

Rural and Water Poverty at household and sub-basin level

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CPWF-IWMI Basin Focal Project for the Indus-Gangetic Basin

Rural and Water poverty national-state junctions

- Rural and water poverty correlation on national grounds (India) seem to be...



- Also in inverse (water and rural poverty) mode

What's next: Drivers of water-poverty nexus

- More spatial analysis required in order to...
 - How strong is the correlating assumption between rural and water poverty?
 - Which are the crucial factors to affect this bipolar relation?
 - Need to get through the core essence of analysis



Means to identify the drivers

- Survey on a household and sub-basin level
- Elements of survey



Some more technical details...



And a breakthrough approach? ...

- What's the contribution of



- Ways to estimate: Effects on Production Approach-Dose Response modeling a) traditional b) linear and quadratic c) econometric
- High caution to impute the “cause” (i.e. bad water quality) to the “effect” (jobless)
- However, worth a try to indicate human welfare loss because of quantitative and qualitative water deterioration

Survey Format

- Survey already conducted through two Questionnaire Forms a) village and b) household level through NAIP/ ICAR Project on “Sustainable Livelihood Improvement through Need Based Integrated Farming System Models in Disadvantaged Districts of Bihar”
- Repeated editing, amalgam of three questionnaire types, pretest in all kind of landholders
- Sample size of ~1000 respondents in diversified districts

2.3 Crop production details in 2007-2008 (1)

Season	Crop code¹	Area size		Ownership		Irrigation							Crop Output				
		Total area (acre)	Cultivated area (acre)	Own (Yes= 1; NO=2)	Leased (Rs/year)	Irrigated area (acre)	Micro-irrigation schemes (acre)	Irrigation Source²	No. of Irrigations per season		Hours of irrigation per season		Crop Production (kg/acre)	Market price (Rs/Kg)	Self-consumption (%of production)	By-products	
									Surface (Nos.)	Ground (Nos.)	Surface (hours)	Ground (hours)				Kg/seasons	Rs/kg
Kharif =1																	
Rabi =2																	
Summer = 3																	
Perennial =4																	

Crop Code ¹									
01= Banana	02=Barley	03= Chillies	04= Coconut	05= Cotton	06= Gram	07= Groundnut	08= Guava	09= Lentil	10= Lime
11= Linseed	12= Maize	13=MaKhana	14= Mango	15= Oat	16= Onions	17= Other roots/tubers	18= Oranges	19= Other grains	20= other oilseed crops
21= Other spices	22= Other vegetables	23 =Paddy	24= Palm oil	25= Papaya	26= Potatoes	27= Pee	28= Pigeon Pea	29= Soybeans	30= Sugarcane
31= Sweet potato	32= Sunflower	33= Tobacco	34= Tomato	35= Water Chestnut	36= Wheat	37=Other			
Irrigation Source ²									
01 =Canal	02= Pond/Tank	03= Tubewell / Dugwell	04 = Rainfed	05 = Conjunctive irrigation (both surface and groundwater)			05= Other (specify)		

5. Water and environment

5.1 If the government would set up a groundwater market for the supervision of the water allocation issue, would you support this idea?		Yes=1 ; No=2	If "No" please go 5.4
5.2 If the government would ask an amount from each farmer as a contribution to <u>develop the groundwater market</u> , would you agree to provide money for it?			
Yes (Go to Q.5.3)	Depends on the amount asked (Go to Q.5.3))	No (see below)	
IF "NO" Why : I am opposed to such economic approaches =1, I do not trust the payment authority =2, I do not have enough money to pay =3, I believe that it is not me to pay for these services =4			
5.3 What is the maximum amount you could <u>contribute per year?</u> (Mention to the farmer that the amount is per year only)		Maximum amount Rs/yea _____	

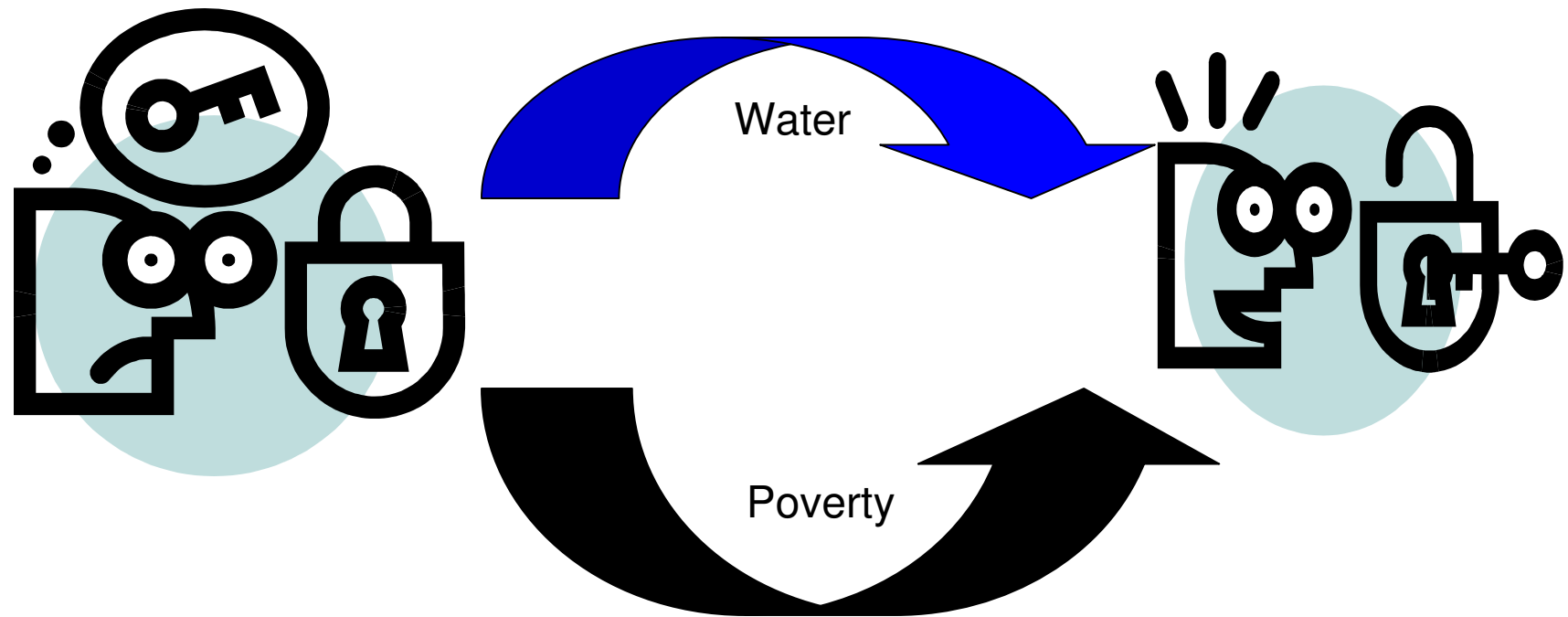
5.4 Nowadays, there is no cost for the water as a good but only for pumping and distribution services. If the government would ask for a charge in order to preserve <u>the environmental services provided by freshwater, like preservation of moisture, microclimate, avoidance of salinity etc.</u> would you be willing to financially contribute for its preservation?			
Yes (Go to Q.5.5)	Depends on the amount asked(Go to Q.5.5)	No (see below)	
IF "NO" Why : I am opposed to such economic approaches =1, I do not trust the payment authority =2, I do not have enough money to pay =3, I believe that it is not me to pay for these services =4			
IF "YES" 5.5 What is the maximum amount you could <u>contribute per year?</u> (Mention to the farmer that the amount is per year only)		Maximum amount Rs/ Year _____	

5.6 Supposing that the local government would decide to <u>revitalise/ introduce the common tubewell system in your village</u> . Would you be willing to financially contribute for its revitalisation/ introduction by buying water for these tubewell?			
Yes (Go to Q.5.7)	Depends on the amount asked(Go to Q.5.7)	No (see below)	
IF "NO" Why : I do not believe that they could revitalise/ introduce the communal tubewell system effectively =1, I prefer to use my own tubewell =2, I do not have enough money to pay =3, I believe that the authorities should pay for these revitalisations =4			
5.7 What is the maximum amount <u>you could pay per year</u> for the revitalisation/ introduction of the communal tubewell ? (Mention to the farmer that the amount is per year only)		Maximum amount Rs/year _____	

5.8 Supposing that you have to stop <u>watering your farm from any other source than the common tubewell</u> for sufficiency purposes, would you agree to get reimbursed for the activation of this project?			
Yes (Go to Q.5.9)	Depends on the amount asked(Go to Q.5.9)	No (see below)	
IF "NO" Why : I prefer to use my own tubewell =1, I prefer to use my own tubewell =2, I don't know how much money to ask for =2, I I do not believe that they reimburse me sufficiently =3, I do not trust them =4			
5.9 What is <u>the minimum amount you would like to get reimbursed per year for the watering loss you will have to face?</u> (Mention to the farmer that the amount is per year only)		Minimum amount Rs/year _____	

Getting closer to water- poverty nexus

- Data gathering, processing, analyzing...



- and getting to know how utilize the drivers for...