Project Completion Report

Reviving Pasture Routes in Dry and Arid Parts of the Country

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INTRODUCTION TO THE PASTORAL ECOSYSTEM

Livestock is the most important sub-sector of the Indian Agricultural economy playing a multi-faceted role in providing livelihood support to the rural population. Livestock contributes 4% of the national GDP and 26% of agriculture. India has more than 577 million small holders comprising landless, small and marginal farmers of which a majority of households rear livestock as a mainstay or complementary to crop production.

Nomadic pastoralism is a tradition among several communities. Sheep husbandry in Rajasthan, Himachal Pradesh, J&K, A.P and T.N. is still based on nomadic or semi-nomadic/ transhumant pastoralism. The driving causes behind the tradition of livestock migration are lack of water resources and acute shortages in fodder in the dry-season. The result is a regional livestock population increasingly on the move, sometimes turning to year-round nomadism to meet demands for seasonal pasturage. Depending on severity of drought, deficit rainfall, temporary migration with lower flock size moves by the end of winter / start of summer and the migrants return by the onset of monsoon. Semi-migration with large flock size of sheep, goat and a few camels migrate out of district or State. Permanent migration moves from the home tract to other districts and States and are always on the move.

Livestock migration can therefore be considered as an essential mechanism for sustainable animal husbandry. Throughout much of its long history pastoralists have been marginalized. Many of these communities were nomadic at the dawn of independence but now they have settled down in rural and urban areas, this does not mean that these communities have lost their nomadic characteristics. This was due to the fact that many of the grazing lands were brought under the plough, thereby depriving the pastoral communities their resources. The nomadic livelihood is threatened due to a variety of problems, including expanding economy and urbanization, leading to a loss of grazing areas and laws which prohibit them from entering forest areas traditionally belonging to them.

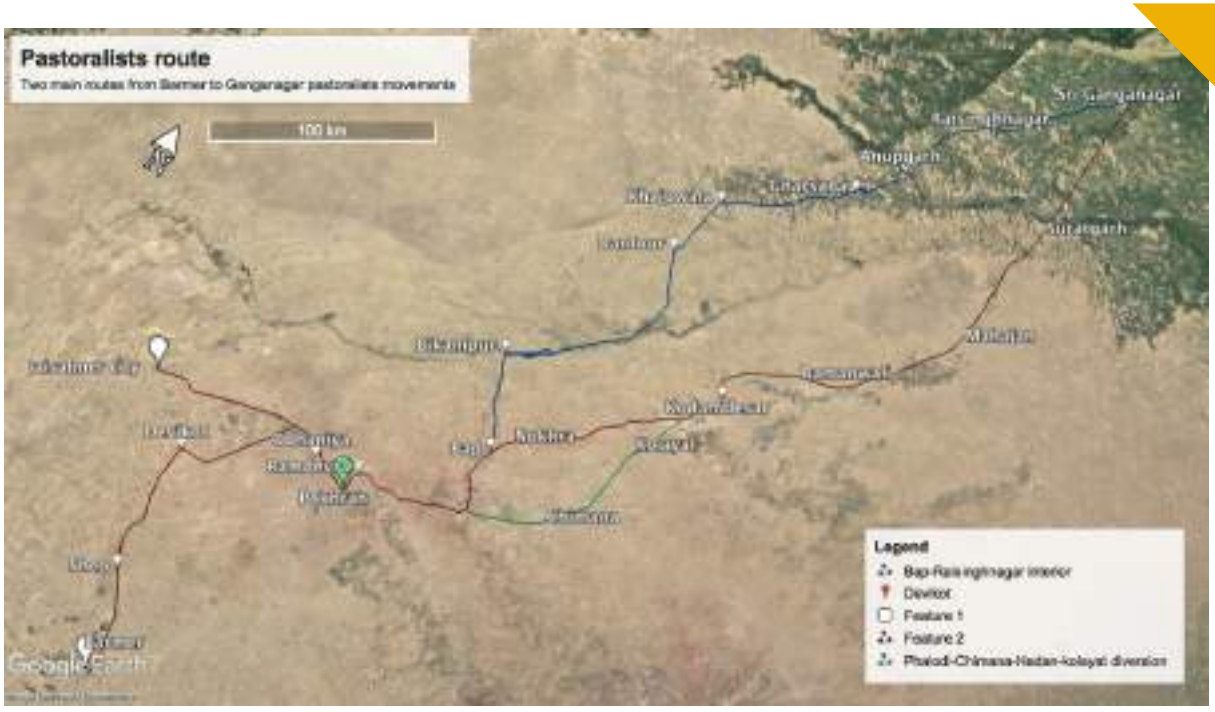
Land reforms of 1950 were focused on growing more food and to generate revenue, so public lands were used for cultivation of crops. These policies led to neglect of pastoralism. Common resources were grabbed by influential villagers and areas that were previously used as grazing sites were developed as agricultural fields.
For example, Indira Gandhi Canal in Rajasthan has brought vast tracts of land under cultivation pushing the nomads out. Due to policies like these, forest and permanent pastures became private.

The pastoralists in western India are known as 'Maldharis' (cattle herders and breeders) mostly living in arid / semi-arid zones. All pastoral communities in this region are traditional breeders; each community moves with their herds usually of one breed, i.e. camel, sheep, goat and some rear cows. A unique community that makes their living with a combination of three abilities – socio-cultural practices that reflect their spirituality and acceptance of nature / environment and learning from nature; rearing a breed with the knowledge of biodiversity (plants and grasses); and dealing with markets to sell milk, wool and their other products.

This is one of the communities from whom lessons of sustainable development and restoration of ecology could be learnt.

During migration the herders use the Common Property Resources (CPRs). In common parlance, CPRs refers to grazing land, water bodies, open spaces, barren, hilly tracts etc. that are open to the immediate neighbourhood to use since no one person or unit has exclusive rights over these. These are also referred to as uncultivable wastelands.

In Rajasthan, according to official statistics such land covers 15600 sq.km. A small portion of this lying adjacent to the villages is used for grazing local stock while the distant portions are browsed upon by the animals of the pastoralists producing milk, wool and offspring (lambs). The migratory flocks of sheep and goat therefore create incremental growth of wealth from zero inputs.



Pastoral routes mapped along the desert districts, Rajasthan

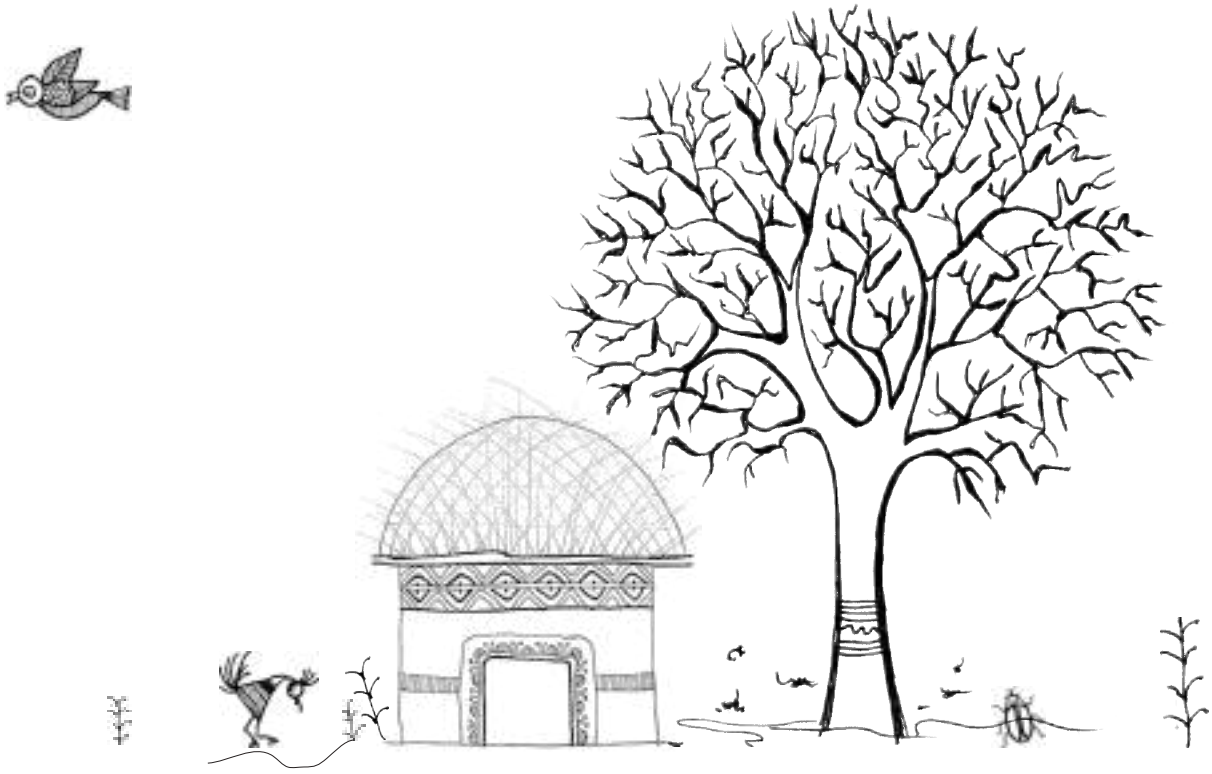
02

NEED FOR INTERVENTION

In western Rajasthan, scarcity of water and harsh summers exacerbates the daily struggles of the people. The desert and its people are at the mercy of weather conditions and have to depend on barely sustainable resources. For centuries, the locals have relied on nomadic and transhumant pastoralism as a means of livelihood safety-net. It has supported the locals during deficit rainfall, droughts, and crop failures. The result is a regional pastoral population on the move. Pastoralism can be considered as an essential mechanism for ensuring sustenance in the harsh desert ecosystem.

Unfortunately, due to rapid urbanization and increased industrialization pastoralists are in a losing battle with industry and urban sprawl. Pastoralism is facing a severe crisis in India. What threatens this way of life are the development strategies and neglect by the modern-state. These pastoralists are facing pressure due to shrinking fodder and water sources, the collapse of veterinary services, the absence of streamlined markets for their animals-based products, and scanty state support along these pastoral routes. The community is marginalized and excluded from the decisions that affect them. Thus, it becomes imperative to ensure that they receive the support services that are essential to their ecosystem.

In its efforts to strengthen traditional livelihoods across the desert, Urmul Trust with support from Food and Agriculture Organisation, United Nations and National Rainfed Area Authority, Government of India through a set of focused interventions launched initiatives to revive and support this forgotten ecosystem in Bikaner district in Rajasthan. These strategic interventions through collaborations with varied stakeholders and domain experts have been working to gradually ensure the resurgence of this vibrant ecosystem. Through the journey of strengthening this ecosystem, support from the community, state agencies, academia, and non-profit organizations has been leveraged.



03

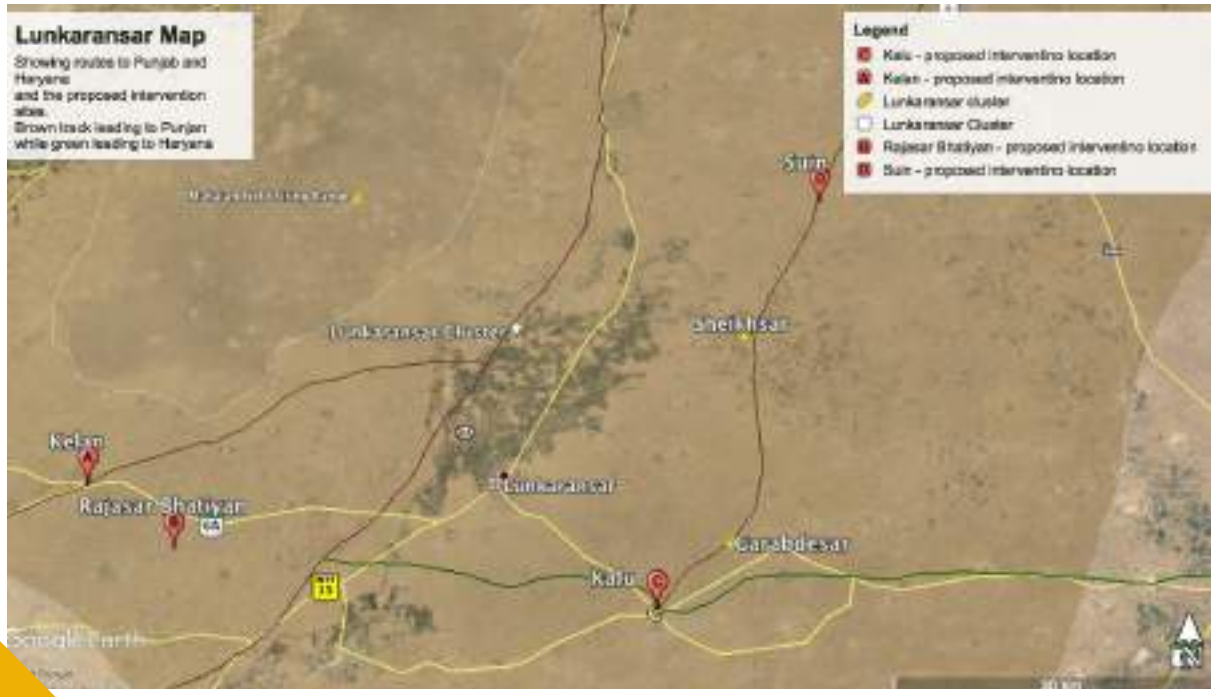
THE INTERVENTION

Project Conceptualisation

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 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 Bhatiyan.

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

- 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.
- The four villages are home to a large population of pastoralists who migrate with their small ruminants. As per the 19th Livestock Census by the Animal Husbandry Department, Government of India there are 9,61,907 goats and 6,53,028 sheep in Bikaner district.
- The current poorly maintained common property resources are not able to fulfil the forage needs of such a large population of small ruminants.
- The existing water resources are poor in number and condition.



Programme Villages, Lunkaransar Pastoral Cluster

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.

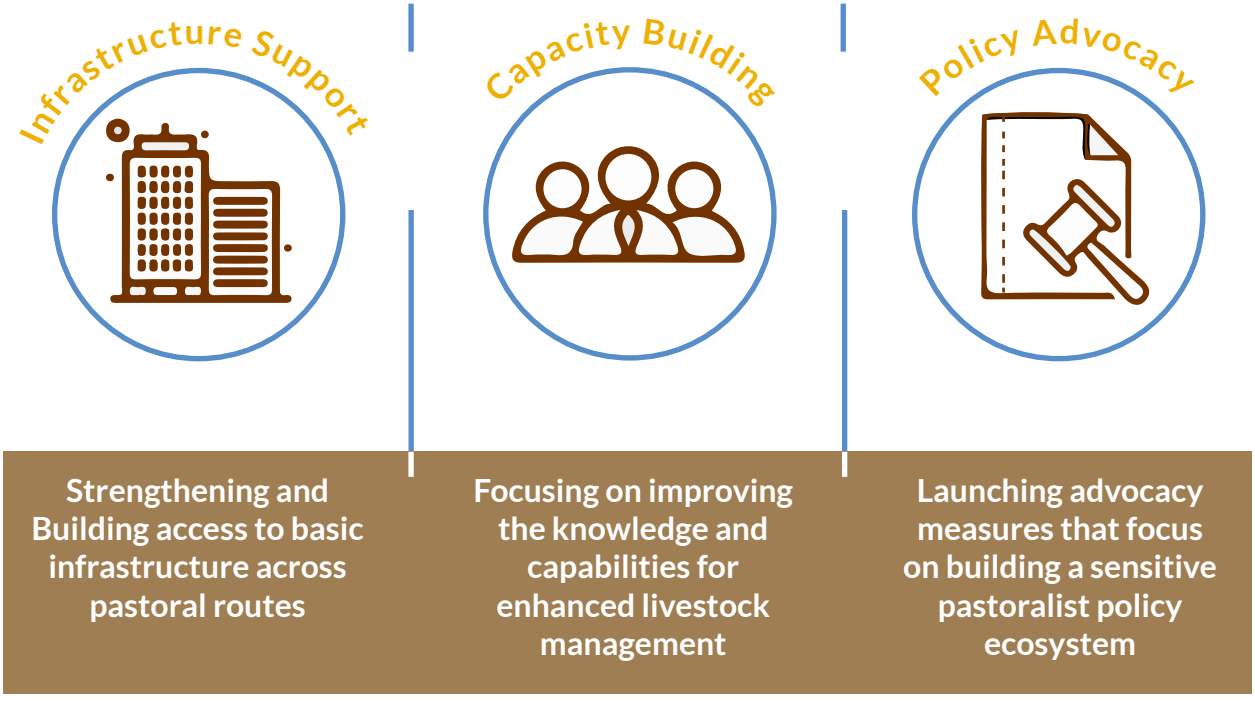
Intervention Design and Framework

Project Vision

Enhancing resilience and sustainability of pastoral livelihood options through an ecosystem support for reviving the traditional pastoral routes in the cluster.

The three chief verticals under which the programme activities have been undertaken include:

THE THREE PRONGNED SOLUTION



IMPROVED ACCESS TO BASIC SUPPORT SERVICES AND INFRASTRUCTUR	ENHANCED CAPABILITY FOR IMPROVED LIVESTOCK MANAGEMENT	ENABLING ENVIRONMENT FOR BETTER POLICY SUPPORT
Access to support services & infrastructure to directly enhance livestock resilience and income of pastoralists.	Trainings to facilitate skill improvement of pastoralists.	Effective policy advocacy, dialogue with state departments and data driven insights to facilitate better policy making.
• Identify constraints related to accessing support services. • Establish 2 CFCs to enable direct access to pastoralists. • Improve 4 CPRs by increasing fodder coverage & water harvesting structures. • Identify & develop feasible package of support services. • Develop one fodder nursery in the cluster. • Organise veterinary care camps.	• Baseline mapping of socio-economic profile of pastoralists. • Convergence with other Urmul programmes and network. • Develop IEC materials. • Conduct livestock management trainings for the pastoralists.	• Develop policy white papers to ensure a conducive policy environment for the pastoralists. • Stakeholders workshop towards appreciative inquiry for improvement of policies focusing on pastoralists.

04

THE APPROACH

Incepation

At the onset of the intervention, the project team developed the design and flow of the programme, detailing the multiple interventions, their plan and deliverables and outcome. The details were documented in the Programme Inception Report to be shared with the stakeholders. The document became the base for the process, consolidation and scaling for all the programmatic interventions. The inception report has been shared as a separate attachment along with the report.

Convergence

Convergence was the underlying principle for all the activities. The programme garnered support from multiple stakeholders ranging from government to corporate to local governance structures and organisations. At the programme design stage, the team had listed the prospective partnerships with a varied range of stakeholders who were reached out to through various online and offline meetings. The details of the programme were shared with the stakeholders and support was sought around outreach of the programme, policy advocacy, financial and human resource. These partnerships helped in the programme scaling and enhanced outreach to the policy circuits and larger pastoral populations.

Participatory Approach and Free Prior Informed Consent (FPIC)

The objective of the project was to enhance resilience and sustainability of pastoral livelihood through an ecosystem support approach. Hence, community knowledge and participation was a key input and was incorporated through participatory planning in keeping with FPIC practices. Prior to the commencement of the various programmatic interventions, village meetings were held to discuss the interventions, timeline, and monitoring framework. Village leaders and Panchayati Raj Institution members were instrumental in gauging and conveying the collective consent of the project villages. Prior to each intervention, planning of specifics and timelines was also done in adherence to FPIC protocol. Written consent was taken whenever feasible. Alongside the data collection in the baseline constraint identification survey was done in partnership with the various community and local governance stakeholders.

05

SUPPORT SERVICES AND INFRASTRUCTURE

Constraint Identification

In the initial three months of the programme, Urmul conducted meetings and dialogues with over 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:

- About 99% of the total pastoralists interviewed seek a need for improvement in Common Property Resources (CPR).
- 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. 61% of respondents expressed that they are allowed their animals to graze on fallow lands.

- Almost 78% people spend INR 10,000 or below on medical care of the animals.
- 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.
- 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.

Documents 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 were referred to understand the constraints that plague the pastoral ecosystem. The documents can be accessed on the following link.

Land Allotment and CPR Revival

The four identified village common property resources (CPRs) were poorly managed and had sparse plantations. The water reservoirs on these lands required urgent support. These problems were echoed by the pastoralists. Their concerns were discussed in the Constraints Identification document and Baseline Survey findings.

The four CPRs in Dhani Bhopalaram, Kelan, Kalu and Rajasar Bhatiyan villages of Lunkaransar block have been mapped, fenced and restored for use by migrating pastoralists. These lands were given usage permits from the Gram Panchayat and District Collector. Fencing and land levelling work have been done in CPRs in Kalu and Kelan.

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 provided 10,000 saplings for plantation in CPRs which included the 6000 saplings initially planned as part of the programme.

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

NAME OF PROGRAMME VILLAGES	ARGETED LAND AREA FOR CPR (IN HECTARES)	TOTAL ALLOCATION FOR CPR (IN HECTARES)	FODDER FOR NUMBER OF ANIMALS (ESTIMATED)
Rajasar Bhatiyan	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 goats at a single time.

CFC Planning Model and Contruction

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.

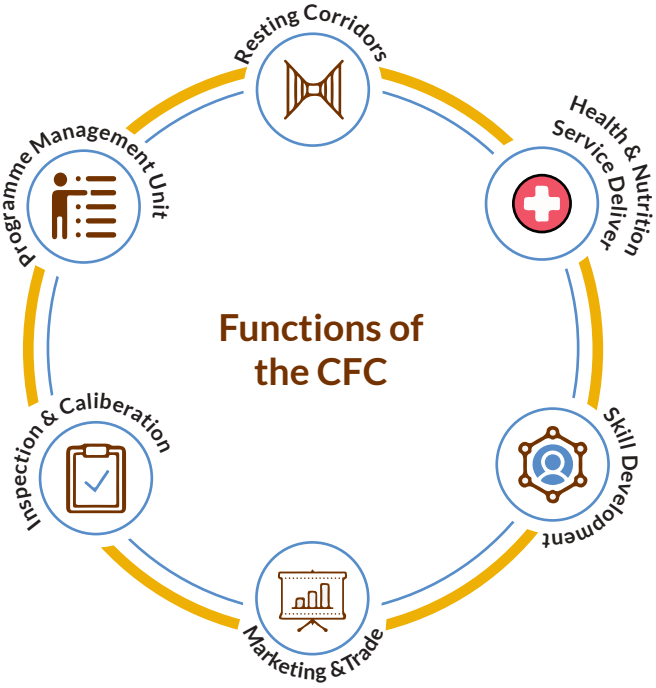
Creation of tangible assets, like resting centres, shearing facility, training centre, R&D centre, marketing display/ selling centre, common logistic centre, etc. is our broad idea behind the development of Common Facility Centres for pastoralists. The approach is to establish them for the common benefit and growth of pastoralists and their herds.

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 were planned to be set-up 25-45 kilometers away from each other.

Objective of CFC

- To create infrastructural facilities in the programme locations dedicated for pastoralists
- To develop green and sustainable facilities as resting places for animals and pastoralists along the pastoral routes.
- To build capacity of pastoralists for common supportive action through formation of self-help groups, consortia, etc.
- To support the sustainability and growth of the programme by addressing issues such as improvement of livestock

management through health and nutritional services, skills of pastoralists, breed quality of animals, market access, etc.



Architectural Plan of the CFC

These infrastructural units have been developed under built environment interventions of the programme with the infusion of sustainable architectural practices. These model units have not just benefited the value chain stakeholders but also educated and upskilled the local masons and labourers involved in the construction process.

Local architecture and reduced infrastructural costs - Rat trap bond and rammed earth methods are often adopted for construction in deserts due to the extreme temperatures. Raw material locally available in abundance – sand, limestone, gravel, and earthen pots were used to construct filler slabs which reduced the need for cement and concrete and reduced transportation costs and carbon emissions. The usage of bricks was also limited through these techniques. Brick usage was further narrowed by utilizing alternative materials like broken glass bottles. This reduced the logistical costs while providing employment to the local population. Moreover, the usage of these local materials had fastened the construction process by curbing the transportation time and cost while also empowering the local labour.

Thermal Comfort - The rammed earth and the rat trap bond technique was used to facilitate the Rohtak domes which have the ability to moderate the temperature through “stag effect” – adopted to insulate against extreme temperatures in Rajasthan. With power outages prevalent in the region, the rammed earth and the rat trap bond technique along with these sustainable designs keep the interior cooler during the summers and warmer during the winters.

Off-grid Renewable Energy for Electricity - The CFCs are run on solar power to ensure sustainable efforts under the programme and optimising green sources of energy.

Services at CFC

Resting Corridors

- Resting spaces for pastoralists and animals.
- Cooking and cleaning facilities.
- Clean energy supply for electrification of the unit.
- Toilets and bath area.

Service Delivery

- Veterinary care and vaccination camps for animals
- Health services to pastoralists through veterinary hospitals.
- Forage for pastoralist animals.

Skill Development:

- Training center for pastoralists on improved livestock management
- Awareness and linkages to government schemes

Marketing and Trade

- Centre for trade of animals and their products
- Meeting center for sellers and buyers creating a marketing hub
- Shearing and bathing space for animals

Water Storage Capacity Enhancement

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 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
Dhani Bhopalaram	48	03	05
Kalu	24	03	02
Kelan	10	00	05
Rajasar Bhatiyan	10	02	03

15 new water reservoirs have been constructed near the CPR, CFC and along the pastoral routes and 1 water reservoir in Kalu has been revived. All of this was implemented in collaboration with Gram Panchayat and NREGA under convergence work.

Enhancement of Fodder Resources

There is poor maintenance of plantations in the common grazing lands resulting in deprivation of adequate fodder for the livestock. Urmul Setu Sansthan provided land for the nursery and is providing supervisory support for the maintenance of the fodder nursery. It is managing the plantation in the nursery beyond the project duration. The aim was 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 has been trained on how to plant and maintain these fodder species.

The fodder trees and grasses that are consumed by sheep and goats had been carefully selected to be grown in the fodder nursery by the programme team. These include

- Ber (Ziziphus mauritiana)
- Khejri (Prosopis cineraria)
- Moringa (Moringa Oleifera)
- Sewan grass (Lasiurus scindicus henrard)
- Daman grass.

The variables considered in the design of the fodder nursery were:
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
- Selection of fodder grasses and trees that require minimum maintenance and supervision. These resilient species play a very important role in ensuring forage for animals in the arid areas

The distribution of fodder seeds/ root slips among the community ensures varied fodder plants available for their animals and the community members gain a sense of accountability for their natural resources. Soil levelling and improvement efforts were undertaken for successful plantation.

Revived 4 Common Property Resources spread across 98 hectares of land area with over 10,000 indegenous plantations and sowing 400 kgs of sewon grass seeds

Enhanced capacity of 96,55,000 stress of water storages along the mapped pastroral route through construction and revival of water reservoirs

Provided vaccines to 14, 975 animals through mosr of this during pandemic induced lockdown

Conducted trainings with 1736 pastoralists on improved health, nutrition and trade practices

Contructed 2 Common Facility Centers to ensure fodder and water along the pastoral routes

Garnereed support worth 1.56 Crores from MGNREGA for construction of CFCs andd regular maintenance of CFCs

Access to Veterinary Services for Migrating Livestock

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.

To ensure that the morbidity rates of the animals decrease, delivery of veterinary services to pastoralists in the clusters through animal camps was planned. Six health camps have been organised, vaccinating 14000+ animals. The health camps were 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.

Migrating herds using the CFCs

06

CAPACITY BUILDING

Training Workshops

6 training have been conducted on livestock management with 1056 pastoralists. 1736 pastoralists have been trained on improved health, nutrition and trade practices.

During the first wave, the team connected with a total of 680 pastoral households in the 4 programme location villages incl. MGNREGA workers and imparted training on how to ensure social distancing, vaccination and adopt hygienic practices owing to COVID-19.

Pastoralist Passport

A Pastoralist Passport - a travel essential diary and identification document for pastoralists has been developed with all the required information for the pastoralists. 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.

The passport would also be used to track and enumerate the number of pastoralists and their herds using the pastoral routes. Rate of birth, death and sale records of the livestock along the routes would also be updated by the pastoralists in the passport. Pastoralists were handed and trained on using the Passport and other IEC materials of the programme.

Convergence

- The infrastructure development activities such as building common facility centres, plantation and maintaining common property resources land and repairing water reservoirs were completed through labour support under MGNREGA. The District Administration under the Mahatma Gandhi National Rural Employment Guarantee Scheme endorsed the sanctioning of the required amount of INR 1 crores and 56 lakhs from the budget of Gram Panchayat in June 2020. The support of the Panchayati Raj Institutes ensured that the state resources were leveraged to expedite the infrastructure work can with this secured labour support for the benefit of the pastoralists accordingly.
- The Forest Department, Government of Rajasthan has been supportive of the programme activities and has provided 10,000 saplings for plantation in CPRs which included the 6000 saplings initially planned as part of the programme.
- Selco Foundation has contributed INR 4,00,000 to support construction of CFCs and INR 4,00,000 for procurement of a wool cutting machine.
- Azim Premji Foundation had garnered support with INR 50,000 for provisioning vaccines for the veterinary camps.

07

KNOWLEDGE AND POLICY SUPPORT

Ecosystem Outreach

Posters, brochures, and media stories have been developed and shared across stakeholder groups via online platforms such as Mongabay, Down To Earth, etc., for raising awareness about the pastoral ecosystem and the CFC model being piloted.

Audio-visual documentation of the uptake of services by pastoralists has been undertaken for dissemination of programme information.

Workshops have been held with National Research Centre on Meat, Hyderabad, and Central Wool Development Board, private dairy entities and start-up agencies to promote and create collaborations for development of pastoral products.

Policy Analysis and Documentation

A comprehensive policy document – emerging from the learnings from the programme – has been developed attempting to raise awareness about pastoral issues with recommendations for policy makers for uptake and scaling up of the CFC model.

Recommendations have been framed for review and consideration by relevant policy think-tanks and state and national bodies. The broad policy recommendation include:

- Strengthen input support services for pastoralists along their routes.
- Provide safety and security of livestock and self to transhumant pastoralists during their migration.
- Enhance documentation and knowledge synthesis of pastoral ecosystems.
- Enhance representation and participation of transhumant pastoralists in governance mechanisms concerning them.
- Improve access to markets and value chains.
- Restore common property resource.

Regular discussions with stakeholders including Gram Panchayats, Block Officers, District Administration have been undertaken for updating them on the programme progress and for requesting support. The Office of the Ministry of Animal Husbandry, Fisheries and Dairying and the Office of the Member of Parliament from Bikaner, Sh. Arjun Ram Meghwal, have been briefed and kept in the loop for expansion of integrated pasture development model in more locations along the pasture routes in the desert districts of Rajasthan.

COVID Support

A status report was prepared in April 2020 enumerating the various challenges faced by pastoralists in Rajasthan. Restrictions on movement during the lockdown and rumours of livestock carrying the virus greatly reduced the support rendered to pastoralists by villagers along the routes. Veterinary services for animals were also hampered. Funds worth two lakh rupees were secured from Azim Premji Philanthropic Initiative to provide emergency healthcare for migrating livestock through vaccines for mange and other common diseases. A total of 6 health camps were organised with support from veterinary doctors and paravets from the State Department of Animal Husbandry – vaccinating 14,975 animals including sheep, goats, cows, camels and buffaloes.

Free vaccines worth INR 50,000 were also distributed freely to pastoralists in need under the COVID relief fund.

Awareness sessions on social distancing norms and hygienic trainings were conducted in programme villages to ensure outreach and adoption of government issued COVID-19 prevention and handling guidelines. Migrating pastoralists were also provided with relief ration kits as part of COVID support.

The first wave of COVID-19 lockdown saw a huge influx of migrant labourers back to their hometowns in Rajasthan. Lack of newer job opportunities in the villages posed a threat to their livelihood and survival. INR 1.56 crore was garnered from the budget of Gram Panchayat in June 2020, which was endorsed by the District Administration under the Mahatma Gandhi National Rural Employment Guarantee Scheme. Labour support was secured through this scheme to complete infrastructure development activities such as building common facility centres, plantation, maintaining common property resources land and repairing water reservoirs. This provided crucial timely employment to jobless migrant labourers who were hit by the pandemic.

08

VALUE CHAIN DEVELOPMENT

Adding value to the services and products at CFCs

In order to ensure the services provided at the CFCs have a steady source of revenue for maintenance and operations and are able to provide livelihood support to pastoralists for the sale of livestock products, the CFCs have been connected with multiple players dealing in fodder, wool, milk and dung value chains.

SELCO Foundation helped with the installation of solar powered set-ups for drawing water and for running shearing and processing of sheep wool at the CFCs. Hydro Greens, a Bangalore based start-up, helped in installing water-efficient fodder-growing machines to make available green fodder to livestock during the peak dry seasons of the year. The dung and excreta from animals grazing at the CFC fodder plantations act as a natural fertiliser to the land and in abundance, are processed into vermicompost fertilisers and sold to farmers in need.

Integration with Urmul Desert Crafts

The CFC acts as a collection centre for sheep wool. Bathing facilities and high-grade shearing machines of global brand Heigniger are ensuring clean and efficient collection of sheep wool. Collaboration with Urmul Desert Crafts – the textile vertical of URMUL group of organisations – has led to accessing the facilities of natural dyeing and processing centres established in other patoral clusters in the state.

Women artisan collectives working with Urmul Desert Crafts sampled and

Product Innovation

Use of sheep wool has also been experimented with beyond the conventional garment industry. A conference hall in Urmul Seemant Samiti, Bajju, Bikaner used sheep wool as sound-proofing and insulation material. Temperature probes and measuring instruments have been installed after dialogues with Sahjeevan, Hunnarshala and Centre for Pastoralism to fine-tune the use of wool in acoustic installations. The conference hall of the HDFC Bank headquarters in Mumbai have also used sheep wool as a sound-proofing construction material.

09

WAY FORWARD

Two committees have been formed with members from programme villages, their respective Gram Panchayats and Urmul Trust members to ensure the CFCs are monitored and maintained at the village and cluster levels.

To ensure sustainability of the CFC model, committees are operating at two levels in spearheading the way forward beyond the project duration:

Village level

- The programme is governed by PRIs (gram panchayats), village collectives, MSMEs and local NGOs.

Cluster level

- The programme is 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.

The committees ensure effective management and utilisation of resources at the CFCs. Dialogues with villagers are ongoing about how to manage revenue streams at the centres and how the community continues to take ownership of these units. Whether short-ranging livestock keepers from other villages would also be allowed to avail the CFC services are under discussion too.

An ELRHA – Humanitarian Innovation Fund and SEEDs project being conducted by Urmul Seemant Samiti is experimenting a private CFC model in Jodhpur on two farmer plots. The project aims to try CFC services on private farms with a private governance model as compared to the model tried on common lands in Lunkaransar. Checking the fit of CFCs to tackle prominent climate crises in Rajasthan such as heat and cold waves and their impact on semi-nomadic pastoralism with water, fodder and veterinary services is being done in this pilot project. This would also allow routes passing through Jodhpur to have dedicated collection centres of pastoral products that would ultimately be sent to Fibre Processing Units and Milk Processing Units set up in the region through other projects. A multi-directional approach to improving the overall pastoral ecosystem is being done through these integrated value chains.

Constraints identified in the implementation and uptake of the programme have been documented by Desert Resource Centre for end-term assessment and support is being sought to fill in the gaps in market and value chain connects for pastoral products.