

# ENVISIONING A FUTURE IN LIGHT OF CLIMATE CHANGE

## Diverse livelihoods for improved climate change adaptations

Tibetans in Shangri-la county have developed diversified livelihoods, combining agriculture, pastoralism, gathering, ecotourism, and wage labor in the transportation industry and tourism-related business. Thus, they now count on several sources of income which facilitate adaptation to drought and water shortages.

## Harnessing roads for climate resilience

The Tibetan people have skillfully harnessed the road infrastructure, originally created as a government policy to transport timber across the mountains. These facilities have undergone a transformative shift, emerging as a powerful tool for climate change adaptation and creating new avenues for the survival and prosperity of the local Tibetan community.

## UNFORESEEN BENEFITS OF INFRASTRUCTURES FOR LOCAL COMMUNITIES

Tibetan communities have a long history of adapting to the region's harsh geography, which has allowed them to quickly integrate new infrastructure, such as the local road network, into their livelihoods. In view of the complexity of life in vulnerable communities, policy makers should exploit the potential of new developments to aid local adaptation to climate change.

## LOCAL PARTNERSHIPS FOR GLOBAL CLIMATE CHANGE

Tibetan communities have demonstrated their ability to utilize their knowledge on climate change impacts to turn other drivers of change into an opportunity to reduce their vulnerability. Governments should always collaborate with local communities to leverage existing infrastructure and emerging economies in order to mitigate climate change, especially in rapidly transitioning communities impacted by the market industry.

## LEARN MORE



LICCI is a European Research Council (ERC) funded project aiming to bring Indigenous and local knowledge to climate change research. Visit the project website for more details and research results.  
[www.licci.eu](http://www.licci.eu)

Fieldwork conducted by: Zhuo Chen and other local assistants

Credit: Zhuo Chen

Project hosted by:



Research led by:



Funded by:



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Local Indicators of  
Climate Change Impacts



## Tibetan communities, Shangri-La County *Diqing Tibetan Autonomous Prefecture, China*



Tibetans from Shangri-La county traditionally live on agropastoralism and gathering. Villages are close to the Napahai Wetland Reserve and Shika Snow Mountain, where ecotourism has developed since the early 2000s. Local communities have adjusted to the widespread lack of water caused by climate change by blending their traditional livelihoods with the new opportunities brought about by tourism.

Credit: Horses for tourist in grass field at Shangri-La, China – CC BY- Nithid Sanbudit

## TIBETAN PEOPLE

With a population of over 6 million people, most of these communities practice Tibetan Buddhism.

Their cultural traditions and livelihoods are deeply rooted in their religious beliefs.



## ACTIVITIES



Ecotourism: Horse riding for tourists on the area.



Agriculture: Highland barley and gathering of matsukake fungi.



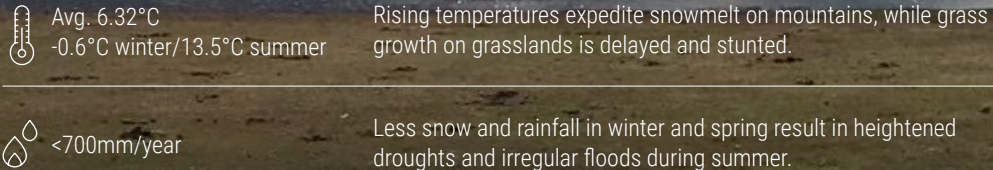
Herding: Yak and cattle. Decreasing transhumance.



# TERRITORY AND CLIMATE

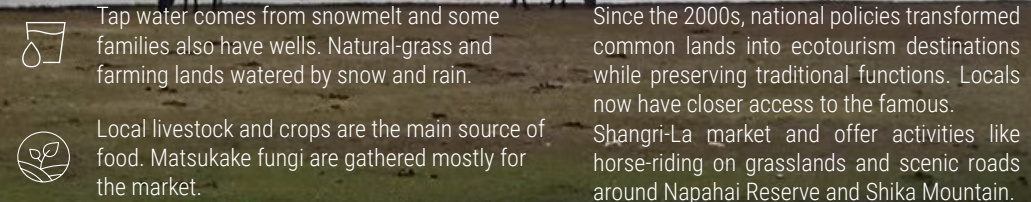
## Subtropical highland CLIMATE

### Changes in the climate



## ACCESS TO NATURAL RESOURCES

### Changes in the territory



## VOICES OF LOCAL KNOWLEDGE

The Tibetan people have a complex knowledge about climate change induced impacts and how they interact with traditional beliefs and market economy, including road infrastructure, transportation and eco-tourism industry. Through their voices, we have a better understanding of the biological and sociocultural effects of climate change.



Credit: Zhuo Chen

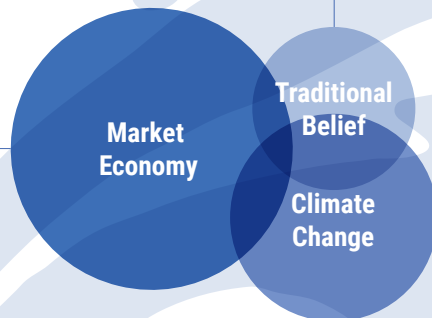
*"Some black pest fell down on the highland barley from air, like a pest rain. We have never seen such things in our lives, it's like the punishment from the deities."*

*"Transhumant used to be too hard. My son or my friend could drive all the things up the mountain for me within a half day. It's easy and very quick."*

*"Young people don't like working on farming or grazing. They prefer wage-labor work and looking for money and fortune in the downtown."*

*"There are too many tourists. They have dug up all the herbs on the grasslands. Those herbs used to be food for yaks and horses, but now they have no herbs to eat and their health is suffering."*

*"There are fewer matsutake in the mountains. Tourists and outsiders all come to pick them."*



Credit: Zhuo Chen



Credit: Zhuo Chen

*"it rains less when needed while rains more when we don't need rainfall."*

*"We can see the whole mountaintop was white when we were young, the snow on the top of the mountain would not melt even on summer days. But now it's only April, and you can see almost no snow there. It just doesn't snow."*

*"No rain, no grass, no fungi. highland barley seeds are smaller. The grassland is not green, we feel unhappy when we see it..."*



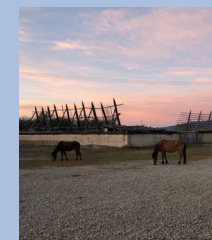
## IMPACTS ON LIVELIHOODS AND CULTURE



Credit: Zhuo Chen

### Transhumance on the road

Drier climate, land-use changes, and ecotourism policies have reduced seasonal transhumance, leading families to abandon it. The remaining few rely on road infrastructure for their nomadic lifestyle.



Credit: Zhuo Chen

### Embracing change, honoring tradition

Highland barley is still cultivated due to traditional beliefs, but land-use changes and water scarcity affect farming practices and force the villagers to adapt their planting schedules.



Credit: Zhuo Chen

### Transforming livelihoods open up new horizons

Villagers' shift to wage labor jobs eroded traditional farming and pasturing knowledge among the youth, but it diversified livelihoods and reduced vulnerability to drought and water shortages.