

Landless Women And Poultry: The Brac Model in Bangladesh¹

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Abstract

On the background of the extreme poverty, most women of rural, landless households are subjected to in Bangladesh, an outline is provided of Bangladesh Rural Advancement Committee and the evolution, which led to its present poultry development model. The model is exclusively targeted at landless women and builds on GO-NGO collaboration. It involves women in a chain of activities as vaccinators, hatchery operators, chicken rearers, feed sellers, producers of hatching eggs and as producers of eggs for the market. Credit as well as marketing are integrated into the model. A recent survey has reported considerable positive impact both in terms of income and producer household egg and meat consumption. It is concluded that poor rural women can contribute to economic development as buyers and sellers of goods and services, by contributing to improved household income, and - as important - in the process their own self esteem is heightened.

KEY WORDS: Landless women, rural poultry, poultry development, BRAC, GO-NGO collaboration, impact

Introduction: Poverty in Bangladesh

That poverty is acute in Bangladesh does not need to be told: However, a few words on poverty will be useful to set the scene in which Bangladesh Rural Advancement Committee (BRAC) operates. Bangladesh has the unfortunate label of a case of endless poverty and deprivation. The proportion of the rural population living below the poverty line in the early 1990s has been estimated to be between 38 percent (Sen, 1995a), 48 percent (BBS, 1995) and 55 percent (Hossain, 1995). These single index measures hide a wide range of variation among the poor: the household food intake is gender biased with the females' consumption levels being between 71 and 90 percent of the males' (Khondakar and Chowdhury, 1995). The per capita food intake (1980 k.cal. in 1990-91) remains below the requirement (2273 k.cal.). The literacy rate is still low at 35 percent (for females it is 29% and for males 45%) (Hamid, 1995). Another indication of poverty is the real wage rate, i.e. kg. of course rice a day's money wage will purchase in rural areas, which has declined from 3.84 in 1987 to 3.24 in 1990 (Hossain, 1995a). Land, which is the single most important resource in the rural areas, is distributed very uneven with 50 percent of the households owning none or less than 0.50 acre. At the same time, for around 60 percent of the rural households agriculture (cultivation and source of employment) is the primary source of income (Sen, 1995).

Access to credit has been identified as a major mechanism with which a household can improve its economic condition (Rahman, 1989; Khondakar and Chowdhury, 1995). The rural households in general and the landless in particular have very little access to institutional credit. In the late 1980s less than seven percent of the landless and 14 percent of all rural households had access to institutional credit including NGO programmes (Rahman, 1989). Given this, it is not surprising that the women in rural areas virtually had no access to institutional credit until the 1980s.

Since the beginning of 1980s some specialised programmes were launched to provide financial support on credit basis to women, who in their turn have proved themselves to be "bankable" (Rahman 1989; Hossain and Afsar, 1989). Along with the expansion of credit availability

in rural areas and for women in particular through expansion of commercial banks and non-governmental programmes, other positive changes are worth noting. One of these is the expansion of safe drinking water to 87 percent of all households (Sen, 1995b). An important change is the improvement in the nutritional status of children under five years of age : the figures for stunting and wasting have declined from 74 % and 22 %, respectively in 1975 to 43% and 13 % in 1991 (Khondakar and Chowdhury, 1995).

BRAC: the Organisation

In 1972, following Bangladesh's War of Independence, BRAC worked on the resettlement of refugees in the Sulla area of Sylhet district (the administrative units in Bangladesh in descending order are country, division, district, sub-district or Thana and Union Parishad) in the north-eastern part of the country. It organized relief and rehabilitation for war victims whose homes, cattle, fishing boats and other means of livelihood had been destroyed. What made BRAC set out on its remarkable journey was the realization that relief-oriented activities could only serve as a stop-gap measure. From then on the new pledge was to provide sustainable measures to improve the conditions of the rural poor by developing their ability to mobilize, manage and control local and external resources by themselves. BRAC's programmes have never been determined by a rigid set of strategies. The organization's success is attributable largely to its flexibility in responding to the needs of the people (Lovell, 1992).

Another factor that has contributed to BRAC's transformation is its capacity to learn through trials and errors. In 1973, BRAC adapted in its work the basic rural development community strategy, focusing on entire village communities. It was at this point that BRAC realized that in fact, there was a community within the larger village community comprising the poor. By 1976, it therefore became apparent that the community approach would not work, as the poor who outnumbered the others in the community benefited very little from the interventions. This was because those who owned land and other productive assets were able to secure for themselves the larger share of the benefits. From here on began BRAC's

involvement with the poorest of the poor - the landless, small farmers, artisans, and vulnerable women. The time had also come to fix the organization's goals which were identified as:

A. Poverty Alleviation

B. Empowerment of the Poor

BRAC's Programmes

BRAC's definition of the poor refers to those people who own less than half an acre of land (including the homestead) and to those who earn their living by selling manual labour. Efforts to empower this group have been evaluated and adjusted many times over the years in the light of BRAC's growing capacity and the needs of the programme participants. Today, working as a development organization in the private sector, BRAC strives to attain its two goals by implementing such programmes as:

1. *Rural Development* which involves development of village organizations of the poor, credit operation, and facilitation of savings' habits. The village organizations are designed to mobilize the collective strength of the poor with a view to empowering them to be self-reliant. BRAC has a Human Rights and Legal Education Programme to further the initiatives aimed at empowering the Village Organization members. BRAC's Rural Development Programme implements these initiatives along with several income and employment generating programmes, designed particularly for the women village organization members. These women are provided with credit and training to carry out their activities. There are also some special programmes that have been introduced under the Income Generation for Vulnerable Group Development and Small Holder Livestock Development Programme initiatives. These too are implemented through Rural Development Programme.

2. *Education* initiatives in the form of the Non Formal Primary Education Programme for the children of the disadvantaged rural people.

3. *Health Programmes* addressing the health and nutritional status of women and children. These initiatives seek to develop and strengthen the capacity of communities to sustain health related activities.

4. *Administrative and Technical Support Services* that facilitate BRAC's programme activities, e.g., training, research, monitoring, the "Aarong"

marketing outlet, publications, public affairs & communication, accounts & audit, logistics, computer service, and construction service.

5. Furthermore, in order to attain budgetary self-reliance the organization has set up its own revenue generating enterprises i.e., the BRAC Printing Press, BRAC Cold Storage and the BRAC Garments Factories.

Of the 86,038 villages of the country, BRAC's Rural Development Programme covers 35,961 with the Education Programme coverage in 16,946 and the Health and Population Programme in 12,056 villages. In certain areas these three programmes overlap.

The management system within BRAC is participatory and decentralized, and programme planning draws upon the experience and expertise of workers at all levels. Women comprise 23% of the staff. Founded by Mr. Fazole Hasan Abed in 1972, BRAC has now grown into an organization in which capacity building of the individual worker and the programme participants is given the topmost priority. BRAC also attaches the utmost importance to the institutionalization of the organization so that it may withstand and overcome the challenges of the future.

The State of the Poultry Sector in Bangladesh

The poultry and livestock sectors are integral parts of the farming systems in Bangladesh. There are about 90 million chicken and 12 million ducks in the country. About 89 percent of rural livestock households rear poultry and the average number per household is 6.8. It is an important source of cash income for the poor rural families, particularly for women. Most birds are kept in a scavenging system and are fed on household waste and crop residues. The predominant poultry breed in Bangladesh is the local. The productivity of the hen is about 40-60 eggs per year. Some other exotic breeds such as Rhode Island Red, White Leghorn, Barred Plymouth Rock, Australorp and Fyaumi are now available in the government poultry farms. There are six government hatcheries in Bangladesh which produce day old chicks, but there is no distribution system in rural areas. These exotic hatching eggs and day old chicks are now distributed to BRAC project areas to develop the local breed. There are some commercial farms in Bangladesh, where the

production cost of eggs and meat is comparatively higher than of eggs and meat produced in scavenging system.

The annual growth rate in the chicken population was 6.5% between 1990-94 (Alam, 1996). The annual per capita egg consumption was only 23 although it should be 100 from a nutritional point of view. For optimal productivity, the high yielding varieties (HYV) of poultry requires improved feeding, but presently the feed which is prepared in the government farms is far less than the need and consequently balanced feed is not available in rural areas.

The prevailing poultry diseases in Bangladesh are Newcastle, Fowl Pox, Fowl Cholera, Fowl Typhoid, Coccidiosis, deficiency diseases and worm infestation, etc. Without interventions, the mortality rate of the poultry in the scavenging systems is high (35% to 80%) due to diseases and predators. In spite of 4 types of important vaccines are produced in Bangladesh, remote rural areas are not served due to lack of service delivery mechanisms. There are only four field staff and one livestock officer at sub-district level and they are responsible for about 200,000 poultry, 50,000 cattle and 20,000 sheep and goats.

Government institutions that are responsible for the delivery of support services in the rural areas are not geared to assist BRAC's target group. There is thus a need to assist particularly the landless in their efforts to earn an income and to the extent possible, improve their long term potential for deriving income from sustainable agricultural practices. In remote areas where government services are not operative or inadequate, BRAC collaborate with the government machinery to extend the service delivery system by developing and using local manpower.

Summary of the Constraints and Major Issues in the Poultry Sector:

- High mortality of the scavenging bird.
- Low productivity of the local hen.
- Unavailability of cheap sources of HYV birds at village level.
- Supply of vaccines in remote rural areas.
- Health and veterinary care is inaccessible for the village women.
- Poor poultry rearing and management system.
- Unavailability of some feed ingredients.

- Lack of organized marketing mechanism.
- The government livestock service delivery system is inadequate and inefficient.
- The vast majority of women are left out of the formal credit system.

The Scope of Poultry Development

The possibilities for women's participation in poultry development are as follows:

1. About 70% of the rural, landless women are directly or indirectly involved in poultry rearing activities. Traditionally these women have some experience in poultry rearing, which therefore represent skills known to them.
2. BRAC has proved that homestead poultry rearing is economically viable. If the landless women are properly trained, supported with credit and other necessary inputs and made to operate under supervision of extension workers of both Government and BRAC and the Government machinery are activated to provide for the delivery of services, the poultry sector could be one of the most productive sectors.
3. Poultry rearing is suitable for widespread implementation as it is of low cost, requires little skills, is highly productive and can be incorporated into the household work.
4. There are few or no job opportunities for the landless, disadvantaged women. Poultry is the only activity in which a large number of landless women can participate.
5. In the small scale poultry units which support the landless, production per bird may be low, but distribution of benefits will be more equal and have great human development impact.
6. Poultry rearing is culturally acceptable, technically and economically viable. Moreover, the ownership of poultry is entirely in the hands of women. This is an asset over which the poor women actually have control. This activity can therefore play an important role in poverty alleviation which is the main goal of BRAC.

Development of BRAC's Poultry Programme

Evolution of the Poultry Programme

The history of BRAC's efforts to develop a poultry programme design can be divided into three phases, i.e. formative, development and replication (see for details in Mustafa *et al.*, 1993). These relate roughly to an eleven year timeframe during which the programme continuously underwent changes and fine tuning.

Formative Phase.

In the late 1970s BRAC identified poultry rearing as a source of income for the landless, particularly destitute women. A high mortality rate for poultry in Bangladesh, combined with its relevance as an income generating activity for poor women, led BRAC to carry out participatory 'action research' aimed at increasing productivity.

Initially, efforts were made to increase the productivity of local poultry by cockerel exchange, but this system with improved cockerels for crossbreeding failed since the improved birds tended to be sold and mortality remained high. In order to reduce bird mortality BRAC initiated an action research in its Manikganj project area. BRAC staff regularly vaccinated poultry birds in the five intervention villages for one year. The positive results in terms of reduction in mortality and increase in bird population led BRAC to realise that vaccination must be an integral part of any intervention to promote poultry rearing as an income earning source.

It was decided to involve women group members in vaccination work and allow them to vaccinate for a fee, using vaccines supplied free of cost from the Government.

It was observed that the pullets supplied by the government and other farms, like the cockerels also suffered high mortality in the scavenging system. It was therefore decided to buy day-old chicks from Government farms. Selected, trained and supervised by BRAC, rural women were to rear the day old chicks for two month on their homestead plots and thereafter sell them to key rearers. The advantage was that the two months old chicks released into the scavenging system survived to a much

higher degree as mortality in chicks is particularly high in the two first months after hatching in the scavenging system. From BRAC's point of view it was an advantage that this arrangement did not require more BRAC staff.

Between 1978 and 1982 the poultry programme of BRAC had no model or design, it was done on an ad-hoc basis. The focus changed from 1983 to supply of improved chicks, prevention of common diseases and training in improved scavenging based rearing. The following model was developed: * One poultry worker (vaccinator) for every 1000 birds. The poultry worker is given a five day training on preventive and curative aspects as well as rearing management. * Vaccinations to take place at dawn. * 10 key rearers in each village keeping one HYV cock and ten hens, trained in the improved scavenging rearing management. * Model rearers with three cocks and 20 hens. * Chick rearing units (CRUs) at the level of a cluster of villages, each with a capacity to nurse 200 day-old chicks for two months. * Feed production centres at the level of a cluster of villages to supply feed to the programme participants who are all women. * In late 1980s, two more components were added to this early model: egg merchants to protect the producers from middlemen, and experiments are underway, from 1993, to create the supply sources of day old chicks through hatchery operators.

Development Phase

Having developed a model for rural poultry development, the District Livestock Office in Manikganj (60km from the capital Dhaka) was approached for cooperation by BRAC's project staff. Between 1983 and 1985 an informal collaboration developed in Manikganj whereby the Government officers supplied vaccines and provided technical advice on the chick nursing units. After extensive evaluation by officials from the Directorate of Livestock Services in Dhaka the BRAC model was accepted as viable and replicable. Based on this experience the model was tested further.

Between 1985 and 1987, the model was tested in 54 Area Offices of BRAC's core Rural Development Programme. The Sub-district Livestock Officers in the respective areas ensured the supply of vaccines to the

participants through the Area Offices of BRAC in 32 Thanas. This produced positive results in terms of increased income for the participating women, a reduction in mortality rates and an increase in bird population. Through the intermediation of BRAC the government structure was brought closer to the people.

In 1987 BRAC integrated the experiences of poultry development collaboration and the Government food aid for destitute women, into an independent programme. The Income Generation for Vulnerable Group Development Programme was launched in August 1987, in collaboration between BRAC, the Departments of Livestock and Relief and Rehabilitation, and the World Food Programme (WFP).

In 1988, it was found that the income earned by the rearers was very low because the participants were able to buy only one or two HYV birds. This prevented development of crossbreeds and improved productivity, resulting in slow generation of income. In the late 1980s credit support for poultry rearing was introduced in BRAC.

Having incorporated the credit component, efforts were directed at *sustainability*. The range of income generation activities are being increased so that the beneficiaries can undertake additional enterprises, which need not be related to poultry. To support this the credit operation is also being scaled up. The interest earnings from financial operations and service charges to be levied for technical services, are estimated to cover the major portion of the programme costs. Furthermore, the need for technical services from BRAC is expected to decline over time as the beneficiaries become adept at using different technologies.

The Programme Framework

Through the process of "learning by doing" BRAC identified a framework for rural poultry development the aim of which is to enhance the income earning capability of very poor women.

Table 1. Programme Framework: The steps

Subject and Objective	Methods
1. Check the bird mortality in order to create a favourable environment, so that the people are interested to rear poultry	<ol style="list-style-type: none"> 1. Selection & Training of beneficiaries 2. Develop poultry worker 3. Regular supply of vaccine & medicine 4. Motivate the people for vaccination of their birds
2. Upgrading of local breed in order to increase production and income	<ol style="list-style-type: none"> 1. Training and development of key rearers 2. Supply of HYV birds through establishment of chick rearing unit 3. Supplementary feed supply
3. Marketing facilities in order to ensure Reasonable price of egg to key rearers	<ol style="list-style-type: none"> 1. Develop egg collector
4. Permanent net work development in order to develop self supported programme	<ol style="list-style-type: none"> 1. Improve management system components such as housing, feeding, rearing etc. 2. Medium scale poultry unit development such as model rearer to produce hatching eggs 3. Set up of small rice husk hatcheries 4. Service charge
5. Credit facilities in order to start the poultry enterprises just after completion of training	<ol style="list-style-type: none"> 1. Small scale credit to the rearers
6. Involvement of Government in order to increase access to Government resources & services for the poor women	<ol style="list-style-type: none"> 1. Delivery of input and other support service 2. Coordination meeting with Govt. staff

BRAC's Poultry Development Programme

Objectives

The programme aims to provide the women an entry point to diversify income earning and employment opportunities through training in poultry activities in order to improve their socio-economic situation.

Specific Objectives of The Programme

1. Integration of poor village women into poultry rearing activities, so that they can earn a monthly income of at least Tk.200 (US\$ 5).
2. To reduce poultry mortality from 40-85% to 15%
3. To increase the poultry population.
4. To introduce crossbreeds and increase the production of eggs and meat.
5. Improve the protein intake level of the rural poor.

Methodology and Development Model

Considering the steps described earlier, BRAC designed a specific model for poultry development from the practical experience in 1983, which was accepted by the Government as a model for poultry development. The approach consists of an integrated package support to the rural women and includes the following:

Selection

BRAC through its Rural Development Programme organizes the landless women into groups. There are 45-55 members in each group out of which 30 are selected for poultry activities and provided different types of training on poultry rearing and management.

Training

(a) *Poultry Workers*: One woman group member is selected from each village and given 5 days of training on poultry rearing, management, vaccination and treatment. The poultry workers are engaged in vaccination and treatment of birds in their respective villages. Once in a month they attend one day refresher courses and they receive poultry

vaccine and medicine twice a month. The workers charge Tk. 0.25-0.50 per bird attended to as a fee.

(b) *Key Rearers*: They are given three days of training on ideal methods of poultry rearing. Every key rearer must have one HYV cock and 10 hens (of which 4-5 HYVs) and a good housing system.

(c) *Chick Rearers*: Chick rearers are given 7 days of training. They rear 200 chicks from day old chicks till two months of age and sell them to the key rearers. The chick rearers are supplied with chicks from the Government farms, BRAC's own farms and the poultry hatcherers (see (f) below).

(d) *Feed Sellers*: One poultry feed sale's centre is established in each area. With the spread of HYV birds, people are gradually getting accustomed to buy balanced feed. Feed producers receive three days of practical training on feed preparation. She prepares poultry feed with ingredients from locally available sources under close supervision of BRAC.

(e) *Model Rearers*: They are given three days of advanced training on poultry rearing and management. They rear HYV 22 hens and three cocks, and produce hatching eggs which are supplied to the poultry hatcherers.

(f) *Poultry Hatcherer*: To meet the demand of day old chicken, five small hatcheries operated by the rice husk method are established in each area, the capacity is about 5000 chicken per month. The hatching eggs are purchased from model rearers through egg collectors.

Input Supply

(a) After completion of training, the poultry workers are provided with vaccination kits. There are specific dates for vaccine distribution. Vaccines are supplied by the Government and distributed twice a month to the vaccinators by the Government veterinary staff. All poultry workers come to the Union Porishad to collect their vaccines. Initially the Government field staff did the vaccination work by themselves, but now the strategy is that they are responsible for distribution of vaccine instead of doing the vaccination work. (b) Medicines are supplied by BRAC at cost price each month. Initially, medicines worth Tk. 25 are given per

poultry worker as a revolving fund from where they buy and sell the medicines. (c) Day old chicken are supplied by the Government to BRAC and BRAC distributes them as per requisition. BRAC also assists in distribution of the day old chicken produced by the rice husk hatcheries. (d) The eight week old chickens are sold from the rearing units to the key rearers from BRAC or Union Parishad offices. (e) To ensure complete feed, BRAC supplies ingredients like fishmeal, sesame oil cake, vitamins etc. at cost price to the feed sellers. **MARKETING** There are 10-15 egg collectors for each area who are responsible for buying eggs at reasonable prices from the group members and marketing of the eggs.

Credit

To ensure proper utilization of the skills imparted during training, BRAC provides credit as initial investment capital to start poultry or chick rearing, feed selling, egg collection and hatchery activities. **COORDINATION WITH GOVERNMENT** To cooperate with Government and to ensure smooth implementation of the programme, BRAC has one Project Officer (livestock) for every 10 areas and one Project Assistant for each area office. BRAC's staff are responsible for initial surveys of participants, motivation, group formation, training and credit to the group members. The Government staff is responsible for training and input supplies.

Institutional Arrangements

BRAC's poultry programme is also a case study in multi-agency action between the State, the Aid Community and BRAC (Mustafa, 1993). The poultry programme was developed in close cooperation with the Directorate of Livestock Services of the Ministry of Livestock and Fisheries, Government of Bangladesh, an interaction, which began in the formative phase of programme development. Thereafter the Aid Community joined hands with Directorate of Livestock Services and BRAC, firstly the World Food Programme (WFP) and later the International Fund for Agricultural Development (IFAD) and Danida. The institutional arrangement for poultry development by BRAC has two

aspects: (a) the providers' aspect, and (b) the implementation aspect. BRAC and Directorate of Livestock Services work with the aid community under different arrangements: with the WFP and the Ministry of Relief and Rehabilitation in one set, and with IFAD and Danida in another set of arrangements, for the implementation of the programme. With respect to the implementation aspect the programme is executed by three organizations:

- a) BRAC implements the programme through its Rural Development Programme in the latter's permanent operational areas.
- b) In collaboration with WFP, the local government (Union Parishad) and the Ministry of Relief and Rehabilitation, which is targeted specifically at the destitute women who receive food aid from the Government under Income Generation for Vulnerable Group Development.
- c) BRAC is a partner in the implementation of the Smallholder Livestock Development Programme.

The last two arrangements may spatially overlap BRAC's core programme for rural development.

Rationale for Collaborative Action

A brief discussion on the reasons why the different agencies came forward to work together will contribute to a better understanding of a phenomena that was encouraged by the donors in the late 1980s. The limitations of the government structures and the comparative advantage of NGOs like BRAC in reaching the poor provided the motivation for joint action to develop.

Limitations of the Public Sector

The emergence and the proliferation of non governmental organisation (NGOs) in Bangladesh and elsewhere in South Asia, has been explained as a response to the fact that the State has had limited success in meeting the needs of the rural poor - particularly the women. A recent review of experiences of agricultural technology development in South and South-East Asia, has identified three broad trends:

- Limited public sector success in meeting the needs of the rural poor.
- The recent establishment of a large number of NGOs which claim advantages over the public sector in reaching the rural poor.
- The increasing weight attached to views that the prospects of successful change are enhanced if the poor participate in its design (Farrington and Lewis, 1993)

The Independent South Asian Commission on Poverty Alleviation (ISACPA) also pointed out the failure of the Government initiated programmes to reach the poor. The Commission identified the following among other reasons for this: "Conventional top-down development strategies, inequitable distribution of assets, inaccessibility of the poor to technological innovations and finance, the misuse of development resources and viewing the poor as a liability". These factors obviously led to the exclusion of a large number of poor from benefiting from Government initiated programmes and hence to their increasing marginalisation (SARC, 1992).

Comparative Advantages of BRAC and the State

The Government structures which extend to the sub-district level and that are relevant for BRAC's poultry programme are the Ministries of Fisheries and Livestock and of Relief and Rehabilitation. The two are briefly described below with a view to identify the weaknesses in them.

The Directorate of Livestock Services, Ministry of Fisheries and Livestock, is the sectoral Government structure whose line functions extend to the Union level. The Directorate of Livestock Services is the Government agency responsible for promoting livestock and poultry development in the country.

The Directorate of Livestock Services has several constraints of its own, particularly inadequate manpower, to cope with the magnitude of the tasks involved. The activity spectrum involves providing of development inputs, training of beneficiaries, prevention and cure of diseases of the animals and birds.

The workload of the present Thana Livestock Development Complex staff appears to be quite heavy as it includes delivering services to around

40,000 households owning over 40,000 cattle, 20,000 goats and 150,000 poultry. This is excessive by any standard of user:provider ratio. As a result, the extent of coverage has obviously been limited and confined virtually to prophylactic treatment i.e., vaccination (Samdani, 1991).

The Directorate of Relief And Rehabilitation under the ministry of the same name, is responsible for providing emergency relief at times of natural disasters, for implementing the "Food for Work" programme during the slack employment season, and for the Vulnerable Group Development (formerly Vulnerable Group Feeding) Programme throughout the year. In terms of the number of beneficiaries the Vulnerable Group Development Programme administered by the Directorate of Relief and Rehabilitation is perhaps the largest. Some 450,000 families in rural Bangladesh are recipients of a monthly income transfer ration of 31.25 kg of wheat for a period of two years. However, the programme has virtually turned into a relief and welfare programme as the target women received wheat only because of lack of adequate personnel for extension services, technical ability and other resources.

The Union Porishads are one of the mechanisms for the distribution of food relief. With one chairman and nine members, directly elected by the rural population, they are close to the recipients of food aid. Village level developmental activities, such as infrastructure construction, are organised through the Union Porishads. The representatives are also involved in health and family planning activities. For all of their developmental activities and resources they are entirely dependent on the respective governmental structures at the sub-district level.

Disfunctioning Government Structures Questions of disfunctioning arise when structures exist, but do not deliver their services to a large segment of the population. In particular, the rural poor men and women are not reached by the services provided by government structures.

In the context of agricultural technology development, a recent six-country study of NGO-State collaboration has found that NGO

approaches emphasise those areas in which "Government services have either disregarded the needs of the poor or have responded to them inadequately". These areas include:

- Technologies and management practices adapted to difficult areas
- Technologies to meet the needs of the rural landless
- Technologies to meet the specific needs of women
- Approaches that "de-mystify" complex technologies and make them suitable for neglected groups
- Approaches helping to form local groups which then carry forward the technology in a sustainable fashion, linking in with input supplies and markets (Farrington and Lewis, 1993).

These general comparative advantages of NGOs in Asia, are also applicable to the concrete situation in Bangladesh and BRAC in particular. The government has traditionally concentrated on the physically favourable areas, large scale lumpy technologies, literate male farmers, emphasising the individual, and so on. Such an orientation reaches only a few and thus diverts resources away from a large number of people. On the other hand the BRAC approach considers people as active participants in development, emphasises the poorer section, particularly women and adapts existing technology to the specific condition of the poor (Mustafa, 1993).

Implementation Arrangements

At the top level the poultry development programme is led by a senior manager who is reportable to the Director of Field Operations. At the implementation level three separate organisations with different funding sources, are engaged.

BRAC implements the poultry programme on its own through its Rural Development Programme which is a multisectoral intervention that comprises group formation, social development, credit and sectoral programmes such as fisheries, agriculture and livestock. Poultry development is part of BRAC's livestock sector development programme. It is implemented through the area offices of the Rural Development Programme.

The organisation of the Income Generation for Vulnerable Group Development Programme focuses primarily on the poultry sub-sector and its beneficiaries are the destitute women who receive the two-year long wheat ration from the Ministry of Relief and Rehabilitation. A part of the food aid from the WFP is used to provide the ration and another part is monetised to establish the Revolving Loan Fund. The Revolving Loan Fund is managed by BRAC staff. The management cost is primarily borne by the Rural Development Programme's budget for 'special programmes'. The officers of the Directorate of Livestock Services provide technical supervision. The role of the local government (Union Parishad) is to select the relief recipients (whose eligibility is verified by BRAC), distribute the relief, provide space for training and motivate villagers on the need for poultry health care. Coordination committees which are comprised of representatives from the Government, the WFP and BRAC, exist at four levels i.e. national, district, sub district and Union.

In 1993 a new organisation was set up to undertake poultry development on a large scale, jointly by the Government's Directorate of Livestock Services and a number of NGOs including BRAC. The funding sources of the Smallholder Livestock Development Programme are entirely different from the two above. IFAD extends soft, long term loan to the government for training and for the Revolving Loan Fund, through Bangladesh's central bank. The Bank on-lends the fund to a) the Directorate of Livestock Services which then finances the training activities undertaken by the NGOs, b) the Bangladesh Krishi Bank which on-lends to the participating NGOs who conduct the credit operations. The social development activities such as group formation, awareness building and other human resource costs are met by Danida on a grant basis. The Smallholder Livestock Development Programme is implemented in 80 sub-districts (out of a national total of 460) of which BRAC is responsible for 66. After the expiry of the Smallholder Livestock Development Programme the groups which are formed will become part of BRAC's core programme for rural development.

Impact of the Poultry Programme

A recent evaluation of the Smallholder Livestock Development Programme (Alam, 1996) reports positive improvements for the beneficiaries. The findings of the assessment are summarised below:

Poultry and Breed

The number of poultry reared per farm in 1995 was 17 for key rearers, 11 for chick rearers, 32 for model rearers, 10 for poultry workers, 10 for feed sellers and 11 for mini hatcherers. The average number of poultry reared per farm was 16 which was much higher than the national average (of 6.8 in 1988-89).

All birds reared by different categories of beneficiary households were classified by type of breed. It was observed that 47.4% of all birds was of the improved type while 52.6% was local. The percentage of improved breed was highest for model rearers (79.2%), followed by mini hatcheries (57.0%), key rearers (44.8%), feed sellers (42.7%) and poultry workers (39.7%). In the case of chick rearers, all chicks were identified to be of improved breed. Considering the national average figure for improved breeds of chicken is at around 5%, one can safely conclude that the Smallholder Livestock Development Programme has contributed substantially to breed improvement in the areas it covers.

One of the objectives of the Smallholder Livestock Development Programme was to reduce the mortality rate of chicken in rural areas. The mortality rate of adult chicken was less than 3 percent for each category of farms and one can thus conclude that the Smallholder Livestock Development Programme has had a significant, positive impact on the mortality rate of chicken.

Income Generation

The repayment behaviour of group members suggests that the loans were properly used and that investment in Smallholder Livestock Development Programme activities was profitable. It was noted that the average net income per household from the Smallholder Livestock Development Programme activities was Taka 427 per month. The amount of income was highest (Taka 1047) for mini hatcherers followed by Taka 761 for

chick rearers, Taka 757 for feed sellers, Taka 500 for model rearers, Taka 394 for key Rearers and Taka 265 for poultry workers. The average monthly benefit/cost ratio was 1.5 : 1 for all farms. The benefit/cost ratio was highest, 3.86 : 1 for key rearers and lowest 1.06 : 1 for feed sellers.

Consumption

As the economic condition of the beneficiary households improved, one would expect that the intake of food by household members would increase after the intervention of the Smallholder Livestock Development Programme. The proposition was thoroughly investigated and analysed. It appears that the consumption of all food items increased after membership. The increase in consumption was substantial in the case of eggs by 159.6% for per week and of chicken by 137% per annum. With regard to consumption of eggs within the households, children, and especially boys, were given priority.

Decision Making

All the beneficiaries of the Programme are women. The Smallholder Livestock Development Programme has ensured employment and income for them and thereby enhanced their status in the family. Their relationships with their husbands have improved and their participation in decision making has increased. Sole decision making by men has declined sharply from 21% in the pre-project period to 2% in the project period. The evidence suggests that the socio-economic status of women within the household has increased after the intervention made by the Smallholder Livestock Development Programme, whereas no change has yet been registered with regard to the beneficiaries' status in the village society.

Conclusion

The poultry programme has made a significant contribution in raising the income level of disadvantaged women, who would otherwise be left without work. They are now an active work force and even if their income is not much, it helps to augment the meagre earnings of the family as well as improving their quality of life. For many it is the sole source

of income.

What is noteworthy about this programme is that poor, rural women can actively participate in the rural economy both as buyers and sellers of goods and services. Moreover, a strong linkage is developed with the Government services, which are now accessed. Another, more important aspect of the programme is the feeling of dignity, the women develop as a result of their participation.

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