Regional development – the sabke approach

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WITH THE DWINDLING economies and often over stretched resources of developing nations, it has become more obvious that for rural development to succeed, an integrated approach encompassing engineering, the environment, the stake holders and sustainability must be considered.

The Sabke Approach gives a case study of integrated regional development in the rural areas of a developing nation. It takes into consideration the inter-relationship of the different components of the development and the community's views from the onset through the implementation to completion.

The Sabke Project is a multi-faceted project envisaged to alleviate the hardship of the people in the Sabke area in northern Nigeria through the provision of potable water, irrigation and rural infrastructure (Fig. 1). It involves the educational development, provision of health and veterinary facilities, promotion of private sector and community participation, the maximum integration of women in the development and the provision of the necessary tools for the setting up of small scale (cottage) industries to use the project's raw materials.

The systematic approach to the development is hereby presented.

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In carrying out the Sabke Project, the first step taken was to visit the villages and the closest semi-urban centres that will be affected by the development to intimate the villages of the project and highlight possible effects. Results from this initial survey showed the villagers' happiness. They felt very special that we had taken them into confidence and subsequently we got total support from them.

This led to our forming a project Forum Group within the communities and this Group became the main focal point where all observations, doubts, requests and contributions were lodged. Discussions with this Group made it obvious that despite the many advantages of the project it could not be sustained without some form of community involvement and development.

The Sabke Approach therefore was to make the Forum Group like the nucleus of the development. Together with the team leaders of each of the component part of the project and representation from the Client, it formed the Consultative Committee for the project.

The main consideration was to provide facilities to cater for the whole region and therefore the need for the Forum Groups and the Consultative Committee.

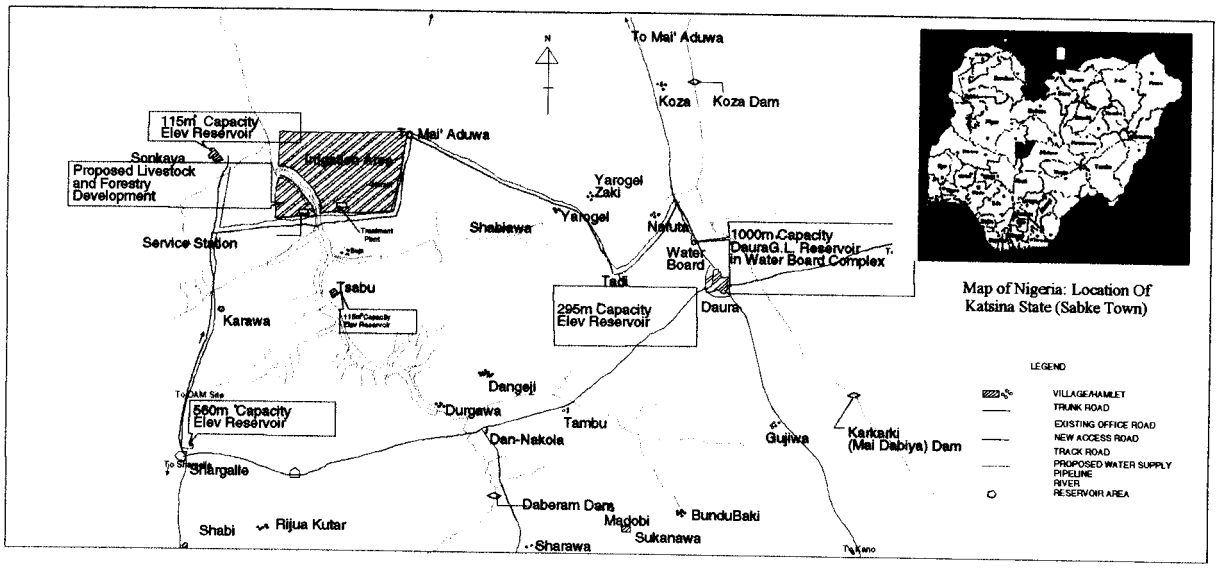

Figure 1. Layout of the Sabke Project

The inter-relationship of the committee and the different components of the project is as given in Fig. 2.

The next step was to carry out the studies and designs for the different aspects of the project.

The sociological, environmental and health impacts and community development studies involved an assessment of the existing sociological, environmental, ecological and health issues in order to obtain the necessary parameters to use as initial reference data and to ascertain the communities susceptibility to negative impacts such as diseases etc. On the basis of the assessment, steps likely to promote beneficial effects, while mitigating potential and real negative impacts, were proposed for incorporation into the implementation. Co-opting members of the village into the study team through the Forum Groups was a tremendous success. These members were particularly beneficial, as they were able to decipher the truths from lies and give us a deeper understanding of underlying factors that otherwise would have been ignored.

Engineering studies including Pedology, Agriculture, Surveys, Economy and Construction Materials Survey were carried out within and in close proximity to the project area. Based on the earlier successes of the other study teams, it was now compulsory for all the teams to co-opt members of the Forum Groups. Each team initially discussed their aims, objectives and methodology with the Forum Groups and with the inputs of these Groups, amendments and/or additions where necessary was incorporated. Interestingly, the study teams all claimed that their work was much more fulfilling and better focussed, because of the incorporation of these villagers.

The outcome of the studies above was used for engineering design of the project components incorporating recommendations of the Forum Groups. This design which included the location, sizing, detailed analysis and optimisation comprised the design of the dam, access roads, irrigation and water supply systems. Furthermore, existing infrastructural facilities such as roads, primary schools, medical and veterinary clinics, which were in poor states, were also assessed, the need to rehabilitate or provide new facilities was ascertained, and designs carried out to suit.

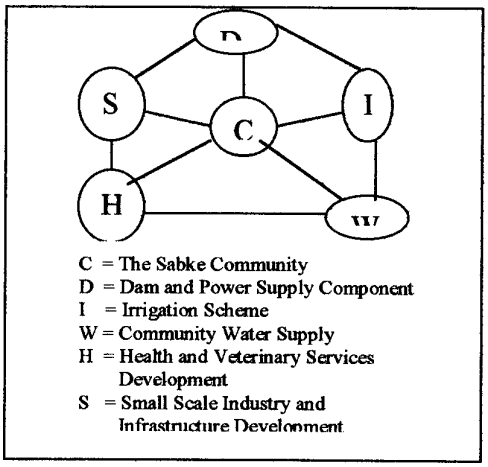

Figure 2. The Sabk project's component inter-relationship

The dam was located based on the most technically feasible site after due consultations with the beneficiaries of the scheme. Other main considerations were the effects of relocation and displacement of the farmers in the reservoir area and the environmental impacts and also the benefits to the region as a whole.

The Irrigation scheme was also located taking into consideration the farming habits of the communities. Agronomic studies were carried out on existing farmlands and agro-economic analysis carried out. From these analyses, an optimal design that would be sustainable was evolved.

It was necessary to determine the population of the area to be able to make useful projections especially for the water supply. In the absence of official population data, local surveys were conducted to determine the appropriate number of households and the number of persons per household in each of the villages. Projections were then developed based on discussions with the village heads and local government personnel. However, these were inconsistent and, therefore the World Bank guidelines were adopted in the absence of any other records. The usefulness of the Forum Groups was particularly felt during these surveys as the Groups had basic knowledge of the situation in the villages.

Due to financial constraints, we could not provide water to all the 33 villages and it was decided to make certain villages selected service centres. In deciding the selected service centres, a lot of discussions were held with the Forum Groups especially considering the fact that everyone would want his village to be a community service centre. The survey also included an assessment of the communities' willingness to pay and to be involved in the running of the scheme as well as the role of women in the development. The regional water supply scheme was then evolved as a transmission and distribution system linking the Sabke Dam to Daura town and providing water to the community service centres representing the other villages. (Fig.3).

The selected community centres were accepted by over 91 per cent of the residents of the Sabke area. Particularly important is the fact that they were within reasonable distance (approximately 1 Km) to the areas they served.

The choice of these villages as community centres for the project thus satisfied the concept of the demand-driven approach, which has been proven to ensure sustainability of regional water supply schemes.

Table 1. Walking distance (Km) travelled per day for water

	Distance covered by walking (km)			
Season	<1Km	1Km	2Km	3Km
Dry	6.1%	13.2%	43.1%	37.6%
Wet	48.8%	43.1%	8.1%	-

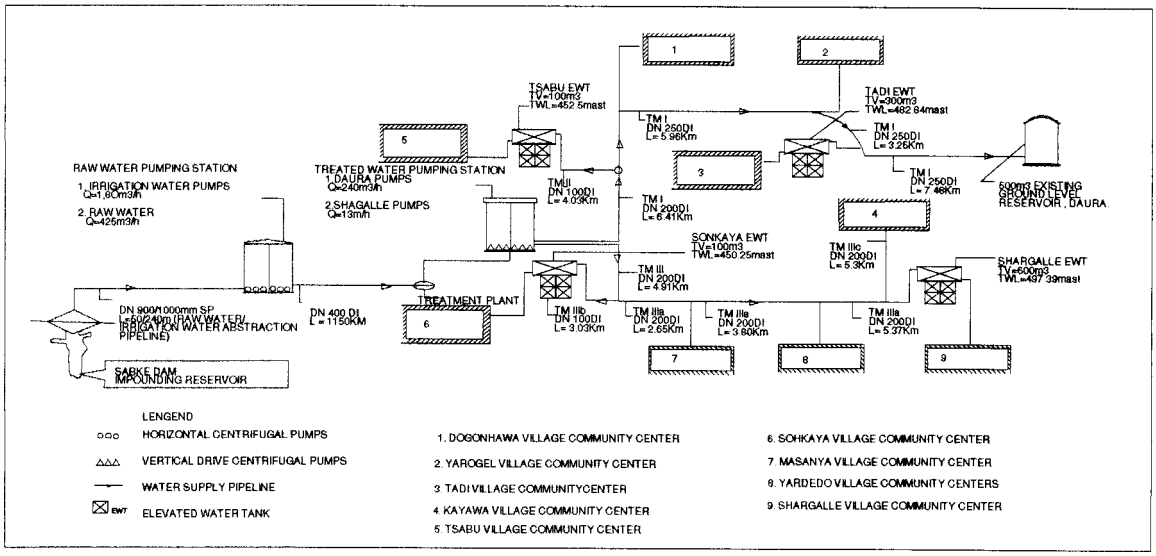

Figure 3. Sabke water and community development

Results and discussions

The main problem that faced us as Consultants was how to distribute the proposed development to benefit the communities within the whole region while at the same time meet the physical engineering and financial constraint.

For instance, from the results of studies carried out, the right bank of the river was found to be most suitable for irrigation purposes and the best location for the treatment plant was also the right bank as well.

The Forum Groups and the Consultative Committee were especially useful in dealing with this problem of location of facilities. It was particularly interesting to note the way historical facts and regional hierarchy came into play.

Furthermore, the Groups and the Committee understood early enough the limited resources and constraints of the project in both physical and financial terms. By working with the committees it was easier arrive at acceptable solutions.

The historical inter-relationship of the communities also played a big role in the resettlement and displacement of people in the reservoir area as well as the acceptance of the need to maintain and therefore sustain the systems. Consequently the need to pay for the proposed development even if it is just a token was accepted by the communities. There was willingness for selected members of the communities to be involved in the operation of the system.

One of the most interesting features of our project was the women-in-development aspect. The women were so delighted that our team thought they were important enough to be spoken to, let alone be asked their views and suggestions on the proposed development. A large majority of them said they were willing to procure small scale industrial machines such as threshers at a subsidised price. It was observed that a large percentage (about 40 per cent) had farms of their own.

In order to generate some form of revenue and allow the immediate positive impact to be felt it was suggested that the Contractors employed people from all the benefiting communities during the implementation. The Forum Group and Consultative Committee therefore formed guidelines for this.

Conclusions

The main problem faced on the Sabke Project was how to distribute the proposed facilities in such a way as to benefit the whole region and prevent the inherent complaints associated with such.

To give technical, sustainable and an acceptable solution to this problem, one needed to understand the history and culture of the people and hence the need for a Forum Group and Consultative Committee.

The sociological, environmental and health impact studies revealed that the introduction of the project is timely as the availability of the project will help develop the area, provide potable water and efficient sanitation. In addition, the rehabilitation of and provision of new dispensaries and primary schools will enhance primary health care and education of the communities.

Maintenance of the entire infrastructure is guaranteed as the communities have been made to participate in the study and implementation of the project. The toll system was further recommended to be upgraded to reflect latest developments in rural water supply by the introduction of pre-paid smart tokens for sale of water at the Community Centres. This recommendation shall, however, be kept in

view till the systems become self-sustaining and the literacy level (currently estimated to be about 30 per cent) is increased.

The project has enhanced the role of women in the development of the area. Adult literacy classes have been provided for the women. The programme among other things aims at enhancing the capabilities of the women in setting up small-scale cottage industries.

The impact of children in an awareness campaign also was taken into account and recommendation for school packs and plays have been included for implementation.

It can be concluded that the integrated regional development concept as demonstrated by the Sabke approach, unlike many other projects of such magnitude that have been 'forced' on the beneficiaries, is very successful by embracing the communities right from the onset. Despite the need for re-settlement of some communities, incentives to be derived by the project in terms of development has eroded the hostilities that is usually meted out by the communities at attempts for re-settlement.

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