Participatory Research, Education and Rural Farmers: A Case Study from Bangladesh

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Abstract: This paper will examine the issues of participatory research, education and agriculture development in the context of rural environment and sustainable development in Bangladesh.

Introduction

Participatory research is politically committed towards structural social change in order to dismantle the dominion of the minority group who control the wealth of the society. It is an active process in which disadvantaged groups are empowered through collective education and partnership for socio-economic and political development [Hall, 1996; Rahman, 1994; Selener, 1997].

I will begin this paper with a brief review of participatory research and the notion of a regenerative agriculture program. For the convenience of my discussion, my analysis will be based on this program which was implemented by Gono Unnayan Prochesta [GUP-People’s Development Efforts], a local Non-Governmental Organization in Bangladesh. Unlike many other programs, it was developed within the context of the rural environment and sensitivity to the socio-cultural conditions in Rajoir upazila [sub-district] of the Madaripur district which lies 250 kms southwest of Dhaka, the capital city. Finally, I will draw a conclusion from my discussion on regenerative agriculture and the empowerment of small farmers. I have conducted my field research between December 1997 to February 1998 in order to understand the process of participatory research and conditions of the rural farmers in the project area of GUP.

Participatory Research and Social Change

The participatory research approach allows marginalized people to generate their own knowledge from their daily experiences in order to liberate them from social oppression. It sensitizes marginalized people to change their social conditions through a collective effort in their society [Rahman, 1994; Selener, 1997; Tandon, 1988]. In the view of Hall [1996];

Participatory research is a social action process that is biased in favor of dominated, exploited, poor, or otherwise left-out people for social change and empowerment. It sees no contradiction between goals of collective empowerment and the deepening of social knowledge. The concern with power and democracy and their interactions are central to participatory research [p. 187].

The main thrust of participatory research is to increase the level of understanding and capacity of the people through cooperative learning so that they can change their situation through collective action within their own socio-cultural environment. This form of research systematically tries to understand the issues from the perspective of target participants. Both the researcher and the people are involved in the process of sharing and learning with the
commitment to social change. This process helps both groups at an equal level to build knowledge and act collectively to improve the conditions [Hall, 1979; Tandon, 1988].

**Gono Unnayan Prochesta: Regenerative Agriculture and Rural Farmers**

Gono Unnayan Prochesta [GUP], a local NGO started its agriculture programs in the Southwestern part of Bangladesh in 1974 with the objective to increase agricultural production in order to reduce malnutrition and poverty in the Rajoir upazila of Madaripur District. This was done through the distribution of material inputs [seeds and seedlings] and organized training for the farmers on the production of new crops and technology. Although GUP initially encouraged the farmers to cultivate high yielding varieties [HYV] of crops and to use chemical fertilizers to grow more, this was discontinued after their realization of the adverse consequences to the farming sector. Having realized the adverse and severe effects of modern agriculture, GUP initiated a regenerative agriculture program for small and landless farmers in the late 1980s in its project area. Regenerative agriculture is considered to be ecologically appropriate, economically viable and relevant to the rural farmers. Regenerative agriculture embraces natural practices and seeks friendly coexistence with the environment and all creatures. By providing education on regenerative agriculture, GUP gives emphasis to an alternative agricultural development process in which local resources can be used effectively by the small and landless farmers. Such initiatives do not encourage the use of chemical fertilizers and pesticides. Rather, farmers are encouraged to use organic and botanical pesticides on their farmland [Ahmed, 1995; Barua, 1999]. The regenerative agriculture program involves both the female and male farmers of the Rajoir area of Madaripur district of Bangladesh. Since the inception of this program until 1990 alone, 264,000 farmers were trained by GUP [Akther et al 1991]. The farmers’ cooperative is mobilized in the villages where they are able to share their own knowledge and experiences on a regular basis without the dominion of experts.

**Participatory Research, Education and Rural Farmers**

This dialogical process of education is based upon the indigenous knowledge of the farmers rather than the modern dominant agriculture paradigm [Freire, 1973]. In the process, dialogical education and reflection sessions were introduced into the agricultural program of GUP as a means to critically analyze the project’s interventions in order to better understand the daily realities of the farmers and to value and sustain their knowledge in the villages. The program planners were careful not to impose their own knowledge in the knowledge building process. The extension workers/organizers of GUP work with the farmers on an equal level in developing a regenerative agriculture program within the villages. The initiatives of the rural farmers were always given a priority. Dialogue was the key tool used to identify the problems and to generate relevant knowledge in order to discover an alternative to external dependency. This reflection was mainly centered on the process of action-reflection-analysis through a group learning session every seven days. This session was organized around open dialogue with circular questioning and role play techniques on the issues of farmers participation, inter-crop pattern, use of organic fertilizers, pesticides and the use of local resources. The session inevitably encouraged farmers to use the local cultural media such as story telling and proverbs which are orally available in the villages. During these weekly learning session, all the samity [cooperative] enlisted farmers and extension workers sat together to find collective solutions for the development of agricultural program in the context of the village culture and society. Most importantly, this weekly learning session was adopted as a continuous process of learning and
relearning so as to realize the implementation of extension education in the villages. Besides regular learning and reflection sessions, the project also encouraged extension workers/organizers to maintain a diary in order to observe the change and record the problems within their operation areas. Over the years, GUP was able to create quite a unique environment of collective learning with the farmers. This process created significant change among the rural farmers in the villages of Rajoir in Bangladesh. It not only changed the economic conditions of the farmers but it also initiated a new dimension in the development of partnership between men and women in the villages [Barua, 1999]. Having used action-reflection sessions as a process for critical learning in the regenerative agriculture program, GUP was able to encourage farmers to organize their own farming in the context of their Bangladeshi village culture. In the following section, I will critically analyze the issue of an agricultural program based on the reflection of two small farmers of Rajoir project area of GUP.

**Agricultural Modernization, Dependency and Destruction of Nature**

Non-formal education for agricultural modernization was initiated in the 1960s to educate and train rural farmers so they could attain high economic growth and increased agricultural production as a result of the success of the ‘green revolution’ in the North [Barua, 1999]. This growth-oriented agricultural development program encouraged the rural farmers to increase rice production through the use of mono crop. This strong trend in favor of mono crop [such as the high yielding variety of rice] production eventually led to its occupation of up to four-fifths of the cultivated land in Bangladesh. However, this mono crop bias not only failed to provide benefit to the small farmers, but also acted as an obstacle to the attainment of total socio-economic development of the country [Ahmed, 1988]. This growth oriented model, subsequently encouraged farmers to introduce costly chemical fertilizers and pesticides on to the farmland for the production of their crops. Modern agriculture has essentially replaced the local crop varieties. Due to the promotion of mono crop, Bangladesh has lost about 7,000 diverse indigenous varieties of rice [ENCNGO/ADAB, 1992]. These diverse varieties of rice were developed by the farmers for centuries in the context of the deltic environment of Bangladesh. Despite this fact, education programs for agricultural modernization virtually marginalized the rural small farmers and helped the urban-based traders and business people to make a profit in Bangladesh. Jarimon [1998], a rural woman farmer, describes that;

Five years ago, I could not feed even one meal a day to my children. My husband used to cultivate a high yielding variety of paddy, but he had to discontinue because it was too costly to produce and it was difficult to survive. In the past, we also used chemical fertilizers and pesticides for the production of the paddy but we could not afford it because of the high price of fertilizers [Quoted in Barua, 1999:85].

The use of chemical fertilizers has increased from 2 million metric tons in 1990/91 to 3.02 million metric tons in 1995/96 in an effort to boost agricultural production. The enormous use of chemical fertilizers and pesticides has also reduced the soil fertility. “Fertilizer use at the farmers level is dominated by urea [70%] followed by TSP and SSP [20%] and MOP [10%] causing damage to the soil structure and thereby reducing per acre production of various crops” [FFYP-5, 1997-2002:xiii-11]. The consumption of urea has increased tremendously from 559 thousand metric tones in 1980/91 to 1.7 million metric tones in 1994/95 [Mahamood, 1995]. The utilization of chemical fertilizers has increased 7.5 times in the last twenty years. At the same time, the price of chemical fertilizers has increased 4 times in the last twenty years.
Concurrently, the cost of pesticides has also increased 10 times in this same period [ADHUNA, 1997]. Despite the massive increase in the use of chemical fertilizers and pesticides, the production of boro has actually declined 22.2 times in last 10 years [ADHUNA, 1997]. These statistics indicates that the production of boro declined at the rate of 3 percent per year. Furthermore, it was observed that the production of HYV rice per acre was reduced by 10 percent from 1971 level, despite a 300 percent increase of chemical fertilizer and pesticide use in per acre of land [ENCNGO/ADAB, 1992]. Sona Mia, a landless farmer confirms that;

If one uses chemical fertilizers and pesticides for agriculture, he would have to distribute this every 16 days. In such a situation, one would only be occupied with the purchase and distribution of fertilizers and pesticides. If this continued, his life would be ruined” [Quoted in Barua, 1999:85].

Such modernization has not only marginalized the rural farmers and created dependency on the external inputs of the so-called ‘experts’, but it is also disrespectful to the land and nature.

Regenerative Agriculture and the Empowerment of Farmers

The relationships among the farmers are collective rather than individualistic. They have their hopes and very realistic dreams within their local context. It is not a question of competition among the farmers; rather, it is a matter of collective living for their survival in life. Each farmer does not need to use a large area of land, but instead can use a small section of land to cultivate diverse crops all year round. The land cropping intensity is maximized with the available land space of the farmers in the villages. Their investment is less and they gain more economic benefit within their local environment. In such an environment, a small farmer can avail him/herself on this opportunity along with his / her family members for economic development [Barua, 1999]. Farmers could utilize their experience within their social context and according to their own needs and aspirations. Attention was given to the use of the local social context rather than creating meaningless infrastructures. Farmers can produce varieties of crops in each of the six different seasons of Bangladesh. These diverse varieties of crops could eventually enrich the soil’s fertility as well as the nutritional requirements of the rural people. Moreover, the farmers did not have to spend their time, money and energy distributing chemical fertilizers and pesticides on the farmland and crops. They are not dependent on outside forces. The farmers are actively engaged in developing their own conditions [Barua, 1999]. They found their means and ways to survive with ease within their unique social context, Jarimon [1998], a rural farmer, describes that;

….I received training on agriculture gardening, organic farming and process of soil preparation from the GUP. Since I have been involved in agriculture production my husband goes to bazaar [daily market] and hat [weekly market] to sell our vegetables. … This season I spent Taka [C$ 20] for seeds only and organic fertilizers which are produced from the waste of vegetables and cow dung. I earned Taka 6000 [C$200] this winter and had an average annual income of Taka 30,000 [C$ 1,000]. Moreover, I do not need to buy anything from the market except fish and meat. … I produce all year round [Quoted in Barua 1999:86]
Farmers maintain a mutual social relationship for their own survival in the village. Male landless farmers are generally encouraged to work on the farm with women without gender bias as they both intend to improve their socio-economic conditions. They work collectively in regenerative agriculture to ensure better economic returns for their family. For them, it is not a question of ‘men or women’, but rather a matter of communal living and harmony. Sona Mia, a male farmer reflects that; “My wife helps me in making compost and irrigating the garden” (Quoted in Barua, 1999:85]. The cooperation between women and men in the disadvantaged group is essential for their families. In the words of Barua [1999] “the relationship between the husband and wife among landless families in the Rajoir area is considered to be complimentary while at the same time, they are improving their economic conditions through regenerative agriculture” [p. 97]

Conclusion

In this paper, I have critically analyzed the agricultural program of GUP by examining the views and statements of two small farmers of Rajoir, male and female. I observed that the rural farmers could not afford to bear the higher costs associated with irrigation, chemical fertilizers and pesticides necessary for mono crop. Rather the freedom and autonomy of the farmer have become enslaved by global corporations in the name of high economic growth. On the other hand, it was observed that the initiative of the regenerative agriculture program through a participatory research has taken a new space in order to create a collective learning environment for the development of small farmers in Bangladesh. I believe that research can only be effective if participation of both the rural people and extension workers/educators is ensured within the program’s implementation without any imposition. It ought to be linked in all steps of the program on continuous basis for social change. For this, the system of decentralized program planning and operation is a must.

References


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