

Window of Opportunity: An Asset Based Approach to Community Development in Bangladesh

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The Rural Development Academy (RDA), Bogra, Bangladesh, runs a poverty alleviation project at the village of Hatea under Gaibandha district in the northwest of the country. This study was conducted in Hatea to identify the major underlying assets contributing to changes in the livelihood patterns of people in the community. A participatory approach was used for both qualitative and quantitative data collection between May and August 2010. Participants interviewed were engaged in income-generating activities such as livestock rearing, beef fattening, poultry rearing, biogas sales, organic fertilizer packaging and selling, fish farming, fish marketing, and agricultural and home gardening.

An asset based community development (ABCD) approach might help to reduce adverse impacts on the Earth due to climate change. People, families, communities, villages, countries, and continents may be limited resources, but the world has generous resources that we can manage and nurture properly in order to lead sustainable lives for present and future generations. However, a single person, family, community, village, country, or continent cannot manage global resources at a desirable level. In light of this situation, a comprehensive effort by groups of these entities through ABCD would help to open the window of community opportunity. In addition, the provision of interest-free working capital would especially help small and marginal farmers. Keeping in mind Bangladesh's national program of "One House One Farm," communities should be motivated by the benefits of multistory efficient housing for human and also for livestock, Use of such housing, with waste management amenities (e.g., biogas plants) and other modern facilities, should save land, encourage sustainable development, and preserve environmental quality. To ensure the healthy ecosystems of all beings, we should all bear the responsibility of sustainability, in which many windows of opportunity for present and future generations remain to be opened.

Key words: Window, community approach, Bangladesh

Introduction

Globally, poverty is a great challenge for us all because of our high dependence on climate. For a particular community reduction of poverty depends on equitable access to all assets at the appropriate time and at optimum levels. The assets-based community development (ABCD) approach is frequently credited with changing the paradigm that defines community development. The traditional approach starts with a struggling community's needs, problems, and deficiencies, and advocates solutions

through discovery and mobilization of the resources and strengths, or assets, to be found in even the most challenged communities (John McKnight, 2009).

In Bangladesh, agriculture is the most important sector of the rural community. It accounts for 19.6% of the national GDP and provides employment for 63% of the population (BBS, 2009). Sustainable agriculture is a means of sustaining the community. Floods and drought are common phenomena in Bangladesh and are compounded by soil degradation due to haphazard use of chemical fertilizers. According to the World Bank, arable land

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currently makes up 61.2% of the total land area of Bangladesh—a decline from 68.3% in 1980. Farms are becoming very tiny because of population increase. In this situation the ABCD approach may play a vital role in the community through the identification of assets and the maintenance of collective land ownership and inheritance regulations. Farming communities in Bangladesh usually have limited access to their limited assets. To ensure their continued existence, we need to explore total assets, including hidden potentials, and to make optimum use of them for the sake of the world community.

Jute is often called the “golden fiber” of Bangladesh. Bangladesh remains the world’s second-largest producer of jute (after India) and the world’s largest exporter of jute fiber. The Bangladeshi economy depends on the involvement of almost 3 million farms in jute production. The decline in jute production a decade ago was attributed to declining prices; now, jute farming is regaining strength and holds great potential.

Tropical rainforest is important for maintaining the ecological balance in Bangladesh, and forestry accounted for 1.9% of the GDP of Bangladesh (BBS, 2009). Forest covers about 17%, or 2.5 million hectares, of the country’s land area. Community-led forestation and livestock, poultry, and fish farming are important activities in this country and contribute both economic and nutritional value. Without community support and involvement, it would not be possible to run these enterprises in a sustainable manner. Over the last quarter century, we have become increasingly aware of the interactions between human societies and the natural environment in which they thrive and upon which they depend socially and environmentally. This reflects the reality that economic and social welfare does not stop at the market’s border, but extends too many non-market activities (Nordhaus, 1999).

The country is losing an estimated 1% of arable land per year because of climate change and urbanization, placing further pressure on long-term food security (DFID, 2005). Despite these numerous challenges, we performed an ABCD study to identify the assets and potential of rural communities and to illustrate how the community’s underlying assets can be applied to support development in a sustainable manner. The results of the study sug-

gested that a full understanding of farmers’ adaptive strategies should be adopted in the policy arena, and that the principles derived from this understanding can then be applied to development. The broad objective was to identify and manage underlying community assets towards the sustainability of agriculture and the environment.

The study was undertaken at the village of Hatea, in the Gaibandha Sadar upazila (sub district) of the Gaibandha district of northwestern Bangladesh (Fig. 1). This village is situated 280 km from the capital, Dhaka, and 8 km from Gaibandha district town. Hatea village was selected because the Center for Irrigation and Water Management (CIWM) of the Rural Development Academy (RDA), Bogra is running an action research project there. This village community is undergoing a typical experience of adaptation and sustainability in the face of a spatial situation known locally as *monga*, which refers to the yearly cyclical stresses of poverty and hunger in Bangladesh. The main characteristics of this *monga*-affected area are low-lying agricultural land, high livestock density, fertile soil with river erosion and a warm climate, and copious unemployment. Flood and drought are common phenomena, along with seasonal unemployment and food insecurity shocks.

Participatory approaches were followed both for qualitative and quantitative primary data collection. Data were collected from May to August 2010. The approaches used included the following: participatory rural appraisal (PRA, with different age groups), key informant interviews, focus-group

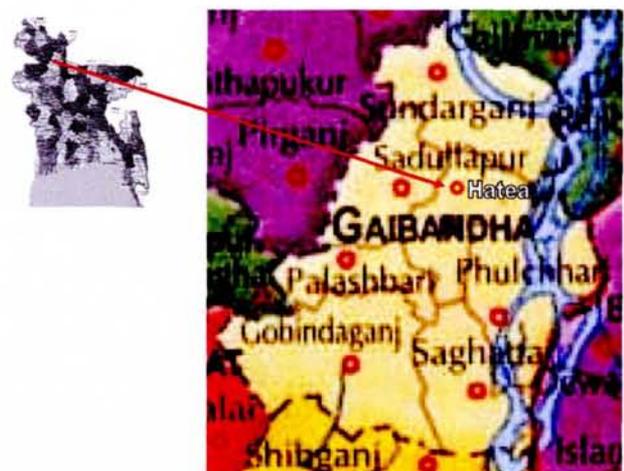


Fig. 1. Map of Bangladesh, Showing Study Location.

discussion (FGD), checklists, and field observation. A pre-tested questionnaire was also used to gather structured data.

i) Participatory Rural Appraisal

PRA is a group of methods used to collect information in a participatory fashion from rural communities (Chambers, 1992). The advantage of PRA over other methods is that it allows wider community participation; therefore, the information collected is likely to be more accurate (Chambers, 1994; Nabasa *et al.*, 1995; Townsley, 1996). For this study, FGD, a PRA tool, was conducted with respondent farmers and associated groups.

ii) Key Informant Interviews

A key informant is someone who has special knowledge of a particular subject. Key informants are expected to be able to answer questions about the knowledge and behavior of their social or work group. Data were cross-checked and validated by the stakeholders concerned. Five types of capital in the sustainable livelihoods framework (SLF) (see below) were used to analyze the qualitative and quantitative data.

Theoretical Framework

Use of the SLF helps the researcher to think holistically about the assets and resources that help villagers to thrive and survive and the policies and institutions that affect their livelihoods. A livelihood is sustainable when it can cope with, and recover from stresses and shocks, and also maintain or enhance its capabilities and assets, both now and in the future, while not undermining the natural resource base (Carney, 1999; DFID, 2001). According to Scoones (1998), five key indicators are important for assessing sustainable livelihoods: 1) poverty reduction, 2) well-being, 3) livelihood adaptation, 4) vulnerability and resilience, and 5) natural resource base sustainability. These indicators constitute the basis of the SLF, which are increasingly being used by many development agencies to achieve a better perceptive of natural resource management systems. The SLF embraces a wider approach to people's livelihoods by looking beyond market-oriented activities in which people engage (Chambers and Conway, 1992; Shankland, 2000).

The SLF has various factors that constrain or enhance livelihood opportunities and show how they relate to each other. The framework provides

a way of thinking through the different influences on livelihoods (i.e., the constraints and opportunities) and ensuring that important factors are not neglected (Ashley and Carney, 1999). The framework shows how, in different contexts, sustainable livelihoods are achieved through access to a range of livelihood assets that are combined in the pursuit of different livelihood strategies following the assets based community development (ABCD). Central to the framework is the analysis of a range of formal and informal organizational and institutional factors that influence sustainable livelihood outcomes (Fig. 2). The five different types of capitals are: i) human, ii) physical, iii) social, iv) financial, and v) natural. These capitals are in practiced by the Hatea village community through ABCD approach towards the efficient use of all available assets in a sustainable manner with equitable access to the community people. By putting wattage on five capitals available in a particular community the distances from the centre point of the SLF will give a clear image of present assets. Analyzing the situation of capitals, community will prepare and follow their livelihood strategies towards sustainability considering environmental issues.

Existing Assets and Livelihood Strategies of the Village Community

Data presented in Table 1- there was a wide range of livelihoods diversity amongst the Hatea village community. A vast number of landless (57.55%), small (22.30%) and marginal farmers (12.95%) in the study area worked mainly at cattle rearing and seasonal fishing, followed by cultivation of rice, jute, vegetables, groundnut, sweet potato, maize, and a local pulse (*mash kalai*). In most cases, cultivation was limited to one crop annually.

All of the large and medium farmers used fertilizers, mainly in the form of cow dung, urea, murate of potash, and triple super phosphate, at various dose rates. The purpose of using fertilizers was to improve the yield. However, a majority (55%) of the poor farmers did not use fertilizers because they lacked technical information and had poor economic returns. There was a substantial difference in fertilizer dose rates among the different farming practices.

Farmers in this area received various types of

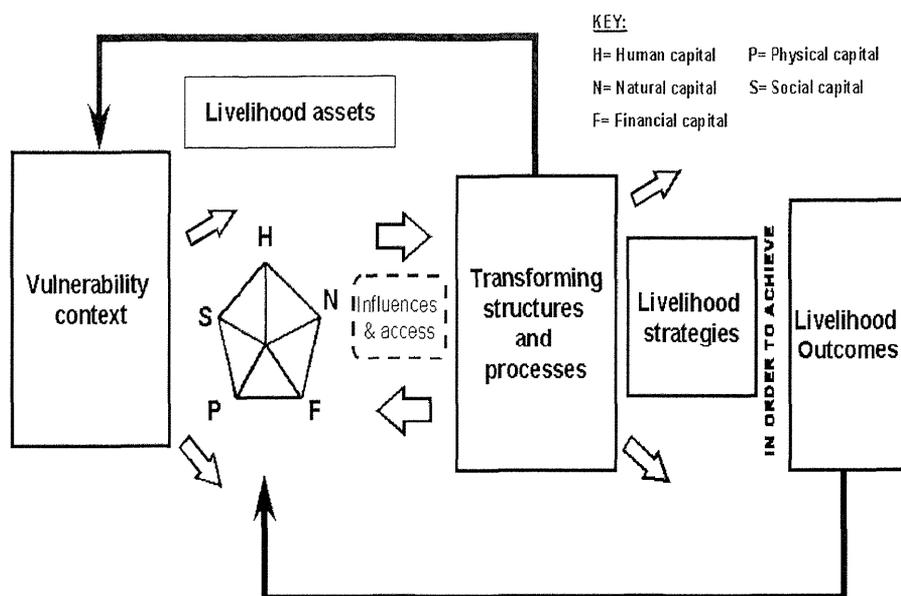


Fig. 2. The Sustainable Livelihoods Framework (Source: DFID, 1999).

training on income-generating activities, with support from the CIWM of the RDA at Bogra. As a result, there has been a dramatic improvement in agricultural production and community awareness over the last several years.

Livelihood Assets of Respondent Farmers

The data obtained from the study and secondary sources showed that diverse combinations and components of capital assets were essential for use by farmers in agricultural production (Table 1). The presence or absence of assorted components of capital assets could help the progress of, or hold back, achievement. People require a range of assets to achieve positive livelihood outcomes (Scoones, 1998). The SLF drew attention to five types of capitals upon which the farmers' livelihoods depended (Fig. 2).

i) Human Capital

Human capital represents the skills, knowledge, ability to work, and good health that enable people to pursue their livelihood strategies and achieve their livelihood objectives (DFID, 1999). A beef-fattening practice had begun as an indigenous technology, and farmers had built up their skills through their own understanding and practice. According to the survey, only 43% of farmers received training on beef fattening from CIWM (Table 1). Some farmers stated that neighbors,

relatives, and friends who had received training were the main sources of getting technical assistance. The practice achieved remarkable momentum when it received technical support from the CIWM.

The farmers interviewed each had an average of 16.7 years of traditional experience in farming (Table 1). In the survey group the literacy rate was only 35%. Most farmers were quite young (average estimated age 41 years; range 23 to 66 years). The total population of Hatea village stood at 1560 with the average estimated family size was 5.6 members. Almost all members over 12 years old in the study area were engaged in income-generating activities. These findings were almost in agreement with that in a study of fish farming technology in Bangladesh (Ahmed, 2009). Participants interviewed were engaged in various income-generating activities such as cattle rearing, poultry rearing, biogas production and sale, organic fertilizer packaging and sale, fish farming, fish marketing and agricultural and homestead gardening.

ii) Natural Capital

Natural capital takes the form of land, forest, water, natural fish fry, and other natural items. Farmers had to rely on rainfall and sometimes surface water from canals or rivers for irrigation and for household purposes. Rapid population escalation in the study area has accelerated natural capi-

Table 1. Major Livelihood Assets of Hatea Village Community in Bangladesh

Item	No.	Item	No.
Households	278	Total population	1560
Homesteads per household head (ha)	0.052	Male	834
Av. cultivable land per household (ha)	0.290	Female	726
Pond/ditch	40	Sex ratio (M/F)	1.14: 1
River	1	Family size (persons)	5.61
Big Watershed	1	Muslim (%)	88
Small Watershed	23	Hindu (%)	12
Cattle farm	203	Ave. income/month (US\$)	66
Poultry farm	140	Ave. income/day < US\$1 (%)	47
Nursery	1	Hut/bazaar	1
Power tiller	42	Grocery shop	33
Shallow tube well	37	Net income from farming (US\$/year)	617
Hand tube well	345	Credit received (%)	28
Deep tube well	1	Electricity available (%)	32
Own tube-well facilities (%)	24	Received training from CIWM (%)	43
Biogas plant	1	Average rice yield per hectare (tonnes)	4.2
Wheat mill	1	Farming experience (years)	16.7
Sawmill	1	Literacy rate (%)	35
Rice mill	1	Trees (Fruit)	400
Primary school	1	Trees (Timber)	900
High school	1	Bamboo garden	56
Madrasha (Religious School)	2	Mosque	5
Working national NGOs: (GB=Grameen Bank; BRAC= Bangladesh Rural Advancement Committee; TMSS=Thangamara Mohila Sabuj Sangha)	3	Average age of respondent farmers (years)	41
Land Ownership Status:	%	Sanitary Status:	%
Landless (0-0.19 ha)	57.55	Sanitary latrine	63
Marginal farm (0.2-0.49 ha)	12.95	Pit latrine	22
Small farm (0.5-0.99 ha)	22.30	Open space	15
Medium farm (1-3 ha)	06.12	Domestic water supply	1
Large farm (above 3 ha)	01.08	Domestic biogas connection	1

tal depletion, which has affected the overall agricultural productivity and environmental quality (Matin, 2010). During FGD with the elderly, members of the group mentioned those 30 to 40 years ago cattle rearing were fully dependent on natural pastures and that fishery stocks were abundant because of the lack of chemical runoff. Excessive utilization of chemical fertilizers, pesticides, and other pollutants and waste materials for the production of pasture grasses had negatively influenced the local natural water bodies and agricultural sustainability.

iii) Financial Capital

Financial capital refers to incomes, savings, and credit. The average annual income of the community farmers in Hatea village was estimated at US \$617 (Table 1). Farmers spent most of their incomes on farming and on basic needs (e.g. food, housing, clothing, medication, social festivities, dowry payments, and the weddings of their sons and daughters). Although most of the respondents (72%) used their own money for farming, the rest (28%) received loans from non-government organizations, money lenders, and banks. The Grameen Bank, which provides micro-credit and was awarded

the Nobel Peace Prize in 2006, is active in Hatea. However, because of poor education or inadequate information, farmers often go to moneylenders and pay very high monthly interest rates of 10% (i.e., 120% yearly). Similar observations have been made in the case of fish farming technology in the Trishal upazila of the Mymensingh district of Bangladesh (Ahmed, 2009). Among the respondents only 28% farmer received credit an average amount estimated at US\$206 per year from all sources.

iv) Physical Capital

Housing, transportation, roads, markets, electricity, water supply, sanitary and health facilities are physical capital required for farmers to pursue their livelihood strategies. However, the study found that often farmers in disadvantaged groups faced severe health and sanitary problems and had limited access to medical facilities. The electricity supply was limited, despite the work of the rural electrification board, and only 32% of farmers had electricity (Table 1).

v) Social Capital

Social capital refers to intra- and inter-household interactions and relationships, as well as interaction with other social actors and participation in events or with organizations (Zakaria, 2010). Social capital in the form of networks, cultural norms, and other social attributes has helped substantially in the exchange of experiences and sharing of knowledge and in cooperation among rural households (Stirrat, 2004). However, lack of social capital has affected the livelihoods of farmers. Some farmers stated that neighbors, relatives, and friends who had intimate relation can share their assets and experiences in a wider range rather than others in the community.

Seasonal Variability

The key attributes of seasonal variability in this community were the seasonal patterns of shocks and adverse trends that are part of *monga*. All these had major impacts on household and community assets, the degree of the impact depending on the household's ability to cope and to generate income. It is therefore important to identify the means by which such negative effects can be minimized and to build greater resilience and improve overall livelihood strategies. Shocks took the form of natural or physical calamities such as floods,

droughts, and major diseases that caused the community to lose its assets. Poor farmers were especially vulnerable to shocks that could compel them to liquidate their assets. Different types of seasonal stress appeared in the community. Seasonal shifts in farming practices were the dominant sources of hardship, particularly for poor farmers. Because of their lack of alternative income sources, these people rarely had mechanisms of defense against seasonal stress; for example, they were subject to stress from seasonal unemployment for up to 3 or 4 months (August to November) and were thus the victims of *monga*. The people of the study area have had in practice of ABCD approach and now majority of the farmers shifted their main occupation agriculture 17.27% to petty- business 38.85% because of high profit margin and means of shock resolving (Table 2).

Table 2. Principal Occupation and Educational Status of Household Head

Principal occupation	No.	%
Agriculture	48	17.27
Bicycle maker	2	0.72
Bucher	14	5.04
Petty-businessman	108	38.85
Carpenter	8	2.88
Day laborer	5	1.80
Driver	10	3.60
Household worker	13	4.68
Painter	2	0.72
Retired	11	3.96
Rickshaw puller	9	3.24
Service industry	34	12.23
Tailor	9	3.24
Mason	2	0.72
Teacher	3	1.08
Educational Status:		
Illiterate	65	23.38
Primary	36	12.95
Secondary	105	37.77
Secondary School Certificate	41	14.75
Higher Secondary Certificate	21	7.55
Graduate	7	2.52
Masters and above	2	0.72
Religious studies	1	0.36

Determinants of Underlying Community Assets

Community development comprises a set of diverse activities. It encompasses all of the socioeconomic components related to such processes as human development, planning, education, environmental protection, employment, and income generation. The community may be able to evolve as an independent and effective institution for implementing the assets based master plan with multi-dimensional opportunities such as its own capital base, group cohesiveness, and social integrity. Figure 3 indicates the processes which directly influence both livelihood strategies and livelihood outcomes. Livelihood resources, institutions, organizations, and vulnerabilities are key determinants of livelihood outcomes in the farmers' communities. These processes could be enhanced through ABCD and farmers' improved socioeconomic conditions can be described on the basis of quantitative and qualitative indicators. These include the rice self-sufficiency index (RSSI), social status, housing facilities, education, health and sanitation facilities, well-being and with overall resources management capability.

Food Sufficiency Status

To assess changes in food sufficiency status, an RSSI was calculated by using the following formula

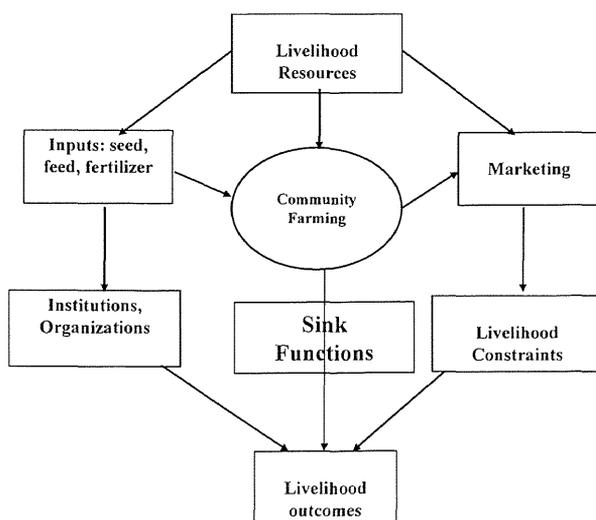


Fig. 3. Schematic Diagram of Livelihood Outcomes in Community Farming.

(Page, 2006):

$$\text{Rice self sufficiency index (RSSI)} = \frac{\text{Potential paddy yield (kg)} \times \text{Landholding size (ha)}}{\text{Annual household rice requirement}} \times 100\%$$

The annual rice requirement for each household was calculated by considering the number of dependent adults and adolescents and children under 10 years and the Food and Agriculture Organization (FAO) recommendations for energy intake (annual intake is 365 kg of unprocessed paddy rice for adults; 274 kg for adolescents (10 and above years); 183 kg for children (under 10 years). The farmer's own yield data in terms of kg of rice/ha were used to calculate the RSSI for each household. In cases where the farming families were sharecropping, the amount of grain due to the landlord was subtracted from the potential yield. Livelihood systems of South Asian countries such as Bangladesh are mostly rice based. Because rice is the staple food, its production and availability can be considered as predictors of food sufficiency status (FAO, 2004). This study used RSSI as a predictor of the food sufficiency status of the rural community.

The necessary data (e.g., number of family members, size of landholding, and yield) were collected by using a structured interview schedule to calculate the RSSI for each respondent before and after the CIWM project intervention. There was a significant increase in rice self-sufficiency among the respondents: RSSI ranged from 18.78 to 519.43 (mean = 146.44) before the project intervention and from 37.23 to 1078.79 (mean = 294.74) after it (t -test; $P < 0.001$). The large difference between the minimum and maximum RSSI values indicated that there was substantial variation in rice self-sufficiency among rural households both before and after project intervention. This finding is similar to that of Zakaria and Haque (2010).

The study showed that farmers had broadly improved their living standards, purchasing power, choice, and ability to finance their enterprises. They had been benefited from greater cash income through integrated farming system (crop, livestock, poultry, fishery, nursery, kitchen gardening etc.) with managing of wastage in community bio-gas plant, utilizing own produced organic fertilizer and biogas as renewable energy sources. Practicing agri-business to minimize seasonal stress-*monga* at

the substantial level, and they would continue to benefit from the modified ABCD approach in the future.

Call for a New Movement

A new movement, made up of people with a different vision for their local communities, is developing. It happens when a group of people discover new potential for their lives. An example is the control of zoonotic diseases and the application of waste management practices, which would not be possible without community efforts. In many nations, local people have felt the need to come together to pursue common callings. These are the visions of local people who have the courage to define their own approaches and to create new customs in response to their dreams' or 'and to create a reality in response to their dreams Anywhere we look, it is the way of life that starts this ABCD approach. It is to be mentioned here that without ABCD approach vaccination programs for livestock were ineffective and community felt in vulnerable. After the intervention of CIWM project an effective routine and ring vaccination programs for livestock were followed by the Hatea village community with sustainability in agriculture (Figure 4). Keeping in mind the Bangladesh national program of "One House One Farm," communities should be motivated by, and prepared for, the benefits of multistory housing for community people and also

for their livestock. Use of such housing, with waste management amenities (e.g., biogas plants) and other modern facilities, should save land, water, electricity cost and so on to encourage sustainable development, and preserve environmental quality (Sarkar, 2008).

Window of Opportunity

Reduction of poverty depends on equitable access to, and management of, all community assets in a way that is temporally balanced and at optimal levels. A concerned community needs to identify its all assets and keep records that enable appropriate planning and preservation for present and future generations. To capture underlying opportunities, the community needs to prepare a detailed problem tree with priority ranking and to specify in tabular form all assets that are available both locally and from outside sources. On the basis of such priority and resource tables, the community may select a needs-based action plan as a consequence of the ABCD approach. The implementation plan would be for the short, medium, and long term, depending on feasibility. The community can choose to implement a particular project by ensuring equitable access to, and management of, all assets at the proper time and at the optimum level. Potential benefits need to be taken into account for sustainability of the community and the environment. Formation of a sizable number of ABCD groups

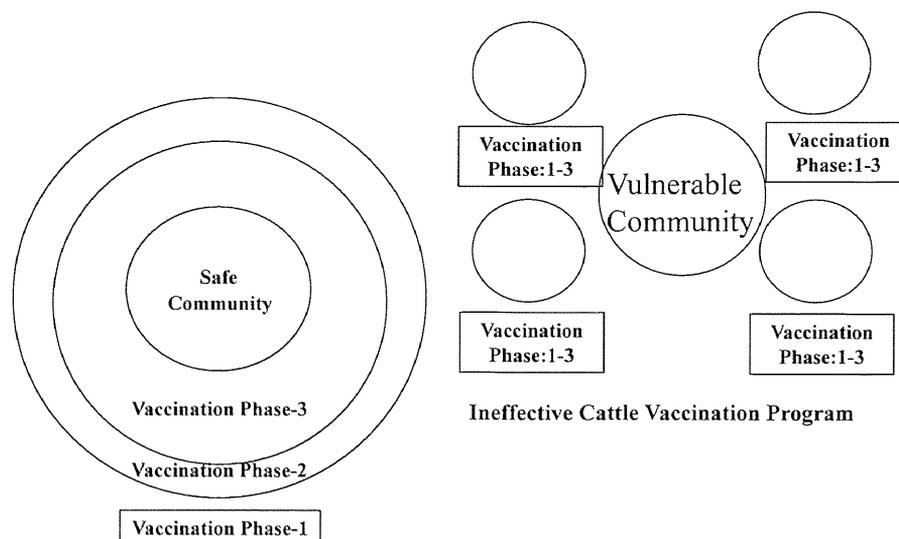


Fig. 4. Schematic Diagram of Community-Led Effective and Ineffective Vaccination Programs for Zoonotic Diseases.

might help to reduce adverse climate-change-related impacts on the Earth. Although human, social, and natural resources are limited, the world has generous resources that we can be managed and nurtured properly in order to lead sustainable lives. It is not possible for a single person, family, community, village, country, or continent to manage the world's resources at a desirable level. In light of this situation, a comprehensive effort by the community would help to open the window of community opportunity. To ensure healthy ecosystems and of the existence of all creatures, everyone should bear responsibility towards assets based environmental sustainability. Underlying roles of available assets should be taken into consideration. Environmental economists describe these roles in terms of three functions (Goodwin *et al.*, 2008):

1. Resource functions: The natural environment provides natural resources that are inputs into human production processes. These include such things

as mineral ores, crude petroleum, fish, and forests. Some of these resources, such as fish and forests, are renewable, whereas others, such as minerals and petroleum, are not.

2. Environmental service functions: The natural environment provides the basic habitat of clean air, drinkable water, and a suitable climate that directly supports all forms of life on the planet. Water filtration provided by wetlands and erosion control provided by tree-covered hillsides are other examples of services provided by ecosystems. People enjoy the services of the natural environment directly when they enjoy pleasant scenery or outdoor recreation.

3. Sink functions: The natural environment serves as a "sink" that, up to a point, absorbs the pollution and wastes generated by economic activity. Car exhaust dissipates into the atmosphere, for example, whereas used packaging goes into landfills and fluid industrial wastes end up in rivers and oceans. Some wastes break down relatively quickly into harmless

Table 3. Underlying Community Assets Identified by the Villagers

Underlying Assets	Underlying Assets
unity and cohesion	crop planting and harvesting
completion of previous priority task	good seed management
organization	fishing
self-help group	aquaculture
professional group	education for all
task distribution and mgt. group	sports
skilled professionals	festivities
livestock vaccination group	social safety
beef-fattening group	plant clinic
dairy cattle rearing	integrated pest management
livestock fodder cultivation and supply	information and communication
rice straw management	technology (ICT)
milk purchase and sale	cultural heritage
poultry production	anniversaries
poultry (day-old chicks) supply	sound health
vaccination	institutional linkage
purchase and sale of poultry products	tourism
waste management	social security
biogas management	transportation
safe water for all	vulnerability management
crop production technology	disaster preparedness
innovative adopter	religious functions
regional fair	amusement (club-TV)
market management	adoption of innovations

substances. Others are toxic and/or accumulate over time, eventually compromising the quality of the environment

In addition to the above functions, the underlying community potentials should also be taken into account for sustainable development and conservation of environmental quality for present and future generation. The ABCD approach may be more effective for efficient utilization of the underlying community potentials (Table 3).

The RDA in Bangladesh has had some notable achievements by following the community approach (e.g., multipurpose use of deep tube well DTW; the WISE (Women in Seed Entrepreneurship) model, women-to-women communication, the Maria seed technology model, a rural plant clinic, and community biogas bottling). See Context box 1 for information on the WISE model (Zakaria, 2008).

Context-1

Women in Seed Entrepreneurship (WISE) (Zakaria, 2008)

The Rural Development Academy (RDA) at Bogra is one of the pioneering institutions in Bangladesh. The project "Women-led Seed Business," which is aimed at developing women's seed-grower groups, began in February 2007. The project is a tripartite initiative of the IFC-SEDF (International Finance Corporation SouthAsia Enterprise Development Facility) Seed Wing; the Ministry of Agriculture, and the Rural Development Academy (RDA), Bogra. The project fostered 400 women as micro-entrepreneurs for seed production, with strong links to the supply chain. The project increased quality seed supply through women-led seed business; income generation by women farmers; mainstreaming of women in the seed sector; and empowerment of the women through acknowledgment of their historical role in the seed system. Women farmers were trained by the RDA to produce quality seeds of vegetables such as bitter melon, yardlong bean, country bean, sweet melon, and red amaranth, and rice seeds. The women have been producing for over two crop seasons and their seeds are now ready for sale. Through this collaborative project, the RDA has made commendable success in the field of seed production and seed business and is up-scaling women's activities at the community level.

Conclusions and Recommendations

Community development comprises a set of diverse activities. It encompasses all of the socioeconomic components related to such processes as human development, planning, education, environment protection, employment, and income generation. It may be able to evolve as an independent and effective community-level institution that has multidimensional opportunities, such as its own capital base, group cohesiveness, and social integrity. However, potential benefits need to be taken into account for the sustainability of the community and the environment.

The respondent farmers indicated that although their community had great underlying benefits, inadequate supply of cattle, high production costs, poor feed quality, and lack of technical support were constraints to the sustainability of cattle farming. Lack of methods of identifying underlying assets, a truncated livelihood assets management system, seasonal vulnerabilities, and weak structures and processes for transformation were identified as constraints to the sustainable livelihoods of farmers and associated communities. It is therefore necessary to provide institutional, organizational, and international support for sustainable farming. In addition, the provision of interest-free working capital would especially help small and marginal farmers.

References

- Ahmed, N., 2009. The Sustainable livelihoods approach to the development of fish farming in rural Bangladesh. *J. Int. Farm Manag.* 4 (4), 1-18.
- Ashley, C. and Carney, D., 1999. Sustainable Livelihoods: Lessons from Early Experience. Department for International Development (DFID), London, UK.
- BBS, 2009. Statistical Pocketbook of Bangladesh, Statistical Division, Bangladesh Bureau of Statistics, Ministry of Planning, Bangladesh, Dhaka.
- Carney, D., 1999. Approaches to Sustainable Livelihoods for the Rural Poor. Overseas Development Institute, UK. Poverty Briefing 2.
- Chambers, R., 1992. Rural appraisal: rapid, relaxed and participatory. IDS Discussion Paper 311, International Development Studies, Brighton, UK.
- Chambers, R., 1994. The origins and practice of participatory rural appraisal. *World Dev.* 22, 953-969.
- Chambers, R. and Conway, G., 1992. Sustainable Rural Livelihoods: Practical Concepts for the 21st Century. IDS Discussion Paper 296, International Development

- Studies, Brighton, UK.
- DFID, 1999. Sustainable Livelihoods Guidance Sheets, Department for International Development.
- DFID, 2001. Sustainable Livelihoods Guidance Sheets, Department for International Development; <http://www.livelihoods.org/> (Updated on 12 June 2005).
- DFID, 2005. Sustainable Livelihoods Guidance Sheets, Department for International Development; <http://www.livelihoods.org/>
- FAO, 2004. Gender dimension in Asian livelihoods in the changing milieu of technologies and economy. Report on Expert Consultation, 9-12 March, FAO Regional Office for Asia and the Pacific, Bangkok, Thailand.
- Goodwin, N., Nelson, J.A. and Harris, J.M., 2008. Macroeconomic measurement: environmental and social dimensions. Tufts University Global Development and Environment Institute, 44 Teele Ave., Tufts University, Medford, MA 02155. First Edition, pp. 1-32.
- Jeremy B.C. and Jackson, P., 1999. Nature's Numbers: Expanding the National Income Accounts to Include the Environment, National Research Council, National Academy Press, Washington, D.C., pp. 19-20.
- Matin, M.A., 2010. A Paper on Action Research Projects, presented at the Annual Planning Conference (APC) '2010-2011, RDA, Bogra, Bangladesh. pp. 1-43.
- McKnight, J., 2009. Community capacities and community necessities, pp. 1-5. Opening remarks, 8 July 2009, at the "From Clients to Citizens Forum", Coady International Institute, St. Francis Xavier University, Antigonish, Halifax, Nova Scotia.
- Nabasa, J., Rutwara, G., Walker, F. and Were, C. (1995) Participatory Rural Appraisal: Practical Experience. Natural Resource Institute (NRI), Greenwich University, London, UK.
- Nordhaus, W.D. and Kokkelenberg, E. (eds), 1999. *Nature's Numbers*: National Academy Press, Washington D.C p. 45.
- Page, S., 2006. Reaping the benefits: Assessing the impact and facilitating the uptake of resource conserving technologies in the rice-wheat systems of the Indo-Gangetic Plain. Final project report. CABI; UK.
- Sarkar, S.K., 2007. Empowering Community Organization: A Village Perspective in Bangladesh. J. Dev. Sus. Agr. 2 (2): PP.73-85. University of Tsukuba, Ibaraki, Japan.
- Scoones, I., 1998. Sustainable rural livelihoods: a framework for analysis. IDS Working Paper 72, Institute of Development Studies (IDS), Brighton, UK.
- Shankland, A., 2000. Analyzing policy for sustainable livelihoods. IDS Research Report 49, Institute of Development Studies, Brighton, UK.
- Stirrat, R.L., 2004. Yet another 'magic bullet': the case of social capital. *Aquat. Res. Cult. Dev.* 1, 25-33.
- Townsley, P., 1996. Rapid Rural Appraisal, Participatory Rural Appraisal and Aquaculture. Food and Agriculture Organization (FAO) of the United Nations, Rome, Italy.
- Zakaria, A.K.M., 2008. Women in Seed Entrepreneurship (WISE). Rural Development Academy (RDA), Bogra, Bangladesh.
- Zakaria, A.K.M. and Haque, M.M., 2010. Assessing the Impact of Participatory Video Shows on Livelihoods of Resource Poor Rural Women under Good Seed Initiative in South Asia. Rural Development Academy (RDA), Bogra, Bangladesh.