SOUTH COAST REGIONAL MARINE PLANNING
SOUTH COAST GIS INFORMATION AND RESOURCE COMPILATION PROJECT

RESULTS OF THE SOUTH COAST REGIONAL MARINE PLANNING COMMUNITY RECREATIONAL MARINE USAGE SURVEY (OCTOBER 2007 – MARCH 2008)

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SUMMARY

From October 2007 to March 2008, as part of the South Coast Regional Marine Planning process, this survey was run to capture information about the distribution and types of marine recreational activities that the south coast marine user community participate in. The study area was from Eucla in the east to Cape Leeuwin (Augusta) in the west.

The survey was distributed principally in conjunction with the South Coast Regional Marine Planning process Community Workshop series, held Augusta, Manjimup, Kojonup, Denmark, Albany, Bremer Bay, Hopetoun, Esperance, Kalgoorlie and in Perth. The survey was also available to download from the Regional Marine Planning website, and was stocked at numerous distribution points such as Department of Environment and Conservation, Department of Fisheries and Department of Planning and Infrastructure offices, marine-oriented shops, accommodation centres and telecentres.

262 responses were received in the survey period, which provided indicative information about the most popular activities, and the distribution of those activities across the coast. The 10 most popular activities reported were Fishing, Swimming, 4WDing, Camping/picnicking, Walking/Hiking, Diving/Snorkelling, Beachcombing, Surfing, Whale-watching, and Other Wildlife-watching. The areas that these activities were undertaken tended to coincide with major population centres, as well as where the coast was particularly accessible or suitable for those activities.

The survey was considered to be successful in providing indicative information; however, there were too few responses received to be able to derive detailed statistics about the average number of days people would spend doing an activity in an area, or how much they valued different areas for the different activities.

The format of the survey successfully enabled respondents to complete it unsupervised, and suitable information was captured to allow spatial display and interpretation of the results in GIS (Geographical Information System) format. It is recommended that the survey be continued for as long as possible to increase the value and useability of the database, and to allow more detailed analyses to be undertaken from a greater population sample size.

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INTRODUCTION

In 2006, the first Regional Marine Planning (RMP) process for Western Australian State waters was initiated off the south coast, covering an area from Cape Leeuwin to the South Australian border. RMP is a process which:

> *provides a framework to integrate current and future sectoral planning and management of biophysical marine regions according to an agreed vision for sustainability.*

As input to the RMP process, there was a need for an assessment of the bio-physical and socio-economic values that are important to the region - based on the best available information - from which the regional marine planning strategy was derived. With funding support from South Coast Natural Resource Management Inc., a contract position was created within the Department of Environment and Conservation Marine Policy and Planning Branch to collect available social, economic, cultural and biophysical information relating to the south coast marine environment. South West Catchments Council provided additional funding support for this project.

Spatial (Geographic Information System - GIS) data were the primary target for information gathering, in order to maximise the comparability of information layers and ensuring that the information gathered across a large and diverse area such as the south coast (over 2,600 km of coastline) had a spatial context. This enables direct comparisons of information layers covering multiple planning sectors/themes over broad spatial areas, giving planners a more holistic understanding of the information describing particular marine sectors and planning issues over different areas.

Preparation of the draft South Coast Regional Marine Strategic Plan commenced in 2007and the ensuing Marine GIS Information and Resource Compilation project progressed in three phases. Phase 1 created the Geographic Information System to house the data, identified and/or collected available information required for the planning process, and evaluated gaps in knowledge. Phase 2 worked further on acquiring information that had been identified as available, but not yet collected, and, where feasible, worked towards filling the gaps in knowledge identified in Phase 1. Phase 3 specifically targeted filling the gap in marine benthic habitat mapping information for the area.

Given the spatial and thematic breadth of regional marine planning (over 1,700 km^2 of WA coastal waters, involving all marine sectors/stakeholders concerned with marine planning and management), information gathering had to be targeted at a similarly broad scale, with emphasis on acquiring information that covered the region comprehensively and continuously. It was recognised that where a comprehensive coverage of information across the whole region was lacking for a given marine sector, priority should be given to producing/acquiring such a dataset, over the gathering of more detailed, localised information.

Phase 1 identified several sources of information relating to the distribution of marine recreational activities; however these tended to concentrate on gathering detailed information about discrete study areas.

- The Recherche Archipelago Socio-economic Study, conducted by Neil Lazarow and Rocio Noriega for the Co-operative Research Centre for Coastal Zone, Estuary and Waterway Management in 2005 consulted with marine user groups in the Esperance area as part of an assessment of socio-economic values of the Recherche Archipelago. As well as commercial marine users, the study consulted with recreational fishers, divers, spearfishers, sailers, windsurfers, surfers, water-skiiers, swimmers and other marine users. Details were gathered regarding the areas that people used for various marine recreational activities, the frequency of use and other details such as indicative economic value.

- The Recherche Aquaculture Plan produced by the Department of Fisheries in 2000 (Fisheries Management Paper No. 140) also contained detailed analyses of marine recreational usage in the Recherche Archipelago, derived through a consultation process with local people. Focus was on key recreational pursuits that may interact with potential aquaculture developments in the Recherche Archipelago: diving, boating/fishing, surfcasting and other beachside recreation.

- The Securing WA's Marine Futures project included an assessment of recreational fishing, diving, surfing, windsurfing, sailing and general recreational boat usage in selected areas of the south coast region as part of its socio-economic component (Davies *et al*. 2008). Local expert marine users were interviewed about their usage of the area of interest over time, and their perceptions of others' usage. The study included significant detail about trends and perceptions of causes of those trends for study areas in the eastern Recherche Archipelago (Middle Island), Bremer Bay (Pt Ann), Albany (Mt Gardener) and Broke Inlet areas.

- Tourism Research Australia operates a yearly phone survey of domestic (intrastate and interstate) and an exit survey of international tourists, querying randomised samples of visitors about various aspects of their tourist activities for Local Government Areas around Australia. The survey collects numbers of respondents going to the beach, whale- or dolphin-watching, fishing, SCUBA diving, or snorkelling. Tourism Research Australia http://www.tra.australia.com/

- The Department of Fisheries conduct periodic (5-yearly) creel surveys of recreational fishing catch and effort on a rotational basis in the 5 management bioregions of the state. To date, only an estuarine fishing survey has been conducted in the south coast region (Fisheries Research Report No. 159, Smallwood & Sumner 2007) with an offshore and shore-based study planned for the near future. In other regions, creel surveys provide a useful analysis of recreational fishing usage, collected in 5 nm grids, and expressed in terms of estimated numbers of fish caught, as well as effort used. It is expected that future south coast creel survey results will be highly useful for regional marine planning, as well as more detailed sectoral planning exercises.

Whilst providing detailed information for their particular study themes and areas, it was determined that the studies described above were not adequate in their collective spatial and thematic extents, to give a comprehensive overview of marine recreation across the SCRMP study area for regional marine planning purposes.

Through the input of the Planning Advisory Group (the stakeholder reference group advising the South Coast Regional Marine Planning process), the wide variety and geographic distribution of recreational marine uses was recognised, as was the high social and economic value of marine recreation on the south coast. It was recognised that as the marine environment varies across the region, so too do the kinds and amounts of the various recreation activities undertaken, also influenced by differing coastal access across the region, largely related to population density. For example, it was understood that the distribution and value of surfing activities was related to those areas of coast which experience the most swell and which provide suitable access. Similarly, the distribution of offshore boat-based activities is restricted by limited safe boating facilities, and prevailing weather conditions. However, whilst these relationships and assessments are intuitive, and peripheral data (such as boat registrations) are available as indicators of recreation, there was no available data to comprehensively describe such patterns and relationships across the region, drawn from the community itself.

In order to provide a spatially and thematically comprehensive assessment of marine recreation suitable for regional marine planning, the SCRMP Community Recreational Marine Usage Survey was developed. Initially intended to leverage the opportunity to contact local marine user communities through the SCRMP Community Workshop series (10 workshops conducted in south coast centres as well as Perth, Kalgoorlie and Kojonup – see Appendix A), the survey was later broadened to be mailed out to local distribution centres, and available online via the SCRMP website (http://rmp.dec.wa.gov.au/). The survey ran from October 2007 to March 2008.

The survey was structured to focus on gathering broad spatial data describing the distribution of marine recreation across the region. Marine users were asked to report their 'normal' yearly marine recreational usage, through a self-assessment of their historical usage of the regional marine environment. The survey asked respondents to report an 'average' number of days spent doing the particular recreational activity, in each area that they typically undertook that activity. In addition, the survey required an assessment of the individual's value attached to various activities and what they perceived to be the wider community's value of those activities. Thus, the survey returned information of the number of different kinds of marine recreational activities undertaken by south coast marine users, the spatial distribution of those activities across the coast, an

estimation of the relative amount of usage, and relative value of those activities across the region. Design of the survey is described in more detail in the Method/Design section of this report.

The survey was successful in delivering an indicative overview of marine recreation across the south coast region. Due to resource constraints, it was not possible to achieve a randomised delivery of the survey, necessary for statistically robust assessments of representation. Hence, interpretation of the results is limited; however as an indication of the distribution of marine recreational activities, the survey was successful and provided valuable information to the South Coast Regional Marine Planning process.

AIMS

By targeting south coast marine users through the SCRMP Community Workshop series, and via distribution of the survey to councils, clubs, shops, telecentres, accommodation providers and other contact points, the Community Recreational Marine Usage Survey aimed to:

1) describe the spatial distribution of various recreational marine activities across the South Coast Regional Marine Planning area;
2) indicate the perceived value of marine recreational activities relative to other activities,
    a. for individuals
    b. for the wider community, as perceived by individuals;
3) indicate the relative average number of days per year that respondents engaged in various activities in various areas;
4) indicate the relative recreational value that different areas provide, for the different activities reported.

METHOD/DESIGN

Survey design

The SCRMP Community Recreational Marine Usage Survey was designed to be filled out by respondents, in their own time or with supervision following an explanatory presentation during SCRMP Community Workshops. Surveys were designed to be folded, stapled or taped, and posted back to DEC Marine Policy and Planning Branch, using the Reply Paid service provided by Australia Post. This enabled the surveys to be mailed out to prospective respondents, or left at distribution points for interested people to take and return by post, free of charge. The survey was also made available from the South Coast Regional Marine Planning website, as a downloadable Adobe PDF document to be printed, filled out and posted back.

The survey consisted of two separate documents, one providing background information about the purpose of the survey and intended usage of the provided information, as well as instructions on how to fill out the survey, and reference maps required for identification of the areas where marine recreation is undertaken. The second document consisted of the survey forms to be filled out and returned, including a cover page with instructions on how to fold and post the survey back using the Reply Paid system.

The document of survey forms included one page for the collection of background demographic and general marine recreational usage questions, a page for the optional provision of contact information, and four pages for reporting the more detailed information about the areas, amount of usage and relative values of different areas for an activity. As explained in more detail below, these four pages allowed the reporting of details of four different recreational activities – respondents were encouraged to take more forms or copy/print more forms if they desired to record details of more than four activities. The Contact Information page was optional, recognising the need for privacy of individuals, but provided necessary details for contacting the respondent, should it be required to clarify answers to the survey questions, or in the event of an incorrectly filled out survey, respondents could be contacted to ensure accurate input of their information to the database.

The process of designing the survey included consultation with the Department of Fisheries (Neil Sumner and Eve Bunbury), principally seeking advice on the best method to capture the spatial component of the required information, and to investigate the complementarity of the SCRMP Recreational Marine Usage Survey with future Department of Fisheries recreational fishing creel surveys.

Experts from the Australian Bureau of Statistics were also consulted, ensuring that the structure of the survey allowed statistically robust interpretation of the results, and to seek advice on the appropriate demographic information to be collected, as well as general advice on making the survey as easy to use as possible.

Finally, after including advice from DEC Marine Policy and Planning Branch colleagues, a pilot survey was created and presented to the SCRMP Planning Advisory Group during a meeting in Augusta on 11th of September 2007. Advice from this group was used in the final design of the survey presented in this report. This ‘pilot’ exercise proved extremely useful in clarifying the survey design, focusing questions and methods of response to ensure that the survey was able to be completed without supervision.

Survey Instructions

The survey instructions booklet, which always accompanied the survey forms, contains information regarding the purpose of the information collected through the survey – the booklet is included in Appendix A.

Contact details for more information, a Reply-Paid postal address for postal return of the survey, detailed Step-by-Step instructions on how to complete and return the survey forms, and Index Maps for the identification of areas used for marine recreation were included in the survey instructions booklet. An example of how to fill out

the form, using a fictional example was also included, in order to maximise the ease of responding to the survey and thus ensure the accuracy of responses.

Background Survey – Step 1

The Background Survey, shown in Figure 1, was designed to capture information about the respondents to the survey, additional to the main marine recreational usage survey form.

BACKGROUND SURVEY (Step 1)

1 Are you male or female? ☐ Male ☐ Female

2 In which age group are you? ☐ 0 – 14 ☐ 15 – 19 ☐ 20 – 34 ☐ 34 – 49 ☐ 50 – 64 ☐ 65+

3 Where do you currently live, and for how long have you lived there?
place:
duration:

4 If you have lived elsewhere (on the south coast), please list where and for how long.
place:
duration:
place:
duration:
place:
duration:
place:
duration:

5 When do you *usually* use the south coast marine environment?
☐ weekday ☐ weekend ☐ 1-2 week period/s (holiday)
☐ >2 week period/s ☐ anytime

6 When you use the south coast marine environment, are you *usually*
☐ alone
☐ with 4 or less other people in my group
☐ with more than 4 others in my group

7 This question is about the value/importance of different coastal/marine activities to *you*, in your own marine usage, and also how valuable/important you think these activities are to the wider community. **Please place a number from the scale below in *every* box.**

1 low **2** **3** medium **4** **5** high

Activity	My Usage	Wider Community
Fishing – shore		
Fishing – inshore (< 5 km) boat		
Fishing – offshore (> 5 km) boat		
Diving/snorkel – shore		
Diving/snorkel – inshore (< 5 km) boat		
Diving/snorkel – offshore (> 5 km) boat		
Spearfishing – shore		
Spearfishing – inshore (< 5 km) boat		
Spearfishing – offshore (> 5 km) boat		
Sailing		
Swimming		
Surfing		
Beachcombing		
Windsurfing/kitesurfing		
Whale-watching		
Other wildlife-watching		
Photography		
Kayaking		
Waveskiing		
Waterskiing		
Walking/hiking		
4WDing		
Camping/picnicking		
Other……		

8 Please continue on to the **MARINE USAGE SURVEY**, and start with the Activities that are most valuable/important to you, i.e. that you responded with 4's or 5's in the 'My Usage' column in the table above.

Figure 1: The SCRMP Community Recreational Marine Usage Background Survey page.

Questions 1 - 4
In order to collect basic information about the respondents to the survey, the first page of the survey was dedicated to demographic and broad recreational usage questions. Questions 1 – 4 of the Background Survey gathered information regarding the age bracket, sex and residence of the respondent. This information was important, particularly as the survey was not going to be randomly distributed, for analysis and interpretation of the results. It was designed to broadly characterise the respondent group, to better evaluate any limitations due to any over-representation of any particular demographic group.

Questions 5 & 6
As well as basic demographic information, the Background Survey also included two questions about the way in which the respondent usually used the marine environment for recreation. Question 5 sought information about the usual periods when the respondent undertook marine recreational activities on the south coast, i.e. recreating any day, on weekdays, weekend users, holiday-makers for periods of weeks, or longer. This question was designed to allow an assessment about the relative proportion of regular vs. more infrequent users responding to the survey, in order to qualify any interpretations made about the results.

Question 6 asked the respondent to report the usual number of people they are with when recreating on the south coast, whether alone, in a group of four or less, or more than four people. This question was designed to allow analyses of the social aspect of various marine recreational activities reported through the survey. For both Questions 5 and 6, respondents were allowed to provide more than one answer, recognising that it may not be possible to condense a potentially wide range of recreational experiences into these discrete categories.

Question 7
The final part of the Background Survey, Question 7, was designed to gather information about the respondents' personal value of various recreational activities, as well as their perception of how the wider community values those same activities. Respondents were asked to indicate how they valued activities, or how important they perceive them to be in their own marine recreation, by giving each one of the list a score from 1 → 5 (low → high value/importance). This was designed to allow analysis of the proportions of respondents who may be identified as, for example, 'surfers', 'fishers', 'divers', 'swimmers', 'beachcombers' etc. Thus it would be possible to determine if some particular recreational user groups may not have been adequately surveyed and so the final summary results could be interpreted accordingly.

The second part of Question 7, concerning the respondents' perception of the wider community's value of different activities, was designed to provide a more holistic understanding of which activities the respondents recognised to be important to other people. For example, a respondent may not undertake sailing activities, but recognise that they are important to other marine users. Differences in responses between the 'My Value' and 'Wider Community' values of the different activities could then be used to provide information about whether the survey adequately targeted participants in all of what were regarded as being the most highly valued or important recreational activities.

Contact Information – Step 2 (optional)

A page was included in the survey forms, where respondents were encouraged to provide basic contact details (name, address, phone number and email address), in the event that more information was required about their response. Contact details were kept strictly confidential and were used only to contact the respondent in the event of an unclear or incorrect response to the survey.

Marine Usage Survey – Steps 3 - 9

An example Marine Usage Survey form is shown in Figure 2.

MARINE USAGE SURVEY (Steps 3 – 9)

Please refer to the Instruction sheet when completing the survey

SECTION 1

This survey relates to this activity (**please circle one only, and <u>use another form for other activities</u>**):

Fishing (fish, shellfish, crustaceans)	Spearfishing	Diving / snorkel	Sailing	Swimming	Surfing	Windsurfing / Kitesurfing	Whale-watching	Other wildlife-watching
Photography	Waterskiing	Walking / hiking	4WDing	Camping / picnicking	Beachcombing	Kayaking	Waveskiing	Other: ……….....

SECTION 2

Area Number	Activity Location			Usage		Value				
Refer to supplied Index Maps for area numbers	Please circle only one, if applicable. Inshore boat-based is defined as within 3 nautical miles (~5 km) from the shore, e.g. from a (typically) smaller boat in bays or estuaries.			Estimate the number of days on which you would do this activity in this area. Write this in as the number of days or weeks per year.		How do you value this area for this activity, compared to other areas where you do this activity? i.e. which of these areas are your favourites? Give those areas a higher value. The definition of 'value' is open to your interpretation.				
				Days	Weeks	Low		Med		High
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5
	shore-based	inshore boat	offshore boat			1	2	3	4	5

Figure 2: SCRMP Community Recreational Marine Usage Survey form.

Spatial Data

The SCRMP Community Recreational Marine Usage survey was designed to ensure that information captured through the survey had a spatial context. This allows the information to be overlain with other information layers to describe inter-sectoral interactions across the region. This spatial context is vital in regional planning exercises, in order to define where interactions between different users and environmental factors are located across the study area.

Initially, design of the method to capture information about the location of respondents' recreational activities was planned to allow respondents to draw on maps, describing areas of value or interest in their own terms. This method would allow flexibility of data input, and allow the respondents to describe locations in as much or as little detail as they desired. This method, whilst potentially providing more spatial detail, would have increased the effort required by respondents, as well as in the processing of returned surveys. With limited resources to process the returned surveys, and the aim to encourage as many responses as possible, this method was deemed inappropriate.

Similar limitations in resource availability and participant willingness are experienced by the Department of Fisheries (DOF) when conducting creel surveys. Upon consultation with DOF (particularly recreational fishing researcher Neil Sumner), it was decided to design the survey to capture spatial information in spatial blocks, similar to the 5 nm grid that DOF use to query recreational fishers about the location of their fishing effort on the day they are surveyed. For SCRMP, the survey study area covered some 2,600 km of coastline, an area of 1,700 km^2 and asked respondents to report all the activities they undertook across the whole region, over a typical year (described further in this section). Thus, whilst it would have enabled direct integration with future creel surveys, the 5 nm grid design could not be used, as this would require users to indicate exactly which of over 500 grid cells they used for a range of activities – a daunting and practically difficult task.

It was decided instead, to design a system of a smaller number of defined, numbered reporting areas that would allow respondents to rapidly identify and report the locations they used at a relatively broad scale. It was recognised that particular activities such as fishing or surfing are often undertaken in isolated places that users are not willing to describe in the public domain. However, for the purposes of regional marine planning, such detailed information was not required, allowing a broad scale of spatial reporting to be designed which facilitated rapid reporting by respondents, as well as avoiding the perceived threat of revealing 'secret spots'.

Upon consultation with DEC staff, SCRMP Planning Working Group members and SCRMP Planning Advisory Group members, the design shown in Figures 3 - 5 was created. Locations of reporting area boundaries were designed both to fall on recognisable topographic features and also so that the reporting areas would encompass whole marine recreational features such as beaches and estuaries. This was to avoid splitting such features and forcing the respondent to decide what proportion of time might be spent on, for example, the western versus eastern parts of an estuary or beach. As such, the reporting areas were not uniform, but as much as possible, whilst designing the boundaries as described above, the final 44 areas were designed to include similar lengths of coastline, each between approximately 25 – 35 km. Figures 3 - 5 were provided in the information/instruction booklet provided with the survey.

Inshore and offshore boat-based activities

For boat-based activities, respondents were directed to report their usage and value details (described below) separately for inshore waters and offshore waters. Inshore waters were defined as being within 3 nm from shore, designed to delineate between activities undertaken in estuaries and embayments, as distinct from activities undertaken further offshore. This was in order to provide information related to the regulatory and jurisdictional boundary of state coastal waters, as well as to separate, for example, inshore estuarine or embayment fishing from deep-sea fishing. Such a distinction was seen to potentially provide directly relevant information for marine safety and marine infrastructure issues on the south coast.

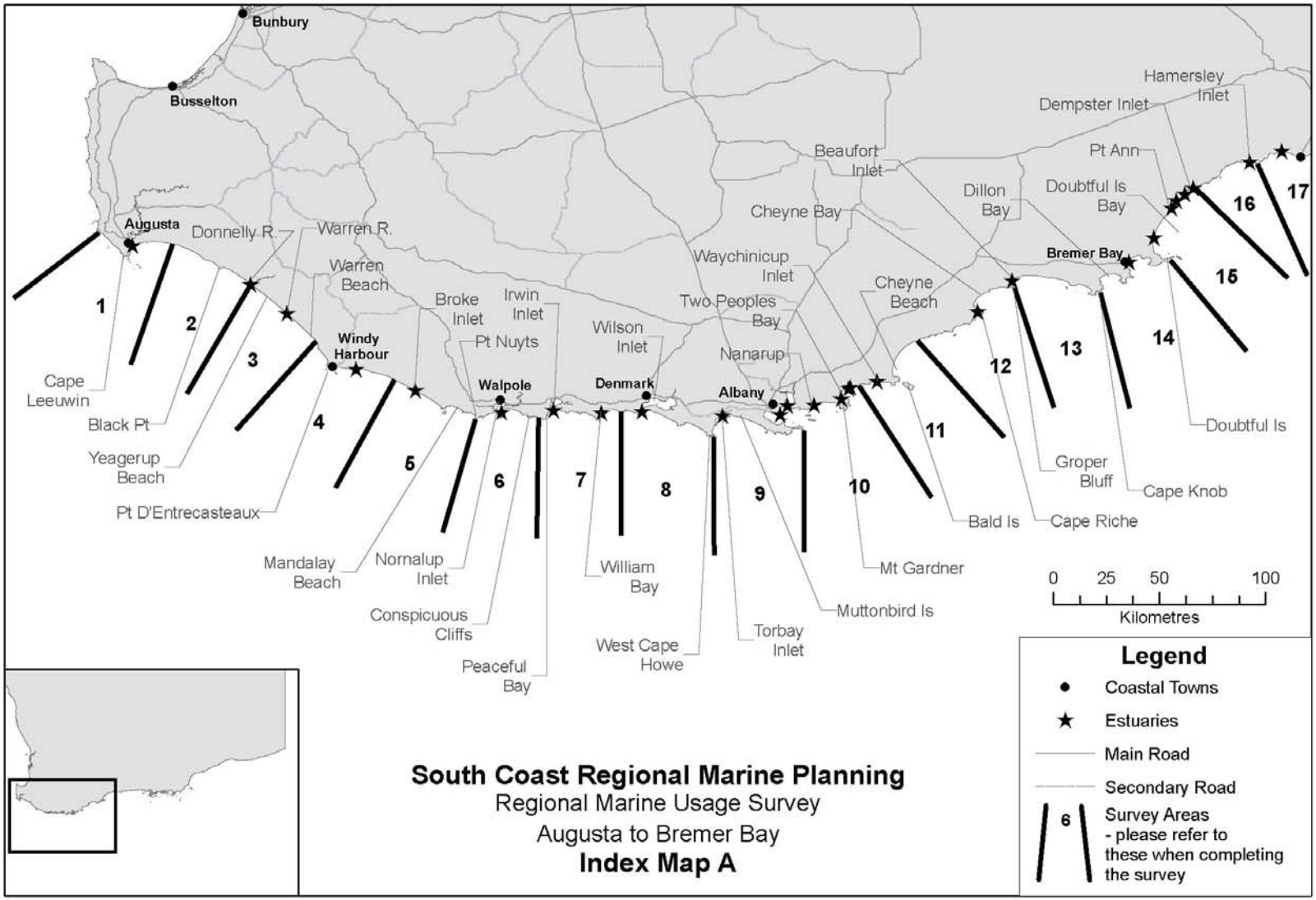

Figure 3: Western portion of the SCRMP study area showing defined reporting areas for the Community Recreational Marine Usage Survey.

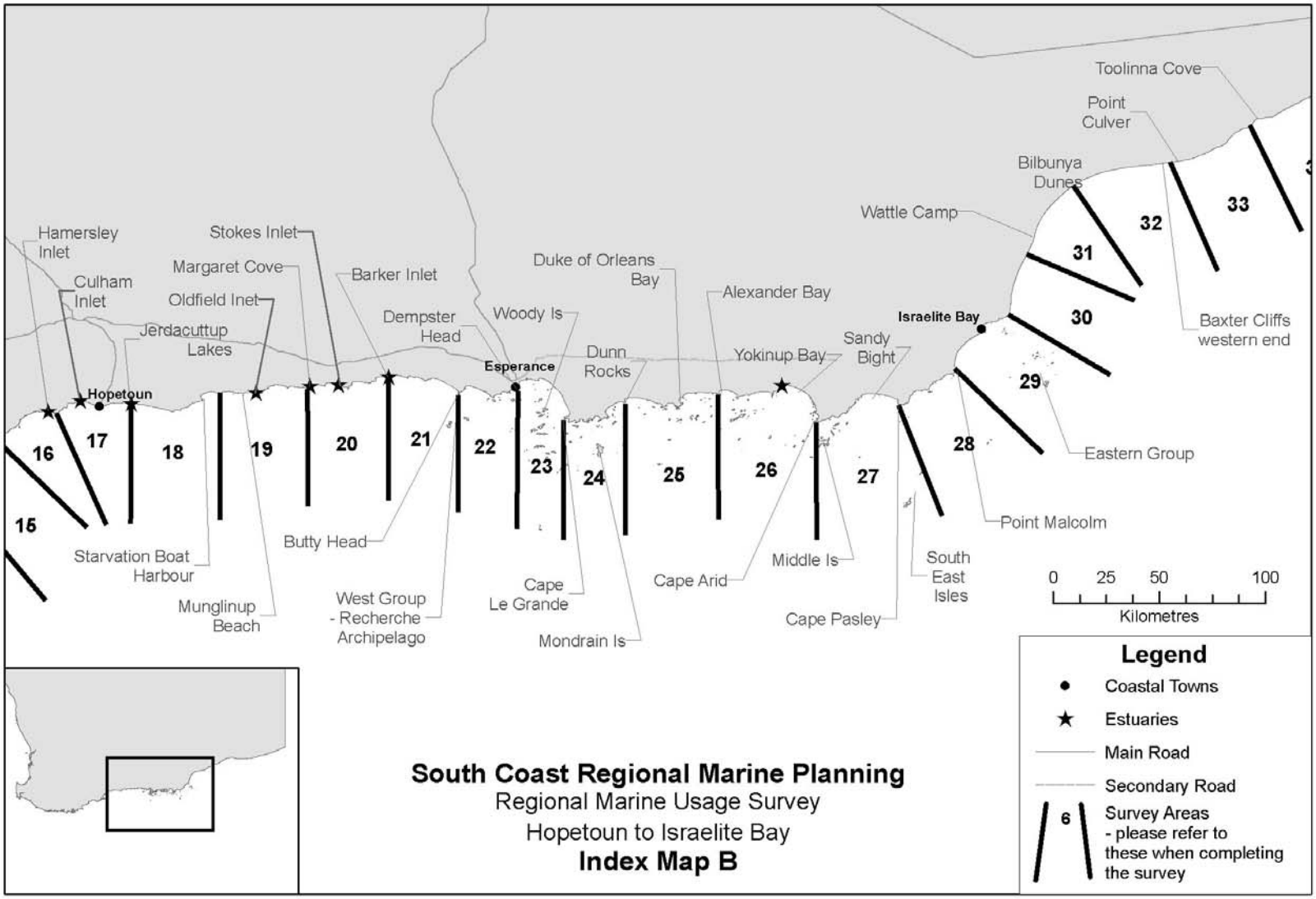

Figure 4: Central portion of the SCRMP study area showing defined reporting areas for the Community Recreational Marine Usage Survey.

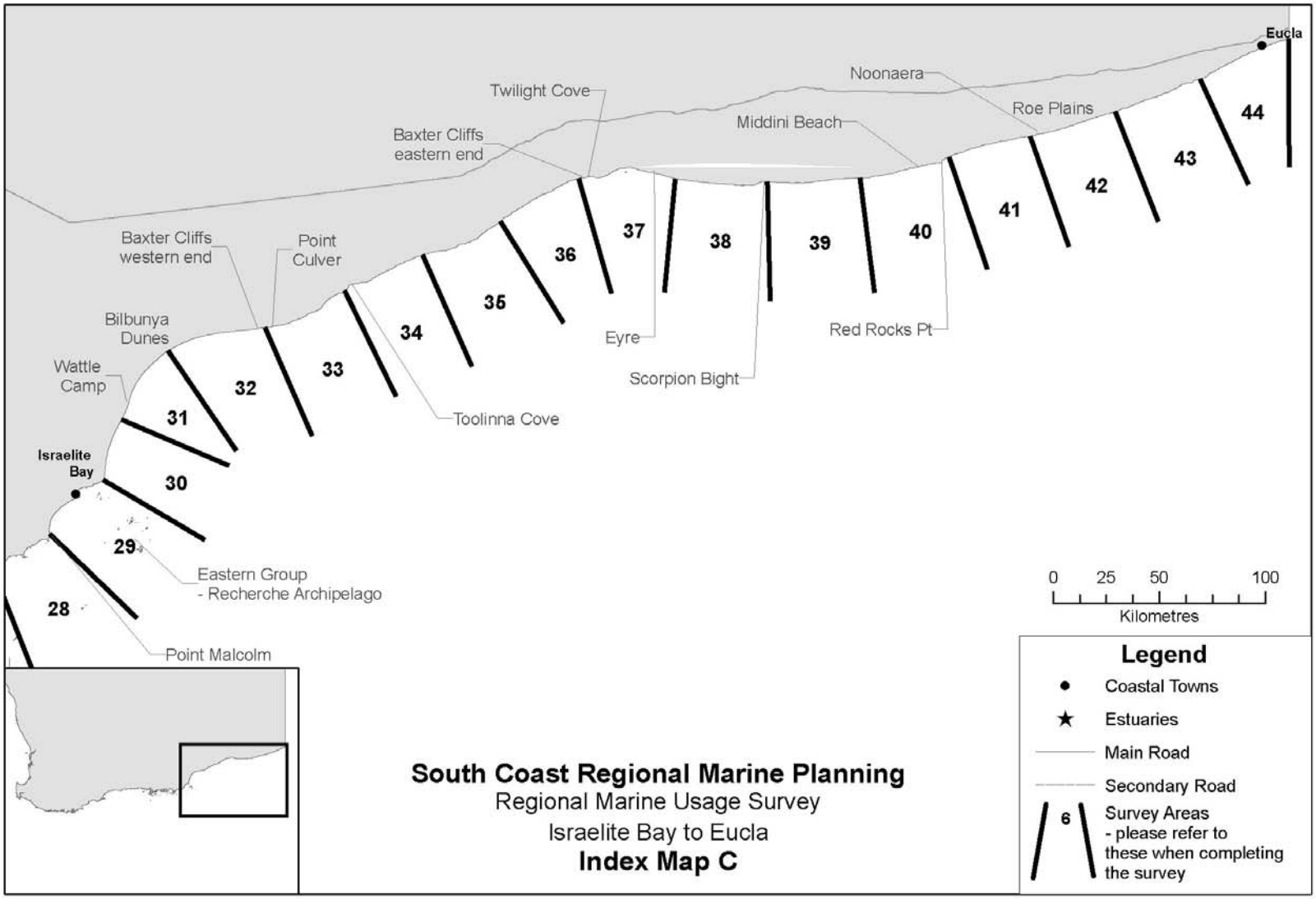

Figure 5: Eastern portion of the SCRMP study area showing defined reporting areas for the Community Recreational Marine Usage Survey.

Usage

Once respondents had identified the areas in which they undertook an activity, they were required to evaluate their 'normal' yearly usage of that area for that activity, in terms of the approximate number of days or weeks in an average year over the individual experience of that respondent. This provided a time-averaged self-assessment of usage of that individual using that area for that activity. The option was provided to express usage in terms of days or as weeks, intended to allow easy assessment of time by the respondent.

Value

Respondents were required to provide an assessment of the relative value they placed on the different areas that they reported for each activity. This was intended provide a distinction between usage and value for the different areas. For example, a recreational user may regularly participate in an activity close to their home, but also travel to other areas of the coast for holidays, where they also undertake that activity. Thus they might report a higher usage for their 'home' area, but perhaps a higher value for the 'holiday' area. This distinction was provided to allow the capture of a high value for a better quality of experience for particular areas of the coast which, for example, may not experience a similar level of usage as more populated areas.

Distribution of surveys

Surveys were distributed via several methods. Initially, the SCRMP Community Workshop series provided the opportunity to present the survey and encourage participants to fill out and return surveys on the night of the workshop (see Appendix A). Workshop participants were also encouraged to take surveys away from the workshop to distribute to family, friends and clubs, etc.

Survey forms and background/information documents were available from the SCRMP website, where a dedicated SCRMP Community Recreational Marine Usage page was created, allowing explanation of the purpose of the survey and directing readers to a link where the relevant documents could be downloaded.

Following the positive, but varied levels of response to the survey distributed at SCRMP Community Workshops, it was decided to provide copies of the survey to distribution points across the south coast, targeting shops with a marine recreational focus, clubs such as sailing and fishing clubs, telecentres and other community centres, schools and coastal accommodation facilities, particularly caravan parks and camping grounds ahead of the Easter long weekend holiday – traditionally a busy time for marine recreation on the south coast.

The survey was open for six months from the beginning of October 2007 to the end of March 2008.

Receipt and processing of responses

There were three methods of collecting completed surveys: collection from respondents at SCRMP Community Workshops; respondents dropping completed surveys into DEC regional offices and subsequent return to DEC Marine Policy and Planning Branch via DEC internal mail, and; direct postage by the respondent using the Australia Post Reply Paid service.

Upon receipt at DEC Marine Policy and Planning Branch, surveys were entered into the SCRMP Community Recreational Marine Usage Survey database, a Microsoft® Office Access 2003 database created to enter, house and query the data received from surveys. A contractor was employed on a casual basis for three weeks, to enter completed returned surveys into the database shortly after the closing date for survey responses – 28th March 2008. As well as entering data directly from the returned survey forms, the date and method of receipt (i.e. from a workshop, post, or personal delivery) was recorded, allowing later analysis of the origin of the returned surveys.

- The SCRMP Community Recreational Marine Usage Survey database is described in more detail in the accompanying Database Guide (Appendix F). The database functions as both an MS Access database, and an ArcGIS personal geodatabase – please see the Database Guide for more information, before using it.

- The database **SCRMP_RecMarineUsageSurvey-FINAL.mdb** is stored in the \SouthCoast_GIS\Data\GIS\Recreation\SCRMPSurvey folder.

RESULTS and DISCUSSION

Survey distribution

In total, approximately 2,300 surveys were printed and distributed via workshops, distribution points and direct mailing to interested people across the south coast. A total of 262 completed surveys were returned from all distribution methods.

In addition to the distribution methods listed in Table 1, surveys were often distributed by organisations other than DEC, especially local councils and some interest groups and community networking groups. Copying of the survey forms was encouraged, in order to maximise the number of surveys circulating in the community, thus accurate evaluation of the number of surveys distributed or returned via these methods is not possible.

Table 1: Approximate numbers of distribution and return of the SCRMP Community Recreational Marine Usage Survey.

Distribution Method	Number of surveys distributed	Number of surveys returned	Rate of return
SCRMP Community Workshop participants	226	70	31.0%
SCRMP Community Workshop 'take-aways'	~174	192	9.3%
Direct postage	100		
SCRMP Website	# of hits		
Provided to distribution points, such as: 'marine' clubs and shops, telecentres, post offices, caravan parks and campgrounds	~1,800		

SCRMP Community Workshops

South Coast Regional Marine Planning Community Workshops were a primary method of distributing the surveys. At each workshop, a presentation was given of the need for suitable information for the SCRMP process, highlighting the lack of information regarding marine recreational activities. The survey design and purpose was then presented and participants were encouraged to complete and return their surveys before leaving the workshops.

Table 2: Number of surveys completed and returned at South Coast Regional Marine Planning Community Workshops, and by post or personal delivery.

Received from	# of community workshop attendees	Number of survey responses received
Esperance W/shop	23	**16**
Kalgoorlie W/shop	3	**0**
Manjimup W/shop	36	**24**
Kojonup W/shop	6	**5**
Albany W/shop	44	**7**
Perth W/shop	26	**5**
Hopetoun W/shop	28	**4**

Received from	# of community workshop attendees	Number of survey responses received
Bremer Bay W/shop	15	**0**
Denmark W/shop	34	**8**
Augusta W/shop	11	**1**
Post/other	-	**192**
	Total	***262***

It is estimated that the SCRMP Community Workshops provided the highest rate of response of the various methods of distribution (an analysis of the numbers of surveys downloaded via SCRMP and other websites is not available). The workshops provided a comprehensive presentation of the context for the survey, and the need for community input into the gathering of marine recreational information. It was noted that people attending the workshops were generally very keen to fill out the surveys, and to take extra copies away for family, friends etc who were not able to attend the workshop. Staff were on hand to encourage and assist with the completion and return of surveys on the night of the workshop.

Some factors resulted in less than expected rate of return for some workshops. Due to extended discussions during the workshop presentations and information-gathering sessions, the late scheduling of the recreational marine usage section of the workshops was observed to have influenced the numbers of surveys completed and returned from some workshops in particular. Other factors, such as low lighting and/or a lack of tables, also appeared to encourage attendees to take surveys with them for later completion at home, rather than to complete on the night. The Perth workshop was noted to mostly involve representatives of stakeholder groups, who then helped with distribution of the survey via their networks, rather than completing the survey on the night. Most participants who did not return the survey on the night of a workshop pledged to return them by post.

Other distribution

Whilst providing a lower estimated rate of return than distribution and receipt via SCRMP Community Workshops, mail-outs, web-delivery and access from local distribution points resulted in a higher number of responses over the course of the survey (Table 1). Information about where the completed surveys were accessed was not a part of the survey design, and so there is little information available to determine the most successful distribution points or methods. It was noted, however, that Shire Councils provided a very effective method of distribution when they were closely associated with the process, for example representatives of the Manjimup Shire Council who attended the Manjimup SCRMP Community Workshop provided a very successful method of distributing surveys via their council website and newsletters. Other organisations such as fishing, diving or sailing clubs, Natural Resource Management regional groups and other marine-based community groups were also recognised as being important contact points for survey distribution and eventual response.

Background Survey

Being a voluntary and largely postal survey, there was a reliance on the potential respondents being motivated to take the time to fill out and return the survey. Results from the Background Survey, whilst not achieving a high enough sample size to draw statistically robust conclusions, showed several apparent biases that may be the result of the non-randomised nature of the survey, when compared with 2006 WA census data.

Question 1 – gender of respondents

There were significantly more responses to the survey from males than females (73.7% and 26%, respectively), than would be expected from 2006 census data for WA (chi-squared test $\chi^2 = 57.4$, $p < 0.001$) (Figure 6). One respondent did not answer Question 1.

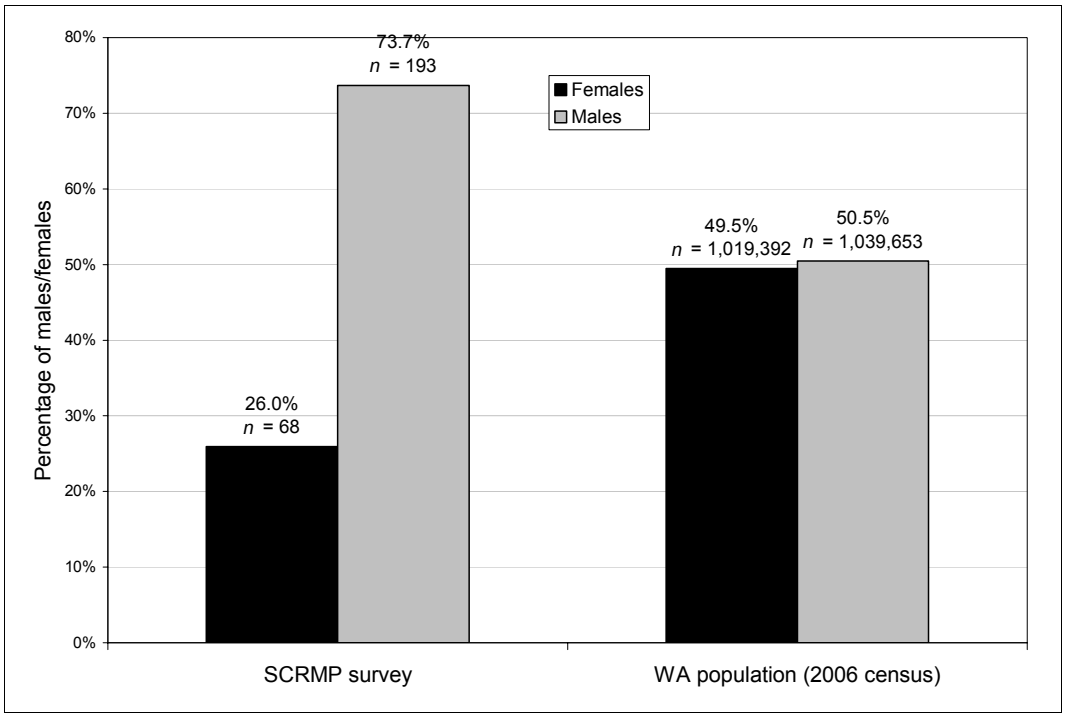

Figure 6: Percentage of survey responses from males and females, compared with 2006 WA census data (ABS 2008).

It is not known why such a bias in responses from males was found.

Question 2 – ages of respondents

Proportionally, the ages of respondents also did not reflect 2006 census data for WA (chi-squared test χ^2 = 127.9, $p < 0.001$). There were more older (aged > 35 years) and fewer younger (aged 0 – 34 years) respondents than would be expected from census statistics, with most respondents to the survey aged between 35 and 64 (69.1%) (Figure 7).

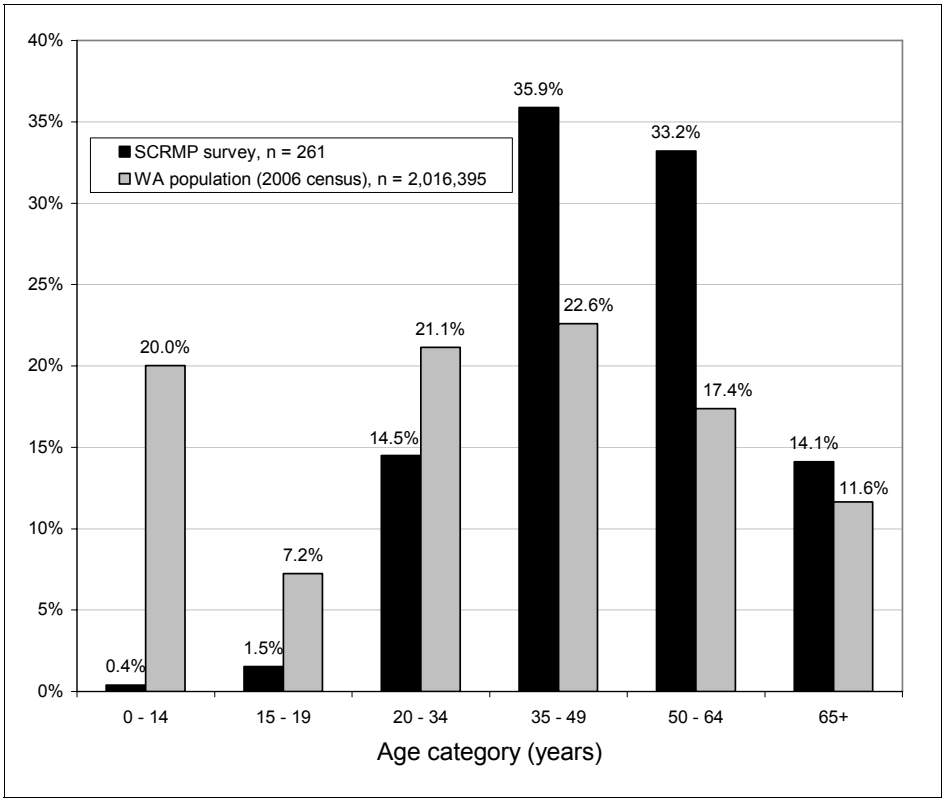

Figure 7: Age of respondents, compared with 2006 WA census data (ABS 2008).

The relatively complex nature of the survey, its reliance on the respondents' individual historical overview of their marine recreational activities, and the evening scheduling of SCRMP Community Workshops all support the apparent skew in older than expected respondent age, when compared with census data. Coupled with these factors and the nature of the SCRMP process as a strategic planning process for State Government agency marine planning and management, it is likely that older people would be more motivated to engage in the planning process, and therefore the survey, as shown in Figure 7.

Question 3 – current residence of respondents

Most respondents came from the major south coast towns of Albany and Esperance, minor towns of Manjimup, Denmark, Northcliffe, or Greater Perth (i.e. including suburbs) (Table 3).

Table 3: Residence of respondents, compared with Local Government Authority population data (ABS 2008). LGAs which had a South Coast Regional Marine Planning Community Workshop are highlighted with an asterisk (*).

Local Government Area (LGA)	Number of survey responses from LGA	% of total number of surveys received	Population of LGA (2006 census)
Manjimup *	82	31.30%	9,773
Albany *	48	18.32%	33,144
Denmark *	40	15.27%	4,809
Esperance *	25	9.54%	13,778
Greater Perth *	13	4.96%	1,519,510

Ravensthorpe *	11	4.20%	2,029
Augusta-Margaret River *	9	3.44%	10,942
Jerramungup*	9	3.44%	1,199
Kojonup *	7	2.67%	2,271
Donnybrook-Balingup	2	0.76%	5,000
Dundas	2	0.76%	1,153
Nannup	2	0.76%	1,260
other	2	0.76%	n/a
Yilgarn	2	0.76%	1,506
Bridgetown-Greenbushes	1	0.38%	4,119
Bunbury	1	0.38%	31,421
Dumbleyung	1	0.38%	671
Kalgoorlie-Boulder *	1	0.38%	30,399
Mandurah	1	0.38%	58,457
Murray	1	0.38%	12,554
Plantagenet	1	0.38%	4,704
Rockingham	1	0.38%	87,541
totals	*262*	*100%*	*1,836,240*

There were more responses received from several Local Government Authority areas than might be expected based on their relative population sizes. For example, of the total number of surveys returned, there were approximately 13% more with residents from the Shire of Manjimup than from the City of Albany, even though Albany City has more than three times the population of Manjimup Shire. Table 3 shows a comparison of the number and percentage of total of surveys returned per LGA, and the populations of each LGA.

Residents of Local Government Authorities bordering the southern ocean and/or which had a SCRMP Community Workshop held in one of it's towns or cities tended to return the most surveys, as would be expected. With the relatively small sample size, any factor which caused a particular community to become more or less involved in the survey is likely to make a significant difference in the total numbers and percentage of responses from that community. For example, the interest and publicity surrounding a Community Workshop, or the effect that a well-organised and supported interest group may have, could easily influence enough people from a town to complete and return a large enough number of surveys. Likewise influential people who were or wanted to be engaged in the SCRMP process could influence enough people to return (or not return) surveys, an effect which would be seen in the results.

Other factors such as recent local events in the marine management or planning of an area, or other topical events close to the time period of the survey in different areas is also likely to be a strong influence on where most surveys were returned from.

Figure 8 shows the distribution of reported 'current residence' duration, in 5-year bins. Most respondents would be considered mid- to long- term residents, with 50% of respondents reporting having lived at their current location for more than 15 years, 26% between 6 – 15 years and 24% being more recent residents of 5 or less years.

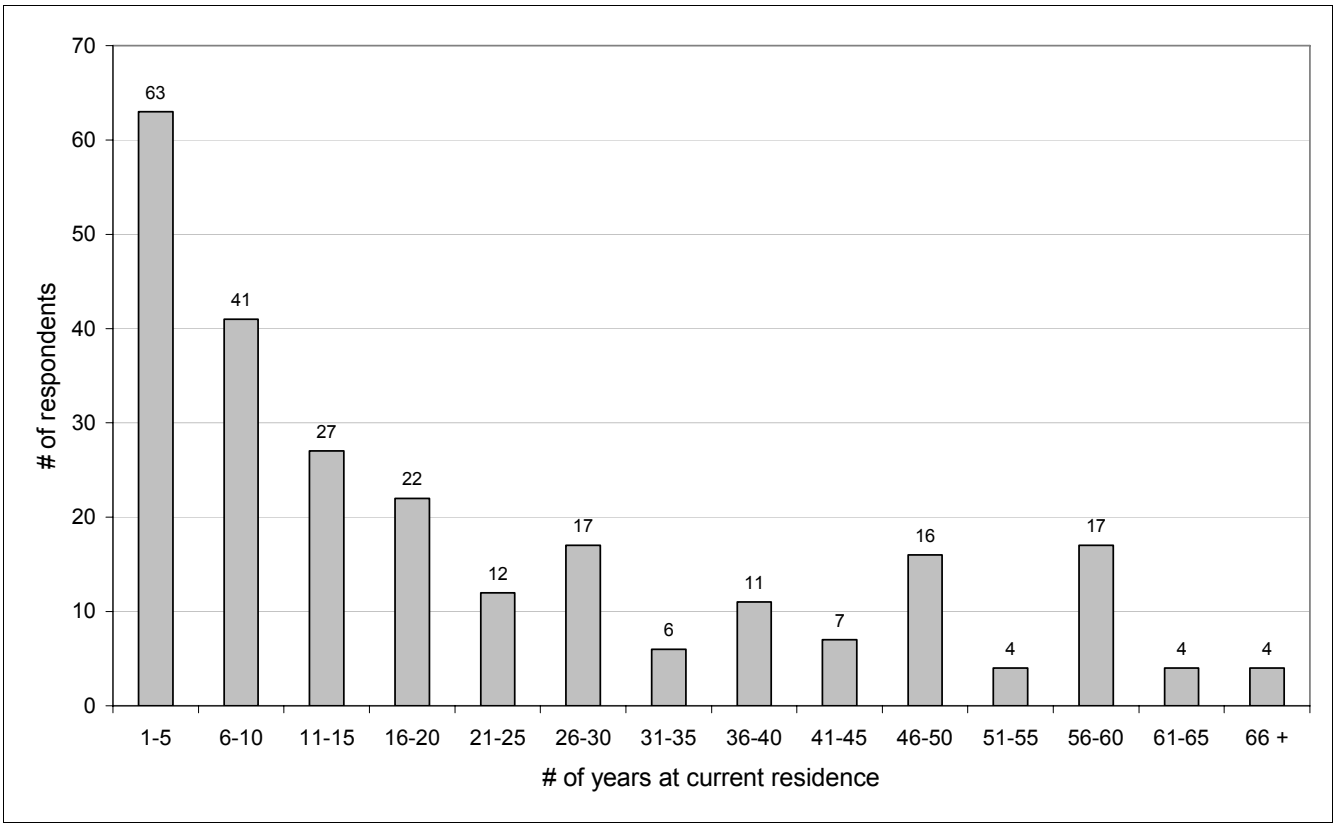

Figure 8: Graph showing the number of years living at the current reported residence.

There are many potential reasons for the observed trend of more longer-term residents returning surveys than shorter-term residents. Longer-term residents are more likely to have broader communication networks through which they may have been presented with opportunities to respond to the survey. Also, it is likely that longer-term residents either feel that they have more to offer to an exercise such as the survey, or that they have more interests to invest in providing input to ensure a 'good' outcome of the process.

Question 4 – other south coast residence(s)

This question was included to capture data to allow more detailed investigation of the origin and experience of respondents to the survey. Results of this question were not analysed for this report.

Question 5 – usual period of usage

Respondents were allowed to choose more than one usual usage period, out of the 5 categories provided: 'weekday'; 'weekend'; '1-2 week period/s (holiday)'; '>2 week period/s'; or 'anytime'. Most respondents chose one or two of the categories only (186 and 62 respondents, respectively), with 13 respondents choosing three or more categories.

Of the 13 respondents choosing 3 or more categories, 9 included 'Anytime' as a choice of their normal usage period for their marine recreation. If these responses are then treated as an exclusive choice of 'Anytime', then Table 4 shows the distribution of 262 responses with either none, one, two or 3 or more responses which did not include 'Anytime'.

Table 4: Respondents' choice of provided 'usage period' categories. Thirteen respondents chose 3 or more categories, 9 of these included a choice of 'Anytime' and so are treated as an exclusive 'Anytime' choice.

Number of 'usage period' categories chosen	Number of respondents	Percentage of respondents
0	1	0.4%
1	195	74.4%
2	62	23.7%
3 or more (not including 'Anytime')	4	1.5%

Of the 257 responses of only one or two separate usage categories, a choice of 'Anytime' was most prevalent, with weekends being the second most popular time to recreate (Table 5).

Table 5: The numbers of respondents who chose only one or two categories of usage period. Out of 262 surveys received, 257 respondents chose one or two categories, four respondents chose three or more categories and one did not chose any. Numbers in bold show exclusive single-choice responses.

	Weekday	Weekend	1-2 weeks	> 2 weeks	Anytime
Weekday	**10**	27	1	0	3
Weekend	-	**37**	17	0	11
1-2 weeks	-	-	**16**	0	3
> 2 weeks	-	-	-	**3**	0
Anytime	-	-	-	-	**129**

Question 6 – usual number of people in group when recreating

Similarly to Question 5, respondents were allowed to choose more than one category of usage group size: 'alone'; 'with 4 or less other people in my group'; and 'with more than 4 others in my group'. Most respondents reported a single category (89.3%) or two categories only (7.3%) (Table 6).

Table 6: number of 'usage group size' categories chosen by respondents. More than one choice was allowed.

Number of 'usage group' categories chosen	Number of respondents	Percentage of respondents
0	2	0.8%
1	234	89.3%
2	19	7.3%
3	7	2.7%

Of the 253 respondents who reported only one or two choices, most reported recreating in groups of four or less other people (Table 7).

Table 7: The choices of respondents who chose only one or two usage group categories. Numbers in bold show exclusive single-choice responses

	Alone	Four or less others	More than four others
Alone	**24**	14	1
Four or less others	-	**181**	4
More than 4 others	-	-	**29**

Question 7 – value of different marine recreational activities

Question 7 included responses about the respondents' personal value of a range of different marine recreational activities as well as the respondents' understanding of the wider community's value of those same activities.

Responses of a '1' or '2' were treated as a 'low' value of that activity, a '3' was considered a moderate value and a '4' or '5' was considered to be a high value of that activity. Some respondents reported a '0' or a blank – these were treated as a response of 'low value' and assigned a value of '1'.

Table 8 shows a ranking of the most important activities, based on the percentage of responses recording that activity as having high value (i.e. responding with a '4' or '5'). Camping, swimming, 4WDing, shore-based fishing and walking were recorded as the top-5 of high value recreational activities to the individual respondents, whilst swimming, shore-based fishing, camping, inshore boat-based fishing and 4WDing were recognised as being the top-5 activities for the wider community. The full detail of responses to this question are given in Appendix B.

Table 8: Ranking of 'high' (a response of '4' or '5') value marine recreational activities, in the respondents' own experience and their understanding of the wider community's values.

Rank	'My Value' responses		'Wider Value' responses	
	Activity	Percentage of responses of 'high' value	Activity	Percentage of responses of 'high' value
1	Camping	**56%**	Swimming	**64%**
2	Swimming	**51%**	Fishing - Shore	**61%**
3	4WDing	**47%**	Camping	**60%**
4	Fishing - Shore	**46%**	Fishing - Inshore	**50%**
5	Walking	**41%**	4WDing	**50%**
6	Beachcombing	**37%**	Surfing	**48%**
7	Fishing - Inshore	**37%**	Walking	**43%**
8	Wildlife-watching	**36%**	Whale-watching	**42%**
9	Fishing - Offshore	**30%**	Beachcombing	**36%**
10	Dive/snorkel - Shore	**28%**	Wildlife-watching	**34%**
11	Whale-watching	**27%**	Fishing - Offshore	**33%**
12	Photography	**26%**	Dive/snorkel - Shore	**31%**
13	Surfing	**21%**	Photography	**30%**
14	Dive/snorkel - Inshore	**15%**	Dive/snorkel - Inshore	**24%**
15	Sailing	**8%**	Sailing	**17%**
16	Dive/snorkel - Offshore	**8%**	Spear - Inshore	**14%**
17	Spear - Shore	**8%**	Dive/snorkel - Offshore	**13%**
18	Kayaking	**8%**	Wind/Kite	**12%**
19	Spear - Inshore	**7%**	Kayaking	**10%**
20	Other	**6%**	Spear - Shore	**10%**
21	Waterskiing	**5%**	Waterskiing	**8%**
22	Wind/Kite	**4%**	Spear - Offshore	**8%**
23	Spear - Offshore	**4%**	Waveskiing	**8%**
24	Waveskiing	**2%**	Other	**3%**

Main survey results

The main part of the survey asked respondents to fill out a separate survey form for each activity for which they wished to provide more detail about the location, usual number of days per year, and value they placed on those different locations for that activity. Four pages were usually included in the survey package, and so respondents needed to request additional survey form pages, or copy/print more of their own if more than four activities were to be reported. There were no limits placed on the number of activities that could be reported.

Table 9 shows that most respondents recorded details about four or less activities, as would be expected from the provision of only four forms per survey.

Table 9: Number and percentage of surveys providing detailed information on main survey forms, one form for each different activity reported by each respondent.

Number of different activities reported by respondents	Number of respondents	% of total responses (262)
0	6	2%
1	43	16%
2	40	15%
3	47	18%
4	100	38%
5	5	2%
6	13	5%
7	5	2%
8	2	1%
10	1	0%

Reported activities

The major activity for which detailed responses were given was fishing (68.7%), followed by swimming (38.5%), 4WDing (36.6%), camping/picnicking (32.4%) and walking/hiking (26%) (Figure 9).

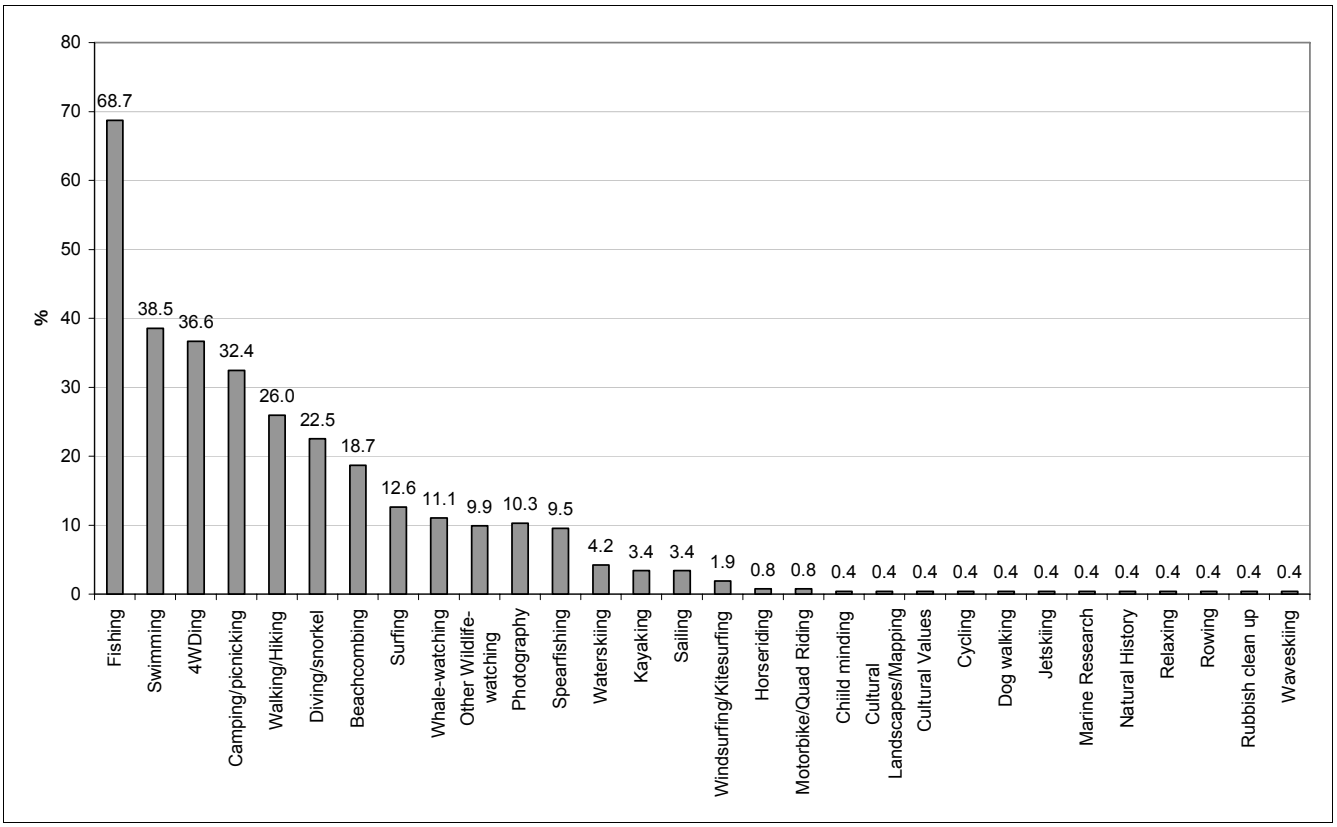

Figure 9 Percentages of respondents reporting detailed information for various marine recreational activities. A total of 262 surveys were returned. Note that respondents usually reported more than one activity in their response (see Table 9).

Spatial distribution of activities

Most reported recreation was shore-based, and concentrated around local population centres and access points, particularly in the western part of the study area, between Bremer Bay and Augusta (Figure 11).

Appendix C contains maps showing the distribution of responses for each of the top-10 activities.

Due to the many related and complex drivers for the different activities, a detailed discussion on likely causes of this distribution is not provided in this report. Coastal access, proximity to population centres, track, roads and highways and other infrastructure as well as the distribution of various climatic and oceanographic processes which drive the quality and accessibility of the different recreational pursuits are likely reasons for the observed distributions.

Maps showing the distributions of many of the factors above are provided in the South Coast GIS Information and Resource Compilation Project Report /SouthCoast_GIS/Documents/Final/FinalReport_SCRMP_GIS_20090530.doc), and in the map products folder \SouthCoast_GIS\Products\Maps\SCRMP

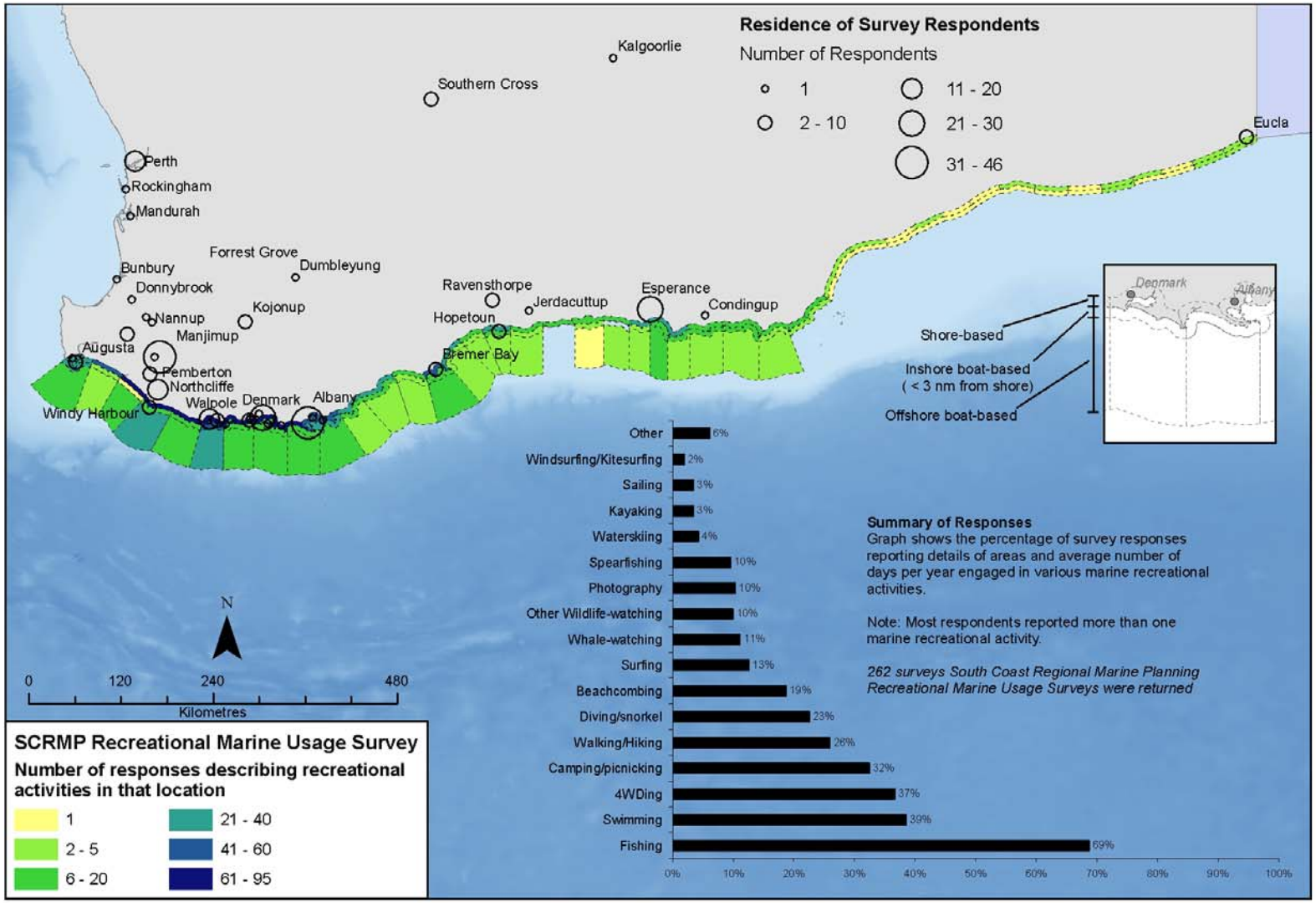

Figure 10: The spatial distribution of marine recreational activities reported through the survey, and the residence of respondents.

CONCLUSION and RECOMMENDATIONS

Overall, the Community Recreational Marine Usage Survey was successful in achieving the main objective of capturing indicative information regarding the types and distribution of popular recreational marine activities. This information has been useful to the South Coast Regional Marine Planning process, and future planning processes, by showing where the different activities are most popular along the south coast. This spatial data is highly important in any planning process, as it allows planners the opportunity to quickly identify any particular issues that may arise in the area of interest, and then to target more detailed information as required.

The number of respondents (262) allowed general, indicative, information to be captured, but precluded thorough statistical analysis or any suggestion that the data are representative of the wider population. However, the survey did capture valuable information not only about where people reported doing the different activities, but also about which activities people felt most motivated to report to the planning process. For example, fishing was the most reported activity (Figure 9), and was also recognised as the most highly valued activity to the wider population (Appendix B). Thus it can be concluded that a) many/most people recreationally fish, and/or b) many fishers were motivated to be involved in the planning process and the survey, and/or c) people value recreational fishing very highly. Similar conclusions can be made about all of the surveyed activities, according to their positions in Figure 9 and Appendix B.

- For this survey, the associated South Coast Regional Marine Planning process had a very broad target audience of (any) south coast marine users. Depending on the context of future survey distribution (such as whether it was distributed at a kitesurfing club meeting, for example) and therefore the target audience, such results, and the conclusions that are drawn from them, are likely to change. It will therefore be important that distribution methods, and contexts are recorded in the database, to allow proper interpretation of the results.

- It is highly recommended that the survey be continued in order to build the database and capture a larger proportion of the south coast, and broader Western Australian population. This will allow more analysis of survey data such as the average number of days per year that people participate in an activity in an area, or how highly they value different areas over others, etc. If staff were available to enter and manage the data, the survey could be continued relatively cheaply, by leveraging public meetings/workshops/conferences, schools, and contact points such as shops, accommodation sites and telecentres, for example.

- To maximise survey uptake and response, it is recommended that the survey is distributed with an accompanying presentation, or some other kind of background information about why it is important to gather such information about recreational activities. Being a relatively complex and sometimes (depending on the number of different activities the respondent wishes to report) time-consuming exercise, sufficient motivation needs to be provided to encourage people to complete the survey.

- It is recommended that the reporting of the number of weeks that people undertake an activity (see the section on survey design - Usage) be removed, so that people only report in terms of days. Several respondents appeared to respond incorrectly, by double-reporting their usage – for example, reporting that they usually spend 14 days, *and* 2 weeks per year, or 200 days, *and* 30 weeks per year, doing different activities. This potentially makes the analysis of usage difficult, and/or potentially skews the results incorrectly.

- Contact details have been left in the database, to allow comparison with any future surveys, so that duplicate responses can be avoided. **THIS INFORMATION SHOULD BE KEPT STRICTLY CONFIDENTIAL**.

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- Staff of the DEC Marine Policy and Planning Branch – Ian Herford, Peter Van Schoubroeck, Ray Lawrie, Mark Sheridan
- Staff of the Australian Bureau of Statistics – Cal Hoad and staff.
- Members of the South Coast Regional Marine Planning Planning Advisory Group, and Planning Working Group
- South Coast NRM – Dylan Gleave

Many people/organisations also assisted with the distribution of the survey, particularly:

- Local south coast offices of Department of Environment and Conservation, Department of Fisheries, and the former Department for Planning and Infrastructure
- South Coast NRM
- South West Catchments Council
- Recfishwest
- Shire of Manjimup
- Shire of Nannup
- South coast Volunteer Sea Search and Rescue groups
- Emu Beach Holiday Park
- Middleton Beach Holiday Park
- Augusta Hardware
- Augusta Marine
- Augusta X-treme Outdoor Sports
- Flinders Bay Caravan Park
- Molloy Caravan Park
- Turner Caravan Park
- Westbay Retreat Caravan Park
- Bremer Bay Beaches Resort and Tourist Park
- Bremer Bay Caravan Park
- Bremer Bay General & Liquor Store
- Cheynes Beach Caravan Park
- Jack F Ricketts and Co.
- Ocean Beach Caravan Park
- Rivermouth Caravan Park
- BBQs Galore
- Crokers Park Holiday Resort
- Duke of Orleans
- Esperance 4x4 centre
- Esperance Bay Caravan Park
- Esperance Camping World and Workwear
- Esperance Caravan and Camping
- Esperance Diving and Fishing
- Esperance Marine and Tackle
- Moby Marine
- Southern Sports and Tackle
- The Last Frontier
- Esperance Surfcasters

- Hopetoun Caravan Park
- Hopetoun District Recreation Association Inc.
- Hopetoun Recreation And Hire
- IGA Hopetoun
- Peaceful Bay Caravan Park
- Pioneer Store
- Rest Point Holiday Village
- Valley of the Giants Ecopark

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Tourism Research Australia http://www.tra.australia.com/

APPENDICES

Appendix A: Community Workshop series report.

See '**APPENDIX A Community Workshop Series Report.pdf**'

Appendix B: detailed summary of responses to Question 7 of the Background Survey – 'Value' of various recreational activities.

'My Value' ratings for various activities - Question 7 of the Background Survey 2007-2008

Activity	Count of My Value ratings					% of 262 responses					Count of My Value ratings			% of 262 responses		
	1	2	3	4	5	1	2	3	4	5	1 or 2 Low	3 Medium	4 or 5 High	1 or 2 Low	3 Medium	4 or 5 High
4WDing	87	16	37	41	81	33.2%	6.1%	14.1%	15.6%	30.9%	103	37	122	39.3%	14.1%	46.6%
Beachcombing	82	33	50	39	58	31.3%	12.6%	19.1%	14.9%	22.1%	115	50	97	43.9%	19.1%	37.0%
Camping	51	16	47	56	92	19.5%	6.1%	17.9%	21.4%	35.1%	67	47	148	25.6%	17.9%	56.5%
Dive - Inshore	176	22	24	20	20	67.2%	8.4%	9.2%	7.6%	7.6%	198	24	40	75.6%	9.2%	15.3%
Dive - Offshore	221	10	9	10	12	84.4%	3.8%	3.4%	3.8%	4.6%	231	9	22	88.2%	3.4%	8.4%
Dive - Shore	130	25	34	28	45	49.6%	9.5%	13.0%	10.7%	17.2%	155	34	73	59.2%	13.0%	27.9%
Fishing - Inshore	104	23	39	36	60	39.7%	8.8%	14.9%	13.7%	22.9%	127	39	96	48.5%	14.9%	36.6%
Fishing - Offshore	143	18	23	20	58	54.6%	6.9%	8.8%	7.6%	22.1%	161	23	78	61.5%	8.8%	29.8%
Fishing - Shore	69	28	45	39	81	26.3%	10.7%	17.2%	14.9%	30.9%	97	45	120	37.0%	17.2%	45.8%
Kayak	207	14	20	11	10	79.0%	5.3%	7.6%	4.2%	3.8%	221	20	21	84.4%	7.6%	8.0%
Other	2	1	2	1	14	0.8%	0.4%	0.8%	0.4%	5.3%	3	2	15	1.1%	0.8%	5.7%
Photography	112	36	46	33	35	42.7%	13.7%	17.6%	12.6%	13.4%	148	46	68	56.5%	17.6%	26.0%
Sailing	211	15	14	6	16	80.5%	5.7%	5.3%	2.3%	6.1%	226	14	22	86.3%	5.3%	8.4%
Spear - Inshore	228	8	7	8	11	87.0%	3.1%	2.7%	3.1%	4.2%	236	7	19	90.1%	2.7%	7.3%
Spear - Offshore	237	7	8	4	6	90.5%	2.7%	3.1%	1.5%	2.3%	244	8	10	93.1%	3.1%	3.8%
Spear - Shore	221	9	10	10	12	84.4%	3.4%	3.8%	3.8%	4.6%	230	10	22	87.8%	3.8%	8.4%
Surfing	177	14	15	18	38	67.6%	5.3%	5.7%	6.9%	14.5%	191	15	56	72.9%	5.7%	21.4%
Swimming	60	15	53	30	104	22.9%	5.7%	20.2%	11.5%	39.7%	75	53	134	28.6%	20.2%	51.1%
Walking/Hiking	93	23	38	37	71	35.5%	8.8%	14.5%	14.1%	27.1%	116	38	108	44.3%	14.5%	41.2%
Waterski	226	10	14	4	8	86.3%	3.8%	5.3%	1.5%	3.1%	236	14	12	90.1%	5.3%	4.6%
Waveski	236	9	11	0	6	90.1%	3.4%	4.2%	0.0%	2.3%	245	11	6	93.5%	4.2%	2.3%
Whale-watching	103	49	40	27	43	39.3%	18.7%	15.3%	10.3%	16.4%	152	40	70	58.0%	15.3%	26.7%
Wildlife watching	101	36	31	38	56	38.5%	13.7%	11.8%	14.5%	21.4%	137	31	94	52.3%	11.8%	35.9%
Wind/Kite	233	9	9	4	7	88.9%	3.4%	3.4%	1.5%	2.7%	242	9	11	92.4%	3.4%	4.2%

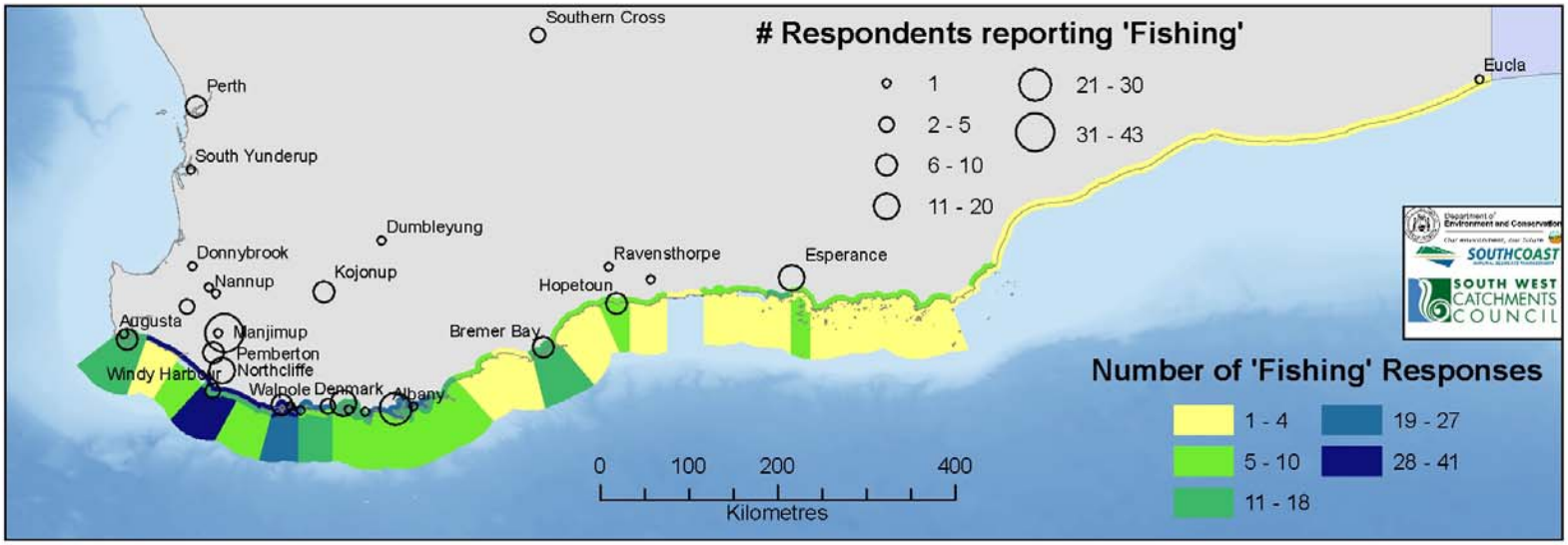
'Wider Value' ratings for various activities - Question 7 of the Background Survey 2007-2008

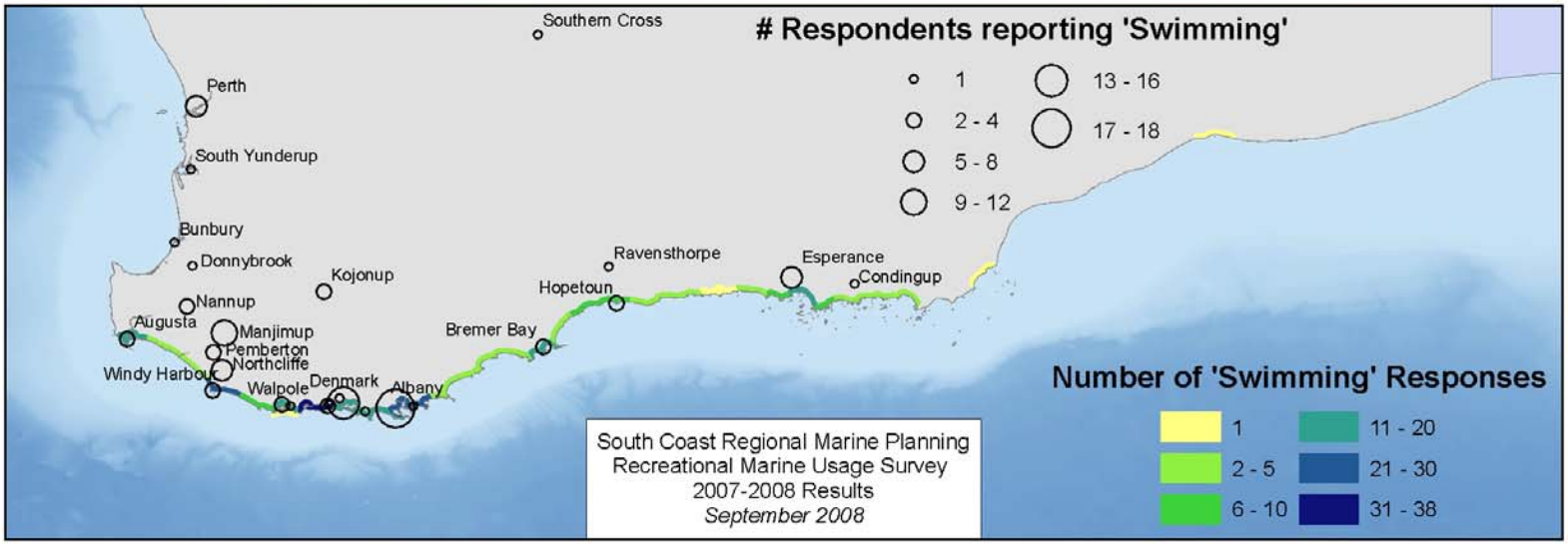
Activity	Count of My Value ratings					% of 262 responses					Count of My Value ratings			% of 262 responses		
	1	2	3	4	5	1	2	3	4	5	1 or 2 Low	3 Medium	4 or 5 High	1 or 2 Low	3 Medium	4 or 5 High
4WDing	67	12	53	61	69	25.6%	4.6%	20.2%	23.3%	26.3%	79	53	130	30.2%	20.2%	49.6%
Beachcombing	77	29	62	39	55	29.4%	11.1%	23.7%	14.9%	21.0%	106	62	94	40.5%	23.7%	35.9%
Camping	64	6	36	64	92	24.4%	2.3%	13.7%	24.4%	35.1%	70	36	156	26.7%	13.7%	59.5%
Dive - Inshore	104	39	55	32	32	39.7%	14.9%	21.0%	12.2%	12.2%	143	55	64	54.6%	21.0%	24.4%
Dive - Offshore	142	39	46	17	18	54.2%	14.9%	17.6%	6.5%	6.9%	181	46	35	69.1%	17.6%	13.4%
Dive - Shore	87	34	60	40	41	33.2%	13.0%	22.9%	15.3%	15.6%	121	60	81	46.2%	22.9%	30.9%
Fishing - Inshore	64	12	54	61	71	24.4%	4.6%	20.6%	23.3%	27.1%	76	54	132	29.0%	20.6%	50.4%
Fishing - Offshore	85	27	63	25	62	32.4%	10.3%	24.0%	9.5%	23.7%	112	63	87	42.7%	24.0%	33.2%
Fishing - Shore	59	2	41	59	101	22.5%	0.8%	15.6%	22.5%	38.5%	61	41	160	23.3%	15.6%	61.1%
Kayaking	125	71	40	15	11	47.7%	27.1%	15.3%	5.7%	4.2%	196	40	26	74.8%	15.3%	9.9%
Other	2	4	4	3	5	0.8%	1.5%	1.5%	1.1%	1.9%	6	4	8	2.3%	1.5%	3.1%
Photography	79	34	71	36	42	30.2%	13.0%	27.1%	13.7%	16.0%	113	71	78	43.1%	27.1%	29.8%
Sailing	105	43	70	26	18	40.1%	16.4%	26.7%	9.9%	6.9%	148	70	44	56.5%	26.7%	16.8%
Spear - Inshore	146	44	36	19	17	55.7%	16.8%	13.7%	7.3%	6.5%	190	36	36	72.5%	13.7%	13.7%
Spear - Offshore	173	38	29	9	13	66.0%	14.5%	11.1%	3.4%	5.0%	211	29	22	80.5%	11.1%	8.4%
Spear - Shore	139	48	50	12	13	53.1%	18.3%	19.1%	4.6%	5.0%	187	50	25	71.4%	19.1%	9.5%
Surfing	79	13	43	60	67	30.2%	5.0%	16.4%	22.9%	25.6%	92	43	127	35.1%	16.4%	48.5%
Swimming	60	6	28	58	110	22.9%	2.3%	10.7%	22.1%	42.0%	66	28	168	25.2%	10.7%	64.1%
Walking	74	14	62	45	67	28.2%	5.3%	23.7%	17.2%	25.6%	88	62	112	33.6%	23.7%	42.7%
Waterskiing	148	49	43	11	11	56.5%	18.7%	16.4%	4.2%	4.2%	197	43	22	75.2%	16.4%	8.4%
Waveskiing	140	60	40	11	11	53.4%	22.9%	15.3%	4.2%	4.2%	200	40	22	76.3%	15.3%	8.4%
Whale-watching	76	26	50	53	57	29.0%	9.9%	19.1%	20.2%	21.8%	102	50	110	38.9%	19.1%	42.0%
Wildlife	80	35	59	44	44	30.5%	13.4%	22.5%	16.8%	16.8%	115	59	88	43.9%	22.5%	33.6%
Wind/Kite	139	45	46	18	14	53.1%	17.2%	17.6%	6.9%	5.3%	184	46	32	70.2%	17.6%	12.2%

Appendix C: Maps of the distribution of responses for the top-10 activities.

The following maps show information regarding the 10 most reported activities:

1. Fishing
2. Swimming
3. 4WDing
4. Camping/picnicking
5. Walking/Hiking
6. Diving/Snorkelling
7. Beachcombing
8. Surfing
9. Whale-watching
10. Other Wildlife-watching


Respondents reporting 'Fishing'
1
2 - 5
6 - 10
11 - 20
21 - 30
31 - 43
Southern Cross
Perth
South Yunderup
Dumbleyung
Donnybrook
Kojonup
Nannup
Augusta
Manjimup
Pemberton
Northcliffe
Windy Harbour
Walpole
Denmark
Albany
Bremer Bay
Hopetoun
Ravensthorpe
Esperance
Eucla
0
100
200
400
Kilometres
Number of 'Fishing' Responses
1 - 4
5 - 10
11 - 18
19 - 27
28 - 41
SOUTHCOAST
SOUTH WEST CATCHMENTS COUNCIL


Respondents reporting 'Swimming'
1
2 - 4
5 - 8
9 - 12
13 - 16
17 - 18
Southern Cross
Perth
South Yunderup
Bunbury
Donnybrook
Kojonup
Nannup
Augusta
Manjimup
Pemberton
Northcliffe
Windy Harbour
Walpole
Denmark
Albany
Bremer Bay
Hopetoun
Ravensthorpe
Esperance
Condingup
Number of 'Swimming' Responses
1
2 - 5
6 - 10
11 - 20
21 - 30
31 - 38
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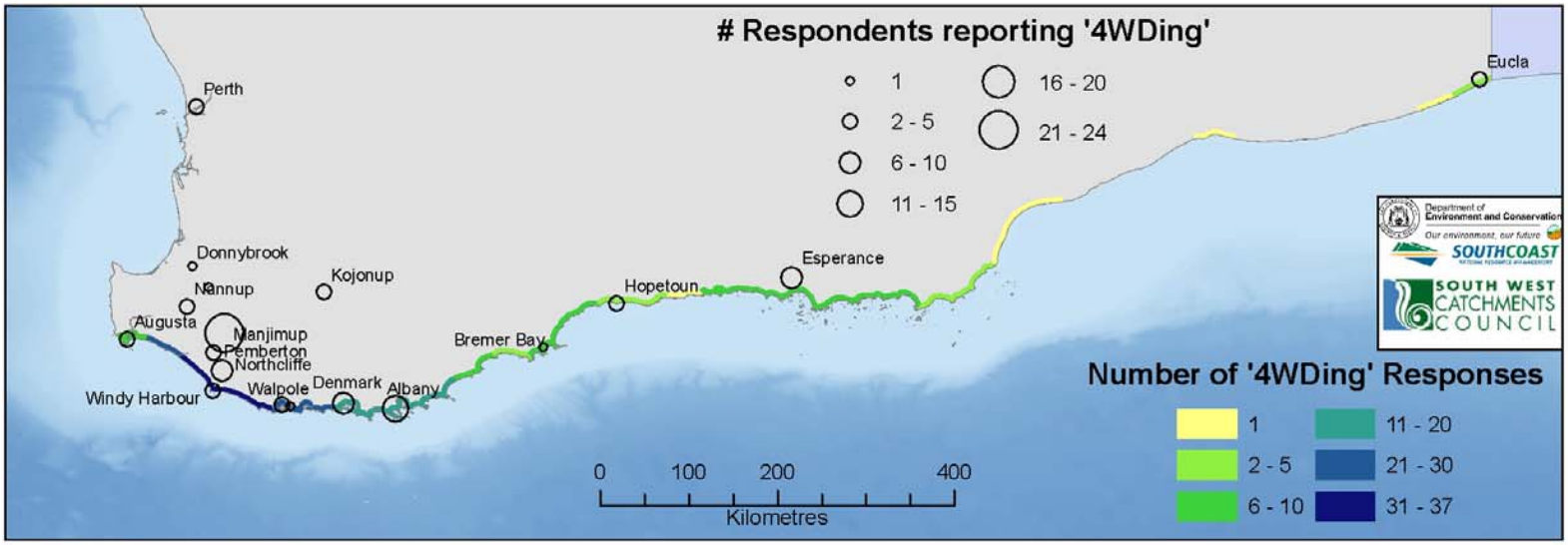
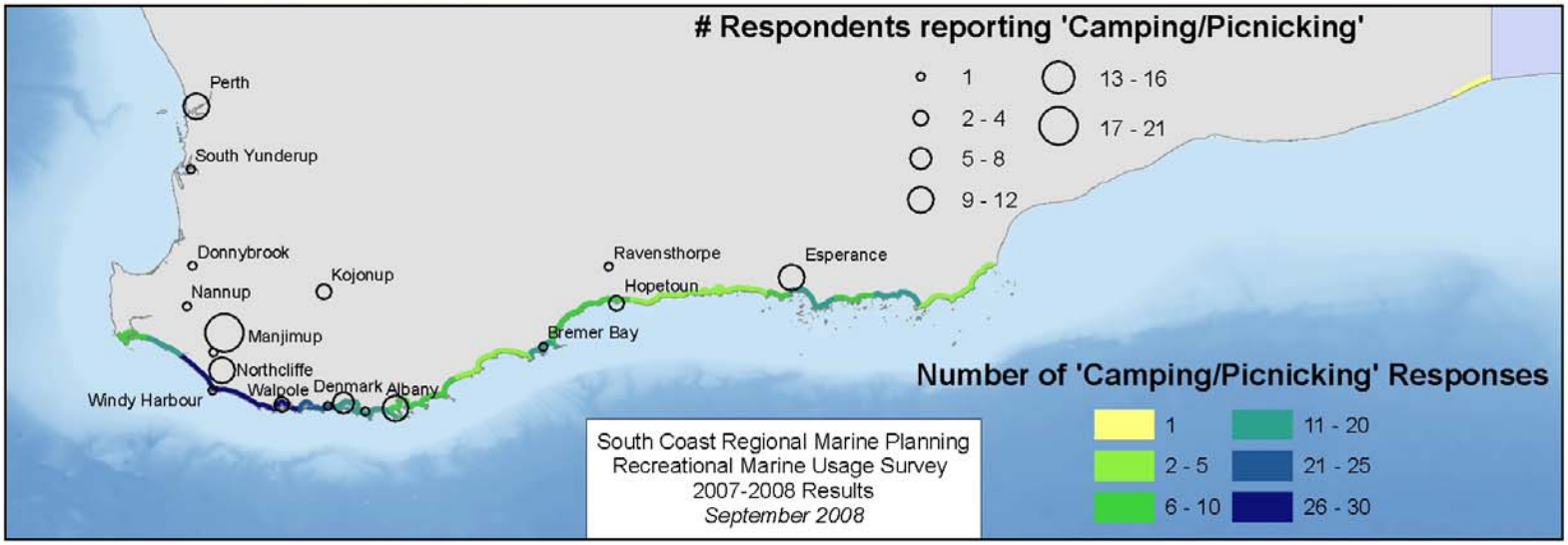

Respondents reporting '4WDing'
1
2 - 5
6 - 10
11 - 15
16 - 20
21 - 24
Perth
Eucla
Donnybrook
Kojonup
Nannup
Augusta
Manjimup
Pemberton
Northcliffe
Windy Harbour
Walpole
Denmark
Albany
Bremer Bay
Hopetoun
Esperance
0
100
200
400
Kilometres
Number of '4WDing' Responses
1
2 - 5
6 - 10
11 - 20
21 - 30
31 - 37


Respondents reporting 'Camping/Picnicking'
1
2 - 4
5 - 8
9 - 12
13 - 16
17 - 21
Perth
South Yunderup
Donnybrook
Kojonup
Nannup
Manjimup
Northcliffe
Windy Harbour
Walpole
Denmark
Albany
Bremer Bay
Ravensthorpe
Hopetoun
Esperance
Number of 'Camping/Picnicking' Responses
1
2 - 5
6 - 10
11 - 20
21 - 25
26 - 30
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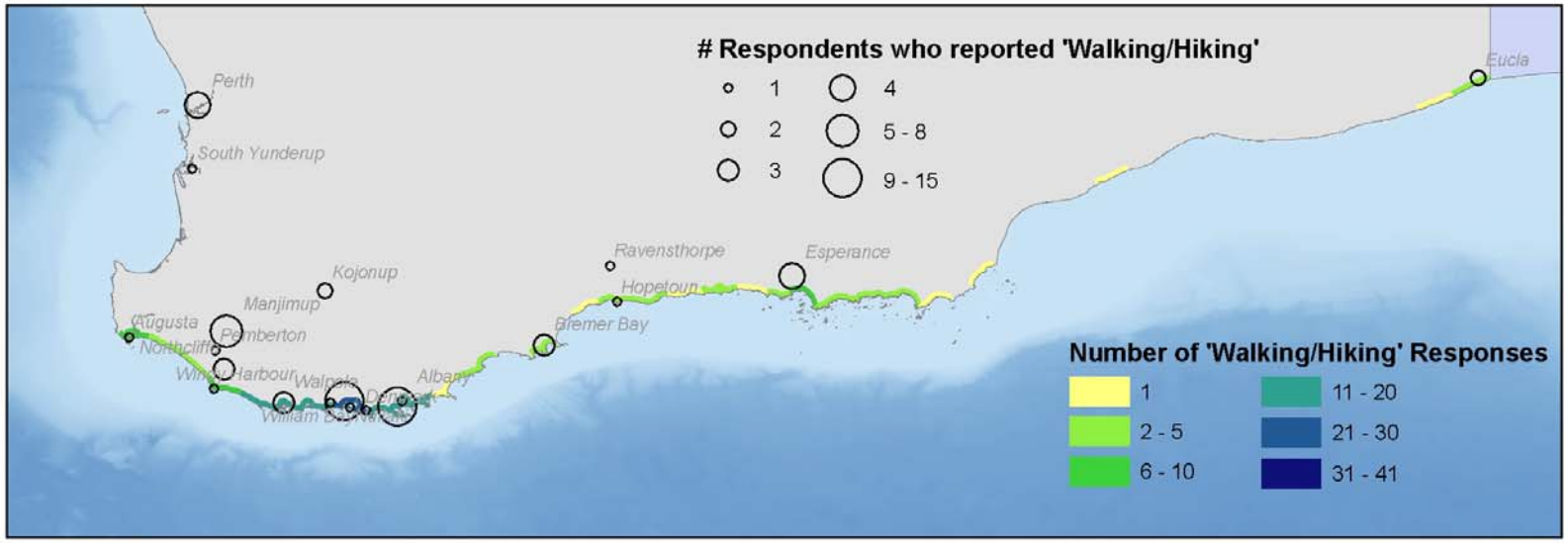
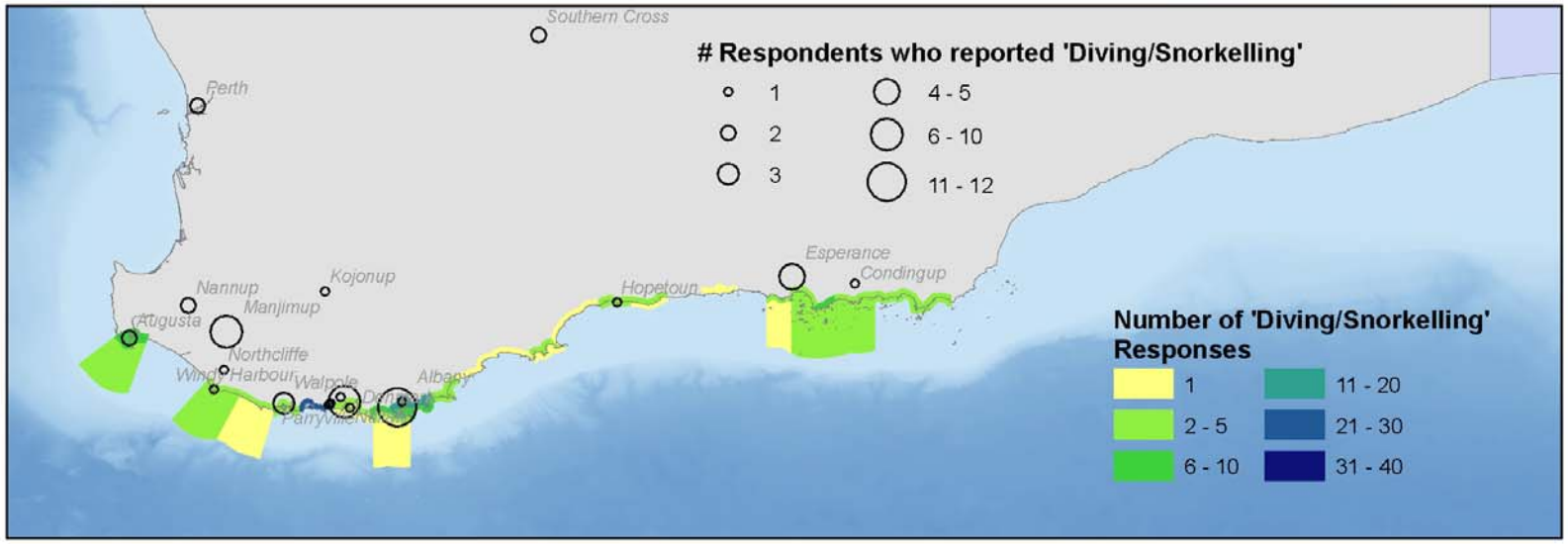
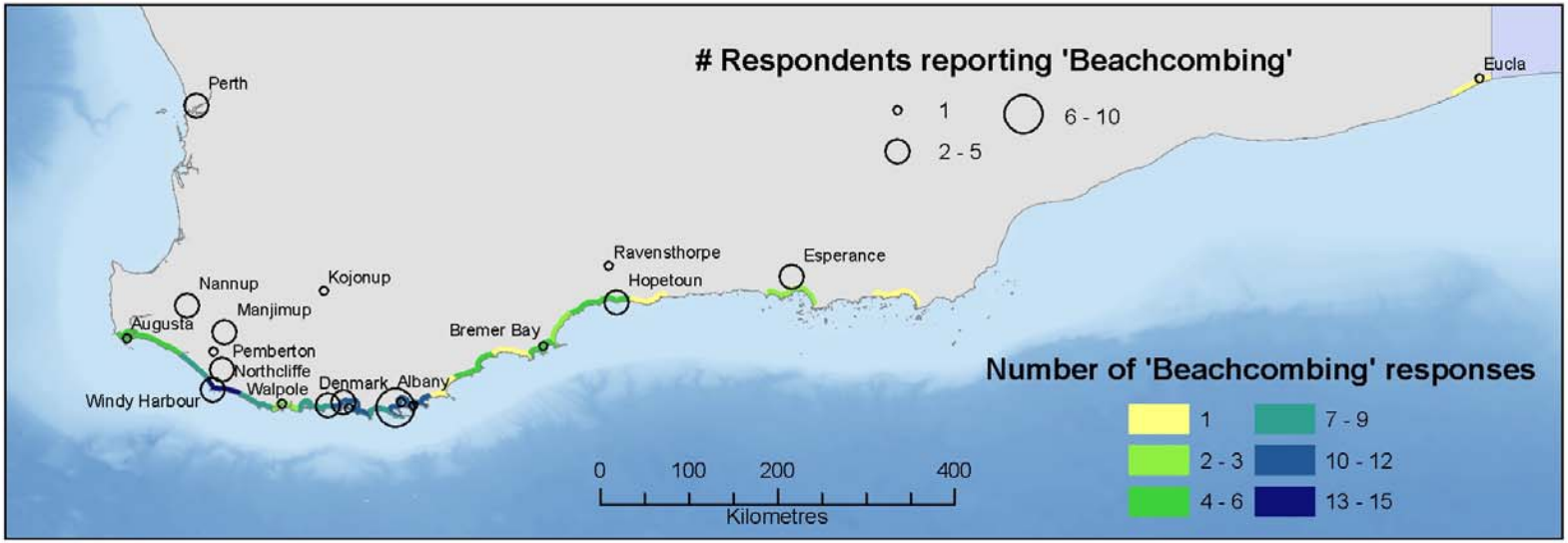
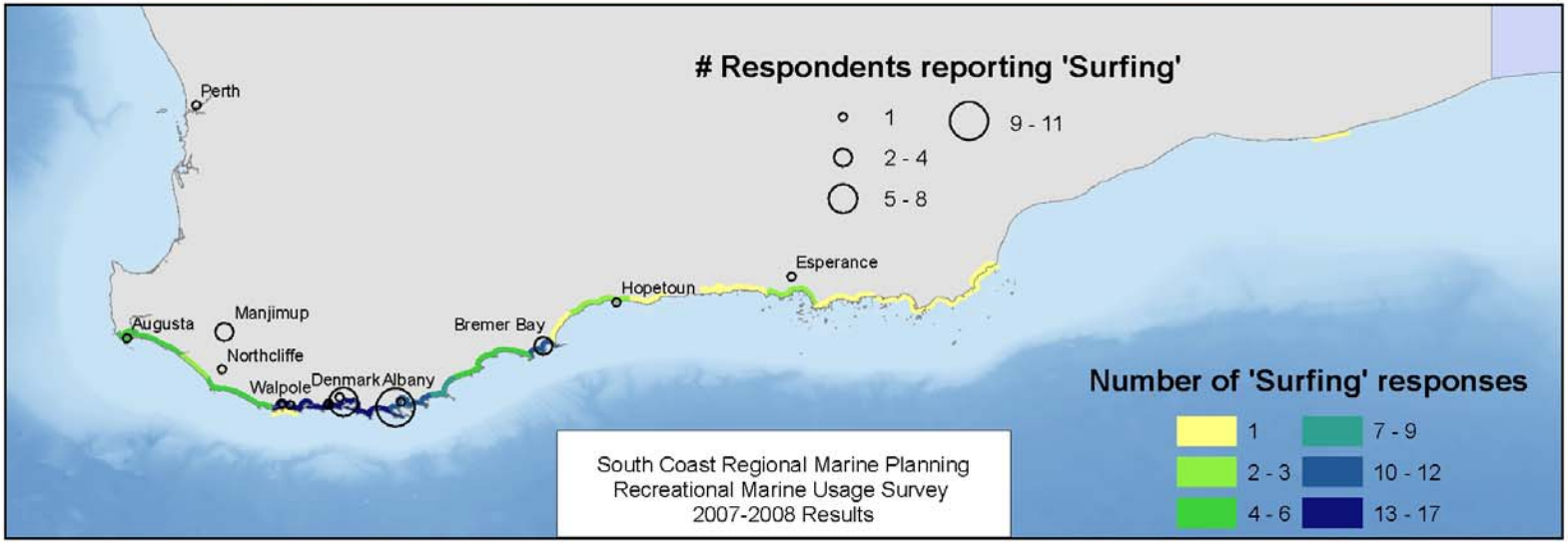

Respondents who reported 'Walking/Hiking'
1
2
3
4
5 - 8
9 - 15
Perth
South Yunderup
Kojonup
Manjimup
Augusta
Pemberton
Northcliffe
Harbour
Albany
Ravensthorpe
Esperance
Hopetoun
Bremer Bay
Eucla
Number of 'Walking/Hiking' Responses
1
2 - 5
6 - 10
11 - 20
21 - 30
31 - 41


Southern Cross
Respondents who reported 'Diving/Snorkelling'
1
2
3
4 - 5
6 - 10
11 - 12
Perth
Nannup
Kojonup
Manjimup
Augusta
Northcliffe
Harbour
Albany
Esperance
Condingup
Hopetoun
Number of 'Diving/Snorkelling' Responses
1
2 - 5
6 - 10
11 - 20
21 - 30
31 - 40


Respondents reporting 'Beachcombing'
1
2 - 5
6 - 10
Perth
Eucla
Ravensthorpe
Esperance
Hopetoun
Nannup
Kojonup
Manjimup
Augusta
Bremer Bay
Pemberton
Northcliffe
Walpole
Denmark
Albany
Windy Harbour
0
100
200
400
Kilometres
Number of 'Beachcombing' responses
1
2 - 3
4 - 6
7 - 9
10 - 12
13 - 15


Respondents reporting 'Surfing'
1
2 - 4
5 - 8
9 - 11
Perth
Esperance
Hopetoun
Manjimup
Augusta
Bremer Bay
Northcliffe
Walpole
Denmark
Albany
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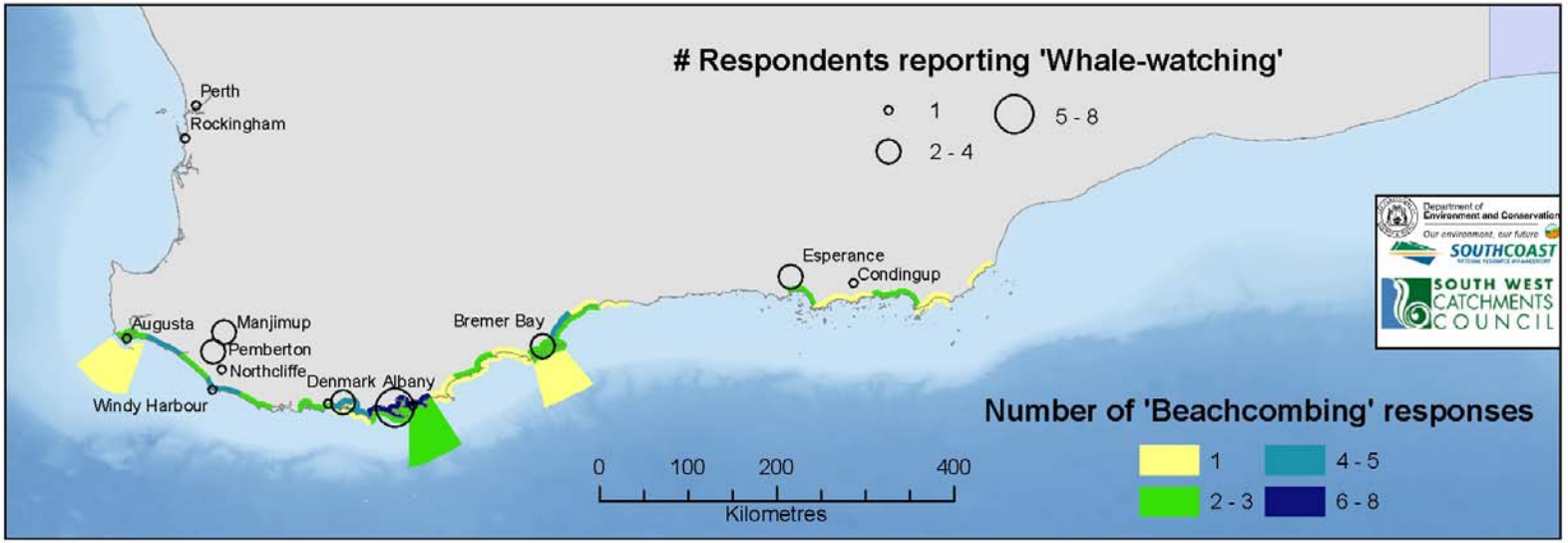
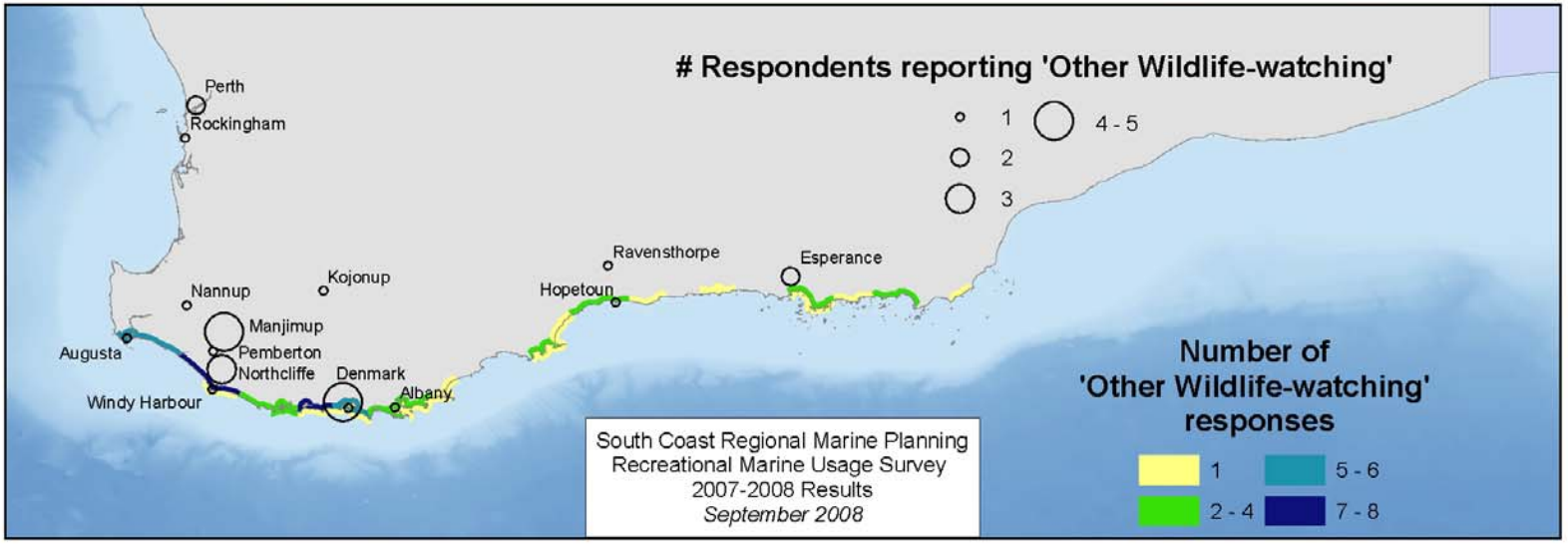
Number of 'Surfing' responses
1
2 - 3
4 - 6
7 - 9
10 - 12
13 - 17


Respondents reporting 'Whale-watching'
1
2 - 4
5 - 8
Perth
Rockingham
Esperance
Condingup
Augusta
Manjimup
Pemberton
Northcliffe
Bremer Bay
Denmark
Albany
Windy Harbour
0
100
200
400
Kilometres
Number of 'Beachcombing' responses
1
2 - 3
4 - 5
6 - 8


Respondents reporting 'Other Wildlife-watching'
1
2
3
4 - 5
Perth
Rockingham
Ravensthorpe
Esperance
Kojonup
Nannup
Hopetoun
Manjimup
Augusta
Pemberton
Northcliffe
Denmark
Albany
Windy Harbour
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Number of
'Other Wildlife-watching'
responses
1
2 - 4
5 - 6
7 - 8

Appendix D: South Coast Regional Marine Planning Community Recreational Marine Usage Survey Instructions

See '**APPENDIX D SCRMP-RecMarineUsageSurvey-INSTRUCTIONS.pdf**'

Appendix E: South Coast Regional Marine Planning Community Recreational Marine Usage Survey Survey forms.

See '**APPENDIX E SCRMP-RecMarineUsageSurvey-SURVEY-FORMS.pdf**'

Appendix F: Guide to the South Coast Regional Marine Planning Community Recreational Marine Usage Survey Database

See '**SCRMP-RecMarineUse_survey_DatabaseGuide.pdf**'