

Using the Stages of Progress Methodology in Assessing Watershed Resources



Up until the 1990s, watershed management has been viewed as an engineering problem. Technical solutions for controlling erosion, reducing runoff and flooding and enhancing groundwater recharge were often designed and implemented with little regard for their impacts on livelihoods of people, farm profitability, and social equity (Pretty and Shah 1999, Johnson and Knox 2002). As a result, many programs were unsuccessful, and farmers often abandoned the technologies and practices as soon as they stopped being forced or paid to adopt

them. Reviews of watershed experiences in the 1970s and 1980s identified the lack of consideration of farmer objectives and farmer knowledge as an important reason for these failures. In contrast, where user participation was encouraged, performance of the watershed projects improved (Kerr 2002).

From the lessons learned, many participatory watershed development interventions were designed and implemented with the explicit

involvement of users. These interventions sought to address users' livelihood concerns, as well as environmental conservation issues. While few rigorous evaluations of these interventions exist, case studies suggest that their performance has been better—at least in terms of governance and technology adoption (Tyler 2006, Hinchcliffe *et al.* 1999 Perez and Tschinkel 2003, Grewel *et al.* 2001). Focusing watershed interventions more directly on the needs of local communities is likely to bring about outcomes that address poverty. However, where local institutions and power structures are inequitable, the problem of the elite capturing benefits will still exist, with beneficiaries being local elites rather than outsiders (German *et al.* 2007, Siagian *et al.* 2006).

More recently, watershed management programs have sought to embed local participatory planning processes within broader social and political processes (FAO 2006,). The focus has shifted from working directly with local groups on land and water issues to supporting multi-stakeholder negotiation platforms that address a range of issues, including but not limited to natural resource management. Compared with past efforts, more emphasis is placed on conflict resolution and linking social, institutional and hydrological scales. Where earlier projects promoted the participation of stakeholders—and often focused specifically on local communities—more recent projects seek to foster collaboration between different types of stakeholders and stakeholder groups (FAO 2006, Hermans *et al.* 2006). Special attention is placed on strengthening and supporting the poor in their ability to participate in multi-stakeholder negotiations with diverse and powerful stakeholders.

While natural resources continue to be important livelihood assets for the poor—even the landless poor (Beck and Nesmith 2001; Jodha 1986, 1995; Dei 1992; Cavendish 2000; Fisher 2004)—the

livelihood strategies of rural households are increasingly diverse. Even in rural areas, households do not depend exclusively on agriculture or on extraction of natural resources. Off-farm income from wage labor or selling of products and services contributes to the welfare of the rural poor (Barrett and Reardon 2000, Bryceson and Jamal 1997, Reardon 1997). While motivation for diversifying livelihood strategies may be either positive (pull factors) or negative (push factors), a growing number of studies suggest that such strategies do have beneficial impacts on rural livelihoods (Shivakoti and Thapa 2005, Block and Webb 2001, Lanjouw *et al.* 2001). Therefore, the impacts of environmental, industrial, transportation and other policies that often come under the ambit of modern watershed management, may have significant indirect implications for the welfare of the poor.

The relationships between poverty and watershed management in two watersheds in the Colombian Andes were investigated. Poverty is defined and measured using the Stages of Progress (SOP) methodology that looks at changes in poverty levels over time, and the reasons behind the changes at the household level (Krishna 2004, 2006b; Krishna *et al.* 2006; Krishna *et al.* 2004a,b). These reasons were examined in the context of economic and environmental dynamics to identify where and how watershed management interacts with the livelihood strategies of the poor. Poverty results were compared with other types of poverty measures, both in terms of how poverty is defined and who is defined as poor under different poverty measurement methods. The implications of the findings for policy makers and planners were prepared (for information on study sites and on discussion of findings, please refer to <http://www.chronicpoverty.org/publications/details/examining-the-importance-of-watershed-resources-in-the-colombian-andes>). The focus of this article is on the advantages and disadvantages of the SOP methodology.

The “Stages of Progress” methodology

To identify the poor and to understand the role of water in their livelihoods, the SOP methodology was used (www.sanford.duke.edu/krishna/methods.htm). It was developed to assess both the dynamics of poverty and the causes behind them. While national-level poverty rates are often slow to change, poverty is not a static situation. It changes as a result of seasonality, climate variability, household-level shocks (such as illness, death or divorce), life cycle changes and public policies. In addition, the number of poor people is itself constantly changing as individuals and households either escape from poverty or descend into it. Looking at the same households over time provides

The Stages of Progress (SOP) methodology is a participatory methodology that relies on the community definition of poverty at a household scale. The poverty level of each household in the community is assessed, and explanations are sought for changes in poverty status over time. The method takes its name from the stages or steps that a household passes through as it makes its way from poverty to prosperity.

a better understanding of the conditions that keep people in poverty and those that move them out. It also helps with identification of the general patterns and assists in policy targeting to maximize protection and support for the most vulnerable, without pulling back those who are escaping (for example, Carter and Barrett 2006).



To define the stages, a representative group of community members must first come to an agreement on the definition of poverty, based on a shared conception of the 'poorest family in the community.' Once this is done, the group successively answers the question "What would this family do with additional resources?" until they reach the point at which the household would be considered prosperous. Because they are defined locally and with reference to a particular poor family, the stages vary by community and reflect the specific conditions and values of the community.

Once the stages are identified, the group then assigns each family in the community—based on a census, which must be obtained or constructed—to the stage where they currently are and the stage where they were at some point in the past (usually 10, 20 or 25 years ago). After they have been assigned to stages¹ tabulation is done to categorize them as follows:

- A – Poor in the past, poor now
- B – Poor in the past, not poor now
- C – Not poor in the past, poor now
- D – Not poor in the past, not poor now

For a randomly selected sub-sample of families, the community then identifies the reasons behind changes in poverty status. The final step in the methodology is to conduct follow-up interviews with a sample of families to confirm the results of the community analysis and to gather more information on specific issues. In the case of this study, interviews included questions on water use, conflicts and management at the household and community scales.

The SOP was selected for this study for two

main reasons. First, a participatory method that allowed communities to define poverty and its determinants was preferred, so that all possible linkages between watersheds and livelihoods could be explored, without being restricted to a pre-defined set of potential linkages. Second, because poverty analysis was implemented as part of a watershed intervention aimed at strengthening community capacity to co-manage resources, a method that would build community capacity was preferred. In SOP, the community determines the results through a transparent process. The main results in terms of poverty trends and key reasons behind them are obtained from the focus groups; the groups have the opportunity to react to the trends and reasons and to offer their own analysis and interpretations.

Though these advantages justified the use of SOP for this analysis, the method has some disadvantages—for example, it has a strong focus on the material aspects of poverty and it is unable to address broader structural determinants of poverty (Harris in Addison, *et al.* 2008); a lack of direct comparability across sites (Peralta *et al.*, 2007; Krishna, 2007), and methodological issues about quality of recall data and the handling of time periods (Krishna, 2007) which limited our ability to look at some aspects of poverty.

¹ It is important to note that the categorisation is done by the stage and not by the poverty category, which reduces the extent to which the groups are directly classifying individual households as poor or non-poor.

Conclusion

The SOP methodology was useful because it provided a cost-effective way of getting what is essentially a panel data set, incorporating qualitative and quantitative data. It allowed the researchers to explore a complex relationship – poverty and water – without having to impose preconceived relationships between variables. It also involved the community in a way that promotes the shared reflection on the results. As such, it is a useful approach to use at the start of an intervention, which was the way it was used in this case. An evaluation of the intervention—which was designed to build the capacity of communities to use legal and policy tools available to them to hold public, and, in some cases, mixed (public-private) institutions, accountable for fulfilling their obligations with regard to watershed management—documented impacts on a broad range of areas, including the ability of communities to interact and negotiate with more powerful stakeholders (Candelo *et al.*, 2008).



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Key Reference

Johnson, N. 2009. *Examining the importance of watershed resources in the Colombian Andes*. Retrieved from: http://www.chronicpoverty.org/uploads/publication_files/johnson_colombia_conservation.pdf

Tags: PN20: Sustaining Inclusive Collective Action

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