

Welcome to My Survey

What is this survey about?

In this survey we are trying to understand your perceptions about the acceptability of a range of intervention options to conserve flatback turtles. By participating in this survey, you will be contributing to an improved understanding of how turtle conservation can be practically implemented in Western Australia. The survey will take between 10-20 minutes.

What does participation involve?

Participation in this survey is completely voluntary and you do not have to take part. If any topic is raised that you prefer not to discuss or answer, you can simply skip that question. You are free to stop your participation in the survey at any time.

Confidentiality

All information you provide will be treated confidentially and you will not be attributed to any statement or finding. The survey is anonymous, and the raw data will only be available to our research team. Any data collected as part of this study will be securely stored in accordance with CSIRO's Recordkeeping Procedure. Aside from giving up your time, there are no foreseeable risks associated with participating in this survey.

Project background

In this research project we are exploring public perceptions about different turtle conservation options. The information from the survey will be used in the production of a final research report for the WA Department of Biodiversity, Conservation and Attractions (DBCA, who are also funding the research), as well as scientific journal publications, conference presentations, and potentially a range of other targeted communications and news stories. We will endeavour to share the key learning with all project participants and other organisations and institutions.

Ethical clearance and contacts

This study has been approved by CSIRO's Social Science Human Research Ethics Committee in accordance with the National Statement on Ethical Conduct in Human Research (2007); Approval number 067/21. If you have any questions concerning your participation in the study, please contact the researchers via their contact details below. Alternatively any concerns or complaints about the conduct of this study can be raised with the Manager of Social Responsibility and Ethics on (07) 3833 5693 or by email at csshrec@csiro.au.

Project research team:

Dr Alistair Hobday

CSIRO Oceans & Atmosphere

Hobart TAS, Australia

Email: alistair.hobday@csiro.au

Dr Chris Cvitanovic

Australian National University

Canberra, ACT, Australia

Email: Christopher.Cvitanovic@anu.edu.au

Phone: 0404 052 278

Background

For each of these statements we ask you to indicate how much you agree on a scale of 1 (strongly disagree) to 10 (strongly agree). Please note that there is no mid-point; a '5' suggests that you "somewhat disagree", while a '6' suggests that you "somewhat agree".

1. Flatback turtles are an important part of the Port Hedland identity

1 _____ 5 _____ 10
Strongly disagree Strongly agree

2. The extinction of flatback turtles locally would have negative economic and/or social impacts on the region

1 _____ 5 _____ 10
Strongly disagree Strongly agree

3. Flatback turtles are important to me on a personal level

1 _____ 5 _____ 10
Strongly disagree Strongly agree

4. The local extinction of flatback turtles would negatively impact me on a personal level

1 _____ 5 _____ 10
Strongly disagree Strongly agree

5. Who do you believe is responsible for ensuring the protection of the local flatback turtle population (please check all that apply):

- State Government
- Local Government
- Federal Government
- Industry
- Community Groups/organisations
- Myself

Other (please specify)

Management

For each of these statements we ask you to indicate how much you agree on a scale of 1 (strongly disagree) to 10 (strongly agree).

6. I believe that the government invests enough funding into flatback turtle conservation and management in the region

1 _____ 5 _____ 10
Strongly disagree Strongly agree

7. I am aware *there are* management measures in place to protect the local flatback turtle population

1 _____ 5 _____ 10
Strongly disagree Strongly agree

8. I feel engaged in the management of the flatback turtle population in the region

1 _____ 5 _____ 10
Strongly disagree _____ Strongly agree

9. I would like more information on the management of flatback turtles in the region

1 _____ 5 _____ 10
Strongly disagree _____ Strongly agree

10. I feel confident that the local flatback turtle population is well managed

1 _____ 5 _____ 10
Strongly disagree _____ Strongly agree

Status and threats

On a scale of 1 (no threat at all) to 10 (is a major threat) please indicate the level of threat *you perceive* each of the following to have on flatback turtles in Port Hedland

11. Climate change

1 _____ 5 _____ 10
No threat at all _____ Major threat

12. Beach change (e.g. erosion)

1 _____ 5 _____ 10
No threat at all _____ Major threat

13. Coastal development (e.g. new structures)

1 _____ 5 _____ 10
No threat at all _____ Major threat

14. Sea level rise

1 _____ 5 _____ 10
No threat at all _____ Major threat

15. Predation from introduced animals (e.g. foxes, pigs, rats)

1 _____ 5 _____ 10
No threat at all _____ Major threat

16. Marine debris (e.g. from plastics eaten or entanglement)

1 _____ 5 _____ 10
No threat at all _____ Major threat

17. Increased light (e.g. from industry, urban)

1 _____ 5 _____ 10
No threat at all _____ Major threat

Support interventions

Please indicate how much you agree or disagree with the following two statements about using management interventions to protect turtles

18. I support active interventions on the local flatback turtle population if that will help to ensure their protection and status into the future

1 _____ 5 _____ 10
Strongly disagree Strongly agree

19. I think it is important to actively intervene to protect flatback turtles now

1 _____ 5 _____ 10
Strongly disagree Strongly agree

Interventions

Please indicate how acceptable you find each of the following interventions on a scale of 1 (completely unacceptable) to 10 (totally acceptable). Each of these interventions is specifically designed to support turtle conservation and will address a particular threat (previously identified in questions 11-17). Not all threats or interventions will apply to all nesting sites. These next questions are intended to find out if the interventions are acceptable or not to you, the last questions of the survey are specific to your local area

20. Cool turtle nests with shading using canopies of solid canvas or mesh

1 _____ 5 _____ 10
Completely unacceptable totally acceptable

21. Exclude feral animals from nesting areas (e.g. fencing out pigs and foxes)

1 _____ 5 _____ 10
Completely unacceptable totally acceptable

22. Exterminate feral animals in/around nesting areas (e.g. shooting or poisoning)

1 _____ 5 _____ 10
Completely unacceptable totally acceptable

23. Prohibit 4WD activity from nesting areas

1 _____ 5 _____ 10
Completely unacceptable totally acceptable

24. Enhance beach depth (e.g. with sand nourishment) to reduce salt water flooding of nests

1 _____ 5 _____ 10
Completely unacceptable totally acceptable

25. Collect eggs from beach and incubate offsite

1 _____ 5 _____ 10
Completely unacceptable totally acceptable

26. Move eggs or nests to location on the same beach where hatching success is higher

1 _____ 5 _____ 10
Completely unacceptable totally acceptable

27. Harvest predatory fish living under jetties to minimise hatchlings being preyed upon

1	5	10
Completely unacceptable		totally acceptable
28. Turn lights off on jetties and ships during hatching season (where safe to do so)		
1	5	10
Completely unacceptable		totally acceptable
29. Collect hatchlings <i>from the waters edge</i> and transport them offshore to avoid predators		
1	5	10
Completely unacceptable		totally acceptable
30. Collect hatchlings directly <i>from the nest</i> and transport them offshore to avoid predators		
1	5	10
Completely unacceptable		totally acceptable
31. People guard nests during hatching season and guide hatchlings to the waters edge		
1	5	10
Completely unacceptable		totally acceptable
32. Cool individual nests with electrical equipment to hatch both males and females		
1	5	10
Completely unacceptable		totally acceptable
33. Replace dark beach sand with light sand to lower nest temperature to hatch both males and females		
1	5	10
Completely unacceptable		totally acceptable
34. Protect areas where female flatback turtles feed (e.g. from fishing and dredging)		
1	5	10
Completely unacceptable		totally acceptable
35. Use excavation equipment to improve the density of the sand (i.e. for nesting purposes)		
1	5	10
Completely unacceptable		totally acceptable
36. Impose seasonal fishing bans in areas where adult turtles are present		
1	5	10
Completely unacceptable		totally acceptable
37. Flush the stomachs of large flatback turtles to remove large plastics		
1	5	10
Completely unacceptable		totally acceptable
38. Treat turtles with infections and diseases (e.g. removing tumours)		
1	5	10

Completely unacceptable

totally acceptable

39. Improve condition of feeding grounds (away from Port Hedland) by banning dredging

1 _____ 5 _____ 10

Completely unacceptable

totally acceptable

40. Reduce disturbance by restricting beach and water activities within a 5 km radius of the nesting beach

1 _____ 5 _____ 10

Completely unacceptable

totally acceptable

41. Impose seasonal fishing bans in areas where juvenile turtles are present

1 _____ 5 _____ 10

Completely unacceptable

totally acceptable

42. Aid natural selection by focussing protection on early maturing (less than 20 years) turtles and their nests to increase population

1 _____ 5 _____ 10

Completely unacceptable

totally acceptable

43. Intervene genetically so females breed earlier and more often (e.g. via gene editing)

1 _____ 5 _____ 10

Completely unacceptable

totally acceptable

44. Which of the interventions would have the greatest impact on turtle conservation in your local area

45. Are there any other interventions that could be implemented to protect turtles locally that have not been covered above?

Demographics

Lastly we would like to ask you some question about yourself.

46. What is your postcode?

47. How long have you lived in the region?

48. Are you part of any local community groups, and if so, which ones?

49. In what year were you born?

50. Gender?