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COMMUNITY PARTICIPATION IN THE RURAL WELL CONSTRUCTION  
PROGRAMME OF GUINEA-BISSAU

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**Abstract:** Community participation is one of the means recommended to realize the targets of the international water and sanitation decade. An example of the successful integration of a community participation component into a rural drinkingwater supply programme is the well construction programme in Buba Tombali, Guinea-Bissau. Not only does the community participate in all phases of the projects, but the process is guided by male and female promoters who have been recruited from the areas they serve. A description is given of the development of the programme, the implementation procedures and the ongoing evaluation. Some recommendations are given for further programme development.

THE DEFINITION OF COMMUNITY PARTICIPATION

The idea of an active involvement of local populations in the establishment of improved water supplies by outside agencies is not new. For many years the future users of water supplies have been requested to assist in the digging of wells or trenches, to house the drilling team or to collect local materials and funds for the construction. A general interest in the definition of the concept of community participation and in the participation process itself is much more recent, however.

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Thus, Feachem(1979) pointed out that participation is often used interchangeable with self-help, self-reliance, user-choice, community involvement and participatory planning and development. Participation is one of those words of which everyone thinks they know what it means, while in reality all have different ideas on its practical implications. A growing number of social scientists is therefore trying to clarify the concept and to operationalize it for drinking water supply and other village development projects.

White (1978) developed a scale of community participation in drinking water supply projects, with a minimum of leadership consultation on felt needs and constraints and a maximum of supply construction and operation with local resources. In their definition of local development participation in general, Simmons and Phillips (1978) ask questions such as 'what should people participate in?', 'who should participate?' 'how should participation take place?', i.e. who should initiate and organize it and what forms should it take, 'to what degree should participants be involved?' and 'what effects does the task environment in relation to physical, biological, socio-economical, cultural, political and historical circumstances have on participation?'

Howell (1979) also developed a scale for participation in drinking water supply projects. She pointed at the difference between the theoretical and practical definitions of community participation after comparing government policies and field procedures in four african countries.

Miller (1978) concludes that participation is often no more than programme rhetorics or a way to lower construction costs by getting free labour, materials and cash contributions. He argues that this involvement in construction is not always effective and efficient. The results of three OECD evaluations of participation in rural water supply projects as well as other research in this field show that participation in the early stages of project design and in recurrent maintenance are more important for project success. For a conclusion on the value of participation in construction more research is necessary.

His conclusions on the importance of community participation in all <sup>Project</sup> stages rather than just the implementation are shared by the Unicef-WHO Joint Committee on Health Policy (1979).

In its 22nd session this committee recommended more community participation which they defined as:

'a balanced process in which individuals, families and opinion leaders representing the various strata of a community are involved with workers, technicians, planners and representatives of various ministries and/or the existing political administration in sharing the responsibilities of planning, designing, implementing, evaluating and maintaining development projects'.

For the realization of this recommendation it is however necessary that national governments in developing their water supply and sanitation programmes also define community participation explicitly and develop a programme and an organizational system to implement this policy. One country which is doing this at present is Guinea-Bissau in West-Africa. In the following paragraphs an account is given of the theoretical base of the programme, the way in which the local population is involved in the various project stages by the mobile promotion service, the educational inputs included in the participation programme and the incorporation of joint evaluations to determine and improve the effectiveness of the programme. Finally, some recommendations are given for further development.

#### THE PHILOSOPHY AND METHODOLOGY OF THE COMMUNITY PARTICIPATION PROGRAMME

The programme is based on the premise that the ultimate usefulness of a service is determined by its users. As much as possible, projects should therefore be defined at the grass-root level. At the same time, a mass approach demands a standardized implementation programme which allows only a limited flexibility. A threefold programme strategy was therefore developed:

1. programme planning based on action research
2. participative project design and implementation
3. programme evaluation based on regular joint evaluations at village level

## 1. Programme planning based on action research

An initial evaluation of the existing well construction programme (van der Ploeg, 1979) showed that problems in operation, maintenance and water use existed and limited the potential public health impact of the new wells.

It was therefore decided to add a community participation and education component to this programme.

Programme preparation and project planning were set up as an action research project. The population of some villages and their committees were frequently consulted about the contents and mode of implementation of the new projects. Various implementation techniques were tried out on a small scale, using experimental lay-outs. Evaluation of these first projects together with the villagers led to alterations in the programme, such as an expansion of the range of choices open to the community. Originally, one new protected well was offered to a village of 25-50 inhabitants, one well with pump to communities with 50-100 inhabitants, two wells with pumps for communities with 100-150 inhabitants etc. Now, communities can choose between the upgrading of two existing wells or the construction of one new well, the installation of two new protected wells without pump instead of one well with a pump and the addition of a laundry and/or cattle watering facility.

Such adaptations have been incorporated into the more standardized project design and implementation procedure described in the next section. Further adaptations are the result of the ongoing evaluation of completed projects. Its procedure and the outcomes of the first series of village projects are described in the third section.

## 2. Participative project design and implementation

The political decision to cover all villages in a selected area of the country means that no selection criteria are applied other than a minimal population of 25 people and the willingness to participate in the project.

When the water agency enters a new project area a regional meeting is called of all village committees by the local political leaders. The project is introduced and each community is invited to participate. This meeting takes place

ca. six months before the actual projects are started. In the next three months a mobile team of a male and female promotor visits each community in the project area.

These promoters are local people with a low educational level. They are recruited from the area in which they are to work. Because of the gerontocratic system in Guinea-Bissau, they have to be older, well-respected members of the community. Their tasks include the motivation, consultation organization and education of the community as well as the evaluation of the project participation process and the project effects. Training is for the larger part on-the-job. Some guidelines have been developed for use in the field.

On their first visit to a village in the project area, the promoters carry out a socio-economic and cultural study. Using a checklist, conditions, attitudes, practices and problems in the fields of water supply, agriculture, health hygiene, housing and organization are registered as well as perceptions of problems and solutions. A socio-geographical map is made of each village, and all information is summarized in a short report in the vernacular language. This report is discussed in a general village meeting. Informal interviews and public dialogue guarantee a lively participation of the mostly illiterate population in the data gathering process.

The promoters, who now have a clear idea of the existing and perceived problems and the type of solutions envisaged by the population discuss the alternatives open to each community with the technical team that has collected the hydrological and geophysical data. Choices to be made include the upgrading of existing provisions, the drilling or digging of new wells, the type of pump, the additional uses and the siting of the new facilities. The community is informed about the options and their respective consequences. If additional provisions such as laundry facilities are desired, the community has to pay one half of their costs.

Final decisions are left to the community. When the village committee informs the promoters that a decision has been reached, a meeting is called and a formal project agreement made. No written contracts are signed however, because the

villagers have a great distrust of any official papers as a result of their experiences during the colonial time. The village committee organizes the voluntary labour and forms the liaison with the agency. No cash contributions are asked, but villagers are responsible for the clearing of the construction site, the construction of an access road if necessary, the housing of the technical team and the organization of locally accustomed ceremonies. In the smallest villages the availability of labour can be a problem. In that case the village committee tries to get the assistance from neighbouring villages or they use paid labour. For the latter they can get a loan from the agency which they have to pay off at the next harvest.

The village also selects two voluntary caretakers, one male and one female, who will be responsible for the daily operation and maintenance. They must be figures of some authority, with a sufficient guarantee of prolonged residency although a concentration of functions has to be avoided as far as possible. More complicated repairs and periodic preventive maintenance are the responsibility of the agency. For the actual construction a time and manpower schedule is drawn up. The labourers are instructed in the various tasks and given some background explanation. The villagers are also asked in making a concrete platform, drainage ditch, laundry site and washing enclosure.

Communication and education are essential elements of the whole process. During the first contacts, the promoters, geologists and even drivers spread the necessary project information, including the level of service, fields for community choices, technological risks, duration and procedure of testhole drilling and community studies, and community contributions to construction and operation and maintenance.

The promoters, who have received some training in environmental health education, use posters, local photographs (which remain in the village) and role playing to start health discussions. The best stimulus to start off such a discussion is however the baby that many mothers, including the female promoters carry with them during their daily work. The importance of safe water and hygiene for health is discussed but great emphasis is also put on improved

nutrition, e.g. by using waste water at the well for a communal vegetable garden. For a greater health impact of the supply, the female caretaker is given specific responsibilities to preserve hygienic conditions around the well and prevent pollution by people and cattle. In addition, one female member of the village committee is in theory responsible for community health affairs. This is however an empty function, imposed from above without any training or guidance. The promoters are therefore asked to stimulate the election of voluntary health promoters in the villages, interested individuals who through continued contacts and special training can assist in a continuous health activation. Regular quality testing of the wells is under development, but no samples are yet taken from household vessels.

### 3. Programme evaluation based on regular joint evaluations at village level

Before, during and after the construction, joint evaluation meetings are held. These evaluations are very important to solve local problems, correct wrong observations and conclusions, to stimulate the dialogue and the educational process and to adapt the programme when necessary.

Joint evaluation already begins when the results of the community study are discussed. Monitoring of the promotion activities and their direct results in the implementation phase may lead to further evaluation meetings in the villages. This activity also provides data for later programme evaluation, e.g. to determine if a more intensive approach before and/or after the installation leads to a higher effectiveness. This effectiveness is evaluated by determining the proportion of the population that is using the new supplies for drinking and other purposes and by checking the maintenance and hygiene around the well (see tables 1 and 2). Offspins of the project such as vegetable gardening and brickmaking are also noted.

table 1

For this evaluation, the promotion team visits each village five to six months after the completion of the wells. The opinion of the villagers is sought by means of structured interviews with the village committee, the pumpcaretakers and the female heads of households. In addition, observations are made on pump conditions, hygiene and water collection

behaviour. These activities take 1-2 days. Immediately afterwards the promoters write their report and read it out to a meeting of the village committee and caretakers. A discussion of the reported results follows, culminating in a definition of the action required from the department and/or the village. In case a technical follow-up is required, the promoters contact the department.

table 2

The value of such regular evaluations is shown in table 2. In this table, the reported use and reasons for nonuse are given for a group of 12 wells in 1979 and 32 in 1980. In the first group it was found that a large number of people continued to use their traditional sources for drinking purposes. Upon investigation it became clear that criteria applied to the taste of the water were very high. The acceptable salt content, for example was below 200 mg/l NaCl, less than one-fifth of the WHO minimum. The high demands on the absence of salt had consequences for the siting procedure. It was found that a higher risk of brackish water existed when wells were situated on the ridges on which most villages were situated than when they were drilled at the bottom of a fold. Thus the villagers sometimes have to choose between conveniently placed wells for household use or wells at some distance for drinking purposes.

Consultation and education of the communities as described above led to a better acceptance of the 32 wells that were constructed first under the participatory programme, although problems of social appropriateness continued to play a role. Footpumps are therefore no longer installed and follow-up visits for health education and training of the pump organization have been added to the programme.

#### SOME FIELDS FOR FURTHER STUDY AND EXPANSION

An important problem that is not yet solved is the financing of the steadily growing recurrent costs. At present the village water supply service is still free. The only contribution of the community to operation and maintenance are the services of the local caretakers. In future, direct or indirect payments will be necessary, however. The willingness and ability to pay for recurrent costs is low, due to the limited agricultural surplus, earlier experiences with colonial taxation and the



absence of a decision on a national taxation system and its relation with services provided. The policy of the promotion service to emphasize that pump and water are free, when people are reluctant to take part in the project for fear of taxation will make the introduction of rates even more difficult.

Another matter to consider are the unserved villages. As a consequence of the decision of the government to improve conditions area wise, large parts of the country will have to wait several years before they can be served. For these areas, a special education programme can be developed on the importance of water and sanitation for public health and the steps the people can take themselves to investigate and improve these conditions with local resources.

For the realization of health impacts the improvement of drinking water supply conditions alone is not enough. Apart from the proper, general and continuous use of sources with water of a good quality, improvements in waste disposal, hygiene and preventive health are necessary. The linkage of water supply as well as sanitation with the primary health care programme under development should therefore be stimulated. This may possibly result in organizational rearrangements. A greater priority has the development of technically, economically and socioculturally appropriate designs for waste disposal facilities, with national production, distribution and adoption programmes linked to the water and hygiene programmes.

Finally the selected approach opens up possibilities for further experimentation. In other areas of the country similar projects as the one in Buba Tombali have been planned. These pilot areas will then become the centres from where the neighbouring districts will be served. Rather than using the one approach described above, it would be useful to find out exactly how important the promotion programme is and to experiment systematically with the various approaches possible. For the first purpose one can think of a comparison of project effects between areas with and without additional promotion services. For the second purpose, a systematic comparison of the effects of different forms and degrees of promotion could be carried out. In both cases the indicators

of success would be the degree of adoption of the new supplies for various purposes, the water quality and quantity used, socio-economic and health impacts and the maintenance of the wells. Preferably, such a study should be a cost-effectiveness study.

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table 1 Operation and maintenance of installed pumps in 25 villages in Buba Tombali, Guinea-Bissau

	lubrication of the pump	hygiene of the pump area	organization for O and M
	%	%	%
good	67	43	63
insufficient	33	36	21
absent	-	21	16

table 2 Patterns and determinants of the use of new wells (N=44) for drinking purposes in Buba Tombali, Guinea Bissau

		% in 1979 (N=12)	% in 1980 (N=32)
degree of acceptance	generally and continuously used for drink- ing purposes	17	34
	partially used for drinking purposes	33	47
	not used for drinking purposes	50	19
reasons for partial acceptance <sup>1)</sup>	taste	50	20
	level of service	50	27
	distance	-	7
	quantity	25	20
	ease of operation	-	27
reasons for non-use <sup>1)</sup>	taste	50	83
	level of service	-	-
	distance	-	17
	quantity	-	-
	ease of operation	17	-
	out of operation	50	-

<sup>1)</sup> sometimes, more than one reason was given

Source: van der Ploeg, 1979, 1980