

Annex/Supplementary material

Table 1: Characteristics of intervention sites

Average community population	851	Source: Author s; qualitat ive eviden ce based on FGD particip ants' estimat ions in each commu nity
Average farm size	1.00 ha	
Percentage of farmland rented out in dry season (Average)	11.7% (3-25%)	
Percentage irrigators (Average)	61% (20-100%)	
Percentage access to wells (Average)	76% (40-100%)	
Rainy season primary livelihood is rainfed farming	15 communities	
Dry season primary livelihood is irrigated farming	15 communities	
GW primary water source for community (Ranks 1)	5 communities (from the 15 communities, 81% on average being GW users)	
GW second most important source (Ranks 2)	8 communities (from the 15 communities, 67% on average being GW users)	
Ethnic and religious heterogeneity score (Average)	2.1 out of 4	
Existing institutions for shared resources such as forests?	Majority yes	
Number of sites	15	

Table 2. Summary statistics for group-level dependent and explanatory variables

Variable	Mean	SD
Share of the group that chose a water saving crop in the round	0.57	0.31
Total amount of water consumed for irrigation by all players in the round (<i>kind</i>)	9.21	3.05
Water level at the start of the round (<i>kind</i>)	25.57	10.32
Total amount of water consumed for irrigation by all players in the previous round (<i>kind</i>)	9.21	3.04
Share of group that found the game relatable (proportion)	0.97	0.07
Gender (female)	0.50	0.50
Average respondent age across group (years)	37.45	4.90
Average education level across group (years)	5.00	2.23
Average hectares of land owned across group (hectare)		0.79
	0.98	
Average years lived in village across group (years)	32.11	7.23
Share of group who is a member of a water association (proportion)	0.19	0.27
Share of group who agree groundwater use now will affect future availability (proportion)	0.48	0.22
Share of group that trusts almost everyone with something important (proportion)	0.19	0.13
Average number of players respondent gets along with in the group	3.62	0.40
Average number of neighbors respondent believes would help with community activity across group	7.18	0.94
Share of group whose primary livelihood in the dry season is farming	0.85	0.20
Share of group who own a water pump	0.41	0.32
Share of group that only use rainfed irrigation	0.58	0.16

Source: pre-game player survey and game choices

Table 3. Pooled regressions: 1) Share of the group making water saving crops choices in the round estimated from Ordinary Least Squares (OLS) and Generalized Linear Models (GLM) regressions; and 2) total amount of water consumed for irrigation by all players in the round estimated from Tobit (left censored) and OLS regressions

VARIABLES	Share of group making water saving crop choices		Water consumed for irrigation	
	GLM	OLS	Tobit	OLS
Game round	0.134*** (0.0504)	0.0256*** (0.00923)	-0.275*** (0.0881)	-0.270*** (0.0901)
Communication game	0.379** (0.148)	0.0854** (0.0343)	-0.901*** (0.326)	-0.895** (0.336)
Communication game w/rules	0.743*** (0.162)	0.166*** (0.0368)	-1.654*** (0.355)	-1.657*** (0.366)
Water level at the start of the round	-0.0270** (0.0116)	-0.00697*** (0.00228)	0.0678*** (0.0217)	0.0686*** (0.0224)
Total amount of water consumed for irrigation in the previous round	0.0550** (0.0266)	0.0113* (0.00598)	-0.112* (0.0571)	-0.111* (0.0588)
Share of group who found the game relatable	0.118 (0.815)	0.0279 (0.189)	0.488 (1.864)	0.394 (1.924)
Gender (female)	-0.537*** (0.141)	-0.115*** (0.0322)	1.211*** (0.315)	1.208*** (0.326)
Group mean respondent age	0.253*** (0.0415)	0.0580*** (0.00932)	-0.574*** (0.0907)	-0.576*** (0.0937)
Group mean education level	0.319*** (0.0719)	0.0717*** (0.0163)	-0.691*** (0.157)	-0.695*** (0.163)
Group mean ha of land owned	-0.461*** (0.143)	-0.104*** (0.0328)	0.936*** (0.318)	0.943*** (0.329)
Group mean years lived in village	-0.194*** (0.0227)	-0.0430*** (0.00509)	0.433*** (0.0499)	0.433*** (0.0514)
Share of group with membership in water association	-3.402*** (0.341)	-0.740*** (0.0730)	7.366*** (0.706)	7.365*** (0.728)
Share of group who agree groundwater use now will affect future availability	-1.060*** (0.361)	-0.206** (0.0821)	2.286*** (0.798)	2.254** (0.827)
Share of group who trust almost everyone	-2.832*** (0.704)	-0.539*** (0.162)	6.177*** (1.577)	6.088*** (1.632)
Group mean number of players respondent gets along with	2.545*** (0.220)	0.533*** (0.0450)	-5.525*** (0.444)	-5.489*** (0.457)
Group mean number of neighbors would help with community activity	-0.861*** (0.0765)	-0.180*** (0.0164)	1.801*** (0.159)	1.795*** (0.165)
Share of group whose primary livelihood in the dry season is farming	-0.343 (0.374)	-0.0364 (0.0861)	0.124 (0.848)	0.146 (0.877)

VARIABLES	Share of group making water saving crop choices		Water consumed for irrigation	
	GLM	OLS	Tobit	OLS
Share of group with water pump	-3.421*** (0.259)	-0.708*** (0.0533)	7.257*** (0.528)	7.230*** (0.543)
Share of group who only irrigated in the rainy season	-0.415 (0.272)	-0.145** (0.0615)	1.113* (0.595)	1.176* (0.618)
Constant	-0.413 (0.714)	0.313* (0.160)	11.54*** (1.558)	11.60*** (1.613)
Observations	611	611	611	611
R-squared	0.302	0.300		0.307
Pseudo R-squared			0.0731	

Robust standard errors in parentheses. Results for *kebele* dummy variables are not reported here.

*** p<0.01, ** p<0.05, * p<0.1

Table 4. Share of the group making water saving crops choices estimated from GLM regressions by gender; total amount of water consumed for irrigation by all players in the round estimated from Tobit regressions by gender

VARIABLES	Share of group making water saving crop choices		Water consumed for irrigation	
	Female	Male	Female	Male
Game round	0.162* (0.0918)	0.0310 (0.0630)	-0.491** (0.195)	-0.0969 (0.132)
Communication game	0.660*** (0.256)	0.0835 (0.189)	-1.684*** (0.593)	-0.277 (0.398)
Communication game w/rule	1.037*** (0.281)	0.515** (0.208)	-3.038*** (0.706)	-1.109** (0.451)
Water level at the start of the round	-0.0124 (0.0177)	-0.059*** (0.0192)	0.0196 (0.0372)	0.131*** (0.0390)
Total amount of water consumed in the previous round	0.0929*** (0.0315)	0.0187 (0.0420)	-0.237*** (0.0785)	-0.0319 (0.0874)
Share of the group that found the game relatable	-0.0830 (0.0763)	-11.36*** (0.787)	0.361*** (0.133)	24.84*** (1.680)
Constant	-1.716** (0.817)	12.43*** (1.387)	14.72*** (1.877)	-17.18*** (2.908)
Observations	304	307	304	307
R-squared	0.309	0.345		
Pseudo R-squared			0.0816	0.0876

Robust standard errors in parentheses. Results for *kebele* dummy variables are not reported here.

*** p<0.01, ** p<0.05, * p<0.1