

Making a difference

Pro-poor livelihoods impact – the contribution from research



‘Did your research achieve impact?’ ‘Did it benefit the livelihoods of poor people?’ These are questions that donors of natural resources research, who are committed to the Millennium Development Goals (MDGs), are entitled to ask especially when they have provided research funding over a number of years. Similarly, policy-makers may ask – ‘Can your research findings make a difference?’ ‘Can adopting your recommendations really improve the livelihoods of large numbers of poor people?’ So how does NRSP measure up to these questions? Here are some of the answers.

Unreasonable questions?

Researchers may feel that such questions are a bit unreasonable. They may have evidence from their research of favourable livelihood outcomes – changes in poor people’s behaviour that should help them to achieve a better life over the longer term. But to be expected to have evidence of impact – evidence that livelihoods have improved, that people are less poor, that they accumulated some assets – can seem too demanding, because such changes often just need time to come into place. Also such changes are affected by more factors than the potential for beneficial outcomes from a particular piece of research.

Measuring up

In many cases, the projects in NRSP’s portfolio are not stand-alone projects. Rather, they are one in a

sequence of projects planned incrementally to achieve certain objectives. Some topics have been worked on for at least seven years and in some instances for the full 11-year life of NRSP. In these circumstances, the ‘impact’ questions are more justified. Indeed having evidence of livelihood impact from research is an asset that can add weight to uptake promotion work with those planning and implementing development projects and programmes.

Three examples are featured here. These are not only interesting of themselves, they also show three different ways in which research projects can assemble evidence of livelihoods impact.

Harvesting the rain

A 13-year programme of research on rainwater harvesting (RWH) – where farmers divert gully flows, road drainage and sheet flows into their fields to supplement direct rainfall – was led by the Soil and Water Management Group (SWMRG) of the Sokoine University of Agriculture in Tanzania. This contributed to the government’s recognition in national water policy (2002) of the potential of RWH in arid and semi-arid areas and the commitment to promote it in rural areas. Various aspects of this research have featured in previous editions of NRSP Research Highlights.

Translating this commitment into meaningful public investment in RWH, targeting resource-poor farmers, requires economic justification in terms of its potential to impact on poverty. So in 2003-04, SWMRG

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undertook a detailed economic study to compare the expenditure of households who were practising RWH with other comparable households who did not, and to assess the performance of crop and livestock enterprises with and without RWH. It was conducted in two contrasting Districts – Same in Western Pare Lowlands where farmers have good access to the Nairobi to Dar es Salaam tarmac road and hence to markets and other livelihood opportunities; and Maswa, a remote area south of Lake Victoria. Some 300 households were involved in the survey, all of whom were under or only slightly above the poverty line – defined as living on less than US\$1/person/day.

Increased household expenditures

The main findings are summarised in Table 1. In Maswa, the majority of households practising RWH had significantly higher expenditure rates than those who did not. For the upper (richest) quartile this was reversed. This could be attributed to less dependence of this group on crop production and a greater proportion of income coming from off-farm activities and livestock. In Same, the findings were the opposite of those for Maswa. It was found that practising RWH did not benefit poorer people (those in the three lower expenditure quartiles) but did significantly benefit the richest people. This finding for Same was supported by other studies of people's access to water runoff in RWH systems. In Same, it was found that richer people have more access to runoff because of the location of their lands relative to the water source in the RWH system combined with their power in the local society.

Table 1: Mean household expenditure (US\$/person/year)

Household expenditure quartile	Maswa		Same	
	With RWH	Without RWH	With RWH	Without RWH
Poorest	60	49	108	117
Poor	105	94	188	194
Medium	166	154	269	296
Richest	323	397	579	437

A study of crop yields generally supported the household expenditure findings. It was found that RWH gave impressive returns to land and labour even when seasonal rains were below average. A further dimension to these findings was that female-headed households were more dependent on crop production and had less diverse livelihood activities

than male-headed households (Table 2). Moreover, richer households (based on the expenditure data) were male-headed. Thus, while the study had produced evidence of the potential of RWH to reduce poverty and livelihood vulnerability in seasons with poor rainfall, it also showed that livelihood development requires a broad approach that encourages enterprises in and beyond agriculture. The development of RWH definitely can and should be an important part of this, but other opportunities are needed to support poor people's livelihood development.

A gratifying aspect for NRSP regarding the inequity of the findings for Same was that one of the last RWH research projects undertaken with NRSP funding specifically addressed the issue of improving equity in resource access in RWH systems.

Table 2: Livelihood options by gender of household head (percent)

Livelihood options	Maswa		Same	
	Male	Female	Male	Female
Crop production	70	90	48	63
Livestock rearing	17	5	24	37
Employment	3	5	3	-
Petty business	7	-	9	-
Artisan works	3	-	12	-

Evidence from the peri-urban interface

One location for NRSP's peri-urban interface (PUI) research was Hubli-Dharwad, a twin city in Karnataka State, India. The research focused initially on improving knowledge and understanding of the PUI – how urbanisation affected rural resources, how nearness to urban development affected rural people's livelihoods, the gains and losses, especially for the poor. In 2001 the emphasis shifted to implementing new livelihood strategies, with priority given to those that were relevant to poor people. Strategies for income generation and other livelihood activities were based on the model of *sangha* (poor people's Self-Help Groups [SHGs]), which are divided by gender (women-only or men-only) and designed to act as group savings/credit mechanisms to provide micro-finance and, later, access to formal banking, to support livelihood activities. Six peri-urban villages participated.



Post-project impact study

In early 2005, a post-project impact study was conducted by consultants who were not involved in the original research. With just one month of fieldwork, a total of 80 households were surveyed in the six target villages comprising 40 poor households (equal male and female-headed, who all participated in SHGs) and a similar sample of 40 households who were not poor and did not participate in SHGs.

Focus group discussions and key informant interviews also were used to make comparisons between target and non-target villages. Livelihood impact was assessed in terms of changes in incomes, reduced vulnerability (such as improvements in food security, diversity of income sources, reduced risks), women's well-being and status, and natural resources (in terms of the sustainability of the NR-based components of villagers' livelihood strategies).

The study found strong evidence of poverty reduction. From 2001 to 2005, average household incomes increased by 41 percent, and those of poor households rose by 52 percent. This represented a significant increase in real incomes for the villagers in spite of consumer price inflation in India of 3-4 percent per year over the same period. Women realised a 58 percent increase in their incomes compared with 31 percent for men over the same time period.

The proportion of households considering themselves to be poor or poorest fell from about 65 to 40 percent. Data on livestock ownership and other assets also indicated that villagers were now better off. Food insecurity also fell. It affected only 49 percent of surveyed households in 2005 compared with 69 percent in 2001. Also, whereas nearly all poor households (95 percent) were at risk of food insecurity in 2001, by 2005 this had fallen to 70 percent.

But the basis for these livelihood improvements was not quite what the research had aimed to do. The aim was to reduce the vulnerability of villagers by developing their capacities to move into livelihood activities which, though still based on land and other natural resources, were better managed and targeted to the urban market. But the survey found that the proportion of household income coming from land-based activities actually fell from 61 to 57 percent while the proportion from non-land-based activities correspondingly rose from 39 to 43 percent.

A second research aim was to develop alternative livelihood activities for the urban market, especially among landless villagers – this was achieved. The dependence of landless people on non-land-based sources of income in the village had decreased, and their income from non-land-based sources in the city had increased (Table 3).

Table 3: Income sources of poor households (percent)

Source of income	2001	Early 2005
Land-based – own land	29	30
Land-based – common land	2	5
Non-land-based, village	38	26
Non-land-based, city	31	39

Importantly, the way in which the landless gained income from the city had also improved. Poor villagers, unlike their 'non-poor' counterparts, derived some of their income from working in the city as labourers. By 2005, the proportion of the total income of poor households that was earned by city-labouring had decreased from 37 to 32 per cent. It was replaced by income from other city-related sources. This indicated a reduction in the vulnerability of poor households as they became less dependent on unreliable casual work and developed alternative livelihood activities.

So people in the PUI, including the poor, with the help of access to micro-finance and other services, such as training, had gained from their proximity to the urban environment.

Poor households had built financial capital and there was strong evidence of the growth of savings by individuals and SHGs, improved access to credit, and displacement of moneylenders. And there were other livelihood-related changes. Human capital had improved linked with training in business and financial management and market appraisal for pursuing urban market opportunities. Social cohesion in participating villages was better and exceeded that found in non-participating villages. Linked with this, attitudes towards poorer members of communities had changed – some SHG members were elected to the *gram panchayat* (a local government body) indicating their acceptance as community leaders even though they came from poor households.

Improved natural capital

And what about natural capital? Did it improve or succumb to urban pressures? The views from target communities was that natural resources management had definitely improved for households and the community, through such things as water conservation measures and irrigation infrastructure, introduction of new crop varieties, and improved livestock. Higher returns to land made small-scale farmers less inclined to sell their land or lease it out for urban-related uses. This contrasted sharply with views in non-target villages where problems of top-soil loss, lack of satisfactory land and water management, and lack of profitability in agriculture were reported.

So there certainly was evidence of favourable livelihood and environmental impacts and also indications that these could endure after the research ended. And these changes had reached and included poor men and women. They had benefited and had developed assets that could help them to continue to do so.

Pro-poor livelihoods progress in eastern India

Since the first NRSP Research Highlights (1998-1999) there has been regular reports on the contribution of NRSP's research to the development of aquaculture as a livelihood enterprise for poor, marginalised farmers in the upland plateau region of eastern India. Examples are: using participatory research with poor farmers to develop a fish culture system for seasonal (rather than perennial) water bodies; policy change recommendations that can make it easier and more feasible for poor people to engage in aquaculture; and improved services that enable farmers to access the various inputs and support that they need at one service point (a One-Stop Aqua Shop). Some of the favourable changes in poor people's lives, linked with their adoption of aquaculture, have also been reported.

Assessing impact

But what about impact? Have changes occurred on a wider scale for poor people in the three states that administer the upland eastern plateau region (Jharkhand, Orissa and West Bengal) that can be linked with at least some of the outcomes of the seven years of NRSP's aquaculture research? It can be argued strongly that the answer is 'Yes, NRSP's research has had impact'. Three examples are shown in the box. They illustrate three levels of livelihoods impact – a change in a livelihood attribute; a project level assessment for one geographic area; and a village level example focused on one group of poor women.

There is a qualifier regarding this impact – it has arisen from the cumulative favourable outcomes of the mix of aquaculture research and use of the products of this research by state governments and development projects working in the eastern plateau region since the early 1990s, combined with other supportive government and NGO initiatives. So there is not a clear cut cause and effect relationship between the research and the impact. Rather, synergies between the various efforts are producing evidence of livelihood benefits that are beginning to accrue to poor farmers who engage in aquaculture.

The situation in the 1990s

Some of the poorest people in India live in the upland eastern plateau region. The majority are tribal people; others belong to scheduled castes. Both groups are poor, socially disadvantaged and marginalised. They farm small areas of upland which, at best, provide household food security for three months of the year. Because of this, many households rely on poorly paid local labouring for better-endowed farmers. Such work is highly seasonal and results in high and socially disruptive rates of migration. Men or whole families migrate in pursuit of other labouring jobs but earn, at best, only a few cents daily. Indebtedness to local money-lenders is a common burden, but an unavoidable part of life.

Evidence of progress – how it is now

The general scene: In 2000, an impact assessment of the Eastern India Rainfed Farming Project, which promoted aquaculture, found that the migration rate had substantially reduced – from 40-50 percent of all households in the early 1990s to 15-20 percent. In some places migration no longer occurred.

The project location finding: In 2005, a review mission of the Western Orissa Rural Livelihoods Project estimated that fish rearing within the project area was contributing to the livelihoods of about 12,000 people. Of all the activities that the project has promoted, villagers reported that aquaculture was the most profitable. A ledger entry of 2005, made available to the review mission by the Mallabhum Gramin Bank, supported the villagers' view – repayments of loans for livestock, agriculture, and aquaculture respectively were 58, 78, and 100 percent.

And in the village: In year 2000, some women weavers of Kandhkelgaon village, Orissa formed a Self-Help Group, *Jeeban Jyoti*. They knew that a large village pond (tank) could be leased for fish culture. But the lease was only for one year – too short to make it a worthwhile business venture. Then in 2003, *Jeeban Jyoti* found that the Orissa government had increased tank leases to five years. This made all the difference and they decided to try for the lease. There were difficulties, but with determination they got the lease and started rearing and selling fish. Two years later the group was running a successful business, their bank balance and cash flow were healthy. In the first year of aquaculture *Jeeban Jyoti* members have made individual savings of Rs 5,000 (US\$110) which they have invested to provide income and life insurance.



Learning from achieving impact

While the three 'impact stories' illustrate livelihood benefits for poor people that can be linked with pro-poor NRM research, they also indicate some of the complexity and demands for achieving such changes. In the semi-arid lands of Tanzania, within poor communities, equity in access to water resources and opportunities to diversify livelihoods were issues that needed attention to assist broader and more secure progress in poverty reduction. In the PUI of Hubli-Dharwad, India, support services tailored to people's proximity to an urban environment, such as training in market appraisal, were important inputs for poor people's livelihood development. And with remote communities in eastern India, while the link between research and development projects helped wider impact, the research and promotional work that led to aquaculture policy changes were vital for enabling poor people to take their own livelihood initiatives. Having evidence (for donors and policy-makers) of how poverty reduction requires multifaceted work, that entails coordinated inputs from different development sectors and disciplines, with a longer term planning and funding timeframe, is equally as valuable as the evidence of impact.

R8116 Improving management of common pool resources in rainwater harvesting systems

PD138 NRSP Impact assessment case studies – Peri-urban interface suite 1

R8334 Promoting the pro-poor policy lessons of R8100 with key policy actors in India