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Base line survey and Village Base Line study were conducted in KARNAL Site (IN 17) of Haryana in Nov-Dec 2012 and March 2013, respectively. 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 Karnal 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 Karnal site, India. Pakhana village of Karnali site is the focal point for the survey where both Base line survey and Village Base Line were conducted in 2012 and 2013, respectively. 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. Department of Agriculture
2. Department of Animal husbandry
3. Gram Panchayat
4. Primary Agri. Coop Credit Society (PACS)
5. Aganwadi
6. PDS
7. Central Bank
8. Schools

Among these eight listed organizations in VBS report ,PDS. Central Bank and Schools should not be categorized as organizations for our purpose because their activities are not directly related to food security, agricultural development and weather/climate change. PDS (Public Distribution System) is not an organization because it is a government licensee shop for distribution of food grain and other essential commodities in rural area. Central Bank is a commercial bank and not directly related to any of our objectives of the survey. Schools are imparting education to children and it is not worth to interview teachers for the purpose of our survey.

But some organizations working in the locality could 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 of Forest,Agricultural Technology Management Agency(ATMA),Krishi Vigyan Kendra-KVK(Agriculture Science Centre),Agricultural Produce Market committee (Mandi) And IFFCO are included for Organizational survey. Department of forest has started massive work of tree plantation which will help climate mitigation programme. Atma and KVK are two important organizations which are engaged in transfer of farm technology. IFFCO is, no doubt, a cooperative organization but helping farmers by making quality fertilizers and seeds at reasonable price at right time. Hence these four organizations are included in organizational survey.

 Agricultural (crops) production and dairy production are two most important activities in Karnal area because 95 % households are engaged in crop production and 60% in dairy production. Hence, we interviewed two persons each from Agriculture and animal husbandry departments

 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 Agriculture development

2. Department Animal husbandry

3. DEPARTMENT OF Forestry

4. Agriculture Science centre (KVK)

5. Primary Agricultural Cooperative

 Credit Society (PACS)

6. Agriculture Produce Market Committee (MANDI)

7. Grampanchayat

8. Aganwadi

9. ATMA-Agricultural Technology Management Agency

10. IFFCO

We interviewed 12 officials. In general one official in each department/organization was interviewed but we interviewed two officials each of the Department of Agriculture, Animal husbandry. It was done keeping in view the importance of these departments in generating income and ensuring food security in the area. Block Agricultural Officer working at block level and Agriculture Development Officer working for a group of villages and more close to farmers were interviewed. District Animal Husbandry Officer and Block Animal Husbandry Officer were interviewed to have more and varied type of information from officials working at different levels. 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 outside the village, located at block or district headquarters. We organized a meeting of officials of above mentioned organizations on April, 2013 at Gurudwara,Pakhana. 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 Village Study. I informed them that it is the third activity in Karnal 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 office 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 Schools and PDS persons were also present in the meeting but we could not contact them for interview.

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, animal husbandry, Agricultural produce market committee |
| Cooperative and local government | Primary Agricultural Cooperative Credit Society, Grampanchayat |
| NGO | IFFCO |
| Transfer of Technology | Agriculture Science Centre and ATMA |
| Rural development including health, hygiene and forestry | 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 green manuring by providing technology and subsidy. Karnal area is agriculturally developed hence fertilizer consumption is very high (more than 200 kgs/per ha.) and agricultural operation is also highly mechanized. Hence, private seed and fertilizer companies are more active in the area which made public sector as weak institution and agriculture department gets more result by making little efforts. However, they provide information about crop production technology, mainly through village meetings with active support of Sarpanch of village and farmers’ fare at district headquarters.

 Animal husbandry department is engaged in immunization of animals against their dreaded 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. They provide green fodder seeds to farmers for production of green fodder. The effort of Animal husbandry department in increasing area under fodders seem to have positive influence since about 60% of households surveyed were found growing fodder crop at the time of base line survey.

PACS (Primary Agricultural Cooperative Credit Society) is a 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 Pakhana village is active and farmers are getting agricultural loan and selling foodgrains also through PACS.

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 is engaged in providing quality fertilizers and seeds in the village which facilitates higher level production of crops in the area. They conduct farmers’ training in modern agricultural technology and organize 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 in both the surveys (Base Line and Village study) none of household reported getting his soil tested in KVK.

Department of forest is engaged in increasing area under tree coverage in various programmes. Agro-forestry is also being promoted by this department but their effort is still not visible in the area. APMC is an important organization in the area which is engaged in facilitating marketing of agricultural produce. They started an innovative activity of compensating loss due to machinery hazards.

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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 in charge of Aganwadi is less educated and she is managing activities of centre with much trouble however she was very cooperative in CCAFS activities.

Findings of Survey

A 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 creation of market infrastructure. 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 and Grampanchayat reported in organizational survey that they are engaged in training of farmers but very few farmers reported about training in our earlier interactions with them.

Facilitation of institutional credit to farmers is an important activity of organizations surveyed in Karnal grid but only 4% farmers reported about availing credit from formal source whereas 12% farmers reported about credit from informal source. This indicates dominance of informal source of credit in even agriculturally developed region of Indo-gangetic plain of India.

More than three –fourths of households are engaged in livestock production hence organizations namely; Department of Animal Husbandry 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 more than 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. But only Animal husbandry and KVK mentioned livestock related activities in organizational survey.

Agriculture of the area is developed but farmers are facing problem due to fast decline in water table which made irrigation more costly. The Department of agriculture is trying to popularize micro-irrigation system and providing subsidy for installing micro-irrigation system in the field.

Means of Communication

 Information is transferred to farmers and rural households through personal contact, meeting, camp and farmers’ fare. Department of agriculture mentioned in organizational survey that they are trying to use T.V. and other mass communication sources for transfer of message to farming community.

Preference in Development programmes

Schedule caste households are categorized as weaker section of society in India. The majority of officials interviewed reported that schedule caste households get preference for subsidy in agricultural programmes however a few scheduled caste households own land and qualify for subsidy. 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 and Grampanchayat undertake work of soil testing but very few of households reported that they could be able to get their soil tested. Almost all the organizations interviewed in organizational survey 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.

 In base line survey, erratic rain fall is the most important reason for change in farming practices (93% farmers) but only one-third of farmers received forecast for 2-3 days rainfall whereas only 5.6% farmers received this information from Govt. extension officers, indicating low involvement of public officials in disseminating this important message

 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 less than 50% organizations did not allocate any time but only Department of forest 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.

 Main challenges

Respondents indicated main challenges in delivering services and information to villagers

These are as follow:

* Non cooperation of farming community
* Less fund in comparison to number of needy households
* Procedural delay in identification of target group for providing benefit
* Lack of trained staff

Conclusions

 While Organizational Base Line interview I observed that only one organization (Agriculture Department) is providing some information relating to climate change and has activities related to climate change mitigation. Agriculture department suggests farmers to adopt short duration crops/varieties which require less quantum of water. It is being emphasised due to fast decline in water table due continuous cropping of rice and wheat-water loving crops. Other government departments are involved in providing their respective services but not involved in climate related services/information. In Base Line Survey also, only 5% households reported about obtaining weather information from government officials. Almost all organizations identified its headquarters as driving force to undertake any activity including climate change adaptation/mitigation.

The most of organizations reported that they are undertaking climate change adaptation and/or mitigation activities but few of them indicated the time of start of these activities. Some of organizations claimed linkages with other organizations but one-fourth of organizations failed to mention their telephone or mobile number of sister organization, indicating poor linkage and coordination among departments/organizations at field level in Karnal area. Finally it may be inferred that 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 of them are not aware of even mobile no. of his senior officials.

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 reasonable institutional marketing support in Haryana, in general and locality, in particular where we are working. Hence, few organizations responded to this question. 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 community 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 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.