The project had originated when area representatives appealed to the Government of Bangladesh for the flood protection and the representatives had been consulted at the feasibility stage of the project, as is common in these kinds of projects. However, the actual landowners near the proposed embankment had not been consulted at all. Neither had they been involved in choosing the already decided alignment and they were violently opposed to it. Threats were made which jeopardised the project.

The introduction of a participatory approach and PRA tools changed the atmosphere completely. Public meetings were called in several locations along the river to discuss the project and to do a detailed, participatory problem census about why the people opposed the alignment and why they did not want to sell their land. In the same meetings, a plan was made on how to address each of the problems. While almost nobody was opposed to having an embankment, the biggest problem was where the embankment would be built: its exact alignment. To solve this problem, something never tried in Bangladesh before was introduced, asking the people themselves to choose the new alignment. As the problem census had revealed, the original alignment was opposed because it went through prime cropland. Alternative, general routes were also publicly considered. The social team then facilitated negotiations held in public in the fields,

By JANE THOMAS

If land acquisition is a necessary evil in some development, a project in Bangladesh has found ways to reduce the losses usually associated with large infrastructure construction. Through a participatory process, the project has been able to address many of the usual tough problems.

The Dampara Water Management Project (DWMP) was implemented in 1998 in northern Bangladesh for the Bangladesh Water Development Board (BWDB) and the Canadian International Development Agency (CIDA) by SNC Lavalin International, Canada’s largest engineering company. The task was to provide flood control to a 15,000ha area which experiences flash flooding several times annually, repeatedly destroying crops, houses, and other infrastructure of the 174,000 residents. The main activity was the construction of a 30km embankment along the Kangsha River.

Normally an engineer would be hired to lead such a project, but this had been conceived as not just another construction project. CIDA and the BWDB wanted to experiment: if the local people were involved from the beginning, would it make a difference to a big problem in Bangladesh, i.e. the long term sustainability of the embankment? To emphasise this social approach, a social anthropologist specialising in participation was hired as team leader and a social team of eight people went to work in communities along the river.

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Participation, land acquisition, power analysis

In only four months, the process was completed, with a new alignment which met the project’s only selection criteria: the new alignment had to be a safe distance away from the river as judged by DWMP engineers, and the decisions had to be made by consensus. In many cases, it meant landowners having to choose between saving their land and saving their houses and most chose to save their land and move their houses elsewhere, usually on the same plot of land. The Sunoikanda Social Map indicates how the people chose to move the alignment to less productive land (see Figure 1 and Box 1).

The participatory alignment selection presented many challenges. It was carried out on a 9.5km stretch of the embankment, affecting 325 plots of land having a total of about 1,200 co-owners. With land sub-divided through...
Inheritance, each plot is usually co-owned by siblings or cousins, and the size of the plot is very small, under one acre. As such, discussion to give up even a few square metres of such precious land magnified any problems or rivalries between people and created new alliances and presented many opportunities for the better-off land owners to take advantage of those with less land. To facilitate, so that the land owners themselves would choose the alignment, but avoid problems, the project took several measures to analyse and be well informed on the individual landowners and the roles they were playing (see Power Analysis below). While many conflicts between owners did arise, these were resolved to a workable extent and some surprising acts of generosity also occurred. In some locations slightly better-off farmers voluntarily allowed the alignment to go further on to their land for the purpose of saving more of their poor neighbour’s land. In one case, a man who owned several plots donated a plot to another man who would lose most of his tiny plot. As the process progressed in each community, a few of the affected landowners themselves took over major facilitation roles, chiding others to also give up pieces of their land for the benefit of the community.

With the new alignment agreed, the DWMP then worked with the landowners to solve many of the other problems they had listed. The project provided an advisor on their land rights, helped in reducing the paper work involved, and helped them get their government compensation in one lump sum in record short time, only eight months. In fact, it usually takes many more months or years and can be spread out in small amounts. This unusual speed of payment, and the fact that the payment was made in one instalment, was popular with the landowners as it gave them cash which most chose to invest in other income generating activities.

Out of this social process, community groups were formed and this led to agreeing with the BWDB to share responsibility for OM and maintenance (OM) of the embankment. In return for a commitment to keep up basic repair work, the community groups have been allowed to plant certain crops on the embankment which, if managed as agreed and trained to do, will generate significant income over the short, medium and long term. This money is to pay the group costs for OM and to go towards community development. In these ways, the landowners who lost land can regain some income. The project was completed in February 2002 with follow-up to be done by an NGO until 2003.

Results of the participatory approach
DWMP is an example of how, in a large infrastructure project, community participation can have many positive results. Participation may add up-front costs but savings offset these later. While DWMP did not carry out an official cost benefit analysis of participation, indications are clear that it can decrease loss and increase benefits, for example:
- a technically sound, socially acceptable, financially feasible alignment was chosen;
- the maximum number of landowners got to save their crop land, food supply and livelihoods;
- no resettlement was needed;
- the embankment was built without obstruction;
- construction costs were saved by the embankment’s reduced overall length which was decided by the people;
- trust and good relations were established: usual police protection was not needed, and no court actions were taken against construction;
- people who participated formed groups for community development, were trained and set-up with means for income generation for OM and community development; and,
- these groups made a formal agreement with the BWDB to share responsibility for OM, increasing the sustainability of the embankment.

Power analysis
One of the most important and useful tools developed in the project was a power analysis of each community. Early in the project for each of the 12 communities involved, a community profile was established first through participatory wealth ranking, then with key informants this ranking was rounded out by an analysis of power. Who has it? What power do they have? From what do they get their power? How do they use or misuse it? Who are the least powerful (most vulnerable)? In the field during the participatory alignment selection, project staff concentrated on listening and observing to try to get an understanding of the power relations through local eyes. Then at weekly staff meetings the social team and technical teams (engineers, surveyors, technicians, fisheries and agriculture experts) discussed, updated, shared news and made plans about dealing with specific powerful people, and on how to protect and support the most vulnerable. Drawing attention to power in this way amongst staff and making it an on-going agenda item for all project personnel to observe and discuss, not only helped ensure protection for the vulnerable, but was also an excellent management tool.

In large, multisector infrastructure projects, if social or participatory processes are included at all, they commonly are considered separate from the technical components.
Figure 2: Who has the Power? The powerful in the Borman Para community

Box 2: Power Venn diagram

Used as an analysis and communication tool between social and technical teams on the project, the Venn diagram identified the most powerful people and what gives them their power. Later, as more was learned about each community and situations evolved, notes were added to the Venn diagram about each person’s power, arbitrarily rated as positive or negative. These diagrams were used only by project staff, to develop a common understanding about the community social structure and influences.

Power analysis in the DWMP looked at both negative and positive power. The participatory alignment selection process involved 12 communities. Although side-by-side and in remote locations, each was very different from each other. Each had a small number of most influential people. Some got their power from material strength (land, money, political links, education, job, family size, etc.). Some got it from mental, spiritual or historical strength or respect (leadership skills, religious piety, respected family history, local social work, etc.). Knowing such details helped immeasurably in facilitating the participatory process. It helped identify who might try to take advantage of others as well as who could be called on to provide protection to those who needed it.

Venn diagramming

From on-going observation in the field and key informant information, project personnel drew Venn diagrams to identify each community’s powerful people, with notes on what gives them power. These diagrams were used only in staff meetings as reminders and illustrations of who’s who in each community. Each community’s Venn diagram was done to name the people and list their power sources (see Figure 2 and Box 2). In the following discussions using the diagrams,
staff started adding positive or negative signs to indicate the kind of influence each powerful person had. In the highly pressured time at the beginning of the project, each powerful person was thought of simply as a negative or positive force.

As situations in each community evolved, roles being played by the powerful people changed and project staff had gained more knowledge, the analysis of the powerful people's influences became more complex. A simple positive or negative assessment was no longer accurate or useful. Continuing only for the project team's internal use at weekly meetings in the field, each person's negative or positive power was then assigned an arbitrary percentage grading which changed according to other changes, and the Venn diagrams changed as needed. These ‘quick reference’ guides to the communities used the actual people's names but, where used in any published material, the names were changed, as below.

For example, in Borman Para community, six men are the most powerful. The two extremes in these six are Babul Das (75%+, 25%-+) and Narayan Borman (70%-+, 30%+). Babul Das is seen in the community as the richest man who gets his income from legitimate sources: he is educated, the head teacher at the local school, is from a big family (seen locally as positive strength coming from brothers, nephews), owns a rice mill, irrigation pumps, a shop, etc. He is known for being gentle, cooperative and helpful to people, altogether explaining why he was assigned a rating of 75% positive (+). He, however, was in a big fight several months ago and the victim was badly injured. Now Babul is involved in a court case and this situation has affected his standing in the community, explaining why he was given some negative rating (25%-). Narayan Borman is also rich but most people fear him, as he is well known for getting what he wants by force, intimidation and coercion. He tries to impose his own leadership but is divisive. This explains why he is seen as mostly negative (70%-). On the other hand he was seen to help a few of the poorest landowners during the alignment selection process so was given a little credit for this (at 30%+).

While the project’s participatory process continued in the communities to the end of project, assigning and adjusting ratings like this confidentially amongst staff, while arbitrary, helped project social and multi-sector technical personnel develop a common understanding and coordinated approach with community members.