

What COVID-recovery policies for Ladakh? A preliminary screening.

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Summary

The world COVID-19 pandemic has created several socio-economic issues for societies across the globe. Governments are now creating stimulus packages that aim at supporting communities in the recovery process. This report looked at the region of Ladakh with its specific characteristics and recent changes and identified intervention areas and modality that could bring more benefit to the local communities.

Introduction

The recent worldwide pandemic of COVID-19 has created several issues for societies across the globe: health hazards, shrinkage of economic output, loss of jobs and damages to the social and psychological aspects of society. The pandemic has also generated the opportunity to re-think our society and propose policies that initiate significant changes towards a more sustainable society. Given the current state of emergency and the momentum created by recent events, there is a risk of proposing recovery policies that apply a one-fit-all solution and do not address the specific characteristics of different areas. For this reason, this report aims at proposing a first screening of policies based on the specific characteristics of this region.

At this moment of time Ladakh is a region of particular interest due to the recent change that made it an Union Territory and the growing geo-political importance linked to the escalation of tension between China and India. Therefore there seems to be a “policy window” (Kingdon, 2003) due to the alignment of several goals: the need to re-launch economies in the post-COVID era, the need to address climate change by increasing resilience of communities, the need to show that the recent administrative change will bring positive change, the need for the central government to keep control and good relation towards a strategic region.

The report tries to look at what possible areas of intervention could be address to meet the previously mentioned needs. Section one gives a concise overview on key issues that could act as policy drivers; section two tried to identify areas for policy intervention that could better align with the identified drivers; section three proposes recommendation and draws some conclusion.



Figure 1: View of Ladakh and adjacent areas involved in political dispute with China and Pakistan

1. Literature review

This section looks at some key aspects which will likely act as drivers for policy change. Some of them are related to macro-trends (COVID impact and climate change) while others are specific to Ladakh (new administrative setup, socio-economic background) or India (increased geo-political importance). These drivers were then used to identify possible areas of intervention (Section 3).

COVID impact

Regarding public health, in this region COVID-19 had serious consequences with 21,000 cases and 290 deaths (covid19india.org/state/LA). Disaggregated data on the economic impact for this region could not be found but it is clear that major impact was felt in the tourism sector (Sharma and Rigzin, 2021), migrant workers and likely caused a retraction in the economy and loss of jobs. As a reference, at national level these events were estimated at 8% and 11 million (Pradhan and Ghosh, 2021). From an environmental perspective the pandemic has reduced the impact on the biosphere on the short-term but on long-term could produce negative results by postponing policies in favour of sustainability (Pradhan and Ghosh, 2021). In relation to policy-making, post-COVID recovery can offer a unique opportunity given the general agreement on creating and enforcing policies for “building back better”. Despite intention, what seems to emerge is that only a small fraction (4%) of COVID recovery measures in India have been linked to the improvement of sustainability (O’Callaghan, 2020). Table 1 shows the partitioning of the proposed COVID recovery plan (approximately 20B\$ out of 478B\$ of total spending).

Recent administrative changes

Since October 2019 Ladakh became a Union Territory (UT) as a result of an historical process that aimed at detaching it from Jammu-Kashmir (J&K) (van Beek, 1998; Chowdhary, 2021) that started in the second half of the XX century. This change has three main consequences: the UT is now under direct governance

Table 1: partitioning of the recovery fund for India

Sector	Amount (Billion \$)
Garib Kalyan Rozgar Abhiyaan	5.29
Animal disease control	1.75
Securing oil reserve	0.35
Support coal mining sector	6.58
urban housing policy	2.4
Funding afforestation and plantation work	0.79
Animal husbandry Infrastructure developm	1.98
Efforts to minimize agricultural waste	0.81

(Source O'Callaghan 2021)

of the Union of Government of India (1) and whether this is a positive or negative situation will highly depend on the policies implemented; with the separation from J&K several opportunities, as access to higher education facilities and a larger job market, are not available (2) and have created gaps that could be used as opportunities (3). This new condition creates constraints but also opportunity for positive change since there are big expectations for this long-awaited change.

Attitude of Central Government

Historically, the attitude towards Ladakh from central government authorities has revolved around the ideas of a remote and backward area (Chowdhary, 2021). Recent increase in tension between India and China suggests a stronger interest from a geo-political perspective from the central government towards this area (civildaily.com, 2021; Sheng, 2021) also causing large infrastructure projects (Sharma 2021, Week 2021, ETnews 2021, Dash 2021). Additionally it should be noticed that relation between government army and local communities is, unlike Kashmir, generally positive. This can increase the consideration of this region in the eye of the Central Government and possibly cause action at policy level.

Socio-economic background of Ladakh

The economy of Ladakh is mostly based on agriculture that occupies most of the population (~70%), there is an increasing interest in horticulture (apricots, apples and seabuckthorn) aiming at creating goods (fruit, dried fruit, juices) to be sold to tourist and export to the national market (LAHDC, 2015). The cultivable land is limited to ~0.3% (Fox et al., 1994) by water location and availability. Irrigation is provided by canals/khuls (Angchok, 2006). Animal husbandry is another important pillar for the livelihood of the local population. It is common for households to combine a mixed mountain agriculture and animal husbandry to mitigate risks and ensure livelihoods (figure 2). Socio-economic changes were found to happen mostly in area connected to transport infrastructure (Dame and Schmidt, 2019; Nüsser and Schmidt, 2012) while remote areas tend to remain the same (Dame and Mankelov, 2010).

Since Ladakh opening in 1974, international and mostly national tourism has increased in the past three decades (Geneletti and Dawa, 2009; Pellicciardi, 2016). There are three main type of attractions: nature and wildlife, adventure activity and religious sites. Therefore the preservation of the natural and built environment is an important aspect for this sector of economy.

Education is a sector where Ladakh already had deficiencies prior to COVID: the average literacy rate is 77% (male 86% and female 63%) not worse than other comparable areas of India but the quality of education is the main issue. Data from 2011 on the passing of exam for Class X, showed a large disparities between passing rate in government school (28%) versus private institutions (90%) (Richard, 2015). Interestingly, enrolment in public schools is made up almost totally of pupils from rural areas. The search for quality higher education would push young Ladakhis to move to J&K since only two colleges existed in the region (LAHDC, 2017). The recent administrative change has decrease the access to these institution (that are now part of another state) and caused the creation of a university in Leh (Chowdhary, 2021).

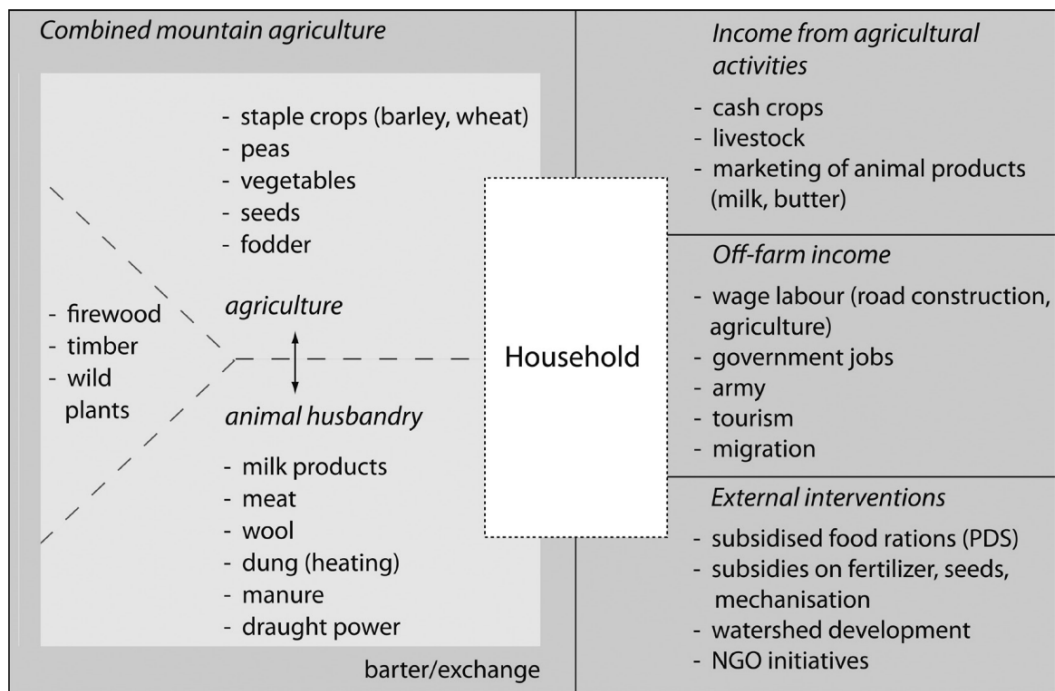


Figure 2: Economy of a household in Zaskar region. It can be observed how differentiated the income and livelihood is. This allows for mitigation of agricultural risk and seasonal variation (Dame 2011).

Climate change

The recent COP26 meeting brought, once more, the attention to climate change. The impact of climate change in the region is unclear. This is due to the topographic complexity of the region, paucity of data, and different methodologies used in the assessments, (Wester, 2019; Das and Meher, 2019). Studies have found increasing trend in temperature increase (Bhutiyani et al., 2007), a decreasing in cryosphere (Schmidt and Nüsser, 2017; Nüsser et al., 2019) but not in regards to precipitation (Chevuturi et al., 2016). This means that there is no single likely future and actions in the present and near future may be crucial.

The available funding targeting climate change mitigation (OECD, 2021; Garg et al., 2021) could be used to address chronic issues of Ladakh (low electrification coverage, use of non renewable energy sources) but also to improve energy efficiency, disaster response and take the opportunity of training new professional for these emerging sectors.

2. Findings

From the contextual analysis previously shown four key drivers seem to emerge: COVID response (1), an increased attention from the Central Government (2) caused by the recent administrative change and increased geopolitical interest, climate change and climate adaptation (3) and the general will to develop Ladakh especially in those sectors where gaps exist (4). Two additional factors were added aimed at evaluating the actual impact of the intervention on the short term (5) and on the amount of capital spent directly in the region and by import (6). Seven areas of possible policy intervention were then evaluated using the previously mentioned six criteria (Table 2).

Different Out of these six criteria, Three factors received a higher weight: alignment with recovery fund because the exceptional availability of stimulus packages should not be missed; short term benefit because the aim of this investigation was on evaluating intervention on this time range; capital spent locally because this aspect is often overlooked in development and remote areas intervention often causing unexpected outcomes.

The results from the analysis showed three clusters of activities based on how well they are aligned with

the criteria. The interventions that showed less alignment were those on transport infrastructure . This is mostly due to the long time span required for their completion and the small direct-benefit that they bring since contractors are coming from other parts of India leaving only low-paid opportunities for locals and migrant workers. If a long-term perspective was adopted this result could be different even if impacts of road is debated ([Bardecki, 2009](#)). A second cluster includes intervention in education, disaster reduction and tourism. These activities were lacking in one of the three most important factors: education and disaster reduction on short term benefit, tourism on capital spent locally. Therefore, while still valid options, they have not been included in the suggested intervention for short-term impact. The highest scoring cluster includes interventions in energy, building and agriculture. Main features for this sector is the possibility of short term return and spending reaching local actors. It is important to stress that these intervention will be beneficial only if local resources and workers are targeted.

Table 2: decision chart for the evaluation of policy intervention areas. Six factors were considered with different weights and alignment to the factor (3= completely aligned, 2= partially aligned, 1= not very aligned)

Decision factor	Weight	Education	Building	Energy	Disaster Reduction	Agriculture	Transport infrastructure	Tourism
COVID-recovery funds	2	2	2	3	1	2	1	2
Political interest	1	2	2	2	1	2	3	1
Addressing climate change and adaptation	1	1	2	3	3	2	1	1
Addressing Ladakh chronic issues	1	3	2	3	3	3	3	2
Short term benefit	2	1	3	3	1	2	1	3
Capital spent in local resources	3	3	3	2	3	3	1	2
total		21	25	26	20	24	14	20

3. Recommendations

In order to achieve short-term impact, with tangible economic benefits to local communities using COVID recovery funds and addressing climate change, the following recommendation are given:

Mode of intervention:

- ensure that intervention have a short-medium term benefit in order to initiate the recovery
- ensure that implementation of intervention can be done with the local available materials and capacity in order to minimize transfer of capital to outside actors. This means preferring local low-tech solution to others.
- use a multimodal approach to address multiple problems at the same time (ex. climate change mitigation and job creation). See practical examples in ([Phillips and Heilmann, 2021](#)).
- use available funding not only to answer immediate needs but to reinforce local economies

Suggested areas for short-term impact:

- *Off-grid energy systems*: promote interventions that aim at increasing electrification from renewable sources, increase efficiency at household scale, create capacity for management and maintenance of installed systems. This last aspects aligns with the idea of creating new creating/reinforcing new market frontiers ([WEF, 2021](#)).
- *Housing upgrading*: improve existing housing on energy aspects (thermal insulation, cooking), sanitation (nature based solution), structural and appearance by using local manpower and techniques (see the work of Sonam Wangchuk as an example in ([Visvanathan, 2021](#))). Consider that building infrastructure is also a historical, cultural and touristic asset ([Rajashkariah and Chandan, 2013](#)) . Ensure that implementation of intervention can be done with the local available materials and capacity in order to minimize transfer of capital to outside actors.
- *Afforestation and animal husbandry*: channel available funding such those for afforestation and animal husbandry to improve resilience and robustness of local economies. This could also help to support rural and nomadic communities.

4. Conclusion

Recent events that involved the worldwide COVID pandemic and administrative change to Union Territory created a unique situation in the governance of Ladakh. While this poses additional challenges to the one already existing in the region, the situation also offers new opportunities given the availability of recovery funds and the more direct administrative structure.

Starting from an analysis of drivers for policy change, an initial screening of areas of policy interventions was carried. Key criteria for selection included an alignment with the identified drivers and the likelihood of making short-term impact on the economic situation of local communities. For this to happen, designing intervention that use and match local resources and capacity is essential. Three areas were identified as more suitable to achieve these goals: intervention on off-grid energy systems, upgrading of existing housing, strengthening of ecological and socio-economic systems through afforestation and animal husbandry.

References

- Angchok, P., D.; Singh, 2006. Traditional irrigation and water distribution system in Ladakh.. Indian J. Tradit. Knowl. 05, 397–402.
- Bardecki, M.J., 2009. The impact of road construction on commercial activity in the Annapurna Conservation Area, Nepal. Himalayan Journal of Development and Democracy 4.
- Bhutiyani, M.R., Kale, V.S., Pawar, N.J., 2007. Long-term trends in maximum minimum and mean annual air temperatures across the Northwestern Himalaya during the twentieth century. Climatic Change 85, 159–177. <https://doi.org/10.1007/s10584-006-9196-1>
- Chevuturi, A., Dimri, A.P., Thayyen, R.J., 2016. Climate change over Leh (Ladakh) India. Theoretical and Applied Climatology 131, 531–545. <https://doi.org/10.1007/s00704-016-1989-1>
- Chowdhary, R., 2021. Formation of the Union Territory of Ladakh: One Year After. Economic and Political Weekly 56.
- Dame, J., Mankelov, J.S., 2010. Stongde revisited: Land-use change in central Zangskar.. Erdkunde 64.
- Dame, J., Schmidt, S., 2019. Urbanisation and socio-ecological challenges in high mountain towns: Insights from Leh (Ladakh). India. Landsc. Urban Plan. 189, 189–199.
- Das, L., Meher, J.K., 2019. Drivers of climate over the Western Himalayan region of India: A review. Earth-Science Reviews 198, 102935. <https://doi.org/10.1016/j.earscirev.2019.102935>
- Fox, J.L., Nurbu, C., Bhatt, S., Chandola, A., 1994. Wildlife Conservation and Land-Use Changes in the Transhimalayan Region of Ladakh India. Mountain Research and Development 14, 39. <https://doi.org/10.2307/3673737>
- Garg, V., Schmidt, M., Beaton, C., 2021. How Green Is India's Stimulus for Economic Recovery?. IISD.
- Geneletti, D., Dawa, D., 2009. Environmental impact assessment of mountain tourism in developing regions: A study in Ladakh Indian Himalaya. Environmental Impact Assessment Review 29, 229–242. <https://doi.org/10.1016/j.eiar.2009.01.003>
- Kingdon, J.W., 2003. Agendas, Alternatives and Public Policies. Longman, US.
- LAHDC, 2015. Economic Review of Leh district 2014-2015.
- LAHDC, 2017. District Statistical Handbook Leh – 2016-17.
- Nüsser, M., Dame, J., Parveen, S., Kraus, B., Baghel, R., Schmidt, S., 2019. Cryosphere-Fed Irrigation Networks in the Northwestern Himalaya: Precarious Livelihoods and Adaptation Strategies Under the Impact of Climate Change. Mountain Research and Development 39. <https://doi.org/10.1659/mrd-journal-d-18-00072.1>

- Nüsser, M., Schmidt, S., 2012. Irrigation and development in the upper Indus Basin: Characteristics and recent changes of a socio-hydrological system in central Ladakh, India.. *Mt. Res. Dev.* 32, 51–61.
- OECD, 2021. The OECD Green Recovery Database: Examining the environmental implications of COVID-19 recovery policies.
- O’Callaghan, et al., 2020. Global Recovery Observatory.. Oxford University Economic Recovery Project.
- Pellicciardi, V., 2016. Recent trends of tourist arrivals in Leh district.. *Stawa* 3.
- Phillips, J., Heilmann, F., 2021. Green Recovery for Practitioners Examples from around the World for Building Forward Better. GIZ.
- Pradhan, B.K., Ghosh, J., 2021. COVID-19 and the Paris Agreement target: A CGE analysis of alternative economic recovery scenarios for India. *Energy Economics* 103, 105539. <https://doi.org/10.1016/j.eneco.2021.105539>
- Rajashekariah, K., Chandan, P., 2013. Value Chain Mapping of Tourism in Ladakh. WWF. <https://doi.org/10.13140/2.1.1807.1046>
- Richard, B.O., 2015. Being Ladakhi and Becoming Educated: Childhoods at School in the Western Himalayas (PhD thesis). UNIVERSITY OF CALIFORNIA.
- Schmidt, S., Nüsser, M., 2017. Changes of High Altitude Glaciers in the Trans-Himalaya of Ladakh over the Past Five Decades (1969–2016). *Geosciences* 7, 27. <https://doi.org/10.3390/geosciences7020027>
- Sharma, B., Rigzin, D., 2021. IMPACT OF COVID-19 ON TOURISM & HOSPITALITY SECTOR IN UNION TERRITORY OF LADAKH, in: Managing the Impact of COVID-19 on Financial Services Industry. Vidya Kutir Publications, New Delhi.
- Sheng, Y., 2021. Geopolitics and the Sino-Indian Border. <https://southasianvoices.org>.
- Visvanathan, S., 2021. Ladakh and the Creative Greening of the Desert: The Life Work of Sonam Wangchuk and Rebecca Norman Through Alternative Practices in Education and Farming. *Society and Culture in South Asia* 7, 211–231. <https://doi.org/10.1177/23938617211014641>
- WEF, 2021. Emerging Pathways towards a Post-COVID-19 Reset and Recovery. WEF.
- Wester, A., P. ; Mishra, 2019. The Hindu Kush Himalaya Assessment. Springer International Publishing. <https://doi.org/10.1007/978-3-319-92288-1>
- civildaily.com, 2021. Ladakh and its Geo-strategic Importance.
- van Beek, M., 1998. True Patriots: Justifying Autonomy for Ladakh. *HIMALAYA* 18 (1).