</li> <li>• Lack of strong regional planning and resultant land use change impacts</li> <li>• Resource issues including water, green energy, organic waste, food security, community capacity and education</li> </ul>
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## Research Aim for Milestone 3b

Milestone 3b addresses the first objective of the overall project, that is **develop an agreed set of indicators**. Following the recommendations from *Getting Started*, the agreed indicator set will include core indicators from *Getting Started*, with additional indicators that are relevant to the region's sustainability, identified by the region's community and stakeholders. Also, the indicators that were used in AIRS will also be reviewed for inclusion in the indicator set, as they were the priority indicators for the region previously identified by stakeholders.

This report describes the method for developing the agreed set of indicators for inclusion in the *Great South West Community Report Card*. This included a community telephone survey and an online stakeholder survey and culminated in a stakeholder workshop where agreement on the indicator list was gained. Following the methods, the results of the surveys and the workshop are described including the final agreed set of indicators. The indicator set is then compared to Victorian State of Environment and Measuring Australia's Progress indicators, as well as other frequently used indicator sets in Victoria. The report concludes with a description of the next steps of the project and a summary of findings for this Milestone.

## Methods

The framework agreed upon for the *Great South West Community Report Card* was the basis for developing the agreed set of indicators. As such, the sustainability vision, the Human-Ecosystem Linked model (Figure 1) and key issues for the region's sustainability were used to guide indicator selection. The process for developing the agreed set of indicators included a community telephone survey, a stakeholder online survey, distillation of indicators suggested from the surveys and a stakeholder workshop to develop the final agreed set of indicators. For the surveys, the study area was confined to the area contained within the boundaries of the six Council areas that make up the Great South West (i.e. Glenelg, Moyne, Warrnambool, Southern Grampians, Corangamite and Colac-Otway). This region has an estimated population of 126,160 (Bennetto et al., 2010). Details on each component of the indicator selection and agreement process are detailed below.

### Community Survey

#### Survey instrument

The questionnaire was designed to determine the Great South West community's opinion on sustainability, and the indicators that residents believe should be included in a sustainability indicator set for the region. This included exploring their opinions on the inclusion of each of the

core indicators recommended in *Getting Started*, as well as those indicators previously included in AIRS. In all, the questionnaire consisted of nine questions including demographics, meaning of sustainability, and core and AIRS indicators. There was also opportunity for participants to suggest additional indicators they felt were important to the region (see Appendix 1 for questionnaire). The questionnaire was pre-tested by Insightrix Research to assess the survey length, clarity, question sequence and adequacy of response formats.



Figure 1: Human-ecosystem linked model of sustainability based on Wackernagel and Yount (1998).

### Survey sample

The survey sample consisted of people living in the six council areas that make up the Great South West. The target sample was set at 383 to achieve a degree of accuracy of  $\pm 5$  percentage points across the region's population. If this sample number was achieved, this would mean that we can be 95% confident that the responses from the survey are within 5 percentage points of the responses we would get from the region's population.

### Data collection

The survey was carried out by Insightrix Research. Data was collected between April 17<sup>th</sup> and May 3<sup>rd</sup> 2011. The survey was programmed into an online computer assisted telephone interviewing (CATI) system. Participants were called from a random list of telephone numbers of people living in the region based on postcodes. Data from the survey responses was automatically loaded to online software – Conformit – and access was provided to the researcher to monitor the survey results.

A total of 386 surveys were completed. However, on closer examination of the respondents localities 100 of these respondents lived outside the Great South West region in localities with the same postcodes as localities in the region. Thus, only 286 survey responses were included in the results of this report (see Table 2 for response rates per Local Government Area (LGA)). This means that the margin of error for the results is  $\pm 5.8$  percentage points with a 95% confidence level, which means the results represents the views of the population 19 times out of 20.

Table 2: Sample numbers across the LGAs in Great South West

Local Government Area	Estimated Population	Sample no.
Colac Otway	21,448	50
Corangamite	17,270	39
Glenelg	20,871	47
Moyne	16,405	41
Southern Grampians	17,451	40
Warrnambool	32,712	69
<b>Total</b>	<b>126,157</b>	<b>286</b>

## Data analysis

Descriptive statistics were produced for the survey data for all respondents and by LGA. The responses for the question about the meaning of sustainability were grouped in themes to show the themes most often brought up by participants when asked what sustainability means to them. The percentage of people in the region, and by LGA, that felt that each core and AIRS indicator should be included in the indicator set was determined. These percentages were used to determine which of the core and AIRS indicators were included in the draft list of indicators for stakeholder consideration (i.e. those indicators that received less than 50% 'yes' responses were not included in the draft list). The other suggested indicators were listed and then reduced to common indicator themes. These common indicators themes were then added to the list developed from the stakeholder survey. The common themes for both the meaning of sustainability and suggested additional indicators were also examined for differences across LGAs. However, there were little significant differences between the meaning of sustainability and suggested indicators between the LGAs, and as such these results are not reported here.

## Stakeholder Survey

The original plan to get stakeholder input into the draft list of indicators was through a series of 6 workshops around the region, one in each LGA. However, responses to invitations sent out to stakeholders around the region were too low (only 16 people for all workshops) to justify running the workshops. As such, it was decided by the Project Executive Group that an online survey would replace the workshops.

## Survey instrument

The questionnaire for the stakeholder survey was almost identical to the community survey, with one additional question (see Appendix 2 for the questionnaire). This question asked participants about the key issues for the region's sustainability.

## Survey sample

The survey sample consisted of people known to have a stake in the Great South West. This included people known to the researcher who worked in the region (the Project Executive Group and Project Reference Group), belonged to community groups in the region and people involved in the development of the Great South Coast Regional Strategic Plan. The target sample for this survey was 50 responses.

## Data collection

Data was collected between May 18<sup>th</sup> and June 7<sup>th</sup> 2011. The survey was entered into SurveyMonkey ([www.surveymonkey.com](http://www.surveymonkey.com)) for online delivery. It was then pre-tested to ensure

clarity, flow and useability of the survey. The link to the survey along with invitation and plain language information statement was emailed to the Project Executive and Project Reference Groups, as well as other stakeholders in the region. The invitation also asked people to send the email on to their networks. The survey responses were downloaded into Excel for data analysis.

A total of 53 surveys were completed from stakeholders from a range of industries, including agriculture, government, education and health.

### Data analysis

The data analysis for the stakeholder survey followed the same process as that of the community survey. For the question about the key issues for the region's sustainability, the responses were listed and then grouped into common key issue themes and compared to the key issues identified previously in Milestone 3a. This analysis could reveal additional or emerging key issues for the region not previously identified.

### Draft Indicator List

The results of the community and stakeholder surveys were combined to determine the most frequently mentioned core, AIRS and suggested indicators. Where there was overlap between the indicators (i.e. they were measuring the same or similar thing), the indicators were combined to reduce the list of suggested indicators to a manageable size.

The draft indicator list presented to stakeholders for consideration was made up of core and AIRS indicators that had more than 50% of people wanting them included in the Report Card and suggested indicators that were the most frequently mentioned (at least 3 people across the two surveys). This list was sent to the Project Executive and Project Reference Group for consideration and feedback.

### Agreement on Indicator Set

A workshop was held with stakeholders who are potential end-users and indicator experts (made up of the Project Executive and Project Reference Group and additional potential end users). Participants were provided the draft indicator list three days before the workshop to consider whether each of the indicators in terms of their ability to tell us something about the sustainability of the region and inform policy, programs and community behaviour change. Those who could not make the workshop provided feedback before the workshop for consideration.

At the workshop, participants were asked to make consensus decisions on the inclusion (or not) of each indicator on the draft list based on the following indicator selection criteria from *Getting Started* (p. 47-48):

- Is the indicator:
  - relevant and valuable to the region (i.e. tells us about a key issue)?
  - easily understood by the average person?
  - appropriate for the regional/LGA scale?
- Will the indicator:
  - flag dangerous or irreversible problems?
  - measure progress to achieving our vision?
  - provide information in the future?
- Can the indicator be:
  - acted on by regional community or authorities?
  - easily measured?

- measured repeatedly with confidence in the result?
- fit with other reporting in the region (Victorian State of the Environment, Regional Catchment Strategy, Local Government Services Report for the Essential Services Commission)
- What are the indicators main limitations?

By the end of the workshop participants will have developed the agreed set of indicators for the Great South West Community Report Card.

## Results

### Demographics

There were slightly less males (45.5% for the community and 45.1% stakeholders) responded to both surveys than females (54.2% and 54.7% respectively). This ratio is slightly less males than that in the population (49.8%) (Bennetto et al., 2010). Nearly half (46.2%) of the community respondents were 45-64 years old, while the stakeholders were mostly in the 25-44 (44.9%) and the 45-64 (46.9%) year old groups. Over half (55.2%) of the community respondents were employed across a wide range of industry groups including agriculture, health, education and transport and logistics. In comparison, 88.5% of stakeholders were employed across a wide range of industries. This higher percentage of employed people in the stakeholder survey is to be expected as the survey targeted people involved in the Great South Coast Regional Strategic Plan, including people working in Local Government, education, health, energy and other sectors.

### Sustainability Meaning

Participants in both surveys were asked what sustainability means to them. Overall, community respondents had diverse opinions with regards to what sustainability means to them, though, most associate environmental factors with sustainability rather than social factors (see Table 3). The most common answers were in regards to not hurting the Earth, looking after the environment or being green (17.4%) or not draining resources and making resources last (15.0%). In addition to this, 15.0% were unsure what sustainability means.

**Table 3: Common themes for the meaning of sustainability from community respondents**

Theme	Count	Percent
Not hurting the Earth/looking after environment/being green	67	17.4%
Not draining/make resources last/balance	58	15.0%
Ability to continue/exist in the future/survive	44	11.4%
Maintain lifestyle/keep things the same	36	9.3%
Continuous generation of energy/product/resources	29	7.5%
Able to live/stay in own home/self sufficiency	25	6.5%
Reuse, Recycle	15	3.9%
Replace what you use	12	3.1%
Other	19	4.9%
Don't know/no comment	58	15.0%

For the stakeholders, there was also a range of opinions about what sustainability means. Although, in contrast to the community, social aspects of sustainability including quality of life, health, well-being, education and social cohesion were mentioned by 21.1% of respondents. The most common theme was 'coexisting communities and natural environment' with 38.5% of respondents stating this as part of their definition. Like the community, 32.7% of stakeholders stated preserving, maintaining or no impact on environment and 28.8% talked about conserving or minimising use of resources and recycling and reuse as being part of sustainability. Unlike the community, no stakeholders said they did not know what sustainability means. Social equity also plays a big part in stakeholder understanding of sustainability with a quarter of respondents mentioning inter- and/or intra-generational equity in their response.

**Table 4: Common themes for the meaning of sustainability from stakeholder respondents**

Theme	Count	Percent
Coexisting communities and natural environment without/little impact on social, economic or environment	20	38.5%
Preserving, maintaining, no impact on environment	17	32.7%
Conserve, minimise use of resources/recycle and re-use resources	15	28.8%
Inter- and intra-generational equity	13	25.0%
Continue indefinitely without excessive resource use/ minimal impact	9	17.3%
Quality of life, health and community wellbeing	7	13.5%
Social sustainability (education, cohesion)	4	7.7%
Locally grown & local action	3	5.8%
Forward planning for community economy & environment	2	3.8%
Other	4	7.7%

## Stakeholder Identification of Key Issues

Only the stakeholders were asked about the key issues for the region, as time and funding constraints prevented adding this question to the community survey. The key issues that were most frequently mentioned (see Table 5) were degradation of the environment and need to protect it (34.6%), dependence on fossil fuels for energy and rates of consumption (28.8%), unsustainable water use and sources (26.9%) and the need for green industry development, particularly a local renewable energy industry (25.0%). A lack of strong regional planning and structures was also one of the most frequently mentioned issues with a quarter of the respondents reporting it as a key issue for the region.

Most of the key issues mentioned by stakeholders had already been identified by other processes, such as the Great South Coast Regional Strategic Plan. However, need to transform local industries to green industries including renewable energy, sustainable farming practices, public transport, and community and government understanding of sustainability were among the additional issues not previously identified.

**Table 5: Key issues for the sustainability of the region identified by stakeholders**

<b>Issue</b>	<b>Count</b>	<b>Percent</b>
Degradation of natural environment and biodiversity	18	34.6%
Dependence on centralised fossil fuel based energy and high levels of consumption	15	28.8%
Water sources and use not sustainable	14	26.9%
Need to transform to green industries with a local renewable energy industry	13	25.0%
Lack of strong regional strategic planning & structures	13	25.0%
Urban and coastal development impacts	12	23.1%
Transport, freight, use, availability and costs	11	21.2%
Need for more sustainable farming practices	11	21.2%
Degradation of waterways, marine, estuaries, rivers, wetlands.	10	19.2%
Waste production, management and recycling rates	10	19.2%
Climate change impacts/adaptation	8	15.4%
Lack of adequate public transport	8	15.4%
Changes in population (ageing, young moving away, growth etc)	8	15.4%
Lack of strong, connected, liveable communities	8	15.4%
Jobs, skills and education and unemployment	8	15.4%
Resource use and management	7	13.5%
Lack of controls on land use change and impacts of change	7	13.5%
Lack of/quality of infrastructure	7	13.5%
Lack of federal/state/local government action and funding	6	11.5%
Local food security	6	11.5%
Community/Government understanding/awareness of sustainability	6	11.5%
Lack of support/education and understanding of what helps people live more sustainability	6	11.5%
Increase diversity and sustainability of industries	5	9.6%
Sustainable building design and developments	4	7.7%
Soil health	4	7.7%
Lack of adequate services	4	7.7%
Need to build sustainable ecotourism	4	7.7%
Carbon emissions/zero net carbon	3	5.8%
Water quality (groundwater and surface)	3	5.8%
Resilience of ecosystems and human systems	3	5.8%
Other environmental	7	13.5%
Other human system	18	34.6%

## Great South West Community Report Card Indicator Set

### Core Indicators

Respondents were provided a list of 15 different indicators that were recommended in *Getting Started* as core indicators and asked to indicate whether or not they believe that each indicator should be used to measure the sustainability of Great South West (see Figure 2 for results).

Overall, the ecosystem based indicators were more commonly selected by both community and stakeholder respondents than the human system based indicators. The majority of stakeholders (96.4%) and community (94.8%) felt that health of rivers should be included in the indicator set for

South West Victoria, making this the highest rating ecosystem indicator. In addition, other commonly selected indicators included land area with native vegetation, land area in parks and reserves and potable water quality all with 80% or more respondents supporting them.

All of the human system based indicators were rated lower than the ecosystem based indicators by the stakeholders and community, except household energy. In fact, household energy use was the second highest rating indicator with more than nine in ten community respondents (90.9%) and stakeholders (92.7%) believing it should be included in the measure of sustainability for the region. By contrast, crime rate (30.9%) was the lowest rated indicator for stakeholders, with more stakeholders believing it should not be included in the indicator set than those who wanted it included (38.2%). For the community, the ratio of the richest 20%'s average income to the poorest 20%'s average income was the lowest rating indicator with only 47.9% of respondents supporting it. The other indicators that were not well supported were self reported health and percent of people who have completed year 12. However, with both of these indicators, there was still a higher proportion of stakeholders and community that believed these indicators should be included compared to not be included in a sustainability measure for the region.

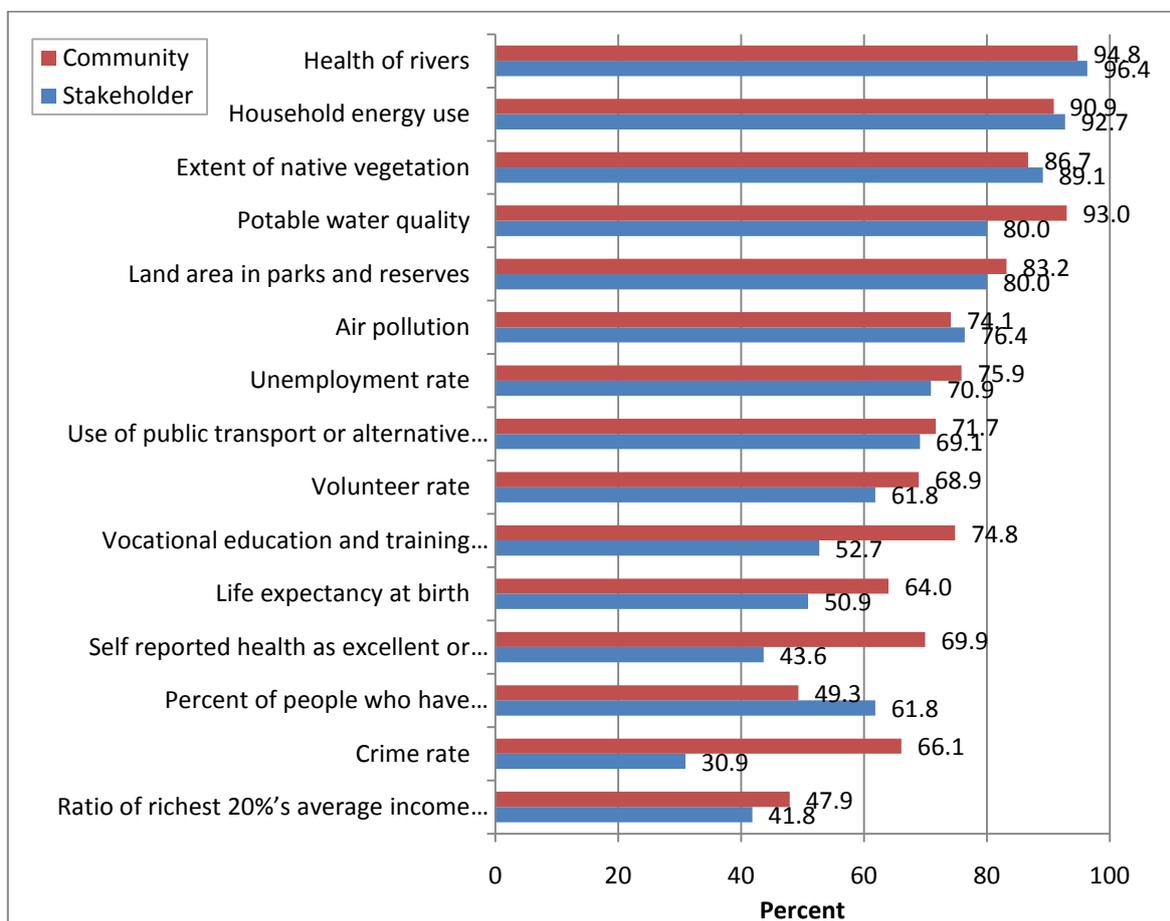


Figure 2: Percent of community and stakeholders who said yes to include each of the core indicators

Points of difference between stakeholder and community opinion on the inclusion of core indicators were vocational education and training enrolments, crime rate and self reported health. In each case a higher proportion of the community felt the indicators should be included in the sustainability indicator set compared to the stakeholders.

### AIRS Indicators

Respondents were provided a list of 8 indicators that were previously used in AIRS to assess the sustainability of South West Victoria and asked to indicate whether or not they believe that each indicator should continue to be used to measure the sustainability of Great South West (see Figure 3 for results).

More than two thirds of the community respondents supported the inclusion of all the AIRS indicator except for land area used for pine plantations, which only had the support of 54.5% of respondents. While, a higher proportion of stakeholders believed the soil health indicators – soil structure decline (87.3%), water and wind erosion (85.5%) and dryland salinity (78.2%) – should be included compared to the other indicators in the list. Although all indicators had more than two thirds of stakeholders wanting them included in the sustainability measure, except for the two land use indicators, dryland pasture (52.7%) and pine plantations (41.8%).

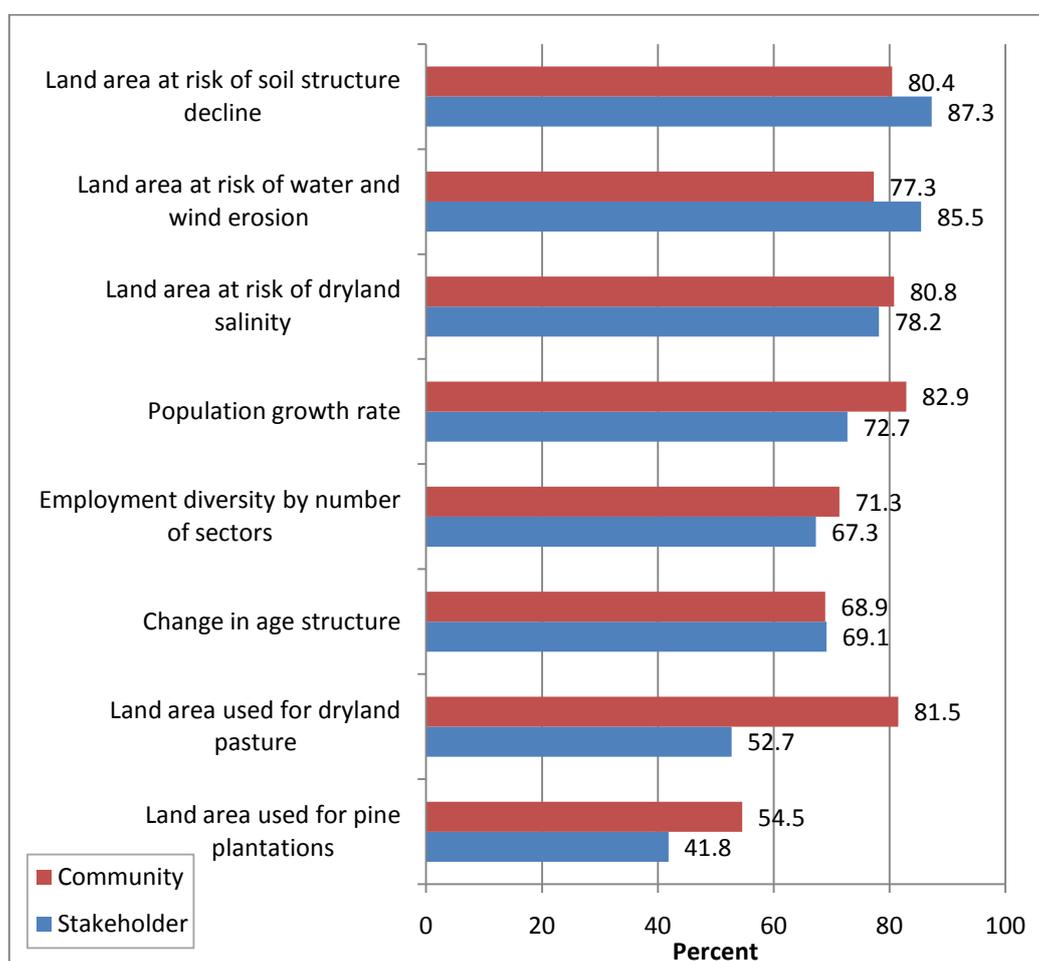


Figure 3: Percent of community and stakeholder respondents who said yes to include the indicators from AIRS

A comparison of the community and stakeholder responses shows that a higher proportion of the community felt that land area used for dryland pasture should be part of the sustainability measure compared to the stakeholders.

### Suggested Indicators

The respondents were asked if there were additional things they believed should be included in a sustainability measure of the region. Forty stakeholders (75%) made suggestions, while 143

community respondents (50%) made suggestions. These suggestions were distilled out of the responses into a list with a count of how many respondents had made the same suggestion. This was done separately for stakeholder and community responses (see Table 6 for the top ten suggested indicator themes).

**Table 6: Top ten indicators suggested by community and stakeholders**

Community		Stakeholders	
Suggested indicator	Count	Suggested indicator	Count
Use of energy/alternative energy	21	Waste generation	5
Roads/infrastructure	21	Accessibility of public transport	5
Environment (general)/climate change	16	Education levels	4
Water use/quality	16	Recycling rate	3
Access to food/agriculture production	14	Household water use	3
Healthcare/hospital issues	13	Percent of households with renewable energy installations	3
Government transparency/accountability	11	Foreign ownership of land and businesses	3
Childhood development/education	11	Workforce structure, attraction and retention of employees	3
Waste management	10	Sense of belonging, social inclusion and social isolation	3
Availability of cultural and sporting events	9	Diversity of population (multiculturalism)	2

There were some similarities in the top ten suggestions across stakeholders and community, with water (quality, availability and use), energy, alternative/renewable energy (use and access), waste management and education being high on the list for both. However, the community's top ten consisted of a number of suggestions relating to access and quality of services, infrastructure and food, and general environment and climate change, while stakeholders were more interested in human activities that influence sustainability such as social isolation and sense of belonging, foreign ownership, education and public transport access.

The stakeholder and community suggestions were merged and condensed down to a list of 31 most commonly suggested indicators (see Table 7). These indicators covered 13 topics which closely aligned with the identified key issues, including ecosystem wellbeing, community wellbeing and health, energy, transport and roads, agriculture and waste management. The highest ranked indicator in this list, an index of sustainable lifestyles, brings together a range of suggested indicators looking at the sustainability of the behaviours of householders including rainwater use, vegetable gardens and own power generation. Other highly rated suggestions include status of fauna and flora species, quality of roads, renewable energy use, waste generation and recycling and access to health care. This list of indicators, along with the core and AIRS indicators that had more than 50% support, were included in the draft list for consideration by stakeholders for inclusion in the final agreed set of indicator for the region.

Table 7: The most frequently suggested indicators from the community and stakeholder surveys

Key issue	Suggested Indicator	Count
<b>Sustainable lifestyles – human impact</b>	An index of sustainable lifestyles	20
<b>Ecosystem wellbeing</b>	Status of fauna and flora species	17
	Percent of intactness by EVC & bioregion & HCVAE or area of healthy functioning ecosystems	8
<b>Transport &amp; roads</b>	Quality of roads & maintenance	14
	Accessibility and local connectivity of public transport, pedestrian or bicycle networks	7
	Kilometres by vehicle type or number of cars registered in area by type	6
<b>Energy</b>	Renewable energy use	14
	Availability of alternative energy sources	13
<b>Waste management</b>	Waste generation (regionally & per capita)	13
	Recycling rate, domestic waste (kg per household)	12
<b>Community health</b>	Access to healthcare	13
<b>Water management</b>	Water availability compared to demand	9
	Household business, farm and industry water use	8
	Water table levels (groundwater use compared to recharge rates)	3
<b>Community wellbeing</b>	Cost of living, i.e. fuel, energy, food	9
	Happiness or Wellbeing Index	9
	Migration patterns	8
	Availability of a range of social services	6
	Number of cultural, sporting events, recreation, arts and craft and local food markets	6
<b>Agriculture</b>	Local food security through sustainable food and agriculture systems	9
<b>Land use and planning</b>	Changes in land use compared to land capability	8
	Blue gum plantation (impact on soil, water, use of land).	7
	Planning regulations for development, installation of wind farms (land area with planning controls)	4
<b>Infrastructure and housing</b>	Infrastructure availability, management and planning	7
	Availability and affordability of housing	6
<b>Education</b>	Education levels attained per regional centre and total region (no. of qualified people)	6
	School retention rates	3
	Availability of higher education (tertiary and training) within a certain distance	3
<b>Economic productivity</b>	Employment opportunities and choice for young people, school leavers (i.e. unskilled work)	6
	Development of new industries & businesses	4
<b>Climate change</b>	Climate change impacts	6
<b>Governance</b>	Level of community consultation in governance including aboriginal land owners input	6

## Agreed Set of Indicators

Participants at the workshop were asked to come to an agreement on which indicators to include in the agreed set of indicators for the Great South West Community Report Card. They were asked to concentrate on ensuring that the indicators agreed to were something we as a region could act on, that they were relevant to the vision of sustainability and key issues and were measurable. In total 27 indicators were agreed upon, covering the majority of the identified key issues including

ecosystem and community wellbeing, population change, planning and land use change, services and infrastructure and a number of resource issues (see Table 8). This agreed set of indicators will form the basis of the Great South West Community Report Card, although some investigation into data availability will be required to ensure all indicators can be measured and included in the report card.

**Table 8: Agreed set of indicators for the Great South West Community Report Card.**

<b>Indicator</b>	<b>Source</b>
Condition of parks and reserves including marine and coastal parks	Based on core indicator
Condition of native vegetation	Based on core indicator
Volunteer rate broken up into social and environmental	Core indicator
Housing affordability as a percent of income	Suggested indicator replacing core indicator ratio of income
Health of waterways (includes Index of Stream Condition, Index of Wetland Condition and Index of Estuarine Condition)	Core indicator with additions
Household energy use broken up into renewable and non-renewable sources	Core indicator
Average streamflows compared to historical average	Suggested indicator replacing core indicator potable water quality
Education levels attained	Suggested indicator replacing two core indicators (vocational education and percent completed year 12)
Health index (include key health factors such as obesity, diabetes, mental health)	Suggested indicator replacing core indicator self-reported health
Violent crime rates	Based on core indicator
Unemployment rate	Core indicator
Access to public transport	Suggested indicator replacing core indicator use of public transport to work
Soil health index	Suggested index to include AIRS indicators area at risk of dryland salinity, erosion and soil structure decline
Demographic change	Based on AIRS indicator
Employment diversity by number of sectors	AIRS indicator
Land use change compared to land suitability	Suggested indicator
Implementation of environmental/sustainability strategy actions	Suggested indicator
An index of sustainable lifestyles	Suggested indicator
Status of flora and fauna	Suggested indicator
Road condition and maintenance	Suggested indicator
Waste to landfill and recycling rate of households	Suggested indicator
Access to healthcare	Suggested indicator
VAMPIRE index (Vulnerability Assessment for Mortgage, Petroleum and Inflation Risks)	Suggested indicator
Community Wellbeing Index	Suggested indicator
Participation rates of young people in work, study & training compared to those on benefits	Suggested indicator
Number of cultural, sporting events, recreation, arts and craft and local food markets	Suggested indicator
Vulnerability Index to climate change impacts	Suggested indicator

*Note: All indicators will be reported at the LGA scale and regional scale.*

A number of the indicators are actually indices, a grouping of indicators whose results are aggregated to produce a single figure, or index. Some of those identified, including an index of

sustainable lifestyles, will need investigation and development, others such as the Community Wellbeing Index have already been developed and used by others (i.e. Australian Unity Wellbeing Index).

There was much debate over many of the indicators and a number of indicators were noted as potential indicators in the future dependent on the outcome of an investigation into the ability to measure each one. These indicators included:

- **Environmental governance structures and capacity** as this was shown to be critical to the achievement of environmental sustainability in the Directions Statement for the region.
- **Nature-based tourism** as this shows connection to the environment. However, its use is problematic at this stage as a sustainable level of nature-based tourism needs investigation and criteria for what is a sustainable nature-based operation have not been defined.
- **Water availability compared to demand** as water availability is important for sustainability of the region, but at the moment demand curves are not likely to over take supply for 25 years, as such this specific indicator does not tell us much about the sustainability of our water use. **Recycled water use** as a percent of what goes out to outfalls could be used instead with a comparison to total demand to see if they demand and recycled water use are changing at the same rate.
- **Condition of groundwater resources**, could look at recharge rates compared to use (licenses versus sustainable limits), or the quality of water compared to a baseline condition or the presence of specific species of groundwater flora and fauna that are linked to water quality (Wannon Water currently investigating).
- **Greenhouse gas (GHG) emissions** instead of other climate change indicators.

## Discussion

This stage of the *Regional Sustainability Indicators Framework for South West Victoria* project produced an agreed set of indicators to be used to assess the sustainability of the region at the LGA scale. This set consists of 27 indicators that cover the key issues for the sustainability of the region, including ecosystem health, community wellbeing and health, public transport and roads, housing affordability, climate change and land use change and regional planning. The indicator set is framed by the human-ecosystem linked model of sustainability, with 13 indicators for the human system, 5 indicators for the ecosystem and 9 indicators that look at the interaction between ecosystem and human system.

*Getting Started* recommended that indicator selection should involve stakeholder engagement, and consider the key issues and vision for the sustainability of the region of interest. It also suggested a list of 15 core indicators be included in the final indicator list to ensure comparability across regions carrying out sustainability reporting. Furthermore, it suggested that additional indicators be included that are relevant to the sustainability of the region of interest to ensure unique aspects of the region are included. The recommended ratio of core and non-core indicators is 70% core: 30% non-core. *Getting Started* also provided indicator selection criteria to help choose indicators that will provide information useful for informing decision making at a regional scale.

However, during the workshop it became apparent that a number of the core indicators were not the most appropriate indicator available. This was because some of the core indicators were seen not to be a useful indicator for the region, for the issue it was meant to be addressing or for informing decision making. Thus, only three core indicators were included as described in *Getting Started*. A further four were based on core indicators but were altered to ensure they provided

information that can be acted on at the regional scale and were meaningful for understanding the region's sustainability. For example, area of parks and reserves changed to condition of parks and reserves as area does not change much and condition is more important for regional ecosystem health and functioning, and biodiversity. Another example was use of public transport (or alternative transport) on the way to work, which is heavily influenced by the availability of public transport or bicycle networks. As such, this indicator was replaced with access to public transport as a major cause of low levels use. Eight core indicators were not included due either to lack of relevance to the region or lack of ability to inform decision making at the regional scale. However, seven of these were replaced with five indicators that measured a different aspect of the same issue. For example, housing affordability as a proportion of income was included to replace ratio of income as it is a more direct measure of inequity and poverty in the region.

Seven of the AIRS indicators were included in the agreed set of indicators for the Report Card. The indicators not included were thought to be covered better by other indicators already included in the set (i.e. area of land in pasture or pine plantations by land use change compared to suitability). This result shows that the issues that the indicators from AIRS covered are still relevant to the region's sustainability now. Although participants felt that there were different measures that could be used to cover the some of the issues.

The set of indicators was compared to the draft indicator list for Victorian State of the Environment (SoE), Community Indicators Victoria (CIV), Measuring Australian's Progress (MAP), Essential Services Commission Local Government Services Report (ESC-LGS) and the Great South Coast Health and Wellbeing Profile to determine what overlap there is between indicator sets (Table 9). Any overlap between these indicator sets ensures the ability to compare the condition and trend of indicators across scales (region, state and national) and between regions. It also shows how the Great South West Report Card indicators fit into a range of other reporting that is going on. For example, waste generation and recycling by households is required for the ESC-LGS report, SoE, CIV and MAP, as well as this indicator set. For LGAs, this means that when they collect this data it will be used at a number of scales and provide the LGA with some understanding of the sustainability of their resident's waste habits compared to others in Australia.

The most overlap between indicators is with SoE draft indicator list where there are 18 of the 27 indicators that are the same or similar. This consists of mostly ecosystem indicators, but also a number of the human system and human-ecosystem linked indicators. This level of overlap will help ensure comparisons can be made between the Great South West's LGAs and the state scale across a range of indicators. The next highest level of overlap is with the CIV indicators where there are 14 similar indicators. There is also overlap between 11 indicators included in the MAP report, which will enable comparisons between the region's LGAs and the national scale, helping provide further understanding of the how the region is progressing compared to the rest of Australia.

**Table 9: Comparison of Great South West Community Report Card indicators to other indicator sets**

Indicator	SoE	CIV	ESC-LGS	MAP	GSC
Condition of parks and reserves including marine and coastal parks	x				
Condition of native vegetation	x	x			
Volunteer rate broken up into social and environmental	x	x		x	
Housing affordability as a percent of income		x		x	x
Health of waterways (includes Index of Stream Condition, Index of Wetland Condition and Index of Estuarine Condition)	x				
Household energy use broken up into renewable and non-renewable sources	x	x			
Average streamflows compared to historical average	x				
Education levels attained		x		x	x
Health index (include key health factors such as obesity, diabetes, mental health)	?	x		x	x
Violent crime rates		x		x	x
Unemployment rate		x		x	x
Access to public transport	x	x			
Soil health index	x				
Demographic change	x			x	x
Employment diversity by number of sectors	x				x
Land use change compared to land suitability	x			x	
Implementation of environmental/sustainability strategy actions	x				
An index of sustainable lifestyles					
Status of flora and fauna	x			x	
Road condition and maintenance		x	x		
Waste to landfill and recycling rate of households	x	x	x	x	
Access to healthcare					x
VAMPIRE index (Vulnerability Assessment for Mortgage, Petroleum and Inflation Risks)					x
Community Wellbeing Index	x	x			x
Participation rates of young people in work, study & training compared to those on benefits	x	x			x
Number of cultural, sporting events, recreation, arts and craft and local food markets	x	x		x	
Vulnerability Index to climate change impacts	x				

The relatively high level of overlap is also encouraging in terms of data availability for the indicators agreed upon, as it suggests that there is data available for at least 14 of the indicators included in the list and potentially for up to 18 of the indicators included (assuming SoE are able to source data for all of their indicators where there is overlap with our set). However, data availability and indicator viability will be investigated further in the next stage of the project.

## Evaluation of Milestone 3b Activities

The activities carried out for this milestone were overall a success, as measured by meeting the target deliverables. The community survey had a good response, as did the stakeholder survey with nearly 50% of people invited to fill in the survey responding. The data gained from the surveys was invaluable in developing the draft list of indicators for consideration at the workshop and provided a wide range of suggestions for additional indicators ensure that the final agreed set of indicators covered the key issues for the region's sustainability. The workshop itself was also a success, with all participants having opportunities to air their opinions and suggestions about the indicators, with a consensus on most indicators selected for the set.

However, there were some lessons learnt about other ways to approach this part of the project in the future. The workshop series developed to ensure stakeholder input into the indicator suggestion process was not well received with a low response rate to invitations. There may be a range of reasons that this occurred. Feedback suggests that the invitation may not have been explicit enough about the benefits of coming to the workshop to encourage people to come, and that the timing and length of the workshops were an issue. Thus, for future indicator projects it is recommended that stakeholder input into indicators be gained through a targeted online or telephone interviews to ensure wide input into indicator suggestions.

The community survey also provided a lesson for the future. Using postcodes to determine the call list does not ensure the people contacted are in the council areas of interest. For future surveys where participants are required from particular council areas, it is recommended that a screening question such as 'which council area do you live in?' be used to ensure that respondents are from the area of interest.

## Next Steps

The next stage of this project is to investigate the data availability and validity for each of the agreed indicators. This will include an investigation into each of the indices included, as well as searching out data sources for each of the indicators. Once data is located, a file will be developed for each indicator that includes available data, method of collection, source and contact, regularity of updating, scale and boundary of data collection. This will form part of the template for future reporting.

Once data is collected the framework for assessment will be applied. This will include the development of an aggregation method based on the Wellbeing Index (Prescott-Allen, 2001). This will involve developing targets and weightings for each indicator to enable the calculation of an index of the region's sustainability at the LGA scale. The aggregation method will also be developed into a template for ongoing use in the region.

Also at this stage, the report card, technical report and online interactive indicator reports will be developed for reporting on the indicators. The implementation of ongoing report cards will also be investigated to ensure that the report card becomes an ongoing process in the region.

## Summary

The aim of Milestone 3b was to develop an agreed set of indicators to be used to report on the sustainability of the Great South West. To do this, a community telephone survey and a targeted stakeholder survey were carried out to determine community and stakeholder opinions about the indicators that should be used to report on the sustainability of the region. These surveys provided

a wide range of suggestions about indicators that should be included in addition to the core indicators recommended in *Getting Started*. A draft list of indicators that were the most frequently suggested for inclusion in a sustainability measure of the region was developed from the survey responses. This list was provided to stakeholders who will be the potential end-users of the report card and indicator experts (made up of the Project Executive and Project Reference Groups and others) for consideration before a workshop where agreement on the final indicator set was sort.

At the workshop, attended by the Project Executive and Project Reference Groups and other potential end-users, all the indicators in the draft list were considered by participants as to their suitability for inclusion in the indicator set for Great South West. At the end of this workshop a set of 27 indicators were agreed upon for inclusion in the Great South West Community Report Card (see Table 8). These indicators will be investigated for their ability to be included in the Report Card during the next stage of the project.

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# Appendix 1: Community Telephone Survey

## Indicators for Great South West Community Report Card

### Community Telephone Questionnaire

#### Screen question

Are you over 18 years of age?

#### Read the PLIS

Could you spare 5-10 minutes to give us your views?

YES – continue

NO – REFUSED Thank respondent and end call

Are you able to complete the survey now?

YES – Continue

NO – Arrange call back time

#### *Understanding of sustainability*

1. Tell me what sustainability means to you?

#### *Measuring the sustainability of South West Victoria*

To develop a report card of South West Victoria we need to measure the region's sustainability. We are going to do this using a set of indicators that measure things members of South West community, like you, feel are most important for the region's sustainability.

2. From the following list of commonly used indicators please indicate (by saying yes or no) which indicators you feel should be used to measure the sustainability of South West Victoria.

Sustainability Indicators	Use for South West Victoria (✓)
Air pollution	
Potable water quality	
Health of rivers	
Land area in parks and reserves	
Land area with native vegetation	
Land area at risk of dryland salinity	
Land area at risk of soil structure decline	
Land area at risk of wind or water erosion	
Land area used for pine plantations	
Land area used for dryland pasture	
Household energy use	
Life expectancy at birth	

Percent of people who have completed Year 12	
Self reported health as excellent or very good	
Change in age structure	
Population growth rate	
Crime rate	
Unemployment rate	
Volunteer rate	
Use of public transport or alternative (not car) transport on way to work	
Vocational education and training enrolments	
Ratio of richest 20%'s average income to the poorest 20%'s average income	
Employment diversity by number of sectors	

3. What other things, not mentioned in the previous question, do you feel should be measured to report on the sustainability of South West Victoria?

**About you**

The following questions will help us categorise your answers:

4. What town or locality do you live in?

5. What is your age group?

Under 25

25-44 years

45-64 years

65 years and above

6. Are you currently...

- a. Employed (go to next question)
- b. Unemployed but not looking for work (skip to q8)
- c. Unemployed and looking for work (skip to q8)
- d. Retired (skip to q8)
- e. A student (skip to q 8)

7. What industry do you work in?

Accounting and Financial Services (banks, securities, investment, insurance, superannuation)

Agriculture, Forestry and Fishing

Business Services (consulting, legal services, public relations, call centres)

Building and Construction (including infrastructure development roads and rail)

Community and Sporting Services

Education (public and private)

Utilities (Electricity, gas and water)

Government and Defence (Federal, State and Local)

Health Care, Medical, and Pharmaceuticals

Hospitality, tourism and travel (accommodation, hotels, restaurants, attractions)

IT and Telecommunications  
Manufacturing operation  
Media, Advertising, Arts & Entertainment  
Natural Resource Development (Mining, Oil & Gas)  
Not for Profit/Charity  
Personal and other Services  
Real Estate & Property Development  
Retail and Consumer Products  
Transportation and Logistics  
Wholesale Trade, Import/Export  
Other (please specify) \_\_\_\_\_

8. Record Gender

Male/Female

9. Would you like to be involved in future stages of this project? If yes, would you prefer to be contacted by phone or email?

Name: \_\_\_\_\_

Email address: \_\_\_\_\_

Phone number: \_\_\_\_\_

**I would like to thank you for your time and contribution to this study**

If you have further queries about the study please contact Dr Michelle Graymore (03) 53622620 Horsham Campus Research Precinct, University of Ballarat.

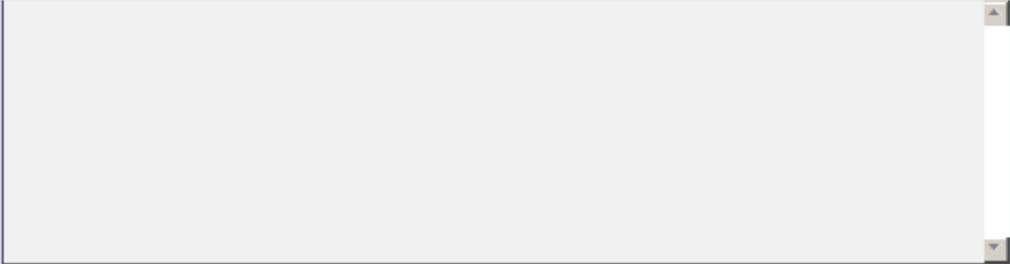
## Appendix 2: Stakeholder Online Survey

**Indicators for the Great South West Community Report Card**

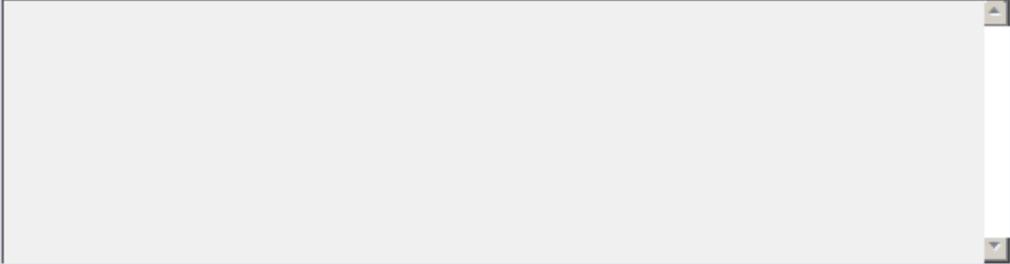
**Your views about sustainability**

The first section asks about your views on sustainability and the key issues for the Great South West

**1. Tell me what sustainability means to you?**



**2. What do you think are the key issues for the sustainability of the Great South West community and its environment?**  
(Please note that for this survey the Great South West includes the Glenelg, Southern Grampians, Warrambool, Moyne, Corangamite and Colac Otway council areas)



## Indicators for the Great South West Community Report Card

### Great South West Community Report Card

The Great South West Community Report Card is being developed to report on the sustainability of South West Victoria (including its community and environment) to Local Governments, local organisations, industry and community, enabling informed decision making and a shared understanding of sustainability. The Community Report Card will provide information at the indicator and overall sustainability scale for each Council, and will have direct links into local government planning and the regional catchment strategies.

To help in the development of the Report Card it is important to understand what the key issues are for the region. A review of key documents, including local government strategies, Great South Coast Regional Plan and the Regional Catchment Strategies, identified the following key issues for the Great South West:

- Natural ecosystem health and functioning
- Climate change impacts on the community, its resources and environment
- Changes in human population (i.e. growth in coastal areas and ageing population)
- Community wellbeing including health, lifestyle choices and violent crime
- Services and infrastructure provision including equitable access and condition of infrastructure
- Lack of strong regional planning and land use change impacts
- Resource availability and management (i.e. water, waste and community capacity).

To report on the sustainability of the region, the Report Card requires indicators that tell us something about these key issues and other things important to the region. An indicator is a simple measure that provides information about the state of the region, and is useful for the region's decision makers. The Report Card will utilise an agreed indicator set. This set of indicators will be defined and agreed to by the region's stakeholders and community (including you). It will include indicators that are felt to be most important to the Great South West Community (identified through this survey) and relevant core indicators recommended for regional sustainability reporting across Victoria in 'Getting Started: A guide to developing regional sustainability indicators in Victoria' (Byrne et al. 2010). So, we need you to tell us what indicators you think should be used for the Community Report Card.

### Indicators for the Great South West Community Report Card

\* 3. From the following list of core indicators recommended for regional sustainability reporting, please indicate (by choosing yes, no or don't know) which indicators you feel should be used to measure the sustainability of the Great South West.

	Yes	No	Don't know
Ratio of richest 20%'s average income to the poorest 20%'s average income	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volunteer rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Potable water quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unemployment rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of public transport or alternative (not car) transport on way to work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Air pollution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self reported health as excellent or very good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extent of native vegetation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Percent of people who have completed Year 12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Household energy use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health of rivers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Crime rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life expectancy at birth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vocational education and training enrolments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land area in parks and reserves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Indicators for the Great South West Community Report Card

\* 4. The following are a list of indicators that have been used in the past for sustainability reporting in South West Victoria. Please indicate (by choosing yes, no or don't know) which indicators you feel should be used to measure the sustainability of the Great South West.

	Yes	No	Don't know
Land area at risk of soil structure decline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employment diversity by number of sectors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population growth rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land area used for pine plantations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land area used for dryland pasture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Change in age structure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land area at risk of water and wind erosion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land area at risk of dryland salinity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Are there any other indicators not mentioned in Q3 or Q4 you feel measure things that are important to the Great South West community and its environment and should be included in the Report Card?

- Yes
- No
- Don't know

If yes, what other indicators are important and should be included in the Report Card?

## Indicators for the Great South West Community Report Card

### About you

The following questions will help us group your responses with other people's responses

6. What town or locality do you live in?

7. What Council area is do you live in?

8. What year were you born?

9. Are you currently... (please choose one)

- Employed
- Unemployed but not looking for work
- Unemployed and looking for work
- Retired
- A student

Other (please specify)

## Indicators for the Great South West Community Report Card

### About you

**10. What industry do you work in? (Please choose one)**

- Accounting and Financial Services (banks, securities, investment, insurance,superannuation)
- Agriculture, Forestry and Fishing
- Business Services (consulting, legal services, public relations, call centres)
- Building and Construction (including infrastructure development roads and rail)
- Community and Sporting Services
- Education (public and private)
- Utilities (Electricity, gas and water)
- Government and Defence (Federal, State and Local)
- Health Care, Medical, and Pharmaceuticals
- Hospitality, tourism and travel (accommodation, hotels, restaurants, attractions)
- IT and Telecommunications
- Manufacturing operation
- Media, Advertising, Arts & Entertainment
- Natural Resource Development (Mining, Oil & Gas)
- Not for Profit/Charity
- Personal and other Services
- Real Estate & Property Development
- Retail and Consumer Products
- Transportation and Logistics
- Wholesale Trade, Import/Export
- Other (please specify)

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**11. Are you?**

- Male
- Female

## Indicators for the Great South West Community Report Card

### Your interest in the project

12. Would you like to be involved in future stages of this project?

- Yes  
 No

If yes, please provide your preferred contact details (phone or email)?

13. Would you like to see a report on this study?

- Yes  
 No

If yes, and you have not already provided your contact details in the previous question, please provide your name and email or postal address and a summary of the results will be provided to you.

## Indicators for the Great South West Community Report Card

**Thank you for your time and thoughts!**

If you have further queries about the study please contact Dr Michelle Graymore 0417 109 813 or [m.graymore@ballarat.edu.au](mailto:m.graymore@ballarat.edu.au) Horsham Campus Research Precinct, University of Ballarat.

If you would like further information about the project 'Regional Sustainability Indicators Framework for South West Victoria' the project's website [www.GSWReportCard.org](http://www.GSWReportCard.org) will be launched soon.



## **Appendix 3: Contributors to the agreed set of indicators**

Brad Henderson (Wannon Water), Kylie McIntyre (Southern Grampians Shire Council), Keith Jones (Southern Grampians Shire Council), Patrick Shaw (DSE - Colac), Michael Fendley (DSE-Bendigo), Athena Williams (Community Indicators Victoria), and Tim Morrissey (Commissioner for Environmental Sustainability Office).

The community telephone survey respondents and the stakeholder online survey respondents.

Thank you to all participated in this stage of the project; your valuable input has provided the indicator set for the Great South West Community Report Card.