

Imagining Changthang: 2050

Ladakh Restoration Visioning Exercise 2025
2-4th June 2025, Leh



CIRCULAR
BIOECONOMY
ALLIANCE



Ecological
Restoration
Alliance



LAHDC LEH



nature
conservation
foundation



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List of Acronyms

NCF - Nature Conservation Foundation
LAHDC - Ladakh Autonomous Hill Development Council
CBA - Circular Bioeconomy Alliance
ERA - Ecological Restoration Alliance
BNHS - Bombay Natural History Society
LEDEG - Ladakh Ecological Development Group
SLC-IT - Snow Leopard Conservancy India Trust
WTI - Wildlife Trust of India
SAVE Changthang - Student Association for Village
Education, Changthang
EJMC - Eliezer Joldan Memorial College
HQ - Headquarters
J&K - Jammu & Kashmir
Dept. - Department
Dy. - Deputy
Prof. - Professor
Fig. - Figure
H1 - Horizon 1
H2 - Horizon 2
H3 - Horizon 3



Overview

The Changthang plateau of Ladakh is a fragile, unique, and culturally rich high-altitude landscape. With its vast rangelands, pastoral communities, and distinct ecology, the region stands at the cusp of multiple transformations driven by climate change, unplanned development, changing aspirations, and shifts in land governance. Ladakh's landscape, especially the Trans-Himalayan region of Changthang, are often misunderstood as barren "wastelands." This perception has fueled unsustainable practices and policies that threaten the ecological health of the region. However, Ladakh's environment is anything but barren; it is a fragile and ecologically rich landscape that deserves a more accurate, scientifically grounded understanding, with collaboration of local knowledge of the landscape.

From 2nd to 4th June 2025, the Ladakh Restoration Visioning Exercise 2025, was held in Leh, organized by Nature Conservation Foundation, in partnership with Ecological Restoration Alliance and Ladakh Autonomous Hill Development Council, supported by Circular Bioeconomy Alliance. The workshop was designed to bring together key stakeholders from the Changthang region and beyond to collectively explore a 25-year vision for ecological restoration in Ladakh, especially Changthang. The workshop focused on developing shared values, identifying challenges, and imagining long-term strategies to ensure the resilience and regeneration of the Changthang landscape.

Participants included community representatives from the Changpa pastoralist group, experts in ecology and policy, government officials, conservation practitioners, civil society members and youth from Changthang. In total, over 80 participants attended the visioning exercise.

Vision & Objective

The Ladakh Restoration Visioning Exercise aimed to build a common understanding of ‘degradation’ in Ladakh’s landscape and define restorative practices in ecological context of the Changthang Plateau. The objectives are laid down below as:

1 Fostering an Inclusive Dialogue
Engaging local communities, policymakers, and experts in an open conversation about the next steps in the ecological restoration of fragile landscapes like Ladakh.

2 Identifying Evidence-Based Solutions
Discussing tried and proven restoration practices across the country and adapting them to suit Ladakh’s unique conditions and needs.

3 Building a Shared Understanding of Degradation
To establish a collective, evidence-based understanding of ecological degradation in Ladakh, integrating scientific research with local perspectives.

Deliverables & Outcomes

The main outcome of the visioning exercise is to outline a vision for the future of Changthang, along with defining the pathways needed to achieve the envisioned future in the year 2050, as imagined by the stakeholders in the form of this visioning document. The outcomes desired:

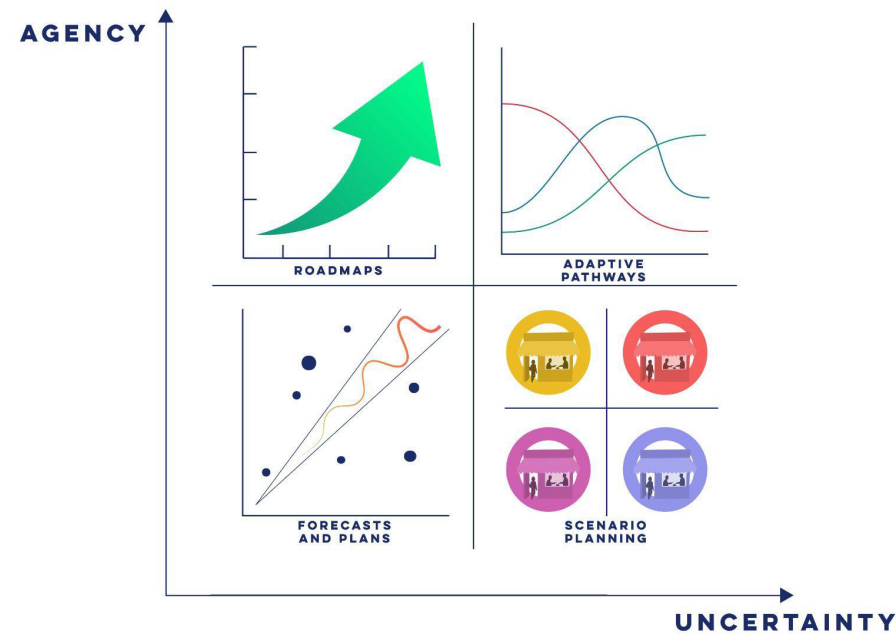
A Clear Vision for Restoration
What restoration should look like in Ladakh, drawing from local knowledge and scientific evidence.

Stakeholder Guidance
Specific pointers for various groups—such as the local communities, policymakers, conservationists, and the tourism sector—on how they can contribute to restoration and work together effectively.



The Framework

Figure 1. The Agency and Uncertainty graph to guide the visioning exercise



The exercise in itself was meant to ascertain a vision for Changthang in 2050. Considering that this is 25 years into the future, there is a need for methods which can handle a large degree of uncertainty, and the stakeholders of this vision have a high amount of agency. Forecasting is usually based on trends, and what we know of the current situation, it would not be possible for this to help assess the dynamic needs that may arise tomorrow. Forecasting is limited in its ability to deal with the kind of uncertainty that characterises a 25-year long plan as it relies on extrapolating from historical data and current trends. The method also assumes that future conditions will follow a predictable trajectory. This has a risk of missing the possibility of systemic shifts like rapid climate change, policy reforms, or socio-economic transformations that could fundamentally alter the landscape or more importantly the priorities of its people. In landscapes like the Changthang Plateau, where both ecological and social systems are

highly dynamic, forecasting may provide a false sense of certainty and lead to strategies that are too rigid to adapt to emerging challenges or opportunities.

Scenario planning or creating roadmaps, both are other interesting ways to envision future worlds, and visions, but both have limitations, while one has a high amount of agency, across institutions and stakeholders, it heavily relies on low levels of uncertainty. This method would be useful only for 3-5 year plans. Beyond this, if it is too rigid, it would not be able to accommodate changing scenarios.

Scenario planning on the other hand, does not accommodate for a high level of agency for the implementer, useful when decisions are not shaped by the implementer, and the directives are exogenous. In the context of this workshop, adaptive pathways are best suited to achieve the objective of an inclusive visioning

exercise. It is said so as adaptive pathways map out a sequence of possible actions that can be adjusted as conditions change over time. It provides multiple pathways towards a desired future with a scope for review and rectification of the action plan if needed. This approach is inherently flexible and participatory, encouraging collaboration across stakeholders, and timely course-correction when needed.

The team identified the 3 horizons framework as a tool to facilitate the convening and conversations between the different stakeholders. The 3 horizons framework is built for conversations across stakeholders, and where every opinion is valued and has a place. It follows a futures approach, where a common vision is collectively defined by various stakeholders, creating ownership over the vision.

The Three Horizons framework encourages participants to examine the system through three lenses:

Horizon 1 (H1) represents the current way of doing things; the dominant systems, practices, and behaviours that define the present. This often reflects the managerial perspective, which focuses on improving and maintaining existing structures that are still valuable.

Horizon 2 (H2) represents the zone of transition; emerging innovations, experiments, and ideas that can help move from the present to the future. This reflects the entrepreneurial perspective, where stakeholders explore what new approaches could be tested and scaled to bridge the gap between today and the long-term vision.

Horizon 3 (H3) represents the aspirational future; the transformative vision of the system we ultimately want to create. This embodies the visionary perspective, where participants articulate bold, future-facing aspirations, free from the constraints of current limitations.

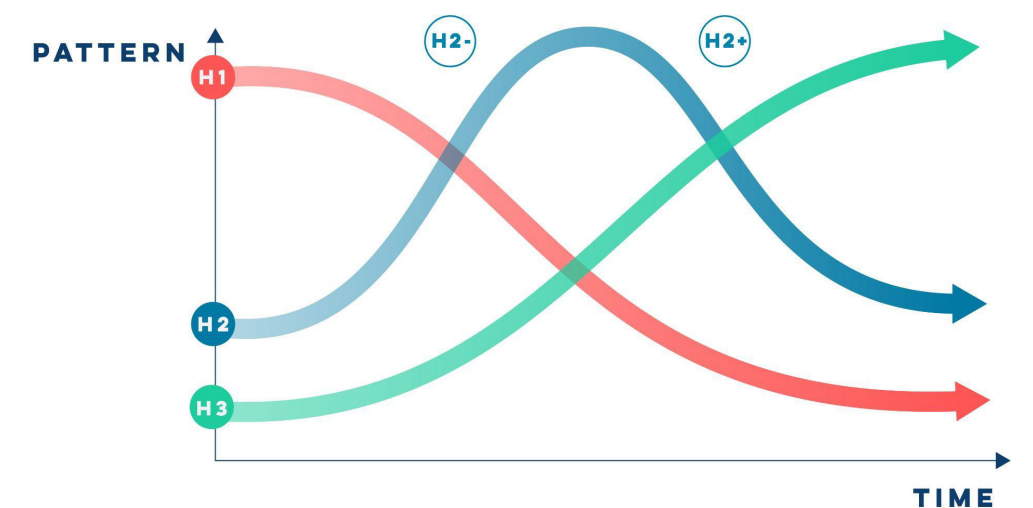


Figure 2. An illustration of the 3 horizons framework

This exercise was useful in getting a common understanding across stakeholders, on the following points:

1. *What is the common vision across stakeholders that they could collectively work towards?*
2. *What kind of projects need to be funded/developed, or require support to achieve the vision?*
3. *What kind of innovations may seem lucrative at this point, but effectively deviate from the collective vision, or prolong its time to fruition?*
4. *What are values that need to be maintained from the current scenario to the future?*
5. *What are the gaps that need to be addressed to achieve the long-term vision?*



The inputs received from the participants were then plotted on the 3-Horizons chart under H1, H2 & H3 approach (see annex. 1), using prompts designed to guide them through the process systematically and to effectively categorize each response as part of the clustering process. This enabled us to identify broader themes and common pain points underlying multiple interconnected issues. The approach also helped to look for links between the problems identified, the interventions needed and the vision to be achieved, which will further be used to develop action plans and analyse the landscape better.

WE WILL FOCUS ON PROBLEMS AND CHALLENGES THAT WE ARE CURRENTLY SEEING WITHIN THIS LANDSCAPE? THESE PROBLEMS COULD BE AFFECTING PEOPLE, LIVESTOCK, WILDLIFE OR EVEN LIVELIHOODS. WE WILL ALSO LIST THE SYSTEM IN PLACE NOT LETTING CHANGE HAPPEN.

G-2

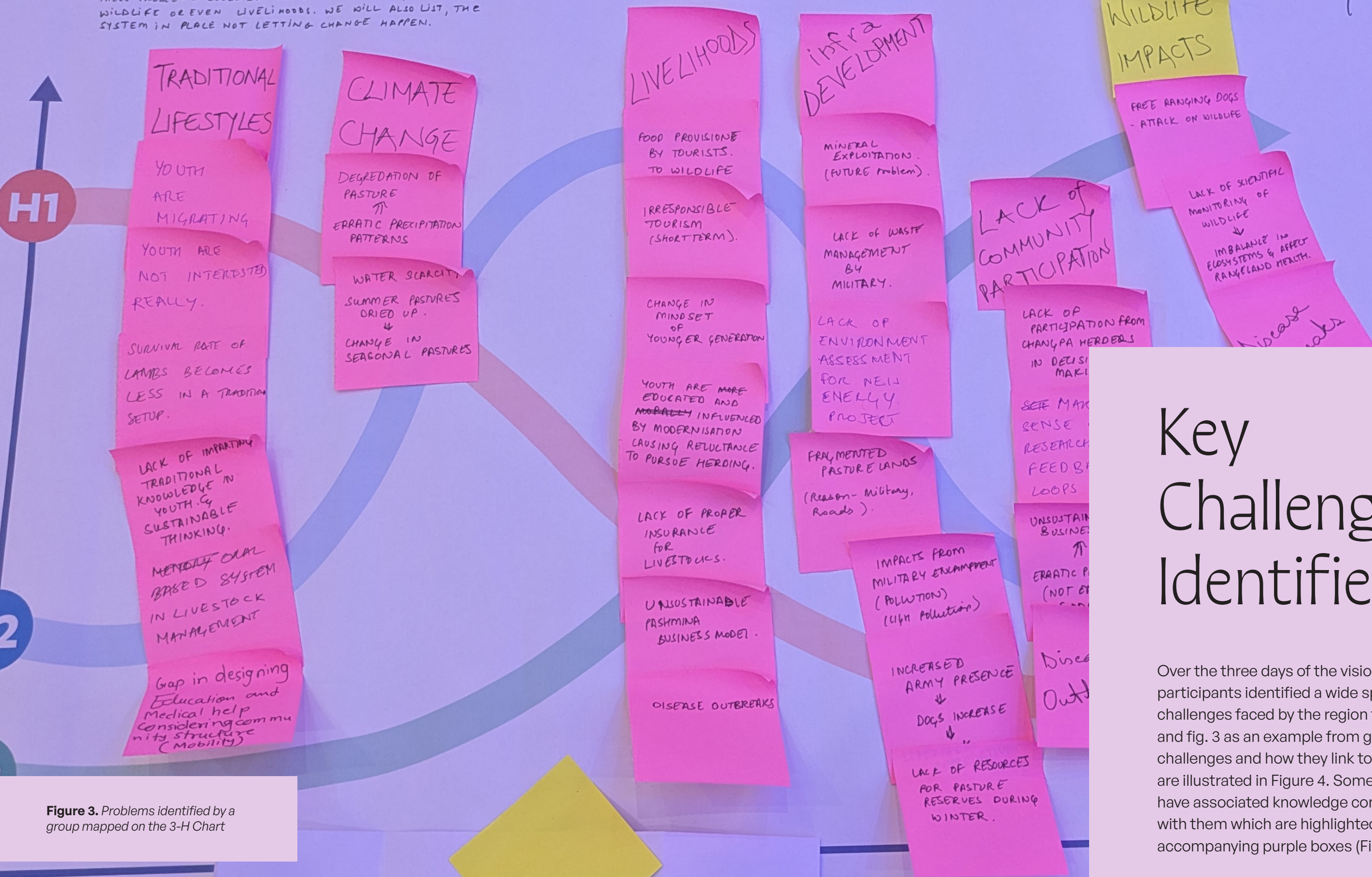


Figure 3. Problems identified by a group mapped on the 3-H Chart

Changthang faces various challenges as discussed by the stakeholders. These are interlinked and affect the landscape and its management in ways as depicted.

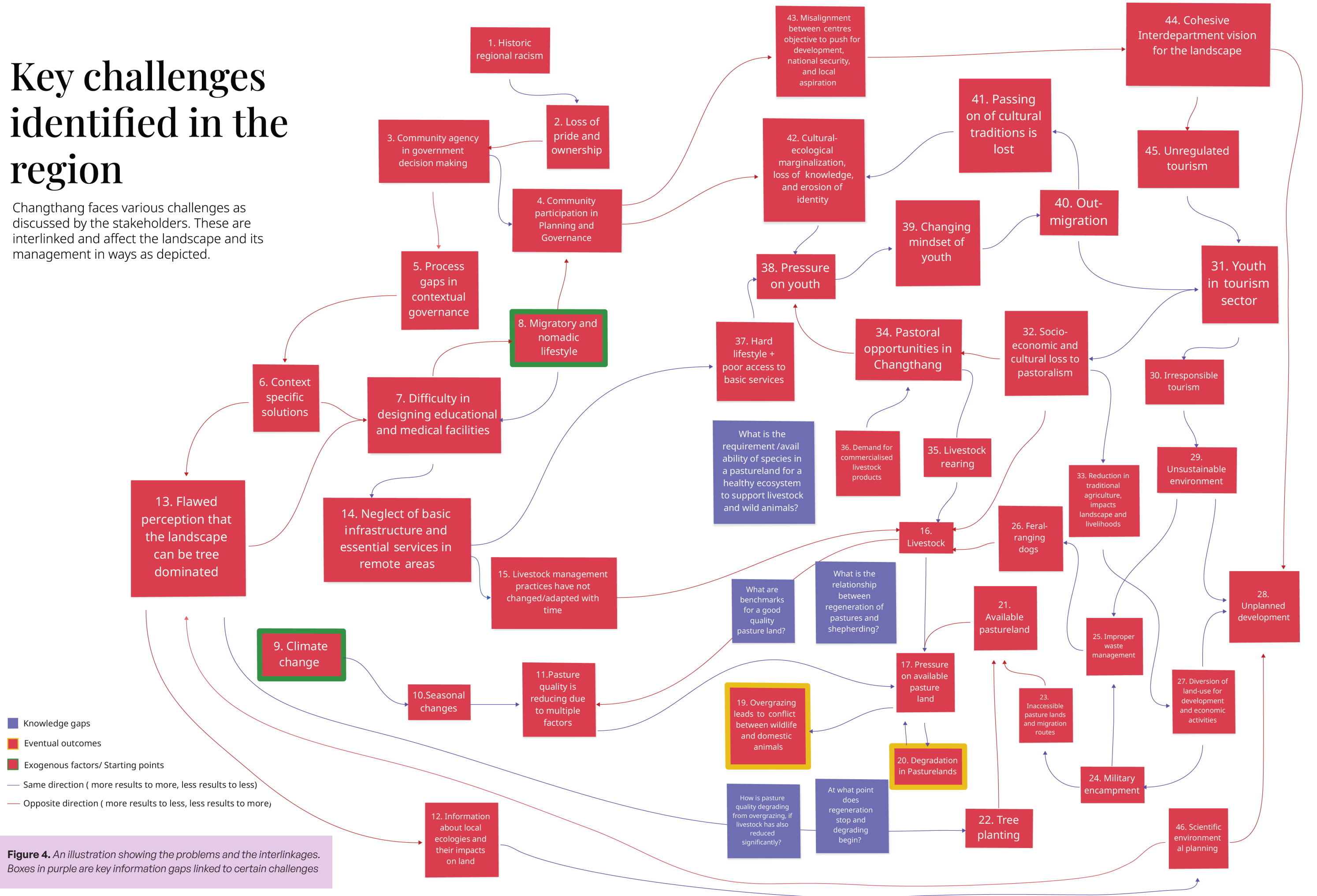


Figure 4. An illustration showing the problems and the interlinkages. Boxes in purple are key information gaps linked to certain challenges

Table 1. Challenges, grouped into themes and their subcomponents

Problem Area	Detailed Outlines	Problem Area	Detailed Outlines
Governance & Participation	Lack of community representation in land-use decisions and planning.	Livelihoods and Pastoralism	Encroachment by non-native species and infrastructural development.
	Absence of community land rights and legal clarity.		Economic pressures forcing herders to seek alternative incomes.
	Top-down development projects with minimal contextualisation.		Oral-based livestock management and poor veterinary access.
	Fragmented governance: no single agency or vision guiding Changthang’s future.		Market pressures for high-value products (e.g. pashmina) without ecological consideration.
	Limited participation from pastoralist communities, especially women and youth. Lack of community voice in decision-making.	Youth and Cultural Change	Lack of insurance and formal systems to protect pastoralist livelihoods.
	Fragmented planning due to multiple authorities and weak inter-departmental coordination.		Outmigration due to limited local opportunities and poor education infrastructure.
	Poor checks and balances in project implementation.		Cultural loss: breakdown in traditional knowledge transmission.
Ecology and Climate Change	Shrinking wetlands and declining pasture quality due to climate shifts.		Youth distancing from herding and traditional livelihoods.
	Overgrazing and land degradation by both livestock and wildlife (e.g. kiangs).	Tourism and Development	Loss of identity, low aspirations for pastoralism, and exposure to external value systems.
	Climate unpredictability, with erratic precipitation and resource scarcity.		Unregulated tourism and waste mismanagement in fragile areas.
	Lack of data and long-term ecological monitoring.		Off-roading done by tourists degrading the habitat.
			Pressure on ground water due to growing

	guesthouses and increasing tourist influx.
	Tourists feeding wild animals (e.g. Marmots) creating a change in their eating habits.
	Militarisation, road-building, and resource extraction fragmenting the landscape.
	Urbanisation pressures around key settlements.
Human-Wildlife Conflict	Increasing populations of feral/free-ranging dogs attacking livestock and wildlife.
	Habitat degradation reduces prey and increases pressure on domestic animals.

Most challenges don’t occur in isolation, hence the team formed links/connections among the various problems identified by the participants and it resulted in an interconnected web of key issues that were feeding into each other or affecting each other directly or inversely (Fig. 4).

The purple arrows in the diagram represent direct relations, where increase in one, results in increase in the other. The red arrows represent the opposite, here the increase in one leads to a decrease in the other.

To understand this better, rearing livestock increases the overall livestock numbers but an increase in free ranging dogs will lead to a decrease in the number of livestock. Similarly, a hard lifestyle and poor access to basic

necessities is increasing the pressure on youth which is leading to a change in the mindset and adding to the problem of outmigration. Whereas, an increase in the opportunities in Changthang will reduce this pressure on the youth.

Another highlighted challenge was the historic regional racism against the Changpa community which is leading to a loss of pride and ownership within the Changpas, especially the herding community. The problem is augmented by a lack of representation and community agency in the government decision making process and thus, a lack of community participation in the planning, development and governance of the landscape and land use.



Figure 5. Presentation on what it means to be a “Changpa” & understanding Changpa identity



Figure 6. Participants discussing the problems with a herder at Rupshu during the field trip

Gaps in the process of contextual governance were also identified and a lack of context specific solutions thereof. Because of the migratory and mobile lifestyle of the herders, it is difficult to design educational systems suiting this need. Alongside, a lack of medical facilities exists for the herders, making it difficult to continue herding practices. This coupled with the neglect of basic infrastructure and essential services in the remote areas has contributed to the hard lifestyle of the Changpas and the younger generations are moving out of the region as a consequence.

Another major cause of concern for the region and the herders, is the effect of climate change on the available pasture and fodder for the livestock. The erratic seasonal changes like lack of rainfall during the short monsoon

season and increased precipitation during drier months have led to reduced pasture quality and in turn, the available pasture for grazing has reduced significantly, causing a problem to the herders who are finding it difficult to sustain large livestock numbers. Alongside, perceptions of overgrazing lead to a conflict between wildlife and domestic animals and disturbing the balance in the system.

An example of lack of context specific solution is the flawed perception that the landscape can be tree dominated and thorough research is needed on the local ecologies and their impact on land and scientific environmental planning instead of mass tree plantation drives in the region, especially of non native species.

Importantly, within the challenges there emerged a few key knowledge gaps that need

addressing before the extent and nature of the challenge is fully understood. When considering the idea of degradation of pasture, a key knowledge gap is to understand what truly are benchmarks for good quality pasture lands. Also, given that these are rangelands, there is a need to better understand the link between shepherding and regeneration of pasture. A key question that needs evaluation is also to answer how pastures are degrading from overgrazing, if indeed livestock numbers are going down. This is linked to understanding at what point does pasture regeneration stop and start degrading. Finally, understanding the requirements and availability of species in the pasturelands for a healthy ecosystem to support livestock and wildlife is another key knowledge gap.



Figure 7. A participant sharing his group's vision

The Vision for Changthang (2050)

The workshop had the stakeholders divided into groups and asked to come up with their desired vision of the future for Changthang and later weaved into common visions for the land. The activity created collective, future-facing visions for Changthang in 2050. It was based on the hopes, indigenous wisdom, ecological priorities, and technological imagination of the landscape and its people.

The shared visions identified the aspirations of the people from Changthang and the coming together of various agencies and actors to create a roadmap for development activities in Changthang.

Visions for Changthang 2050

Various visions for Changthang over the next 25 years, as articulated during the restoration visioning workshop

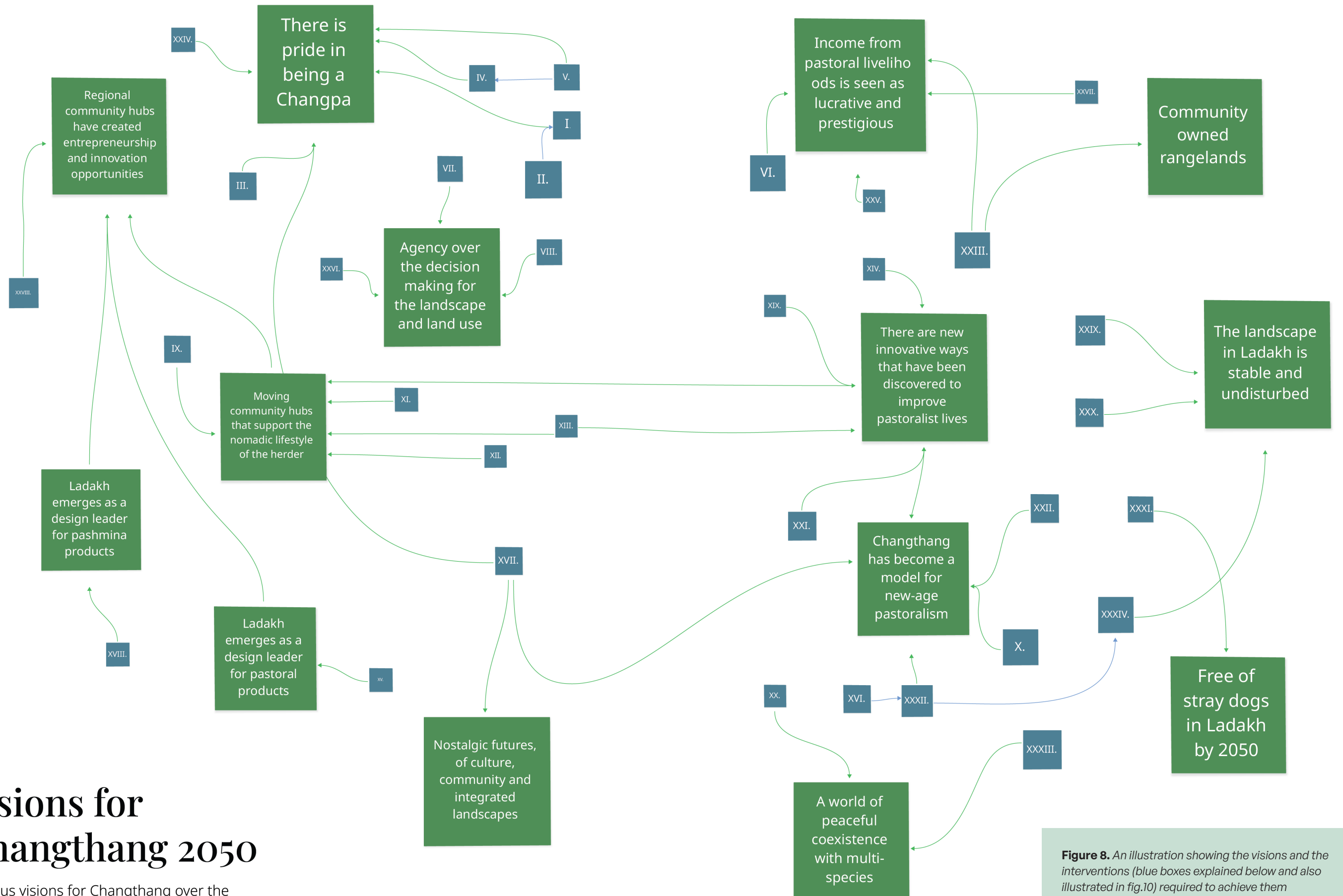


Figure 8. An illustration showing the visions and the interventions (blue boxes explained below and also illustrated in fig.10) required to achieve them

VISION 1

Pride in being a Changpa

The most significant and most talked about vision for Changthang was ‘pride in being a Changpa’. It is the revival of the Changpa identity, where pastoralism is seen as dignified and valuable, both in terms of adding to the economy and the celebration of an ancient culture. The other complimentary side of it is that income from pastoral livelihoods is seen as lucrative and prestigious and thus, adding to the pride in being a Changpa.

Interventions to revive the pride in the Changpa community:

To build pride in the Changpa community, what is needed is interventions like inclusive policies for the members of the community, to address the challenges of historical regional discrimination, that come associated with a mobile lifestyle.

Apart from this, a revival of cultural traditions and celebrations of the mobile lifestyle, via setting up institutes like CHIPA (Changthang Institute of Performing Arts) which will become the flagbearer of the Changpa culture. These sorts of interventions eventually can help the youth to feel, experience and celebrate their identity.

VISION 2

Ladakh as a design leader for pastoral & pashmina products

The vision is to make Ladakh a design leader for pastoral products (including pashmina products) and their global distribution. This will ultimately lead to textile innovation and large-scale yet ecologically mindful manufacturing of pashmina products. It envisions the creation of entrepreneurship and innovation opportunities to empower youth and existing business ecosystems to thrive and become self-sustaining.

To sustain this vision, the focus should go beyond developing the craft, to improving livestock management practices and

increasing and better managing pasture and range lands available to the pastoralist community. The current land available already seems to be facing immense pressure.

Interventions to make Ladakh a design leader in Pastoral and Pashmina products:

In 2050, for Ladakh to sustain pashmina and pastoral enterprises and build successful pastoral business models, what is needed is regional community hubs to create entrepreneurship and innovation opportunities for enterprises to set up in Changthang. Additionally, there is a need for creation of community hubs that support the mobile lifestyle of the herder and systems that create opportunities for youth.

VISION 3

Community owned rangelands

The dominant feeling currently among the community is that of a lack of agency over the governance of landscape and land use. While they have access to the landscape, and customary rights over certain pasturelands, the decision making does not fully lie with the community. The vision for community owned rangelands would further bolster the pride in being a changpa community member, by enabling the community that resides within the landscape to decide over what is best for the landscape and the community.

Interventions to enable community owned rangelands:

Improved youth engagement and stewardship towards Changthang will help address the issues of out migration, and enable better local decision-making. Some ideas to support this intervention would be to create fellowships for youth to understand the landscape better, create opportunities for the community to take ownership of the rangelands by applying for CFR(Community forest rights) under the Forest Rights Act.

VISION 4

Nostalgic futures of culture, community & integrated landscapes

The vision also encompasses a nostalgia around futures of culture, community and integrated landscape. It tries to revive the connection between the community and the land by seeing the landscape and its people as one entity. The nostalgia is also about the ancient nomadic practices and the relationship with Tibet, flow of trade and availability of a wider range of pasturelands. One of the ways to make it possible to incorporate the past glory in the future is reinstating of historical pastures and migratory routes.

Interventions to realise nostalgic futures of culture, community and integrated landscapes:

It will be possible through international knowledge sharing, appreciation and celebration of nomadic culture through festivals, sports events and educational programs. This vision requires forming a curriculum rooted in the culture and values of the Changpa community with focus on studying and understanding the lives of nomads.

VISION 5

Moving community hubs that support the nomadic lifestyle of the herders

In order to support the mobile lifestyle of herders, there has to be mobile community hubs that move along the herders, which have improved facilities for healthcare, education, livestock management and winter

infrastructure to support the nomadic lifestyle of the herders.

Interventions to realize the vision for moving community hubs that supports the nomadic lifestyle of the herders.

There is a requirement of school infrastructure that aligns to the Changpa way of nomadism where schools follow wherever the herders go. It also requires creation of micro - communities with basic infrastructure and essentials like medical facilities including mobile veterinary and human healthcare units, mobile schools and solarised rebo to make life easier for the herders. Along with it, the incorporation of innovative ways in the current methods of herding is suggested to employ technology in tracking and monitoring of livestock, like use of GPS for tracking of yaks, and drone shepherding. There can be use of mechanised livestock-pens and automated machinery to feed fodder to build pastoralist infrastructure that supports innovative herding practices.

VISION 6

Regional community hubs have created entrepreneurship & innovation opportunities

The representation of the Changpa community in the decision making is limited

and the futuristic vision for the governance of Changthang is the one where the people have autonomy and agency over decision-making in the usage of land. There needs to be a bioregional approach towards governance of the landscape, efforts to improve accessibility, and bolstering multi-stakeholder decision making.

Interventions for regional community hubs to create entrepreneurship and innovation opportunities:

There needs to be a bioregional approach towards governance of the landscape and efforts to improve accessibility and creating ways for multi-stakeholder decision making. Apart from this it would mean an increased participation in decision-making processes for the rangelands, which requires the creation of mobile centres of governance, and ways to integrate the mobile lifestyle into existing administrative structures. This could take the form of moving offices and desks that accompany the seasonal migrations.

VISION 7

Peaceful co-existence with multiple species

2050 Changthang will be a place of peaceful coexistence with multiple species. This vision imagines a future where there is natural balance between the various species existing in the region and including and perhaps most centrally, improved human - wildlife interaction. It imagines Changthang as a place where people and ecology both flourish together, rather than being separated. There is a balance between development and biodiversity.

Interventions to enable peaceful co-existence of multi-species:

A key intervention to enable peaceful co-existence of multiple species is to increase available pasturelands. This is particularly important as whatever remains of available pastures, their quality is reducing particularly as climate change is exacerbating impact on pastures, alongside land being taken away by government authorities like the military. Tree planting drives add to loss of available pasture lands. Besides, another intervention is to increase native plant nurseries, particularly as these are limited and with reduction in pasture particularly due to climate change, native plant nurseries will be important to ensure pastures are maintained or even increased. This is particularly important for improving populations of range-restricted and declining species such as the Tibetan *Gazelle Procapra picticaudata* who seem to be rather selective in their foraging behaviour, preferring *Ceratoides latens* - nurseries of which can help improve native plant pastures.

VISION 8

New Age Pastoralism

Changthang will become a model for new-age pastoralism. In this vision, there are new and innovative ways that have been discovered to improve pastoralist lives. Pastoralism as we know it today will be transformed yet retain its importance as an important land use and cultural asset. This vision sees a transformative change in how pastoralism is done, which is intrinsically linked to the vision of having mobile community hubs that support the mobile lifestyle of herders while also promoting regional entrepreneurship and innovation opportunities. This vision sees an integration of science in agriculture and pastoral practices. Collectively, all of this feeds back into the vision of augmenting pride in being a Changpa.

Interventions for a new age of pastoralism:

For the emergence of a new age pastoralism in Chanthang, the integration of science in

agricultural and pastoral practices is crucial. This will include interventions that integrate culture and appreciation of ecology as a means of revenue generation. This can be championed by building and setting up locally relevant institutes. For instance, the establishment of a progressive rebo system with special solarized provisions for the winter can make the life of herders easy. Social, technological innovations leading to ease in adaptability like a revolutionary water harvesting technique will be beneficial in sustaining pastoral lives. An important aspect of this is improved and scalable models of local feed, especially during the crucial winter months for the Changpa herders. A key to achieving this vision is establishment of international knowledge sharing to learn and implement novel interventions and also build appreciation. Another important action is to build grassland management committees that work on policies for their own grasslands, especially reducing the emphasis on unscientific tree planting. Changpa herders participating as key research members in better understanding their own systems alongside having improved healthcare for both livestock and herders are important aspects of this vision.

VISION 9

The landscape in Ladakh is stable and undisturbed

Given the current direction of unsustainable and unplanned development, increase in tourism, cordoning of parcels of lands, and changing climatic conditions, could have severe consequences for the ecology of the landscape. The vision that emerged is in 2050 the landscape could have stabilised, with enough strength to restore and maintain itself into the future. In this vision, destructive developmental activities such as non-local ways of development are reduced.

Interventions for the Landscape in Ladakh is stable and undisturbed.

The first step in working towards this vision would be to really understand the carrying capacity of the landscape, this would help in creating strict regulations that would help prevent straining the landscape. Considering that this is an ecologically sensitive landscape with deep socio-cultural history, the safe-guarding of land use and maintaining custodianship should be with the people of Ladakh. This measure would help in ensuring new infrastructure development undertaken would be ecologically sensitive. It is also advocated for exploration of alternate income avenues like agriculture, organic systems, and localised tourism.

VISION 10

Free of stray dogs in Ladakh by 2050

Stray dogs have slowly become a menace in both urban and rural areas. There have been noted issues of attacks by dogs on humans, livestock and wild animals. The vision to move towards a stray dog free Ladakh for 2050 comes from this perspective. In this vision, Ladakh in 2050 will be free of stray dogs and the various social-ecological issues that create in today's Ladakh.

Interventions for free of stray dogs in Ladakh by 2050.

One of the key issues that have led to the increasing population of stray dogs in Ladakh is improper waste management practices, which have resulted in ample scavenging opportunities across the landscape. The interventions suggested would be to create a better waste management system, across urban, rural and military areas. Another key intervention that could help reduce the stray dog population would be to have civil society groups coming together to negotiate, build awareness, and provide guidance on different strategies that could work towards a stray dog free Ladakh.

VISION 11

Income from pastoral livelihoods is seen as lucrative & prestigious

This vision hopes to change the perception of pastoralism altogether, within the community and beyond. It speaks towards making pastoralism a lucrative and a prestigious career option for the youth. It dreams of creating a world where pastoralists are recognised for their knowledge, for the services they provide and see being a pastoralist not as the last option but the first choice.

Interventions for Income from pastoral livelihoods to be seen as lucrative and prestigious:

Some of the interventions that were proposed to make this vision a reality was first and foremost, create a bachelors of science or an equivalent course for shepherding. A recognised degree or a formalised course, would make this seem as a more lucrative opportunity. This could be combined with other interventions such as building out better livestock management practices. Concurrently, while a new curriculum is developed for a formalised shepherding course, there also needs to be a contextual educational curriculum that is developed for school aged children. The curriculum should include aspects of traditional ecological knowledge, vocational skills, topics related to pastoral lives, and trans-border histories of the landscape. Such interventions will bring appreciation and recognition to the pastoralist community, and further institutionalising the role could add prestige to the position.

VISION 12

Agency over the decision making for the landscape & land use

This vision sees a Changthang where the local Changpa herders hold the agency over the decision making for their landscape and land use. Historically and even in contemporary times, Changpa herders have been at the receiving end of policies and action from the outside, not only marginalizing them but also crowding out their knowledge systems and ways of thinking in making the most contextually-appropriate decisions of their own landscapes.

Interventions for agency over the decision making for the landscape and land use:

To achieve this vision, would mean taking key steps in decentralization of decision-making and governance and building a meaningful bioregional approach to governance; one that involves Changpa community members at its core, especially increased participation from women and youth. This will need improved access, of the often remote-dwelling, Changpa herders to multi-stakeholder decision making platforms. All of this can only be made possible when there is better coordination between multiple stakeholders to address issues holistically. For instance, different government departments might have varying and contradictory policies for Changthang. As an example the Wildlife Department might want to increase protected areas in the region and restrict herder access, whereas the sheep husbandry department would likely want an increased land use with livestock. Therefore, to ensure synergistic policies and actions, we need to develop platforms for more coordination in decision-making between stakeholders.



Interventions Going Forward

Figure 9. Participants undertaking group activity to define the interventions needed in H2.

Using the H2 approach (Fig. 9) of the 3 Horizons principle the groups identified the necessary interventions (table 2) needed to create pathways connecting the challenges with the vision and use them as markers while designing and implementing projects and policies concerning the landscape of Changthang.

Participants were encouraged to contribute ideas under each horizon, exploring what should be protected and maintained, what should be phased out, and what should be created or scaled up to achieve the collective vision.

This was analysed by using an H-positive / H-negative filter:

H-positive elements are current systems and practices that should be strengthened or carried forward into the future. These might include strong community networks, traditional knowledge systems, or existing governance structures that already align with the shared vision.

H-negative elements are those that no longer serve the community or landscape and should be transformed or replaced over time. Identifying these allows stakeholders to discuss whether these elements can be reformed, replaced with more sustainable alternatives, or phased out entirely.

The approach followed the H positive and H negative distribution to classify systems and methods to be carried forward in achieving the vision, as well as, pointing out areas and systems to be improved upon and processes that need innovative interventions to be relevant for the future.

The major areas of improvement identified and the subsequent intervention needed are highlighted in table 2.





FOCUS AREA	GOVERNANCE	PASTORALISM	CLIMATE & ECOLOGY	LIVELIHOODS	EDUCATION & YOUTH	MOBILITY & ACCESS	WASTE & TOURISM
Priority	<div><div>1.</div><div>Establish village-level planning bodies</div></div> <div><div>2.</div><div>Legal recognition of community land rights</div></div> <div><div>3.</div><div>Build cross departmental coordination platforms</div></div>	<div><div>1.</div><div>Invest in breeding infrastructure, vet care, mobile hubs</div></div> <div><div>2.</div><div>Develop pashmina cooperatives</div></div> <div><div>3.</div><div>Introduce insurance and subsidies</div></div>	<div><div>1.</div><div>Monitor pasture health scientifically</div></div> <div><div>2.</div><div>Reintroduce native species</div></div> <div><div>3.</div><div>Integrate ecological indicators in planning</div></div>	<div><div>1.</div><div>Support Changpa youth entrepreneurs</div></div> <div><div>2.</div><div>Promote agro-pastoral alternatives</div></div> <div><div>3.</div><div>Develop ecotourism and renewable energy enterprises</div></div>	<div><div>1.</div><div>Launch Changthang-specific curriculum</div></div> <div><div>2.</div><div>Promote cultural festivals</div></div> <div><div>3.</div><div>Create mentorship and training opportunities</div></div>	<div><div>1.</div><div>Reinstate traditional migratory routes</div></div> <div><div>2.</div><div>Develop infrastructure suited to nomadic life</div></div>	<div><div>1.</div><div>Mandate waste protocols in army camps and tourism zones</div></div> <div><div>2.</div><div>Support decentralized waste tech</div></div> <div><div>3.</div><div>Limit tourist flows via carrying-capacity assessments</div></div>
Vision To Be Achieved	<div>Agency over the decision making for the landscape and land use.</div> <div>Community owned rangelands.</div>	<div>Moving community hubs that support the nomadic lifestyle of the herders.</div>	<div>The landscape in Ladakh is stable and undisturbed.</div>	<div>Regional community hubs have created entrepreneurship and innovation opportunities.</div> <div>Income from pastoral livelihoods is seen as prestigious and lucrative.</div>	<div>There is pride in being a Changpa.</div>	<div>Moving community hubs that support the nomadic lifestyle of the herder.</div> <div>There are new innovative ways that have been discovered to improve pastoralist lives.</div>	<div>Balance between development & biodiversity.</div>
Suggested Stakeholders	<div>LAHDC, Gobas, community</div>	<div>Department of Animal Husbandry, Department of Sheep Husbandry, LAHDC, ACPGCMS</div>	<div>NGOs, Ecologists, Department of Sheep Husbandry, LAHDC</div>	<div>Department of Tourism, Department of Industries & Commerce, LAHDC, Youth Groups</div>	<div>Department of Education, Department of Tourism, LAHDC, NGOs, community and youth</div>	<div>LAHDC, PWD, community, Department of Health, Department of Education</div>	<div>Department of Tourism, Municipal Committee Leh, LAHDC, Indian Army, PPP enterprises, NGOs</div>

Table 2. Priority interventions mapped to focus areas, stakeholders involved and visions they link to

Interventions to achieve the visions

The interventions which tackle specific challenges and help achieve the visions.

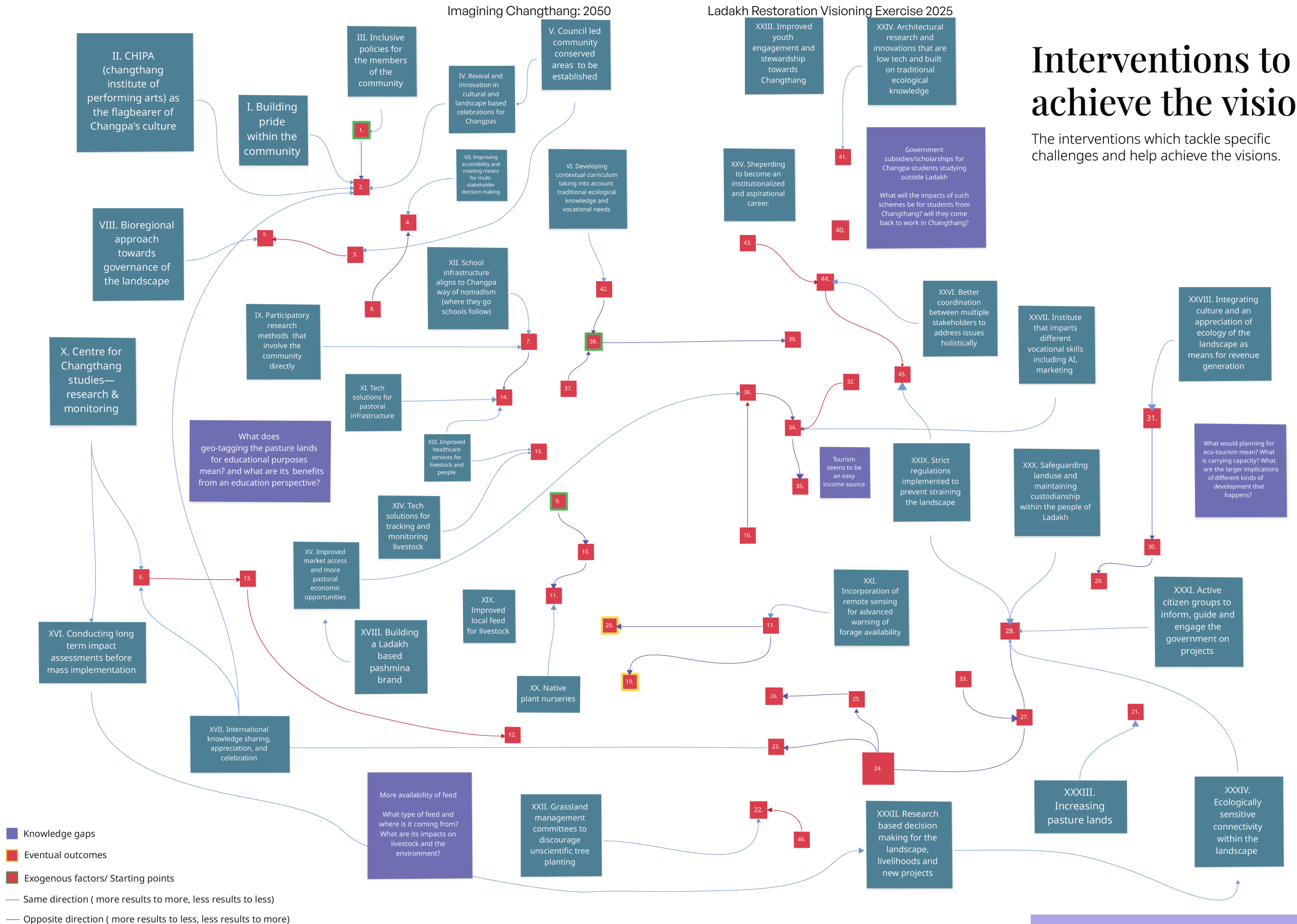


Figure 10. An illustration connecting the interventions with the challenges identified

One of the ways to achieve the desired outcome from policy planning and developmental roadmapping is to conduct long-term impact assessment before mass implementation of new methods, policies and ecological interventions. Impact assessment of such kind requires availability of research material on the ecological nuances of the region, its culture, people - nature relationship and the resilience of the environment in general. The first step towards this, as proposed, is the setting up of a centre for Changthang studies for research and monitoring. The centre will act as a research hub for scientific endeavours, a platform for synergizing social sciences and ecology in the context of Changthang.

Much like the challenges, to be sure about the effectiveness and appropriateness of certain interventions there are key knowledge gaps that exist. Firstly, it is important to answer what exactly does geotagging of pastureland for education really mean. Geotagging was discussed as a means to demarcate pastures as there is no formal and digitized knowledge of their extent and use.

Secondly, winter feed is a key intervention that was delimited, however question remains of what is the best feed, where should it come from and what are its impact on the livestock and the environment. Thirdly, while tourism seems to be a pull factor for youth away from herding, is it really an easy and sustainable source of income? Moreover, exposure beyond Changthang was a key intervention

highlighted, however there is a knowledge gap in understanding what the impact of such schemes be. Will Ladakhi youth truly come back to Ladakh once they are trained far away. Lastly, we need to interrogate what planning for eco-tourism means. Is there a carrying capacity of tourism that can be calculated and used for regulations? What are the implications for Changthang of different kinds of development?

Conclusion

The Ladakh Restoration Visioning Exercise 2025 reaffirmed that the ecological restoration of Changthang is inseparable from the restoration of cultural identity, community agency, and sustainable livelihoods. The vision developed by participants recognised the deep interconnections between rangeland health, traditional pastoral practices, biodiversity conservation, climate resilience, and the socio-economic wellbeing of the Changpa people. In this vision, the landscapes are not only ecologically intact but are also stewarded by the Changpa community themselves.

Achieving these visions will require coordinated action across governance, livelihoods, ecology, education, and infrastructure, as well as the systematic closing of critical knowledge gaps. The visioning document is made to act as a tool to define further steps and actions needed to realise the vision articulated during the visioning exercise. The vision document is not intended to be a rigid template to follow and execute, rather an inspiration of ideas and

collective thinking to further refine and act upon in a context-specific manner. It is also important to recognise the limitations of this exercise and document. While the process brought together a diverse group of stakeholders, few full-time herders participated, so the most direct voices from the landscape were underrepresented. This limits the depth of insight into the day-to-day realities of pastoralism, as well as the lived challenges and aspirations of those most affected by policy and ecological changes. Moreover, the three-day format allowed for visioning but limited deeper exploration of specific technical issues, which would require subsequent discussions in the future to form an evolving document. Greater involvement of herders, women from herding households, and younger members of the Changpa community would help ensure that future visioning exercises are more inclusive and representative. So, by recognising these gaps, this document is positioned as a starting point rather than a definitive blueprint.

Acknowledgement

We extend our sincere gratitude to the UT Ladakh Government and its various departments - Animal Husbandry, Sheep Husbandry, Wildlife & Forest, Horticulture, Tourism and others, for their active engagement and valuable contributions throughout this process. We are especially grateful to the Ladakh Autonomous Hill Development Council, Hon'ble CEC Adv. Shri Tashi Gyalson, Executive Councillors, and Councillors from Changthang for their continued support and encouragement. We are also thankful to All Changthang Pashmina Growers Cooperative Marketing Society for their support and contribution.

Our heartfelt thanks go to the herder community in Rupsho, Tso Kar, and across Changthang, whose insights, experiences, and aspirations formed the foundation of this visioning exercise. We also appreciate the participation of the youth, local leaders, researchers, other NGOs and civil society representatives, whose energy and ideas enriched the discussions and helped shape a

shared vision for Changthang's future. We gratefully acknowledge Circular Bioeconomy Alliance (CBA) for funding this exercise and for its role in conceptualising and supporting the design of the event.

The restoration exercise was led and coordinated by Ms. Manjeet Yadav (NCF), Mr. Arjun Singh (ERA), Shri Thinles Nurboo (LAHDC) and Dr. Munib Khanyari (NCF) with logistical support from the Deskitsal Hotel staff in Leh. Ms. Dawa Dolma, Ms. Parul Daga, Mr. Srijan Dangwal, Dr. Munib Khanyari and Ms. Akshata Anand were facilitators for the various sessions. Mr. Arjun Singh, Ms. Manjeet Yadav, Ms. Aditi Bajpai and Dr. Munib Khanyari worked on synthesizing information and making interlinkages for Challenges, Interventions and Visions. They were also responsible for the working of the report, with inputs from the participants. Ms. Manini Bansal illustrated the Challenges, Interventions and Visions with help from Ms. Manjeet Yadav. Mr. Vidit Jain designed the final report.

Annex 1 | 3 Horizon Framework

GROUP 1

Group names
To get started, please add your name to a post-it note below.

Anjumand	Stanzin Chuskit	Sunetro Ghoshal
Thinle	Dietrich	Chamba Tsetan
Norbo Dolma	Tsering Angchuk	Diyajyoti
Jordan	Faisal Abdu	Vipry Dhasmana
Nawang Yangshan	Parul	

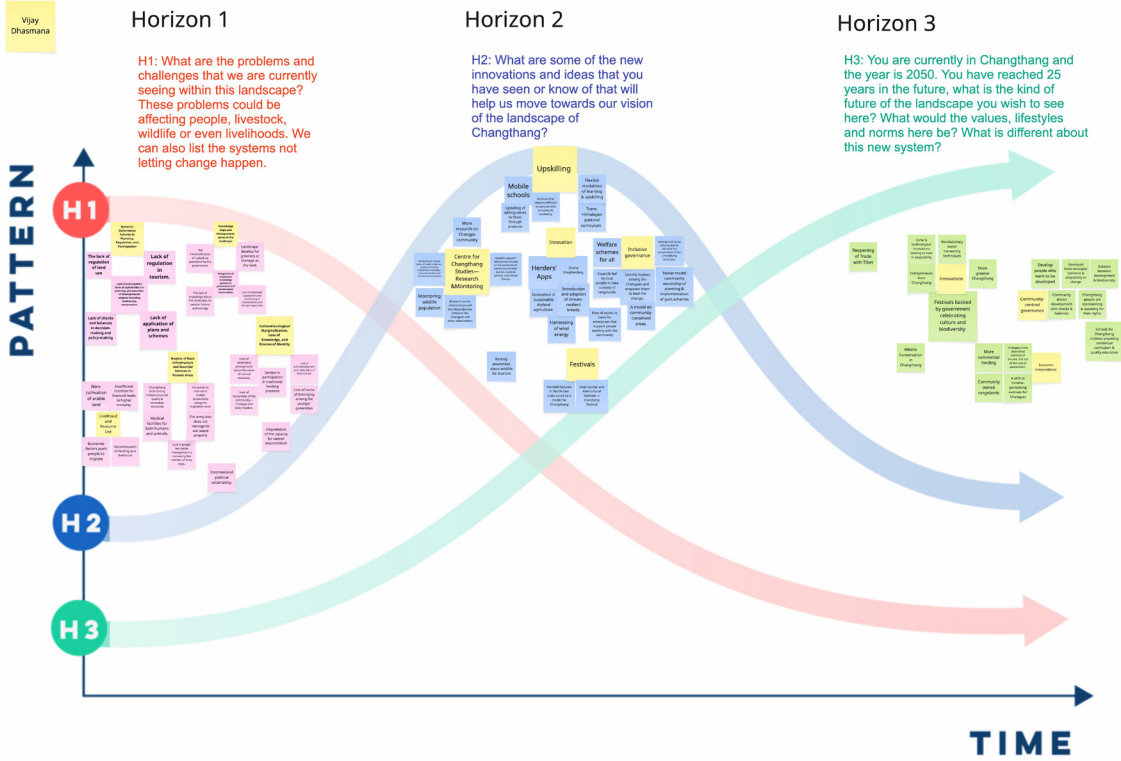
Scope for our work today:

OF:
The future of the Changthang landscape, over the next 25 years

FOR (Who are we?):
People representing different industries, departments, non-governmental organisations, people from the Changpa community and citizens who have work in Changthang.

FOR Purpose (How will we use it?):
To develop strategies that will help take proactive measures to ensure that our landscape does not degrade but instead flourishes so that future generations have access to the same and more opportunities

- Facilitator Instructions:
1. Restate your topic of enquiry by reading the scope to the group.
 2. Ask your team the trigger question, and give them 1 minute to write down their initial thoughts.
 3. Then, write one idea from each person in CAPITAL LETTERS on individual post-its. 8 words maximum.
 4. Go around the group until you have about 10 points, or more.
 5. Ask the team if anything is missing.



GROUP 2

Group names
To get started, please add your name to a post-it note below.

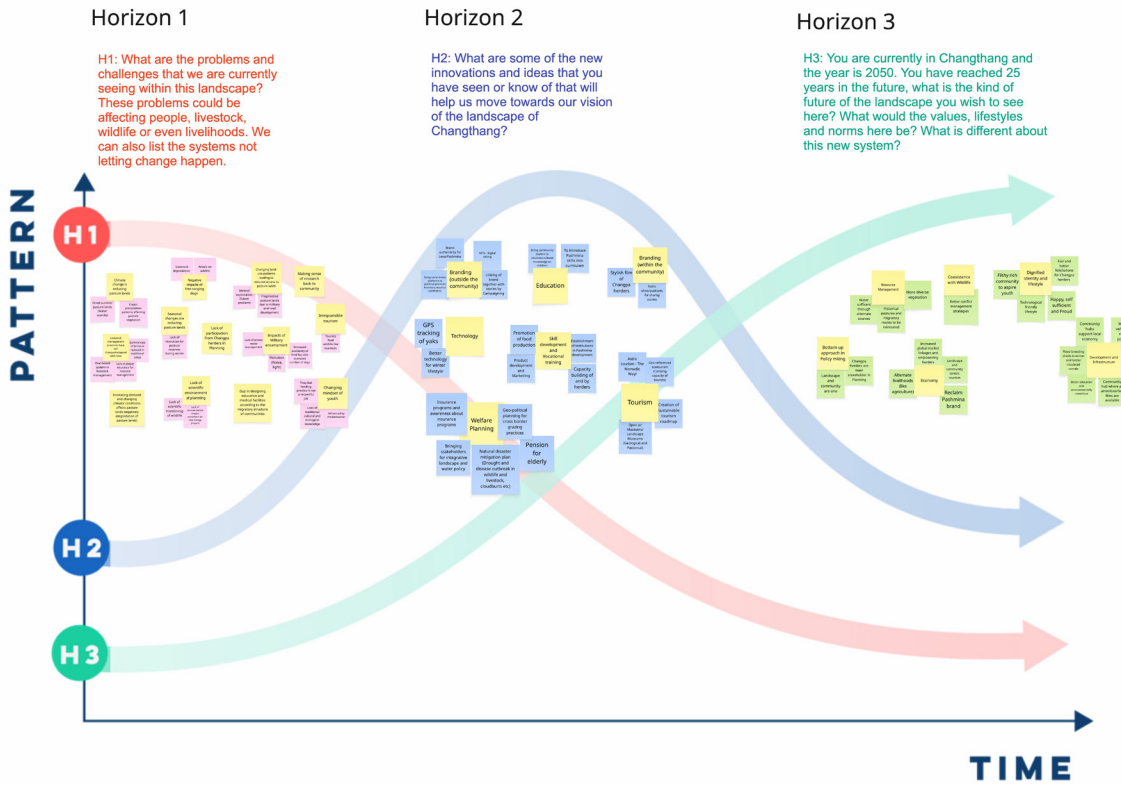
Scope for our work today:

OF:
The future of the Changthang landscape, over the next 25 years

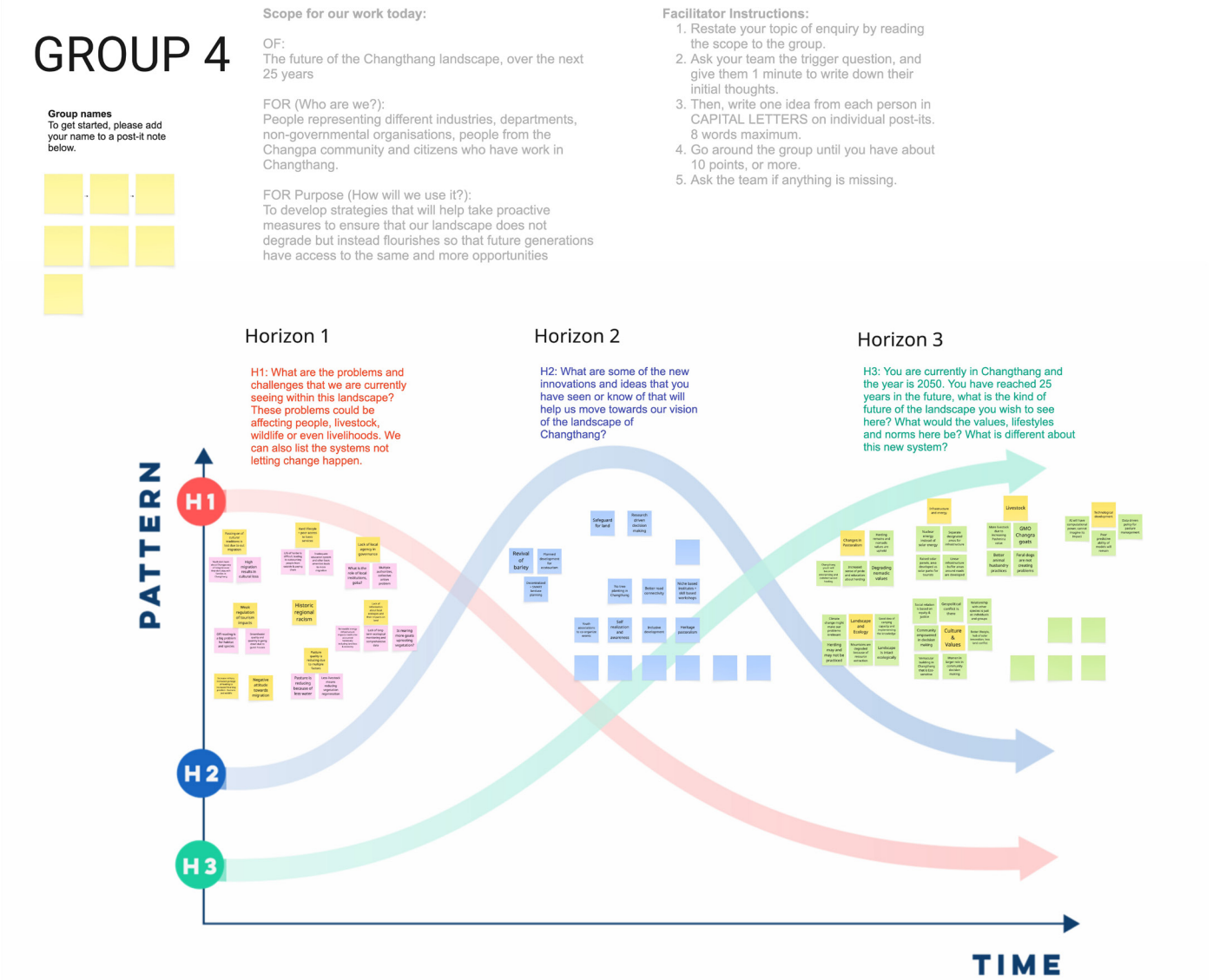
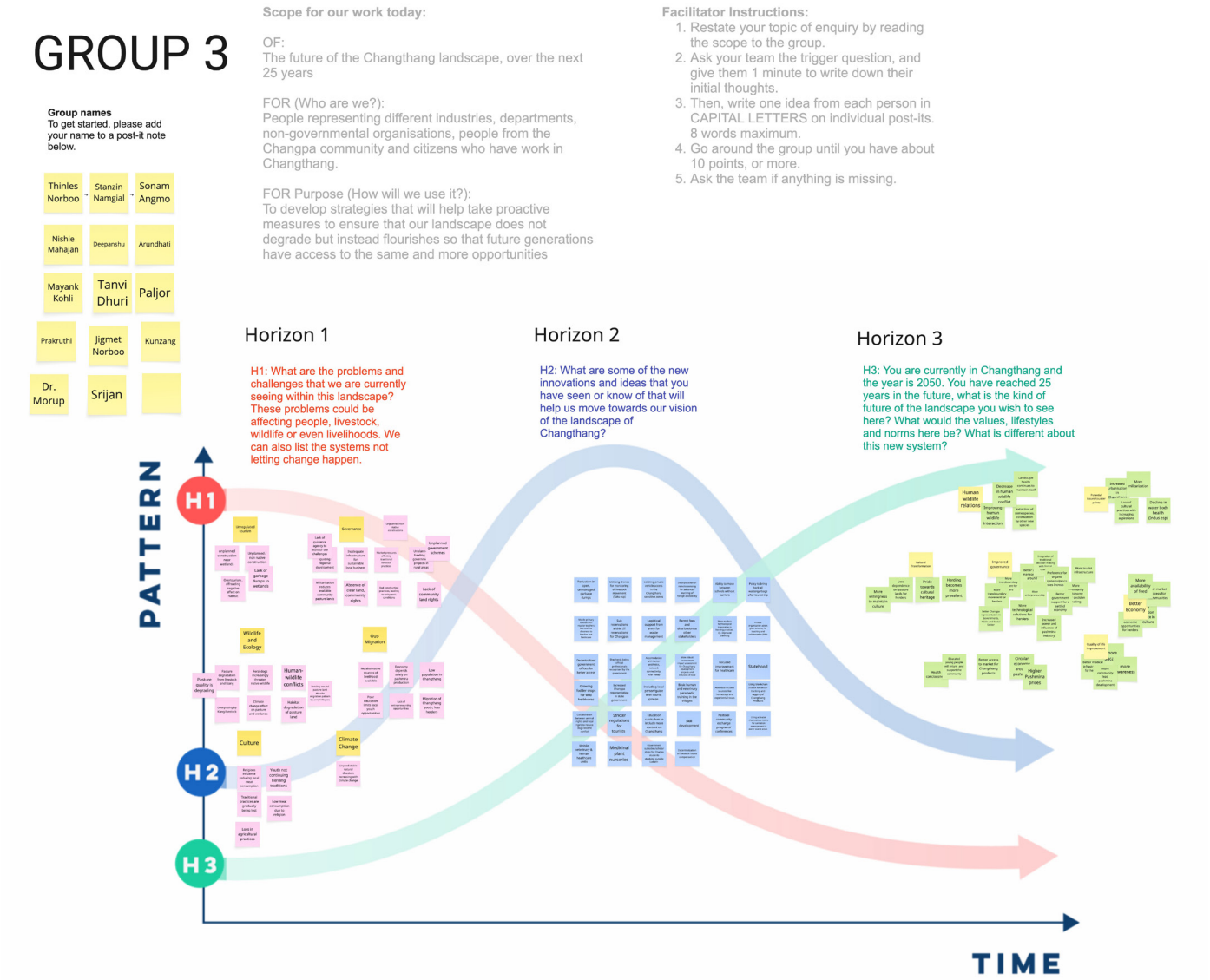
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 5. Ask the team if anything is missing.



Annex 1 | 3 Horizon Framework



Annex 1 | 3 Horizon Framework

GROUP 5

Group names
To get started, please add your name to a post-it note below.

Sidak Kaur	Deachen	Natasha
Niaz	Rinchen Angmo	Sonam Angmo
Tanmayi	Sonam Gyummet	Arif
Ajay	Stanzin Norbu	Tashi Gyalson
Jiwan Kaur		

Scope for our work today:

OF:
The future of the Changthang landscape, over the next 25 years

FOR (Who are we?):
People representing different industries, departments, non-governmental organisations, people from the Changpa community and citizens who have work in Changthang.

FOR Purpose (How will we use it?):
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Facilitator Instructions:

1. Restate your topic of enquiry by reading the scope to the group.
2. Ask your team the trigger question, and give them 1 minute to write down their initial thoughts.
3. Then, write one idea from each person in CAPITAL LETTERS on individual post-its. 8 words maximum.
4. Go around the group until you have about 10 points, or more.
5. Ask the team if anything is missing.

Horizon 1

H1: What are the problems and challenges that we are currently seeing within this landscape? These problems could be affecting people, livestock, wildlife or even livelihoods. We can also list the systems not letting change happen.

Horizon 2

H2: What are some of the new innovations and ideas that you have seen or know of that will help us move towards our vision of the landscape of Changthang?

Horizon 3

H3: You are currently in Changthang and the year is 2050. You have reached 25 years in the future, what is the kind of future of the landscape you wish to see here? What would the values, lifestyles and norms here be? What is different about this new system?

PATTERN

TIME

Annex 2 | Workshop Agenda

2nd June

Setting
the Context

9:00	Registration
10:00	Welcome Address
10:30	Changthang - A Landscape Perspective by Devayani Khare
11:30	Tea break
12:00	Flora of Ladakh by Dr. Konchok Dorje
12:30	Lunch
1:30	Introduction to the Visioning Exercise by Arjun
2:15	Group Activity - Mapping the challenges within the landscape
16:00	Tea break
16:30	Summing up some of the challenges in Changthang by Stanzin Norboo
17:00	Alpine Grassland Restoration and Tree Planting in the Himalayas: Policies, Practices, and Pathways Forward by Pushpendra Rana
18:00	Closing

3rd June

Familiarisation
with the
landscape

Field trip to Tso Kar to understand the Changpa community and their relationship with the land.

4th June

Forming of
the vision

9:00	Welcome back
9:15	Ecological Restoration for drier landscapes by Vijay Dhasmana
10:15	What will we be doing in this landscape in 2050?
10:30	Tea break
10:45	Group Activity - Understanding different perspectives of the needs of the future
13:15	Sharing our Vision
13:30	Lunch
14:30	Group Activity: Innovations & Ideas that will help achieve our vision
15:30	Group Activity: What are the missing pathways?
16:30	Tea Break
17:00	Group Activity: Building the story of the envisioned future
17:30	Sharing the story of the envisioned future
18:00	Closing
19:00	Dinner

S. No	Name	Organisation & Designation
1	Prof. Konchok Dorje	Authors: The Plants of Ladakh
2	Tsewang Namgyal	Director, SLC-IT
3	Niaz Khan	BNHS
4	Chamba Tsetan	Centre for Pastoralism
5	Lobzang Wangtak	Navikarana, Zanskar
6	Dr. Stanzin Namgyal	Professor, EJMC
7	Norbo Dolma	Lhagsam trust
8	Dawa Dolma	Journalist
9	Padma Dolker	WWF
10	Padma Rigzin	Anthropologist
11	Sonam Gyurmet	Thiksey Culture & Welfare Society
12	Stanzin Norboo	SECMOL
13	Sonam Angmo	SAVE Changthang
14	Rinchen Angmo	SAVE Changthang
15	Tsering Namgyal	SAVE Changthang
16	Stanzin Norboo	Ladakh Drayangs
17	Elijah Gregan	Professor, Botanist
18	Tashi Gyal	Ex- President, SAVE Changthang
19	Amina	Looms of Ladakh
22	Jeevan	Mantra Himalayas
21	Desal	Reach Ladakh
22	Faisal Qadir Abdu	Recykal
23	Dr Abbas	Dy. Registrar Cooperative DRC, Leh
24	Dr. Asif	Dept. of Sheep Husbandry
25	Dr. Morup	District Sheep Husbandry Officer
26	Sh. Thinles Norboo	Councillor Kungyam
27	Ms Kunzang Wangmo	Director, Horticulture Dept.
28	Sh. Tobdan	Sheep Husbandry Dept.

29	Dr Firoz	Skaust
30	Dr Sonam Dolkar	Animal Husbandry Dept.
31	Dorjay Stanzin	Pashmina plant
33	Devayani Khare	The Geosophy Newsletter
33	Nishie Mahajan	Researcher
34	Pushpendra Rana IFS	Himachal Pradesh Forest Dept.
35	Sunetro Ghosal	Stawa Ladakh
36	Vijay Dhasmana	The Rewilders
37	Iftikhar Ul Zaman	Wildlife Warden, HQ, J&K
38	Abhishek Ghoshal	WTI
39	Abeer Gupta	Achi Association India
40	Tanmayi	Rain Matter Foundation
41	Surya	Acres of Ice
42	Deepanshu	Acres of Ice
43	Arundhati	NCF
44	Srijan	NCF
45	Sidak Kaur	NCF
46	Akshata	NCF
47	Divyajyoti	NCF
48	Mayank Kohli	NCF
49	Charu Sharma	NCF
50	Ajay	NCF
51	Thinle	NCF
52	Herman Ramesh	NCF
53	Nila Balaji	NCBS - Student
54	Aryan Patel	NCBS - Student
55	Tanvi Dhuri	NCBS - Student
56	Parul	ERA
57	Arjun	ERA
58	Natascha	Austria

59	Dietrich	Germany
60	Nayan	Travelling Telescope
61	Paljor	Global Shapers Community
62	Kavya	Global Shapers Community, Tar
63	Arjumand	BNHS
64	Marmagya	BNHS
65	Prakruthi GM	BNHS
66	Vaijayanti	Educator
67	Sonam Angmo	Student
68	Stanzin Chuskit	Student
69	Stanzin Nesal	Student
70	Jigmet Norboo	Rupsho Member
71	Tashi Dorje	Rupsho Numbardar
72	Rinchen Angmo	Student
73	Nawang Stobdan	Pashmina Industry
74	Stanzin Shaydup	Student
75	Stanzin Jordan	Ladakh Basket
76	Tashi Morup	Ladakh Arts & Media Organisation
77	Tsering Angchuk	Kharnak
78	Arif Azir	Greenhub Fellow
79	Kunzang Dorjay	SAVE Changthang
80	Dechan Wangmo	LEDEG
81	Padma Lhamo	Ladakh University
82	Tashi Yangzom	Ladakh University
83	Manu	WWF
84	Preet	WWF
85	Karma	NCF
86	Padma Gyatso	NCF
87	Tsering Yangskit	NCF
88	Nawang Yangchan	NCF