Supplementary Materials: Extraction Behaviour and Income Inequalities Resulting from a Common Pool Resource Exploitation

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1 **1. Experimental Instructions**

2 These instructions are related to the treatment of no communication and no monitoring and are
3 intended to be an example. Different instructions were obviously provided for the treatments
4 involving communication and / or monitoring.
5

6 *General Instructions*

7 Welcome and thank you for coming today. You accepted to become part of an economic experiment
8 funded by the Deutscher Akademischer Austauschdienst (DAAD) and supported by the Leibniz
9 Zentrum für Marine Tropenökologie, in Bremen.
10

11 For your participation you will be payed in cash immediately at the end of the session. What you will
12 earn depends partly on your decisions and partly on the decisions of other participant(s).
13

14 To ensure anonymity, each participant will have a tablet assigned, and all the decisions and interactions
15 will be done through them. No communication among participants is allowed during the course of the
16 experiment.
17

18 Please note that all participants receive the same copy of these instructions. The experimental session
19 is composed of three different tasks.
20

21 *Questionnaire – Type A*

22 The questionnaire consists of a number of questions you are required to answer. Be aware that for
23 every question, you have the option to eventually choose "I do not want to disclose this", if that is the
24 case.
25

26 For the completion of the questionnaire you will be rewarded with 2 €.

27 *Questionnaire – Type B*

28 In this task, you will be randomly paired with another participant, and your earnings from this part of
29 the experiment will be added to your previous earnings.
30

31 This situation consists of 10 decisions you will have to make. Each of your decisions is a choice between
32 two alternative allocations described under LEFT and RIGHT. Each alternative has consequences, both
33 for your own earnings and for the earnings of your randomly matched partner.
34

35 Your total earnings will be determined as follows: At the end of the experiment, one set of decisions
36 out of the ones made by you and your matching partner will be chosen. From these, one of the 10
37 decisions effectively made will be randomly selected, and this alternative will be actually carried out

38   and paid out to both you and your partner.

39

40   Decision-making xample (see figure below): The choice is formulated as follows. "LEFT" means that

41   you choose to allocate 1.60 € for yourself and give 2.60 € to your randomly matched partner, while

42   "RIGHT" means a different allocation between you and your matching partner.

43

Choose

You	Other
$1.60	$2.60

You	Other
$2.00	$2.00

44   *Interaction*

45   You and all participants will simultaneously decide on how much you each individually harvest a

46   common renewable fishery resource. Your and the other participant's decision is only related to how

47   much effort (between 0 and your maximum) you are willing to invest in fishing. The stock renews at a

48   constant rate, costs are zero, and prices are constant.

49

50   The dynamic of the resource (R) and the individual harvest (IH) are presented on the screen. Below

51   the figure, you will find a slider representing your effort levels. The slider ranges between zero effort

52   and maximum effort. If you want to increase your effort level, you drag the slider to the right, while if

53   you want to decrease your effort level, you drag the slider to the left. When you have decided on your

54   effort level (i.e., on where to position the slider), you need to confirm your choice by pressing "Send".

55   Be aware that the Send button is only active when the software is ready to calculate your harvest. That

56   said, it will be blocked for a few seconds right after you press it. You can change your effort level as

57   many times as you wish for as long as the experiment is running.

58

59   The experiment is expected to last for around 10 minutes, and it will stop for all participants at the

60   same moment. Your earnings will depend on how much you harvest—the more you harvest, the more

61   you will earn.

62

63   Before the start of the experiment, we will do a trial period without consequences on your earnings.

64   The trial will last four minutes.

65

66   *Final Remarks*

67   Please note that the aforementioned tasks will not necessarily follow the order recently mentioned,

68   though they will all be part of the session. Except for the Questionnaire Type A, your payment will

69   vary according to your decisions and the decision of your respective decision maker/s. In order to

70   receive your payment, you are required to complete each and every one of the tasks within the session.

71   Your final earnings will correspond to the sum of your earnings in every part of the experiment. Thank

72   you for participating !

73

74   Please return the Experimental Instructions before leaving the Lab.
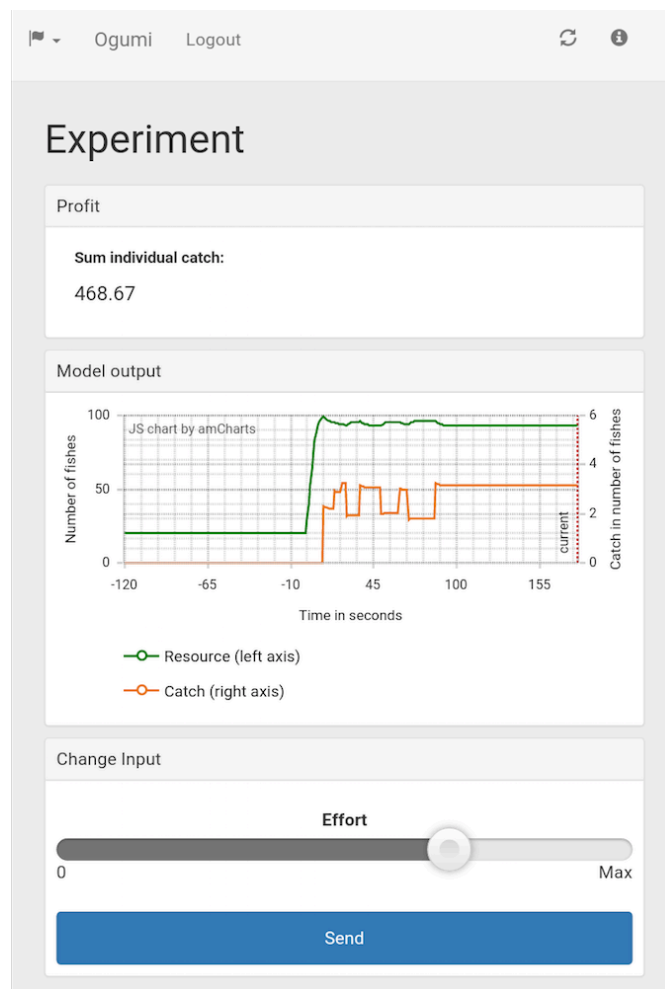
2. Summary Statistics

Summary statistics for the effects of communication and monitoring on resource, income, and Gini index.

Table S1. Effects of communication and monitoring on resource. Symbols: SS = sum of squares, df = degrees of freedom, MS = mean squares, F = F-value, and P = p-value.

Source of variation	SS	df	MS	F	P
Communication	836.2	1	836.2	25.326	0.001
Monitoring	80.1	1	80.1	2.427	0.158
Communication **x** Monitoring	103.9	1	103.9	3.147	0.114
Residuals	264.1	8	33.0	-	-

Table S2. Effects of communication and monitoring on income. Symbols: SS = sum of squares, df = degrees of freedom, MS = mean squares, F = F-value, and P = p-value.

Source of variation	SS	df	MS	F	P
Communication	53.38	1	53.38	28.987	0.000
Monitoring	1.61	1	1.61	0.872	0.377
Communication **x** Monitoring	0.82	1	14.73	0.443	0.524
Residuals	14.73	8	1.84	-	-

Table S3. Effects of communication and monitoring on the Gini index. Symbols: SS = sum of squares, df = degrees of freedom, MS = mean squares, F = F-value, and P = p-value.

Source of variation	SS	df	MS	F	P
Communication	0.017	1	0.017	8.497	0.019
Monitoring	0.013	1	0.013	6.423	0.035
Communication **x** Monitoring	0.000	1	0.000	0.026	0.877
Residuals	0.016	8	0.002	-	-

Table S4. Effects of combinations of communication and monitoring on resource, income, and Gini index. Symbols: df = degrees of freedom, T = t-value, and P = p-value.

Variable	resource			income			Gini index		
	df	T	P	df	T	P	df	T	P
Communication									
Presence vs Absence	10	4.319	0.002	10	5.578	0.000	10	2.425	0.036
Monitoring									
Presence vs Absence	10	-0.816	0.43	10	0.482	0.639	10	-1.972	0.077