The following supplement accompanies the article

A global review of marine turtle entanglement in anthropogenic debris: a baseline for further action

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Box S1. First Questionnaire

Marine Turtle Entanglement Survey

Introduction & Background

Welcome to the survey of marine turtle entanglement in anthropogenic (man-made) debris. You are invited to take part in this study that aims to glean insight into the scale of this issue to ultimately aid in managing this threat. The study is being conducted by Emily Duncan, Zara Botterell and Prof. Brendan Godley from the University of Exeter, UK.

To close critical knowledge gaps we are seeking the support of our colleagues with collecting data on proportions, prevalence and types of marine turtle entanglement occurring globally. We hope that this information can be used to gather insight into the scale of this threat, focus future research needed for management and conservation for marine turtles faced by debris entanglement.

We are defining "marine turtle entanglement" as when a marine turtle has become entwined or trapped within any man made materials.

If you agree to participate in this study you are invited to complete this online questionnaire that will ask for your knowledge of the numerical scale and the severity of this issue when regarding stranded turtles. The survey can take 5-10 minutes and contains 20 key questions.

However, we encourage you to expand and provide us with any specific cases or photo images of such incidents; these would be greatly appreciated to help add more detail.

To increase the effectiveness and scope of our study we also actively encourage you to pass this survey onto your peers and colleagues that may have the knowledge to complete this survey. Publication: The data from this survey will be used in the PhD thesis of ED and hopefully a manuscript on a global review on entanglement in marine turtles. Your responses and contact details will be strictly anonymous and not individually identifiable.

Thank you very much.

Informed Consent Approval
I understand that the aim of this research study is to collect data on proportions, prevalence and types of marine turtle entanglement. I consent to participate in this project and the details have been fully explained to me. I understand that my participation will involve completing the following online survey and I agree that the answers can be used in academic work and publications explained previously. I acknowledge that: - taking part in this study is voluntary and I am aware that I can stop taking part in it at any time without explanation or prejudice and to withdraw any unprocessed data I have provided. - any information I give will be kept strictly confidential and that no names will be used to identify me with this study without my approval. By clicking "Yes" in the check box below, I consent to completing this online questionnaire (Please tick to indicate consent).

- Yes
- No

1. **Name**
2. **Organisation:**
3. **Email:**

4. **Which ocean basin does your work primarily concern**?
- Atlantic
- Pacific
- Mediterranean
- Caribbean
- Indian

5. **In which country is your work based?**

6. **In which state/region/territory is your work based?**

7. **On average how many turtle strandings do you observe annually at this site (as stated above)?**

8. **For how many years have you being dealing with stranded turtles at this site?**

9. **Of these what is the species breakdown? I.e. what is the percentage for each species? Note they are listed alphabetically.**

Grid response: Species (Flatback, Green, Hawksbill, Kemp's ridley, Leatherback, Loggerhead, Olive ridley) against percentage classification (0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100, N/A, Unsure)

10. **Approximately what percentage of all strandings are alive?**

Grid response: Species (Flatback, Green, Hawksbill, Kemp's ridley, Leatherback, Loggerhead, Olive ridley) against percentage classification (0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100, N/A, Unsure)

11. Do you receive stranded sea turtles (or reports of) which are "entangled" (entwined or trapped) in man-made marine debris?

- Yes
- No
- Other:

12. If so what percentage of stranded sea turtles are "entangled" out of all strandings?

Grid response: Species (Flatback, Green, Hawksbill, Kemp's ridley, Leatherback, Loggerhead, Olive ridley) against percentage classification (0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100, N/A, Unsure)

13. Approximately what percentage of "entangled" animals are still alive?

Grid response: Species (Flatback, Green, Hawksbill, Kemp's ridley, Leatherback, Loggerhead, Olive ridley) against percentage classification (0, 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100, N/A, Unsure)

14. What kinds of materials have you experienced entangling stranded turtles? Please note, it is useful to differentiate whether fishing gear appeared to be lost/discarded or not.

Grid response: Entangling material (Lost/discarded fishing net, Lost/discarded fishing rope, Lost/discarded fishing line, Active fishing net, Active fishing rope, Active fishing line, Non fishing rope/twine, Woven sacks, Polythene sheets, Other) Other please explain/describe:

15. Which life stages are "entangled"? (Please select all that apply)

Grid response: Species (Flatback, Green, Hawksbill, Kemp's ridley, Leatherback, Loggerhead, Olive ridley) against Life stage (Pelagic juveniles, Neritic juveniles, Adults, Pelagic & neritic juveniles, Pelagic juveniles & adults, Neritic juveniles & adults, All, N/A, Unsure)

16. Do you think the prevalence of entanglement has changed over the last 5 years?

- Increasing
- About the same
- Decreasing
- Other please explain/describe

17. Do you think the prevalence of entanglement has changed over the last 10 years?

- Increasing
- About the same
- Decreasing
- Other please explain/describe

18. Would you have images and specific cases that you would be prepared to share?

19. Are there any other peers/colleagues/organisations you can suggest to contact further the investigation?

20. Additional comment/information:

Box S2. Second Questionnaire

Turtle Entanglement - Sharing Results and Thoughts

Thank you so much for participating in our first Marine Turtle Entanglement survey. We received 106 responses from 50 countries and territories

In order to gain further insights into the challenges faced by this expert community and identify opportunities for more effective solutions, it would be great if you could have a look at our key findings and answer the following questions.

If you agree to participate in this study you are invited to complete a second online questionnaire that will ask for your expert knowledge on the issue of marine turtle entanglement. The survey can take 5-10 minutes and contains 10 key questions.

Publication: The data from this survey will be used in the PhD thesis of ED and hopefully a manuscript on a global review on entanglement in marine turtles. Your responses and contact details will be strictly anonymous and not individually identifiable.

Thank you very much.

Informed Consent Approval
I understand that the aim of this research study is to collect further information on the results from the previous Marine Turtle Entanglement survey on proportions, prevalence and types of marine turtle entanglement. I consent to participate in this project and the details have been fully explained to me. I understand that my participation will involve completing the following online survey and I agree that the answers can be used in academic work and publications explained previously. I acknowledge that: - taking part in this study is voluntary and I am aware that I can stop taking part in it at any time without explanation or prejudice and to withdraw any unprocessed data I have provided. - any information I give will be kept strictly confidential and that no names will be used to identify me with this study without my approval. By clicking "Yes" in the check box below, I consent to completing this online questionnaire (Please tick to indicate consent).

- Yes
- No

1. Name:

2. Organisation:

3. Email:

4. a) Is there anything missing form our results that you were expecting to see?

b) Was there anything in our results that was a surprise to you?

5. What do you think are the top three challenges to addressing entanglement issues in turtles?

6. What do you think are the three key research needs to better understand turtle entanglement?

7. What do you think would be the top three priority actions that would help reduce turtle entanglement?

8. How likely is entanglement in man-made debris to be causing population level effects in marine turtles?

- Definitely
- Very likely
- Probably
- Probably not
- Definitely not
- Don't know

If so for what species and in which region (can provide multiple answers)?

9. How do you think the threat of entanglement in man-made debris compares to:

Grid response: Threat type (Plastic ingestion, Oil pollution, Fisheries bycatch, Direct exploitation, Climate change) against Threat level (Greater than entanglement, About the same as entanglement, Less than entanglement, Unsure)

10. Lastly, are there any questions you would like to ask of us?

Fig. S1. Likelihood of population level effects. Number of responses from experts when asked how likely entanglement in man-made debris to causing population level effects in marine turtles (n=63).