IN-ReportOBS-20130510 (Vaishali -IN 16)

Base line survey and Village Base Line study were conducted in Vaishali Site (IN 16) of Bihar in 2012. These studies generated information on varied aspects of socio-economic status, agricultural practices, use of inputs, output, employment, marketing of input and output, livestock production, use of climatic and weather information, natural resources, gender role etc. But the information was obtained from the recipient side of services and information. An attempt was also made in earlier studies to have an idea of flow of information, services and support from different institutions to improve agricultural production scenario and improving quality of life of rural households. The picture of current conditions remains incomplete without considering the interventions by external and internal organizations which are providing services and information to households and communities.

 In earlier village survey and study, relevant information and data were obtained from households but related stories from supply side were missing. Hence, an organizational survey is conducted involving organizations which supplied services, technology and information to households and communities in Vaishali Site of Indo-gangetic plain ,India. The information will supplement the quantitative and qualitative household surveys at the same location.

The objectives of the organizational base line survey were to:

* Provide indicators to monitor changes in behaviours and practices of locally relevant organizations over time
* Understand the provision of information/services at the local level that informs farmers’ decision making about their livelihood strategies in response to climate change

Location

 The organizational survey is conducted in Vaishali site, India. Mukundpur village of Vaishali site is the focal point for the survey where both Base line survey and Village Base Line were conducted in 2012. Some of the organizations operating in the village have already been documented in Base line survey and Village Base line study. The following organizations were identified which are mentioned by respondents /participants of these two surveys.

1. Sudha Dairy Cooperative(Dairy Cooperative Society)
2. Department of Agriculture
3. Department of Livestock and Fishery
4. Gram Panchayat
5. Rajapankar Block(Block Development Office)
6. Agriculture Science Centre(KVK)
7. Primary Agri. Coop Credit Society (PACS)
8. IFFCO Foundation
9. BPL/APL
10. IFFCO Tokio
11. Gram Panchayat

Among these eleven listed organizations ,BPL/APL is not an organization but these are categories of households that is; Below Poverty Line(BPL) and Above Poverty Line(APL) which are used by government for providing subsidized food grains, sugar and other several services and facilities. PDS (Public Distribution System) is also not an organization because it is a government licensee shop for distribution of food grain and other essential commodities in rural area.

But some organizations working in the locality could not be reported by farmers neither during Base Line village survey nor in Village Base Line study, mainly due to unawareness of participants about various organizations which are not located in the village but contributing to development process of village economy. Hence, relevant organizations were identified for organizational survey. Department Dairy Development, Department Irrigation (water resource) and Department of Horticulture are included for Organizational survey. Dairy production is the second important complementary enterprise in the area of investigation and horticultural crops contribute significantly to the household income in Vaishali area. Department of Irrigation is included because water is one of the critical inputs for agricultural production. Aganwadi is included because it plays very important role in improving food/nutrition security of children and health of pregnant mother. There are some other organizations but all of them are not active in the area. We limited our study for thirteen organizations which are as under:

1. Block Development Office 8 Aganwadi

2. Department of Livestock 9.Grampanchayat

3**. Department of Dairy Development** 10. Agriculture Science Centre ( KVK)

4. **Department of Irrigation** 11. **District Horticulture Office**

5. Primary Agricultural Cooperative

 Credit Society 12.IFFCO Foundation

6. Dairy Cooperative Society(Sudha Dairy) 13. IFFCO\_TOKIO

7. Department of Agriculture

We interviewed 16 officials. In general one official in each department/organization was interviewed but we interviewed two officials each of the Department of Agriculture, Animal husbandry and Agriculture Science Centre, Vaishali. It was done keeping in view the importance of these departments in generating income and ensuring food security in the area. Project Co-ordinator and Subject Matter Specialist of Agriculture Science Centre were interviewed because it is engaged in transfer of agricultural technology from Lab to Farmers’ field and only organization in the area providing training to lower level officials and farmers in the field of modern agricultural technology. The semi-structured questionnaire provided by the CCAFS has been used to get information from respondents .

 **Process of Data Collection**

At the time of Village Study, participants identified organizations which have their offices in the village or out side village, located at block or district headquarters.We organized a meeting of officials of above mentioned organizations on Feb,28,2013 at DPS Regional Institute of Cooperative Management ,Patna. Representatives of 16 department/organizations were attended the meeting. At first, I welcomed them for accepting our request for participating in the meeting of the project. I described the objectives of the project along with our activities like; Base Line Survey in seven villages and Vllage Study. I informed them that it is the third activity in Vaishali site which will be completed with your cooperation. The purpose of the meeting was to have good rapport with these officials so that the desired information is obtained through questionnaire. I explained the each and every items of questionnaire. There was detailed discussion and response was very encouraging. I clarified several questions of participants which were not clear to most of them. None of the officials was ready to fill questionnaire after meeting but assured to give time for completion of questionnaire in office. We made at least two to three visits to each and every offices however organizations located in village cooperated and we could complete questionnaire in one visit, probably due to good rapport with villagers. We faced problem in getting information from other offices located outside village, mainly due to either their absence from office or engagement in official activity. We could complete this questionnaire with much difficulty. Representative of Forestry department, Agricultural Technology Management Agency, IFFCO-Sanchar and Department of Fisheries are also working in the locality for development of the area and providing services and information to rural households but they did not attend our meeting. We tried to get information from them but despite our best efforts they did not cooperate to our work. However, their activities are not visible in the area under investigation.

It is worth mentioning that the officials of village based organizations are not qualified hence we made much efforts in making them understand the contents /meaning of each and every questions however they cooperated much in completing questionnaire. Despite high level of education, exposure and training of Officials located in block/district headquarters, they took much time in responding our questions because some of them could not understand many questions properly.

 Organization participated in organizational survey are grouped in five categories on the basis of their functions which are presented as under:

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| Category of organization | Names of departments and organizations |
| Crop and livestock production | Department of agriculture, horticulture, animal husbandary, dairy development, irrigation |
| Cooperative and local government | Primary Agricultural Cooperative Credit Society, Dairy Cooperative Society, Grampanchayat |
| NGO | IFFCO-Foundation and IFFCO-Tokio |
| Transfer of Technology | Agriculture Science Centre |
| Rural development including health and hygiene | Block Development Office and Aganwadi |

 Current Issues/WORK of Organizations

 The majority of organizations are engaged, mainly in providing services, inputs, and technology for increasing level of crop and livestock(milk) production. The main activity of department of agriculture is arranging supply of quality seeds, chemical fertilizers and organic manures. They promote production and use of Vemi-compost by providing technology and subsidy. Popularization of agricultural machineries is also one of the important activities of agriculture department. Besides, they provide information about crop production technology, mainly through village meetings and farmers’ fare at district headquarters. Horticulture department is doing similar activities but for horticultural crops. However, subsidy component in case of production of horticultural crops is higher than field crops because there is mega National Horticulture Mission project in operation for the last six years in the area.

Irrigation is one of the critical inputs for production of field and horticultural crops but department of irrigation is one of the weakest departments. There is no public tube well in the area and farmers depend on their own diesel operated tube wells which is very costly due to high price of diesel. Infrastructure of canal irrigation is very week but government has started survey for extension of canal network in the area.

 Animal husbandry department is engaged in immunization of animals against their dread diseases and treatment of ailing animals at block level hospital. They arrange camp in villages for treatment of sterility in a few villages which is not adequate to meet the requirements of dairy farmers. Dairy development department is working with dairy cooperative societies and training farmers for clean milk production. They provide green fodder seeds to farmers for production of green fodder but the area is deficient in green fodders.

 Dairy Cooperative Society is an active village organization not only in village/site under study but it is only successful cooperative organization in Bihar. It is supervised and monitored by Dairy development department and Bihar State Milk Cooperative Federation. DCS is collecting milk on fixed price (revised time to time) and sell to Milk Union(district cooperative federation).It also provides quality feed, fodder seeds and veterinary services . Artificial insemination facility is also provided by DCS with help of Milk Union and State Federation. They provide training on several aspects of livestock management and health –hygiene of animals.

PACS (Primary Agricultural Cooperative Credit Society) is another cooperative organization of farming community at village level which provides credit, mobilizes small savings, sells agricultural inputs and procures foodgrains on procurement price from farmers but not actively involved in providing other services and information to rural households . PACS of Mukund pur village is not much active but it can play an important role in increasing agricultural production and enhancing income of farmers by procuring food grains on procurement price.

Grampanchayat is another democratic organization in the village which is managed by electeted representative of villagers. It is a village level nodal organization for all round development of village. All the development departments operate through Grampanchayat in the village. They facilitate implementation of the development project and monitor also wherever needed.

IFFCO-Tokio is profit making organization and started working in risk management

in crop production. The organization covered only 200 farmers in the last year but there is scope of extension of its activity in risk prone agriculture of Bihar ,in general and our Site ,in particular.

IFFCO-Foundation is an active NGO at national level and it is working in Vaishali site also for the last two years. The organization is working in agricultural development and has collaboration with CCAFS and other International organizations. IFFCO Foundation conducts farmers’ training in modern agricultural technology and organizes farmers fare for transfer of agricultural technology. The organization has weak organization structure and poor man power for serving the rural community of our site.

 KVK (Agriculture Science Centre) is established with financial support from Government of India. KVK is engaged in transfer of Agril. Technology and training to lower level officials and farmers. KVK collects weather information but there is no proper mechanism to make available the information to farming community.KVK has established soil testing laboratory but non functional. In both the surveys(Base Line and Village study)none of household reported getting his soil tested in KVK.

 Block development office in a nodal office for all the development activities in villages of block. He is administrative head of the block for law and order also. Block level officials of all departments work under supervision of block development officer

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Aganwadi Kendra is village level organization of Department of Welfare and Health which caters to need of nutrition and health of children and young women, particularly of pregnant lady. The incharge of Aganwadi is literate and she is managing activities of centre with much trouble however she was very cooperative in CCAFS activities.

Findings of Survey

An preliminary analysis was undertaken. On the basis of information obtained in organizational survey, the first five important objectives of surveyed organizations are provision of modern agricultural technology, arranging credit to farmers, immunization and treatment of animals, promotion of fodder production and promotion of horticultural crop production. We observed in Base line Survey and Village Study that the crop production is the main occupation of 96 % of households whereas 71% households are engaged in both crop and livestock production in surveyed villages hence organizations working in the area are focusing their efforts in making available modern technology for crop production which includes know-how, seeds, fertilizers(organic & inorganic) and pesticides. Training of farmers is important activity of agriculture department, KVK (agriculture Science Centre),Block Development Office, IFFCO Foundation and Grampanchayat but very few farmers reported about training in our earlier interactions with them.

Facilitation of institutional credit to farmers is the second most important activity of organizations surveyed in Vaishali grid. It seems reasonable also because the majority of households(89%) in the surveyed villages belong to marginal category (below 1 ha.) and poor with meagre surplus hence they need institutional credit for adoption of new farm technology and purchase of improved breed of dairy animals.

About three –fourths of households are engaged in livestock production hence organizations namely; Department of Animal Husbandry, Department of Dairy Development ,Dairy Cooperative Society and Grampanchayat assign more priority to immunization of animals because diseases cause much loss to dairy farmers in the area. Fodder production is the next important activity of some of organizations interviewed because 50 per cent of households are obtaining income through sale of livestock products in surveyed villages. Livestock production is also complementary enterprise to crop production , helping crop production enterprise by different ways hence a large number of organizations are working in the area for development of livestock sector and all of them including Department of agriculture are promoting green fodder production in the area.

 Promotion of production of horticultural crops is fifth important activity of surveyed organization. It is needed also because Vaishali area is rich in horticultural crops. It is known for mango, litchi, guava and various vegetables production. In our Base Line Survey we observed 70% households engaged in vegetable production and 40% in fruit production. Keeping in view the importance of horticultural crops, various horticultural development projects are being implemented by government which include subsidy for production of most of horticultural products, production of vermin-compost and 90% subsidy on micro-irrigation equipments and appliances.

Means of Communication

 Information is transferred to farmers and rural households through personal contact, meeting, camp and farmers’ fare. Booklets and any type of written materials are not commonly used due to prevalence of illiteracy(17%) and low level of education in one –fourth of households in the area.

Preference in Development programmes

Schedule caste and Schedule tribes are categorized as weaker section of society in India. The majority of households interviewed reported that schedule caste households get preference in making available subsidy in agricultural programmes. None of organization assigned any preference to women in any programme, except programme designed especially for women.

Importance of Work related to Climate

Department of Agriculture, KVK, IFFCO Foundation and Grampanchayat undertake work of soil testing but very few of households reported that they could be able to get their soil tested. IFFCO Foundation and IFFCO Tokio are working in the field of climate change mitigation. Department of agriculture ,animal husbandry and many others claimed that they are working on climate change mitigation but all of these departments/organizations are either providing contingent crop plan or assistance in case of extreme weather condition.

 Officials were asked to indicate about allocation of time, staff and budget on work related to climate change on five point scale that is; None,Low,Medium,High and Very high. Analysis of data revealed that about 31% respondents did not allocate time but three organizations ( IFFCO Foundation,IFFCO-Tokio and KVK) allocated high time to climate change mitigation work .More than 50 per cent respondents reported that their organizations did not allocate budget for this purpose. About one-third of respondents claimed that their organizations allocated low budget for climate change mitigation work.

 IFFCO Foundation and IFFCO-tokio are partners of CCAFS but these organizations allocate medium level of fund for climate change mitigation. The allocation of staff for climate change mitigation also observed the similar trend. Hence, the climate change mitigation work is still in infancy stage in almost all organizations working in Vaishali area;

 Main challenges

Respondents indicated main challenges in delivering services and information to villagers

These are as follow:

* Non cooperation of farming community
* Small size of land holding
* Less fund in comparison to number of needy households
* Procedural delay in delivery of services/information
* Low literacy and awareness
* Lack of experts for transfer of services/information

Conclusions

 While Organizational Base Line interview I observed that only two organizations are working on climate change and activities related to climate change mitigation but these organizations have very special purpose. IFFCO -Tokio is providing crop insurance coverage but there is no presence of this organization in the area. IFFCO Foundation is organizing farmers’ fare for transfer of farm technology and do not provide any information about climate mitigation. Government departments are involved in providing their respective services but not involved in climate related services/information. In Base Line Survey also ,only 8 % households reported about obtaining weather information from government officials. Almost all organizations identified its headquarters for driving force for implementation of climate change agenda

Despite non-existence of any activity related to climate change, the majority of respondents could not mention any gap in the area of climate related activities.

All the respondents tried to relate their organizations’ activities to food security. Soil and water management is the main natural resource management activity. There is weak institutional marketing support in Bihar ,in general and locality, in particular where we are working. Hence, few organizations responded to this question. IFFCO FOUNDATION claimed that they facilitated vegetable marketing to city market but we verified and found that very few farmers were motivated for this purpose. On the whole we observed very weak organizational support in the area with respect to agricultural development, food security, health and sanitation.

 Officials are aware about climate change and its adverse effect on agriculture and livelihood of people but they are not even making the rural households aware about the climate change. We interviewed officials of grass root organizations and local offices of State level organization who have no authority in major decision making and showed their inability in responding several questions with authority because they cannot take decisions. The questionnaire is semi-structured and we expect many things from local officers who are not exposed to climate change activities. Despite our hints at the time of interview they were not able to answer properly.

 There is no coordination among organizations in the area for even proving similar services to farmers .The majority of officials do not know well their counterparts of other organization working in the area and some them are not aware of even mobile no. of his senior officials.

Finally I like to mention that there is no any project and plan for climate change and mitigation in Bihar. ICAR-Regional Centre for Eastern Region has started some experiments on mitigation aspects but it is still cosmetic academic activity. There is need to make sincere efforts to develop crop varieties, animal breed and fish species which could thrive well in changing scenario due to climate change. Farmers should be educated for several aspects of climate change and available befitting technology should be transferred at ground level.