**Appendix A.** Payoff function (Taken from Mackay et al, 2019)

To determine the payment for the participants the payoff function was extrapolated from a standard formulation in a static CPR game without any rules being applied (Walker, Gardner and Ostrom, 1990; Apesteguia and Maier-Rigaud, 2006). Participant *i*’s payoff ($P\_{i }$) is given as:

$P\_{i }=\left\{\left[aY-bY^{2}\right]\frac{x\_{i}}{Y}-cx\_{i}\right\}+\left\{d-eY\_{-i}\right\}$ (1)

where *xi* is the number of fish caught by the participant, *Y* is the total number of fish caught in the fishery ($Y=\sum\_{}^{}x\_{i}$), *Y-i*is the total number of fish caught by other fishers ($Y\_{-i}=\sum\_{j\ne i}^{}x\_{j}$), and *a, b, c, d* and *e* are the parameters. This specification of the payoff incorporates the two types of benefits derived from recreational fishing. The first benefit, which is directly associated with the catch, is represented by the first expression in curly brackets on the right-hand side of the equation. This type of benefit is strictly concave in own-catch *xi* and decreases with an increase in the group’s catch *Y*. The second benefit, which is associated with the enjoyment benefit gained from the experience of the recreational activity itself, is represented by the expression in the second curly brackets and is negatively related to the intensity of others’ fishing. Therefore, an individual’s payoff exhibits diminishing marginal returns to increased own-catch (${∂^{2}P\_{i}}/{∂x\_{i}^{2}}<0$) and decreases with others catch (${∂P\_{i}}/{∂x\_{j}}<0$). Furthermore, the marginal returns to increased own-catch diminishes with others catch (${∂^{2}P\_{i}}/{\left[∂x\_{j}∂x\_{i}\right]}<0$). The first element is consistent with empirical evidence that the highest satisfaction is obtained from the first fish caught and a marginal return of satisfaction that diminishes for increasing catch (Beardmore et al. 2015). The second and third elements reflect the fact that an individual’s level of enjoyment in recreational fishing and additional enjoyment from extra catch are influenced by other peoples’ decisions in terms of the health of the stock and how busy the fishing spots are.

**Appendix B**. Sensitivity analysis on ordering effect

Table B.1 Comparison of proportions between full sample and two sub-samples to assess any ordering effect

|  |  |  |  |
| --- | --- | --- | --- |
|  | Normative in low deterrence | Normative in high deterrence | Instrumental |
| Compliance Response Group | Full sample | Sub-sample 1 | Sub-sample 2 | Full sample | Sub-sample 1 | Sub-sample 2 | Full sample | Sub-sample 1 | Sub-sample 2 |
| The compliers | 25 | 16.7 | 16.7 | 52.5 | 0 | 43.3 | 27.5 | 25 | 13.3 |
|  |  | (0.4431) | (0.3838) |  |  | (0.3689) |  | (0.8535) | (0.1077) |
| The free-riders | 5.8 | 11.1 | 8.3 | 9.2 | 0 | 20 | 3.3 | 0 | 0 |
|  |  | (0.3964) | (0.6445) |  |  | **(0.0966)\*** |  | (0.5244) | (0.3149) |
| The incentivized | 15.8 | 22.2 | 20.8 | 12.5 | 0 | 10 | 34.2 | 41.7 | 40 |
|  |  | (0.4981) | (0.5496) |  |  | (0.7072) |  | (0.6046) | (0.5536) |
| The non-compliers | 53.3 | 50 | 54.2 | 25.8 | 0 | 26.7 | 35 | 33.3 | 46.7 |
|  |  | (0.7944) | (0.9359) |  |  | (0.9202) |  | (0.9065) | (0.2376) |
| Number of observations | 120 | 18 | 24 | 120 | 0 | 30 | 120 | 12 | 30 |
| Note: This table reports the proportion per compliance response group and the p-values in parentheses for comparison of proportions statistical test. Significant coefficients are bolded, and significance level are: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. |