



Second PMES Report

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Section 1: Introduction

Background of RACP

Rajasthan, located in western India is the largest state in the country, covering 10.5% of the country's geographical area and 5.5% of the population. The state's economy is primarily agriculture driven with two third of the population depending on it as a means of livelihood and income generation. This said the state grapples with a challenging terrain and climate and has only 1% of water resources of the country of which 83% is used for irrigation. The limited water resources are further stretched by a variety of factors including a fast increasing population, urbanization and industrialization. These factors coupled with the need for raising agriculture productivity is generating competing claims for water resources.

With limited water resource and increasing constrains on water availability in particular for agriculture, improving productivity per unit of water used in irrigated agriculture and achieving productivity gains in rain-fed agriculture are untapped opportunities in the agriculture sector. Thus the major challenge for the state is sustainable and efficient use of its scarce water resources from all available water sources for various uses in context of ever increasing and competing demands from all sectors of economy.

The Rajasthan Agricultural Competitiveness Project (RACP) has been initiated in this background with an aim of ensuring sustainable and efficient use of water resources, including improved on farm-water efficiency and reduced water intensive cropping patterns. The target of the project is to increase the productivity of natural resources and farmers' income through efficient water management, crop management and animal husbandry as well as improved produce marketing.

RACP which is supported by Government of Rajasthan (GoR) and the World Bank has the following stated project development objective:

Establish the feasibility of sustainably increasing agricultural productivity and farmer incomes through a distinct agricultural development approach by integrating agriculture water management and agricultural technology, farmer organizations and market innovations in selected locations across the ten agro-ecological zones of Rajasthan. The aim is for the state to help farmers get more rupees per unit of water in compensation for farmers using fewer units of water.

The key performance indicators (KPI) established for the project are outlined as follows.

KPI 1: Reduction in water used in agriculture	KPI 4: Increase in gross margins from crops and livestock products
KPI 2: Increase in water use efficiency in agriculture	KPI 5: Increase in share of producers' price in wholesale price
KPI 3: Increase in agricultural productivity	KPI 6: Farmer satisfaction with project deliverables

Primary beneficiaries of RACP are smallholder farmers with an actual and potential commercial outlook who are to be brought together through collective actions towards achieving economies of scale through groups and associations such as water user groups, ground water management communities, livestock herders, watershed groups and farmer produce organizations. The other key stakeholders involved in the project include six line departments of the GoR (Departments of Agriculture, Horticulture, Animal Husbandry, Watershed Development and Soil Conservation, Ground Water and Water Resources), autonomous institutions, Non Government Organisations (NGOs), Service Providers (SPs) and private sector partners such as agro processers and agro industries, wholesalers and traders participating through the commodity value chains.

The project covers clusters spread across eight agro-ecological zones (AEZs) of the state which are indicated in the following table along with the thematic areas that are applicable for each.

Sl.	District	Cluster	Thematic Areas
Ground Water Clusters			
1.	Ajmer	Pisangan	Agriculture, Horticulture, Ground Water, Livestock
2.	Kota	Sangod	Agriculture, Horticulture, Ground Water
3.	Sawai Madhopur	Bonli	Agriculture, Horticulture, Ground Water
Watershed Clusters			
4.	Alwar	Bansur	Agriculture, Horticulture, Livestock, Watershed
5.	Banswara	Kushalgarh	Agriculture, Horticulture, Livestock, Watershed
6.	Dholpur	Bari	Agriculture, Horticulture, Livestock, Watershed
7.	Jaipur	Mokhampura	Agriculture, Horticulture, Livestock, Watershed
8.	Jhalawar	Manohar Thana	Agriculture, Horticulture, Livestock, Watershed
9.	Nagaur	Ladnu	Agriculture, Horticulture, Livestock, Watershed
10.	Tonk	Dooni-Deoli	Agriculture, Horticulture, Livestock, Watershed
11.	Pratapgarh	Jakham Catchment Area	Agriculture, Horticulture, Watershed
12.	Bundi	Gudha Catchment Area	Agriculture, Horticulture, Livestock, Watershed
13.	Chittorgarh/Bhilwara	Orai and Bassi Catchment Area	Agriculture, Horticulture, Livestock, Watershed
Surface Water Clusters			
14.	Baran	Palaiitha, Anta	Agriculture, Horticulture, Surface Water, Livestock
15.	Bikaner	Phoolasar-Distributary	Agriculture, Horticulture, Surface Water, Livestock
16.	Bundi	Gudha Command Area	Agriculture, Horticulture, Surface Water, Livestock
17.	Chittorgarh/Bhilwara	Orai and Bassi Command Area	Agriculture, Horticulture, Surface Water, Livestock
18.	Jaisalmer	Kheruwala-Distributary	Agriculture, Horticulture, Surface Water
19.	Pratapgarh	Jakham Command Area	Agriculture, Horticulture, Surface Water
20.	Sri Ganganagar	Z-Distributary	Agriculture, Horticulture, Surface Water

Introduction to the PMES Exercise

The objective/goal of conducting Participatory Monitoring and Evaluation System (PMES) exercise is to build the community's capacity to track the progress of its own development; and both the project and primary stakeholder (i.e. small farmers, farmer's community, private sector partners, public institutions and service providers) are joint users of the information. It is expected that it will lead to enhanced proactive engagement and ownership of the project amongst the primary stakeholders. The PMES collects qualitative information about the progress of RACP activities in a participatory manner so that the community can make its own decisions on aspects such as status of work, pendency issues, aspects that need to be changed and steps that need to be taken to improve the service delivery. PME methods are used to facilitate prompt identification of shortcomings and problem areas, and facilitate concurrent corrections, where necessary, in the project design and implementation arrangements so that a project can achieve its development objectives.

It is expected that RACP would use the findings of the PMES to capture opinions and feedback from the community regarding the goods and services provided under the project and to identify areas of improving project service delivery.

Beneficiary and stakeholder participation in PME will enable RACP to ensure: a) Project and Programs are responsive to the genuine needs of stakeholders; (b) Strengthened institutions through better program accountability and transparency; (c) Determination of the impact, intended and unintended on the intended beneficiaries and stakeholders from their respective perspective; and (d) if the project work is proceeding according to the plan or not. Though there are varieties of PME tools which can be used but given the fact project activities are still in the initial stages, Community score card (CSC) tool was used due to its relevancy and ease of use by the community, in the second round of review. The Community Score Card (CSC) process is a community based monitoring tool which amalgamates the techniques of social audit, community monitoring and citizen report cards. The CSC process in RACP uses social and public accountability and responsiveness from service providers and project. It facilitates the monitoring and performance evaluation of services that are being provided by the RACP directly or through service providers to the community and their institutions.

The community score card (CSC) process used in RACP is expected to ensure the following:

- Tracking of project inputs
- Monitoring of the quality of services provided
- Generation of benchmark performance criteria that can be used in resource allocation decisions;
- Comparison of performance across clusters
- Building capacity of community and district project team for service delivery

Out of the 20 clusters across three themes- Groundwater, Watershed and Surface Water-six clusters across the three themes were selected. The six clusters chosen were:

Cluster Type	Cluster	District
Ground Water	Bonli	Sawai Madhopur
Surface Water	Sri Ganganagar	Z-Distributary
	Jaisalmer	Kheruwala Distributary
	Bundi	Gudha Command Area
Watershed	Bansur	Alwar
	Bari	Dholpur

PMES was conducted for the period April 2017 – September 2017 across above mentioned six clusters during the period November to December 2017 by Sutra Thematic Experts and other key staff.

Objectives of the PMES Exercise

Participatory Monitoring and Evaluation system (PMES) was used to monitor performance of relevant activities such as the activities of/with the common interest groups and multi-task groups (MTGs). The purpose of CSC in the six clusters was to assess the quality and effectiveness of intervention implemented by service providers with the focus on beneficiaries' perception and interest on same. As part of the participatory M&E system, tools such as community score card was used to see the progress for the six monthly period of April 2017 to September 2017.

Methodology

Physical progress of the clusters was reviewed based on the Monthly Progress Reports accessed from RACP. Based on the review by Sutra thematic experts, it was decided that with the status of progress in these clusters, Community Score Card tool would be the appropriate PMES tool to be used during the second PMES, as it would provide a firsthand account on the process of project implementation and community's perceptions, thereby giving an opportunity to understand the bottlenecks which usually occur in the initial period of project implementation.

To conduct Community Score Card process, sample guides were created and monitoring teams were oriented on the objective of Community Score Card Process and how to conduct it on the field. The methodology of conducting Community Score Card process was similar across the six clusters.

Community Score Card process was conducted with the villagers of six villages consisting of MTG members and beneficiaries. From each cluster CSC was conducted in two villages, which were selected from the list of project villages under the respective clusters. The selected villages were then shared with the respective PIA officials of the cluster. It was upon their agreement that the CSC process was conducted in the selected villages. The mobilization of participants for CSC was facilitated by agricultural supervisors accompanying the Sutra team on the field visit in all the clusters. During the CSC approximately 30-35 members gathered at a place for meeting. Prior to initiating the CSC, Sutra expert team organized a discussion with the village community to build up an enabling environment for the CSC. During the discussion the purpose of CSC was shared with the participants.

The participants were shown five colored circular images (in the shape of chapatti) for ratings of the works that have been implemented during the period April - September of financial year 2017. The participants were first briefed about the community score card process and facilitated with discussion on scoring over a scale of 1 to 5 (where 5 was excellent, 4 being very good, 3 good, 2 fair and 1 poor score as per the participants) for particular activities implemented during April 2017 to September 2017 based on its performance and processes adopted for implementation. During the CSC community members were asked about the activities conducted in the village and detailed discussion on each activity was conducted. The CSC process revealed that the community had a sense of ownership towards project and were also aware of most of the aspects during discussion. Most important aspect of CSC was the expression of rationality by participants on the basis of which they were scoring a particular activity.

The plan of the six monthly monitoring visits was shared by the PMU with PIA officials of the concerned districts prior to the visits and field plan for data collection in the villages. The same plan was discussed with the concerned officials on the first day of the six monthly monitoring visits to clusters. The PIA officials designated cluster officials for accompanying the Sutra monitoring team on field for data collection. The cluster officials comprising of Assistant Agriculture Officer (AAO) and Supervisors supported the mobilization of beneficiaries for CSC process.

The collected data from six districts was compiled and analyzed by the experts cluster-wise, breaking it down to the activities conducted in the mentioned monitoring period. The following section provides cluster wise summary of CSC process findings and in the section next to it findings are discussed with specific recommendations for streamlining of activities under the project.

Section 2: Findings and Results of the PMES

Introduction

The following section presents cluster wise findings of CSC process. The CSC process was undertaken in two villages in each of the clusters. Marking was done in a range of 1-5 with 1 standing for unsatisfactory and 5 for excellent. The participants were trained on the marking method etc. prior to the exercise. The marking scale adopted is as follows:

- 1- Unsatisfactory
- 2- Fair
- 3- Good
- 4- Very Good
- 5- Excellent

Participants were those who were beneficiaries of the project and those who had been exposed to project activities. A list of three key activities undertaken in the village was developed in consultation with the participants and marks were awarded in most cases in consensus.

Findings from CSC Process in Bari Cluster, Dholpur District

Table 1: CSC in Singroi Village

Activity	Marks Awarded	Explanation for Score by Community
Chaff cutter distribution	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saves time, fodder, improved digestion of animals ○ Provision should be available for running through motor ▪ Negatives: <ul style="list-style-type: none"> ○ MTGs selected the eligible members only and two more members could have been included as beneficiaries but they were not covered due to limit of beneficiaries from an MTG
Goat distribution	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Goats distributed two months ago ○ Women MTG elected the two families in a democratic manner ○ Benefit should be given to other poor and women headed family in the village ▪ Negatives: <ul style="list-style-type: none"> ○ Nothing specific was mentioned
Feeding trough distribution	3	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Quality should be improved and it should be immediately installed in field at the time of distribution ▪ Negatives: <ul style="list-style-type: none"> ○ Quality of feeding trough needs improvement ○ Many feeding troughs found in idle condition,

Activity	Marks Awarded	Explanation for Score by Community
		<ul style="list-style-type: none"> ○ Unit cost is high as compared to quality of item which is of low weight
Solar pump	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Poor service of supplier ○ Limited support from Department ○ Low running time of motor ○ No use of pump and farmers have to spend additional cost for irrigation
Shade net house	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Took more time in installation and one whole season lapsed due to delay in distribution of seed ○ Poor service of company, still small part of work has to be completed ○ Training should provide to farmer on its usage
Wide spacing crops with inter cropping (Kinnu- Orchard)	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Drip system couldn't be installed because of dysfunctional solar system. ○ Only 150 plants distributed for 1 ha out of 400, beneficiaries went thrice to Bari for plants but were not provided ○ Need proper communication between farmer and department for timely availability of inputs
Seed demonstration	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Given to farmer under controlled plot and yield is less ○ Height of plant was less, fodder produced was also less as compared to their traditional variety
Post harvest management – Tirpal	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Quality of Tirpal is good ▪ Negatives: <ul style="list-style-type: none"> ○ Farmers were not involved during identification of beneficiaries

In Singroi village of Bari cluster, participants listed eight major activities, listed in the above table, which had taken place during April 2017 to September 2017. For **Chaff cutter distribution** participants gave a score of 4 marks. During the discussion they told that this activity can be scored **very good (4 marks)** as it saves their time, fodder and helps in improved digestion of animals. They also suggested that there should be a provision for running it with motor. Despite giving high marks participants told that MTGs selected the eligible members only and two more members could have been included as beneficiaries but they were not covered due to limit of beneficiaries from an MTG.

For **Goat demonstration** participants gave a score of **5(Excellent)**. Participants told that goats were distributed to beneficiaries only two months so they cannot yet say anything on kids of the goats. They told that beneficiaries (two households) were elected by the women members of the MTG in a democratic manner. They further suggested that benefit should be given to other poor and women headed family in the village

For **Feeding trough distribution** participants gave a score of **3(Fair)**. Participants highlighted that quality of feeding trough is not good. Sutra monitors during the field visit had found that many feeding troughs were in

idle condition and unit cost is high as compared to quality of item which is of low weight. Participants suggested that quality of feeding trough should be improved and it should be immediately installed in field at the time of distribution.

For **Solar pump** participants gave a score of **1(Unsatisfactory)**. Participants told that service provided by supplier was very poor and there was no support from the department. They further added that running time of motor is low and there is no use of pump, and on top of that farmers have to spend additional sums for irrigation. They suggested that strict action against should be taken against the supplier in case of any complaints from beneficiaries. Beneficiaries told that there is a need of automated solar pump.

For **Shade net house** participants gave a score of **1(Unsatisfactory)**. Participants told that it took more time in installation of shade net house and one whole season lapsed due to delay in distribution of seed. They further told that service provided by the company was poor and still small part of work has to be completed. Participants suggested that training should be provided to farmers on its usage.

For **Wide spacing crops with inter cropping (Kinnu- Orchard)** participants gave a score of **1(Unsatisfactory)**. Participants told that drip system couldn't be installed because of dysfunctional solar system and only 150 plants were distributed for 1 ha out of 400 plants told earlier. On their part, beneficiaries went thrice to Bari for plants but were not provided despite repeated visits. Participants suggested that there is a need for proper communication between farmer and department for timely availability of inputs.

For **Seed demonstration** participants gave a score of **1(Unsatisfactory)**. Participants told that seed demonstration was given to farmer under controlled plot and yield was less, height of plant was less hence fodder produced was also less as compared to their traditional variety.

For **Post harvest management (Tirpal)** participants gave a score of **4(Very good)**. Participants told the quality of tirpal distributed is good. The only issue they raised was that farmers were not involved during identifications of beneficiaries.

Table 2: CSC in Mundpura Village

Activity	Marks Assigned	Explanation for the score
Animal Health camp	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Community recognized the impact of camp and use for villagers ○ Information on camp was provided through LLW, Pashu Sakhi, mobile, FNGO and pamphlet distribution ○ Camps frequency should be more ○ More medicines should be available in camps ▪ Negatives: <ul style="list-style-type: none"> ○ Nothing specific was mentioned.
Goat distribution	3	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Goats from two households died but their claim settlement has not been done ○ one beneficiary goat cannot pregnant, micro plaza diseases among goat, quality is reasonably okay ○ MTG identified the name of

Activity	Marks Assigned	Explanation for the score
		beneficiaries <ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Nothing specific was mentioned.
Chaff cutter distribution	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saving of time and labor. All goats feed together at one place. Saving of fodder, milk productivity improved, digestion improved ▪ Negatives: <ul style="list-style-type: none"> ○ Nothing specific was mentioned.
Feeding trough distribution	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saving of fodder , useful, quality can be improved ○ Unit rate is high as compare to quality ▪ Negatives: <ul style="list-style-type: none"> ○ Nothing specific was mentioned.
Post harvest management-Tirpal	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Useful activity. Used to cover the agriculture produce and beneficiaries use it for many other purpose like cover the home roof during rains ▪ Negatives: <ul style="list-style-type: none"> ○ Nothing specific was mentioned.
Seed demonstration	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ No significant change observed by community but optimistic that good result will get in good rains ▪ Negatives: <ul style="list-style-type: none"> ○ Nothing specific was mentioned.

In **Mundpura village** participants listed :a)Animal Health camp; b) Goat demonstration; c) Chaff cutter distribution; d) Feeding trough distribution; e) Post harvest management – Tirpal; and f) Seed demonstration, as six major activities which took place in the aforementioned monitoring period.

For **Animal health camp** participants gave a score of **4 (Very good)**.Participants told that community recognized the impact of camps as it is useful for villagers. They told that information of camp was provided to them by LLW, Pashu Sakhi, FNGO and through pamphlet distribution. They suggested that frequency of camps should be more and more medicines should be available in the camps.

Farmers gave **3 marks (good)** for **Goat demonstrations**. Participants told that the rationality for this marking was based on the fact that two beneficiaries' goats died but claim settlement is yet to be received. They also mentioned that one of the beneficiary's goat couldn't get pregnant. Adding to that they told that micro plaza diseases among distributed goats have been observed and the quality is reasonably okay but not good. Participants suggested that goats should be purchased after proper health test and claim should be immediately settled.

For **Chaff cutter distribution** participants marked a score of **5 (Excellent)** marks. The reason which participants gave for marking so high was the fact that MTG fulfill its objective after the formation. They told that it has helped in saving of time, fodder and labor. Participants told that now they can feed all goats at one place and milk productivity has improved along with improvement in digestion of goats.

For *Feeding trough distribution* participants gave a score of **4 (Very good)**. Participants told that feeding trough has helped them in saving of fodder. They further told that it is useful but its quality can be improved. Participants highlighted that unit rate is high as compared to its quality.

For *Post harvest management (Tirpal)* participants gave a score of **5 (Excellent)**. Participants told that they see it as useful activity. Participants told that it is used to cover the agriculture produce and beneficiaries use it for many other purposes like covering the roof during rains.

For *Seed demonstration* participants gave a score of **4 (Very good)**. Participants told that no significant change was observed by community but they are optimistic that good result will come out in case of good rains.

Findings from CSC Process in Bonli Cluster, Sawai Madhopur District

Table 3: CSC in Olwara Village

Activity	Marks Assigned	Explanation for Score
Guava Plantation and Drip System	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Water saving ○ Time saving ○ Labour saving ○ Fertilization can be done ○ Electricity saving ○ After 3 years receive good income ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Bajra demonstration	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Less production ○ Straw is hard, not useful for fodder ○ Height is less ○ Grains are black ○ Market value is less ○ Short duration
Thresher distribution	3	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Not suitable for the area ○ Big in size ○ More labour needed to operate ○ Output is less ○ One side weight is more, during transportation balancing is a problem ▪ Positives <ul style="list-style-type: none"> ○ Not cited
MTG formation	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Democratically constituted ○ Regular meetings are organized ○ Benefits are being received from project ○ Information about agriculture and horticulture increased

In *Olwara village of Bonli cluster* participants listed *four activities* which had been conducted during the aforementioned monitoring period. The four activities which they listed are: a) Guava Plantation and Drip System; b) Bajra demonstration; c) Thresher distribution; and d) MTG.

For *Guava Plantation and Drip System* participants in the CSC process gave *5 (Excellent) marks*. Participants told that this activity has led to water saving, time saving, electricity saving and labour saving. They further told that beneficiaries receive good income after 3 years.

Participants gave *1 mark (Unsatisfactory) for Bajra demonstration*. They told that the reason for such a low score is less production received by beneficiaries, hard straw comes out which is not useful for fodder, grains being black in color, less market value and short duration

For *thresher distribution*, participants gave a score of *3 marks (Good)*. They told that thresher is not suitable for the area and is big in size. They further told that more labor is needed to operate it and output is less. Participants highlighted that weight of the thresher is not balanced equally on both sides, which causes problem during transportation.

Participants scored *MTG formation as Excellent (5 marks)*. They cited that it was democratically constituted and regular meetings are organized. Beneficiaries told that information about agriculture and horticulture activities increased with the formation of MTG.

Table 4: CSC in Rahita Khurd Village

Activity	Marks Assigned	Explanation for Score
Guava Plantation & Drip System	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Irrigation takes less time ○ Less water needed per unit area ○ Labour Saving ○ Plant growth is good ▪ Negatives: <ul style="list-style-type: none"> ○ Nothing specific was mentioned
Bajra Demonstration	2	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Germination was good ○ Received complete package ▪ Negatives: <ul style="list-style-type: none"> ○ Flowering was less ○ Production was less ○ Fodder production is less and stalks are hard not useful for fodder
Thresher distribution	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Useful in wheat and other big grains ○ Output of harvested crop has improved ▪ Negatives: <ul style="list-style-type: none"> ○ Small sieve net was not provided as a result it is not useful for Bajra and Mustard ○ Height is more creates problem in handling

In **Rahita Khurd village** of Bonli cluster participants listed **three activities** which had been conducted during the aforementioned monitoring period. The three activities which they listed are: a) Guava Plantation & Drip System; b) Bajra demonstration; and c) Thresher distribution.

For **Guava Plantation & Drip System** participants gave a score of **5 marks (Excellent)**. They told that they have benefited from it as now irrigation takes less time, less water is needed per unit area, labor time is saved, and plants' growth has improved.

For **Bajra Demonstration** participants gave a score of **2 marks (Fair)**. They told that they though germination of seeds was good and they received complete package, but there was reduction in flowering, production, fodder produced was less as stalks were hard and not useful in fodder production.

For **Thresher distribution** participants gave a score of **4 marks (Very good)**. They told that it is useful in wheat and other big grains, and output of harvested crop has improved. Along with that the beneficiaries highlighted few challenges: a) small sieve net was not provided as a result it is not useful for Bajra and Mustard; and b) height of thresher is comparatively more which creates problem in handling.

Findings from CSC Process in Gudha Cluster, Bundi

Table 5: CSC in Mangli Khurd Village

Activity	Marks Assigned	Explanation for Score
Drip irrigation system	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Farmers are aware about micro irrigation system and recognize the importance so 45 systems has been installed in farmers field during this period. ○ Installation was done within time ▪ Negatives: <ul style="list-style-type: none"> ○ Quality of PVC pipe is poor ○ Overall system quality is also not perfect ○ Not suitable as per soil condition and crops are growing in cluster ○ Design was not appropriate so farmers paid additional money to reduce the lateral distance from their own pocket ○ Supplier replace the damaged parts of system within contract period but provided the same quality so not useful for farmers
Solar Panel distribution	2	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ No positive observation was found ▪ Negatives: <ul style="list-style-type: none"> ○ Engineer provided the design for 20 m and 50 m head but in cluster farmers need pump at 30 m design, which is more feasible so farmers are not taking benefit of the solar pump due to inappropriate design ○ Discharge of pump is very less ○ Technical staff of supplier did not collect the technical information in a proper way ○ Fixed panel provided but farmers need automated solar panel ○ Wrong message spread among farmers in the

Activity	Marks Assigned	Explanation for Score
		<ul style="list-style-type: none"> neighboring village about solar panel so hesitate to use this technology ○ Took long time in installation and farmers suffer a lot ○ Response to farmer from the supplier is very poor ○ Few farmers took their file again from the department ○ Only drip can run from solar panel pump and does not have capacity to run sprinkler
Poly house distribution	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Excellent work, no complaints ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Vegetable demonstration -Tomato	1	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Nothing positive was reported ▪ Negatives: <ul style="list-style-type: none"> ○ Huge financial loss to farmer and zero gain ○ Seed suitable to winter season gave to farmers in summer ○ Not suitable to local condition ○ Farmer spent approximately 30000 per bigha as input cost but no production ○ One season lapsed and they could not another crop on that land ○ seed should be provided after consult to farmers
Vegetable demonstration -Ladyfinger	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Seeds were distributed after gaining consent of the farmers ○ Yield of crop was good and it can be increased if duration is more ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Vegetable demonstration -Pea	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Very good result ○ Seed was given after consent with farmers ▪ Negatives: <ul style="list-style-type: none"> ○
Post harvest management (Tirpal)	2	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Quality is below average ○ Unit cost is more ○ Old stock ○ Damaged in short time
Rotavator distribution	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Very useful farm implement for the farmer and useful to reduce input cost and increase yield of farm produce ▪ Negatives: <ul style="list-style-type: none"> ○ Rotavator should be provided according to tractor characteristic i.e as per HP, RPM and small/big size of tractor.

Activity	Marks Assigned	Explanation for Score
Soybean demonstration	4	<ul style="list-style-type: none"> ○ More suitable to Mahindra tractor only ▪ Positives: <ul style="list-style-type: none"> ○ Quality of seed is good but could not get good result due to erratic and low rainfall in particular season ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited

In **Mangli Khurd village** of Gudha cluster participants listed **nine activities** which had been conducted during the aforementioned monitoring period. The nine activities which they listed are: a) Drip irrigation system; b) Solar Panel distribution; c) Poly house distribution; d) Vegetable demonstration –Tomato; e) Vegetable demonstration –Ladyfinger; f) Vegetable demonstration –Pea; g) Post harvest management (Tirpal); h) Rotavator distribution; and i) Soybean demonstration.

For **Drip irrigation system** participants gave a score of **4 (Very good) marks**. Participants told that farmers are aware about micro irrigation system and recognize the importance so 45 systems has been installed in farmers field during this period and installation of systems was done within the decided timeframe. Participants highlighted some of the challenges which are: a) Quality of PVC pipe is poor; b) Overall system quality is not good; c) Not suitable as per soil condition and for crops grown in the cluster; d) Design was not appropriate so farmers paid additional money to reduce the lateral distance from their own pocket; and e) Supplier replaced the damaged parts of system within contract period but provided the same quality so it was not useful for farmers.

For **Solar panel distribution** participants gave a score of **2 (fair) marks**. They told that engineer provided the design for 20 m and 50 m head but in cluster farmers need pump at 30 m design, which is more feasible so farmers are not taking benefit of the solar pump due to inappropriate design and also highlighted that discharge of pump is very less. Participants had complaint about the engagement with technical staff of supplier. They told that technical staff of supplier did not collect the technical information in a proper way and fixed solar panel as per the specifications decided under the project but farmers in the cluster need automated solar panels. Participants also told that negative information by word of mouth has spread about solar panel to farmers in the neighboring villages so they now hesitate in using this technology. Participants told that it took longer than usual in installation and as a result farmers faced inconvenience. They also cited that response to farmers from the supplier is very poor.

For **Poly house distribution** participants gave a score of **5 (Excellent) marks**. They told that it is an excellent activity undertaken under the project and they have no issues in it. Though participants had a suggestion that skill training to farmers on cultivation in poly house should be provided.

For **Vegetable demonstration –Tomato** participants gave a score of **1 (Unsatisfactory) mark**. They told that there was no benefit to them from this activity. They further explained that due to this activity beneficiaries have suffered a huge financial loss and there had been no gain to them. They told that seeds which are suitable for winter season were given to farmers in summer which was not suitable to local condition. The farmer spent approximately Rs 30, 000 per bigha as input cost but there was no production. One season lapsed in this and they could not cultivate any other crop on that land. They suggested that seed should be provided after consulting the farmers.

For **Vegetable demonstration –Ladyfinger** participants gave a score of **4 (Very good) marks**. They told that this activity was beneficial to them. As seeds were distributed after gaining consent of the farmers and yield of crop was good and it can be increased if duration is more.

For **Vegetable demonstration –Pea** participants gave a score of **5 (Excellent) marks**. They told that this activity was beneficial to them as they received very good results from cultivating it.

For **Post harvest management (Tirpal)** participants gave a score of **2 (Fair) marks**. They told that they were not happy with the quality of Tirpal provided to beneficiaries. They cited quality of Tirpal is below average, unit cost is more, old stock and it gets damaged in short duration.

For **Rotavator distribution** participants gave a score of **4 (Very good) marks**. Participants consider that it is very useful farm implement for the farmer and useful to reduce input cost and increase yield of farm produce. Participants suggested that rotavator should be provided according to tractor characteristic i.e as per HP, RPM and small/big size of tractor. They further added that current rotavator is more suitable to Mahindra tractor only.

For **Soybean demonstration** participants gave a score of **4 (Very good) marks**. They told that this activity could be beneficial to them as inputs provided are good. They further added that quality of seed is good but they could not get good results due to erratic and low rainfall in particular season.

Table 6: CSC in Thikarda Village

Activity	Marks Assigned	Explanation for Score
Chaff cutter distribution	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saves time, fodder, improved digestion of animals ○ Provision should be available for running through motor ▪ Negatives: <ul style="list-style-type: none"> ○ Not Reported
Doe	2	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Good Breed ○ Weight gain ▪ Negatives: <ul style="list-style-type: none"> ○ Abortion after 10 days of distribution ○ Inter kidding period is 12 month
Feeding and Water Trough	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saving of fodder , useful, quality can be improved ○ Unit rate is high as compare to quality ▪ Negatives: <ul style="list-style-type: none"> ○ Quality need attention of the official. ○ Expensive
Buck	3	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Good breed ▪ Negatives: <ul style="list-style-type: none"> ○ Die after 10 days of distribution. ○ Claim is not proper

For **Chaff cutter distribution** participants marked a score of **5 (Excellent) marks**. The reason which participants gave for marking so high was the fact that MTG fulfill its objective after the formation. They told that it has helped in saving of time, fodder and labor. Participants told that now they can feed all goats at one place and milk productivity has improved along with improvement in digestion of goats.

For **Doe distribution** participants marked a score of **2 (Fair) marks**. The reason which participants gave for marking low was the fact that MTG did not fulfill its objective after the formation. They told that it has helped

in saving of time, fodder and labor. Participants told that now they can feed all goats at one place and milk productivity has improved along with improvement in digestion of goats.

For **Feeding trough distribution** participants gave a score of **4 (Very good)**. Participants told that feeding trough has helped them in saving of fodder. They further told that it is useful but its quality can be improved. Participants highlighted that unit rate is high as compared to its quality.

For **Buck distribution** participants gave a score of **3(good)**. Participants told that feeding trough has helped them in saving of fodder. They further told that it is useful but its quality can be improved. Participants highlighted that unit rate is high as compared to its quality.

Findings from CSC Process in Bansur Cluster, Alwar

Table 7: CSC in Nimbuchada Village

Activity	Marks Assigned	Explanation for Score
Mini sprinkler distribution	1	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saving of more water (up to 60%) as compared to sprinkler system ○ Saving of power and labor ○ Reduced fertilizer consumption because provide during irrigation in liquid form ○ Reduces losses during flowering stage of wheat ▪ Negatives: <ul style="list-style-type: none"> ○ Earlier flexible pipe (HDP) was provided but now PVC pipe has provided and buried in field so farmer could not extend the system in field. ○ Suggestion from farmers ○ Mini sprinkler with HDPE pipe (flexible) should be provided ○ Farmers those have land below 0.4 Ha at one place are not eligible ○ Target should be increased
Crop demonstration –Bajra	2	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Distributed at time to all willing farmers ▪ Negatives: <ul style="list-style-type: none"> ○ Low yield (25-35%) as compare to private company seed ○ Affected from diseases
Rotavator distribution	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Very useful implement, help to minimize the size of soil particle, reduce weeding, mix soil and grass in field, improve fertility and production of crop increased ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Tirpal (PHM)	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Very useful, multipurpose item but supply is very less as compare to

Activity	Marks Assigned	Explanation for Score
		<ul style="list-style-type: none"> ▪ demand in field ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Solar panel	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Useful and feasible item for the farmers and huge demand in the project area but reluctant to use RACP solar panel due to poor experience with pilot farmer in project villages ▪ Negatives: <ul style="list-style-type: none"> ○ 5 H.P motor has provided but it should be 7.5 HP ○ Number of hours of pump is very less ○ Discharge from pump is not serve the purpose of water requirement in field
Vegetable demonstration with drip irrigation system	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saving of water up to 70% ○ Farmers started the vegetable cultivation with drip after the project ○ Many farmers are interested in vegetable cultivation but reluctant due to problem of movement of cattle in farmer field ○ Quality of drip is good ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Vegetable demonstration - Carrot	3	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Quality of carrot is not up to the mark, this item should be heavy in weight
Orchard with drip irrigation system (Pomegranate and Lemon)	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Got the quality plants at time ○ Department and NGO staff provided support to the farmers at regular interval ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Green House	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ More yield in less area ▪ Negatives: <ul style="list-style-type: none"> ○ Only rich farmers can afford this technology because other farmers do not have required amount to contribute

In *Nimbuchada village* of Bansur cluster participants listed *nine activities* which had been conducted during the aforementioned monitoring period. The nine activities which they listed are: a) Mini sprinkler distribution; b) Crop demonstration – Bajra; c) Rotavator distribution; d) Tirpal (PHM); e) Solar panel; f) Vegetable demonstration with drip irrigation system; g) Vegetable demonstration – Carrot; h) Orchard with drip irrigation system (Pomegranate and Lemon); and i) Green House.

For **Mini sprinkler distribution** participants gave a score of **1 mark (Unsatisfactory)**. Participants told that the reason for low score are based on processes followed and equipment supplied under the activity. They told that earlier flexible pipe (HDP) was provided but now PVC pipe is provided and it is buried in the field so farmer is unable to extend the system in field. They further added that suggestion from farmers were not taken while implementing this activity.

Despite giving a low score participants cited mini sprinkler system helps in saving water (upto 60%) as compared to sprinkler system, saves power and labor, reduces fertilizer consumption and reduces losses during flowering stage of wheat.

Participants suggested that mini sprinkler with HDPE pipe (flexible) should be provided and farmers who have land below 0.4 Ha at one place should be included under the eligibility to become beneficiary.

For **Crop demonstration –Bajra** participants gave a score of **2 marks (Fair)**. They told that though seeds were provided to all willing farmers but the results of this demonstration has not been encouraging to farmers. Participants told that farmers experienced low yield (25-35% lesser) as compared to private company seed and standing crop was affected with diseases. Participants suggested that good quality seed of private company having high yield should be provided rather than from NSC/Rajasthan seed corporation.

For **Rotavator distribution** participants gave a score of **5 marks (Excellent)**. They told that it has been very useful implement and helped farmers to minimize the size of soil particle. Rotavator usage has reduced the need for weeding and it mixes soil and grass in field thus improving the fertility, which in turn has resulted in production increase.

For **Tirpal (PHM)** participants gave a score of **5 marks (Excellent)**. They told that it is very useful and multipurpose item. The only concern raised by the participants was that its supply is very less as compared to demand in field.

For **Solar panel** participants gave a score of **4 marks (Very good)**. They told that it is useful and feasible item for the farmers and there is huge demand in the project area but farmers are hesitant to use RACP solar panel due to poor experience with farmers in project villages during the pilot stage.

Participants also shared some concerns. They told that currently 5 H.P motor is provided but it should be 7.5 HP and number of hours of pump usage is very less (11 a.m to 3.30 p.m). They further added that discharge from pump does not serve the purpose of water requirement in field.

For **Vegetable demonstration with drip irrigation system** participants gave a score of **4 marks (Very good)**. They told that it has helped in saving water up to 70% and farmers have started the vegetable cultivation with drip after the project. Now many farmers are interested in vegetable cultivation but are reluctant due to the problem of stray cattle in farmers' field. Farmers are satisfied with the quality of drip.

For **Vegetable demonstration - Carrot** participants gave a score of **3 marks (Good)**. They told that quality of carrot produce is not upto the mark and it's weight should be more.

For **Orchard with drip irrigation system (Pomegranate and Lemon)** participants gave a score of **5 marks (Excellent)**. They told that they got the quality plants on support to farmers at regular interval time was received from the department and NGO staff.

For *Green House* participants gave a score of **5 marks (Excellent)**. They told that it is very useful and provides more yield in less area. The only concern raised by the participants was that only rich farmers can afford this technology because other farmers do not have required amount to contribute.

Table 8: CSC in Bisalva Village

Activity	Marks Assigned	Explanation for Score
Chaff cutter distribution	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saves time, fodder, improved digestion of animals ○ Provision should be available for running through motor ▪ Negatives: <ul style="list-style-type: none"> ○ MTGs selected the eligible members only and two more members could have been included as beneficiaries but they were not covered due to limit of beneficiaries from an MTG
Doe	2	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ ▪ Negatives: <ul style="list-style-type: none"> ○
Feeding and Water Trough	3	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saving of fodder , useful, quality can be improved ○ Unit rate is high as compare to quality ▪ Negatives: <ul style="list-style-type: none"> ○ Quality need attention of the official.

In Bisalva *village* of Bansur cluster participants listed **three activities** which had been conducted during the aforementioned monitoring period. The three activities which they listed are: a) Chaff cutter distribution; b)Doe distribution; and c)Feeding and water trough.

For **Chaff cutter distribution** participants marked a score of 4 (**Very Good**) marks. The reason which participants gave for marking so high was the fact that MTG fulfill its objective after the formation. They told that it has helped in saving of time, fodder and labor. Participants told that nw they can feed all goats at one place and milk productivity has improved along with improvement in digestion of goats.

For **Doe distribution** participants marked a score of 2 (**Fair**) marks. The reason which participants gave for marking so low was the fact that MTG did not fulfill its objective after the formation. They told that it has helped in saving of time, fodder and labor. Participants told that now they can feed all goats at one place and milk productivity has improved along with improvement in digestion of goats.

For **Feeding trough distribution** participants gave a score of 3(**good**). Participants told that feeding trough has helped them in saving of fodder. They further told that it is useful but its quality can be improved. Participants highlighted that unit rate is high as compared to its quality.

Findings from CSC Process in Kheruwala Cluster, Jaisalmer**Table 9: CSC Process in Poonam Singh ki Dhani Village**

Activity	Marks Assigned	Explanation for Score
Diggi Construction	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Timely Irrigation is possible ○ Store water for emergency period ○ More area covered for cropping and irrigation ○ More production ○ It is useful along with Solar pump ▪ Negatives: <ul style="list-style-type: none"> ○ It is expensive without solar pump
Solar Pump	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ It is useful for uninterrupted electricity supply ○ Less Expenditure ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Wheat Demonstration	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Seed supply in January ○ Not used ○ Timely seed supply required
Tripal- PHM	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Quality wise poor ○ Expensive
Doe distribution	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Insufficient milk ○ Teat closed. No milk after kidding in some cases ○ More expenditure then income ○ 250 ml milk which is feed to kid and seems goat weak Marwari breed
Buck distribution	1	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Breed is good but buck seems under weight ○ Not useful ○ Members refused to take bucks
Chaff Cutter	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Save Fodder. ○ Total use of fodder. ○ Improve digestibility. ○ Less expenditure more income ○ Requires less efforts and time saving ○ Distribute to more beneficiaries.
Feeding and Water Trough	3	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Maintain quality of fodder. ○ Equal distribution of fodder. ○ This is comfortable in feeding and it is in the reach of animals. ▪ Negatives:

Activity	Marks Assigned	Explanation for Score
		<ul style="list-style-type: none"> ○Expensive ○Fabrication quality of water trough is not good. ○Quality is not up to the mark
Animal Health Camp	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Medicine available and consultation given to their animals ○Information regarding feeds and fodder practices was given

In *Poonam Singh ki Dhanivillage* of Kheruwalacluster participants listed *nine activities* which had been conducted during the aforementioned monitoring period. The nine activities which they listed are: a)Diggi Construction; b) Solar pump; c) Wheat demonstration; d)Tripal- PHM; e) Doe distribution; f) Buck distribution; g) Chaff cutter; h) Feeding and Water trough; and i) Animal Health Camp.

For *Diggi Construction participants* gave *4 marks (very good)*. They told that with this now it is possible for them to do timely irrigation, store water for emergency period, more area is now covered under cropping and irrigation, as a result of which they now have more production. They also added that it is useful along with Solar pump initiative under RACP, and without it retrieving water for irrigation from diggi becomes expensive.

For *Solar Pump participants* gave *5 marks (Excellent)*. They told that it is useful for uninterrupted electricity supply and there is less expenditure.

For *Wheat Demonstration* participants gave *1 mark (Unsatisfactory)*. They told that seed supply was done in January which was not used by them. They suggested that seed supply should be in time.

For *Tripal- PHM* participants gave *1 mark (Unsatisfactory)*. They told that quality of tirpal was poor and it was expensive.

For *Doe distribution* participants gave *1 mark (Unsatisfactory)*. They told that goats distributed provide insufficient milk, in some cases teat was closed so there was no milk after kidding in some cases. Participants felt that there was more expenditure than income. The participants told that after feeding 250 ml milk to kid Marwari breed goat seemed weak.

For *Buck distribution* participants gave *1 mark (Unsatisfactory)*. They told that breed is good but buck seems under weight. Participants were of the opinion that it was not useful to them and some members refused to take bucks. Participants opined that they require perfect weight marwari breed.

For *Chaff Cutter* participants gave *5 marks (Excellent)*. They told that it helps in saving fodder and improves digestibility of animal. Participants were of the opinion that there is less expenditure and more income through this activity for them. As a result of using chaff cutter now they require less effort and it saves their time. They suggested that it should be distribute to more beneficiaries

For *Feeding and Water Trough* participants gave *3 marks (Good)*. They told that it is comfortable in feeding and it is in the reach of animals, maintains quality of fodder, ensures equal distribution of fodder. Participants raised some issues regarding the cost and fabrication quality of feeding and water trough.

For *Animal Health Camp* participants gave **5 marks (Excellent)**. They told that medicine was available and consultation was given to their animals in the camp. They also got information regarding feed and fodder practices. They suggested that there is need of more health camps and frequency of health camps should be increased.

Table 10: CSC Process in Khileriki Dhani Village

Activity	Marks Assigned	Explanation for Score
Diggi construction	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Doing Sowing in 10-12 Bigha instead of 5-6 bigha ○ Water available for drinking ○ More Production (gram) ○ Start ground nut sowing ○ Timely water available for irrigation ○ More demand for Diggi ▪ Negatives: <ul style="list-style-type: none"> ○ It is expensive without solar ○ Farmers have to borrow money on Loan ○ Rs 4-5 lakhs cost load is on the farmer
Tripal- PHM	2	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Weight and size is good but quality is not good ▪ Negatives: <ul style="list-style-type: none"> ○ Good quality Tripal is required
Wheat Demonstration	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Seed was supplied in time ○ Good Production ○ Good Fodder production ○ More seed requirement ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited

In *Khileriki Dhani village* of Kheruwala cluster participants listed **three activities** which had been conducted during the aforementioned monitoring period. The three activities which they listed are: a) Diggi construction; b) Tirpal – PHM; and c) Wheat demonstration.

For *Diggi construction* participants gave a score of **4 marks (very Good)**. They told that after the construction of diggi they have increased the cultivation to 10-12 bigha instead of 5-6 bigha and now water is available for irrigation in due time. With the diggi now more water is available for drinking. As a result of irrigation from diggi water they have increased production of gram and some farmers have started ground nut cultivation. Participants informed that there is more demand for diggi. Participants also raised some issues under this activity. They told that diggi is expensive without solar pump. Also for the construction of diggi a farmer had to spend Rs 4-5 lakh and for that he/she had to borrow money as a loan.

For *Tripal- PHM* participants gave a score of **2 marks (Fair)**. They told that although the weight and size of tripal is good but quality was not good.

For *Wheat Demonstration* participants gave a score of **5 marks (Excellent)**. They told that seed was supplied in time, the production was good and fodder production was also sizeable. Participants told that the demand of seed is more amongst the farmers.

Findings from CSC Process in Z-Distributary, Sri Ganganagar

Table 11: CSC Process in Chak 3C Chhoti Village

Activity	Marks Assigned	Explanation for Score
Diggi construction	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Reduced irrigation cost ○ Timely watering ○ Save water ○ Increased cultivation area ○ Increase production ○ Fishery activity can be done ○ Target is less, needs to be increased as there is more Demand ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
MI Drip and Plantation	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Irrigation possible within two hours ○ Increased income ○ Good quality fruit ○ Fertigation in proper limit ○ Easy method for disease prevention ○ Improved environment ○ Wire boundary required ▪ Negatives: <ul style="list-style-type: none"> ○ Plantation time delay ○ Plantation supply should be in time ○ Company selection for purchase should be decided by farmer ○ Farmer should themselves decide plants for plantation
Solar Pump	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Saves fuel and less expenditure ○ Not dependent on electricity ○ Pollution free ○ Farmer should independently decide which company brand to be selected ▪ Negatives: <ul style="list-style-type: none"> ○ Not cited
Crop Demonstration -Guar	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Good result ○ Due to less rainfall, production is less but in comparison to previous years better production ▪ Negatives: <ul style="list-style-type: none"> ○ Input management not proper and delay in distribution
Demonstration-Jowar Chari	5	<ul style="list-style-type: none"> ▪ Positives:

Activity	Marks Assigned	Explanation for Score
		<ul style="list-style-type: none"> ○ Reaped three harvests ○ Good Production ○ Use as green fodder also ▪ Negatives: ○ Not cited

In **Chak 3C Chhotivillage** of Z-distributary cluster participants listed **five activities** which had been conducted during the aforementioned monitoring period. The five activities which they listed are: a) Diggi construction; b) MI Drip and Plantation; c) Solar pump; d) Crop Demonstration– Guar; and e) Demonstration -Jowar Chari.

For **Diggi construction** participants gave **5 marks (Excellent)**. They told that it has reduced irrigation cost and now they are able to water the crops in due time. This initiative has enabled farmers to save water and increase cultivation area. As a result their crop productivity has increased. Participants told that with doggies in place now they can take up fishery in future. Participants suggested that target is less and it needs to be increased as there is more demand for diggis.

For **MI Drip and Plantation** participants gave **5 marks (excellent)**. They told that with MI drip irrigation is possible within two hours and it has helped in increasing income. Participants told that plantations, provided under horticulture activity of RACP, have provided good quality fruit.

Participants added that by using MI drip they are able to do fertigation in proper limit and it acts as an easy method for disease prevention. They further added that this activity has also helped in improving the environment.

Participants raised some issues related with selection of plantation and selection of company for equipment supply. Participants told that farmers should have the choice to decide upon the company from which the purchase had to be made and they should also have the freedom to decide upon the plantation.

For **Solar Pump** participants gave **5 marks (Excellent)**. They told that it saves fuel and it has reduced their expenditure. They added that with solar pump now they are not dependent on electricity to run water pump and this is pollution free. They suggested that farmers should have a choice to decide upon the company brand of solar pump.

For **Crop Demonstration –Guar** participants gave **5 marks (Excellent)**. They told that they have had good results with the seed demonstration activity. They told though due to less rainfall in the season the production is less but in comparison to previous years it is better.

For **Demonstration -Jowar Chari** participants gave **5 marks (Excellent)**. They told that they have already reaped three harvests and production is good. Participants told that they also use it as green fodder for animals.

Table 12: CSC Process in Chak 18ZVillage

Activity	Marks Assigned	Explanation for Score
Diggi construction	5	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ When there is no crop then at that time construct Diggi ○ Store water ○ Utilize water in emergency ○ Increase production ○ More demand for Diggi

Activity	Marks Assigned	Explanation for Score
		<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Target is less and it should be increased ○ It is expensive without solar
Mini Sprinkler	2	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Useful in wheat, mustard and gram ○ Suraj company quality is good but Gangotri quality is not good ▪ Negatives: <ul style="list-style-type: none"> ○ Shifting of sprinkler is difficult due to clayey soil ○ Not useful for other crops
Solar Pump	4	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Once installed after that there is no expenditure ○ Pollution free ○ Less Maintenance ○ More Demand ▪ Negatives: <ul style="list-style-type: none"> ○ No accountability of the company ○ Purchase as per need of farmers like 5-10 hp or less ○ Wari quality is not good
MI Drip and Horticulture	3	<ul style="list-style-type: none"> ▪ Positives: <ul style="list-style-type: none"> ○ Provide best plant ▪ Negatives: <ul style="list-style-type: none"> ○ Experienced and Knowledgeable, expert consultation needs ○ Nagarjuna is not have long life ○ Provide information and focus should be on quality ○ Wire boundary is needed
MTG- FPC	2	<ul style="list-style-type: none"> ▪ Negatives: <ul style="list-style-type: none"> ○ Proposal taken but no update ○ Schedule calendar for meeting is not there

In *Chak 18Z village* of Z-distributary cluster participants listed *five activities* which had been conducted during the aforementioned monitoring period. The five activities which they listed are: a)Diggi construction; b)Mini Sprinkler; c)Solar Pump; d)Drip and Horticulture; and e)MTG- FPC.

For *Diggi construction* participants gave *5marks (Excellent)*. They told that farmers construct diggi when there is no crop to cultivate and store water in it. The water is utilized in emergency. This activity has helped in increasing production and there is more demand for Diggis. They also told that there is more demand for diggis but irrigation from diggi turns out expensive without solar pump.

For *Mini Sprinkler* participants gave *2 marks (fair)*. They said that it is useful in wheat, mustard and gram cultivation. Participants also cited some challenges. They told that shifting of sprinkler is difficult due to clayey soil and it is not useful for other crops.

For **Solar Pump** participants gave **4 marks (Very good)**. Farmers see value in using solar pump and told that once it is then there is no expenditure, it is pollution free and requires less maintenance. Participants suggested that solar pumps should be purchased as per the need of farmers like 5-10 hp or less.

For **MI Drip and Horticulture** participants gave **3 marks (fair)**. They said that there is need for provision of only best plants. Participants raised some issues too. They told that experienced and knowledgeable expert consultations are needed. They added that Nagarjuna company MI drip currently supplied, does not have a long life.

For **MTG- FPC** participants gave **2marks (Fair)**. They told that proposals were taken but there is no update on them and there is a need for schedule calendar, which currently is not in place.
