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Wildlife Research

Supplementary Material

Exploring the human dimensions of gharial conservation in the Mahanadi River, India

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Table S1: Summary of binomial logistic regression model estimates of predictor variables affecting the role of perception of crocodiles in the Mahanadi River.

Coefficient	Estimate	s.e.	z value	<i>P</i> value
Intercept	-1.46	0.74	-1.98	0.04
DR- drinking water	-2.50	0.61	-4.07	0
DR- farming	-2.21	0.55	-4.01	0
DR- fishing	-2.62	0.41	-6.34	0
WSS- gharial	1.51	0.70	2.14	0.03
AAI- yes, and received	1.67	0.76	2.19	0.02
AGE	0.03	0.01	1.96	0.04

Table S2: Analysis of binomial logistic regression models for determining the role of perception of gharial in the Mahanadi River

Series number	Models	Residual deviance	AIC
1	PRC ~ DR + WSS + AAI + AGE	244.30	264.30
2	PRC ~ OC + DR + WSS + AAI + AGE	236.89	264.89
3	PRC ~ OC + DR + WSS + AAI + HT + AGE	233.86	265.86
4	PRC ~ OC + DR + FT + WSS + AAI + HT + AGE	232.78	268.78

PRC, perception of role of gharial in river; DR, dependency on river; WSS, which species sighted; AAI, aware of incentive; AGE, age of respondents; HT, house type; FT, different types of fishing methods.

Table S3: Summary of ordinal logistic regression for the response to presence of crocodiles in the Mahanadi River.

Coefficient	Estimate	s.e.	<i>t</i> value	<i>P</i> value
OC- fisherman: government employee	1.32	0.49	2.69	0.007
OC- fisherman: daily wages	2.01	0.70	2.87	0.004
IC- <1 lakh: 1-2 lakh	-1.57	0.69	-2.27	0.023
IC- <1 lakh: 2-3 lakh	-1.30	0.66	-1.95	0.050
IC- <1 lakh: 3-6	-1.47	0.73	-2.01	0.044
WSS- no idea: gharial	1.38	0.56	2.47	0.013
WSS- no idea: both gharial and mugger	0.95	0.34	2.77	0.005
No (Scared): Neutral	-1.39	0.74	-1.87	0.050
Neutral: Yes (Pleasure)	1.48	0.74	2.01	0.044

Table S4: Analysed ordinal logistic regression for response to gharial presence in the Mahanadi River.

Series number	Models	Residual deviance	AIC
1	LCP ~ OC + IC + WSS	447.41	473.41
2	LCP ~ AGE + OC + IC + WSS	446.24	474.24
3	LCP~ AGE+ OC + HT + IC + WSS	445.05	477.05
4	LCP~ CAS + AGE + OC + HT + IC + WSS	443.66	481.66

LCP, do you like presence of gharial in the river?; OC, occupation; IC, annual income; WSS, which species sighted; AGE, age of respondents; HT, house type; CAS, caste of respondents.

Table S5: Summary of binomial logistic regression model estimates of predictor variables affecting fishing-free zones.

Coefficient	Estimate	s.e.	z value	<i>P</i> value
Intercept	1.76	1.39	1.26	0.2
FG- net and boat	-3.91	1.49	-2.62	0.008
OC- daily wages	2.99	1.00	2.98	0.002

Table S6: Analysed binomial logistic regression models for people's response to the fishing-free zone.

Series number	Models	Residual deviance	AIC
1	SFFZ ~ FG + WSS + OC	193.97	215.97
2	SFFZ ~ AGE + FG + WSS + OC	193.39	217.39
3	SFFZ ~ DR + FG + WSS	193.73	221.73
4	SFFZ ~ AGE+ DR + FG + WSS + OC	193.09	223.09

SFFZ, willingness to support gharial conservation by fishing free zone; FG, fishing gear used; WSS, which species sighted; OC, occupation of respondents; AGE, age of respondents; DR, dependency on river.

Questionnaire survey data sheet

Date....., Area/Village....., GPS.....

Open-ended questions

1. Name of the respondent :
2. Gender :
3. Age :
4. Caste :
5. Education :
6. Occupation :
7. Annual income :
8. House type :
9. Drinking water facility :
10. Fishing type :
11. Fishing gears used :
12. Dependency on river :

Fixed response questions

13. Do you have livestock? (Yes/ no. if yes, then number of cow/goat/sheep)
14. Livestock predation by crocodile? (not applicable/ yes/ no) if yes, how many?
15. Do you worship crocodile? (Yes/ no)
16. Have you ever seen crocodile? (Yes/ no)
17. Which species do you sight? (no idea/ gharial/ mugger/ both)
18. How do you feel the presence of gharial in river? (not like/ neutral/ like)
19. Do you want your area will be declared as 'fishing free zone'? (yes/ no)
20. Do you want any alternative livelihood? (not applicable/ yes/ no)
21. Which alternative livelihood you will choose? (not applicable/ job/ agriculture/fish farming/ business)
22. Do you know what is the role of gharial in river? (no idea/ maintain ecosystem)
23. Do you aware about incentive program of government? (Yes/ no/ yes and received compensation)
24. Do you know there are less than 10 gharials left in Mahanadi River? (Yes/no)
25. Do you know blasting is one of the major threats for gharial?