
COMMUNITY SELF-FINANCING: A Solution to Indonesia's Clean Water Needs

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ABSTRACT

The need for improved domestic water supply and sanitation facilities in rural Indonesia far exceeds the Government of Indonesia's (GOI) available resources. CARE Indonesia's ten years experience in partnership with the GOI and 421 rural communities in the development of clean water supply has convinced it that the gap between available resources and water needs can be more rapidly addressed if communities are entrusted to take responsibility for it themselves. Future efforts should take greater advantage of the potential that exists in rural communities to meet their water needs. CARE Indonesia is developing a sustainable community water resource development program which focuses on increased coverage of reliable and accessible domestic water supply by means of promoting effective community participation, community resource mobilization and community self-financing of village level water supply.

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INTRODUCTION

The International Drinking Water Supply and Sanitation Decade held out hope for tens of millions of Indonesians that they would have access to clean water and sanitation facilities during this decade. Though the decade is nearly over, approximately two-thirds of Indonesia's rural population – eighty-seven million people – still do not have access to sufficient, reliable sources of domestic water or to proper sanitation facilities.

The problem is two fold: The GOI and its interested international aid donors simply do not have adequate resources to meet the tremendous need. Even if resources were adequate, a centralized, top-down approach where communities are passive recipients of water systems has proven ineffective, time and again.

Conventional wisdom holds that communities are incapable of taking a dominant role in their development. According to this prevailing thinking it follows that poor rural communities cannot afford to pay for water and sanitation services. The poor are just too poor; they must wait until the government is able to provide the service for them. A fundamental change needs to occur in the manner in which the government and aid donors perceive local development. Communities must be actively encouraged and given the means to help themselves if clean water supply is to reach many more rural areas.

A recent World Bank paper (Churchill, *et al.*, 1987) suggests that the basic assumptions which have shaped water development programs may well hinder greater progress in meeting the objectives of the Water Decade. The Bank's paper cites experiences in several countries which "...reflected a turning away from a sector development philosophy that once appeared irrevocably linked to the notion that rural populations are incapable of taking a more central role themselves in improvement initiatives and are too poor to contribute to covering the costs."

The Bank's paper concludes: "Without a high level of cost recovery it is unlikely that programs will be either financially or administratively replicable on the scale required to get the job done. The evidence suggests there is both a willingness and ability to pay for improved services in most rural areas."

CARE Indonesia is developing its current water and sanitation program to embrace community self-financing for rural clean water supply and sanitation facilities. Based on its experience to date, CARE Indonesia staff is convinced that a com-

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munity self-financing approach, rather than the conventional grant method, has the greatest potential to significantly accelerate water supply and sanitation services coverage in rural areas of Indonesia.

THE GAP BETWEEN AVAILABLE RESOURCES AND NEED IN INDONESIA

Inadequate Resources to Meet the Need

The Indonesian Government set a goal of providing safe potable water for 60% of Indonesia's rural villages by 1990. It has made considerable progress since the beginning of the decade when only 18% of the rural population had access to water supply. By the mid 1980s access had increased to approximately 33%. Considering the number of people in rural areas still without easy access to clean water, however, it is virtually impossible to achieve the GOI's targets by the end of the decade given the limited resources now available for the water and sanitation sector.

Just when the need for increased resources is the greatest, the effect of the decline in world oil prices has severely reduced the GOI's overall development budget as well as specific central grants used to support water and sanitation projects. The 1987 development budget was cut by 22%. The 1988 development budget was reduced further by another 6.5%. Consequently, the central government budget which supports most of GOI rural water and sanitation programs was reduced by 29% for 1988. Furthermore, the September 1986 rupiah devaluation of 31% and subsequent inflation have significantly reduced the buying power of the current budget.

Outside assistance from international agencies is also insufficient to meet the rural water demand. Of all external assistance allocated for water and sanitation projects -- \$350 million over the ten year period 1979 to 1988 -- more than 90% was devoted to urban areas. Moreover, international assistance agencies, like the GOI, give inadequate support for developing new rural water and sanitation approaches. Private sector financing is not pursued nor is increased community participation effectively promoted.

Expectations that Water Supply Is the Government's Responsibility

Until now the GOI has not effectively promoted or incorporated community participation in the design, construction or management of water and sanitation systems. Actual construction is normally done by private contractors who rarely involve the community. A major consequence of the lack of community participation is that systems are poorly maintained, to the point where they function at far less than their designed capacity and are frequently abandoned after breakdown. An evaluation (Ministry of Health, 1987) conducted by the GOI, UNICEF and WHO of government sponsored water projects found that *"there is clearly a high level of apathy toward 'government' facilities by groups who are intended to benefit from them."*

A centralized development approach perpetuates a paternalistic attitude and reinforces community expectations that the government is solely responsible for providing water and sanitation facilities to meet local needs. Because of these expectations, communities rarely take the initiative to construct facilities on their own.

Given the gap between the country's need and present resource allocation, and the basically top-down approach used, achievement of the projected coverage targets is unlikely. All of this portrays a bleak picture which will continue for the foreseeable future unless a major change in approach occurs.

CARE INDONESIA'S WATER PROGRAM ACCOMPLISHMENTS

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CARE operations in Indonesia center around seven geographically based field offices that report to a central office in Jakarta. Each field office is responsible for project management and implementation within its area. CARE Indonesia has a staff of seven expatriates and 190 Indonesians, with 65 field staff working in the water program sector.

Village water supply has been the cornerstone of CARE's involvement in rural development in Indonesia for the past ten years. Rural community water supply projects serves as the programming foundation in each of the provinces in which CARE presently works. One project, jointly funded by CARE Canada, CIDA, the provincial governments and the participating

communities, is implemented in three provinces of Sulawesi. The other, jointly financed by CARE USA, USAID, the provincial governments and the participating communities, operates in West Java, East Java and West Nusa Tenggara (NTB). Since their inception, these two projects have installed 310 piped water systems, 1,420 hand pumps and 1,216 rain catchment tanks benefiting over 500,000 persons.

Both projects encourage the active participation of the community from the initial design stages through the installation of the water system. Participating communities have actively supported the project by providing up front contributions of 10 to 30% of the total installation costs in the form of labor, local materials and cash. The inputs from CARE Canada, CARE USA, CIDA, USAID and the provincial governments is provided to the participating community on a grant basis. Both projects also promote the organization of a water user's association to operate and maintain the system once it is completed. CARE encourages the establishment of a community user fee collection system so that funds are available for future maintenance and repair. The user's fee is collected, normally in cash, but some times in kind. The funds generated through the collection of the fee are managed by either the village development committee or the village water user's association.

CARE plays an operational role throughout the implementation of its water projects. Its field staff work with the participating communities to plan and organize for its implementation and marshal community resources, provide technical assistance for the design, and procure pipe, accessories and other construction materials.

DEVELOPMENT OF CARE'S NEW MULTI-YEAR WATER PROGRAM

Focus on Sustainability, Program Impact and Increased Coverage

Every three to five years CARE missions review their programs and develop a strategy and focus for the following period. This process last occurred during 1986/87 for CARE Indonesia. Three major issues became the focal point for the development of CARE Indonesia's new multi-year plan: concern for sustainable approaches; increased program impact; and increased coverage.

Assessment of Strengths and Weaknesses of Present Program

During the review of the mission's ongoing water program, CARE staff acknowledged that its current approach benefited one village at a time; and that the program's coverage was dependent on the amount of funds available from CARE and its donor partners. At the same time, the CARE mission recognized that its own resources were wholly insufficient to make an impact commensurate with Indonesia's needs. It also recognized that grant-type water systems (be they granted by CARE, the government or other organizations) create a dependence which hinders, rather than fosters, local development.

On the other hand, CARE staff also recognized that the active community participation was a major factor in the success of CARE assisted projects, not only in terms of construction, but also with regard to the water system's operation and maintenance once installed. The organization of the water user's association and the assessment and collection of a user's fee was also seen as a successful component of the current project, but one which should be strengthened and improved. In addition, its water projects were found (Gearheart, 1983) to be technically sound, using low cost technologies appropriate for the rural Indonesia setting.

Community Collection of User Fees

During this program review, the water user fee came to be viewed as an increasingly important component of the project. The user fee had been collected by communities, up to this time, to ensure that funds would be available in the event that their water system needed to be repaired. The amount of the fee is set by each community. Normally, it is quite low -- between Rp. 100 to 300 (approximately 6c to 18c U. S.) per household per month -- since the water system requires very little maintenance and infrequently needs to be repaired.

Despite the low fee level, the fees collected have generated substantial funds which were used by the communities not only to repair and maintain the water system, but also to conduct other village development activities. Examples of activities for which the water user fee has been used include supplementary feeding, village health insurance schemes and construction of physical structures including the expansion of the water system.

Some communities contiguous to those which CARE assisted were so motivated to improve access to water that, on their own initiative, they independently financed the installation of piped water patterned on those of the CARE assisted village. In such instances the communities requested and received technical assistance from CARE.

CARE staff concluded that there were more local resources available within poor rural communities than is commonly realized. They saw this as evidence of a potential for fuller self-financing for water system development. They realized that the gap between the tremendous need and easy access to clean water could be narrowed when both community and outside resources are combined.

Formulation of a New Strategy

CARE Indonesia staff came to believe that community self-financing is the key to rapid and significant coverage of rural water supply. A consensus developed among the staff that if rural Indonesia is to overcome the problem of lack of access to an adequate supply of clean water, the community itself must actively take the responsibility for providing it. Attention was then turned to developing a strategy to accomplish this. The key elements would be mobilization of community resources to finance their own water project. A major existing constraint to expansion will be removed if self-financing approaches can be proven feasible and promoted on a wide scale.

The development of workable approaches to achieve maximum levels of community self-financing became the immediate priority for advancing CARE Indonesia's strategy for its water programs. The mission committed itself to experimenting with ways to increase the self-financing component of future water systems.

As part of the learning process, CARE initiated a mission-wide sample survey of its previous water projects to document experience with the collection and uses of water user fees. The survey, presently in progress, is also a means of assessing the current status of the system's operation and maintenance.

Community Self-Financing of Water Systems Feasibility Study

CARE Indonesia commissioned (with partial funding assistance from USAID/Indonesia) a feasibility study related to village self-financing of rural community water systems. One of the principle concerns of the study was to determine the ability and willingness of poor rural communities to pay for their community water supply system. Though CARE's own empirical analysis indicated that communities are able to pay for their water system, it was important that before embarking on its major new strategy more systematic information be collected.

Major Findings of the Study

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The recent study (Judd, et al., 1988) found that "*the concept of rural community self-financing for improved water and sanitation systems is highly feasible and desirable*". The major findings of that study include:

- Most of the rural communities surveyed have a great need for improved water systems and are willing to self-finance them.
- The desire for self-financing is greater in communities with many income-generating activities because people have less time to fetch water themselves.
- The concept of community self-financing is not new in rural areas; communities have long contributed for construction of village roads, mosques, schools and other buildings.
- Communities are willing to approach banks for loans (but need assistance for the initial visit).
- The loan repayment capability of most communities is good, particularly if the loan period is two years or longer.

This last finding is of major importance if the concept of self-financing is to fulfill its expected impact of significantly improving access to rural water supply. If poor communities are to self-finance their water supply they must have the ability to pay for them.

Ability to Pay for Water Supply

The study found that over half (54%) the study sample had a maximum disposable annual household income of less than

Rp. 300,000 (approximately US\$180). To be conservative, the study decreased this by half to derive a minimum disposable annual income.

The study calculated the loan amount required to finance the construction of an average community water system. The loan amount was based on 68% of the total cost of the system. This percentage represents the total construction cost less the community's up front contribution (32%) for the 25 CARE assisted systems constructed in the three study areas during FY 1987. A nominal interest rate of 18% per annum (1.5% per month) -- the interest rate that would most likely be set for such loans -- was used for deriving the total amount of the loan and interest. Loan repayments were calculated for two, three and four years.

The projected monthly household repayments for loans based on FY 87 CARE assisted water system costs appeared to fall mainly under Rp. 3,000 (US\$1.80) per month for loan terms of two years. This was compared with the minimum monthly disposable income. The sample survey of the study found that 91% of the households are able to afford a loan repayment of Rp. 3,000 (US\$1.80) per month (see Table 1). In fact 75% of the households were found to be able to sustain debt financing of twice the amount required to finance the standard water system. The study concluded, therefore, that the majority of the respondent households have the repayment capacity for a loan to finance the construction of a community water supply system.

Table 1: Loan Repayment Capability of Sample Households

| Rupiah Per Month | Repayment - CARE Assisted Sites | | | Repayment Capability of H'holds | |
|---------------------|---------------------------------|-------------------|-------------------|---------------------------------------|-------|
| | 24 Months % | 36 Months % | 48 Months % | No. | % |
| < 1,000 | 0 | 16.0 | 24.0 | 68 | 100.0 |
| 1,000 - 2,000 | 36.0 | 40.0 | 52.0 | 68 | 100.0 |
| 2,000 - 3,000 | 36.0 | 24.0 | 16.0 | 66 | 97.1 |
| 3,000 - 4,000 | 8.0 | 12.0 | 8.0 | 62 | 91.2 |
| 4,000 - 5,000 | 12.0 | 8.0 | 0 | 59 | 86.8 |
| 5,000 - 6,000 | 8.0 | 0 | 0 | 54 | 79.4 |
| < 6,000 | 0 | 0 | 0 | 51 | 75.4 |
| Total | 100.0 | 100.0 | 100.0 | (n = 68) | |

Willingness to Pay for Water Supply

The willingness of communities to pay for water supply is also an important consideration. Recent studies (Churchill, *et al.*, 1987; Whittington, 1987) have found that willingness to pay is largely a determinant of time saved and convenience. *cross*

The CARE Indonesia commissioned study found that "the willingness of rural communities to pay for water facilities is dependent less on the economic ability to finance such a system but more on other factors or combination of factors". The major factors and their influence on willingness to pay include:

- ✓ • Lack of easy access to water significantly increases the willingness to pay.
- ✓ • The greater the opportunity for employment or income generating opportunities, the greater the willingness to pay.
- ✓ • There is a high correlation between strong village leadership and willingness to pay.
- A nearby community with a piped water supply can have a positive influence on willingness to pay.
- Conversely, the perception of access to grant-type water projects correlates with low willingness to pay.

add The feasibility study also found that most communities would prefer to pay for their water system up front if they can afford it and to take out a loan only as a last resort. Many communities will not be able to up front the full cost of their water system and will therefore require access to credit. The availability of loans on reasonable terms is essential if the full potential of the self-financing approach is to be realized.

Availability of Credit for Water Systems

Unlike many developing countries, Indonesia has a wide variety of credit programs and credit institutions. The banking system is large and reaches the small town level. There are over 6,000 rural banks throughout the archipelago.

The feasibility study found that state banks are interested in the concept of self-financing rural community water supply systems as it would assist them to fulfill their mandate of being "agents of development". They are cautious, however, and want the concept tested through pilot projects first.

In promoting the self-financing approach, credit for water systems will take advantage of existing institutional sources and

mechanism without resort to subsidies or guarantees. In East Java, one bank has already taken the initiative to experiment with the concept by providing a loan at market rates (18% nominal interest per annum) to one community. The bank based its lending decision on the community's previous credit history and the fact that CARE was providing the community technical and management assistance to implement its project.

FUTURE CARE PLANS

Improved Delivery Capacity

CARE Indonesia defined its strategy in terms of programs, not projects, to facilitate planning beyond existing project completion dates and sites. As articulated in the strategy paper (CARE, 1986), the CARE mission is committed to increasing coverage, impact, sustainability and local control of its programs. It recognized that this strategy required new learning to move CARE from its current operational role to a catalytic one.

CARE Indonesia is committed to pursuing its strategy of village self-financing of water supply and sanitation facilities. CARE is implementing the strategy based on its learning experience, carefully testing the feasibility and viability of various approaches and mechanisms.

To improve its ability to assist communities to self-finance their water projects, CARE Indonesia is in the process of improving its own delivery capacity by:

- Strengthening its ability to provide communities with technically sound design options and their costs, and financing options for affordable and durable water supply. This will allow communities to make intelligent decisions on the best match between technical and financial options for their water systems.
- ② Developing field assessment tools to assess each community's ability and willingness to pay for its water supply.
- Developing a capital formation mechanism through increased community savings and improved collection of water user fee collection.

- Developing management training programs to improve the community's capacity to organize, finance and manage a community water system.
- Linking rural banks and material suppliers with communities interested in financing their water systems.

Establishment of a Foundation to Support Water Supply Development

CARE is also studying the feasibility of establishing a foundation whose purpose will be to promote, support, and assist communities to self-finance their clean water supply and sanitation facilities. One of the roles of the foundation would be to encourage and support changes in public policy in support of the self-financing approach. The foundation will not serve as a financial intermediary to communities; however, it is possible that some type of subsidy may need to be provided to those few communities found to be too poor to fully finance their water system.

The foundation would also encourage other entities to actively participate in the self-financed water program. Because of the high material cost of water projects, few Indonesian NGOs presently have water programs of any significant scope. With community self-financing removing this major barrier, it is believed that many more NGOs will be interested and able to enter the water development sector in roles ranging from technical support to management training.

One of the possibilities being considered for financing the foundation is an endowment fund. Interest income generated from the endowment would be used to finance the operations and programs of the foundation. This would allow the foundation to operate indefinitely without concern for its own financing. Among the sources of funding for the endowment that is being explored by CARE is the monetization of goods or products, such as wheat and fertilizer made available from CARE donor countries.

CONCLUSION

The staff of CARE Indonesia is convinced that the limited access to clean water supply in rural areas throughout Indonesia can be adequately and more rapidly addressed if communities are entrusted to take responsibility for it themselves. The limited resources that are available to government and donor agencies should not be used primarily to build grant water systems for communities. Rather, its limited funds should be used to increase the communities' awareness and improve the communities' organizational and managerial capacity to construct, operate and maintain their own water and sanitation systems. The priority of government should be to remove the barriers that prevent communities from obtaining credit, to allow them to finance the water systems themselves. In this manner it is believed that the ideals and objectives of the International Drinking Water and Sanitation Decade can more quickly be achieved.

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