## Camel: A resilient species of arid regions
Nutritional value of camel milk and towards alternative livelihoods
Threatened Existence
The ship of the desert and declining numbers
Constraint Identification

## Inception of the Camel Partnership
Proposed system and value chain
TCP Verticals
- Communities
- Enterprises
- Policies

## Collaborative and timeline
Programme Location and status
Programme Activities

## Support Required
Knowledge Management
❖ The image of camel, a symbol of human survival in the desert, is tied to the history of the major nomadic civilizations of the hot dry areas of the northern hemisphere.\(^1\)

❖ With its unique bio-physiological characteristics, the camel has become an icon of adaptation to challenging ways of living in arid and semi-arid regions.\(^1\)

❖ Camels have for millenia played an important role in preserving agro-ecology of the arid regions by holding back desertification, enriching soil and preventing erosion.\(^1\)

❖ The camel is used for transportation as well as for providing milk. It is popularly known as “the ship of the desert”.\(^2\)

❖ In arid zones the camel is a better provider of food than the cow, which is severely affected by the heat, scarcity of water and feed. (Sweet, 1965)

❖ Their mobility prevents overgrazing, allowing natural vegetation to grow back. Their skills and practices are those of protectors.

❖ The distant and scanty Common Property Resources are grazed by camels producing milk and offsprings thereby enabling immense wealth creation for rural India.\(^3\)

❖ The bones of camels are used to produce crafts such as combs, spoons, vases, etc.; camel milk and value addition products such as cheese, milk powder, chocolates, soaps etc.; camel fibre is used for preparing rugs, ropes, coats or jackets, etc.\(^3\)

With the variety of nutrients camel milk has, it is an emerging superfood.

### WHY CAMEL MILK?

#### THERAPEUTIC VALUE OF CAMEL MILK

- Camel milk has three times the vitamin C that cow milk is an excellent source of iron, protein, vitamin B3 and good probiotics and lower in lactose. It is thereby beneficial for people suffering from milk allergies.¹
- It is also high in immunoglobulins which is the key to boosting immunity thus protecting against pathogens.¹
- Children suffering from autism have shown considerable improvement with use of camel milk therapy for the treatment.¹
- People suffering from diabetes (Type 1) have shown improvement after consuming camel’s milk.¹

#### MARKET POTENTIAL OF CAMEL MILK

- Somalia, Kenya, Mali, Ethiopia, Saudi Arabia, and Niger are the major camel milk-producing countries in the world dominating 60% of the world camel milk market.²
- Even after a drastic decline of camel population in 2012 and 2019 in India, the improvement of nearly 30% in the number of female camels shows the potential of camel milk market.¹
- The Food Safety and Standards Authority of India allows sale of camel milk in India and Amul has initiated its regular sales.¹
- Other key camel milk products manufacturers (both Indian and Global) include Camelicious; Desert Farms Inc.; The Camel Milk Co.; Vital Camel Milk Ltd; Camel Dairy Farm Smits; Al Ain Farms; Tiviski Pvt Ltd.; UK Camel Milk Ltd.; Aadvik Foods; and QCamel.²

Due to loss of traditional revenue stream, shrinkage of CPRs, higher feed & health costs and poor reach of existing support services the camel herding ecosystem is being threatened. It can be attributed to these reasons:

- Traditional camel products no longer have a local market or demand in the community due to availability of factory made cheaper alternatives, fast fashion and lack of value chains.
- State-wide ban on trade of camels deprived camel herders of a source of steady livelihood.
- Missing links in the veterinary healthcare system has affected health of camels.
- Poor management of community managed pasture lands (Gochar/Oran) has resulted in deprivation of nutritional forage for camels.
- There is an absence of community managed water sources for the camels in the villages.

Source 1: Through a series of field study, dialogue with community members and baseline survey with 1064 camel herder households in Bikaner, Jaisalmer and Jodhpur, the above constraints were mapped.
<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>35%</td>
<td>Estimated contribution to income of small and marginal farmers from dairy and animal husbandry in Rajasthan*</td>
</tr>
<tr>
<td>50%</td>
<td>Estimated contribution to income of small and marginal farmers from dairy and animal husbandry in arid areas of Rajasthan. However, the contribution of camel milk market is significantly low.</td>
</tr>
<tr>
<td>0.25 Million</td>
<td>Camel population reported across the country reported in 20th Livestock Census Report in 2019</td>
</tr>
<tr>
<td>37.05%</td>
<td>Decline in camel population across the country compared to the last Livestock Census in 2012</td>
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<tr>
<td>0.21 Million</td>
<td>Camel population reported for the state of Rajasthan in 20th Livestock Census Report in 2019</td>
</tr>
<tr>
<td>85%</td>
<td>Total nationwide camel population concentrated in the state of Rajasthan reported in 20th Livestock Census Report in 2019</td>
</tr>
<tr>
<td>34.7%</td>
<td>Decline in Camel Population in state of Rajasthan compared to the 19th Livestock Census Report in 2012</td>
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Camel Population across the country reported in Livestock Census (in Millions)

- 1997: 0.91
- 2003: 0.63
- 2007: 0.52
- 2012: 0.4
- 2019: 0.25

METHODOLOGY

- A constraint identification study was carried out to understand the concerns of the camel herders and where they need urgent support.
- Information around the health, water, and forage support for the camels were gathered in a questionnaire. Additionally, status of existing livelihoods around camel based products were assessed.
- The sample size covered 1,064 camel herders from 145 villages in three districts of Bikaner, Jaisalmer and Jodhpur through purposive and snowball sampling.
- The findings were further validated through focused group discussions.

KEY THEMES

The survey captures details under the following key themes:

- Assessing the health status of the camels
- Current management of CPRs and feed availability
- Current and potential camel milk yield
- Medical insurance coverage of the animal
- Access to government services and support
- Areas where urgent support could be provided

KEY SURVEY FINDINGS

POKARAN CLUSTER

- 98% of respondents resort to self-diagnosis of diseases for their camels
- All the respondents reported that they do not earn any income from sale of camel milk or other derived milk products.

CHIMANA CLUSTER

- Only a mere 0.2% of the respondents relied on the services of a veterinarian.
- All the respondents took their animals to community managed pasture lands for grazing. However, they all expressed that these pasture lands were barren with sparse plantations.

BAJJU CLUSTER

- 16% of respondents do not get their camels yearly vaccinated.
- The average veterinary care expense of a camel herding household among the respondents is INR 2200.
A full industry creation exercise, The Camel Partnership aims to mobilize the camel herding community, knowledge & potential. We aspire facilitating herders to take charge of their livelihood and drive an inclusive, accountable, collaborative, and, sustainable enterprise ecosystem.

This partnership with resource, technology and knowledge support from multiple stakeholders and by forging diverse market linkages would develop a resilient camel derivatives value chain and ecosystem in deserts.
A localised value chain built around camel milk, camel hair, leather, and animal waste - providing for substantial livelihoods to herders. Over the decades it has collapsed and what we have now is:

**DISARRAYED VALUE CHAIN:**

- LOCAL VALUE CHAIN
- NON-CONDUCIVE POLICY ENVIRONMENT
- PUBLIC PRIVATE PARTNERSHIP
- PUBLIC AND PRIVATE SUPPORT INSTITUTIONS
- MARKETS - LOCAL AND REMOTE

**PUBLIC PRIVATE PARTNERSHIP**

- Sick/unhealthy camels
- Absence of robust input services such as CPRs, water resources, health camps, etc
- Stressed camel herders

**Private players**

- State support institutions
- Global/domestic markets

**PUBLIC AND PRIVATE SUPPORT INSTITUTIONS**

- COMMUNITIES
- ENTERPRISES
- MARKETS - LOCAL AND REMOTE
We are targeting appreciative cooperation from local community and commitments for long term partnerships to reach to over 6,000 households in three districts of western Rajasthan

**CONDUCIVE POLICY ENVIRONMENT**

**PUBLIC PRIVATE PARTNERSHIP**

- **Presence of robust input services such as CPRs, water resources, health camps, etc**
- **Healthy camels**
- **Camel herders with revived livelihood around camel products**

**BACKWARD LINKAGES**

- **State support institutions**
- **Private Players**

**FORWARD LINKAGES**

- **State support institutions**
- **Camel derived products enterprise**

**PUBLIC AND PRIVATE SUPPORT INSTITUTIONS**

**COMMUNITIES** ➔ **ENTERPRISES** ➔ **MARKETS**
TCP VERTICAL SPREAD

A full industry creation exercise, The Camel Partnership aims to mobilize the camel herding community, knowledge and potential.

TCP aims at working in three core verticals - community, enterprises and policies - engaging with 6,000 households in the first phase. Spread across Rajasthan, this multi-year, multi-stakeholder partnership shall facilitate value chain creation and consolidation, enhancing livelihoods of community and demonstrating a model for policy advocacy towards scaling up.

COMMUNITIES

- Animal health, nutrition, herders institution building, CPR mapping and improvement through community engagement, NRM interventions, youth cadre for micro entrepreneurship, facilitating health insurance coverage through government schemes

ENTERPRISES

- Value chain alignment exercises including - infrastructure development, business trainings of select herders, identification of milksheds, logistics mapping, technology partnerships, engagement with entrepreneurs for business partnerships, mentoring of community level micro-entrepreneurs, collaboration with social investment funds and enterprise

POLICIES

- Stakeholder engagement at village, block, district and state level engagement with several touch-points including state government, public enterprises, private sector, social sector
Through a comprehensive set of interventions spread over three key verticals – Communities, Enterprises, Policies – the Camel Partnership plans to set-up a resilient ecosystem to support camel herders and enable camel enterprises to take on the ecosystem management and development work:

- Achieve a fair, inclusive, accountable, auditable enterprise to scale the business opportunities
- Achieve community owned and professionally managed value chain for camel products
- Facilitate policy action for improved access to health and nutrition services and CPRs
- Achieve a cadre of enterprising changemakers across the value chain
- Enable community led action in three clusters in western Rajasthan reaching out to 6000 households
Health access and support through health camps

Provision of water resources

Forage support through plantation diversification in community managed pasture lands and forest lands

Building value chain around camel based products

OUR PARTNERS

Centre for Pastoralism, Desert Resource Centre, Revitalising Rainfed Area Network, Sahjeevan, Selco Foundation, Urmul Seemant Samiti, Urmul Trust
THE CAMEL PARTNERSHIP TIMELINE

2-6 months

6 - 12 months

12-18 months

18-24 months

CONDUCTIVE POLICY ENVIRONMENT FOR CAMEL DERIVATIVE MARKETS

CAMEL HERDING COMMUNITY

POKHAN

Cluster Mapping – Villages, CPRs

Collective Formation

Youth Leadership Identification & Mobilization

Groundwork For Institution Building

BAJJU

Cluster Advancement Roadmap

Infrastructure Development

Product Piloting & Diversification

Maintenance Benchmarking And Standardization Framework For Product And Enterprise

CHIMANA

ENTERPRISE

MARKETS

LEGEND

COMPLETED

IN PROGRESS

PLAN AHEAD
The Camel Partnership
Clusters identified for focus interventions

- **POKARAN CAMEL MILK CLUSTER**
  - 20 VILLAGES

- **BAJJU CAMEL MILK CLUSTER**
  - 69 VILLAGES

- **CHIMANA CAMEL MILK CLUSTER**
  - 63 VILLAGES

**CLUSTER STATUS LEGEND**
- Federation Formed
- Business Training Conducted
- BMC Setup Initiated
- Stakeholder engagement ongoing
<table>
<thead>
<tr>
<th>COMMUNITIES</th>
<th>ENTERPRISES</th>
<th>POLICIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>❖ Identification and mapping of camel milk clusters</td>
<td>❖ Institutionalization of community groups through forming cluster-level Federations</td>
<td></td>
</tr>
</tbody>
</table>
| ❖ Community mobilisation & skill enhancement on various aspects - health, nutrition, animal management | ❖ Focused trainings and skilling of youth changemakers with support from NRCC on various functions of milk value chain like:  
  ➢ Improvement in milking practices  
  ➢ Improved awareness on animal nutrition, health and hygiene towards improved quality of milk  
  ➢ Milk collection equipment and better practices  
  ➢ Basics of computer and accounting | ❖ Policy and industry dialogues                                                                 |
| ❖ Health service inputs and facilitation                                    | ❖ Infrastructure improvement towards encouraging businesses for the camel milk procurement |
| ❖ Documentation of ethnoveterinary practices used to tend to diseased camels | ❖ Technical, infrastructure and strategic partnerships for building efficient and technically advanced value chain |
| ❖ Documentation of abundantly available local vegetations that are nutritious for the camels | ❖ Social investments mobilisation through ecosystem partners |
| ❖ Youth changemakers identified and cadre formed – currently leading efforts on ground ecosystem building and village-level PRI advocacy | | ❖ Regular meetings taking place at State and District levels. |
|                                                                           | ❖ Knowledge management support from RRAN and CIfP to address the opportunity and ecosystem development activity. |
|                                                                           | ❖ Through Situation Assessment Narrative Reports/ frequent Op-eds developed to apprise stakeholders of ecosystem challenges. |
(above) Bulk Milk Chiller of 1,000 litres capacity has been installed in a community centre in Ganga Ram ki Dhani village, Pokaran camel milk cluster.

(above) TCP Chimana camel milk cluster interacting with camel herdsmen in Jodhpur district.

(above) Honourable Minister Sh. Saleh Mohammad in discussions with TCP Pokaran camel milk cluster team in Jaisalmer district.
“In these difficult times, I still remember, in Paithro ki dhani village, Bikaner district there was Alsi Ram who did not even once requested any ration support for his family. He did not have a lot of resources but kept insisting that there were others in his community that needed more support.”

- Rajendra Prasad from TCP team leading relief efforts in Bikaner and Jodhpur districts

“I am grateful to serve my community members in hours of need. We delivered and administered vaccines for our diseases camels. I am fortunate to be saving the lives of our livestock.”

- Achala Ram Raika, a camel herder from Charanwala village, Bikaner district

“We contacted the Urmul team back in March and since then we have remained connected. It was heartening to see that when we had no idea about the government relief measures, there was TCP team to ensure that our camels do not remain sick and our families receive some ration support.”

- Sadasukh Bishnoi, a youth changemaker from Fattuwala village, Bikaner district

“In our approach of mobilising community, setting up enterprise and the policy advocacy efforts, the camel herding community is the primary stakeholder. It was important to not leave them in the lurch during the COVID-19 lockdown. Only a community that believed in us would help us in take the vision of TCP forward.”

- Dipak Gode, from TCP team coordinating relief activities in the Bajju cluster

“I am grateful to serve my community members in hours of need. We delivered and administered vaccines for our diseases camels. I am fortunate to be saving the lives of our livestock.”

- Achala Ram Raika, a camel herder from Charanwala village, Bikaner district
The Camel Partnership team through garnering resources has been actively working to:

- Mobilize resources for ration packages for vulnerable 600 camel herding households for 2 months
- Vaccines distributed to treat 2,700 diseased camels
- Liaise with Animal Husbandry Department, Government of Rajasthan to organize health camps for the diseased camels
- Identify vulnerable households with the aid of our Youth Changemakers to distribute vaccines and supported in distributing ration packages
- Organized regular community awareness and mobilization telephonic meetings

TCP team through our expanse of youth changemakers has been able to achieve on-ground structural support.
The Camel Partnership envisions to leverage the support of network organisations to build a thriving ecosystem for camel based enterprises.

Knowledge support would focus on capturing and dissemination of traditional community knowledge; generating new evidence to encourage evidence-based policy making.

Partnerships with organisations working in the ecosystem define the essence of TCP and give the network an opportunity to collaborate on capacity building, advocacy efforts and technical support.

Through the network organisations their specific technical expertise to address the gaps across the camel milk value chain would be sought.

The financial partnerships would ensure that adequate resources are garnered for setting the required infrastructure and establishing a thriving ecosystem for camel based social enterprises.
With the aim in the first phase to establish procurement pilot at one location in Rajasthan, collating information and knowledge management becomes very important for The Camel Partnership.

<table>
<thead>
<tr>
<th>Programme Materials (Reports/ Minutes/ Strategy Documents)</th>
<th>Documentation of the overall vision and constraints of the ecosystem to ensure seamless programme implementation. Consistent documentation efforts are being undertaken to manage materials and are continuously being shared with stakeholders.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster Advancement Roadmap March 2020</td>
<td>This document was developed as a primer on the ecosystem of camel herders. Sections on understanding issues that plague the camel herders’ ecosystem—healthcare, forage, water availability and unfavourable state policy; addressing some of the gaps; nutrition mapping &amp; management for herders; details on future infrastructure and enterprise development interventions are laid out.</td>
</tr>
<tr>
<td>COVID-19 Status Narrative Report April 2020</td>
<td>The camel herding community was no exception to the challenges posed by the COVID-19 lockdown. They were worried about the sustenance of both their families and their herds. The herders are worried about arranging forage, water, and veterinary support services. The restrictions on movements have further made it difficult for them to avail of the necessary support. As the summer peaked, the lockdown tested every step they walk along with their livestock. The report laid out the immediate and long-term challenges faced by community.</td>
</tr>
<tr>
<td>Media Fellowship May - September 2020</td>
<td>Media professionals are developing materials that would enable the Partnership to reach out to the policy makers, researchers, consumers, and entrepreneurs. The professionals would benefit from covering the creation of a robust full-scale camel milk value chain.</td>
</tr>
<tr>
<td>Ethno-Veterinary and Nutrition Practices Followed by Camel Herding Community Elders March 2020</td>
<td>Insights from interviews conducted with the community elders on ethnoveterinary practices adopted by them to keep their camels healthy are highlighted. This was to ensure this knowledge does not get lost for the young generation of camel herders. In addition, it would be interesting for alternative medicine practitioners and ethnic studies enthusiasts.</td>
</tr>
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</table>
Links to the programme documents to learn more:
(Kindly click on the document to access it on google drive)

- **TCP: Vision Roadmap**
- **Constraint identification study of the camel herding ecosystem**
- **GIS Images of CPRs mapped**
- **Cluster Advancement Roadmap**
- **Repository of publications developed by The Camel Partnership Media Fellows and the DRC Knowledge Team**
- **Situation Assessment Narrative Reports on the impact of COVID-19 lockdown**

For questions/concerns please connect with

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