REDEFINING THE NARRATIVE AROUND LIVESTOCK-BASED LIVELIHOODS IN INDIA

WORKSHOP ORGANISED BY

RAINFED LIVESTOCK NETWORK

Contents

Intent of the Workshop

Livestock production in India is frequently misrepresented. The prevailing narrative portrays India's livestock production as a low-output system, deemed inefficient with high methane emissions. Native breeds are often perceived as low-producing animals, as efficiency is commonly measured by output per individual animal.

If that's the scenario, it's truly astonishing how India stands out as the largest sheep and goat meat exporter, having exported 8,695.97 metric tons worth $60.04 million (APEDA, 2021-22). Additionally, India holds the title of the world's largest milk producer (FAO, 2022) and contributes 43% to global buffalo meat production (APEDA, 2021). Notably, India also exports substantial quantities of grain for intensive livestock farming, including maize and oil meal cakes (Government of India, Agricultural Statistics, 2021). What adds another layer of wonder is that all this is achieved in a country where 69% of the land is dryland (UNFCCD, 2010), facing escalating water stress, intensifying competition for land resources, and the ongoing challenge of a burgeoning population.

Such significant levels of production are not solely attributable to the sheer numbers of livestock in the country, but rather to the diverse farming systems that produce animal source foods. The predominant production system in India is the extensive mode of production which includes – agropastoral and all forms of pastoral production systems (the latter estimated to be 6% of India's population) which play a crucial role in sustaining India's agricultural output.

Extensive livestock systems, distinct from intensive sedentary models, are deeply embedded in intricate social associations within communities that rear them, with crop farmers, local allied sectors, and traders. For feed, a diverse array of grazing resources are used which contribute significantly to meat (over 70%) and milk (around 50%) production in India (Kullu Call, 2016). These feed resources, constitute common property resources, crop fallows, and forests, fulfilling almost 60% of feed requirements for livestock production in India. The remaining 40% is derived from crop residues and cultivated fodder. In contrast to Western-intensive systems, India's livestock industry, except for the commercial poultry sector, remains largely non-industrialized, relying minimally on grains. Furthermore, Indian livestock production systems are characterized by their ability to utilize any available biomass efficiently to generate high-value animal protein, while also providing essential services such as de-weeding, germination, and fertilization. This inherent circularity significantly reduces production costs.

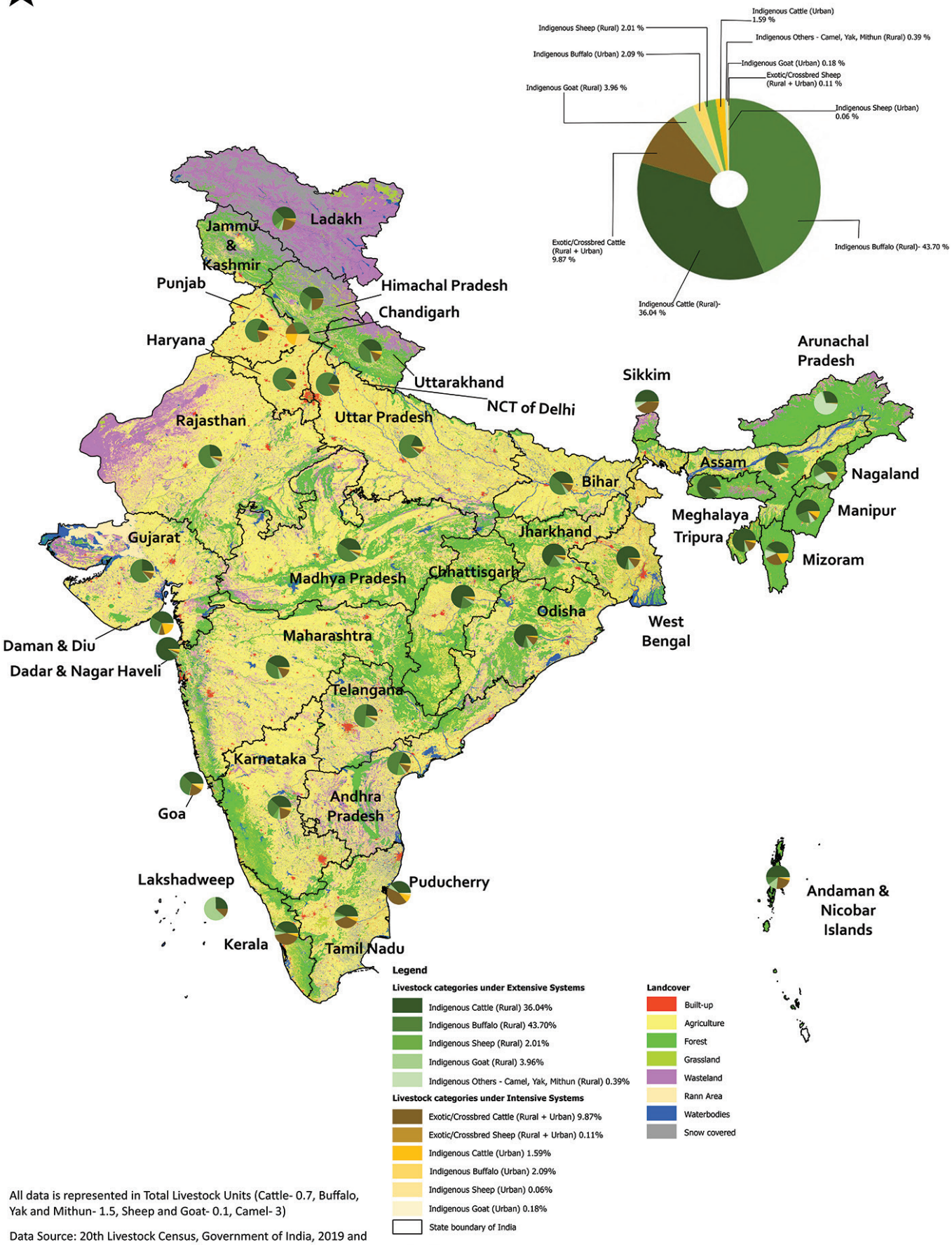
Figure 1 (below) illustrates this very disposition using large and small ruminant populations across the Indian landscape showing that systems are largely extensive and intrinsically linked to land cover and use and therefore the farming systems.

This also makes evident that with less land dedicated to feed cultivation, the water footprint for livestock products is primarily limited to crop residue production. These systems demonstrate remarkable flexibility, adapting to fluctuations in feed availability as livestock naturally seek out feed resources. As a result, they function as low-carbon systems with minimal maintenance expenses. Importantly, the success of these systems relies on the collective intelligence of the herd and the wealth of traditional knowledge held by livestock keepers and pastoralists, often an underappreciated aspect.

The workshop also critiqued the mainstream animal science perspective, which tends to overlook the unique attributes of local breeds in favour of efficiency.

A call was made for a holistic paradigm, considering broader aspects such as antibiotic administration and animal welfare in the context of planetary boundaries.

Distribution of Small and Large Ruminants in Extensive and Intensive Systems in India



All data is represented in Total Livestock Units (Cattle- 0.7, Buffalo, Yak and Mithun- 1.5, Sheep and Goat- 0.1, Camel- 3)

Data Source: 20th Livestock Census, Government of India, 2019 and Landcover from multi-temporal satellite data of IRS AWiFS sensor for year 2018-19

The Workshop

The Rainfed Livestock Network (RLN) has engaged in collaborative endeavors within the livestock sector since 2008, with a specific focus on constructing an alternative framework for livestock advancement starting with rainfed regions of India. Over this period, RLN has conducted several research initiatives and authored with its partners a vision document, thematic position papers, and policy briefs addressing various facets of livestock development in India. These thematic areas encompass Livestock and Commons, Primary Healthcare Services for Livestock, Conserving India's Indigenous Livestock Breeds, Livestock Breed Conservation through Biocultural Community Protocols, Livestock Markets, strengthening Backyard Poultry and Pastoralism as a sustainable way of life.

Reflecting upon its achievements and aspiring for further growth and impact, RLN has recently convened, both longstanding and new partners, to collectively reassess its strategic positioning. This collaborative effort aims to delineate a renewed vision for the network and identify emerging domains of engagement for the forthcoming years.

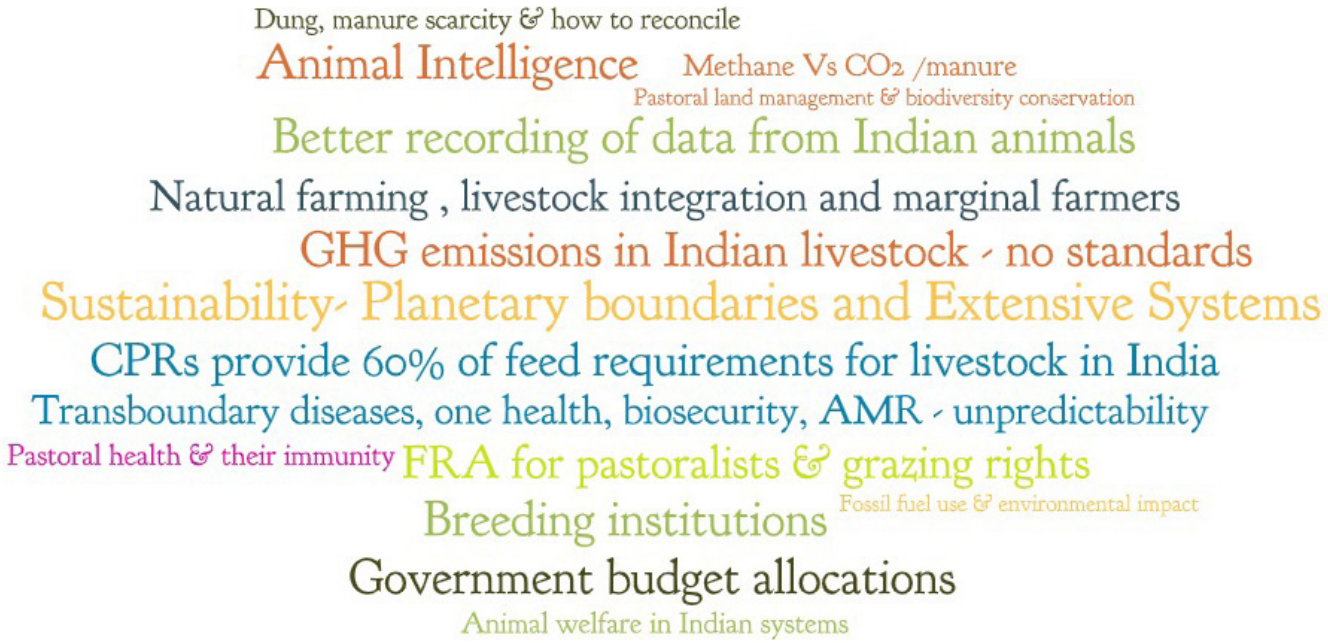
The workshop spanned over two days, with a comprehensive agenda focused on exploring the significance and future direction of extensive livestock systems in India. Day 1 began with welcoming remarks from Dr. Bhavana Rao and Dr. Kamal Kishore which included an overview of the work done and future expectations for the Network. This was followed by a Panel discussion that was delivered by four esteemed RLN partners who deliberated the importance of extensive livestock systems in India. The panel was designed to set the context for the visioning exercise and was moderated by Dr. Chanda Nimbkar, Director of Nimbkar Agricultural Research Institute & Dr. Purnendu Kavoori, Executive Director, Center for Social Ecology. The four themes and speakers of the panel were:

1. *Understanding the importance of India's livestock breeds, communities, and traditional knowledge by Dr. Ilse Köhler-Rollefson of LPPS, Rajasthan*
2. *Animal Health as a link to extensive systems and sustainability by Dr. Nitya S. Ghotge, ANTHRA, Pune*
3. *Livestock and the Commons by Sajal Kulkarni, Centre for People's Collective*
4. *Agricultural Sustainability and the Livestock Connect, by Mr. Pramel Gupta, Coordinator NF Coalition*

Panel Discussion Highlights:

- ***Greenhouse Gas Emissions and Indigenous Breeds:*** *Recognition of unique characteristics of Indian livestock breeds, challenges prevailing notions of inefficiency and high emissions. Existing emission measurement standards may not accurately represent Indian contexts, necessitating the development of tailored metrics for India. Current methodologies overlook the multifaceted roles of livestock in Indian agriculture.*
- ***Holistic Paradigm Shift:*** *Emphasis on indigenous breeds' cultural and practical significance calls for a broader paradigm considering antibiotic usage, animal welfare, and planetary boundaries. Mainstream animal science discourse often overlooks local breed attributes, hindering a comprehensive approach to environmental impacts.*
- ***Animal Health and One Health Approach:*** *Concerns raised were regarding transboundary diseases, biosecurity, and land use change's impact on disease spread. The concept of One Health stresses interconnectedness between human, animal, and environmental health. Ethno-veterinary medicine's efficacy and pastoral health research were highlighted.*
- ***Livestock and Land Use:*** *60% of feed for livestock in India comes from a mosaic of land resources. India's extensive livestock production faces challenges from competing land resource demands, affecting millions of livestock keepers and food production. Forest Rights Act's role in supporting pastoralists is crucial, necessitating attention to land tenure issues.*
- ***Agricultural Sustainability:*** *Civil society advocates for natural farming and agroecology, highlighting the importance of integrating livestock for manure and bio-inputs. Collaboration between RLN and NCNF is proposed to showcase positive ecological impacts and explore social enterprise models. Bridging animal sciences with RLN for interdisciplinary approaches is urged.*

Several important aspects that **need attention in research** also emerged during the panel discussions highlighting the need for new thinking and research agenda for the livestock sector.



Post the panel discussion, the attendees then participated in an introduction and expectation-setting session, followed by breakout sessions to discuss collaboration needs and challenges. On the same day 14 posters were presented by partners, details of which can be found in Table 1.

Table 1 : Overview of posters presented by Partners at the RLN workshop

S. No.	Partner Organisation	Partner name(s)	Description of the Poster
1	Lokhit Pashu Palak Sansthan (LPPS) and Camel Charisma	Dr. Ilse Köhler-Rollefson and Hanwant Singh Rathore	Poster 1: Shows the various plants that the Camels in Rajasthan feed on while grazing which makes their milk highly nutritious and medicinal for certain human diseases /disorders. Marketing of camel milk provides alternative income sources to camel pastoralists of Rajasthan who are largely dependent on camels for their survival. Poster 2: Describes the process of how to produce and procure hygienic milk from camels. The poster aims to showcase not just the economic and health aspects of milk production but also the animal welfare perspective and its importance.
2	Future Greens	Dr. B.R. Athani	The poster illustrated the importance of leveraging traditional livestock market mechanisms to conserve and propagate indigenous livestock diversity. It aimed to convey that markets are becoming monopolistic based on parameters of the processing industry. Need for transparent and standardized pricing of livestock is required.
3	Professional Assistance for Development Action (PRADAN)	Chandrashekhar and Shailesh Kumar	Integrated livestock rearing in Santhal Pargana region of Jharkhand is a significant part of the livelihood of Santhals and Pahariya communities (PVTG). Such livestock keeping supports the poor households, women and the destitute and is the cheapest source of protein. Promoting doorstep veterinary services (through Pashu Sakhis), loans, land and fodder development, households can enhance incomes, improve breeds, provide jobs & avenues for entrepreneurship for locals (especially women).
4	Center for Social Ecology (CenSE)	Dr. Purnendu Kavoori and Nayantara Lakshman	Poster 1 and 2: The first poster depicts the comparison between livestock grazing on land around the Luni River which had crop fallows and “wastelands” where grazing would take place. There was a significant increase in agriculture from 1940 to the present day with shorter durations of fallow periods and an increase in the number of crops per year which reduced the intensity and frequency of grazing in this area over time which is pushing grazing to common lands (“wastelands”). The second poster is a documentation of this change in Luni River and lands around it over time based on oral histories collected starting from 1980 (and before that) to 2020.
5	Sahjeevan and Center for Pastoralism	Ramesh Bhatti and Amit Rathi	Poster 1 and 2: The first poster maps the journey of Sahjeevan through the years highlighting its achievements (Living Lightly) and moments where some aspect of livestock and pastoralism was recognized by the government (Pastoral cell, recognitions from NBAGR, etc). The second poster explains how Sahjeevan and CfP work with pastoralists across India. It includes working on strengthening livelihoods; securing land rights for pastoralists under FRA, 2006; breed recognition with NABGR; community mobilisation and outreach activities.
6	Pathe Pathshala	Dr. Balaram Sahu	Ethno-veterinery practices for sustainable livestock keep and biodiversity conservation where the approaches used are low input, have responsible use of biomass, low-cost skills and easy availability of science and technology at the grass roots level along with indigenous knowledge which together inform best practices for livestock keeping.

S. No.	Partner Organisation	Partner name(s)	Description of the Poster
7	Watershed Organisation Trust (WOTR)	Dada Rajaram Dadas	The poster talks about the FarmPrecise app that provides weather-based crop and livestock management advisories that are data driven and offer cost effective solutions along with advice from experts. This empowers the rural communities to adapt to climate change induced environmental fluctuations.
8	Rainfed Livestock Network (RLN)	Dr. Bhavana Rao, Mr. Kamal Kishore, Dr. Ranjeet Sahani, Kasuhalendra Rao and Harshit Mishra	3 maps (3 posters) on livestock distribution (small and large ruminants, pigs and backyard poultry) in extensive and intensive systems in India: The maps try to visualise India's livestock population, distribution, and production, indicating that India's production is largely extensive and dominated by indigenous breeds. Both these facts clarify the myth that extensive systems are low-output, inefficient. The maps also illustrate how the distribution of livestock and production is intrinsically linked to land cover. This implies that animals in extensive systems utilize any available biomass to produce high-value animal protein - while providing de-weeding, germination, and fertilizing services. Additionally, these systems use very little land, water, and energy resources for feed cultivation or livestock production - making them low-carbon systems with minimal maintenance costs. Manure poster: The poster aimed at understanding the manure economy which was found to be one of the main sources of income for farmers in Karnataka (even above milk). Commodification of manure through commercial agriculture (cash crops, plantations, orchards) is procured from small to large livestock keepers and sold with the organic certification. The economics of this chain is not well understood, but most of the manure comes from extensive systems and extends beyond the state boundaries. This asserts the importance of these systems in sustainable transition to organic agriculture.

On Day 2 the highlight was a session where participants created a "Newspaper of the Future " which was focused on bringing out what do "we" aspire for as a network and "where" would we like to reach. The subsequent sessions involve crafting a collective vision statement, deep diving into thematic areas, and exploring pathways to realizing the envisioned future. The workshop concludes with gratitude and the formal conclusion of the event, marking the end of the Rainfed Livestock Network workshop.

Why is a network needed at this point of time?

- *To frame/develop a holistic approach/perspective towards livestock development*
- *Enables working at scale and bringing in systemic change/paradigm shifts across geographies*
- *A unified coalition fosters enhanced credibility*
- *Amplifies crucial issues impacting livestock and communities, prioritizing community voices.*
- *Creates space for convergence and co-creation with lesser transactional costs*
- *Drives impactful research agendas and informs policymaking*
- *Helps participate in global processes with informed agendas covering larger geographies*
- *Provides space for interdisciplinary approach, facilitates knowledge exchange and methodological rigour*
- *Triggers innovation and streamlines processes for greater efficiency*
- *Optimizes resource utilization and minimizes redundant efforts.*
- *Curates deeper and richer narratives for transformative change*
- *Enhances capacity building and curation of knowledge products for change*
- *Improves data accessibility, knowledge curation, and dissemination channels*

Recently, a two-day workshop brought together 19 partner organisations to create a shared vision around new challenges emerging in the domain.

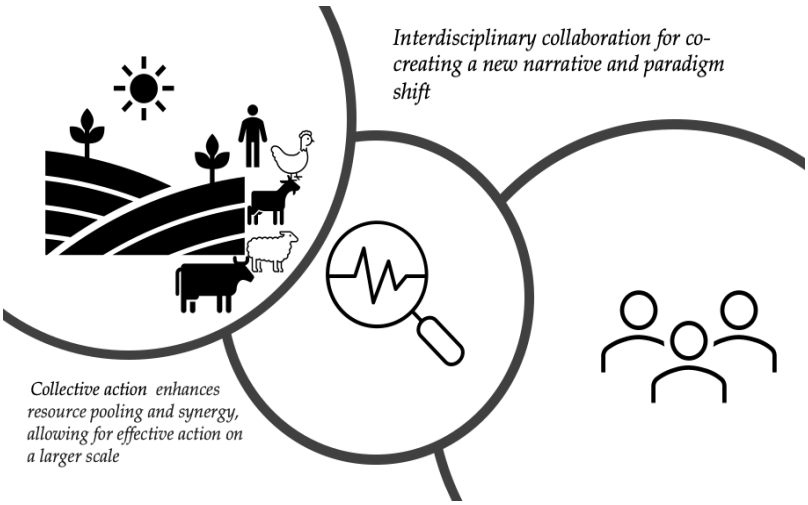
It aligned with the larger aim of the network seeking to redefine and shift the discourse on livestock production in India that currently positions native livestock breeds as being less productive, high methane-emitting, and inefficient (as efficiency is commonly measured by output per individual animal).

“Meeting future Demands & Challenges”: the role of RLN in the next decade

Unlocking potential through interdisciplinary collaborations

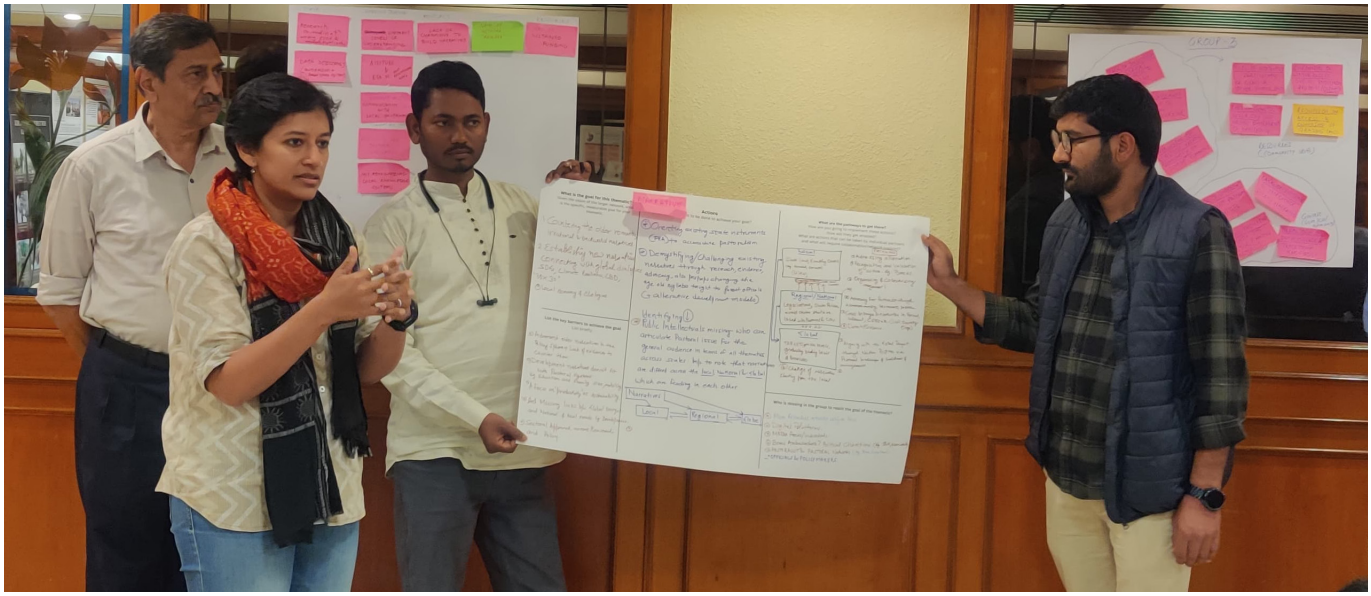
To address the current challenges and create a paradigm shift in the livestock sector the partners felt that the ***involvement of experts from diverse fields*** such as animal health, policy, ecology, anthropology, sociology, and more is necessary. Taking an ***interdisciplinary approach*** encompassing both ecological and social dimensions will ***dismantle the siloed approach*** to livestock management, fostering a comprehensive understanding that can inform effective interventions and research efforts.

Networks members also felt the need to address ***cross-cutting issues*** such as renewable energy, climate change, policy advocacy for all livestock keeping communities which requires ***collective action*** to reshape the narrative surrounding livestock, emphasizing their role in rural livelihoods, nutrition, agricultural and environmental sustainability. This will also assist in policy formulation and design to address existing ambiguities and challenges.



Given the vast diversity within India’s livestock production systems, only a collective can mirror its composition and endeavors. Hence collaborating as a collective ***enhances resource pooling and synergy***, allowing for ***effective action on a larger scale*** and addressing diverse issues and shaping a more inclusive narrative.

The network can also play a crucial role in ***forging strong partnerships for change*** between research, education, practitioners, civil society organizations, and government entities - ***fostering less transactional work*** environment and by ***creating new inclusive spaces*** for knowledge exchange and implementation of innovative ideas better.



Defining the problem: Overcoming challenges and creating impact

Partners together identified the following challenges and barriers within the livestock sector that need to be changed.

Policy level challenges

Addressing the prevailing bias towards large ruminants, particularly the pronounced emphasis on dairy development within India's livestock sector, necessitating a ***shift towards a more inclusive livestock development framework***. This entails ***equitable attention to all livestock species and animal source products***, ***preventing the marginalization of a substantial segment of livestock rearers*** who substantially contribute to the nation's economy.

Moreover, there is an imperative to ***steer away from a production ethos fixated on maximization and efficiency of certain products*** e.g milk and meat, as this trajectory portends unsustainable food production practices and the concomitant erosion of animal genetic resources. In parallel, ***conservation strategies and interventions*** demand to be attuned to the ***unique cultural and ecological milieu within which Indian livestock husbandry*** is situated.

Finally, moving away from ***compartmentalized thinking within the livestock domain*** is essential, as livestock assumes a pivotal role in fostering both agricultural productivity and ecological equilibrium. This thinking is critical to overcome ***external divers*** such as unsustainable transitions in farming, land use change, Renewable Energy & Infrastructure development, etc. that are destabilising a robust system of food production.

Research & Education – lack of orientation towards extensive systems

The research agenda needs to ***transition from conventional scientific studies focused solely on productivity or crossbreeding to interdisciplinary research*** aimed at elucidating the multifaceted benefits of extensive livestock systems. This shift is crucial for dismantling existing barriers and shaping livestock policies effectively. Additionally, there's a notable absence of acknowledgment and understanding regarding the utilization of traditional pastoralist knowledge and the various facets of pastoralism in livestock management. Addressing this gap requires collaborative efforts with government departments and research agencies to ***initiate systematic data collection processes, following established frameworks or guidelines, to fill the void in fundamental data with respect to Indian livestock systems and breeds.***

Collaboratively, efforts need be directed towards ***revising curricula across all levels of education***, from school programs to specialized degrees. This calls for an urgent imperative to reshape the discourse surrounding livestock, which currently presents significant issues. Rangelands are often unjustly labeled as wastelands, extensive systems are deemed unsustainable and unprofitable, and agriculture, livestock, and natural resource management are frequently treated in isolation despite their interconnectedness. Moreover, livestock tends to linger in the shadow of agriculture, warranting its recognition as a distinct entity with its own identity. These ***narratives must be infused into***

existing agricultural, veterinary, and related disciplines to ensure the proper integration of livestock development into mainstream education.

Innovation needs support

Currently, there is a ***lack of platforms for dialogue among various stakeholders***, including government departments, research agencies, markets, civil society organizations, and donors. Furthermore, communicating with the government and accessing data present numerous challenges. There is a pressing need to ***foster a mutual understanding*** among CSOs, researchers, government bodies, businesses, and communities as well as work with institutions such as FPOs and SHGs simultaneously.

Perceptions need an overhaul

Addressing the evolving aspirations of pastoral youth and fostering their interest and capacity in this realm is imperative. There's a noticeable lack of sensitivity and inclusivity toward pastoral communities, coupled with a limited understanding of their cultural practices. Communities encounter challenges in migration, and livestock-rearing communities face marginalization, often bearing the brunt of social stigma and associated biases.

Technology & the future

Artificial Insemination initiatives and the emerging sexed semen technologies are diminishing the control of livestock production held by traditional livestock keepers and pastoralists. This shift in power dynamics has heightened dependence on AI, placing economic strain on livestock keepers who must now afford these technologies aimed at obtaining genes with desirable traits.

Overcoming barriers through Stakeholder Identification & Analysis

Barriers to Change

External drivers

1. Multiple negative drivers causing transitions in farming
2. Land use change
3. Renewable Energy Projects
4. Infrastructure development
5. Lack of Sustained Funding, donor driven
6. Loss of biodiversity
7. Climate change

Stakeholders

1. Market institutions
2. Corporates
3. Government departments Donors

General issue

1. No space for dialogue & collaboration to build shared visions
2. Ego and attitude of different stakeholders
3. Difficulty in communicating to research, Govt. Bodies
4. Education /syllabus - driven by green & white revolution
5. No powerful personalities advocating for pastoralists & extensive systems
6. Decline in cattle rearing

Stakeholders

1. Research & Academicians
2. Governments & policy makers
3. Educational institutions
4. Media agencies
5. Market Mafia

Policy level

1. Policy makers don't understand Indian production systems
2. Focus is milk and meat-centric
3. Disproportion fund allocation to dairy sector
4. Discounts TEK, need for migration, cultural practices & community level issues
5. Focus is on maximising production
6. Lack of holistic perspective-working in silos

Stakeholders

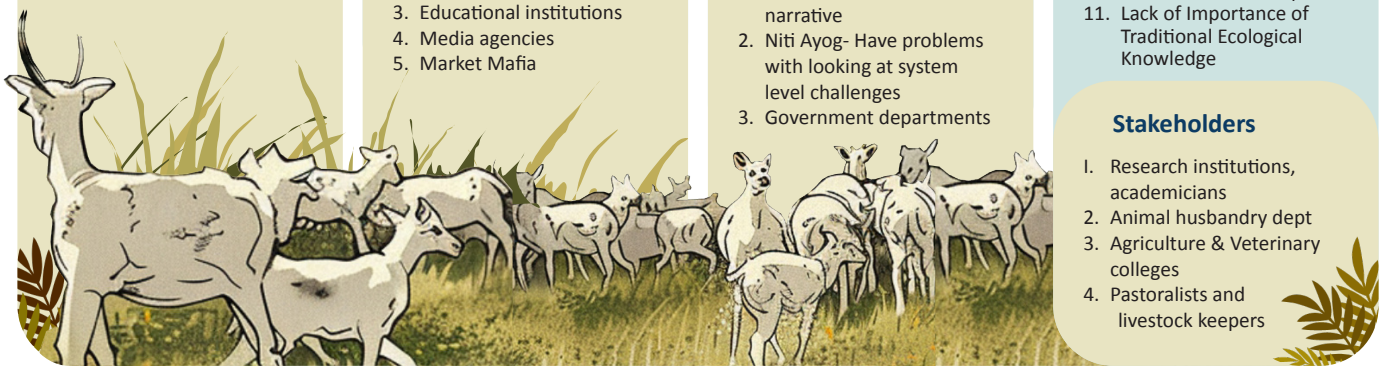
1. Consultancy firms reinforcing a dominant narrative
2. Niti Ayog- Have problems with looking at system level challenges
3. Government departments

Research & Knowledge Barriers

1. Livestock cannot be viewed as a sector
2. Negative perception to extensive systems & pastoralism
3. Disconnect between agriculture and livestock
4. Move away from western standards
5. Animal health care system
6. Improper livestock census
7. Lack of understanding in livestock /no new narratives
8. Data coming out supports only industrial livestock sector repressing the methane emissions
9. Beneficial data is scattered, deficiency in certain aspects
10. Understanding on the arid & semi-arid landscape
11. Lack of Importance of Traditional Ecological Knowledge

Stakeholders

I. Research institutions, academicians
2. Animal husbandry dept
3. Agriculture & Veterinary colleges
4. Pastoralists and livestock keepers



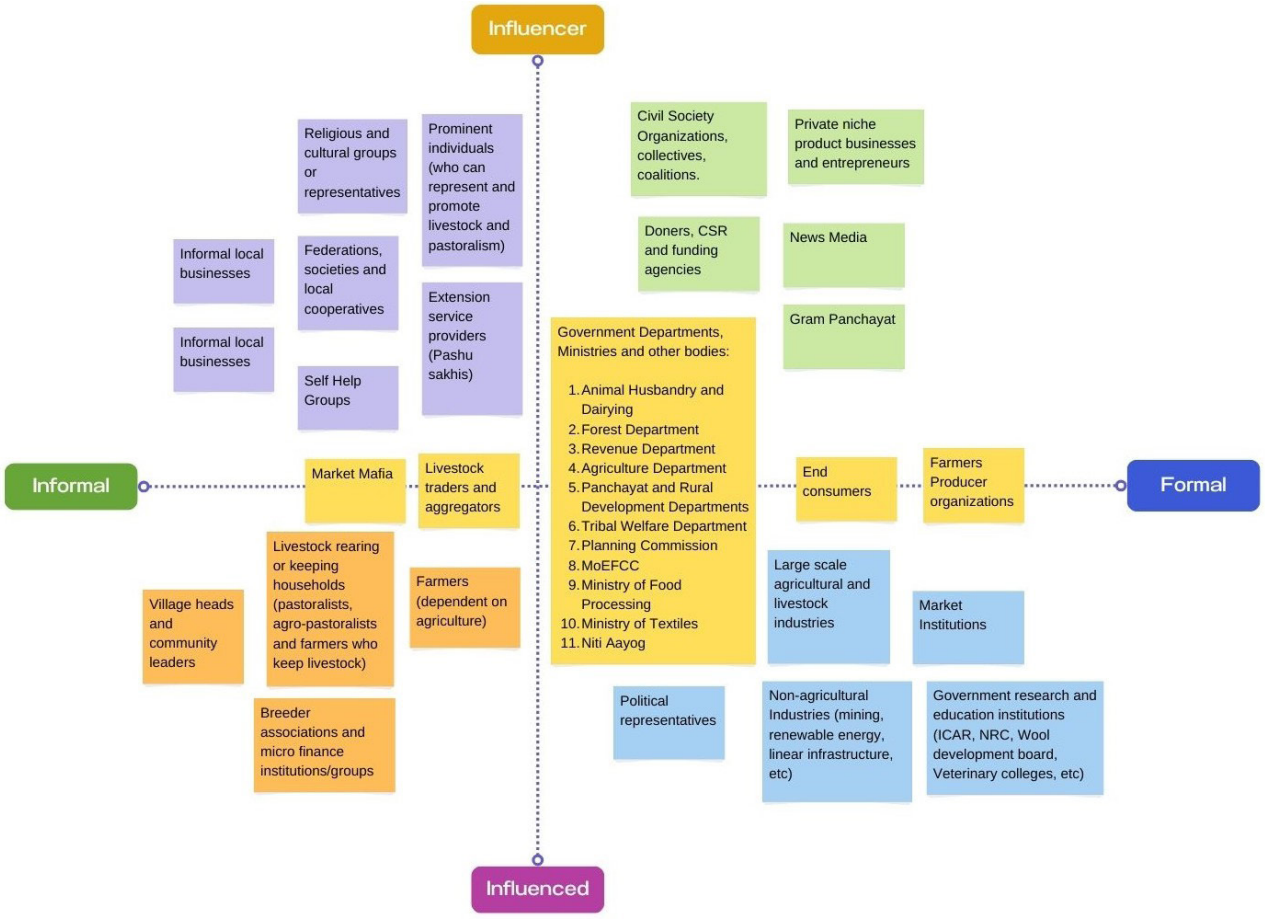
Taking this further, the diagram below is an overall analysis for stakeholder engagement that the partners felt is needed. The analysis was done in terms of four categories to understand the current scenario and how we can overcome the current barriers:

a) Formal stakeholders that are influencers at the same time,
b) Formal stakeholders that can be influenced
c) Informal Stakeholders that can be influenced
d) Informal stakeholders that can be influencers

The analysis indicates the presence of numerous formal stakeholders within government departments, ministries, and other agencies who possess the potential to transition from being influencer to becoming influenced toward the necessary paradigm shift.

The CSOs emerge as the primary formal influencers actively advocating for the required shift. They are followed by stakeholders such as private businesses and entrepreneurs offering specialized products, donor agencies, media outlets, and local gram panchayats, which, although not taking a firm stand, hold the potential to influence change.

Additionally, certain government boards, research and educational institutes, and industries were identified as stakeholders currently influenced by the prevailing narrative. Therefore, concerted efforts are needed to influence them significantly in order to overcome existing barriers.



Market mafia and traders were identified as informal stakeholders who can sway either way and can become potential informal influencers for the new paradigm shift to occur.

Rural households, farmers, pastoralists who rear livestock along with local breeders and microfinance groups were identified as informal influenced stakeholders as current policies,schemes and programs strongly influence their decision making in farming. Therefore, concerted efforts will be needed here.

The informal stakeholders who can be potential influencers were identified as informal local businesses, prominent religious and eminent persons, SHG and extension service for shift that is being envisaged.

Thematic and Actions within them

Given the barriers and strategies required to bring about the paradigm shift led to identifying five new themes the network proposes to work on.

Thematic 1: Building a new narrative

The objective of this thematic area is to formulate and solidify a fresh narrative regarding Indian livestock production systems, intricately weaving together local ecological and economic dynamics, while also engaging with global dialogues, Sustainable Development Goals (SDGs), and challenging prevailing climate discourses that categorize extensive systems as inefficient and low in productivity. The narrative building thematic group will work towards removing adamant older narratives in the policy sphere as well as come up with ideas for evidence building, new research agendas shifting the focus from "productivity" to "sustainability" mode. The narrative will try to build space for all extensive system, with particular emphasis on "extensive livestock systems with special focus on pastoralism which is usually excluded from the development narratives.

Actions

1. Build linkages for cross sectoral and interdisciplinary research to demystifying/challenging existing narratives to support policy change
2. Curate new educational syllabus on the lines of "alternative development models" by collaborating with educational institutions
3. Ideate and build narratives and strategies and address the missing links/aspects between current global, national targets and local needs in the Indian context
4. Analyse local, state, and national laws from an extensive livestock systems lens
5. Curate various forms of knowledge products – for wider dissemination.

Pathways for change

1. Identifying: Public intellectuals missing who can articulate pastoral issues for the general audience
2. Disseminate the evidence and new narrative in all local, national and international events /spaces for policy change
3. Involve new stakeholders such as new researchers actually working on the field, digital platforms, media and pastoral youth networks to influence the narrative change

Thematic 2: Indian Livestock Production Systems

The goal of this thematic is to build sustainable package of practices for various kinds of extensive livestock systems to improve livelihood resilience and sustainable food systems. The focus would be on clarifying that extensive systems and livestock mobility are key facets of sustainable food. The emphasis would be on changing land use patterns, circularity in Indian food production systems, creating awareness on traditional knowledge systems, and how extensive systems stay well within the planetary boundaries and are still economically viable.

Actions

1. Curate PoPs for sustainable extensive livestock systems (e.g integrated farming systems, diversified cropping systems, conservation and development of commons, local breed improvements, etc)
2. Develop champions or models for scaling up
3. Work on curating new strategies/mechanisms for aspects like livestock insurance, social security, animal health care, animal welfare, monitoring and evaluation system to be incorporated in to current schemes and programs
4. Link livestock to programs on agriculture and natural farming!

Pathways for change

1. Implement pilots at scale with CSOs
2. Disseminate the evidence and data emerging from the pilots for policy change
3. Involve new stakeholders such as new researchers actually working on the field, digital platforms, media and pastoral youth networks to influence the narrative change
4. Influence donors to support initiatives under the new narratives
5. Develop collaborative research projects with academicians to new data and development of livestock standards for the Indian context
6. Showcase results by media coverage
7. Build support systems to enable extensive livestock system which is inclusive of pastoralism of all kinds

Thematic 3: Livestock Markets and Products

The objective of this group is to establish sustainable market mechanisms aimed at ensuring producers receive a fair share of profits while retaining their agency. Additionally, it will prioritize the development of niche markets for exclusive livestock products of Indian origin, rooted in traditional knowledge, characterized by high animal welfare standards, and produced sustainably as slow food.

This thematic will also look for opportunities to develop new mechanisms of marketing, suggest investments for market infrastructure and processing, improve market information flow and create awareness to consumers to buy consciously. It will also explore avenues where recognition of high value Indian livestock products can happen globally.

Actions

1. Develop market platforms for mass aggregation and sale of ethically produced livestock in extensive systems of production.
2. Mobilize investors for infrastructure in livestock markets for ethical trade.
3. Develop marketing strategies for niche products with proper certification system for genuine nature of products
4. Develop mechanism to set up producers collectives for different products produced by communities in extensive livestock systems

Pathways for change

1. Collaborate with investor, economists and communication specialists to develop an alternate marketing narrative
2. Collaborate with food technologists for niche product development at international standards
3. Develop scalable models that can be piloted by CSOs /pastoral youth associations, etc in different states
4. Identify influencers and develop branding and digital purchase systems
5. Aggregate producer collective under one digital platform for niche products

Thematic 4: Livestock Finance

This thematic will focus on unlocking existing funding to achieve a more comprehensive approach to support agroecological & biophysically suitable livestock production in India. The focus would be on bringing in targeted changes and adopting a systemic approach within farming systems. Currently, the larger narrative in food production / agricultural systems often overlooks the inclusion of the livestock sector, despite its significant contribution. It is viewed merely as an allied sector rather than recognizing its pivotal role, akin to the "Delta" of agricultural systems. This thematic will therefore aim to create awareness on the critical importance of supporting initiatives for livestock sector and identify "livestock keepers with no agricultural lands & pastoralists," as a distinct group - 0not grouped under generic terms like "farmers."

Actions

1. Develop focused narrative for financing the "Livestock Sector"
2. Identification of financers (public/ private/ social enterprises) to support more holistic programs, drive systemic change and create incubation funds for partners
3. Develop an investment portfolio so that RLN can be an aggregator of funds (blended finance)
4. Work as a platform to aggregating livestock producer organisations (like FPOs, cooperative) to receive finances and get connected with the larger world
5. Play a support function to Partners in developing sustainable Livestock Centric Projects
6. Liaison with financial institutions to broaden financing for livestock

Pathways for change

1. Engage /finance different players in various value chains to bring in systemic change
2. Organise Annual livestock Investment Summit with all the relevant finances and stakeholders and showcase the investment portfolio

Thematic 5: Education and Capacity Building

The aim of this thematic would be to re-orient educational institutions in the agriculture, veterinary sciences and development-oriented subjects to relook at their curriculums to include a more nuanced and holistic narrative of food production in the Indian context. Along with this it would also look at various ways of building capacities of different stakeholders in livestock value chains including associated stakeholders on all aspects of extensive livestock production, pastoralism, gender dimensions, ethnoveterinary practices and role of traditional knowledge among various other topics.

Actions

1. Develop a MOOC on extensive livestock systems & pastoralism in Indian language encompassing all crosscutting aspects.
2. Develop new curriculum with the help of experts/scholars/environmentalists and practitioners to be incorporated in to current syllabus
3. Creating inclusive training programs and capacity building to create awareness on the need to change existing curriculums
4. Working towards setting up institutions like TRTI – PRTI (full form???)
5. Curate experiential learning programs for urban communities/youth to influence consumers and facilitate systemic change
6. Orienting existing state instruments (like FRA) to accommodate all extensive form of livestock production with special focus on traditional pastoral communities

Pathways for change

1. Influence Board of Studies, ASCI like UGC, NCERT, veterinary and agricultural councils
2. Highlight why change is needed at different levels/forums
3. Film & food festivals
4. Sensitize Ministries, funders, educational institutions like (TISS, Shiv Nandar, Azim Premji, IRMA) and media

The Synthesis of Vision for RLN

The last exercise was about stimulating a shared vision from the partners for RLN. It was conducted through a very innovative exercise of writing newspaper headlines the partners would like to see in future (See box item)

"The major emphasis from all the discussions and headlines stemmed underscored the imperative of acknowledging the pivotal role and contributions of livestock keepers who rear animals in extensive systems. Central to this vision was the recognition of their symbiotic relationship with nature and ecology, and their pivotal role in sustaining ecosystems and consequently human existence. Given that communities practicing livestock husbandry and their indigenous knowledge systems are indispensable for the preservation of both human societies and ecological equilibrium, requisite adjustments in support mechanisms (e.g., market infrastructures, healthcare provisions, social amenities, and educational services tailored to pastoral groups) and policies (e.g., rights of access) pertinent to extensive modes of livestock husbandry are urgently warranted."

News headline of the future!

1. Bangalore declares public holiday to welcome FLOCKS of SHEEP
2. Women graduates of the Indian Institute of Pastoral Mahago event get offers to set up similar ventures in 27 countries.
3. Indian cheesers win first prize at International Competition
4. Last chemical fertilizer factory closed down!
5. India requested to lower tariffs on export of its genetic resources
6. Livestock Minister Chennama Devi to receive the pastoralists and felicitate them for their contribution to nature conservation and saving the climate during annual migration.
7. Leading Businesses Groups announce 'BILLIONS' for Ext. Livestock
8. Top 5 Pharma Companies switch to "Ethonovet Med"
9. 10,000 Villages in India become "Energy Neutral"
10. Urbanites Flocking to Villages!!
11. Indian Cool wool reaches the Paris fashion week with 8 Indian designers/artisans!
12. Phalana Lab of India succeeds in making soil from 'gai gobar': Possibility of India saving the world from the current food crisis.
13. India hosts International Pastoral Olympics!!
14. Khangchendzonga National Park across Indian and Nepal Boundaries gets the maximum no. of floral and faunal diversity
15. Pastoral communities manage sanctuaries and parks across India
16. Lab based meat banned in India, going back to livestock to meet the protein needs of the country.
17. Pastoral Mark Launched
18. No land is wasteland, all are grassland.
19. Mobile HealthCare Vans reaching the pastoral Communities enroute for women
20. New Ministry set up for pastoral communities
21. Sufficient Allocation of funds to PRI's for enhancing livestock production
22. Silvi-Pasture an established model to combat climate change.
23. Pastoral youth group launched enterprise on pastoral communities
24. NCERT launched a special curriculum for pastoralist's children
25. Pastoral corridor opened in 2030 is row used by at least 10 lakhs pastoralists every year
26. Agro-pastoralists and indigenous groups humans have been saved from extinction
27. Industrial Livestock Production Banned: UN Declaration

The primary focus remained fostering collaborative efforts for sustainable livestock development tailored to India's diverse terrain and farming systems, while drawing from valuable traditional knowledge of livestock keepers and pastoralists.

The workshop also emphasised on the significance of innovation as well as understanding gender perspectives in livestock conservation.