

Project Title

Reviving Traditional Pasture Routes in Dry and Arid Parts of the
Country

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Project Inception Report

For the

Sustainable and resilient livelihood options for rain-fed areas
of India TCPIND3708

To the

Food and Agriculture Organization

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Abbreviations

FAO	Food and Agriculture Organisation
NRAA	National Rainfed Area Authority
CAZRI	Central Arid Zone Research Institute
CSWRI	Centre for Sheep and Wool Research Institute
CPR	Common Property Resources
CFC	Common Facility Centre
RAJUVAS	Rajasthan University of Veterinary and Animal Sciences
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
ICAR	Indian Council of Agricultural Research
MSME	Micro, Small and Medium Enterprises
NRCC	National Research Centre for Camels

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Reviving Traditional Pastoralist Routes in Dry and Arid Parts of the Country

Inception Report

Executive Summary

Under the FAO funded project titled “Reviving Traditional Pastoralist Routes in Dry and Arid Parts of the Country” efforts were launched in December 2019 in the 4 programme sites in Dhani Bhopalaram, Kalu, Kelan and Rajasar Bhatiyan in Lunkaransar block, Bikaner district, Rajasthan. The document would cover the key activities undertaken until May 15, 2020, and proposed activities until the end of April 2021. The proposed activities and its relation to the approved results framework, deliverables, and timelines as per the revised Letter of Agreement would be discussed in detail in this report. In addition, challenges and effects of the ongoing COVID-19 pandemic and its effects on the deliverables of the project would be discussed as well.



Map of two major pastoralist routes mapped in Rajasthan

I. Programme Objectives

Nomadic pastoralism is facing a severe crisis in India. What threatens this way of life are the development strategies of the modern-state. The programme envisions enhancing resilience and sustainability of pastoral livelihood options in Lunkaransar pastoral cluster in Rajasthan, through an

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ecosystem support for reviving the traditional pastoral routes in the cluster. The villages identified for specific interventions in the Lunkaransar pastoral cluster are Dhani Bhopalaram, Kalu, Kelan, and Rajasar Bhatiyani.

The following variables were considered for identifying the 4 programme locations for interventions:

1. These four villages lie on a prominent pastoral route from Barmer/ Jaisalmer to Sri Ganganagar districts and further to Punjab and Haryana frequented by pastoralists of the region
2. The four villages are home to a large population of pastoralists who migrate with their small ruminants. As per the 19th Livestock Census by Animal Husbandry Department, Government of India there are 9,61,907 goats and 6,53,028 sheep in Bikaner district.
3. The current poorly maintained common property resources is not able to fulfil the forage needs of such a large population of small ruminants.
4. The existing water resources are poor in number and condition.

Due to the harsh climatic conditions and low forage, water unavailability, pastoralists from desert districts of Jaisalmer, Jodhpur and Bikaner tend to migrate to greener parts of the state and further on to Punjab and Haryana.

This long pastoralist route is arduous. As per our on-ground assessment consisting of mapping the traditional routes and focused interactions with the pastoralists, Bikaner district is estimated to be a home for 20,000 pastoralists. These four programme areas have been chosen as they cater to the local pastoralists and the ones from other districts traveling to Punjab and Haryana.

In this context, Urmul aims to develop pilot management of pastoral routes ensuring management of inputs like water, fodder, veterinary health, and also support services for safety and social upliftment of pastoralists in selected clusters of traditional routes. This model could then be scaled up for nationwide adoption.

II. Programme Activities

The three chief verticals under which the programme activities would be undertaken include:

1. Improving access to basic support services and infrastructure

Access to basic support services and infrastructure improvement is believed to directly enhance livestock resilience and therefore the income of the pastoralists. By undertaking focused dialogues and discussions with the pastoralist community, the constraints that plague the pastoral livelihood ecosystem were identified. The aim was to ensure that the constraints in the delivery of basic

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support services and infrastructural facilities are addressed through the programme activities. A host of activities that improve the existing water, fodder resources and access to veterinary care were undertaken.

Towards improving infrastructure and access to services	
Activity	Description
1.1. Constraints identified	Identify issues related to accessing basic support services and infrastructural facilities available for pastoralists in Rajasthan and generate a detailed mapping study/report
1.2. Identify & develop feasible package of support services	Identify & develop feasible packages of basic support services required for improved livestock management. Develop a module using the expertise of CAZRI, Rajasthan Animal Husbandry department and Urmul network knowledge
1.3. Establish Common Facility Centres (CFCs)	Establish two (2) CFCs to enable direct access to pastoralists of vital health and product services
1.4. Improve 4 CPRs	Improve four (4) CPRs in the identified cluster with greater fodder coverage, 6000 trees plantation, constructing water recharge pits in the CPRs to harvest rainwater
1.5. Enhance water availability on pastoral route	Construct new or renovate community owned, existing water structures – ponds, traditional water structures, water tank, on route – four (4) units in total
1.6 Develop One (1) fodder nursery in the cluster	A fodder nursery shall be the source of fodder seed to be made available to pastoralists, for their farms, and be used for CPR development and maintenance
1.7 Organise Animal Health camps	Deliver veterinary services to pastorals in the clusters through six (6) animal camps organised in villages

1.1 Constraints identified

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In the past three months, Urmul has conducted meetings and dialogues with more than a hundred pastoralists around the route identified across western Rajasthan. The aim was to understand the problems, and opportunities around their livelihoods, social and cultural capital, and access to available infrastructure.

Some of the variables considered in our focus group discussions to design this constraint identification study are the following:

- Poor management of Common Property Resources by the local village and state authorities.
- Disarrayed linkages to state services and schemes for pastoralists.
- Lack of proper health services for animals and their high morbidity rate.
- Poor economic conditions of pastoralists and absence of their market linkages.

A mixture of both qualitative and quantitative methods was leveraged to develop the [Constraints Identification document](#)**.

- Qualitative tools adopted included focus group discussions with the pastoralists.
- Quantitative tools included using the findings of the baseline survey conducted between 15 Jan to 28 Feb, 2020 of 394 pastoralists to validate the ground findings.
- Some chief baseline survey findings that helped confirm the systemic constraints included:
 - a. About 99% of the total pastoralists interviewed seek a need for improvement in Common Property Resources (CPR).
 - b. There has been a collapse in the traditional relations enjoyed by the pastoralists with the farmers on the pastoral routes they used to pass through. Presently, 61% of respondents expressed that they are allowed their animals to graze on fallow lands.
 - c. Almost 78% people spend INR 10,000 or below on medical care of the animals.
 - d. Even though more than half of the population have medical facilities within 10 kms of their pastoral route, 90% of the respondents still vaccinate their animals themselves.
 - e. Along the pastoral routes, the animals are prone to diseases. 76% of the respondents reported that diseases such as Pox (*Mata*), Enterotoxaemia (*Fidkiya*), Mange (*Khujli*) and Measles (*Auri*) pose a great threat to the lives of their animals.
- Documents¹ developed by organisations working on the same set of issues were used for reference. Works of the Centre for Pastoralism, Foundation for Ecological Security, and *Lokhit Pashu Palak Sansthan* in Appendix I were referred to understand the constraints that plague the pastoral ecosystem. The documents can be accessed on the following [link](#).

¹ Appendix I: External documents referred for Constraints identification

Sheep Pastoralism in Rajasthan, Lokhit Pashu-Palak Sansthan, 2005

Evolving a Policy on Pastoralism, Foundation for Ecological Security

Fading Lifestyle, Shrinking Commons, Foundation for Ecological Security

Evolving a Policy on Pastoralism in the semi-arid state of Rajasthan, Foundation for Ecological Security

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Through extensive fieldwork and focused literature review, the team has gained an understanding of the issues that pose a threat to the pastoralists' ecosystem.

The challenges are categorized on their severity and the duration in which they could be addressed.

- The first set of constraints are severe and could be immediately addressed through dedicated support:
 - a. Encroachments and disinterest of locals to maintain common property resources have deprived the animals of these rich sources of forage.
 - b. Infrequent government health camps, expensive private care, apathetic veterinarians, and scarce health care institutes result in the poor medical care of animals.
 - c. Deficit in rainfall and the callous use of water resources have resulted in a shortage of water resources for the animals.
 - d. Increased dependence on middle-men for the sale of products.
- The second of constraints are around awareness and it would take considerable time for these behavioral changes to happen:
 - a. Fragmented agricultural lands and growing disinterest in maintaining a symbiotic relationship has deprived these pastoralists of a strong support system.
 - b. Pastoralists find it difficult to approach the police machinery for recourse.
 - c. Rapid urbanisation has resulted in altered pastoral routes.

Developing this document that details the identified constraints, the aim was to voice the concerns of the pastoralists. Through this draft, Urmul has attempted to document the woes of people whose existence largely remain undocumented. The aim was to reach out and sensitize researchers, policymakers, desert enthusiasts, media persons, and other readers*.

1.2 Identify & develop feasible packages of basic support services required for improved livestock management

Pastoralist communities lack proper documentation as well as representation. As a result, pastoralism is one of the most under-acknowledged sources of livelihood in the country with an estimated population of 30-35 million pastoralists.

Through our field assessment and discussions with the communities we noticed that pastoralists lack access to improved knowledge and pastoralism practices. They have no information about government schemes they can avail, right nutrition for their animals or even the rampant diseases and their vaccinations. Additionally, they are usually subjected to exploitation by the police and

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local thugs in the ambit of lack of proper identification documents as they cross the state boundaries in their pastoral route.

Through learnings from organisations like CAZRI, Rajasthan State Animal Husbandry Department and Urmul Organisation network the team worked on the feasibility of basic support services required for improved livestock management.

A Pastoralist Passport is being developed in Hindi. This would include the identification details of the pastoralist, emergency contact numbers knowledge around disease and nutrition management of the animals. This passport shall be issued by the Gram Panchayat. This document would serve as the primary identification document for the pastoralists. It would enable them to not be harassed by local authorities for identification details and in case of emergency contact the authorities.

Details around recommended practices in the Passport would ensure that the pastoralists pay close attention to the health and nutritional requirements of their small ruminants.

Key concerns and knowledge gaps that emerged from the baseline survey and identification of constraints to the pastoral ecosystem were covered:

- Inadequate knowledge about the vaccines and their dosage for the animals - has been addressed in the material by adding the details of the rampant diseases, their symptoms, vaccines and its dosage. These details have been compiled from different publications developed by ICAR institutions and the Animal Husbandry Department, Government of Rajasthan.
- Gaps around providing adequate nutritional forage from CPRs have been shared by adding details of a feed mixture that could be produced using local available plants and shrubs has been added. This mixture has been recommended by the Animal Husbandry, Government of Rajasthan.
- Information on the breeds of the small ruminants is laid out, including details of the physical attributes and characterizations of the breed have been incorporated.
- Basic details around schemes and policies of the Central government and state of Rajasthan has been added. These details would ensure that the pastoralists are aware of the benefits under each scheme.
- Emergency contact numbers of a helpline run by Rajasthan University of Veterinary and Animal Sciences catering especially to pastoralists and Animal Husbandry Department, Government of Rajasthan has been shared for their reference. Also, contact details of the programme team of Urmul has been shared as well.

1.3 Establish Common Facility Centers (CFC)

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Of the 4 programme villages, pastoralists follow the route starting from Kalu, Dhani Bhopalaram, Rajasar Bhatiyani and Kelan villages. The 2 CFCs are alternatively situated along this route in Kalu and Rajasar Bhatiyani.

The 4 programme locations fall on a prominent pasture route undertaken by pastoralists traveling to Punjab and Haryana – from Jaisalmer and Barmer via Sri Ganganagar in Rajasthan. There was no dedicated resting stop catering to the needs of pastoralists and their animals during this arduous mapped journey of more than 800 kilometers. These requirements included healthcare facilities for the pastoralists and their animals.

Basis our field assessment, the programme locations are important resting places for the pastoralists migrating to Punjab and Haryana. To ensure that the pastoralists are provided with a range of services available - from resting corridors, health services (including medicines), food, fodder, shearing for sheep, warehousing, selling of nutrients etc. these centers would be set-up 25-45 kilometers away from each other. They would act as a comprehensive service & facility center for pastoralists.

Two CFCs in Kalu village and Rajasar Bhatiyani village, Lunkaransar, Bikaner would be set-up to enable direct access to pastoralists of vital services on animal health and related products. The site plans have been developed* and the foundation stones were laid in February 2020. The construction efforts were affected by the imposition of nationwide COVID-19 preventive lockdown and these efforts would be further resumed in June 2020.

The Panchayati Raj Institutions (PRI) including Gram Panchayats, Block and District Office of the four programme villages have supported the efforts in providing land resources for the CFC and ensuring its maintenance in the future. Selco Foundation has committed solar energy powered infrastructure support for the CFCs. With the support from Panchayati Raj Department, labour force has been secured under Mahatma Gandhi National Rural Employment Guarantee Scheme.

To ensure sustainability of the CFC model, we are strengthening the capacities of local bodies. The agencies would be operating at two levels in spearheading the implementation.

- Village level: The programme would be governed by PRIs (gram panchayats), village collectives, MSMEs and local NGOs.
- Cluster² level: The programme would be governed by Urmul at the cluster level with support from NRAA, block and district offices of the PRIs and other state and central government agencies.

² As per MSME, Government of India definition “A cluster is a group of enterprises located within an identifiable and as far as practicable, contiguous area and producing same/similar products/services. The essential

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In the first year of our programme, one of the CFCs would be managed by the village collectives or Gram Panchayat and the other would be managed by Urmul Setu Sansthan. Towards the end of the first year we will conduct a comparative study to assess the management, good practices, challenges and learnings of both the groups.

To ensure a wider adoption and replication of CFC model, information shall be disseminated by the programme team to the relevant stakeholders.

1.4 Improvement of 4 Common Property Resources

The four common property resources areas are poorly managed and have sparse plantations. The water reservoirs on these lands require urgent support. These problems were echoed by the pastoralists. Their concerns were discussed in the [Constraints Identification document](#) and [Baseline Survey findings](#).

Measures to be taken for pastoralist animals to get the required fodder support. By restoring the 4 identified CPRs in Dhani Bhopalaram, Kelan, Kalu and Rajasar Bhatiyar villages of Lunkaransar block, the team is working to garner the required organic nutritional support. These lands were given usage permits from the Gram Panchayat and District Collector. Fencing and land levelling work was initiated in CPRs in Kalu and Rajasar Bhatiyar. The work was stalled due to the nationwide preventive lockdown imposed. The team plans to resume the work in June 2020.

It was initially planned that a plantation of 6,000 trees would be undertaken. The Forest Department, Government of Rajasthan has been supportive of the programme activities and has pledged to provide 10,000 saplings for plantation in CPRs which includes the 6000 saplings initially planned as part of the programme. The team is actively seeking support to procure more saplings from the Department on the onset of monsoon. Technical knowledge support would be sought from CAZRI. With the support from Panchayati Raj Department, labor force for construction efforts has been secured under Mahatma Gandhi National Rural Employment Guarantee Scheme. The plantation shall begin on the onset of monsoon.

The total land area undertaken in the four programme villages for CPR development:

characteristics of enterprises in a cluster are (a) Similarity or complementarity in the methods of production, quality control and testing, energy consumption, pollution control, etc (b) Similar level of technology and marketing strategies/practices (c) Channels for communication among the members of the cluster (d) Common challenges and opportunities.”

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NAME OF PROGRAMME VILLAGES	TARGETED LAND AREA FOR CPR (IN HECTARES)	CURRENT ALLOCATION FOR CPR (IN HECTARES)	FODDER FOR NUMBER OF ANIMALS (ESTIMATED)
Rajasar Bhatiyar	10	10	500
Kalu	10	24	1200
Dhani Bhopalaram	10	48	2400
Kelan	10	10	500

Assumption: 1 hectare of CPR can accommodate 50 sheep or goat at a single time.

1.5 Enhance water availability on pastoral routes

Water availability in the Thar is scarce. For pastoralists, it is of utmost importance to find suitable water resources along the pasture routes. Under the programme, construction of new or renovation of community owned, existing water structures – ponds, traditional water structures, water tanks, on route was planned to be undertaken. The main variables considered in the design of this activity are:

- Scarcity of water due to harsh summers and poor rainfall.
- Scarce knowledge on use of traditional water management and rainwater harvesting techniques.
- Reliance on water sourced from vendors for their animals.

The region is rain-fed and receives scanty rainfall. It becomes necessary to ensure that the water structures are optimally built and utilized. The number of water reservoirs to be constructed in each CPR were planned basis the:

- Total land allocated for the CPRs
- Mapping whether the existing water reservoirs were sufficient to cater to the needs of the local animals

NAME OF PROGRAMME VILLAGES	LAND ALLOCATED FOR CPRS (IN HECTARES)	EXISTING ACTIVE WATER RESERVOIRS	NEW WATER RESERVOIRS TO BE CONSTRUCTED UNDER THE PROGRAMME

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<i>Dhani Bhopalaram</i>	48	3	5
<i>Kalu</i>	24	3	2
<i>Kelan</i>	10	0	5
<i>Rajasar Bhatiyar</i>	10	2	3

Total 15 new water reservoirs to be constructed near the CPR, CFC and along the pastoral routes. In addition to the above, 1 water reservoir in Kalu to be revived. All of this is being implemented in collaboration with Gram Panchayat and NREGA under convergence work.

1.6 Develop One fodder nursery in the cluster

There is poor maintenance of plantations in the common grazing lands resulting in deprivation of adequate fodder for the livestock. A fodder nursery was envisioned to be the source of fodder seed to be made available to pastoralists, for their farms, and be used for CPR development and maintenance. The nursery is being set-up in Urmul Setu Sansthan campus in Lunkaransar block, Bikaner district.

The variables considered in the design of the fodder nursery are:

- Access to good quality, nutritious fodder grasses and trees.
- Water management practices appropriate to the area and the proposed fodder species.
- Proper upkeep of the nutritious indigenous fodder for animals.

The distribution of fodder seeds/ root slips among the community would ensure varied fodder plants available for their animals and the community members gain a sense of accountability for their natural resources. Soil leveling and improvement efforts have been undertaken. The plantation would begin before the onset of monsoon.

Urmul Setu Sansthan has provided land for the nursery and will be providing supervisory support for the maintenance of the fodder nursery. Beyond the project duration, they would be managing the plantation in the nursery. The aim is to develop this nursery towards an environmentally and financially sustainable enterprise model. By ensuring regular maintenance of the nursery, the fodder seeds and saplings would be sold at nominal rates to the farming community. To ensure that throughout the year fodder for their animals is available in the region, the community would be encouraged and shared knowledge on how to plant and maintain these fodder species through continuous dialogues and planned training. The fodder trees and grasses that are consumed by

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sheep and goats have been carefully selected to be grown in the fodder nursery by the programme team. These would include:

- Ber (*Ziziphus mauritiana*)
- Khejri (*Prosopis cineraria*)
- Moringa (*Moringa Oleifera*)
- Sewan grass (*Lasiurus Scindicus* Henrard)
- Daman grass

The fodder grasses and trees require minimum maintenance and supervision. These resilient species play a very important role in ensuring forage for animals in the arid areas.

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**For detailed programme related documents visit [this link](#).

1.7 Organize Animal Health camps

The pastoralists reside in the remotest regions of the desert. There is poor last-mile veterinary care connectivity. Infrequent government health camps, expensive private care, apathetic veterinarians, and scarce health care institutes result in the poor medical care of animals.

A few critical veterinary care challenges were voiced by the pastoralists during the focused group discussions and aligned with the design of this activity:

- The frequency of government health camps organised was reported to be inadequate and poor.
- The private health care services that they opt for are usually very expensive. With limited understanding of modern medicine, they find it difficult to check the credibility of the diagnosis and treatment.
- With mounting healthcare expenses, the pastoralists prefer to self-administer injections and medicines. However, the pastoralists have inadequate knowledge about dosage and the technique to administer them resulting in limited benefits for the animals.
- The efficacy of the vaccines used by the Animal Husbandry Department was considered to be very low by the pastoralists.
- Improved condition of the CPR could ensure the management of nutritious fodder for the enhanced capacity of pastoralists who would migrate through the region.

To ensure that the morbidity rates of the animals decreases, delivery of veterinary services to pastoralists in the clusters through animal camps was planned. There have been six health camps planned in the region. Two health camps wherein 3700 animals were vaccinated were organized on 11th February and 20th March, 2020. After the lifting of the lockdown four more would be organized.

The health camps would be organized in villages where the veterinary care centers are remotely located. The vaccines were procured by the programme team from the market. The programme team has sought the help of the Animal Husbandry Department, Government of Rajasthan to support these vaccination drives by providing mobile veterinary teams.

The camps related information and evidence of efficacy of vaccines would be continuously monitored and shared with the Animal Husbandry Department, Government of Rajasthan. The programme team would be engaging with the Department to ensure that the Department through their expertise and resources is able to address the identified gaps.

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2. Capacity enhancement of pastoralists for wider adoption of improved livestock management

Towards capacity enhancement of pastoralists for wider adoption of improved livestock management	
Title	Description
2.1 Baseline knowledge management	Identify baseline Government of Rajasthan, GoI, and other programmatic schemes that focus on improved livestock management practices and support for pastoralists. Manage knowledge which could enhance the input services to animals.
2.2 Convergence	Facilitate development of convergence strategies for supporting pastoralists for improved livestock management on a sustainable basis. Converge with other Urmul programmes on crafts development, cattle breed improvement, and comprehensive village development.
2.3 Demonstrations	Conduct improved livestock management demonstrations/trainings for knowledge dissemination amongst pastoralists.
2.4 Education	Develop IEC material for knowledge sharing and training the pastorals on animal management, best practices and data
2.5 Pastoral Community Mobilization for diverse animal-based business opportunities orientation.	Focus trainings & workshops for pastoral communities on livestock-based business diversification first generation and existing entrepreneurs around milk products

By conducting improved livestock management demonstrations/training for knowledge dissemination amongst pastoralists it is believed their skills would be improved. Training focusing on feed, disease and animals-based products management are being undertaken. The good practices will be shared with the pastoralists to enhance their capabilities and ensure wider adoption of improved livestock management. Several activities including demonstrations, training, and business orientation are planned in this vertical. The expertise of technical organisations such

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as CAZRI and RAJUVAS would be leveraged to disseminate information. In addition, Urmul network’s three-decade long experience in the desert crafts value chains would be used to expand business opportunities for the pastoralists.

2.1 Baseline Mapping

Under this activity, we have mapped the various state schemes currently being availed by pastoralists in the programme areas. These schemes provide health, vaccination, breed improvement, market exposure to pastoralists.

Government of India and Rajasthan Schemes

Vertical	Government Schemes	Policy Description
Holistic Livestock Development	National Livestock Mission, GoI	Policy works on productivity enhancement, entrepreneurship development and employment generation, strengthening of infrastructure of state farms, conservation of threatened breeds, minor livestock development, rural slaughter houses, fallen animals and livestock insurance.
	National Policy for Farmers, GoI	Policy works to enhance the income of livestock owners, productivity of agri-clinics, crop livestock mixed farming systems would be promoted, apart from encouraging production of organic manures and biofertilizers. Livestock insurance would also be revamped and made accessible to all farmers.
	Rajasthan State Livestock Development Policy, GoR	This policy works towards strengthening the animal husbandry sector in order to enhance production, productivity, livelihood of the poor and self-reliance of underprivileged sections of the rural society through sustainable development of the sector.
	Brucellosis Disease Control Programme, GoI	This component was implemented since 2010 and central assistance is being provided to States/UTs for mass vaccination of all female

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		calves between 6-8 months in the areas where incidence of the disease is high.
	Foot and Mouth Disease Control Programme, GoI	The major activities in the programme is to vaccinate all the eligible cattle, buffaloes, goats and sheep at six monthly interval, Publicity and Mass Awareness Campaign, including orientation of the State functionaries for implementation of the scheme, identification of the target animals, Siro-surveillance/monitoring of animal population on random basis, mass vaccination, procurement of cold cabinets and FMD vaccine, assessment of the randomly collected samples of vaccines for their quality, virus typing in case of outbreaks and recording/regulation of animal movement from unvaccinated areas through temporary quarantine/ check-posts.
Livestock Health and Disease Control	Peste des Petits Ruminants (PPR) Control Programme, GoI	PPR also known as 'Goat Plague' is a viral disease that affects goats and sheep. Under this programme around 30% of the state sheep and goat population are vaccinated.
	Assistance to States for Control of Animal Diseases (ASCAD), GoI	Under this component, assistance is provided to State/Union Territory Governments for control of economically important and zoonotic diseases of livestock and poultry by immunization, strengthening of the existing State Veterinary Biological Production Units and of the existing Disease Diagnostic Laboratories as well as for providing in-service training to veterinarians and para-veterinarians.
	National Animal Disease Reporting System (NADRS), GoI	The programme is executed through the National Informatics Centre. The objective of the NADRS Project is to record and monitor livestock disease situations in the country with a view to initiate preventive and curative action on the basis of outbreaks reported in a timely and speedy manner. NADRS involves a computerized network linking each Block, District and the State/UT Headquarter in the

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		country with the Central Project Monitoring Unit.
	Establishment & Strengthening of Existing Veterinary Hospitals and Dispensaries (ESVHD), Gol	Under this component, the Central Government provides financial assistance to States and UTs construct new veterinary hospitals and dispensaries as well as strengthen/equip existing ones.
	Professional Efficiency Development (PED), Gol	The objective of the programme is to regulate veterinary practice and the maintenance of the Register of veterinary practitioners.
	Animal Quarantine and Certification Service, Gol	The objective of this service is to prevent ingress of exotic livestock diseases into India by regulating the import of livestock and livestock products and for providing export certification of International Standards for livestock & livestock products.
	Chaudhary Charan Singh National Institute of Animal Health (CCSNIAH) Baghpat, Gol	This institute has been established to undertake quality control and assurance of standard, efficient and safe veterinary biologicals and to act as a nodal institute to recommend licensing of veterinary vaccines in the country using standard, efficient and safe veterinary biologicals.
	Central/Regional Disease Diagnostic Laboratories, Gol	In order to provide referral services in addition to the existing disease diagnostic laboratories in the States, a Central and five Regional Disease Diagnostic Laboratories have been set up by strengthening the existing facilities.
Health and Vaccination	Breed Improvement Programme, GoR	<p>a. Goat Development Programme</p> <p>The programme for goat development is mainly aimed to help in improving the weaker sections of society. There are goat farms of the department working at Ramsar in Ajmer district, Cattle Breeding Farm, Nagaur and Kumher at Bharatpur District. Goat development programme is aimed to develop</p>

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		<p>Sirohi goats in ten districts of South-Western regions of the State.</p> <p>b. Sheep Breeding Programme According to the departmental sheep breeding policy, the indigenous purebred Ram (Chokala, Nali and Marwari) of the farm has been distributed to sheep breeders @ Rs. 50/- per Kg live weight. In the year 2018-19, the farm has distributed 243 proven Rams at subsidized cost to sheep breeders.</p>
	<p>Veterinary healthcare and disease control, GoR</p>	<p>a. Veterinary Health Care Programme The health of the animals of the state is being taken care of by 7897 veterinary institutions comprising of 35 Polyclinics (VPC), 785 First Grade Veterinary Hospitals (VHF), 1710 Veterinary Hospitals (VH), 198 Veterinary Dispensaries, 5067 Sub-Centers (SC), 102 District Mobile Veterinary Unit (DMVU). These institutions are situated in far flung areas of the state. The sub-centers and dispensaries are headed by technical subordinate staff i.e. Livestock Assistant (LSA) & Veterinary Assistant (VA), respectively. Whereas the VH, VHF & VPCs are headed by the state officer cadre staff i.e. Veterinary Officer (VO), Senior Veterinary Officer (SVO) and Deputy Director (DD), respectively. All these institutions are stationary with working jurisdiction of villages falling in their 8 Km radius area.</p> <p>b. Disease Control Programme The animals are vaccinated regularly against many fatal diseases viz. Haemorrhagic Septicaemia (HS), Black quarter (BQ), Enterotoxaemia (ET), Sheep Pox, Foot & Mouth Disease (FMD), PPR, Brucella and Rabies. The vaccination is done at a nominal cost i.e Rs.1.00 per dose for HS/BQ, Rs. 0.50 per dose for ET/Sheep Pox. Registration fee of Rs. 2.00 is charged for PPR, FMD, Brucella.</p>

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

		<p>c. Biological Production Unit State Biological Product Laboratory, situated at Agra Road, Jamdoli Jaipur, is producing various types of vaccines viz. Hemorrhagic Septicemia (HS), Black quarter (BQ), Enterotoxaemia (ET) etc. for effective control of diseases in the state.</p> <p>d. Disease Diagnostic Centre Department is providing animal disease diagnostic facilities through One State Disease Diagnostic Centre, 6 Regional Disease Diagnostic Centres and 27 Disease Diagnostic Laboratories at District headquarters to the vast livestock population.</p>
	Pashudhan Nishulk Arogya Yojana, GoR	Under this scheme, to ensure the health of all the animals, the state government would provide free of cost vaccines for them.
Security and Insurance	Bhamashah Pashu Bima Yojana, GoR	In this scheme the pastoralist belonging to SC/ST reservation category and Below Poverty Line could connect with the nearest government veterinary hospital to avail an insurance coverage of upto INR 50,000.

First round of [baseline survey](#) with 394 respondents to comprehend the socio-economic conditions as well as the issues and support gaps of the pastoralists in the harsh regions of the Thar was undertaken. The report and the detailed empirical study carried out in the programme intervention villages will further aid our intervention in mitigating the issues faced by the pastoralists. A combination of both qualitative and quantitative methods was applied for the field work conducted between 15 Jan to 28 Feb, 2020.

The interviews were conducted on the basis of a semi-structured snowball method which enabled us to cover all the aspects around pastoralists. Snowballing helped us to hasten the survey of 394 respondents in an effective manner since it was carried out by a local researcher. Random Sampling was adopted to conduct pen and paper interviews on the field which was later digitally entered by the project team. The detailed findings are attached in annexure*.

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

The second round of survey would be centered around all the four project locations - *Dhani Gopalaram, Kalu, Kelan and Rajasar Bhatiyar* with 1600 respondents from villages within a 90 kms radius. These areas host the majority of pastoralists migrating to Punjab and Haryana in search of forage and water due to the limited availability of the same in the nearby regions.

2.2 Convergence

The program facilitates development of convergence strategies for supporting pastoralists for improved livestock management on a sustainable basis. Pastoralists community require support around the following major verticals that can be provided from the following organisations in both short- and long-term engagement:

Support Required	Concerned Departments in Government of Rajasthan
Veterinary access and support	Department of Animal Husbandry
Policy and forage support through plantation diversification in CPRs and forest lands	Department of Forest Department of Agriculture Department of Panchayati Raj Central Arid Zone Research Institute (an ICAR Institute)
Provision of water resources	Department of Water Resources Department of Panchayati Raj
Building value chain around animal-based products	Department of Animal Husbandry Department of Dairying Department of Animal Production Department of Skill Employment and Entrepreneurship Department of Panchayati Raj Central Sheep and Wool Research Institute (an ICAR Institute)

Alongside government schemes benefiting pastoralists directly and indirectly would be mapped in the second round of baseline survey and a plan would be developed to link the pastoralists to these schemes. Under the programme we have collaborated with the following agencies by far.

Panchayati Raj Institutes	<ul style="list-style-type: none"> Land granted by the Gram Panchayat, District Commissioner and Cooperative Society at Kalu
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*Details attached in annexure

**For detailed programme related documents visit [this link](#).

	<ul style="list-style-type: none"> ● Kalu village contributed INR 1.5 lac for the programme, and spearheading the advocacy with MP Arjun Ram Meghwal for additional resources ● Urmul Setu provided land for fodder nursery and extended HR support for community mobilisation ● Zila Parishad extends full support, allocates 15 MGNREGA labour days for three months to the programme
State of Rajasthan	<ul style="list-style-type: none"> ● Veterinary service delivery in partnership with Animal Husbandry Department, Govt of Rajasthan. 3700 animals reached so far ● Forest Department to provide 10,000 saplings for plantation in CPR
National Agencies	<ul style="list-style-type: none"> ● Overall guidance and support by NRAA team- stakeholder influencing support ● Financial, expert, technical and knowledge support by FAO ● Collaboration with various ICAR institutions - CAZRI, NRCC - on technical inputs, knowledge and good practices ● Revitalising Rainfed Area Network (RRAN) programme to support intervention sustainability
CSR and other foundations	<ul style="list-style-type: none"> ● Selco Foundation has supported solar energy powered infrastructure across 4 project locations ● Sustainable Agriculture Program, Urmul Trust teams provides support for training, experts and knowledge ● Desert Resource Centre is supporting the team with technical inputs, insights and knowledge management ● Skills to Succeed Crafts programme led by Urmul Trust extends support for wool value chain development

2.3 Demonstrations

The low awareness levels amongst pastoralists around animal health, nutrition, forage, good practices and other relevant information to aid their sustenance and growth is a major roadblock in the pastoral ecosystem. Under the program the team has designed a set demonstrations/training to be conducted for improved livestock management and knowledge dissemination amongst pastoralists. We have so far conducted 2 training with 83 pastoralists organised at the Urmul Lunkaransar campus and Kalu Urmul cluster office. In addition, 14 meetings with 236 pastoralists were organised to make them aware about the support being extended through program interventions and how collaborative efforts need to be mobilised for community efforts.

Collaborations with institutions with technical expertise such as CAZRI and RAJUVAS would be

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

further approached to organize training on recommended practices.

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

Trainings and Meetings with the community members:

Date	Objective of Training/ Meeting	Description of Activities	Materials used	Participation witnessed from villages
23 Jan 2020 which witnessed participation from 20 pastoral households	Recommended practices around disease, breeding, and nutrition management	<ul style="list-style-type: none"> ● Symptoms and treatment of rampant diseases were discussed ● Nutrition management- beneficial fodder species and the diet to be maintained for these small ruminants ● Breed management of animals to ensure progenies are disease-free and can be used for producing good quality animal-based products such as meat, wool, milk, etc. ● Hygiene practices to be followed for the animals 	<ul style="list-style-type: none"> ● National Dairy Development Board video on breed improvement ● IEC materials developed by Animal Husbandry Department, Government of Rajasthan 	Rajasar, Garabdesar, Kalu, Rawasar, Nathusar, Bhijarwali, Kheeyera
11-12 Feb 2020 which witnessed participation from 63 pastoral households				
14 meetings in 13 villages with participation from 236 pastoral households from 23 Jan - 4 March 2020	Sharing programme information and community mobilisation	<ul style="list-style-type: none"> ● Focused discussions around understanding the pastoralists' constraints ● Enhancing awareness around programme activities and benefits ● Sharing details on government schemes and benefits 	NA	Rajasar Bhatiyan Kunda Nakrasar Rajasar Kakarasar Kelan Adasar Sahajrasar Rawasar Chandsar Sahajrasar Kalu Kharda

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

2.4 Education

It is essential to educate and spread awareness on improved rearing and livestock management practices along with information on existing benefits and avenues for availing them.

The pastoralist passport has detailed information about good rearing practices, nutrition, health and government schemes details for pastoralists to refer to and learn from. The details shared in the passport can be updated annually for maintaining data accuracy and worth. Also, the details like nutritional practices, diseases, etc are long term and can be used even after the project period.

Verticals	Gaps	Knowledge to be shared	Medium
Nutritional Practices	Low availability of nutritious fodder and knowledge of their management.	<ul style="list-style-type: none"> Information on types of nutritional grasses available in the area and their organic maintenance. Details on feed mixture that could be prepared by the pastoralists themselves 	<ul style="list-style-type: none"> Posters on grasses and nutritive compounds to be pasted in meeting halls and distributed to pastoralists. Forming local youth pastoralist cadre and educating them on the nutritional practices so they further reach out to larger pastoralist groups. Sharing the details in the pastoralist passport.
Health and Vaccination	Poor knowledge about Government vaccination drives and health camps.	<ul style="list-style-type: none"> Knowledge on diseases, their vaccines and frequency. Details of government hospitals and dispensaries along the pastoralist routes 	<ul style="list-style-type: none"> Connecting with pastoralists through use of ICT like SMS/ WhatsApp to share information on health camps and vaccination drives. Training passionate local youth as para-vets to facilitate vaccination in remote villages and also provide livelihood opportunities to young pastoralists. Section on diseases and their vaccines and the

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

			names and locations of government hospitals and dispensaries along the mapped pastoral routes in the pastoralist passport.
State Schemes	Lack of adequate knowledge about the government schemes and methods to avail them.	<ul style="list-style-type: none"> ● Mapping government schemes and steps to avail them. 	<ul style="list-style-type: none"> ● Training youth on ICT to capacitate them for registering and linking pastoralists to state schemes. ● Section on current govt schemes for pastoralists in Rajasthan in the pastoralist passport.
Market Linkages	Absence of market linkages to facilitate sale of animal products at fair prices.	<ul style="list-style-type: none"> ● Information of range of pastoralist animal products and their value-added products 	<ul style="list-style-type: none"> ● Identifying and forming a group of passionate entrepreneurs to establish market linkages for pastoralist products. ● Section on ways to stop exploitation against middlemen for animal products in the market in the pastoralist passport.

To further this cause, we have also been working to develop (Information, Education and Communication (IEC) material for the pastoralists. In the same process, a program summary sheet and branding material for the CPR sites and CFCs were developed. Posters and other training material for increasing the knowledge around good practices are in the process of development.

2.5 Pastoral Community Mobilization for diverse animal-based business opportunities orientation

There are poor market support structures. The pastoralists receive very low prices for their products. The opportunities are lacking. Through our initiation workshops we are formalising the sector and building the foundation of a sustainable enterprise. We conducted 14 meetings with pastoralists across the programme area to discuss their constraints, current livelihood avenues, introduced our programme and synergize efforts to work together. Also, we have been conducting training on livestock management with pastoralists to adopt good practices to their herding ways. We have

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

conducted two training on good practices around diseases, breeding, and nutrition and livelihood management in January and February 2020 with 20 and 63 pastoral households each. The participants are imbibing the practices learnt through these sessions in their everyday lives. We would continue to conduct more training post lockdown restrictions.

Also, we have been working on programme convergence with organisations like Revitalising Rainfed Area Network, Urmul Desert Craft to support intervention sustainability and development of wool and milk-based enterprises and to further exploring other business models in the later phase.

Animal Based Products
Wool based clothing products
Milk and derived products
Meat
Leather based products

A detailed market assessment exercise of consumer base, tools and technologies, product mix and product line would be mapped in the third quarter of the programme. It is challenging in times of the pandemic to sell the above products. Also, prices currently are not supportive. However, there is an opportunity and could be addressed through convergence and communication.

3. Enabling environment for better policy support for pastoralists in place

Towards Enabling environment for better policy support for pastoralists in place	
Title	Description
3.1 Organise state level workshops.	A state level workshop participated with relevant stakeholders to promote policy adoption of the CFC model and provide other support services to pastoralists. Disseminate the findings and learning to relevant state and national level stakeholders. One high level state workshop

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

3.2 Policy white papers	The programme shall have policy white papers as an important activity, reflecting on current pastoralism related policy, pastoral challenges, opportunities and policy recommendations basis the programme implementation
3.3 Engagement with policy makers.	Regular engagement with various departments to enhance the services access to pastoralists in the cluster. Regular engagements with state government officials.

Under this vertical, evidence-based policy dialogues that disseminate knowledge about the pastoralist ecosystem would be undertaken. Collaborative efforts to reflect on current pastoralism related policy, pastoral challenges, opportunities and policy recommendations basis the programme implementation would be undertaken. Regular engagements with varied state government departments to enhance the services access to pastoralists in the cluster have been launched. The interventions focus on building a conducive policy environment that is responsive to the needs of the pastoralists.

3.1 Organise state level workshops

To disseminate the findings and learnings of the various programme interventions to stakeholders across the value chain a high-level workshop with relevant stakeholders to promote policy adoption of the CFC model and provide other support services to pastoralists is imperative to the program design. We organised a two-days launch event on February 11-12, 2020 to lay the foundation stone of Common Facility Centres and Fodder Nursery for the pastoralists. The program was formally launched on February 11, 2020. The event was graced with the presence of Dr. B.S Prakash and Dr. B. Rath from NRAA. Mr. Tomio Shichiri, FAO India Head, was the Guest of Honor joined by Mr. Konda Reddy Chavva, FAO Assistant Representative in India. There was representation from Animal Husbandry Department GoR, Central Arid Zone Research Institute, National Research Centre on Camel, SELCO Foundation, PRIs, Swami Keshwanand Rajasthan Agriculture University, Rajasthan University of Veterinary and Animal Sciences, HDFC Bank CSR, Urmul Trust, Urmul Setu Sansthan, and Urmul Dairy who committed their support to the programme.

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

The list to the participants and their commitment to the programme have been listed below:

Organisation	Representative	Commitment to the program
Food and Agriculture Organisation	<ul style="list-style-type: none"> ❖ Mr. Tomio Shichiri, India Head ❖ Mr. Konda Reddy Chhava, FAOIR 	<ul style="list-style-type: none"> ❖ Financial support to the project ❖ Expert and technical inputs to the programme team ❖ Sharing knowledge and experience
National Rainfed Area Authority	<ul style="list-style-type: none"> ❖ Dr. B.S Prakash, Technical Consultant (Senior) ❖ Dr. B. Rath, Technical Expert 	<ul style="list-style-type: none"> ❖ Program anchorship ❖ Leading the evidence-based policy influencing ❖ Technical support to the programme team ❖ Sharing knowledge and experience ❖ Convergence with other stakeholders and policy formation
URMUL Network	<ul style="list-style-type: none"> ❖ Mr. Arvind Ojha, Chief Executive, Urmul Trust ❖ Mr. Rameshwar Godara, Chief Executive, Urmul Setu ❖ Mr. Harbans Singh, Secretary, Urmul Seemant ❖ Mr. Rampal Bishnoi, COO, Urmul Trust ❖ Mr. Ramesh Saran, CFO, Urmul Trust 	<ul style="list-style-type: none"> ❖ Implementation of the program ❖ Regional expertise to the program design ❖ Convergence with other stakeholders
Animal Husbandry Department, GoR	<ul style="list-style-type: none"> ❖ Dr. Poonam Chand Sharma, Joint Director ❖ Dr. Virendra Netra, Deputy Director 	<ul style="list-style-type: none"> ❖ Capacity building of team to conduct health camps and vaccination drives ❖ Providing a medical team and vaccines
Panchayati Raj Institutions; Gram Sabha	<ul style="list-style-type: none"> ❖ Mr. Shiv Narayan, Sarpanch, Gram Panchayat, Kalu 	<ul style="list-style-type: none"> ❖ Providing land resource for the CFC and ensuring maintenance
Domain Expert	<ul style="list-style-type: none"> ❖ Dr. A.K Gehlot, Former Vice Chancellor, RAJUVAS ❖ Mr. Mahesh Sharma, Managing Director, Urmul Dairy 	<ul style="list-style-type: none"> ❖ Sharing knowledge on CPR and goat and sheep rearing ❖ Community mobilisation

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

Central Arid Zone Research Institute (ICAR)	❖ Dr. N.D Yadav, Head, Regional Research Station, Bikaner	❖ Technical support for seeds, saplings, soil fertility
Swami Keshwanand Rajasthan Agriculture University, Bikaner	❖ Dr. Rakshpal Singh, Vice-Chancellor	❖ Technical support with training to pastoralists on good nutritional practices of the herd
National Research Centre on Camel	❖ Dr. Sumant Vyas, Principal Scientist	❖ Facilitating knowledge support to the programme team
Selco Foundation	❖ Mr. Roshan Mascarenhas, Sr. Program Manager	❖ Solar energy powered infrastructure support across project locations
HDFC Bank Parivartan CSR	❖ Ms. Arpana Kumari, Program Manager, CSR	❖ Discussion for potential collaboration

The second workshop would be planned for February 2021. Expected outcomes from the workshop includes awareness and progress mapping on the various programmatic interventions, development of CPRs and CFCs, construction and revival of water structures, status of health services.

Alongside, steps towards developing a cohesive policy environment to address the concerns of the pastoralists as well as share the novel interventions undertaken for this pilot in western Rajasthan. The goal would be to scale the model to a nationwide Integrated Pastoralist Development Programme. Also, efforts to begin establishing market linkages for the animals-derived products in the pastoral value chain.

3.2 Policy White Papers

The programme team is to draft policy white papers as an important activity, reflecting on current pastoralism related policy, pastoral challenges, opportunities and policy recommendations basis the programme implementation.

With the vision of reviving the pastoral ecosystem through using evidence-based policy tools, the findings of the baseline survey and the constraints identification document would be shared with Policy makers. These on-ground challenges around inadequate forage availability and water scarcity in arid areas, poor veterinary care and other aligned pastoral ecosystem problems would be shared with the stakeholders. These extensive data gathering exercises would aid the team to monitor and evaluate the progress of the interventions under this pilot.

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

Alongside, the knowledge team had developed an COVID-19 status narrative report for pastoralism value chain across the desert ecosystem. The assessment was well-received by the stakeholders.

The findings of a baseline survey of 2,000 pastoralists mapping their practices and access to government services would be shared with stakeholders. This would ensure policy decisions that are formulated are based on rigorously established objective evidence.

3.3 Engagement with Policy Makers

The programme team garnered resources commitment and support from stakeholders across the board. The team gained support from PRIs, technical agencies such as CAZRI, and Members of Parliament among others. The officials of Animal Husbandry Department and Forest Department of Government of Rajasthan have continuously lent their support. The PRIs have allocated land for the development. Their support has enthused the team to scale this model to a nationwide scale. The programme team is taking the pilot in western Rajasthan and is attempting to develop a nationwide Integrated Pasture Development Programme.

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

III. Virtual Review Meeting

On May 15th, a virtual review meeting was hosted between the teams from FAO, NRAA and Urmul.

Following are the action points that emerged from the meeting:

- A draft inception report shall be prepared and circulated by Urmul for comments from NRAA and FAO. The inception report shall also explain the different activities mentioned in the LoA.
- A draft list of sub-tasks and corresponding timelines shall be prepared by Urmul and circulated for feedback from NRAA and FAO.
- NRAA and FAO shall provide feedback on the Integrated Pasture development programme framework to be prepared by Urmul. Planning framework shall be finalized by 31 May 2020.
- Ensure that the number of pastoralists benefitted through the programme are documented well.
- Understand and reason with the district administration on their inadequate efforts to organise health camps. If the quality of vaccines and frequency of camps then it must be conveyed to the Animal Husbandry Department. Effective monitoring and community leadership is required to demand these things. Alongside policy dialogues between state and the central government is crucial to ensure the delivery of veterinary services.
- Through data mapping exercise, capture the information on total allocation and required vaccines in the region. Based on that information, the gaps could be addressed.
- The ethnoveterinary practices adopted by the community members need to be documented well and shared with all the stakeholders.
- Plantation of indigenous species such as Prosopis Cineraria (Khejri), Sewan grass (Lasiurus Scindicus), and Moringa Oleifera should be undertaken keeping in mind the nutritional requirements of the livestock and the local weather conditions.
- Finding whether it is feasible to promote crop-livestock integration through the use of molasses/urea blocks and rice/straw treatment.

As per Dr. Ashok Dalwai's suggestions, Urmul team is working on designing a pan-India, Integrated Pasture Development Programme basing it on the model of our programme in Rajasthan. The inception presentation to the programme has been developed to be shared with the respective teams and further to multiple government ministries for adoption and implementation.

IV. Free and Prior Informed Consent Training

FPIC is an indigenous peoples' right and a good practice for local communities training course on how to practically operationalize the indigenous peoples' right to Free, Prior and Informed Consent (FPIC) throughout all stages of the FAO project cycle.

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

The programme team at Urmul took the training and the following were the key learnings from the online module:

- Fundamentals of Free, Prior and Informed Consent
- The regulatory framework and the importance of indigenous peoples’ rights
- Skills to seek FPIC and mainstream it through each phase of the project cycle

V. Program Updates and Timelines

	DEC '19- FEB '20	MAR- MAY '20	JUN - SEPT '20	OCT - DEC '20	JAN '20- APR '21
1. IMPROVED ACCESS TO BASIC SUPPORT SERVICES AND INFRASTRUCTURE: ESTABLISH 2 COMMON FACILITY CENTRE					
1.1 Constraint Identification					
1.2 Identify & develop feasible package of support services					
1.3.1 Identification and securing land for the 2 CFCs in <i>Rajasar Bhatiyar</i> and <i>Kalu</i> villages.					
1.3.2 Site plans developed.					
1.3.3 Fencing and sign boards installation. Fencing work stalled further due to COVID-19*.					
1.3.4 Foundation stone for CFCs laid in <i>Rajasar Bhatiyar</i> and <i>Kalu</i> on 11-12 February 2020 in <i>Lunkaransar</i> .					

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

<p>1.3.5 Convergence work*:</p> <ul style="list-style-type: none"> ● Support committed by Sh. Arjun Ram Meghwal, Union Minister (<i>Bikaner</i>) and district administration ● Labour force secured under MGNREGA with support from Panchayati Raj Department 					
<p>1.3.6 Construction work to begin from June 2020*</p>					
<p>1.3.7 Seed procurement and plantation discussions initiated. Plantation to start on the onset of monsoon*.</p>					
<p>IMPROVEMENT OF 4 COMMON PROPERTY RESOURCES</p>					
<p>1.4.1 Identification of CPRs in <i>Dhani Bhopalaram, Kelan, Kalu and Rajasar Bhatiyani</i> and land usage permission received Gram Panchayat and District Collector</p>					
<p>1.4.2 Fencing and land levelling work is ongoing in <i>Kalu and Rajasar Bhatiyani</i>. Work stalled further due to COVID-19*.</p>					
<p>1.4.3 Seed and sapling procurement with support from CAZRI & Forest Department (Plantation on the onset of monsoon) *</p>					
<p>1.5 Water structures in the identified CPRs to be renovated in collaboration with Gram Panchayat*.</p>					
<p>1.6 Fodder nursery established in Urmul Lunkaransar Campus. Plantation to begin during monsoon*.</p>					

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

1.7 2 health camps with 3700 animals. 4 more to be organised post the lockdown is lifted*.					
2. CAPACITY BUILDING: COMMUNITY DIALOGUES AND TRAINING					
2.1 Baseline survey of 394 pastoralists has been conducted and their responses mapped. Sample size to be increased up to 2000 post the lockdown is lifted*.					
2.2 Convergence with PRIs and State departments to garner labor support, knowledge and resources					
2.3 2 training on livestock management for 83 pastoralists in Urmul Lunkaransar Campus and Cluster office in Kalu. More meetings to be held post the lockdown is lifted*					
2.4 Summary sheet and knowledge materials developed. Developing a Pastoralist Passport; a travel essential diary with all the required information for the pastoralists and posters for awareness*.					
2.5 14 initiation community meetings with 236 participants on awareness and community mobilization.					
3. POLICY ADVOCACY: BUILDING A CONDUCIVE POLICY ENVIRONMENT					

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

3.1 One state level meeting was organised at Rajasar Bhatiyar during the inaugural event on February 11th and 12th. Another to be organised in Jaipur in the months of August-September*					
3.2 Regular dialogue with policy makers at different levels- sarpanch, MLA, CEO- Zila Parishad on 18th March, Animal Husbandry Department, other State and Central Government departments*					
3.3.1 Policy white papers reflecting on current pastoralism related policy, challenges, opportunities and recommendations					
3.3.2 Report on COVID lockdown effects on pastoralists and recommendations document for relief support					

VI. Revised Programme Timelines (December 2019- April 2021)

	TIMELINE (AS PER THE AMENDED LOA)	MILESTONES	OUTPUT INDICATORS
1. IMPROVED ACCESS TO BASIC SUPPORT SERVICES AND INFRASTRUCTURE: ESTABLISH 2 COMMON FACILITY CENTRE			
1.1 Constraint Identification	Jan'20- Feb'20	Identification of the constraints faced by the pastoral communities	Improved access to basic support services and infrastructure
1.2 Identify & develop feasible package of support services	June'20- Sept'20	Feasible package of support services developed	

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

1.3.1 Identification and securing land for the 2 CFCs in <i>Rajasar Bhatiyar</i> and <i>Kalu</i> villages.	DEC '19- FEB '20	Allocation of land for the 2 CFCs
1.3.2 Site plans developed.	DEC '19 - FEB '20	Development of site plans
1.3.3 Fencing and sign boards installation. Fencing work stalled further due to COVID-19*.	JUNE '20 - SEP'20	Fencing completed
1.3.4 Foundation stone for CFCs laid in <i>Rajasar Bhatiyar</i> and <i>Kalu</i> on 11-12 February 2020 in <i>Lunkaransar</i> .	DEC '19 - FEB '20	Foundation stone laid and construction work began
1.3.5 Convergence work*: <ul style="list-style-type: none"> ● Support committed by Sh. Arjun Ram Meghwal, Union Minister (<i>Bikaner</i>) and district administration ● Labour force secured under MGNREGA with support from Panchayati Raj Department 	DEC '19 - MAY '20	Convergence work to mobilise resources
1.3.6 Construction work to begin from June 2020*	JUNE '20 - DEC'20	Construction of the two centers completed
1.3.7 Seed procurement and plantation discussions initiated. Plantation to start on the onset of monsoon*.	JUNE'20 - SEP'20	Fodder grasses and saplings planted
1.3.8 Solar plant installation in the unit	JUNE'20 - SEP'20	Installation completed
1.3.9 Dialogue with animal husbandry department for veterinary care at the CFC	JUNE'20 - SEP'20	Reports from dialogues to mobilise veterinary care support
1.3.10 Procurement of provisions, tools and equipment for setting up the resting and meeting places for the pastoralist in the CFC	OCT'20 - DEC'20	Procurement completed to begin utilisation of the centres
IMPROVEMENT OF 4 COMMON PROPERTY RESOURCES		

*Details attached in annexure

**For detailed programme related documents visit [this link](#).

1.4.1 Identification of CPRs in <i>Dhani Bhopalaram, Kelan, Kalu and Rajasar Bhatiyani</i> and land usage permission received Gram Panchayat and District Collector	DEC '19- FEB '20	Land allocation granted	
1.4.2 Fencing and land levelling work is ongoing in <i>Kalu and Rajasar Bhatiyani</i> . Work stalled further due to COVID-19*	MAR'20 - SEP'20	Completion of work	
1.4.3 Plantation and management of CPRs to ensure forage supply round the year	JUNE'20 - SEP'20	Completion of plantation	
1.4.4 Seed and sapling procurement with support from CAZRI & Forest Department (Plantation on the onset of monsoon) *	JUNE'20 - SEP'20	Liaoning with CAZRI to mobilise resources	
1.5 Water structures in the identified CPRs to be renovated in collaboration with Gram Panchayat*.	JUNE'20 - SEP'20	Water structures developed for full utilisation	
1.6 Fodder nursery established in Urmul Lunkaransar Campus. Plantation to begin during monsoon*	JUNE'20 - SEP'20	Plantation of fodder grasses and saplings	
1.7 Two health camps with 3700 animals. 4 more to be organised post the lockdown is lifted*.	JUNE'20 - SEP'20	Animals receive good medical care	
2. CAPACITY BUILDING: COMMUNITY DIALOGUES AND TRAINING			
2.1 Baseline survey of 394 pastoralists has been conducted and their responses mapped. Sample size to be increased up to 2000 post the lockdown is lifted*.	JUNE'20 - DEC'20	Evidence around access to input services gathered	Enhanced capability of pastoralists for wider adoption of improved livestock management
2.2 Support through programme and organisational convergence to ensure programme sustainability	Dec'19- April'21	Dialogues with various institutes and garnering support to the programme	
2.3 Two training on livestock management for 83 pastoralists in Urmul Lunkaransar Campus and Cluster office in Kalu. More meetings to be held post the lockdown is lifted*	MAR'20 - DEC'20	Pastoralists understanding the good practices around livestock management	

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2.4 Summary sheet and knowledge materials developed. Developing a Pastoralist Passport; a travel essential diary with all the required information for the pastoralists and posters for awareness*.	JUNE'20 - DEC'20	Knowledge materials developed	
2.5 Fourteen initiation community meetings with 236 participants on awareness and community mobilization.	DEC'19 - FEB'20	Mobilization of pastoralists	
3. POLICY ADVOCACY: BUILDING A CONDUCIVE POLICY ENVIRONMENT			
3.1 One state level meeting was organised at Rajasar Bhatiyar during the inaugural event on February 11th and 12th. Another to be organised in Jaipur in the month of February 2021*	JAN'21 - MAR'21	State and national level policy support	Enabling environment for better policy support for pastoralists in place
3.2 Regular dialogue with policy makers at different levels- sarpanch, MLA, CEO- Zila Parishad on 18th March, Animal Husbandry Department, other State and Central Government departments*	FEB'20 - APR'21	Successful dialogues	
3.3.1 Policy white papers reflecting on current pastoralism related policy, challenges, opportunities and recommendations	JUNE'20 - APR'21	Leading evidence-based policy making efforts	
3.3.2 Report on COVID lockdown effects on pastoralists and recommendations document for relief support	MAR'21 - APR'21	Garnered urgent relief support from stakeholders	

VII. Effects of COVID-19 Lockdown on the Programme

Owing to the nationwide preventive lockdown there have been delays in the program activities resulting in extension of the program duration by 6 months. The updated program duration is December 2019- April 2021.

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- Movement has been restricted. Although the team is finding it difficult to be on ground and monitor the challenges, we have been constantly telephonically connected with the community members.
- Construction activities have been permitted by the government but raw material for the same cannot be procured. This has resulted in a pause of the ongoing infrastructure development work.
- The movement along the pastoral routes are banned, this has created a need for urgent fodder and food support to the pastoralists.
- Repeated extension of the lockdown has increased the uncertainty regarding program meetings, training sessions, veterinary camps and other program activities.
- Actualisation of the support secured through convergence has been delayed.

VIII. Way Forward

The programme team is planning to undertake the following steps to ensure a nationwide adoption of this model.

- Encourage PRIs to lead and coordinate on-ground natural resource management efforts
- To ensure a wider adoption and replication of CFC model, information shall be disseminated to the policy makers across the board
- Develop market linkages for products – meat based or crafts based – such that livelihood opportunities of the pastoralists could be enhanced across the country
- Leverage technology to enable communication and monitoring system to review the efficacy of the support interventions
- Develop newer business models such as ecotourism/homestays along the pasture routes. This could ensure sustainable income for CPR management and an excellent rural tourism hotspot for people to experience livestock and the culture of pastoralism
- Build technical and leadership capacities of the pastoralists ensure the sustainability of interventions

VIII. Support Required under the Programme

The programme team requires support under three major verticals:

- Evidence based policy advocacy: Guidance to the team in gathering ground level data to enable evidence-based policy advocacy and policy making efforts for the pastoral community
- Knowledge: Access to knowledge library, facilitate close collaboration of the program knowledge team with domain experts to enhance understanding

*Details attached in annexure

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*Details attached in annexure

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IX. Programme Team

Dr. B. Rath	National Rainfed Area Authority
Dr. B.S. Prakash	National Rainfed Area Authority
Dr. Babita	National Rainfed Area Authority
Mr. Arvind Ojha	Urmul Trust
Mr. Rameshwar Godara	Urmul Setu Santhsan
Mr. Rewant Ram Jaipal	Urmul Trust
Mr. Mula Ram	Urmul Trust
Mr. Anshul Ojha	Desert Resource Centre
Ms. Aakriti Srivastava	Desert Resource Centre
Ms. Aastha Maggu	Desert Resource Centre

*Details attached in annexure

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Supporting Annexures

Annexure I: Constraints Identification

Context

Pastoralism is a production system dependent on herding livestock. Historically, this ecosystem has supported a large population (Hatfield and Davies 2006). In India, the pastoralists are believed to form 7% of population, i.e., about 88 million people, inhabiting mainly the arid and semi-arid areas of the country (Nitya and Kishore 2017).

Through centuries, they have adapted to harsh environments and have made dynamic use of resources in their ecosystem. They have been lauded for adopting resilient, sustainable, and creative capabilities to ensure a symbiotic relationship with their environment. These pastoral groups exist across all the states of the country. Their practices, lifestyles, and culture are not homogenous.

In western Rajasthan, the pastoralists chiefly rear sheep and goats. The region is a host to a large population of pastoralists (Koller-Rollefson 1994) and it has witnessed a shift in their ecosystem in the last two decades. Presently, the pastoral fragile ecosystem is facing challenges from rapid urbanisation and policies that disregard their needs (Mukherji, et al. 2016). Scarce resources and limited exposure make it difficult for them to demand accountability from institutions.

“There has to be strong support from government agencies to ramp up the healthcare services. We need to focus on ensuring last mile connectivity of medical services for our animals.”

- *Khyali Ram, LSA, Government Veterinary Hospital, Kalu village, Bikaner district*

Constraints to the land, living and life of the pastoralists

With their entire livelihood and ecological ecosystem under threat for survival, it becomes imperative to voice the problems that mar the existence of pastoralists today. The section below outlines the challenges faced by them.

I. Reduced Common Property Resources

Encroachments and disinterest of locals to maintain common property resources have deprived the animals of these rich sources of forage.

The health of animals is widely affected due to shrunken common property resources. For centuries, these lands had served as a nutritious and replenishable source of forage for the animals. These

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lands were maintained by the local institutions. In the last few decades, the encroachment of these lands by locals has resulted in the collapse of these rain-fed biodiverse sources of forage. The pastoralists in the region have not been able to muster the resources and the resolve to challenge these brazen encroachments resulting in deprivation of a wonderful source of pasturage.

II. Missing links in the veterinary system along the pastoral routes

Infrequent government health camps, expensive private care, apathetic veterinarians, and scarce health care institutes result in the poor medical care of animals.

A few critical challenges were highlighted by the pastoralists:

1. There are infrequent health and vaccination camps organized by government agencies. The pastoralists are barely given any prior information resulting in sparse participation by them.
2. The private health care services that they opt for are usually very expensive. With limited understanding of modern medicine, they find it difficult to check the credibility of the diagnosis and treatment.
3. The veterinarians lack sensitivity to interact with the pastoralists. The pastoralists expressed hesitance to approach and trust their treatments.
4. With mounting healthcare expenses, the pastoralists prefer to self-administer injections and medicines. However, the pastoralists have inadequate knowledge about dosage and the technique to administer them resulting in limited benefits for the animals.

The pastoralists do realize that the reliance on traditional medicine is insufficient but the accessibility to modern medicine is scarce, and expensive for them. They plead that there should be reasonably priced medical services available to them.

“Our animals do not get access to any healthcare services along the pasture route. They get sick and die. It is unfortunate that we cannot provide them with timely care.”

- *Kalu Ram Nayi,*

Kalu village, Bikaner district

III. Shortage of community water resources

Deficit in rainfall and the callous use of water resources have resulted in a shortage of water resources for the animals.

The pastoralists complained of an absence of sufficient water resources along the routes. Traditionally, the locals provided the pastoralists and their herds with drinking water. However, currently, while they offer water to the pastoralists, they are reluctant to supply water for their herds. Frequent droughts, and poor rainfall have made the task of providing water for animals more onerous each year and the pastoralists find it difficult to manage. Even if the locals do offer water

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to the animals, they request the pastoralists to replenish water from nearby water resources or instead pay some amount to them.

“Things have changed over time. It is getting more difficult to provide the animals with good feed and water along the route. The government should ensure our animals get the services they deserve.”

*- Surja Ram,
Kelan village, Bikaner district*

IV. The collapse of traditional relations between pastoralists and agriculturalists

Fragmented agricultural lands and growing disinterest in maintaining a symbiotic relationship has deprived these pastoralists of a strong support system.

The agriculturalists have increasingly stopped letting pastoralists feed animals on their fallow lands. Historically, the farmers used to allow pastoralists to graze on their lands after harvest. However, due to increased reliance on fertilizers, farmers ignore this rich source of organic manure. In addition to forage support, the farmers used to let the herds rest in their farms. Presently, due to fear of security and lesser reliance on animal manure for soil fertility, farmers have shown reluctance in hosting these pastoralists. Due to decreased trust and reliance between the two communities, the pastoralists are losing their greatest ally in the ecosystem.

V. Absence of streamlined value chain

Increased dependence on middle-men for the sale of products.

There is an absence of streamlined sheep and goat derived products value chain. The pastoralists do not have any avenue to sell the products along the routes. They have to rely on exploitative middle-men to sell their wool and other products in the market. Most of these middle-men quote prices that are extremely low and ensure that they maximise their profit margins. There is a strong need to explore alternative markets and provide necessary infrastructure support services to the pastoralists.

VI. Apathetic police machinery

Pastoralists find it difficult to approach the police machinery for recourse.

The pastoralists complained of theft of animals along the routes. They find it difficult to report the theft because of the lack of clarity on police jurisdiction and the follow-up process to their complaints. Further, insensitive policy and legal institutes barely provide any needed support to these pastoralists. Poor levels of awareness of the pastoralists makes it difficult for them to approach the state institutions. also makes seeking help a hassle for them.

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“If our herds get stolen along the pastoral routes then we approach the police for help. We have approached the Haryana and Punjab police for help, but they keep saying that they have conflicting jurisdictions and refuse to help us.”

Lal Khan,

Kelan village, Bikaner district

VII. Disturbed pastoral routes

Ramifications of rapid urbanisation include altered pastoral routes.

In the last two decades, the pastoralists saw an extensive change in their pastoral routes. Increased urbanisation and surge in population has put pressure on existing resources. Further, the encroachment of common property resources, expansion of roads, shortage of common water resources and desertification have resulted in the decline of forage and water resources. Pastoralists are always on the lookout for rich forage sources and pressure on current natural reservoirs has directly impacted the pastoral routes undertaken.

Concluding Remarks

Focused capacity building and infrastructural development measures could save the forgotten community- pastoralists. Through the course of the next one year, Urmul, with the aid of stakeholders, plans to strengthen the ecosystem by equipping the community with the necessary knowledge, resources, and infrastructure.

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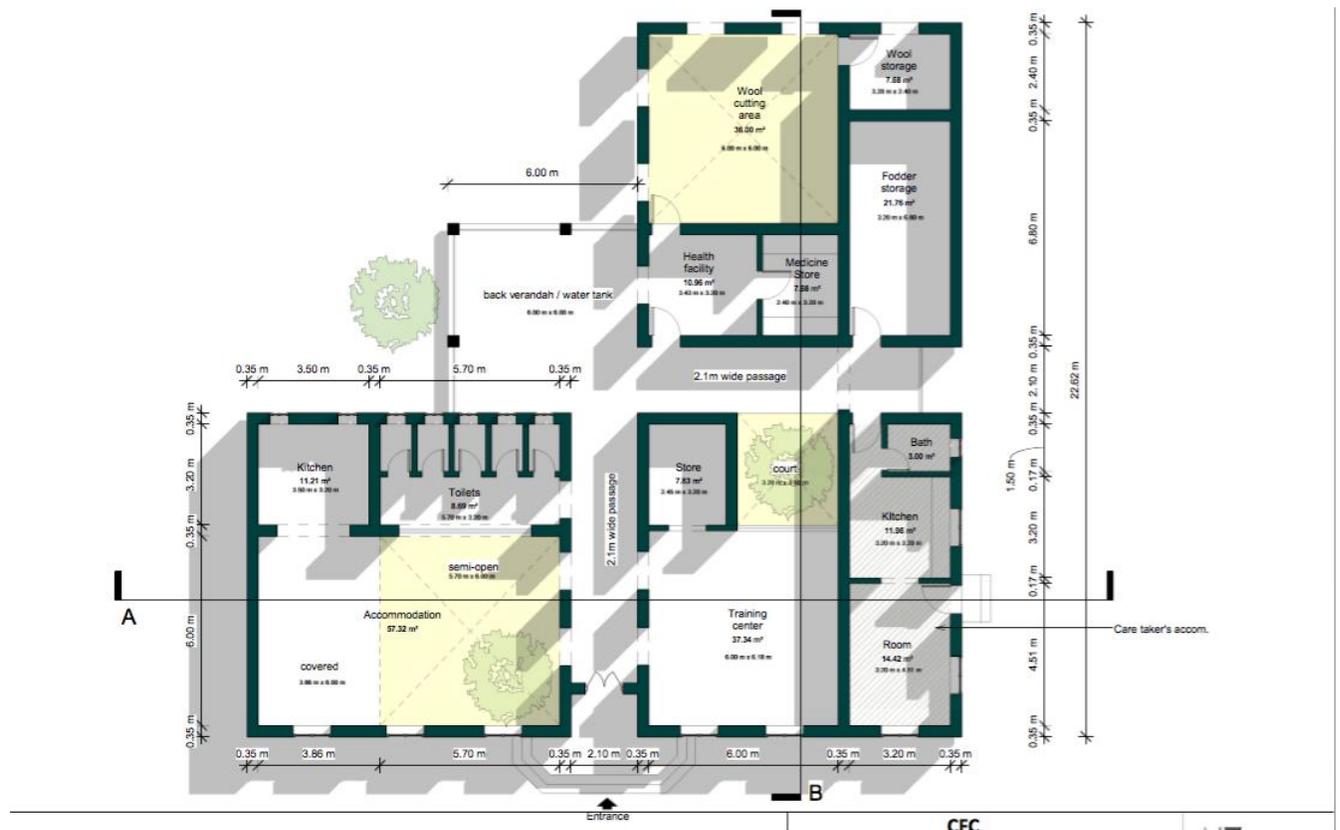
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Annexure II: Common Facility Centre Layout

Common facility centres are infrastructural units that shall be developed at strategic locations along the pastoral highway. These centres located 25-45 kilometers away from each other could be developed as a comprehensive service & facility centre for pastoralists. A range of services available could include resting corridors, health services (including medicines), food, fodder, shearing for sheep, warehousing, selling of nutrients etc.

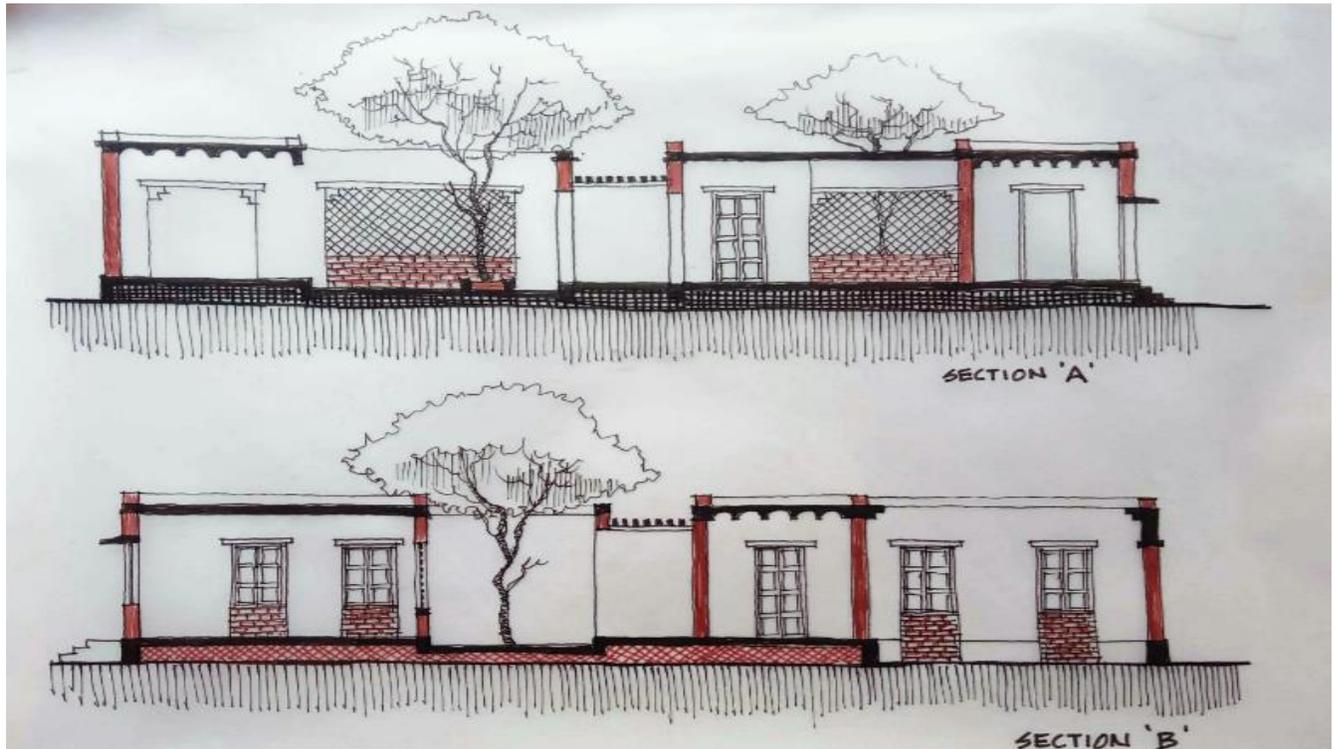
Architectural map of the CFC being established under the pilot programme in Rajasthan



*Details attached in annexure

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Architectural Map of the CFC Front View



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Annexure III: Baseline Key Survey Findings- Early Trends

The period of study was from 15 Jan to 28 Feb 2020. During the survey, 394 inhabitants from Bikaner, Chattargarh and Lunkaransar blocks were interviewed. The survey was carried out in the two blocks of Bikaner with an increased history of migration by pastoralists. The key factor that governed the identification of sample size was the migration routes taken up by the pastoralists. Through the survey tool the following key information was captured:

Primary information of the respondents

- The literacy levels of the respondents are poor with 76% of the total respondents are illiterate and 82% of the total inhabitants have not received any form of formal education.
- Income is meagre in these regions and mostly dependent on agriculture and livestock as 67.5% and 71.6% of the total population earn between 0-60,000 as annual income from farming-based distribution and animal husbandry-based distribution respectively.
- About one third of the respondents have either practiced pastoralism for more than half a century or have started adopting pastoralism in the last five years.
- All the respondents own a total of 27,578 sheep and 7,338 goats.
- While more than half of the respondents belong to the caste category of OBC, the other half is divided between Scheduled Caste (32%), Unreserved (17%) and Scheduled Tribe (1%).
- Out of the total respondents, 83% avail banking services and are under formal economy which gives impetus for emergence of probable enterprises in the future.
- The inaccessibility to resources is evident in the region as 61% do not have a functional toilet followed by 61% respondents who do not own any form of vehicles in comparison to 35% camel cart owners.
- 98% of the respondents sell animal derived products as a major source of livelihood.
- It was found out that the majority of the pastoralists-initiated migration from Kalu Lunkaransar followed by different routes ranging from Gaurisar, Rajasar, Mahajan Field Firing Range (Area) and other nearby villages. These pastoral routes extend up to Punjab and Haryana seeking forage and water.

Forage support

- The annual amount of investment on animal fodder ranges from INR 10,000 to INR 1,00,000 every year with 34% pastoralists investing up to INR 20,000.
- 66% of the respondents migrate on a yearly basis on foot for adequate access to fodder and believe that the routes have changed in the last 10 years.
- About 99% of the total population seeks a need for improvement in Common Property Resources (CPR).

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- Of the 74% respondents who use CPRs for forage, respondents are mostly dependent on Oran and Gochar or both.

There has been a collapse in the traditional relations enjoyed by the pastoralists with the farmers on the pastoral routes they used to pass through. Presently, 61% of respondents expressed that they are allowed their animals to graze on fallow lands.

Veterinary Facilities

- 98% of the animals are vaccinated on a yearly basis.
- Even though more than half of the population have medical facilities within 10 kms of their pastoral route, 90% of the respondents still vaccinate their animals themselves.
- 99% of the respondents have reported deaths due to sickness or infection which might be linked to the fact that almost 84% have reported that 1-20 animals have died over the span of two years.
- Almost 78% people spend INR 10,000 or below on medical care of the animals.
- Along the pastoral routes, the animals are prone to diseases. 76% of the respondents reported that diseases such as Pox (*Mata*), Enterotoxaemia (*Fidkiya*), Mange (*Khujli*) and Measles (*Auri*) pose a great threat to the lives of their animals.

General Awareness

- More than 95% of the total population is unaware about climate change, desertification and soil erosion.
- 99% of the total population do not participate in Gram Sabha or in any discussions regarding environmental activities. The locals have low interest and limited enthusiasm for participation in the activities of Panchayati Raj Institutions.

Majority of the total respondents were facing the following problems during migration

- Lack of water resources- The limited water resources available are mostly inadequate to cater to the needs of the pastoralists.
- Fear of theft- With herd size of hundreds of sheep and goats and absence of security, theft in the region is imminent.
- Fodder unavailability- Due to harsh weather conditions in the region, fodder is limited.
- Absence of medical facilities- Due to its unavailability, pastoralists often have to deal with health-related issues of the animals. One of the major health related issues during migration is the death of a child bearing sheep/goat or its offspring catering to long distances.

KEY TAKEAWAYS

*Details attached in annexure

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Like most rural areas in India, illiteracy is a challenge for the pastoralists of the region. With the majority of the population in Lunkaransar and Chattargarh having no formal education the reliance of locals on pastoralism as the primary source of income is evident. But, recently with the onslaught of urbanisation and collapse of management of commons their livelihood is under threat. As a result, the majority of the farmers migrate seeking forage in CPRs and seek improvement but over time the reduction in Common Property Resources and unavailability of veterinary facilities in the vicinity has led to the loss of numerous animals. In addition, collapse of previously maintained traditional relations between pastoralists and agriculturalists are no longer cherished.

It is difficult to mitigate these issues as there is a lack of awareness in the area regarding the environment as well as a low participation in the activities of panchayats. Presently, the pastoral fragile ecosystem is facing challenges from rapid urbanisation and disregard of their needs by the locals. Scarce resources and limited exposure make it difficult for them to demand their rights. Their animals urgently require better veterinary support, restoration of common property resources, revival of community water resources, forage support from farmers with fallow lands, and better market access to sell their products.

*Details attached in annexure

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