



## Chapter-II

# Approach and Methodology of the Study



Scientists inspecting cotton crop



Awareness programme for women

## Chapter – II

### APPROACH AND METHODOLOGY

#### BACKGROUND OF THE STUDY

- 2.1 There is a limit on the expansion of the cultivable area in the country. In order, therefore, to meet the growing needs of the burgeoning population, productivity of the agriculture sector including its derivatives has to be increased. Here, the role of extension and advisory services, along with other matching inputs to help meet future higher yield needs, is very vital. The centrally sponsored scheme “Support to State Extension Programme for Extension Reforms”, seeks to make extension system farmer driven and farmer accountable by way of new institutional arrangements for technology dissemination in the form of ATMA.

#### OBJECTIVES OF THE STUDY

- 2.2 The broad aim of the impact assessment study is to assess the extent of success achieved in meeting the objectives of the scheme on various parameters included in the cafeteria of activities. The study aims at assessing the efficacy and effectiveness of the institutional mechanism created under ATMA with a focus on the achievement with respect to established milestones of physical and financial targets, quality services and process adherence so as to facilitate mid-course corrections wherever required and to enable initiation of timely corrective measures.

#### TERMS OF REFERENCE:

- 2.3 The study has been undertaken in two major parts:
- (a) Evaluation
  - (b) Impact Assessment.

#### (A) SCOPE OF WORK FOR EVALUATION STUDY

- (i) **To examine implementation of each of the activities under the scheme in agriculture and allied sector on the following parameters:**
- Physical achievement vis-à-vis targets as approved by GB of ATMA
  - Financial achievement vis-à-vis targets as approved by GB of ATMA and also as compared to cost norms prescribed in the cafeteria
  - Implementation of processes followed vis-à-vis processes prescribed under the scheme

- Quality of implementation.
- Number of farmers benefited sector-wise (agriculture, horticulture, sericulture, animal husbandry, dairy, fisheries etc.)
- Category-wise no. of farmers benefited (Women, SC, ST, OBC, Small, Marginal and Large)
- Additional income earned by beneficiaries as a result of implemented activities.
- Average delay, if any, in starting implementation
- Average time overrun, if any, in completing implementation.

(ii) **To assess achievement in respect of the following parameters:**

- Creating awareness about ATMA institutions.
- Extent of involvement of non-governmental sector
- Percentage of resources on recurring activities at district level utilized for women farmers as against prescribed 30% and extent of benefits accrued to women farmers.
- Percentage of beneficiary contribution realized on beneficiary oriented activities as against prescribed 10%.
- Extent of mobilization of funds from non-governmental sector, excluding the beneficiary contribution.
- Extent of utilization of resources under four categories of activities at the district-level as compared to the scheme provisions.
- Processes followed in preparation of District and State Extension Work Plans as compared to the processes prescribed for the purposes.
- Extent of public-private partnership (PPP) - Quality of partnership including the amount of private investment.
- Innovative extension activities.

(iii) **To assess the efficacy and effectiveness of the following institutions as per the mandate given to them under the scheme:**

- a) GB and MC of ATMA
- b) BTT and FAC
- c) SAMETI
- d) KVK, SAUs and other Research institutions
- e) Line Departments and IDWG
- f) Women's Representation in different Committees
- g) Farmer's Representation in different Committees
- h) Other non-officials in different Committees.
- i) Fund flow mechanism.
- j) Financial powers of key functionaries

(iv) **To make suitable recommendations for improving the implementation**

**(B) SCOPE OF WORK FOR IMPACT ASSESSMENT**

(i) **To assess project impact on the target beneficiaries in respect of the following parameters:-**

- Number of farmers benefited (SF, Marginal, LF and overall)
- Number of Women/SC/ST farmers benefited
- Change in KASA (Knowledge, Aptitude, Skill and Adoption) levels of the targeted beneficiaries in areas of agriculture, allied sectors, marketing, value addition, post harvest management including grading, packaging, value addition etc.
- Extent of cultivable area covered.
- Additional area brought under cultivation
- Changes in cropping pattern
- Introduction of new crops or new farm activities / enterprises
- Increase in cropping intensity
- Coverage of activities in allied sector (sector-wise)
- Adoption of new and/or sustainable technologies
- Increase in productivity
- Increase in value addition
- Assistance in marketing of agriculture produce
- Increase in prices realization
- Per hectare increase in income of farm household (separately for marginal, small, large farmers and overall)
- Increase in income of farm household sector-wise (separately for agriculture and each of allied sectors)

(ii) **To assess the project impact in reforming the extension system in respect of the following processes:**

- Formation and effectiveness of commodity based Farmers' Interest Groups
- Bottom-up planning
- Decentralized and flexible decision making
- Decentralized, multi-agency and flexible implementation system
- Farmers' empowerment in planning, decision-making, implementation, etc.
- Farmer to farmer extension
- Coverage of women farmers
- Research-Extension-Farmer linkages

- Group approach to extension
- Convergence/dovetailing of extension activities and assessment of 'funding gap' for extension activities
- Public private partnership (PPP)
- Sustainability of extension services
- Implementation of innovative activities

### **UNIVERSE OF THE STUDY**

- 2.4 The study has been conducted in 2 districts of Haryana and 9 districts of Uttar Pradesh covering 18 Project Blocks spread over 245 villages in U.P and 4 Project Blocks spread over 70 villages in Haryana.

### **SAMPLE SIZE**

- 2.5 The sample size for field survey comprises of a total of **7875** beneficiary farmers covering **6125** farmers from Uttar Pradesh and **1750** farmers from Haryana.

### **SAMPLE PROFILE**

- 2.6 The sample is a representative group comprising of beneficiary farmers drawn from various socio-economic categories [SC/ ST/ OBC / Women / General, Small Farmer / Marginal Farmer / Large Farmer, etc.]

### **SAMPLE DESIGN & METHODOLOGY**

- 2.7 The State of Uttar Pradesh is divided into 9 Agro-climatic Zones while that of Haryana is divided into 2 Agro-climatic Zones. Accordingly, in order to give a fair representation to all the Agro-climatic Zones in both the States and to see the scheme impact on the varying regions and zones of the two States, a total of 9 districts from U.P. and 2 districts from Haryana have been selected randomly for the purpose of study covering each Agro-climatic Zone in both the States. In selection of districts, due weightage has been given to districts where maximum number of programmes / activities have been held under agriculture as well as the allied sectors viz. animal husbandry, horticulture, fisheries, sericulture, etc. As per the terms of reference, a minimum of 2 project blocks have been chosen on a random basis from each selected district. Again, since districts are divided into different Agro-ecological Situations (AES), it has been ensured that the selected blocks are from different AES to have a fair assessment of the impact in all areas of the block. In selection of blocks, preference has been given to those blocks where maximum number of activities has been held under the scheme in agriculture as well as allied sectors (Animal Husbandry, Horticulture, Fisheries, etc.). Further, due care has also being taken to ensure availability of sufficient number of beneficiaries under all activities for a meaningful and effective survey. All the State level, District level and Block level

activities including all the dominant farming systems in the district have been covered in the study. The details of districts and blocks chosen for the study are shown in the table below:

S. No.	Agro-Climatic Zones	Name of Districts	Name of Blocks
<b>Uttar Pradesh</b>			
1.	Bundelkhand Zone	Jalaun	Dakur Kuthand
2.	Tarai Zone	Saharanpur	Sarsawa Punwarka
3.	Western Plain Zone	Baghpat	Baghpat Baraut
4.	Mid-Western Plain Zone	Bareilly	Nawabganj Mirganj
5.	South Western Semi-Dry Zone	Aligarh	Khair Atrouli
6.	North Eastern Plain Zone	Maharajganj	Barawala Jatusana
7.	Vindhyan Zone	Allahabad	Chaka Handya Urwa
8.	Mid-Plain/Central Zone	Lucknow	Gosainganj Basti-ka-Talab (BKT)
9.	Eastern Plain Zone	Barabanki	Deva Masauli
<b>Haryana</b>			
10.	South-Western Zone	Sirsa	Sirsa Nathusari Chopta Rania
11.	North-Eastern Zone	Sonepat	Gohana Rai Ganaur

- 2.8 Since the ATMA scheme is implemented in all the blocks of selected districts, there cannot be any control block (i.e. a block where the scheme is not in operation) to assess the impact. In the circumstances, for the purpose of comparison and analysis, baseline data as available in SREP, has been used.
- 2.9 The study has been conducted on the set parameters applied for conducting socio-economic impact evaluation process. A multi-stage, systematic, stratified sampling method has been adopted for the study. The reference period for the study is 2005-06 to 2007-08.

## STUDY TOOLS

- 2.10 The field survey at the level of farmer beneficiaries provides the basic feedback for impact assessment. The study tools have, therefore, been so designed as to lead to meaningful data on well defined quantitative parameters relating to effective delivery

of intended benefits, equity in extension of these benefits among between different social and economic categories of farmers and also gender-equity. In keeping with the cafeteria of activities under the scheme as well as the terms of reference of the present study, Structured questionnaires/schedules were designed separately for beneficiary farmers i.e. farmers who had availed benefits under the scheme such as participation in training programmes, demonstrations, exposure visits, field days, kisan goshtis, etc. Separate structured questionnaire was also devised for Project Directors of ATMA, Block Technology Teams (BTTs), Farmers' Advisory Committees (FACs), Farm Information & Advisory Centres (FIACs), Commodity Oriented Farmers' Interest Groups [FIGs] and the State level training institution (SAMETI). In addition, separate Schedules/Check Lists were prepared for KVKs in the districts, Agriculture Universities/Research Institutions and all the Line Departments in the Districts viz. Agriculture, Fisheries, Animal Husbandry, Horticulture, etc. The schedules were field tested in 2 districts namely, Sonapat (Haryana) and Baghpat (U.P.) whereafter draft copies of the same were handed over to the Extension Division in the MoA, DAC for perusal and concurrence. The core team also had meetings with the concerned officials in the Division during the second week of May 2009 on the draft schedules and based on their valuable inputs and feedback obtained on the implementation process, the Schedules were duly revised. Thus, the following study tools for inter-active phase in the form of structured schedules, check lists and open-ended questions for each category of interviewees were designed:

- i. Farmer Schedule *(to elicit pre and post project information on various parameters to measure the impact of ATMA on the beneficiary farmers)*
- ii. Schedule for District Agriculture Department *(to elicit information on area-wise & crop-wise production, extension support programmes and coverage of farmers there under during the last three years)*
- iii. Schedule for District Level Line Departments (AH, Horticulture, Fisheries, etc.) *(to elicit information on crop-wise/year-wise crop production, support services and impact of ATMA at the block level for the last three years)*
- iv. Schedule for Krishi Vigyan Kendra/Agricultural University Schedule *(to elicit information on the role of KVK and SAUs on transfer/dissemination of new technologies/knowledge to the farmer's fields)*
- v. Schedule for SAMETI *(to elicit information on training programmes undertaken for functionaries and their HRD plan)*
- vi. Check-List for Project Director, ATMA
- vii. Check-list for Block Technology Teams (BTT)
- viii. Check-list for Farmer Advisory Committees (FAC)
- ix. Check-list for Farmers' Interest Group (FIG)

- x. Check-list for NGOs/Self Help Groups

## GENERAL

- 2.11 The study started with preliminary discussions with the officials of the Ministry of Agriculture, DAC, Extension Division. The Study Team made a presentation on the Inception Report on 23rd March 2009 and a presentation on the Intermediate Progress Report on 5<sup>th</sup> October 2009 before the Technical Monitoring Committee of the MoA, DAC, GoI under the Chairmanship of Additional Secretary (Agriculture) of the Ministry. The study team also met the Directors Agriculture, the Addl. Director (Extension), State ATMA Coordinator and other officials dealing with the implementation of the programme in both the States of UP and Haryana and briefed them about the approach of the study. The field survey had been carried out by trained research associates and supervisors under the close guidance of the core team. The field team was given thorough training in the conduct of FGDs and canvassing of farmer schedules. In addition to field survey at the village level and interaction with farmer beneficiaries, an interface was also held with the representatives of farmers' organizations, farmer interest groups, NGOs and officials of line departments and other agencies. The evaluation was carried out by a combination of various methods including review of progress reports, interactive discussions with implementing agencies and all stakeholders.
- 2.12 The data collected from the primary and secondary sources was coded, tabulated, collated and analyzed using appropriate statistical tools like frequency, percentage and simple correlation to draw inferences thereon. As already indicated, structured interview schedules and semi-structured check lists were used as data collection instruments.

## SOURCES OF INFORMATION

- 2.13 The following agencies were accessed for collecting various types of information/data required in respect of the study:
- District Agriculture Departments
  - District Line Departments viz. Animal Husbandry, Horticulture, Fisheries, Sericulture, Sugarcane,
  - District Statistical Office
  - KVKs in the districts
  - SAMETI, Uttar Pradesh and Haryana Jind
  - Convener, Block Technology Teams (BTTs)
  - Chairman, Farmer Advisory Committee (FAC)

## **LIMITATIONS OF THE STUDY**

- 2.14 The study required interaction with several agencies and officials of various line departments implementing ATMA scheme in the two States besides the sample farmers and farmers' organizations for procuring primary and secondary data. The study team faced several constraints in timely obtenance and collection of data from the field level functionaries as also in accessing the concerned individuals and agencies, particularly keeping in view the multifarious activities involved under the scheme.

## **REPORT STRUCTURE**

- 2.15 The report has been structured and organized into eight Chapters. Chapter-I gives a brief introduction on the agricultural scenario and the genesis of the ATMA programme, Chapter-II deals with different approaches and methodologies adopted in conducting the study to make the same really of relevance and use to the client. Chapter-III makes a critical evaluation of the ATMA implementation in the study area and Chapter-IV discusses the role of the stake holders in implementation of the scheme vis-à-vis their mandate. Chapter-V contains the analysis of the primary data obtained from the farmer beneficiaries in sampled districts with a critical assessment of the project impact in reforming the extension system. Chapter-VI details the economic impact of the programme on the targeted beneficiaries. Chapter-VII contains findings and conclusions of the study while Chapter-VIII gives suitable recommendations and policy suggestions based on the findings and conclusions of the study.