



Summer Estuary Workshop Series

3. Irwin River Estuary

Workshop held on 30th Nov 2012 at the Shire of Irwin Recreation Centre.

Attendees: Dr Mic Payne, Wendy Payne (NACC), Dr Malcolm Robb, Michael Johnson (Dept of Water), Bill Lewis (Aboriginal representative), Coralie Palmer, Felix Neuweiler (Shire of Irwin), Riki Porteus (Shire Councillor), Greg Reid, Ernest Giutsa, Ben Bryce (Durack Institute of Technology), Jim Sorgiovanni, Isabelle Hepworth, Diana Lundberg, Leonie Butler, June Johnston, Roger Jonston (community representatives).

Workshop goals

- Raise community awareness of the issues associated with the Irwin River Estuary (IRE);
- Record estuary values important to the community;
- Identify threats to the estuary and possible solutions to mitigate these issues.

Summary of presentations

The Irwin River Estuary - Dr Mic Payne (NACC) and Dr Malcolm Robb (DoW)

- Estuaries represent transition zones between rivers and the sea; they are very dynamic and biologically productive with complex food webs, but are generally not very diverse;
- Australian government database, OzCoasts (<http://www.ozcoasts.gov.au>), have adopted a general definition of estuaries as “semi-enclosed bodies of water where salt and freshwater meet”;
- The IRE is classified as a wave-dominated estuary, which means that ocean-derived sediments tend to deposit at the mouth to form a sand bar;
- The main land use in the catchment is agriculture and approx 60% has been cleared (1999 data);
- Deposition of ocean-derived coarse sediment occurs at the estuary mouth, while fine land-derived sediments are deposited in the upper estuary;
- Flow in the IRE is maintained by significant groundwater inflow, although decreasing rainfall in the region is reducing flushing;
- The IRE is very shallow and well mixed so dissolved oxygen is generally high;
- Up to 2005, the Dept of Water regularly monitored water quality in the IRE but this no longer occurs;
- Reduced water clarity is a result of suspended material from the catchment rather than elevated nutrient levels and the associated algal blooms;
- Bank erosion and weeds are very evident;

Aboriginal perspective – Bill Lewis (Widi Mob representative)

- Bill expressed sincere gratitude for the fact that interest was being taken in the IRE;
- Bill has sort permission to present at this workshops from other claimant groups, the Amangu and Mullewa Wadjari;
- The limestone country near the mouth of the IRE contains many traditional sites for women only;
- Mens' sites are located further upstream.





Community values

Workshop attendees attributed the following values to the IRE;

- Recreational – primarily walking, some canoing;
- Educational resource – Batavia Coast Marine Institute;
- Natural amenity;
- Bird watching;
- Aboriginal culture/heritage.

Community concerns

At the conclusion of the workshop attendees were invited to complete a feedback survey. A Feedback Report is included as Appendix A.

Conclusions

Nutrient levels in the IRE are low compared with other similar estuaries in the Northern Agricultural Region despite a predominantly agricultural catchment. Lower rainfall in the region means that the estuary is not receiving as much flushing as in previous times. Recreational use of the IRE consists mostly of pedestrian use of the riparian zone, requiring the Shire of Irwin to focus on managing walk trails. Weeds, particularly the African Boxthorn and Japanese Pepper, are prevalent in the riparian vegetation.

Two community concerns regarding management stand out, these are;

- Protection of riparian zones, including reducing pedestrian impacts, weed control, revegetation and off road vehicle control;
- Catchment management, including reducing sedimentation and improving water quality;

This workshop supported by;



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Appendix A : Irwin Estuary Feedback Report



Figure 1: Participants at the Irwin River Estuary workshop, 30th November, 2012, Port Denison, (photograph: NACC)

Geraldton, January 2013

Author: Rolan Deutekom, Social Science Research Officer at NACC





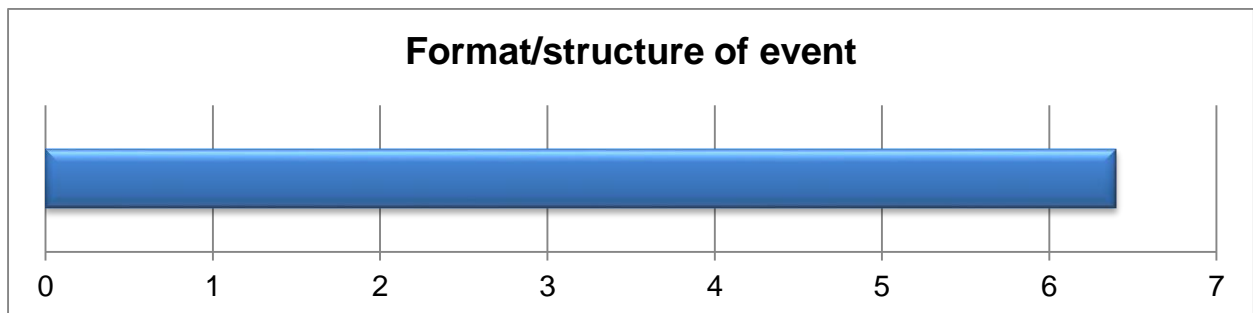
Introduction

A summer estuary workshop on the environmental value of the Irwin estuary was conducted in the Northern Agricultural Region (NAR). A total of 14 participants attended the workshop.

Funding for these workshops was provided by Caring for Our Country and the Northern Agricultural Catchments Council (NACC). The workshop aimed to engage the coastal community in raising awareness of the role of estuaries in our coastal environment and issues associated with estuary management. Community feedback was recorded via feedback forms distributed at the end of the workshop.

Ten respondents filled in a survey, but not all respondents filled in all questions.

Question 1: How do you rate the format/structure of this event?



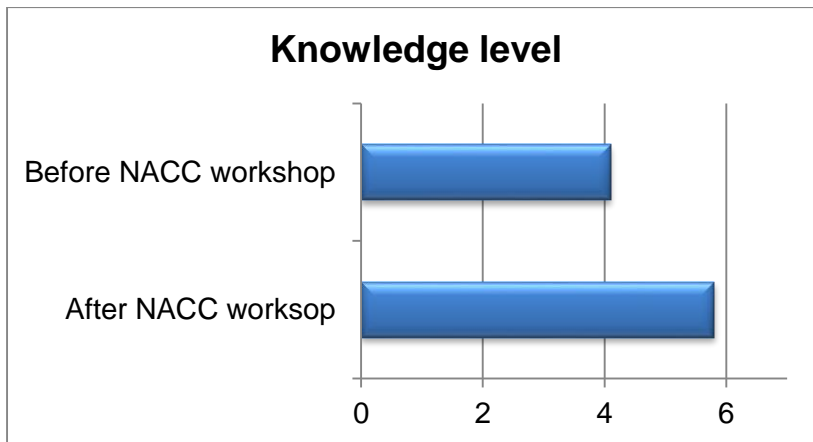
Ten respondents answered this question. Most respondents rated the format/structure of the workshop as very good. Two respondents provided the following comments:

- A credit to organisers
- Informative yet collaborative and inclusive.





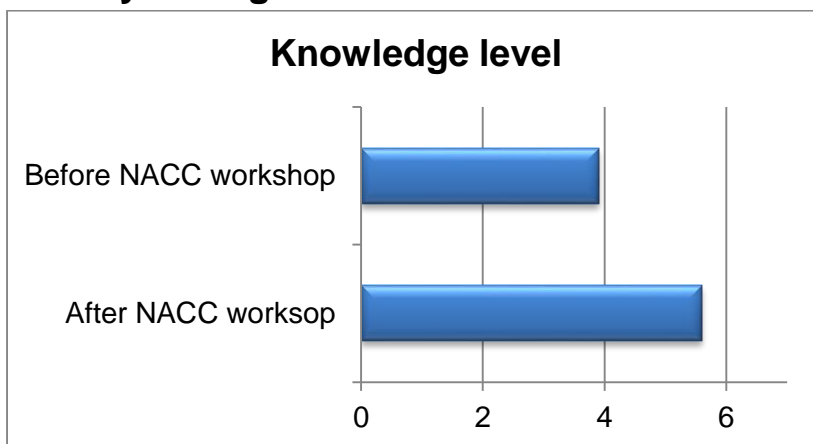
Question 2: Please indicate your knowledge level on the environmental value of estuaries:



Ten respondents answered this question. They indicated a $(5.8 - 4.1) / 4.1 * 100\% \approx 41\%$ increase in knowledge. Three respondents provided additional comments which are summarized below:

- A great start for us... And we have room for lots more learning still. (mentioned three times)

Question 3: Please indicate your knowledge level on issues relating to estuary management:



Ten respondents answered this question. They indicated a $(5.6 - 3.9) / 3.9 * 100\% \approx 44\%$ increase in knowledge. Four respondents added additional comments which can be found below:

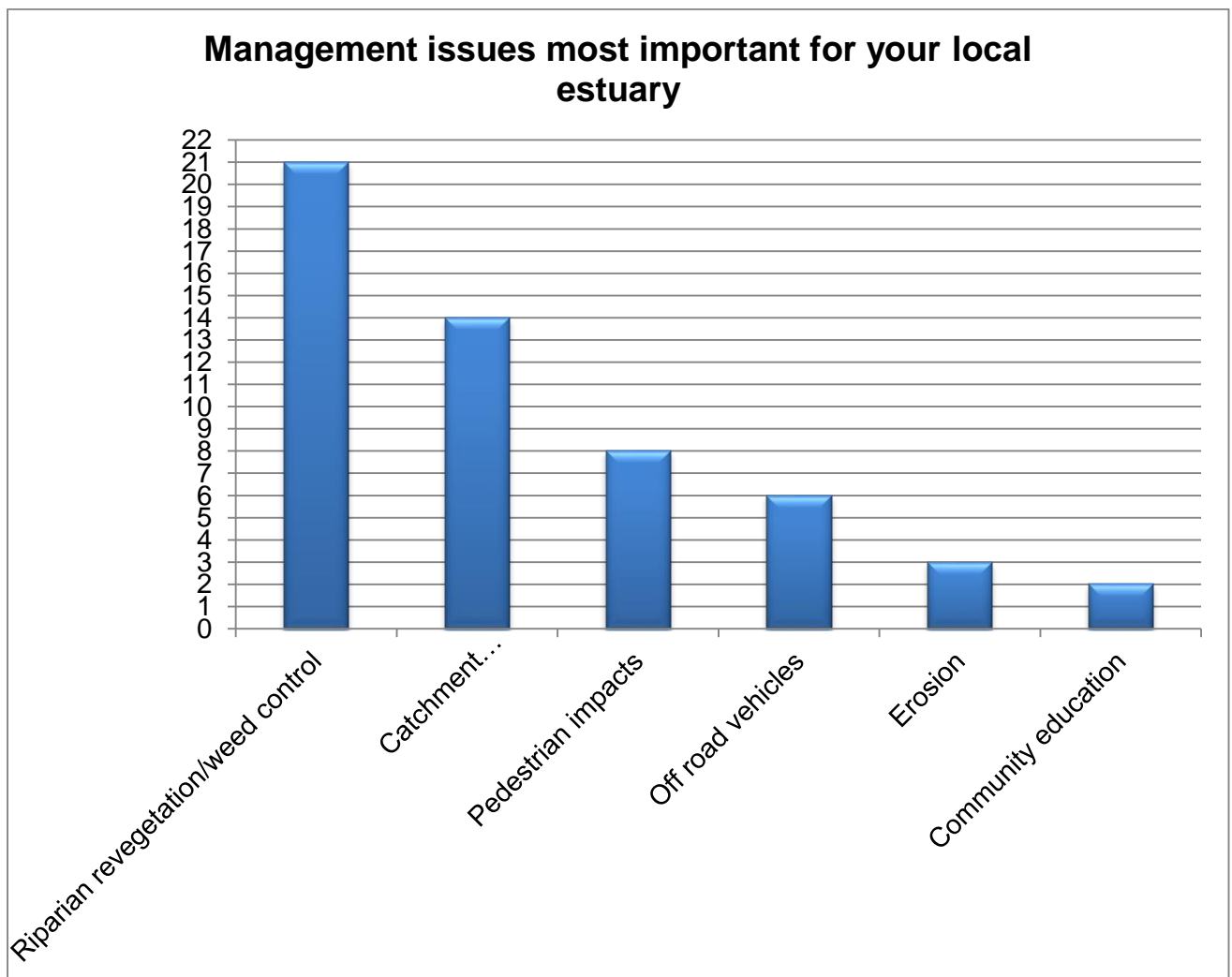
- Hope to get involved and learn more. (mentioned twice)
- Increased understanding of complexities behind management.
- Nutrient analysis.





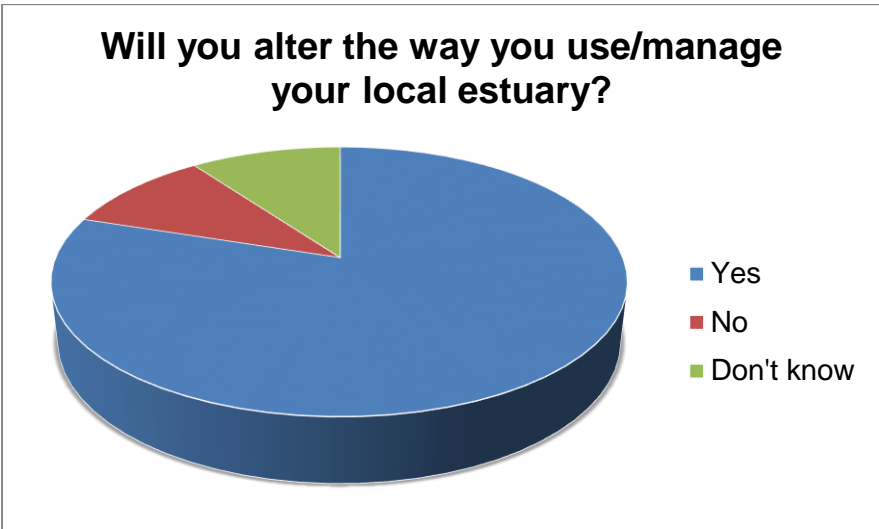
Question 4: Please rank (in order of priority) three management issues you regard as most important for your local estuary:

This question was answered by ten respondents. They were asked to rank the most important management issues in three different priority groups. Any issues mentioned in the highest priority groups were scored with a 3, followed by a 2 for the second group and 1 for the last group. Following this strategy the issues of Riparian revegetation/weed control (scored 21 times) was mentioned as most important, followed by Catchment management/sedimentation/water quality (scored 14 times) and Pedestrian impacts (scored 8 times).



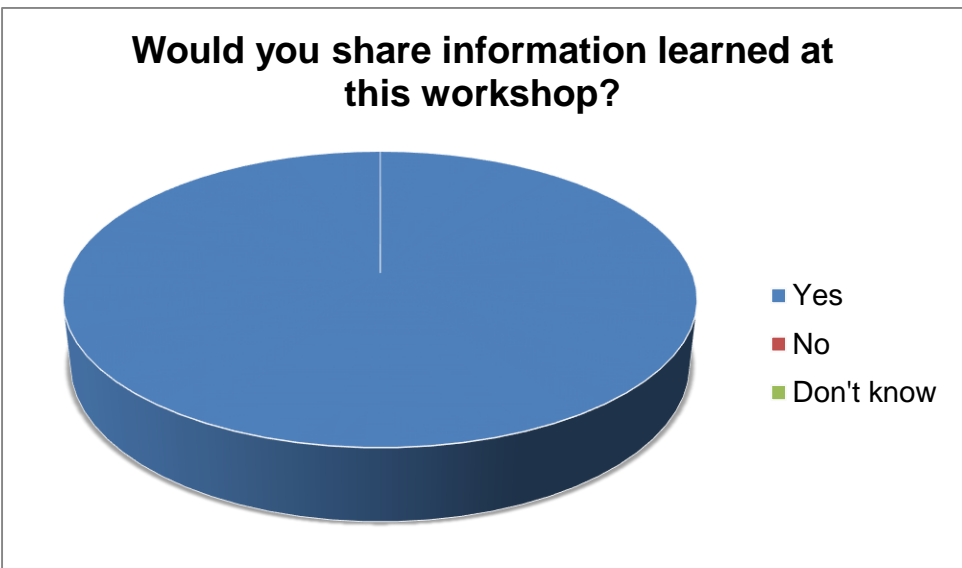
Question 5: Would you alter the way you use/manage your local estuary as a result of this workshop?





Ten respondents answered this question. Eight respondents mentioned 'yes', one 'no' and one 'don't know'.

Question 6: Would you share information learned at this workshop with others?



Ten respondents answered this question and all indicated that they would share information with others.

Question 7: Would you consider becoming involved in any of the following activities relating to your local estuary?





Ten respondents answered this question. Their answers can be found in the above graph. One respondent indicated 'other' and a detailed response can be found below:

- We are beginners with birds, fish, invertebrates

Question 8a: What was the one thing you enjoyed most about this event?

Nine respondents answered this question. Their answers can be found below.

- Information provided was very good. (2)
- Everything
- Positive attitude of attendees and presenters
- Water quality issues
- Department of water presentation
- Bill's input regarding Indigenous value of Irwin
- How the sand bars are formed and fish kill.
- Learning about my environment.

Question 8b: What was the one thing you enjoyed least about this event?

Three respondents answered this question and their answers can be found below.

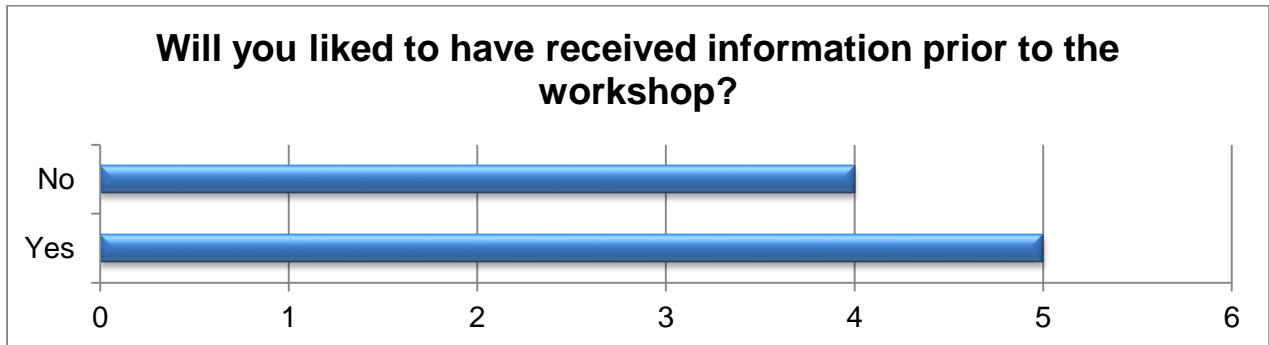
- Never bored at anytime





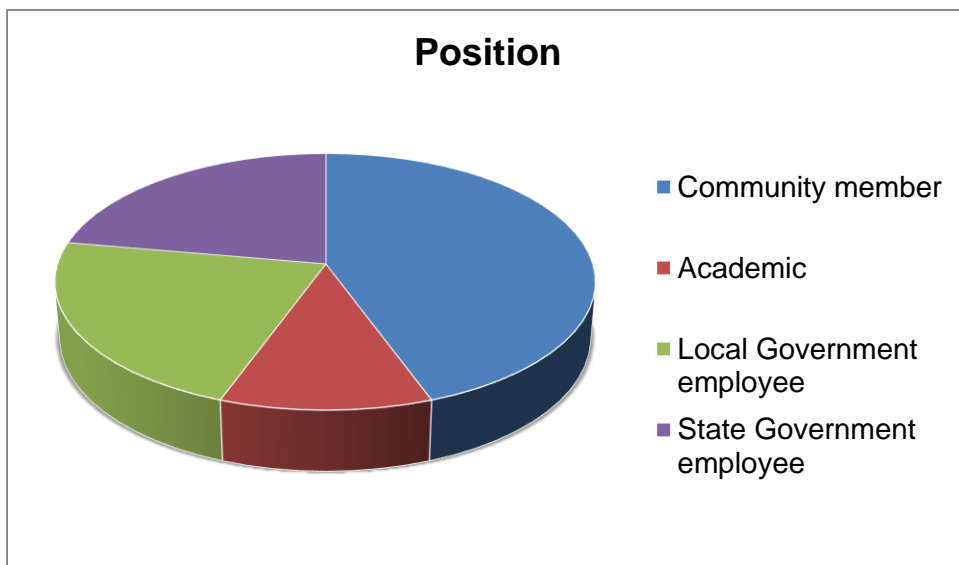
- Interruption to speakers
- Not being able to attend afternoon session.

Question 9: Would you like to have received relevant information to read prior to the workshop?



Nine respondents answered this question and their answers can be found in the above graph.

Question 10: Please indicate your position:



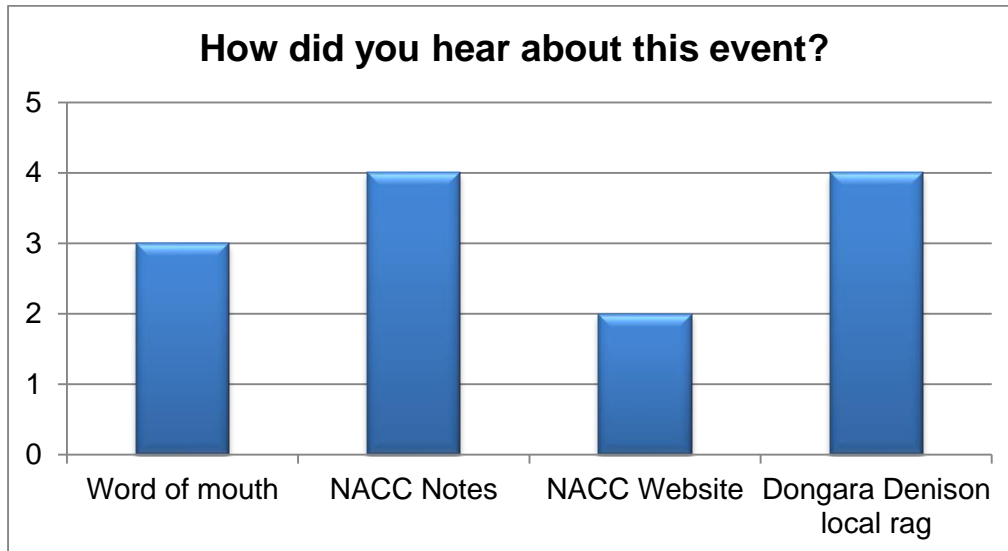
Nine respondents answered this question. Four people identified themselves as community members. Two respondents as Local government employee, two as a State Government employee and one as an academic.





Question 11: How did you hear about this event?

Eight respondents answered this question and their answers can be found in the graph below.



Question 12: Other comments

Four respondents answered this question and their answers are depicted below:

- A very well organised and operated seminar. Many thanks to all involved.
- Information presented was excellent
- Very interesting, especially Mic and Malcolm's experience in this area. Cheers
- Would like to participate more with water sampling and testing/securing funding and working in partnership with relevant organisations.





Figure 2: Field trip to wetlands near the mouth of the Irwin Estuary, Port Denison (photograph: NACC)

Conclusion

The workshop was well attended by local and government agency staff, however community representation was relatively low, most likely because the workshop was held on a weekday. Workshop participants considered the workshop format good and increased their knowledge on the environmental values of and management issues for estuaries. Management concerns focused mainly on issues relating and the riparian environment, namely revegetation, weed control, pedestrian access and off road vehicles. The need for improved catchment management was also highlighted. Participants indicated a willingness to change how they use/manage the estuary, a willingness to share workshop information with others and to get involved in community-based activities. Just over half respondents would have liked background material to read prior to the workshop.

