

JURABI TURTLE CENTRE

SEASON REPORT

2005 – 2006



Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
Error! Hyperlink reference not valid.
Error! Hyperlink reference not valid.
Error! Hyperlink reference not valid.
Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
Error! Hyperlink reference not valid.
Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
Error! Hyperlink reference not valid.
Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.
 Error! Hyperlink reference not valid.

Table of Figures

Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,

List of Tables

Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,
Error! Hyperlink reference not valid,

- Deleted:** Figure 1: Breaches of CoC from visitor behaviour observed by NTP scouts. . 7
- Deleted:** Figure 2: Breaches of conduct observed for visitors aware of the Turtle Watchers Code of Conduct (CoC). (n=84) . 7
- Deleted:** Figure 3: Key message obtained by self guided tourists encountered on the beach (n=334) . 8
- Deleted:** Figure 4: Total number of tour participants and total number of participants picked up at the JTC over the 2005/06 operating season. . 10
- Deleted:** Figure 5: Origin of total tour participants (n=255). . 13
- Deleted:** Figure 6: Origin of international visitors. . 13
- Deleted:** Figure 7: Origin of Australian visitors. . 14
- Deleted:** Figure 8: Tour participant accommodation in Exmouth. . 14
- Deleted:** Figure 9: Age groups of tour participants. . 15
- Deleted:** Figure 10: Location where tour participants learnt of turtle tour. . 15
- Deleted:** Table 1 – Volunteer roles at JTC . 4
- Deleted:** Table 2 JTC feedback . 10
- Deleted:** Table 3 Interaction component feedback (%) . 11
- Deleted:** Table 4 Summary of issues and recommendations . 20

1. Introduction

The Jurabi Turtle Centre (JTC) is an interpretative centre located on the North West Cape in the Jurabi Coastal Park. It is situated between Hunters and Mauritius beaches, adjacent to a popular rookery for three threatened species of marine turtles- the Green (*Chelonian mydas*), Loggerhead (*Caretta caretta*) and Hawksbill (*Eretmochelys imbricata*).

A significant threat faced by marine turtles on the North West Cape is disturbance during the nesting process by people seeking a turtle viewing opportunity. In recognition of this problem the JTC was constructed as a joint venture between the Shire of Exmouth and the Department of Environment and Conservation (DEC; formerly the Department of Conservation and Land Management, CALM).

The mission of the centre is defined in the Jurabi Turtle Centre Draft Business Plan (JTC Draft Plan) (CALM, 2004):

The purpose of the Jurabi Turtle Centre venture is to work in collaboration with stakeholders and the community to promote conservation of marine turtles and protect biodiversity values while providing access to an informative and enriching wildlife experience.

The 2005-2006 turtle breeding season was the second year that JTC operated. On recommendations from the previous season, changes were made to JTC operations in regards to self guided visitors.

Visitor attendance at JTC in the previous year did increase compliance with the Turtle Watcher's Code of Conduct (CoC), however 55% of visitors to JTC still did not comply with the CoC during self guided interactions. It was observed that the most effective means to ensure compliance with the CoC was to supervise interactions on the beach. Therefore during the 2005/6 season the JTC experience was promoted as a talk and a tour which visitors could book through the Exmouth Visitors Centre or the licensed operator. Self driven visitors to the centre were encouraged to participate in a commercial guided tour with the licensed operator. Tours entailed a visit to the JTC, a presentation given by a CALM volunteer and a guided tour viewing nesting turtles with accredited guides.

The goals of JTC are:

- to protect threatened species and conserving biodiversity;
- to advocate and facilitate sustainable tourism;
- to promote and maintain community participation and stewardship for coastal management; and
- to integrate the interests of conservation and recreation.

2. Operations

The centre was run by volunteers from the Ningaloo Turtle Program (NTP) from the 10th December 2005 to the 28th of January 2006. A presentation was delivered at 8pm from Monday to Saturday, with the exception of Christmas Eve, New Years Eve and

Australia Day. Tours ran for 38 nights in total, with a few nights cancelled due to poor weather conditions.

Prior to the 2005/6 season solar lighting was installed at the JTC which addressed a visitor risk management issue of inadequate lighting. This installation provided low level lighting which produced a welcoming ambiance to the JTC whilst not allowing light to reach the adjacent beaches. Solar lighting was activated by the movement of vehicles or visitors arriving in the JTC car park. Lighting at the centre was programmed to stay on for 40 minutes before turning off or movement triggering the system to remain on. At 11pm the lighting turned off for the night. By having the lighting on a movement activated system means that lighting does not remain on unnecessarily.

The low level lighting allowed visitors to peruse the static interpretation material at the centre and also provided a source of renewable electricity which allowed volunteers to deliver a powerpoint presentation using a projector and screen. The presentation was approximately 20 minutes in length, delivered by one of the three NTP team leaders. The presentation entailed a brief description of the Ningaloo Turtle Project, the JTC aims, turtle biology, ecology and the threats faced by turtles in the Ningaloo region. The team leader then handed over to the licensed operator's tour guide who briefed the participants on the code of conduct. Before presentations, volunteers welcomed visitors to the centre and interacted with them by answering questions and providing information as required.

2.1 Volunteer Roles

The roles that were undertaken by volunteers and the related training is summarised in [Table 1](#),

Deleted: Table 1

Table 1 Volunteer roles at JTC

Role Title	Tasks	Training
Team Leader	Centre co-ordination, deliver talks, and liaise with Commercial operators and turtle scouts.	Completion of Tafe Turtle Tour Guide Training Course, on-the-job training at JTC.
Information Officers	Delivering talks, liaising with Commercial operators and Turtle Scouts, interacting with visitors and self guided tourists.	Completion of Tafe Turtle Tour Guide Training Course, on-the-job training at JTC.
Assistant Information Officers	Greeting visitors, interacting with self guided tourists.	Competent NTP volunteer, on-the-job training.
Turtle Scouts	Scouted beaches for turtle activity, monitored self guided turtle interactions, liaised via radios with team leaders, liaised with Commercial tour guides, data collection	Completion of Tafe Turtle Tour Guide Training Course and on-the-job training at JTC OR Competent NTP volunteer, completion of Turtle Scout training workshop and on- the-job training.
Assistant Turtle Scouts	Assisting turtle scouts on the beach.	NTP volunteer, community member.

The JTC operation was supervised by an officer from the Department of Environment and Conservation..

The centre was able to operate with a minimum of two volunteers per night at the centre itself. Depending on available trained scouts there were between 1- 4 scout groups on the adjacent beaches at any given time. Operations on a whole were successful and fulfilled the JTC goals.

2.2 Volunteer Effort

Fifty six volunteers contributed 1227 hours at JTC during this season, 3.4 times the 2004/2005 season. This represents 69% of the total volunteers involved in the NTP, compared to 50% for the previous season. This increase in volunteer effort can be contributed to the change in the rostering system and the fact that participating in JTC was part of the volunteer commitment this season compared to last season when it was optional.

2.3 Volunteer Training

The role of the JTC volunteer was to educate the public outlining the Turtle Watchers Code of Conduct (CoC), monitoring turtle-visitor interactions on the adjacent beaches and assist visitors to follow the interaction guidelines. To be able to do this, volunteers require a high level of competency in turtle interaction. During the 2005/2006 season, four 8 hour Turtle Scout Workshops were conducted.

At all times throughout the season there was a minimum of two volunteers per night. However, there were periods when JTC lacked competent scouts due to the roster-training schedule and limited resources. Fortnightly scout workshops were aimed to target the large influx of volunteers. On their four week placement volunteers began their JTC training in week two. In addition to attending the scout workshop volunteer's required three night's experience, volunteers were not gaining competency until the end of the 3rd week. This resulted in each volunteer investing two weeks of training for one week actively scouting. The Christmas to New Year period left the project with fewer volunteers and no staff to train. The problem was addressed midseason and the training schedule was altered to be more intensive in the first week of arrival for the volunteers. Clearly the needs of the two branches of the NTP are different and need to be considered, keeping in mind providing benefits/rewards for the volunteers as well as the project as a whole.

Recommendations:

- ***Changes to roster-training for next year; volunteers can take one of three paths:***
 - ***combined stream – as is, both JTC and monitoring on a day on/day off basis;***
 - ***JTC stream – JTC only at least 5 nights a week;***
 - ***Monitoring stream – monitoring only at least 5 nights a week.***
- ***Team leaders to be trained as trainers.***
- ***JTC internships lasting the entire season.***
- ***Additional resources for an employed position over the Christmas/New Year period.***

➤ ***Increase community involvement.***

An important issue raised at the beginning of the season was the volunteers' lack of awareness of the JTC product. Volunteers became disgruntled when learning of the strong link with the tour operators, the talk and scouting being part of a paid tour, the belief being that the public, who didn't want to pay to go on a guided tour, were excluded from education regarding turtle conservation. Volunteers felt that the commercial operator was making undue profits from volunteer efforts.

Recommendations:

- ***target tourism students for JTC in addition to environmental students, this would hopefully balance the number of volunteers wanting to participate in morning monitoring and evening education;***
- ***in the literature sent to volunteers emphasise the tour as community collaboration, focusing on the history of the project and why such measures are necessary;***
- ***specify the role of the JTC volunteer in literature;***
- ***reiterate in the induction the goals of JTC;***
- ***tour operators to acknowledge DEC volunteers as an integral part of the experience.***

2.4 Visitor-turtle interaction

A duty of Turtle Scouts was to monitor visitor-turtle interactions on the adjacent beaches to JTC and to assist self guided tourists to follow the interaction guidelines. Visitors participating in a guided tour had negligible non-compliance with the CoC.

Data collected by scouts over the JTC season showed that 97 self guided groups were encountered or observed on three beaches, namely Hunters, Mauritius and Wobiri. Of these, 285 adults and 49 children were observed.

The main breach (27%) of the CoC observed was failing to walk along the high tide line ([Figure 1](#)). The high frequency of this behaviour is probably due to both the lack of emphasis in the varying CoC information and the difficulty of both the scouts and JTC staff to explain such a requirement, particularly to international visitors. Shining a torch to search and sudden movements were equal (20%) in the next main breach of conduct observed ([Figure 1](#)).

Deleted: Figure 1

Deleted: Figure 1

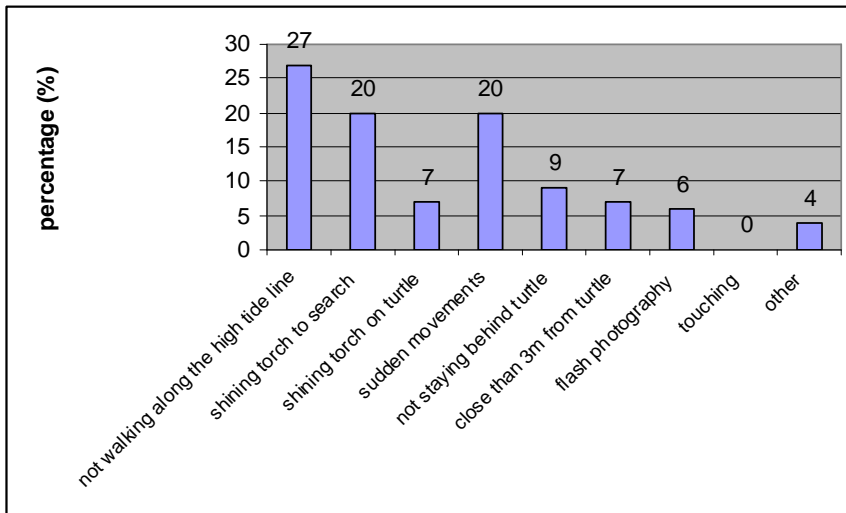


Figure 1: Breaches of CoC from visitor behaviour observed by NTP scouts.

Of the self guided tourists encountered on the beach, 62% were aware of the CoC. Of these 40% were observed breaching the CoC. Again the main breach was failing to walk along the high tide line, followed by sudden movements and shining a torch to search (Figure 2).

Deleted: Figure 2

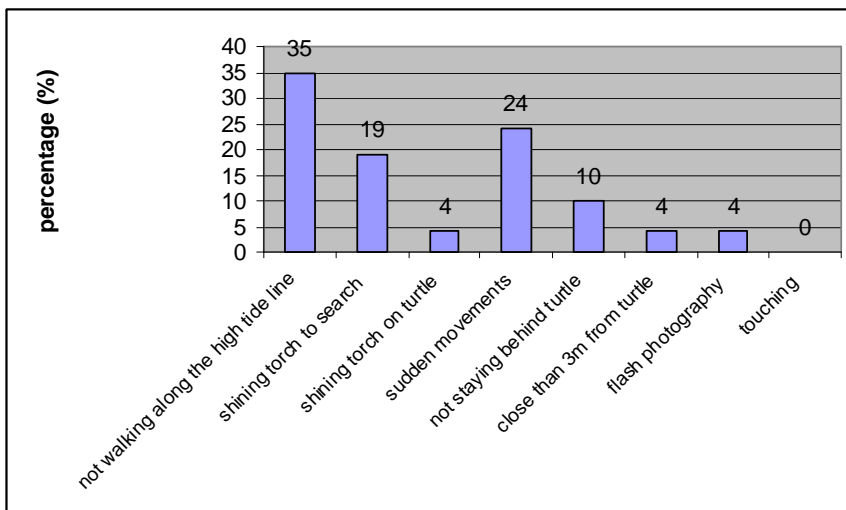


Figure 2: Breaches of conduct observed for visitors aware of the Turtle Watchers Code of Conduct (CoC). (n=84)

Over the Christmas - New Year period NTP scouts encountered high numbers of self guided tourists which occasionally led to confrontational situations. All self guided observations were recorded between the hours of 19:30 and 22:00. Scouts generally vacated the beach by 21:30, leaving the beaches unsupervised after this time.

Situations reported as difficult by volunteers included:

- Scouts having reported a turtle to JTC and waiting for the tour group to arrive when self guided visitors approach causing two possible scenarios: (i) the number of visitors (tour group and self guided) exceeding the limit of 15:1 so guides have to ask self guided visitors to keep looking further along the beach; and (ii) scouts asking the self guided visitors to join the tour group, in order to ensure they are complying with the CoC, causing paying tour participants to feel disgruntled.
- At times, self guided visitors interacted with the only nesting turtle and the scouts could not locate another turtle; subsequently scouts felt under pressure to invite the tour group down to the turtle potentially upsetting the self-guided visitors who were already with that turtle.
- Scouts still providing a tour for self guided visitors leading to the belief that if you turn up at the beach you can get a free tour.

This put a large responsibility on the volunteers to deal with potential confrontational situations so a response sheet to deal with potential situations was drawn up to assist volunteers with how to approach any such situations. It was also recommended that if a group of self-guided visitors were interacting responsibly with a turtle before the scouts arrived then that turtle should not be reported to JTC so as not to disgruntle responsible turtle watchers.

Recommendations:

- *Provide public education for those not participating on the tour.*
- *Manage influx of people onto the beaches at night.*
- *Monitor beaches later than 9:30 or restrict public access.*

3. Effectiveness of Education at JTC

One of the key roles of the JTC is to reduce disturbance to nesting marine turtles by providing education about turtle behaviour and the Turtle Watchers Code of Conduct.

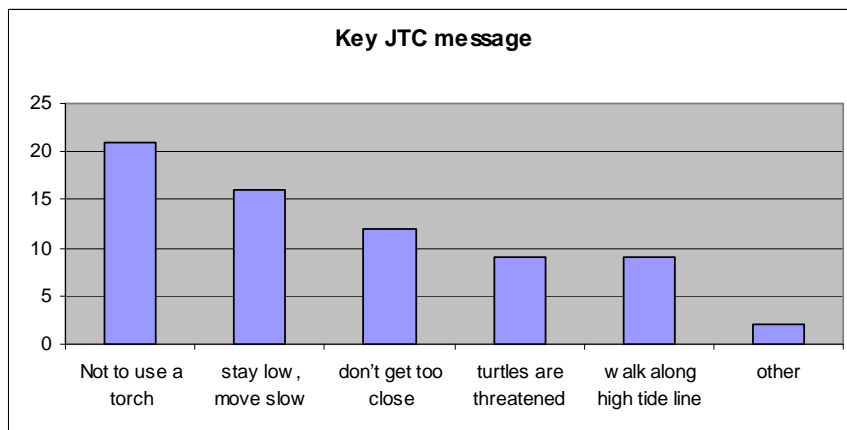


Figure 3: Key message obtained by self guided tourists encountered on the beach (n=334)

Of those self guided tourists encountered on the beach that visited JTC, the main message taken was not to use a torch (Figure 3). However torch use is still a common breach observed (Figure 2). As identified in the 2004/2005 report this can be accounted for partly due to conflicting information provided in JTC signage and at the beach accesses to turtle rookeries. Both forms of interpretation recommend that turtle watchers reduce (not eliminate) the use of light.

Deleted: Figure 3

Deleted: Figure 2

As demonstrated in Figure 2, the most frequent behaviour breach of the CoC was visitors walking along the beach rather than the high tide line, however it was the least of the key messages obtained at the JTC (Figure 3). This outcome is consistent with the 2004/2005 season also, and emphasised in the 2004/2005 season report, demonstrating the need to focus on this in the static material, promotional material and the presentation (given by the tour operators). Disturbing a turtle once on the beach is an established threat to nesting turtles, with the potential of significantly impacting their energetic expenditure.

Deleted: Figure 2

Deleted: Figure 3

Recommendations:

- *Interaction guidelines, particularly those relating to walking along the high tide line and acceptable use of lights, must be consistent and reiterated in all forms of information about turtle watching techniques.*

Another issue faced at the JTC was visitors that did not wish to participate on a tour for whatever reason believed to be alienated from turtle viewing and education. Unfortunately due to lack of data the main reason people did not want to participate could not be identified. Some families commented on the cost being too much at \$60 for 2 adults and 3 children. Locals felt they should not have to pay.

4. Commercial Tour Operators

The only licensed commercial turtle tour operator for the 2005/2006 season was Ningaloo Reef Retreat. Visitors were encouraged to participate in a guided tour to try and manage compliance with the CoC. By working in conjunction with tour operators it was hoped that they would assist DEC with the management of visitor numbers on turtle nesting beaches. Guide qualifications involved attending the Tafe Turtle Tour Guide training course or the DEC Scout Workshop, plus on-the-job training.

The tour comprised a visit to the JTC, the presentation and a guided tour viewing nesting turtles. Booking was advertised as essential so that the tour operator knew how many guides to provide (one tour guide per 15 tour participants). Scouts had the opportunity of working as a guide should the number of self driven visitors exceed that manageable by the operator. Tour costs were; adults \$25, children \$15, families \$60. Feedback suggests that prices were viewed as reasonable.

Over the season 38 tours ran, with a total of 742 participants of which 626 were adults. Of those on the tour 617 pre-booked with the Ningaloo Reef Retreat, thus 125 tour participants were collected at JTC without a booking (20%).

The Peak season was between Christmas and New Year (Figure 4).

Deleted: Figure 4

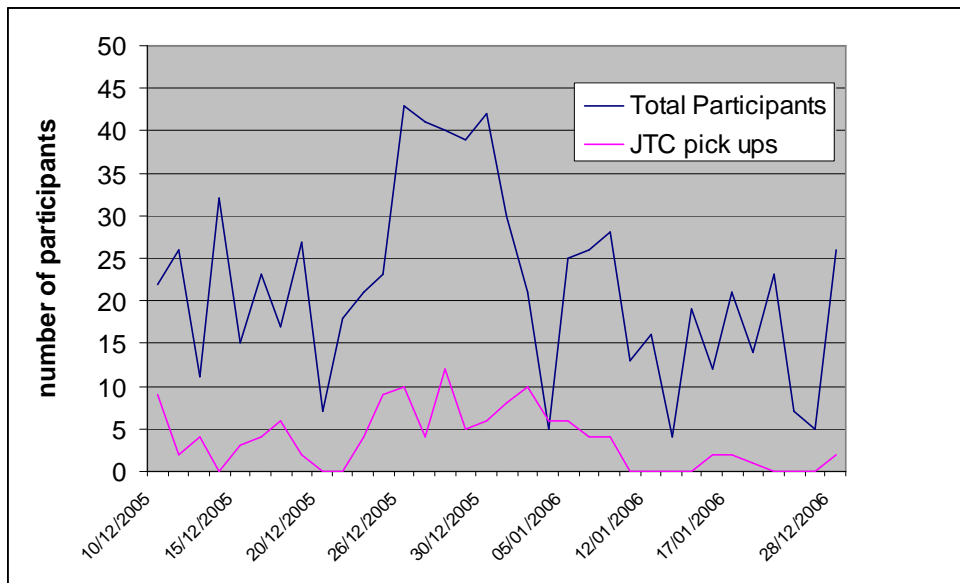


Figure 4: Total number of tour participants and total number of participants picked up at the JTC over the 2005/06 operating season.

From data collected by the scouts it was determined that 70% of self guided tourists encountered on the beach were aware of the tours, however not enough data was collected to determine why they chose not to participate.

The Ningaloo Reef Retreat provided a bus service from town, 89% of those that participated on the tour utilised this service, minimising the number of vehicles travelling to the Jurabi Coast, reducing threats to wildlife and reduction of light emittance on beach-front carparks.

Feedback from the tour participants was clearly positive across the board with respect to tour satisfaction. Feedback forms were divided into two sections, JTC and interaction component in order to provide feedback to both parties involved (DEC and Tour operator) for future improvements.

5. Tour Participant Feedback

5.1 Jurabi Turtle Centre Feedback

Feedback received for the JTC and the presentation delivered by the Team Leaders was very positive and indicated a very high level of visitor satisfaction ([Table 2](#))

Deleted: Table 2

Table 2 JTC feedback

Jurabi Turtle Centre	Yes	Partly	No
staff at facility were welcoming and friendly	100%		
Lighting at the carpark, walkway and centre are adequate	85%	13%	2%
The information panels and displays are interesting	84%	13%	3%
The facilities at Jurabi Turtle Centre are satisfactory	90%	9.9%	0.1%
The Presentation			

The presentation was enjoyable and informative	99.9%	0.1%	
The presentation was clear and easy to follow	99.9%	0.1%	
The presentation was too long	11%	12%	77%
Safety messages were adequately covered	93%	6.8%	0.2%
The presentation made me more aware of the threats sea turtles face	91%	8.8%	0.2%

The main messages that tour participants took from the JTC presentation were:

- turtles are threatened,
- save the turtles,
- no go, go slow, stay low.

5.2 Tour Interaction Feedback

Feedback received for the interaction component of the tour was also positive and indicated a high level of visitor satisfaction (Table 3). 89% of tour participants saw a turtle during their turtle tour.

Deleted: Table 3

Table 3 Interaction component feedback (%)

Enjoyed experience	64	24	8	3	1	did not enjoy the experience
too long	12	13	60	7	8	too short
Made conservation seem more important	55	24	17	3	1	Made conservation seem less important
tour was exciting	45	33	14	6	2	tour was boring
I would recommend to others	74	16	5	4	1	I would not recommend to others
tour was worth money	57	15	16	5	7	tour was not worth money
Saw a turtle	89	5	4	1	1	Did not see a turtle
more should be done to conserve turtles	55	21	21	3	0	less should be done to conserve turtles
info at centre complemented the tour	72	18	8	1	1	info at presentation was not complementary
Code of Conduct is reasonable	83	12	3	1	1	Code Of Conduct is not reasonable

Shortage of qualified guides at the beginning of the season and over the Christmas period did prove a problem because:

- a) of the unexpected number of willing tour participants at JTC itself, attracted by the sign on the road;
- b) the Turtle Tour Guiding Course as a pre-requisite for Guides ran only at the end of November, resulting in a small pool of qualified candidates;
- c) of the 26 students enrolled in the course, few demonstrated interest in working as a guide, despite being aware of opportunities available with Ningaloo Reef Retreat;
- d) of the lack of interest generated amongst NTP volunteers to engage in paid employment.

The Reef Retreat did however by midseason have core staff, including Exmouth locals that were adequate to cover tour numbers.

Recommendations;

- *Expand information in regards to bookings on roadside sign.*
- *Focus on training and qualification for guides prior to the beginning of the season.*
- *encourage local community participation to increase the number of willing guides.*

On a few occasions, incidents arose due to operational procedures that could result in tour guides failing to comply with license conditions such as limited numbers of participants per tour and distances which could easily lead to disturbances of emerging and nesting turtles.

Recommendations:

- *That tour operators use radios to ensure that each tour group of 15 is independent of the other.*
- *That compliance auditing of operations be conducted throughout the season*

On several occasions tour participants were observed to have incorrect clothing and footwear for the nature of the tour (commando crawling, dark cold conditions) increasing the risk of injury or incidents. Either tour participants chose to ignore information given to them on the occupational health and safety issues when booking or tour participants were not informed regarding appropriate clothing, footwear and risks.

Recommendations:

- *That information given by tour operators and the various tourist outlets must specify requirements and conditions*
- *That tour operator posters should depict the nature of the tour-nighttime.*

6. Visitor data and analysis

Visitors completed 255 feedback forms; all visitor data analysis was taken from feedback forms of tour participants only.

Visitors demonstrated a very high level of satisfaction with regards to the interpretation material at JTC, the facilities provided and the presentation and service provided by the NTP volunteers. The main message obtained by those attending the talk were 'turtles are threatened', 'save the turtles' and 'no glow, go slow and stay low'.

In terms of demographics, international visitors comprised 48 % of tour participants (Figure 5). The second highest group of participants were visitors from the Perth metropolitan area (28%).

Deleted: Figure 5

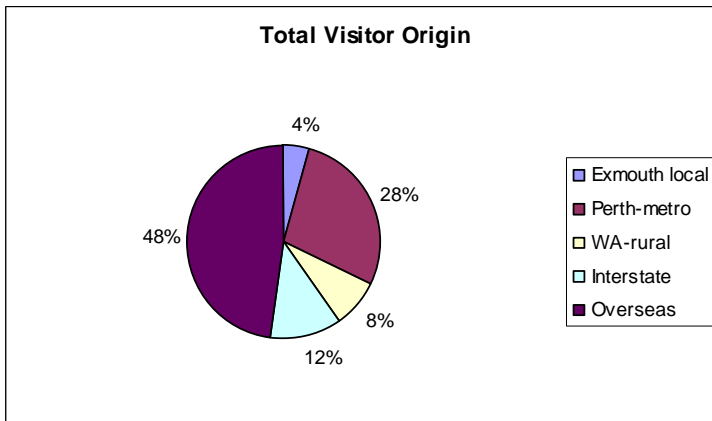


Figure 5: Origin of total tour participants (n=255).

Of the international visitors 29% percent were of UK origin, followed by 20% from Germany (Figure 6). Figure 6 demonstrates that a high proportion of international visitors to the JTC did not use English as a first language.

Deleted: Figure 6

Deleted: Figure 6

Recommendation:

- *That CoC and interpretive material should be available in languages of high use such as German, Swiss and Italian*

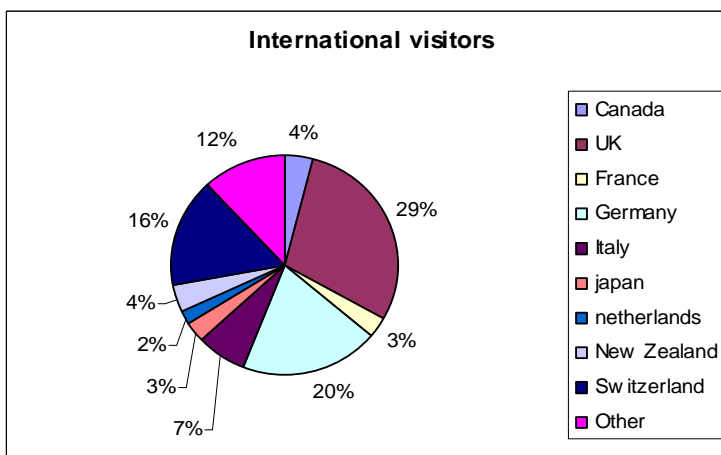


Figure 6: Origin of international visitors.

Of the Australian visitors, 54% percent were from the Perth metropolitan area, 8% from local Exmouth, a 3 % increase on the 2004/2005 season (Figure 7) and 23% of visitor originated from interstate.

Deleted: Figure 7

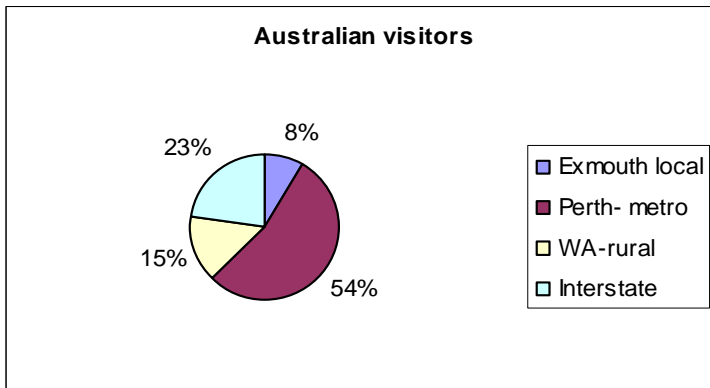


Figure 7: Origin of Australian visitors.

The majority of tour participants stayed at caravan parks (Figure 8). If consistent with last years results one can assume the majority of visitors were staying at the Lighthouse Caravan Park. As the accommodation options on the feedback form were broad it is hard to draw conclusions, however a high proportion of tour participants stayed at the backpackers/hotel (Figure 8) compared with last season. This maybe explained by the availability of the tour pickup this year as many backpackers do not have a vehicle and the relatively low cost of the tour making it more accessible to a wider audience. Also it highlighted the majority of tour participants being visitors to the area.

Deleted: Figure 8

Deleted: Figure 8

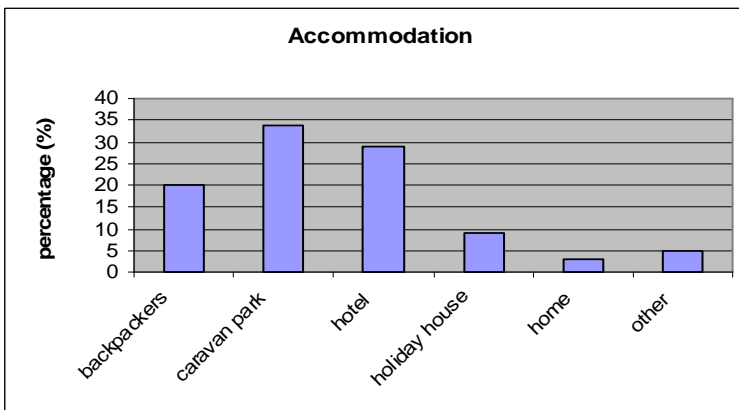


Figure 8: Tour participant accommodation in Exmouth.

48% of visitors were between the ages of 25-39, 25% above the age of 40 and 27% below the age of 24 (Figure 9).

Deleted: Figure 9

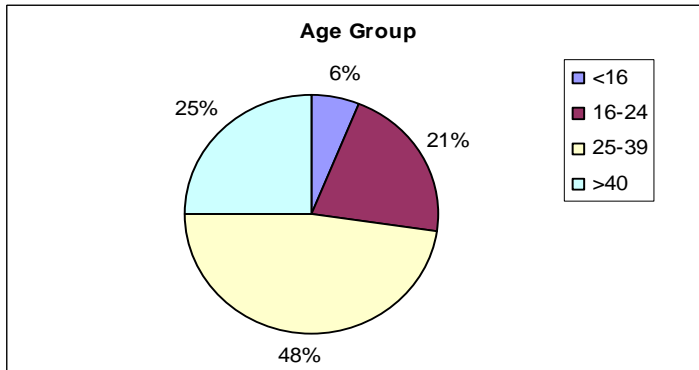


Figure 9: Age groups of tour participants.

The Visitors Centre was the main source of information regarding the Turtle Tours (Figure 10); this may be either the Exmouth Visitors Centre or the Milyering Visitors Centre, as the feedback forms did not distinguish between the two.

Deleted: Figure 10

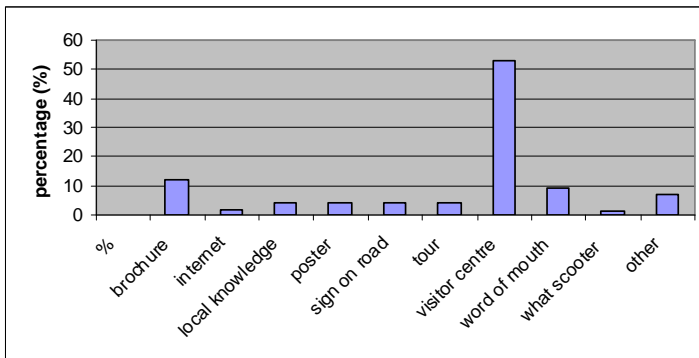


Figure 10: Location where tour participants learnt of turtle tour.

7. Mall Stall - Community education and involvement

In response to concerns regarding the lack of public turtle interaction education the Mall Stall was set up in the main square of Exmouth Shopping Centre. The aim was to provide education for Exmouth locals and tourists regarding the Turtle Watchers Code Conduct, with the intention of educating those not interested in a turtle tour.

The Mall Stall began in the first week of January, running from 10am-12noon Tuesday, Thursday and Saturday. 50 people approached the mall stall, over the three week period of which it was running.

Feedback suggests that the Mall stall did not fulfil its goals due to:

- the Mall stall was set up post-peak season, missing the target tourists and locals;
- the location did not catch the wider, target audience; and
- the locals showed little interest in the stall.

Recommendations:

- *That an information stall be set-up in the Exmouth Visitors Centre to target tourists.*
- *That the mall stall be improved and continued in order to attract the locals, maintain a presence and improve local perceptions of the NTP.*

What the 2005/2006 season did demonstrate is the need for community involvement and support with the aim of improving the view of the NTP. In a post-season meeting the following suggestions were proposed:

- Recruit volunteers locally through newspaper, letter drop and personal contact.
- A Local Liaison Person to improve the local perception of the project. The person would give talks to local groups representative of the community, organise social events thus making the project more accessible to the community.
- Improve signage detailing the CoC at beach accesses and put a positive spin on it.
- 2006 is the Year of the Turtle - perfect emphasis for ongoing community events throughout the year such as the Whale shark festival, quiz night, school poster competitions, - a 'Turtle Festival' before the 2006/7 season, a stall at the Exmouth Christmas street party, etc.

8. Occupational Health and Safety

Occupational Health and Safety guidelines for JTC are detailed in the Operational Procedures for Interpretation Volunteers and Turtle Scouts. All volunteers are formally briefed about OH & S and are required to complete a CALM Volunteer Registration form prior to attending the centre in a volunteer capacity. There were no OH & S incidents or issues recorded this year.

9. Visitor Risk Management

Inadequate lighting was addressed this season with the installation of solar lighting at the centre, along the pathways and at entrance bollards. The toilet also had a solar light installed during the season allowing for safe use by visitors.

10. Marketing

The following marketing was undertaken for the 2005/2006 season;

- a) A letter detailing operational information sent to all tourism related businesses in and around Exmouth.
- b) NTP season launch 26th November at JTC. Targeting local stakeholders, businesses, sponsors, volunteers
- c) Article published in the local paper, the Northern Guardian announcing official opening to the turtle nesting season and upcoming tours available.
- d) Friday 9th, free tour for locals and tourism representatives
- e) Ningaloo Reef Retreat Turtle Tour Posters distributed to all local accommodation suppliers, Exmouth Visitors Centre, Milyering Visitors Centre, Coral Bay and Exmouth Community and CALM notice boards.
- f) Visitors Centres - provide tour participants with more information about clothing and nature of the tour
- g) Sign on the road "Turtle Tours Tonight"

In general the marketing provided to the tourists visiting the region appeared adequate. The suggested recommendations below targeting the local involvement, if fulfilled, would clearly spill over to the visiting tourists.

Recommendations:

- *That free tours targeting locals should not be during peak Christmas party season*
- *That commercial operators should better represent the tour conditions for instance depicting night beach setting. In addition, the NTP volunteers should be recognised and the community collaboration should be emphasised to portray a better image within the community.*
- *That visitor centres need to provide people with more accurate information regarding tour conditions and requirements.*
- *That the sign on the road requires more specific information regarding bookings.*
- *That the 2006 Year of the Turtle be utilised as a, launch pad for marketing events.*

11. Research

11.1 “Evaluating the Effectiveness of the Jurabi Turtle Experience in managing turtle-tourist interactions” by Leanne Smith

Murdoch University Honours student Leanne Smith has been working closely with CALM in Exmouth to evaluate the effectiveness of the Jurabi Turtle Experience in managing turtle-tourist interactions. Leanne aims to determine the influence of the Jurabi Turtle Experience on tourist behaviour and satisfaction and, specifically, to answer the questions:

1. Does the Jurabi Turtle Experience reduce tourist non-compliance with the CALM code of conduct (CoC) for viewing nesting turtles?
2. Does the Jurabi Turtle Experience increase tourist satisfaction with the turtle nesting experience?

Leanne carried out her fieldwork during the 2005/06 season where she used participant observation and a questionnaire to gather data on tourist levels of:

1. Non-compliance with the code of conduct for viewing nesting turtles
2. Awareness of the code of conduct
3. Satisfaction with the turtle nesting experience

Leanne will be comparing data for Jurabi Turtle Experience participants (tour participants) with self guided independent travellers to determine the effectiveness of the Jurabi Turtle Experience in managing tourist interactions with the nesting turtles. The results of Leanne’s work will assist CALM in future management of turtle-tourist interactions in Ningaloo Marine Park.

11.2 Community Turtle Conservation Through Cross-Regional Collaboration

This project is designed to support and standardise the existing sea turtle monitoring initiatives throughout Australia based on the success and practices of the Ningaloo Turtle Program.

The purpose of this project is to share knowledge across Australia on marine turtle monitoring, beach-based turtle tourism and the development of education and interpretation material and the standards for monitoring and the development of educational materials can be quality enhanced and standardised where appropriate.

The methodology will increase the capacity of groups to deliver standardised nesting-beach monitoring data that can contribute to national knowledge. To support sustainable turtle ecotourism practices, a national Code of Conduct and uniform interpretive materials will be trialled on the Ningaloo Coast using the expertise from James Cook University. This project aims to build enhanced communication, increase capacity and improve coordination over community driven marine turtle programs to assist in the implementation of the National Recovery Plan for Marine Turtles in Australia

12. Finance

The revenue produced through donations by Ningaloo Reef Retreat for every adult tour participant totalled \$1252.00 (\$2 per adult; 626 adults participated in tours during 2005/06 season). There was also discussion regarding a recommendation from the draft business plan that the commercial operator would pay back to the program the going rate (\$15/hr) for every turtle interaction facilitated by turtle scouts.

The revenue produced through gold coin donations at the centre itself totalled \$437.35 despite not highlighting 'gold coin donations' on advertising and marketing material this season, due to donations coming from commercial operators for every adult participating on a guided tour. This overcame the issue of visitors to the centre not paying a gold coin donation and highlighted that tour participants were even willing to donate money despite having paid to participate on a tour and \$2 per adult already being donated on their behalf by the commercial operator. NTP volunteers felt that \$2 donation was insufficient and it is recommended that next year:

- That \$5 per adult is donated by commercial operators for use of the JTC NTP services.

Any revenue raised by the centre will assist covering operational costs, which are presently absorbed by DEC and the Shire of Exmouth.

The JTC Draft Plan identified a revenue objective of cost recovery for DEC's vehicle running expenses associated with the centre. The total revenue raised, once collected, exceeds vehicle running costs of \$1064 (38 nights @ 40kms x \$0.70) however a second vehicle was used on several nights for training purposes so the extra money collected would cover these additional costs.

13. Conclusion

The goals projected for JTC in its second year were partly achieved.

As recognised from the 2004/2005 report it was determined that the best way to avoid turtle disturbance during nesting is by supervised interactions, encouraging all tourists to participate on a tour was how this was achieved. When considering 742 people participated on a tour, assuming that they did not disturb a turtle, the goal of facilitating sustainable tourism has been met. However 334 self guided tourists observed on the beach is an extremely high figure, an issue facing the turtles that is not being sufficiently managed. Clearly with figures this high, if turtle tourism is to continue the goal must be to continually encourage people to participate on a guided tour. For those not willing to participate, channelling people through the JTC and an increase in public education is essential. Clearly a need to streamline information provided to the public, making it both concise and consistent is necessary.

If the numbers of visitors impacting on the nesting turtles significantly increases over time alternative management strategies may need to be considered. Channelling visitors to JTC and adjacent beaches should continue in order to assist visitor management.

The goal of promoting and maintaining community participation and stewardship for coastal management clearly still needs to be pursued. The 2005/2006 season emphasised the need to rally local support not only to improve the perception of the project amongst the community but to give them ownership. Valid suggestions have been made for consideration with the attempt to generate pride in 'Exmouth's turtles' and encouraging locals to become involved in both the protection of turtles and education of the public.

Tour operators, despite occasionally lacking in competent guides, did a great job. In future years more tour operators participating is essential, focusing on community collaboration.

The number of volunteers as a whole was adequate; however the number of available trained volunteers was not always enough throughout the season. Changes to the rostering system will clearly rectify this problem. Additional resources are required to meet training requirements for JTC. Although the NTP is one entity the two branches do need to be considered independently as the volunteer requirements are different.

The activities at JTC, visitor feedback and surveys conducted by volunteers on the beach during the 2005/06 breeding season have all provided valuable information that will direct and assist the Turtle Interpretive Facility Advisory Committee to develop the centre still further. The successes of the centre during the 2005/06 season are largely due to the commitment of volunteers, the NTP, TAFE instructors, DEC and a suite of supporters in Exmouth, including local businesses, the Exmouth Visitors Centre, Ningaloo Reef Retreat and the Shire of Exmouth. Collaboration among stakeholders continues to contribute to the spirit of this project and assist in achieving the successes of JTC to date.

The following table summarises issues and recommendations based on the 2005/06 turtle breeding season.

Table 4 Summary of issues and recommendations

Issue	Recommendation
Lack of adequate numbers of trained volunteers	<ul style="list-style-type: none"> ➤ Changes to roster-training for next year, needs of both branches of the NTP to be factored in when recruiting volunteers ➤ Team leaders to be trained as trainers ➤ JTC specific volunteers ➤ JTC internships
Some volunteers lacking interest in JTC involvement	<ul style="list-style-type: none"> ➤ Target tourism students
Lack of resources to train volunteers	<ul style="list-style-type: none"> ➤ Train team leaders as trainers ➤ Seek additional budgetary and/or external funding to train volunteers
Confusion amongst volunteers regarding their role as a JTC volunteer	<ul style="list-style-type: none"> ➤ Initial information provided to the volunteer to outline specifically the JTC history, the aims and the specific requirements for a JTC volunteer
Large, uncontrolled influx of self guided tourists over the Christmas- New Year holiday	<ul style="list-style-type: none"> ➤ Additional resources for an employed position over the Christmas/New Year period. ➤ Public education pre-season ➤ Target all accommodation outlets regarding both tours and CoC ➤ Community involvement and education ➤ Target the Visitors Centre
Main breach of the CoC was failing to walk along the high tide line, thus disturbing emerging turtles.	<ul style="list-style-type: none"> ➤ Changes need to be made to static material at JTC, printed material and the signage at beach accesses putting greater emphasis on this element. ➤ Visitors to be encouraged to participate on a tour
People aware of the CoC are still doing the wrong thing	<ul style="list-style-type: none"> ➤ Volunteers stationed at beach accesses explaining CoC ➤ Scouts patrolling beaches past the current 21:30 departure ➤ Limit beach access to significant turtle rookeries
Disgruntled people who did not want to participate on the tour believed to be excluded from turtle watching experience	<ul style="list-style-type: none"> ➤ Encourage all visitors to participate on a tour ➤ Greater focus on providing information to those people unwilling to participate on the spot- brief CoC notes.
Tour Operators lacking competent Guides	<ul style="list-style-type: none"> ➤ Target locals as they can be trained prior to the season

	<ul style="list-style-type: none"> ➤ Tour operators to improve publicity signage, encouraging bookings to therefore have better estimates on tour numbers
Tour Operators occasionally not complying with turtle interaction licensing conditions	<ul style="list-style-type: none"> ➤ Tour operators to use radios, each group of 15 is completely independent of the other. ➤ Strict guidelines to be followed, 15 people per one turtle only. ➤ Auditing of tour operators to ensure complying, otherwise licence removal. ➤ additional training for guides by operators ➤ guides sign to say they have read license conditions
Tour participants not adequately informed of necessary physical and clothing requirements	<ul style="list-style-type: none"> ➤ All information outlets to be briefed and must inform people of conditions ➤ Promotional posters must better depict the nature of the tour
A high proportion of international visitors do not use English as a first language	<ul style="list-style-type: none"> ➤ Have CoC translated into select languages
Mall Stall did not fulfil its aim to educate and inform the local community. Lack of emphasis on the community collaboration that is the NTP.	<ul style="list-style-type: none"> ➤ Local Recruitment ➤ Information sessions, outlining the community structure of the NTP. ➤ A Local Liaison Role to improving the local perception of the project. ➤ Improve signage detailing the CoC at beach accesses. ➤ 2006 is the Year of the Turtle- perfect emphasis for ongoing Community events throughout the year.