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From MPA to NPA: participatory assessment of water & sanitation projects in rural Nepal

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Introduction

Nepal Water for Health (NEWAH) is a non-governmental organisation working in the water and sanitation sector in rural Nepal. Over 10 years of experience implementing water and sanitation projects in rural Nepal confirmed to NEWAH that the richest so-called higher caste men dominated all aspects of these projects and that women, the poor, and socially excluded groups such as *Dalits* were not represented in key decision-making processes, and also unable to gain equal access to safe drinking water, all of which made projects unsustainable.

To address gender equity and poverty issues, in 1999, NEWAH hired an external gender consultant, set up a Gender and Poverty (GAP) unit, and piloted a GAP approach to implementing water and sanitation projects. In order to evaluate these GAP pilot projects, NEWAH chose a new participatory evaluation tool called the Methodology for Participatory Assessment (MPA) (Postma, van Wijk and Otte, 2003).¹

The experience however revealed that the MPA needed to be simplified, streamlined and adapted for the specific condi-

tions of Nepal. This article describes the difficulties and advantages to NEWAH of creating the NEWAH Participatory Assessment (NPA), for use in rural water and sanitation projects.

NEWAH's gender and poverty approach

Starting in 1999, NEWAH developed a GAP approach, funded by DFID UK and integrated throughout NEWAH's programme. This approach recognises that, without agency intervention, poor women and men are automatically excluded, and thus aims to ensure that benefits obtained through improved water supply and hygiene practice are sustainable and reach to women and the poorest (see Box 1).

The GAP Unit, comprising of six operational teams of both technical and social staff (30 men and six women) at its Kathmandu Head Quarters and at each of its regional offices in the five development regions of Nepal, was trained to apply a GAP approach in communities, including gender awareness training to partner organisations and communities, and to apply PRA methods in a gender-sensitive manner. From 1999 to 2002, the GAP approach was piloted in five projects in the five development regions of Nepal.

Evaluating the GAP approach with the MPA

To evaluate the impact in five pilot GAP project communities,

¹ See Wijk (2002) for a comprehensive description of the MPA methodology; Dayal *et al.*, (1999) for the original MetGuide; Mukherjee and Wijk (2003) for the revised methodology; and, for applications, Wijk *et al.* (2002) and Wijk and Postma (2003).

Box 1: NEWAH strategies to implement the GAP approach

- Gender awareness training to partner organisations and community;
- Building the confidence of women and poor men to participate in projects;
- Providing additional support to poorest households, including constructing free latrines, and instituting a graded rate system of operation and maintenance (O&M) payments according to ability to pay;
- Consulting women also in design and planning of water supply systems;
- Giving health and sanitation education to men as well as women;
- Providing health and sanitation education to 'in-school' and 'out-of-school' boys and girls;
- Encouraging gender balanced community project management committees;
- Implementing 50% payment for unskilled labour contribution by poorest households;
- Encouraging women to train along with men for paid project jobs; and
- Introducing kitchen garden technical training and vegetable seed subsidies.

NEWAH chose not to use the less effective questionnaire survey method that reduces water users to passive respondents, and instead opted for the MPA, which essentially uses a set of sector-specific indicators to assess sustainability, demand, gender and poverty-sensitivity in water and sanitation projects. NEWAH was interested in the participatory MPA methodology in order to make future projects more demand-responsive, empowering, participatory and sustainable. Specifically it wanted to enable the GAP team and rural communities to assess and improve the sustainability of services by:

- investigating how equitably poor households and women participate in, and benefit from projects; and
- making visible the key factors for attaining success in community water-sanitation projects, while simultaneously allowing quantitative aggregation of village-level participatory monitoring data for use at programme and policy levels.

After a two-week training in the MPA methodology in early 2002, 40 members of NEWAH's GAP teams from the regions and head quarters field-tested the MPA in Rayale and Bihabar, two rural communities in Nepal's Central Region. This was followed by an MPA database training, in which the GAP teams entered data into a specially created computer database, while the external consultant analysed the data and presented the key findings of the two villages.

Developing the NEWAH Participatory Assessment (NPA)

After the MPA training, the field-testing and the MPA data-

Box 2: Components of the NPA

- **Community meetings:** to assess general information about the village, including access to social and economic infrastructure, information on past projects, major caste groups, religions and languages spoken, number of households (by socio-economic group, caste and ethnicity) not served by, and requiring access to, water supply and sanitation systems, along with reasons for current lack of access.
- **Well-being ranking and social mapping:** to identify households by socio-economic, caste and ethnic groups, and to represent this information on village social maps.
- **Water system mapping:** to mark all existing water points and sources (traditional and improved), and components of water systems (if any).
- **Water point surveys:** to assess status of existing water points, including number of users (by caste and socio-economic group), adequacy, reliability, timeliness of repair, water quality, leakage, environmental sanitation (around the water point), effectiveness of maintenance training, default rates in user monthly charges (and reasons for non-payment), and social barriers to access; along with specific reasons, in each case.
- **Household survey:** to assess issues that are difficult, time-consuming or non-verifiable in a focus group discussion, e.g., water collected per household for different uses, hygiene in water and food storage, and individual household latrine surveys.
- **Focus group discussions by gender and class (and also with school children and out-of-school children):** to assess differences in current health, hygiene and sanitation issues and practices, performance of past project (e.g., participation in decision making, voice and choice in technology design, location, contribution to initial construction costs, financing for O&M etc.), gender division of labour within households, and participation by poorest men and women in community decision-making.
- **Case studies:** to pick up positive and negative impacts experiences with past projects and other community initiatives.

base training, the GAP teams felt, while that the assessment reflected the situation in each project on the whole and could provide valuable community-level information to plan corrective action, it was not very cost effective for NEWAH's staff and men and women from the community. Specifically, the staff found that:

- the process was too time-consuming for them and for communities, since each assessment requires around five to six days in each community;
- the amount of time required of the community to participate in the MPA unfairly penalises the poor since they have to give up daily labour wages or working in their own fields;
- the assessments create high expectations; and
- strong facilitation, computer and analysis skills are needed to conduct the MPA properly.

Instead of looking for another methodology, and then

Box 3: Ordinal scoring systems

Standard PRA tools like focus group discussions are useful in generating information on people's perceptions for a range of qualitative issues. However, aggregating these across large numbers of groups, villages or water points is difficult. Scoring systems using ordinal numbers are a useful way of aggregating this information. Here, community men and women or assessment team members rank the possible outcomes to a certain issue (e.g., women's participation in village meetings) from the worst case (e.g., women do not even attend meetings) to the best case (e.g., women attend and discuss all issues as equals with men) and give each of these cases a score. This ordering of cases from worst to best (e.g., from 0, 25, 50, 75, 100 or 1, 2, 3, 4, 5) is called an ordinal scoring system. Each issue (such as women's participation in village meetings) will generate a unique score for each village, which makes it easy to represent even information from 1,000 villages on a single spreadsheet.

There are more advantages. By linking ordinal scores to 'descriptive categories' – what these scores represent (e.g., 0 = women do not even attend meetings; 25 = women attend but do not speak, etc.), it is clear to everyone what the score stands for. Since the same categories are used in all sampled villages, the responses can be compared. Further, because they represent a concrete situation in the village (e.g., 'women attend but do not speak in meetings'), the scores for any particular issue in Village X in August 2004 will not change over time or in the eyes of another group of respondents from the same village. Ordinal scoring with descriptive categories is thus a 'reliable' way of generating statistical data within the community. Results from some ordinal scoring systems (e.g. those without descriptive categories) tend to be different when repeated over time, or with a different group of respondents. For more information on ordinal scoring and its applications, see James (2003). 'Quantified Participatory Assessment' WHiRL working paper, Water Households and Rural Livelihoods (WHiRL) project. See also www.nri.org/whirl

undergoing training to use it, field test it and then carry out assessments, NEWAH decided to modify the MPA to suit their purposes. GAP teams and external consultants spent nearly six months developing and field-testing the NEWAH Participatory Assessment (NPA), which was finalised by end 2002². It uses a combination of PRA techniques, household questionnaires and case studies to collect community-level information (see Box 2), and uses a descriptive ordinal scoring system (like that of the MPA) to translate qualitative information into numbers (see Box 3).

Like the QPA in India, the NPA is a flexible methodology where assessment issues, indicators, and methods can be adapted to suit local conditions and requirements of different projects, although it has been developed for use in NEWAH to

² This was with the assistance of a consulting economist who had already revised and field-tested a version of the MPA in India called the Quantified Participatory Assessment (QPA) (James, 2003).

Box 4: Basic features of the NPA

- **Flexibility:** to suit particular situations, including socio-economic and institutional issues of gender, poverty, caste, ethnicity and participation, and for use at different points of the project cycle, including planning, monitoring and assessment.
- **Standard PRA tools:** such as transect walks, focus group discussions, pocket voting, well being ranking and social mapping.
- **Descriptive ordinal scoring** which is a reliable method to translate qualitative community responses into numbers³.
- **Collects quantitative and qualitative information** to explain these scores, and to probe issues in further detail (e.g., in case studies).
- **Information shared with the community** and also filed in community folders for future use by project implementing field teams.
- **Computerised database:** to store information for analysis, reporting and presentations⁴.
- **Adapted to the Nepal context:** The field manual is bilingual (English and Nepali) and the tools have been modified (and field-tested) to capture important contextual differences between gravity flow systems (in the hills) and the tube well systems (in the *terai*).
- **Addresses gender, caste, ethnicity and poverty issues relating to water and sanitation:** especially given important and often related differences between caste and ethnic groups.
- **Greater attention to health, hygiene and sanitation issues** through tools designed to gather information by gender, caste, ethnicity and socio-economic groupings.
- **More qualitative information:** through individual case studies, to complement the quantitative information.
- **Fewer participatory tools:** time-consuming participatory tools are replaced by focus group discussions wherever possible.
- **Peer-group scoring:** wherever self-scoring was time consuming and confusing to respondents; each assessment team scores the existing situation (noting down with reasons for their scores), and defends these scores to other members of the assessment teams.
- **Benchmarking of ordinal scores** at the mid-range score of 50, in order to facilitate assessment, with scores of 50 and above being 'satisfactory', and scores below 50 indicating problems.
- **Case Studies:** based on taped semi-structured interviews with men, women, boys and girls from different socio-economic groups, to enable personal perceptions and stories to be revealed in relation to NEWAH's GAP approach, implementation and impact.

assess gender, poverty, participation and sustainability aspects of rural water and sanitation projects (see Box 4). Although several of these features are similar to the MPA, the NPA is different from the MPA in several ways (NEWAH, 2002).

³ 'Reliability' is the ability to elicit the same response in repeated focus group discussions. Results from some ordinal scoring systems (e.g., those without descriptive categories) tend to be different when repeated over time, or with a different group of respondents.

⁴ GAP teams underwent training in using an MS ACCESS database, and developed a customised database for the NPA, taking care to ensure that the computer data entry sheets were similar to the paper assessment sheets, in order to minimise data entry errors.

Table 1: Components of the GAP approach adopted in the proposed CBWSS project in Nepal

- Fifty percent paid unskilled labour contributions to the poorest households;
- 50/50 gender balance and proportional representation of castes and ethnic groups in Water User Committees;
- Trained women and men in paid technical jobs;
- Inclusion of men and 'out-of-school' children in health, hygiene and sanitation education;
- Subsidised sanitation units for the poorest households who are below the poverty line; and
- Subsidies to poor and remote communities.

Using the NPA

An opportunity to use the methodology soon after its development was a five-village socio-economic survey for the Project Preparation Technical Assistance (PPTA) by ARD International, USA, for the Community-Based Water Supply and Sanitation (CBWSS) Project in Nepal, funded by the Asian Development Bank (ADB). The NPA findings (NEWAH, 2003) were well appreciated by both ARD and ADB, with many of the strategies of the GAP approach being adopted in the design of the proposed project (see Table 1).

GAP teams also evaluated 15 projects (one GAP pilot project and two non-GAP projects in each of the five regions of Nepal) from July to September 2003 to assess the impacts of a GAP approach (James et al., 2003). This assessment revealed that GAP villages allowed different socio-economic groups more voice and choice in technical and design issues of water supply, and in management. Two particular areas of better implementation results are:

Greater voice and choice in project management

Since all socio-economic groups had a better voice and choice in electing or selecting their Project Management Committee in GAP projects, the water systems in these villages perform better, and there is more equal division of unpaid and paid labour between men and women from all socio-economic groups.

Significant empowerment of women

Women in GAP villages are more confident, in responsible positions in the project management committees, and participate more actively in community meetings, suggesting that there may be relatively fewer social barriers to women participating in future community project meetings, if gender-sensitive processes are applied by projects that encourage and enable them to participate.

Challenges and potentials

The real worth of the NPA to NEWAH is its ability to capture effectively the difficult-to-measure benefits of a gender and poverty approach and to identify corrective measures necessary to make the GAP approach even more effective in achieving sustainability of poverty and gender-sensitive rural water and sanitation projects. The NPA-based evaluation of NEWAH's GAP approach had a number of lessons to guide future GAP interventions, including further development of the NPA⁵. Challenges here include the use of the NPA for continuous monitoring (giving annual snapshot views to complement baseline and end line evaluations) and integrating its database of qualitative information with MIS and GIS databases.

Given the problems that invariably accompany the creation of any new methodology, the NPA has been relatively expensive to create. But it has already yielded rich dividends by helping to make the GAP approach more effective, and promises more in future. Additionally, NEWAH can also now market their newly developed expertise within the water and sanitation sector.

To other NGOs struggling to find a way to address effectively the many 'soft' issues that make projects sustainable, and community men and women empowered and engendered, the lesson from NEWAH's experience with the NPA can be summed up in just three words: 'It is possible'. With dedication and hard work, they have taken a useful methodology, improved it and made it more suitable for their own purposes.

⁵ Based on the evaluation of NEWAH's GAP and non-GAP projects (James, Moffatt & Khadka, 2003).

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