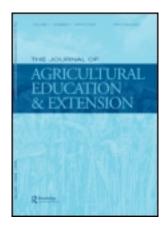
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Publisher: Routledge

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European Journal of Agricultural Education and Extension

Publication details, including instructions for authors and subscription information: http://www.tandfonline.com/loi/raee19

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M. Walker ^a & A.A. Sarkar ^b

^a Agricultural Support Services Project. Aid Management Office, British High Commission, United Nations Road, Baridhara, Dhaka, Bangladesh

Version of record first published: 30 Jul 2007.

To cite this article: M. Walker & A.A. Sarkar (1996): The development of a National Agricultural Extension Policy in Bangladesh, European Journal of Agricultural Education and Extension, 3:2, 85-95

To link to this article: http://dx.doi.org/10.1080/13892249685300221

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^b Ministry of Agriculture, Government of Bangladesh, Secretiriat Buildings, Dhaka, Bangladesh

The Development of a National Agricultural Extension Policy in Bangladesh

M. Walker* and A.A. Sarkar**

Abstract

Agricultural extension is moving away from externally imposed change programmes towards bottom-up planning, farmer participation and empowerment and catalysis of sustainable change, based on local needs and problems. However, many of these changes have been on a relatively small scale, in policy or institutional environments generally favouring a more traditional approach to agricultural development. For a broader process of sustainable agricultural development to occur, changes in the policy and institutional environment are required. This paper explores the process of developing an agricultural extension policy in Bangladesh and describes the content of the final policy statement, as an example of the approach taken in one country to developing a facilitative environment for sustainable agricultural development.

To date, the policy statement has been approved by the Ministry of Agriculture, and an implementation strategy is being developed. The policy is only a stage in the process of change, and it is hoped that other countries which are developing mechanisms to facilitate sustainable agricultural development will find the experiences in Bangladesh both encouraging and potentially useful.

Eur J Agr Educ Ext (1996, 3, 2, pp 85-96)

Agriculture in Bangladesh

Context and Constraints

The economy of Bangladesh is predominantly agrarian. The agriculture sector, comprising crops, livestock, fisheries and forestry, accounts for about 35 per cent of the Gross Domestic Product. There are about nine million hectares of land suitable for cultivation, of a total of 14.8 million hectares, supporting 122.7 million people, over 80 per cent of whom live in rural areas. Of the population, 38 per cent are landless or marginal, owning little more than a living area. The population growth rate is currently 2.2 per cent per year, which means that by the year 2015, there will be in excess of 180 million people living in Bangladesh (Bangladesh Bureau of Statistics, 1995). Much of the population live

in poverty, remaining unable to secure a sustainable livelihood. Despite the successes of the green revolution in bringing about massive technological change and increasing productivity in agriculture, many rural people continue to be marginalised, unable to adopt the agricultural technologies being intensive promoted by extension services. Larger farmers who are able to adopt improved practices continue to capture market advantage, while the vast majority are excluded from entering this 'fast stream', leaving an ever widening disparity between the landless and the land owners.

In addition to the challenges of poverty and equity, the natural environment in Bangladesh is potentially under threat. Abstraction of ground water, deforestation, and the possibly increasing

^{*} Extension Management Specialist, Agricultural Support Services Project. Aid Management Office, British High Commission, United Nations Road, Baridhara, Dhaka, Bangladesh

Additional Secretary, Ministry of Agriculture, Government of Bangladesh, Secretiriat Buildings, Dhaka, Bangladesh

physical and chemical deterioration of soil fertility may be threatening sustainable agricultural development. High-input agricultural technologies may prove unsustainable in the long run, both in terms of the livelihood security of the majority of people, and the natural environment upon which Bangladesh depends. Frequent floods and cyclones also form severe obstacles to the development of sustainable livelihood securities.

Table 1 Agricultural Policy Objectives and Strategies

Short to Mid Term Policy Objectives	Long Term Policy Objectives	Policy Strategies
- attain self-sufficiency in food grains and increase production of other nutritional crops;	- ensure sustainable agricultural development;	- establish macro-economic policies that enable farmers to be responsive to domestic and international markets;
- ensure sustainable agricultural growth through more efficient and balanced use of land, water and other resources;	- introduce high quality, appropriate agricultural technology;	- provide high quality infrastructure and government services to enable farmers to produce and market products at low cost;
- increase foreign exchange earnings through agricultural exports;	- maintain the ecological balance in the natural environment;	- encourage private sector involvement in the supply of inputs and rely on competitive markets to supply agricultural inputs at low cost;
- increase per hectare rice output in order to release more land for other crops, especially legumes and fodder crops;	- reduce rural poverty;	- stablish policies, regulations and project assistance to ensure sustained agricultural production;
- introduce high value cash crops;	- establish export-oriented agro-processing industries;	- ensure that research concentrates on the key technical and socio- economic constraints to production;
- improve the quality and availability of seeds;	- sustain and balance production, consumption and income.	- provide appropriate technical and farm management advice and information to all farmers through continued improvements in extension and other support services.
- reduce environmental degradation;		
- increase fish, livestock and forestry production;		
- conserve and develop forest resources.		·

(Source: Adapted from Draft Perspective Plan, Government of Bangladesh, 1995)

Government Agricultural Policy

In order to tackle some of the constraints to agricultural development, the Government of Bangladesh has formulated broad objectives and for sustainable agricultural strategies development. These are summarised in Table 1. A number of government programmes are being implemented to realise these objectives, many support of international donor with the investment. These include interventions to support improvements in credit services, the private sector, and extension and other rural development services.

Agricultural Extension in Bangladesh

Background and Array of Extension Providers
Agricultural extension is basically a communica-

tion process which identifies needs and problems, constraints and opportunities and develops appropriate ways for farmers to optimise resource use as a means of improving agricultural production and livelihood security. It has been a key component of the formal agricultural sector in Bangladesh since 1914, and informally since farmers began to farm.

There is a large array of extension providers in Bangladesh. Non-government organisational activity developed since independence from British colonial rule in 1947, and especially after the liberation war and independence from Pakistan in 1971, when Bangladesh emerged as a separate nation. There are now over 11,000 registered Non-Government Organisations (NGOs) in Bangladesh. Most of these are based in rural areas and many play a significant role in

Table 2 Milestones in the Development of Public Sector Extension in Bangladesh

Date	Event		
1914	District demonstration farms established and colonial Agricultural Officers appointed		
1947	Colonial rule ends, East Bengal becomes East Pakistan		
1956	Department of Plant Protection established		
1961	Bangladesh Agricultural University, Department of Agricultural Extension, and Department of Agricultural Marketing established		
1962	Department of Agricultural Information established		
1968	Separation of different directorates for Agricultural Extension and Research		
1971	Bangladesh gains independence		
1974 to 1978	Commodity Boards for Tobacco, Horticulture, Sugarcane, Tea, Cotton and Sericulture established. Separate extension services established for fisheries, livestock and forestry. Department of Agricultural Extension role reduced to field food crops		
1978	Start of Training and Visit System with Department of Agricultural Extension		
1982	Training and Visit System introduced nationally, and Department of Agricultural Extension absorbs Jute Production, Plant Protection, Horticulture and Tobacco Boards		
1985	Training and Visit System Extension Manual published for Department of Agricultural Extension		
1995	Revised Extension Manual published by Department of Agricultural Extension with assistance of Agricultural Support Services Project		

(Source: Adapted from Sarkar et al, 1995)

agricultural development. No two NGOs are the same, and those in Bangladesh comprise a multitude of organisational forms, approaches, capacities. Some, such as the sizes and Rural Advancement Committee Bangladesh (BRAC), are effectively national, have upwards staff. of 2,000 members of paid supplemented significant numbers by volunteers and work in a multitude of areas including fisheries, crops, income generation, health and sanitation. Others work in just one or two villages on a single issue. About 29 of the NGOs working in Bangladesh are international, such as Save the Children or CARE (Hasan et al, 1992).

Since the supply of agricultural inputs has now been privatised, the commercial sector is now also becoming a significant source of extension advice.

The milestones in the development of public sector extension are summarised in Table 2, which shows the emergence of the Department of Agricultural Extension (DAE). With a public sector agricultural extension service operating since 1914, and the increasing involvement in extension through the non-government and commercial sectors, there is an ever expanding array of organisations involved in enhancing knowledge and information processes to support agricultural development. This array is known to many as an Agricultural Knowledge and Information System (AKIS). As in other countries, the array has failed to function effectively as a coherent force for development (Walker, 1994). The largest single part of the AKIS in Bangladesh is the Department of Agricultural Extension (DAE).

Early Efforts to Improve Public Sector Extension Effectiveness

As shown in Table 2, there have been a number of efforts to strengthen the public sector extension service. Of these, the main early attempts were administrative and organisational changes, leading to the introduction of the Training and Visit (T&V) system in 1978. In 1992, a major review of these efforts was conducted. The review, which concentrated on T&V, found that while there were improvements

in managerial discipline, government coordination and staff training, fundamental improvements in extension effectiveness were hard to find. Among the problems identified were:

- inefficient budgetary balances between staff costs and operating costs, with staff accounting for 95% of budgets;
- top-down work schedules that did not allow staff to manage their time efficiently, particularly in relation to a stringent cycle of training and visiting which did not allow for the completion of other tasks;
- concentration on the richer male elite as contact farmers, who did not pass information to other farmers, and the provision of inadequate services to women and smaller farmers;
- inappropriate technical messages, and failure to provide research institutes with information on farmers' constraints - fundamentally undermining the two way linkage role of an extension service;
- concentration on message delivery to the detriment of responding to farmer needs, and failure to allow meaningful farmer participation in priority setting (AST/CIDA, 1992).

The review concluded that more fundamental change was required, and the *Agricultural Support Services Project* was designed to address this need.

The Agricultural Support Services Project

The Agricultural Support Services Project (ASSP) was designed to run from 1992 to 1998, and makes provision for Technical Assistance and funding amounting to US\$59.6 million. It is co-financed by the International Development Association. UK Overseas Development Administration and Government of Bangladesh. DAE acts as the implementing agency, and the donor approach attempted to build local ownership from this base, primarily through the development of close co-operation between the Technical Assistance team, and staff of DAE and the Ministry of Agriculture. The project is designed to be managed as a process through partnership, with no pre-determined blueprints as in previous agricultural extension projects. The project goal is to assist farmers to optimise the

use of their own resources by improving agricultural knowledge and access to agricultural services. This is being achieved through five main areas of support: technical institutional strengthening in DAE; administrative institutional strengthening involving DAE and its partners; improvements to homestead production services; improvements in farm level seed availability; and the development of a horticultural export capacity.

The institutional focus, both with DAE and between DAE and its partners, is most pertinent to this paper, having provided a major trigger for change in extension approach and policy.

"Institutional strengthening is a process which facilitates organisational change... through reform and development of systems, structures, staffing mix and skills, strategic planning and shared values... in order to improve the effectiveness with which the organisation fulfils its mission" (ODA, 1994:11).

The institutional strengthening focus of ASSP operates in this way to facilitate a process of change, enabling DAE to develop an extension service which is more responsive to the needs of its clients. The development of a revised extension approach was the first challenge.

The Department of Agricultural Extension's Revised Approach

From 1992 ASSP worked closely with senior and mid-level DAE management to develop a new approach to agricultural extension for the Moving away from department. approaches which emphasised control, centralisation and technology took a great deal of negotiation - managers were used to top-down systems in which they played the main roles in planning, monitoring, evaluation and priority setting. Traditionally, the extension reform debate concentrates on alterations in attitudes, behaviours and working practices at field level. However, changes at headquarters can be just as important in providing an enabling environment for positive change. After three years of work, in June 1995, the Department published a revised extension approach and manual, with the

full backing of the Ministry of Agriculture. This lengthy period indicates how complex it is to generate changes in local management systems, with the full support of local managers. Process type projects need time to gain momentum, and require considerable patience - not least from donors, who often demand quick results. They also need local managers to act as "champions of change", driving improvement from within.

At the heart of DAE's revised manual are five principles: decentralisation; targeting; responsiveness to farmers' needs; working with groups; and appropriate use of extension methods (DAE, 1995).

- The responsibility for needs identification, planning, implementation, monitoring and evaluation, and staff management is decentralised to local staff who are to work in partnership with local farmers. Centrally defined impact points have been discarded.
- Local extension programmes recognise the variety of needs of different farmers, and target women farmers, small, marginal and landless farmers as well as larger farmers. The principle of working with contact farmers who represent the male elite has been discarded.
- Local staff, in partnership with farmers, use participatory techniques such as the Problem Census to identify farmer information needs and involve farmers in the planning of extension programmes (Bhuiyan & Walker, 1995). Local staff act as a link between farmers and other services such as research and non-government organisations in order to ensure that information needs are met. The top-down technical focus has been abandoned in favour of a bottom-up approach that begins with farmers and their needs.
- Local staff work with farmers groups to enhance contact with all categories of farmer, enable farmers to take co-ordinated action, and increase opportunities for farmer participation. Cost effectiveness is enhanced through moving away from an individual focus to a group focus for extension. Staff work with existing groups affiliated with other organisations, temporary as well as permanent groups and groups which have members from similar socio-economic

backgrounds. The principle of working with individual contact farmers has been abandoned.

- Extension staff use a range of appropriate extension methods, including mass, group and individual methods. Mass media provide an efficient means of disseminating information rapidly, at low cost, to many people. Folk song, dance and drama provide a participatory and culturally appropriate means of addressing locally important agricultural issues. Fairs, farm walks, farmer-led research, field days and other methods can also be used.

These principles are being put into place nationally through a large scale Extension Approach Training Programme. Some of the principles have been successfully tested on a pilot scale in Jessore District, where local staff worked with farmers to identify needs, then worked on the district level preparation, implementation, monitoring and evaluation of an extension programme. Pilot results were encouraging, and helped stimulate the emergence of national level "champions of change" in DAE (Bhuiyan & Walker, 1995).

The institutional strengthening focus of ASSP is enabling a re-orientation in DAE towards participatory demand driven extension, while encouraging the necessary management adjustments at headquarters. However, while the Jessore Pilot and the new manual provide grounds for optimism, it is too early to assess the national effectiveness of the revised approach for the farmers of Bangladesh.

Although the revised approach was fully supported by the Ministry of Agriculture, it was recognised that the Department was only one actor involved in extension. For the whole of the AKIS to move forwards together, the Department and its government, commercial and non-government partners must be supported by a facilitating policy environment. Commitment to change at the highest level, and from all corners of the extension arena are required for institutional change.

A major review of ASSP, conducted by the three project financiers in 1994, led to the government agreement to develop policy to set the

framework for this facilitating environment in the form of a policy statement. The last published review of agricultural extension in Bangladesh was on the basis of the 1994 review of ASSP, and was published in 1996 by the Overseas Development Institute (Chowdhury & Gilbert, 1996). So, though recently published, the review has been superseded by events in a number of key areas (Walker, 1996). Notably, a formally endorsed DAE extension approach has now been published with the full backing of DAE senior management and the Ministry of Agriculture (DAE, 1995), and a National Agricultural Extension Policy (NAEP, 1995) has been developed with the participation of all stakeholders. The remainder of this paper deals with the NAEP in detail.

The Process of Developing a National Agricultural Extension Policy

Defining Policy

Although the term "policy" has never been comprehensively defined, drawing from the literature, Coutts (1995) suggests that it may be a:

- government action;
- statement of government intent;
- governing principle, plan, or course of action made by an authority in a government entity;
- decisions made in response to public problems;
- structuring of commitment across organisational boundaries.

For the purpose of this paper, a policy is a set of principles made by a government entity to guide action and structure commitment across organisational boundaries in response to an identified need. Policy development is a complex process, taking place over a long period of time, though discernible stages may be identified.

Stages of Policy Development

Eight stages to the extension policy development process can be described in Bangladesh:

- 1 Identifying the need for a policy;
- 2 Setting up a mechanism for policy development;
- 3 Seeking information;
- 4 Formulation of proposals;

Table 3 Status and Content of Policy Stages in Bangladesh

	Policy Stage	Status	Content
1	Identifying the need for a policy: Why is a policy needed?	Completed in late 1994	DAE had developed a revised extension manual, but was only one actor in the AKIS. All actors needed to be involved in setting extension development priorities and principles, in order to develop partnership. A policy has the potential to create an enabling environment for partnership.
2	Setting up a mechanism for policy development: How can a policy be developed?	Completed in late 1994	Inter ministry Task Force with supporting sub- committees and working groups with specific tasks relating to policy formulation, partnership between government and non-government actors, research- extension links etc.
3	Seeking information: What should the policy contain?	Completed by early 1995	The key principles of the revised DAE Extension Manual, opened up to comment from all extension organisations, plus information and recommendations from the world-wide extension debate through literature reviews and participation in international workshops
4	Formulation of proposals: Draft a policy	Completed by early 1995	Goal: Encourage extension agencies to provide complementary services to farmers in an effort to increase agricultural efficiency and productivity
			Eleven principles: Support all categories of farmer; service efficiency; decentralisation; demand-led extension; working with groups; extension-research linkage; training; appropriate extension methods; integrated farming system support; co-ordination; environmental support
5	Comment and discussion: Circulate a draft to gain the opinions	Completed by mid 1995	Sent to 70 government organisations, NGOs, and other agencies and individuals. Comments collated and assessed
6	Finalising a policy: Prepare and approve a final policy	Completed by late 1995	Comments incorporated into a final policy statement. Policy approved by task force, MoA, and submitted to cabinet
7	Developing an implementation strategy: Defining how the policy can be put into place	To begin in early 1996	A sub-committee of the national task force will be charged with defining the role of different extension agencies and developing effective mechanisms for partnership, information flow, supply management and monitoring of resources, and training. Wider localised debate through workshops.
8	Implementing the strategy: Putting the policy into place	As soon as Implementation Strategy finalised	A time-table of actions put into place as per the implementation strategy

- 5 Comment and discussion;
- 6 Finalising a policy;
- 7 Developing an implementation strategy;
- 8 Implementing the strategy.

The status and content of each of these stages in relation to extension policy is shown in Table 3. To date, a National Agricultural Extension Policy has been drafted, reviewed by all stakeholders, revised and approved by the Ministry of Agriculture. The remainder of this paper discusses the content of the policy statement.

The Content of the National Agricultural Extension Policy

Theme of Section 1: The Meaning of Agricultural Extension

Agricultural extension is a term which has different meanings, at different times, in different places, to different people. National Agricultural Extension Policy (NAEP) sees extension as a service to assist farmers to identify and analyse their production problems, increase their awareness of opportunities for improvements in the areas of improved farming methods and techniques, increased production efficiency and income, increased living standards, and higher social and educational standards. Extension helps farmers make better use of existing resources and technologies, introduces new ideas and provides information to research institutes. The primary processes extension employs are information exchange and communication, encouragement and education.

Theme of Section 2: Knowledge Systems and the Policy Goal

The NAEP recognises that extension is deployed by a variety of government and non government agencies, farmers, commercial traders, input suppliers and other actors which together can be seen as comprising an Agricultural Knowledge and Information System (AKIS). Some of the most important public sector agencies besides DAE include the Department of Livestock Services and Department of Fisheries. Some of the largest NGOs include BRAC, Rangpur Dinajpur Rural Services (RDRS) and Grameen Bank. Traditionally, there has been little collaboration between the government and NGOs. NGOs feel that working with government departments may compromise their integrity and independence, while many in government see NGOs as competitors for funds and resources. With this historical context, the goal of the National Agricultural Extension Policy is to encourage the various partners and agencies within the AKIS to provide efficient and effective services which complement and reinforce each other, in an effort to increase the efficiency and productivity of agriculture in Bangladesh.

Theme of Section 3: The Eleven Extension Principles

The core of the NAEP is a comprehensive set of extension principles or broad objectives designed to achieve the policy goal. These are summarised in Table 4. Note that the DAE revised extension approach covered only five principles decentralisation, targeting, working with groups, responsiveness to farmers needs, appropriate extension methods. The NAEP is more comprehensive, and refers to demand led extension rather than responsiveness to farmer needs. This implies the need for further development of DAE's own approach, particularly in relation to other providers.

Conclusion

The NAEP arose from a rethinking process within the public sector extension service after 15 years of experience with the T&V system, in an environment characterised by an expanding array of agencies providing extension services to farmers. The NAEP is now being approved by the Cabinet of the Government of Bangladesh. Once fully approved, the policy must be implemented. Without implementation, the policy will remain shelved paper, rather than practice (Coutts, 1994).

To ensure a transition to implementation, the decision in Bangladesh was to prepare a broad based policy for change comprising principles rather than a constrictive and potentially inflexible detailed set of instructions. An

Table 4 The Principles of the National Agricultural Extension Policy

Policy Component	Summary of Policy Component	
Extension Support to all Farmers	All members of rural households, male or female, from households of all kinds - from landless to large scale farmers, are entitled to extension services.	
Efficient Extension Services	Cost-effective services, provided by well trained highly skilled extension agents, must be provided to solve basic production, marketing, and management problems faced by farmers. Cost-effectiveness will be enhanced by co-operation between extension providers and the use of no and low cost extension methods.	
Decentralisation	As agricultural conditions vary from place to place, extension programmes must be decided locally on the basis of local farmer needs and problems.	
Demand-led Extension	Farmers' problems, needs and demands will set the extension agenda. Issues requiring attention will be identified jointly by farmers and extension staff using participatory techniques, and may lead to the involvement of extension agencies in participatory technology development with farmers as well as traditional extension functions.	
Working with Groups of all Kinds	Working with groups offers the opportunity for more effective use of limited extension resources, enhanced sharing of information, and the provision of a platform for decision making and participation.	
Strengthened Extension-Research Linkage	Extension agencies and research agencies cannot function in a vacuum. There must be a free flow of information between extension and research if either is to deliver an effective service to farmers. Institutional mechanisms will be reformed in order for an effective flow of information to occur.	
Training of Extension Personnel	All extension agents need to be confident in their ability to solve farmers' problems, work together with non-traditional clients - such as women and landless households - and collaborate with other agencies or individuals. Training will be essential in enabling extension agents to fulfil these and other roles.	
Appropriate Extension Methodology	No single method is suitable for all purposes and occasions. Extension agents can use farm visits, mass media, training, demonstrations, participatory methods such as Participatory and Rapid Rural Appraisal, demonstrations, training, and many others. The choice must be made locally.	
Integrated Extension Support to Farmers	Extension agencies must work with farmers to encourage change in recognition that farmers operate complex and integrated systems. Advice and information provided to farmers must take an integrated farming systems perspective. Extension agencies with differing expertise must collaborate if they are to provide whole farm advice.	
Co-ordinated Extension Activities	Co-ordination underlies all components of the NAEP. Extension services provided by different agencies must be co-ordinated at all levels in order to optimise the use of resources within the AKIS, through the sharing of information and expertise among the agencies involved.	
Integrated Environmental Support	The NAEP supports extension programmes which seek to encourage farmers and farmers groups to apply sustainable agricultural practices, recognising that farmers own Indigenous Technical Knowledge is often environmentally sustainable, and that efforts should be made to support and learn from farmers, as well as the formal research system. Inevitably, with increasing demand for higher agricultural output for the rapidly increasing population, there may be a negative effect upon the natural environment. However, efforts must aim at balancing demands for increasing production with environmental preservation.	

(Source: Adapted from Ministry of Agriculture, 1995)

Implementation Strategy is now being developed to ensure that the policy is put into practice by as many agencies as possible. In developing a realistic and acceptable Implementation Strategy, greater participation from other actors is to be sought through more open ended workshops rather than committee meetings and task forces. The principle will be to move towards a broader AKIS to generate coherence and ownership by all participants. To date, DAE has played a leading role - for the future, others will play a greater role. This process will lead to an Implementation Strategy which clearly defines linkage and roles, collaboration mechanisms, resource management and training mechanisms.

However, this does not mean that change in DAE as an organisation will come to an end. Further management, administrative, attitudinal and behavioural developments may be required, both at field and at headquarters. The revised Extension Manual represents a Implementation Strategy for DAE field staff, and the current focus of ASSP is on ensuring that staff have the necessary skills to put the manual into practice. One of the reasons that the T&V system failed to function effectively Bangladesh was that DAE staff did not receive focused skills training in specific areas of the system. Α training programme, participatory styles of learning and a multi-media approach, is currently being implemented with around 13,000 staff to ensure that the same mistake is not made again. At the same time,

work is further develop underway to headquarters mechanisms for effectively managing decentralisation. This includes arrangements for reviewing and revising the DAE Extension Manual.

For other countries embarking on efforts to revitalise public sector extension, three key lessons from Bangladesh may be useful:

- Generating change in local systems is complex and time consuming. Interventions designed to promote change need to take a long term process perspective, should have a balance between Technical Assistance and financial assistance, and should not expect immediate alterations in working procedures;
- Commitment to change at the highest level is required as an enabling environment. This often takes the form of committed key individuals who serve as a nucleus or catalyst in local organisations they act as "champions for change", and need to be nurtured and supported. Commitment at the top can also be enabled by initiating field level changes in defined areas, in the form of a pilot to show senior managers that effective change is possible in Bangladesh this took the form of the Jessore Pilot Programme;
- Partnership between Technical Assistance and local staff is essential for change to occur, and for change to be locally owned. Entering an organisation with a pre-determined blueprint stands the risk of creating animosity. Determining the direction of change must be done as a partnership.

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