The importance of watershed resources to poverty alleviation in the Colombian Andes: an application of the Stages of Progress method

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Sources

- Johnson, Nancy, James García, Jorge E Rubiano, Marcela Quintero, Ruben Dario Estrada, Esther Mwangi, Alexandra Peralta, and Sara Granados, 2009, "Water and poverty in two Colombian watersheds," *Water Alternatives* 2(1): 34-52

- Peralta, Alexandra, James García, Adriana Moreno, Sara Granados, Luis Felipe Botero, Harvey Rodriquez, Jorge A. Rubiano, Nancy Johnson, Jorge E. Rubiano, Marcela Quintero, y Rubén Estrada, 2007, Dinámica y definición de pobreza en los Andes colombianos: enfoques participativos vs. enfoques objetivos, *Desarrollo y Sociedad*, 58: 209-243

Sustaining Inclusive Collective Action that Links across Economic and Ecological Scales (SCALES)

SCALES Research Questions

- What are the interests of the poor in watershed management?

- How does collective action work across scales?

- How can the poor participate effectively in multi-sectoral negotiation processes?

SCALES Research Questions

- What are the interests of the poor in watershed management? – Implemented SOP in 23 communities in 2005, selected for position in watershed, poverty, and water conflicts

- Why SOP?
  - No existing data
  - Wanted to explore all possible linkages

Atlantic Ocean

N

Barranquilla

Maracaibo

Caracas
Valencia
Barquisimeto

Panama
Panamá

Venezuela

San Cristobal

Medellín

PUERTO CAR

Coello River Watershed

Bogota
Fuquene Lagoon Watershed

Pacific ocean

Cali

Colombia

PASTO

Brasil

Quito

Ecuador

Guayaquil

Perú

Iquitos

LETICIA

290   145   0   290
Km

Coello River

■ 190,000 ha, 280 to 4700 masl

■ Population: 622,395 (425,770 in urban area)

■ Rainfall: <1000mm to >3970mm

■ Welfare index: "medium low" to "medium high"

Fuquene Lake

■ 187,000 ha, 2300-3300 masl

■ Population: 229,011

■ Rainfall: 700-1500 mm

■ Welfare index: "very low" to "high"

Stages below the poverty line, by order of importance

Description	Order	Frequency
Food	1	23
Education	2	20
Clothing	3	15
Housing	4	18
Small animals	5	18
Land	6	8
Services (water & electricity)	7	9
Appliances	8	10
Health	9	6
Crops	10	4
Other	11	2
Transportation	12	2
Savings/investment	13	2
Recreation	14	2

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- Half mentioned water, but it was only below poverty line in 9
- 4% of households could get out of poverty with access to water

Poverty Dynamics 1985-2005 (% of families)

	A (P,P) Chronic poverty	B (P,NP) Escaped poverty	C (NP,P) Became poor	D (NP,NP) Never poor	E New arrivals
Fuquene (n=13)	42	30	3	14	10
Coello (n=10)	11	59	3	24	3

P=Poor, NP-Not Poor

Significant decline in poverty in both watersheds, though poverty remains relatively high in Fuquene

Effect of not having cause on probability of being poor

Cause	Delta P (Poor2=1) without cause (i) - P(Poor2=1) with cause (i)
Steady employment (off-own farm)	0.3650
Agriculture (own farm)	0.3503
Help from the government	0.3041
Pension	0.2666
Education/training	0.2569
Help from family and friends	0.2343
Livestock	0.2310
Savings/investment	0.2182
Inheritance	0.1673
Fúquene	-0.2368
Newly established family	-0.2517
Illness/accident	-0.3706
Legal or family problems	-0.6243

Some examples of potential poverty-environment tradeoffs at watershed scale

Coello:

- Small scale farming – yes
- Large scale ranching– no

Fuquene

- Small scale farming – no
- Intensive dairy and mining – yes

SOP	Unsatisfied basic needs (NBI)	Living conditions index (ICV)
1. Food		
2. Education	X	XX
3. Clothing		
4. Housing	XX	XX
5. Small livestock		
6. Land		
7. Services		XX
8. Appliances		
9. Health		
10. Crops		
11. Other	XX	X
12. Vehicles		
13. Savings and investment		
14. Recreation		

Comparison of SOP and "Objective" results from Fuquene

Vereda	Non-poor in 2005 (%) - SOP	Ranking based on average of 11 NRM, social and institutional indicators (4 highest) – local territorial planning exercise
Ladera Grande	12.6	3
Rasgata Bajo	50.9	3
Chipaquin	53.5	1
Palacio	57.0	4
Peñas de Cajón	78.2	4
Gacha	55.1	3
La Isla	56.1	2
La Puntica	48.0	3
Centro y Guata	2.2	2
Chinzaque	74.0	4
Nemogá	81.5	1
Chápala	13.5	4
Apartadero	70.0	2

Some conclusions

- Easy to implement
- Useful for exploring local conceptions and for identifying linkages
- Useful for involving the community
- Highlights shortcomings of indicators used in objective measures
- Results may not be comparable across villages