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Chapter I

Images from Beyond the Mountains

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Abstract: This chapter explores the changing landscapes, ecosystems, and cultures of Ladakh, as observed by Joanna Van Gruisen, a conservationist and wildlife photographer. Through vivid descriptions and photographs, the chapter provides a glimpse into the region's natural beauty and its ecological significance, particularly highlighting the brackish water lakes and diverse wildlife, including the black-necked cranes and snow leopards. The chapter also touches upon the impacts of tourism, climate change, and modern development on Ladakh's traditional nomadic lifestyle and fragile ecosystems. It underscores the importance of conservation efforts in preserving both the natural environment and the cultural heritage of the region, emphasizing the concept of "shifting baselines" and generational amnesia in perceiving environmental degradation.

Keywords: Ladakh, Conservation, Wildlife, Climate Change, Nomadic Culture

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I'm very honoured to be amongst such an august company and I appreciate the perspective behind this conference. I am going to present my observations on Ladakh on a few slides which is a place very close to my heart. I spent many years there long back and these images are from beyond the mountains because it is beyond the Himalayas. It's a small portion of the Ladakh region I'm planning to show. It's often thought of as very remote and arcane and unknown. But of course, that depends on your perspective. It's been a crossroad with a thriving trade and cultural interaction with Central Asia for centuries, although it's only been open for us for the last fifty years or so in terms of tourism and it is this sort of feeds into the theme of the presentation which is that of shifting baselines or generational amnesia in that. We think of it as remote and unknown, whereas actually, it was a centre of a thriving culture earlier. Here I just showed it to give you the perspective of where we're going, the long line down the middle.

This is the Indus region and on this side is the main Himalayan area and the Ladakh range and Karakoram on this side and this little purplish line are the up thrusts from the lakes that was formed when the plates first met and they give rise to these amazing steep jagged mountains inside some areas where the sedimentary rocks at the bottom of the sea have been thrust so much they're almost vertical and they make these wonderful, colourful also and extraordinary shapes. So it was actually in this area that I spent quite a lot of time. My talk today and images are only of the Leh district of Ladakh, which of course is a very small part of it and the Zanskar and Kargil area I don't know so well. My observations are not very expert and they are very modest. But as I mentioned, generational amnesia is something even in our lifetimes we forget what went earlier and because of the baseline shifts, what we think of as degradation our children think of as natural. So, it's quite important. I think what you're doing and what I'm trying to do today is just to give a little snapshot of how things used to be and discuss a little bit of the change that's happening. So, I think everybody can contribute to that, however modestly. The majority of my photographs are actually from the eastern part of the Ladakh, which I just find extremely beautiful. This is where it's the westernmost extension of

the Tibetan Plateau, which is the highest and largest plateau on earth. In the days when I was in Ladakh in the late 1980s, this was not open even for Indians and you couldn't go there without a permit. So, we had to get special permission and we couldn't go anywhere without a Major from the army escorting us. I soon realized that there were restrictions also because there was one time we were driving along and it was beautiful stripy rock pattern and I stopped to photograph it only to be hurriedly told that this was not possible, by the Major, because there was a bridge in the picture and bridges in India at that time were banned for photography. I looked around and I could see no bridge until he pointed out there was a very small two-foot by four-foot footpath plank across one small stream, but that was considered bridge enough to be bad from photography.

So that's how restricted the area was. But it's different from the rest of the Ladakh in that it's much more rolling hills and it's characterized by these wonderful brackish water lakes which are self-drainage lakes basically and wonderful wetlands which are extremely important ecologically. Little has been known about them but they are becoming increasingly important because of the consequences of global climate change as indicators as well as the repositories. They tend to be brackish because although they're fed by freshwater streams and glacial melt, the evaporation creates the salinity because they don't drain anywhere and they remain frozen much of the year. One of the biggest of these is, of course, Pangong which I'm sure everybody's heard of since recent happenings. This is at around 4300 metres and one of the highest lakes in the world and it's also very large. It's 150 kilometres long. One-third of that in India is 50 kilometres and about two-thirds in China, it's a slight sort of V shape. It's very saline, and highly alkaline, but it freezes also for three months of the year. It's got no fish and not a great deal is known about it, but it has very low biodiversity due to high salinity and also maybe because the nitrogen levels are apparently very low. This image is looking towards the Chinese side and this image is looking towards the Indian side. But since the days when I was there in the late 80s, it has been open to tourism and of course because of the 3 Idiots film it became very popular. A lot of tourists have started coming and staying near Pangong also, which could trigger a major change in the lake ecosystem. Already researchers are finding that biofilm formations are beginning to occur near some of the villages which is an assemblage of microbes in response to nutrients that are going into it. These are all things that one needs to be aware of the changes that are happening due to human interests.

As I was saying, these lakes are fed by glacial streams and like little inland seas because of the salinity of them, some of them, they've receded a little bit. Next to some of them, there

are some grassland areas and indeed even this one, which is, Tso-moriri, the looking from Korzok village. A small amount of cultivation can happen, otherwise most of this area it's too high for cultivating crops. As I'll show you most of the activity by the people is pastoralism and transhumance. This one is my favourite basin. This is the Shyok basin, which now has two distinct legs. The freshwater feeds into the more brackish water because of the springs. It keeps the water fresh on this side and then the stream is on the other east, which is consequence of the army in the area.

The tourists and their rubbish encourage the dog population and also increasing fox population. So they are, because they can't fly when they're having their chicks, they are increasingly in danger of being killed by the domestic predators. One of the other ducks, it's so important for us, the Brahminy duck. They nest on the cliffs so they're not so vulnerable, but they still have to reach the water and there is now a road between whether it typically nest and the lake that also presents a hazard. A better-known large bird that nests in these areas is the black-neck Crane. This is the western-most breeding population and they arrive in March-April and recently a study has found that they can be seen in twenty-two different wetlands and Ladakh and Sikkim are the only known breeding areas for the Cranes in India. Dogs can cause damage to the eggs and the chicks and that's something that needs to be looked out for, but they have been increasing and from about thirty-two birds in 2000, a total population in the 2014 survey that was done counted 112, which included 17 breeding pairs. Although there were only 8 fledged chicks, that's quite encouraging since people have been giving attention, WWF and others have done work in this area and so they have been increasing, which is very nice.

Just to introduce you to a few of the mammals of the area, this is the Nayan, the Great Tibetan sheep and it's the largest sheep in the world actually, the Himalayas have the highest angular density of all the mountain areas because India is at the confluence of two geographic zones, the Palearctic and the Oriental, although people think it's barren and empty. Actually, it's not at all. It has a very diverse community, both of plants and of wild species. They have been targeted hunting, especially by the army, when they first came in, but now there's much greater awareness. So, they are better protected, blue sheep, of course, are quite ubiquitous. It's not a true sheep, it's actually closer to a goat, but it grazes in summer when the grass is available and then in winter feeds on the shrubs and herbs. Second, it's an endemic Tibetan animal and it prefers rocky areas. It's a favourite prey of the blue sheep and it prefers steep slopes for escape.

Another sheep of the area is the Ladakh Urial. It prefers the rolling, gentle slopes and such a hilly terrain and rugged canyons with low elevation along the river valleys in the open areas because it's quite water-dependent, unlike the others. It needs to be near the river systems. And historically this was one of the first to go and when we were there in the 80s, it was an extreme danger. They've been hunted indiscriminately. Happily, again I can say now in 2020 and 2021 the numbers have come back and they are seen quite a lot now along the valley, which is lovely.

Another antelope in the area is the Kyang, which is the largest of the wild ass and this is only found in the Tibetan plateau. Now people will say that the Changthang area is overstocked with Kyang and it creates forest competition with livestock, but this may also just be, the erosion of people's tolerance. It's people's perspective on the competition changes with other factors apart from just the numbers of the species. It's closely related to, as in the Runn of Kutch and it used to be in the same family, but molecular studies now place it as a separate species. You find them also in the Changtang area, a lot in the river basin. But they are also on the slopes and they come down, especially around the Shyok area for falling and the rutting season in the summer. This is again the Shyok basin and these grassland areas are the winter grazing for the nomads of the area. But it's also the summer breeding area for this beautiful Kyang who hang around the lakeside and feed on the grass. This is a time for breeding and these males carve out a leg for themselves and then find females with which to mate with. It's a very good time to be there to watch the activities.

Amongst the predators, there are one of the little scenes is the Lynxes. I rather like this picture because the ear tufts of the lynx match so beautifully with the grass tufts so you can see how it can just disappear in the grassland without anybody noticing. The wolf is ubiquitous and is found in this area either singly or in small packs. And one of the more endangered animals is the wild dog. This species has been around for twelve thousand years. If you imagine it was there when the mammals were there. But it's still one of the least studied social carnivores in the world, and it also ranks as one of the most threatened. Recently, researchers have found that numbers in India, that's including this one and the planes may be as low as one or two thousand, which is seriously endangered.

The Snow Leopard is the other major predator in the area. Looking at some more of the prey species, this is the Marmot, the Himalayan Marmot. We have the long-tailed Marmot and Zanskari and the Himalayan Marmot in this area. They hibernate for nearly half the year and lose half their body weight or a third of their body weight. If you see them in September or

October, they look enormous and fat, they live in colonies and they're important prey for snow leopards and another small kind of wolves as well as golden eagles. You often see them sitting outside the hole and looking out for danger.

Another species that lives in the ground in this area are the Mouse-Hare or Pika. This is a Lagomorpha. That's the same family as the hare or rabbit and there are about eight species in Ladakh. You could call them ecological engineers. They're very adapted to the cold climate. They can't tolerate heat at all and in America they talk about them being a better indicator for climate change than even the Polar Bear because as soon as it gets warm, they can't survive. but they play a key role in the vegetation dynamics of these high-altitude ecosystems and they're also important prey for the smaller carnivores. They have very poor heat loss abilities which are why they can't tolerate the heat. Here they live in burrows but in the rest of the Ladakh, I just put this in to show that if you're very quiet and patient, you can get quite close to these little fellows. They're quite trusting.

This was when I was filming there in the 80s. But the rest of Ladakh, they live in cracks in the rocks and there's an interesting piece of thought, I wouldn't say it's fact because it's not been proved. But I'm sure many of you will have heard of Shilajit, which is an ayurvedic medicine it's been used for thousands of years and it is reckoned to be the decomposition of plants by microorganisms that are found in the mountains. There is one theory which I somewhat subscribe to, which is that in fact, it could be the result of these Mouse-Hare droppings, the excretion and the urine because there was a time in Ladakh when they were building a road and one of the Mouse head burrows had got open and part of it there was a black substance that was definitely very Shilajit like which was in there what you might call their toilet chamber. So given that they feed on all the plants that Shilajit is reckoned to be made of. It's quite possible that they are part of the creation, providing microorganisms for Shilajit to have develop. I just thought I would throw that in as an aside.

Another underground liver is the Voles, the Marmots hibernate, but the Mouse-Hare and Voles, they're adapted to the high environment and they remain active even through the winter and you can see their burrows going through the snow even. There are three species of Voles in Ladakh. This is I think the Silver Mountain Voles, which is a subspecies of the Royal Voles. They often fill in rock fishes with the excellent mix with plant debris also and form an insulated wall for warmth. But as you can see here, this one is collecting fur from the carcass of a gully that it will take back to its burrow.

Surprisingly, in these seriously cold environments, down to thirty, forty degrees minus we also have reptiles and this toad-headed Agama is the one that we mostly see. It's interesting because it gives birth to live young and it used to be very common, but recently several visiting naturalists said it's very hard to see and I wonder whether this may also be a casualty of tourism because again, they're very hard to see on the ground and if people are driving around all over the place, they could easily be damaged.

There are many ground nesting birds also this is a Tibetan Sandgrouse which is a bird related to doves and pigeons and they have feathers which are belly feathers modified to act like a sponge so that they can fly to water bodies and bring water back for cooling the eggs and providing water for the chicks, so the chicks will suck up water like a goat will drink from its mother. The desert wheat here and a lot of other ground nesting birds. They're so well camouflage. It says it would be very easy to run over these and not even know that you've done this. So that is one of the dangers now of roads coming in and vehicles.

The early days, main form of transport was horse, which of course, is the best way to move in these areas. Outside influence and social change are not new to Ladakh. The presence of Central Indian traders and activities of missionaries have made marks on society before, but earlier it used to occur more slowly and had little effect on the fundamental values of people there. Now that's changing. Things are happening faster and changes are happening very much faster than they used to. A Lot of the specialized knowledge and the resource management skills and abilities may be lost.

This is showing you the Shyok basin and in the foreground are the temporary dwellings of the nomadic. People who will spend their winter here and trekking and tourism added a conflict because they come with ponies and who feed on the seasonally protected grass. This is important for winter grazing of the nomadic. But before the border with China was closed, the winter grazing grounds were actually across in Tibet, so there were some rich valleys there which were so rich that the animals actually used to get fatter in winter. But in the 1960 and 1962 war and the closure of the border they were no longer able to go there. Now the winter can bring death because there's not as much grass in these areas so they do have to be very protective and that's why they feel younger/Khyang, a competition, but trekkers also can bring that competition.

This is an area that's 4500 meters and so it's mostly too high for agriculture and there are very few people who are sedentary, there's scant rainfall, low vegetation and very harsh-cold

winters, powerful winds and high value bottoms. The wildlife conflict was fairly minimal because in summer they're up in the hills and in the winter they're back here. So when they're not there, the wildlife themselves will take over the houses and it generally worked in a fairly good balance. When tourism came in and upset the balance a bit, the Changpa community the nomads took it upon themselves actually to regulate it because they traditionally have survived by community decision making and sharing and when they saw the damage that it could be doing to their area, they took it upon themselves to regulate the camp sites, make sure that rubbish was removed and that they were minimal damage as they could find.

So this is one of the windows of the houses that I showed you earlier and then the little Owlet may still be there. So this is the Shyok area, which as I said, as you can see in this picture the to the right is the fresh water lake and this is the brackish water lake and you can see there's a lot of white. This is actually salt deposit from the evaporation. Along the edge, this is just a view with a beautiful thing and there is some life in these lakes. These are Brine shrimps, which is a species of aquatic Crustaceans which can tolerate high levels of salinity and apparently, they are red because they develop this color to protect themselves from the ultraviolet radiation. But the importance of this lake again came about after the closure of the border with Tibet because in the other, apart from the winter grazing grounds, there were also two or three lakes in Tibet that provided excellent salt.

Although Shyok has always had salt it was considered an inferior variety fit only for animals, livestock. But once the border was closed, this became a very important source of salt and indeed, it was a source of conflict between the Karnak and Rumsby communities and the it belonged to rupture and they would post guards there to prevent the Karnak people from stealing the salt. I was camping there once when the Garnock people came over the mountain and actually kidnapped the guards, they came with a herd of sheep which had the pack animals and they kidnapped the guards, held them hostage while they collected salt, filled up their bags to take them away. I'm talking about the late 80s, maybe early 90s. This happened, it must have been late 80s because really after the mid-90s they stopped, salt stopped having its importance as it was brought in from the plains as when the Leh-Manali road opened up.

But it was a bit of history and I remember once meeting a young boy from the area and chatting to him about it and he was from the area, but he hadn't known this and I felt very sad that I was a foreigner, I was sharing this piece of information. He was very pleased to hear about it and I was hoping that his grandparents would be able to tell him much more detail about it. So as I

would say, most of the people in the area, trans-human pastoralists Chungpa means a northern plains dweller or a dweller of the desert. They are also you can call them by the area they're from Yolpar, but chunk per is a general term for all of them. The people who remain in villages at Yolpar, but most of the people in this area are Changpa. It's believed that these pastoralists migrated from Tibet in the 8th century. So, they have a Tibetan origin and then there was a second influx after the 1959 uprising and 1962 war of more Tibetans that came across and initially there was some conflict, but they settled it with agreements like limiting the number of livestock for the Tibetans. Now they live together in harmony. They move around, they have very specific areas for grazing.

Here the tent is already white in the old days that it would have been made from Yak hair, but by this time that had already changed. And the Yak used to be very important. This is actually a photograph from Tibet. But Ladakh also, they used to do the same. The wool was used for the tent and they were used for carrying the goods and the dung was used for burning, because I said, there are very few trees and shrubs here. So this was made good fuel and the milk of course was used for cheese and butter as well as from the goat. Their main sources of income were salt and sheep wool in the early days.

This is inside one of the tents you can see already. They now have the smoke free Chulahs, which was one of the big changes that was brought. There have been changes, over the centuries, but now I think things are changing faster than ever. The advent of rations has brought one change, but another one is that in the earlier days is polyandry, even when I was there, polyandry was a main feature of the social set up, where one the brothers would, with permission of the woman, remain as one family with the eldest brother's wife. Now that's not the case, Polyandry is declining, almost gone. There's a very small percentage who still believe and practice it.

The families are now more nuclear which is also a problem for their way of life because there is no longer big enough to have enough people in the family to do all the things that are required for a nomadic family in terms of looking after livestock, taking the water market, etcetera. That is one of the changes that is happening. After the initial economy was salt and wool, but later again, after the border closed, it became pashmina because the value of that went up and the price of it went up since the Tibetan pashmina was no longer available. After the number of sheep and goats went down and the number of sheep went down and the number of goats

increased. They move maybe eight to fifteen times a year now and live in these. It's a way of life that's been continuing for centuries.

I guess the changes to a large extent happened from 1974 when Ladakh was opened for tourism. It didn't bring in large numbers until recently, but it brought in modern ideas and institutions and now a lot of the Changpas are more from part-time jobs, which of course are mainly available in the summer. Which is actually when the earlier traditional work was most manpower was most needed. So, there is a decline in the earlier way of life. In 1991, when the Leh-Manali highway was opened to civilian traffic, this opened up access to the nomads to the urban areas, meaning Leh. Because suddenly apart from before when it was taking several days, it now only took a few hours. So, children go to school there, and some people started to move there. That has made quite a big change. It meant the children were no longer growing up learning the ways of animal husbandry that they had been doing before and once they had been in school, mostly they didn't want to go back.

There is an interesting mix of few people who have, and a lot of them now have houses in Leh. But it's not all as rosy as I think they hoped it would be. Not that this is an easy way of life by any means, but it's not easy in Leh also. You can see here the goats are lined up for milking and this is done with a rope that's been doubled and twisted across their necks, which has been described from centuries ago. So, the ways have not changed in many ways. Goats provide apart from the pashmina, also provide milk and cheese and sometimes they're just milked on the hoof, as it were. So, wolves are very interested in the herds and they do follow the Changpas on their migration and can cause quite a lot of damage by killing the goats. The local Changpas and also other rural Ladakhi had ways of killing them. This is a wolf trap you can see the stone; they would put a piece of meat and the stone would fall on its head. They would make holes with carcasses in that wolves would fall in. While one doesn't condone killing wildlife, actually this was a management system that worked, it didn't make the wolf extinct and still to be found over the whole of Ladakh, but it kept them at a level that was acceptable for the Changpas and for them to continue their livelihood. I think this kind of system one should recognize rather than just condemn it actually, it did work and it wasn't done out of maliciousness against the wildlife. There was a great understanding and it was done only to the extent that made a balance possible so that both could live together.

So now we'll leave the eastern Changthang area and I'll just show you a couple of pictures from the area where I lived for quite a while. This is the Rumbakh village which is just south of the Indus and you can see there was a lot of livestock there also and we're now at a lower altitude, so there are fields. These are winter shots, so there are no active crops in the field. So, it's looking quite brown. This is a picture that I took in 2019 and there have been many changes. There is no livestock in this village now many of the families no longer live here. You can see even some of the fields are no longer cultivated. Many changes are happening. There are, however, quite a few more willow trees that have been planted and a lot of that started with one wonderful gentleman Ranger Nobu from the forest department Cherry Nobu, he began the conservations for Snow Leopards by helping villagers cover the night corrals for the goats and sheep and to encourage them to plant trees that would grow the willow and some areas also. The poplar and other shrubs that they could use for food, heating and cooking to prevent the destruction of the local vegetation.

In the old days, there were no roads we used to walk from Spituk it would take several hours. It would take a whole day to get to Rumbakh, and several hours just to cross the plain. In winter, we were walking up frozen lakes very often and negotiated very precariously with pack horses the streams and the ways on the route. Wood was also taken out of Leh, to be sold from the lower villages that had somehow trees. At every path, there would be a lawn on which the money stones and this is Shabu head skulls would be put in the prayer flags. All this is sadly going out because now the road has come it doesn't go over the same area and it comes into, this is the Rumbakh valley that we used to with the last leg of the walk to Rumbakh from Leh seen in different seasons, this is all the same valley. It has great beauty throughout the year. Now this road has been built and indeed apparently is now a blacktop. That's going to bring many changes to the area, as yet we don't know, some will be good some bad. We were happy to see where we were, there that if you look up on the hillside, you can see there's a herd of blue sheep. So interestingly, they have not been too bullied. It wasn't working at the time, but they haven't been too bothered by the road-building JCB activities. I just added one or two pictures from the village life then, which may be something that's going out now that the road can come in. It could be more mechanized and fewer people in the villages now to pursue these activities.

On the left is an Amchi. This is the original Tibetan doctors. It's one of the oldest surviving well-documented medical traditions in the world and where every village had its Amchi pretty much. It goes back for many years, quite similar to ayurvedic medicine based on the local

plants and minerals that are available. It's also dying out a bit now because of various factors. It used to pass down through the generations, but now very often only the name remains and it was a very wonderful tradition and it provided healthcare to very remote villages, which of course, hospitals delay and the modern allopathic system. We don't have the outreach that the local Amchi who is very set in the social mores of the village and the community have. But some organizations have been helping it to keep it going and reviving it and hopefully, it will not die out completely if it can exist in conjunction with the allopathic system, but as a way of having community healthcare, even the remotest villages would be perfect. On the right is a chilling craftsman. These were believed to have been brought from Nepal originally many years ago and traditionally they made this brass, changa and teapots in a village called Chilling. The old man from the villages and spinning. And to just finish off, this is a picture of Leh from the 80s. You can see it was a village of a few houses interspersed with many fields, and crop fields and the population was quite small.

This is a picture now where there are almost no fields left. Everything has been built on, fortunately, the trees are still there but they are several many storeys high and this was from 2019. When I was there in the 80s, there wasn't a single glass-fronted shop. I was there when the first one was put in, it was a Bata shoe shop and they put in a glass front of course, after that many followed and shopping malls came. They still sell vegetables on the same street, but the trees have gone, and the traditional dress to a large extent has gone. As you can see, there are very fancy glass-fronted shops. So, I will end here except I'm including one picture of a beautiful Ladakhi kitchen which happily had.

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BIBLIOGRAPHY

Books:

- Aggarwal, R. (2004). Beyond lines of control: Performance and politics on the disputed borders of Ladakh, India. Duke University Press.
- Bertelsen, R. (2015). *High Himalaya, unknown valleys: A journey to Ladakh, Zanskar, and Western Tibet*. Shambhala Publications.
- Crook, J. H., & Osmaston, H. (Eds.). (1994). *Himalayan Buddhist villages: Environment, resources, society and religious life in Zangskar, Ladakh.* Motilal Banarsidass.
- Francke, A. H. (1907). A history of Ladakh: From the earliest times to the present. S. W. Partridge & Co.
- Rizvi, J. (1996). Ladakh: Crossroads of high Asia (2nd ed.). Oxford University Press.
- Schaller, G. B. (1997). *Mountain monarchs: Wild sheep and goats of the Himalaya*. University of Chicago Press.
- Singh, K. (2013). Ladakh: The land and the people. Penguin Books India.
- van Beek, M., & Pirie, F. (Eds.). (2008). *Modern Ladakh: Anthropological perspectives on continuity and change*. Brill.

Articles & Essays:

- Brunner, H. (2012). Buddhism and the politics of identity in Ladakh. *Journal of Asian Studies*, 71(1), 113-136. https://doi.org/10.1017/S0021911811001857
- Crook, J. H. (1982). Social organization and ecology in the highlands of Ladakh: Perspectives on the nomadic pastoralism. *Mountain Research and Development*, 2(4), 387-399. https://doi.org/10.2307/3672980
- Osmaston, H. (1994). Traditional resource management in Zanskar, Ladakh. *GeoJournal*, 32(4), 451-460. https://doi.org/10.1007/BF00812955

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- Pirie, F. (2007). Order, justice, and authority in rural Ladakh: The law of the land. *Modern Asian Studies*, 41(5), 1043-1077. https://doi.org/10.1017/S0026749X07002792
- Suri, S. (2017). Beyond the brocade: Changing patterns of identity and visual representation in Ladakh. *Asian Ethnology*, 76(1), 105-130. https://doi.org/10.18874/ae.76.1.2017.105-130

Reports & Guides:

- Aggarwal, R., & Bhan, M. (2012). *Negotiating Ladakh's identity: Ethnicity, religion, and politics in the contemporary world.* International Centre for Integrated Mountain Development (ICIMOD).
- International Centre for Integrated Mountain Development. (2000). *Sustainable tourism development in Ladakh*. ICIMOD. Retrieved from https://www.icimod.org
- Ladakh Ecological Development Group. (2005). *Preserving Ladakh's heritage: A report on cultural and ecological sustainability*. Retrieved from https://www.ladakhecologicaldevelopment.org
- UNESCO. (2014). *Ladakh's tangible and intangible heritage: Conservation strategies and tourism development*. UNESCO Publishing. Retrieved from https://www.unesco.org

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