**Using local ecological knowledge to determine the status of** **Cantor’s giant softshell turtle *Pelochelys cantorii* in Kerala, India**

Ayushi Jain, V.A. Akshay, V. Deepak, Abhijit Das, Paul Barnes,

Benjamin Tapley and Francoise Cavada-Blanco

Supplementary material is published as supplied by the authors. It is not checked for accuracy, copyedited, typeset or proofread. The responsibility for accuracy and file functionality remains with the authors.

Supplementary Material 1 Definition of Scheduled Castes and Tribes in India as per Constitution of India.

Constitution of India has defined ‘Schedule Castes’ and ‘Scheduled Tribes’ under articles 341 and 342 and further under 366(24) and 366(25) to provide protection and upliftment of the section of people who were denied of basic economic, social and educational rights since ancient times.

Article 366(24) states, ‘Scheduled Castes’ means such castes, races or tribes or parts of or groups within such castes, races or tribes as are deemed under article 341 to be Scheduled Castes for the purpose of this Constitution.

Article 366(25) states, ‘Scheduled Tribes’ means such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under article 342 to be Scheduled Tribes for the purpose of this Constitution.

Supplementary Table 1 Stepwise model selection performed using forward, backward and bidirectional selection methods to assess the effect of respondents’ age and usage of the river (for subsistence fishing, irrigation, bathing and washing) on the probability of sighting of Cantor’s giant softshell turtle *Pelochelys cantorii*.

|  |  |
| --- | --- |
| Variables1 | Akaike information criterion value |
| **Forward stepwise selection** |  |
| Seen\_CGST ~1 (Null model) | 205.72 |
| Seen\_CGST ~Subsistence\_fishing | 193.75 |
| Seen\_CGST ~ Subsistence\_fishing + Age | 181.93 |
| Seen\_CGST ~ Subsistence\_fishing + Age + Irrigation | 176.82 |
| Seen\_CGST ~ Subsistence\_fishing + Age + Irrigation + Bathing (Best fit model) | 176.06 |
| Seen\_CGST ~ Subsistence\_fishing + Age + Irrigation + Bathing + Washing | 177.53 |
| **Backward stepwise selection** |  |
| Seen\_CGST ~ Age + Subsistence\_fishing + Irrigation + Washing + Bathing | 177.53 |
| Seen\_CGST ~ Age + Subsistence\_fishing + Irrigation + Bathing (Best fit model) | 176.06 |
| **Bidirectional selection** |  |
| Seen\_CGST ~ 1 (Null model) | 205.72 |
| Seen\_CGST ~ Subsistence\_fishing + Age + Irrigation + Bathe (Best fit model) | 176.06 |
|  |  |
| - bathing | 176.82 |
| + washing | 177.53 |
| - irrigation | 180.58 |
| - age | 182.82 |
| - subsistence fishing | 186.60 |

1CGST, Cantor’s giant softshell turtle.

Supplementary Table 2 Best-fit model as determined by model selection shows that subsistence fishing, respondent’s age, irrigation and bathing are the top predictors for the sighting of *Pelochelys cantorii.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Estimate ± SE | z-value | Pr (> |z|) |
| (Intercept) | -3.00949 ± 0.79069 | -3.806 | 0.000141\*\*\* |
| Subsistence\_fishing (Yes) | 1.80826 ± 0.55582 | 3.253 | 0.001141\*\* |
| Age | 0.04327 ± 0.01519 | 2.849 | 0.004382\*\* |
| Irrigation (Yes) | 0.96894 ± 0.38333 | 2.528 | 0.011482\* |
| Bathing (Yes) | 1.6795 ± 1.14411 | 1.468 | 0.142117 |

\*\*\*P < 0.001, \*\*P < 0.01, \*P < 0.05.

Supplementary Table 3 The final selected model. Bathing was removed as it was not statistically significant, and respondents who used the river for bathing also used it for at least one other purpose.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Estimate ± SE | z-value | Pr (> |z|) |
| (Intercept) | -2.95648 ± 0.7755 | -3.812 | 0.000138\*\*\* |
| Subsistence\_fishing (Yes) | 1.84177 ± 0.54466 | 3.382 | 0.000721\*\*\* |
| Age | 0.04313 ± 0.01495 | 2.885 | 0.003914\*\* |
| Irrigation (Yes) | 0.99829 ± 0.37832 | 2.639 | 0.008322\*\* |

\*\*\*P < 0.001, \*\*P < 0.01, \*P < 0.05.