

# EU-LIVEABLE LEH PROJECT A CASE STUDY

A roadmap to make Leh an **inclusive, resilient & liveable mountain town** by 2030



Funded by  
The European Union

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**LEDeG** (Ladakh Ecological Development Group) works to promote ecological and sustainable development that is in harmony with and builds upon the local traditions and culture of Ladakh.

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A roadmap to make Leh an inclusive, resilient and liveable mountain town by 2030

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## **BOX: Facts and Figures:**

Name of town: Leh

Union Territory: Ladakh

Population: 35,807 (residents) as per 2011 Census & 65,927 (floating)

Population density: Net density: 20.3 person per hectare (PPH); net residential density: 135 PPH

Municipal wards: 13

Municipality land area: 1,760 hectares

Altitude: Between 3,310m and 3,915m

Climate: Cold desert

Languages: Ladakhi, Urdu, Hindi, English



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# 1. Introduction:

Leh town is one of the most popular tourist destinations in India. For a small Himalayan town that was dependent on agriculture for livelihood till fairly recently, there has been a sudden shift from being an agrarian society to a tourist-centric town. The number of visitors to Leh has increased from 527 visitors in 1974 to 54,346 tourists in 2007 and 279,000 tourists in 2019 with a sharp spike since 2010.

Leh has experienced rapid and unplanned urban growth to cater to the fast growing and profitable tourism sector. This has led to over-exploitation of natural resources like water supply, and over-burdening of existing infrastructure for sanitation, transportation and waste management.

Leh has been a rural town and these urban issues and expectations were a new phenomenon. Local government agencies, including the Ladakh Autonomous Hill Development Councils, Leh and Municipal Committee, Leh, were not prepared for this new challenge. They were neither equipped in terms of capabilities or capital nor did they have a plan to address these issues.

Unfortunately even in 2018, nearly eight years after tourism increased dramatically and these problems started becoming visible, the situation had still not changed significantly. There were no clear development plans and processes to build capabilities to address problems in a systematic and organised manner.

As business opportunities expanded, people exercised the most convenient and economically viable solutions and started constructing hotels

and guest-houses on fertile agricultural lands. The roads were inundated with commercial taxis and restaurants. Traditional dry compost toilets were replaced with flush toilets and concrete buildings took the place of traditional houses made with stones, earth bricks, timbers, and mud.

Drinking water has been one of the most worrisome signs of this environmental and social stress. As natural springs started drying up, people turned to bore-wells and a piped water system to meet the growing demand for water without knowing how much underground water was available for use. Flush toilets created problems of wastewater, and contaminated groundwater sources. Many of these groundwater sources in different parts of Leh town now show traces of pollutants such as nitrate and *Escherichia coli*.

Furthermore, the rampant use of packaged food and plastic water bottles have created a major challenge for solid waste management. The municipal solid waste generated in Leh town is estimated to be 38.8 tonnes per day in the peak tourist months of the summer and 9.2 tonnes in the off-season months of winter. The average per capita waste generated in Leh town is 0.47 kg.

Similarly, the influx of tourists has increased the number of commercial taxis on the road and contributed to traffic congestion and air pollution. Public spaces such as the Polo Ground have been converted to function as parking spaces. Other public spaces are also being considered for use as parking spaces even though as the town also lacks playgrounds, parks, and public spaces.

## 2. Challenges faced by residents of Leh town :

There are three central underlying challenges:

1. The town and local government **lack development planning, strategy or vision** to manage Leh's growth or mitigate the impacts of rapid urbanisation.
2. The local authorities including government departments such as Public Health Engineering (PHE) and Public Works Department (PWD) **lack the required technical and management capability** to properly discharge their duties in Leh's climatic and social situation.
3. There is **very little dialogue, coordination and cooperation** between the government, citizens, local businesses and civil society organisations (CSOs).

In June 2017, Ladakh Ecological Development Group, with funding from the European Union and Bremen Overseas Research and Development Association (BORDA), conducted an opinion survey amongst residents of Leh town. In the survey, they were asked questions on 'How much do you worry about the following for the future?' The results were somewhat expected, but also ran contrary to expectations—while water supply is often discussed, sewage disposal, traffic and parking emerged as major concerns.

Issues	Not at all or just a little	Yes I worry, or I am very concerned	Comments
Quantity of water available	27%	73%	Demand is growing and there is severe shortage in winter
Quality of water available	44%	56%	Water tests show E. coli contamination but low awareness
Sewage disposal	20%	80%	Lack of sewage systems contaminates water sources and the environment
Garbage collection system	40%	60%	Generally satisfactory
Garbage dumping site	23%	77%	Potential hazards that trouble and concern people
Traffic	10%	90%	A daily frustration
Parking	14%	86%	No solution in sight due to lack of space
Parks and public spaces	24%	76%	Major but not a critical problem
Electricity supply	51%	49%	Satisfactory

Local authorities struggled due to many reasons, including:

### 1. Lack of technical knowledge:

- Did not have technical understanding of issues related to urbanisation and climate change.
- Urban consultants and planners in India are not familiar with issues caused by extremely cold climate and mountainous topography, and generally resort to standard technologies that are often inappropriate for Ladakh.

### 2. Lack of leadership and management abilities:

- Demands on local government agencies have grown exponentially over the past decade, and officials do not have the skills to manage complex workload.
- Less than 10% of government officials have undergone any kind of leadership training, hence do not have the necessary decision-making and team leadership capabilities.
- Being a geographically isolated region with its unique language and culture, it is not easy to ask or find help or assistance.

### 3. Lack of a plan:

- Due to the above factors, local government agencies are unable to make effective and practical medium and long-plans to address these challenges.
- Most government agencies have limited staff, which are over-burdened with daily tasks. Thus, the 'urgent' is prioritised over the 'important', and planning takes a back seat.

### 4. Lack of cooperation and collection action:

- The government generally works in a silo and there is low coordination between different agencies and departments of the government.
- Local authorities are not able to effectively coopt citizens and CSOs to support them due to lack of information, transparency, and trust.

These factors are manifest in ad hoc actions and low enforcement of existing and outdated regulations. In turn, this leads to inefficient execution of new projects and a chaotic and unaccountable development process. Combined with the rapid pace of growth and development, these factors were creating severe bottlenecks that need immediate redress.

No	Current Gaps	How the action will address current gap
1	Local officials lack technical understanding of how urbanisation and climate change related problems may evolve in the future and hence, do not know what kind of solutions to seek	<ul style="list-style-type: none"> <li>• Comprehensive and interactive technical workshops</li> <li>• Hiring specialists and consultants who have the requisite experience and knowledge</li> <li>• Exposure visits to visualise how Leh can become a resilient mountain town</li> </ul>
2	Demands on the local government have grown exponentially in the past decade, and officials do not have required project management or administrative skills to perform their tasks efficiently	<ul style="list-style-type: none"> <li>• High quality leadership development programme</li> <li>• Training for project and operations management</li> <li>• Including CSOs and private sector contractors to strengthen relationships and trust in the ecosystem</li> <li>• Project team will assist selected officials</li> </ul>
3	Advisors, consultants and urban planners in India do not understand the local context and situation and often resort to standard technologies and solutions that are often inappropriate for Ladakh	<ul style="list-style-type: none"> <li>• Identifying and recruiting international consultants with relevant experience to provide inputs</li> <li>• Project team will provide consistency and continuity in working with consultants and contractors, thereby improving accountability of such consultants</li> </ul>
4	Locals often cannot communicate easily with outsiders and vice versa, especially on complex or technical topics	<ul style="list-style-type: none"> <li>• Project team with Ladakhis who are familiar with the local language and conditions will help address communication barriers</li> </ul>
5	Transfer of officers who are responsible for implementing projects leads to loss of knowledge and disrupts continuity and accountability, leading to delays and errors	<ul style="list-style-type: none"> <li>• External consultants and project team will provide continuity in key activities and work packages</li> <li>• Group capacity building and training programmes can also build backup and redundancy within government departments and minimise such disruptions</li> </ul>

### 3. Project plan and intervention:

Local authorities and residents desperately needed workable and relevant rules and regulations, and simple and robust solutions that are effective, easy and low cost to operate. Given its unique geographical features, altitude and climate, Ladakh has special requirements to deliver various services.

Instead of proposing specific solutions, it was considered more important to develop a long-term vision for the town to not only make it resilient and liveable but also find sustainable solutions to mitigate the impacts of climate change.

The EU-Liveable Leh Project offered to help LAHDC, Leh to develop such a plan that would not only help them take decisive and clear actions but also create shared goals for the government, citizens, local businesses and CSOs.

The larger goal was to inspire local leaders in other cities and towns to re-think their model of governance, and move towards a more sustainable and liveable urban future.

However, developing a vision or a plan would be meaningless if Leh did not have the management skills to implement them. Thus, the project was aimed to primarily benefit the officials of LAHDC and local CSOs through active and high-quality capacity-building exercises. Outside experts and advisors were invited to provide technical and managerial capacity-building programmes for the staff of LAHDC, MC, Leh and other local authorities as well as local CSOs and industry associations.

*Former Chairman of LAHDC, Leh, Gyal P Wangyal shared his thoughts on capacity-building programmes, "There was a global awakening about the impacts and causes of climate change, and the need to enhance the capacities of government officials, especially technical staff, to come up with innovative and sustainable technologies that could help mitigate climate change in the district, especially Leh town." The impact of increased footfall of tourists such as mushrooming of hotels and tourist taxis and the migration of people from rural to urban areas in search of livelihood are emerging issues in Leh along with increased awareness of the impacts of climate change such as higher incidence of flash floods, traffic congestion, etc.*

Thus, the specific objectives of the Liveable Leh Project were:

- 1. Capacity building:** Train local officials on technical knowledge about urban management, climate change and sustainability, and their management and leadership skills to strengthen institutions to conceptualise and develop Leh as a resilient and liveable mountain town;
- 2. Planning:** Prepare implementation plans to improve public services, focusing on sewage treatment, waste supply, green public spaces and transportation guided by a holistic and comprehensive vision for the town;
- 3. Citizen engagement:** Educate the 30,000 residents and 250,000+ tourists on issues of climate change through increased citizen engagement.

Local authorities need strong and relevant capabilities to improve governance, sustainability and, ultimately, quality of urban life. However, capacities will be unproductive without clear, inclusive and holistic plans to improve infrastructure, public services and spaces, biodiversity, and a sense of community. Finally, this requires full participation and cooperation of citizens, businesses and CSOs.

### 4. Methodology used:

- Environmental protection:** The central component of this project is to promote ecologically sustainable water and sanitation solutions and increase sustainability of the town. The project made efforts to be environment-friendly by adopting practices such as minimal use of external inputs etc.
- Fostering cooperation and building alliances:** Although there is a great scope for learning and knowledge sharing, there are no platforms for knowledge exchange between small towns. This project fosters cooperation between towns through exposure visits, workshops and

publications. The project strengthened a unique and deep collaboration between government and CSOs.

- **Gender-sensitive approach:**

Women are primarily responsible for waste and water management but have limited participation in public decision-making for these systems. We ensured that at least 40% of the participants in discussions, trainings and workshops were women.

## 5. Activities and Goals:

The project focused on three outcomes: Capacity building, Planning and Citizen engagement.

**Capacity building:** Local authorities requested training through workshops and exercises to improve their technical understanding, and planning and management skills. In addition, local organisations such as All Ladakh Tour Operators Association, members of political parties and leaders of local CSOs were also

invited to these workshops. This ensured that the workshops were more participatory and gave voice to various stakeholders to build trust and strengthen relationships. This helped make the project more efficient and inclusive, improve governance, reduce risks of poor implementation and benefit the local ecosystem in the long-term.

**Planning:** One of the underlying goal of the Liveable Leh Project was to move from capacity-building to detailed and implementation-oriented planning. The project scope included developing a broad but actionable vision for Leh that can be implemented immediately along with development of detailed plans for sectors such as water supply, waste management and non-motorised transportation.

**Citizen engagement:** To develop a process of participatory governance and feedback mechanism while also organising townhall meetings, events and other discussions to hear from citizens, and make them more aware and sensitive to problems facing the town and efforts of the government.

Activities	Goals
1. <b>Capacity building and skill development</b>	1.1.1: Twelve trainings for 100 officers 1.1.2: Six project management trainings for 60 1.2.1: Fifteen workshops for 700+ people 1.3.1: Coaching sessions for six senior government officials 1.4.1: Twelve trainings for 200 operators 1.5.1: Two international and three domestic exposure visits 1.6.1: Twinning with one city (MoU)
2. <b>Technical assessment and planning to improve basic services</b>	2.1.1: Appoint thematic, urbanisation and climate change experts 2.1.2: In-depth collaboration between experts, relevant officers and CSOs 2.1.3: Leh Vision document published 2.2.1: 4 Detailed strategy and plan for four critical sectors 2.3.1: Review Liveability Index and collect existing data
3. <b>Efficiently implement water project</b>	3.1.1: Survey and data collection to complete the Liveability Index 3.1.1: Conduct water audit 3.1.2: Prepare a water status and strategy report 3.2.1: Prepare draft regulations for town-scale FSM and present to MC, Leh 3.2.2: Integrate feedback from MC, Leh and prepare final FSM regulation 3.3.1: Expand FSM services to include at least 3,000 trips 3.4.1: Develop device to clean septic tanks 3.5.1: One public toilet renovated and maintained (Zangsti) 3.5.1: Construct greenhouse
4. <b>Citizen engagement and global outreach</b>	4.1.1: 18 Hold townhall meetings and roundtable discussions 4.2.1: Publish newsletter 4.3.1: Release three films 4.4.1: Generate a minimum of 5,000 followers on social media 4.5.1: Exhibition and games about climate change in public spaces 4.6: Publish and disseminate nine reports 4.7: Publish one case study about Leh's journey 4.8: Global design competition on solutions for high altitude problems 4.10: Presentations at a minimum of 15 international and national conferences

## 6. Results:



### **Result 1: Capacity-building of local officials: Satisfactory**

The key objective of the project was to build capacities, improve leadership skills and institutional capacities, and enhance accountability and efficiency of local government agencies to make urban spaces more inclusive, resilient and sustainable. In this regard, the following activities were conducted:

#### **A. Leadership development training programmes for 40 senior LAHDC, Leh officials and 60 mid-level and high potential officers and CSO staff**

##### **A.1 Twelve trainings, including six Senior Leadership Enhancement Programmes (SLEP) and six Future Leadership Programmes (FLP) for 100 officers were conducted.**

Thomas Rieger from Como Consult, who has over 20 years of experience as a consultant for organisational development, trained senior officials from Ladakh. Similarly, Manas Rath, with 18 years of experience in general management, the social sector and investment banking, trained officers from the government sector and CSOs. "We never got any training on leadership and project management. The modules and sessions were very productive and helped us to make key decisions to develop Leh as per the SDGs" (Dr Zahida Bano, Director, Urban Local Bodies).

The sessions included technical sessions on Sustainable Development Goals (SDGs), the Paris Agreement, climate change and municipal management. They also included leadership sessions on negotiations and conflict management, building stronger teams and motivation, leadership styles, systems thinking, communications and project management. [add more from SLEP]

##### **A.2 Six Project Manager trainings for 60 people:**

CSOs in Leh have never got account-related training. Chartered Accounts working for big organisations were invited to train staff members of CSOs on issues related to accounts including FCRA, GST, etc.

##### **A.3 Fifteen workshops for 700+ people on climate change and liveable cities:**

Workshops on sustainable mobility, rammed earth architecture, solid waste management, future of water in Leh town, conservation of water and segregation of municipal solid waste for municipal workers were organised to build awareness on climate change.

##### **A.4 Twelve trainings for 200 city operators, including garbage collectors and sanitation workers, on efficiency, quality and safety:**

Operations and maintenance (O&M) trainings on a diversity of topics. This included ductile iron pipes and household service connection, segregation of waste at source and maintaining health and safety, continuous water supply to PHE officials from Leh and Kargil, principles and methods of laboratory analysis for wastewater, underground water management and water tariff structure, drinking water quality analysis -drinking water supply and management for Leh town, SWM city-wide planning tools, safety and hygiene of municipal workers and waste sorting.

##### **A.5 Two international and three domestic exposure visits:**

The international visits to the municipalities of Faradona/Trikala/Meteora in Greece (clubbed with twinning of Leh town with a European town with similar climatic conditions and geographical features) and Bangkok to study advanced sewage, faecal sludge solutions and solid waste management, could not take place due to the COVID-19 pandemic.

Three domestic exposure visits were conducted for LAHDC, Leh, PHE and MC, Leh officials to Hubballi-Dharwad in Karnataka (to study their continuous water supply system), Silvassa in Dadra and Nagar Haveli (to study successfully operation of a solid waste management plant), and Malkapur in Maharashtra (to study their continuous drinking water supply system).

"We were under the impression that continuous water supply could not be replicated in a place like Leh due to the cold and harsh climate. However, the exposure visits not only helped us to understand new technologies that could be replicated to provide continuous water supply in town but also provided us help from municipalities of the other towns to replicate these models"- **Iftikhar Ahmed, Assistant Engineer, PHE Leh**

The technical site visits empowered local authorities and enabled them to adopt a different approach to the challenges faced by Leh. Having the right technical plan, however, was still essential before meaningful action could be undertaken.

Activity	Course	Participants	Curriculum	Trainer(s)
<b>Senior Leadership Enhancement Programme</b>	The training workshop programme was conducted using an international standard curriculum developed by COMO Consult, a German company that specialises in organisation development and has assisted change projects in more than 80 countries in Europe, Asia, Latin America and Africa. Como has conducted trainings for leaders in public administration, private business and CSOs in countries such as Indonesia, Vietnam, Pakistan and Tunisia.	Senior government officials, senior politicians, hoteliers, journalists, senior religious leaders	The course consisted of 18 days of face-to-face work with trainers (divided into four modules), four days of supervision, (at least) five days of work in learning groups and individual work on cases and a thesis. Each module has one or two focus topics. The sequence of modules allows a systematic development of professional competence and application of the newly acquired knowledge in practical work. Modules included core concepts of leadership, personal mastery; approaches to empower people – dialogue and process consultation as leadership skills; change processes; advanced techniques for leading and changing organisations	Dr. Thomas Rieger has worked for more than 20 years as an Organisation Development consultant and as a trainer for project managers, facilitators and consultants, and in the field of cross-cultural communication.  Mr. Stanzin Tsephel, the Regional Co-ordinator of BORDA South Asia, has over 14 years of experience in financial and management expertise. He has vast experience in conducting and moderating workshops for partners and stakeholders in South Asia.
<b>Future Leadership Programme</b>	Develop leadership and management skills of local government officers, elected representatives, and social and business leaders. Workshops were conducted using customised curriculum by trainers and experts with experience in leadership, organisational development, project management, communications and finance in India and abroad.	Government /municipal employees, CSO leaders, business owners and private citizens	The course consisted of 10 days of workshops with trainers in learning groups (Three workshops of three to four days each).  The programme will be adapted to meet the needs of participants. Modules included personal development and leadership; organisational development and teamwork; sustainable urbanisation and liveable cities	Mr. Manas Rath has 18 years of experience in general management, the social sector and investment banking, He has worked at and been an advisor to various CSOs, startups and companies. While working with Dasra, he led workshops and programmes to help CSOs become more effective in planning and implementation to improve their quality of work and upscale results.



Senior leadership Enhancement Programme (Module-3)  
November, 2019



Future Leadership Programme (Module-3)  
October, 2019



## Result 2 : Development planning : Satisfactory

The objective was to create specific and actionable plans to develop Leh into a model sustainable and resilient town, with a special focus on solid and liquid waste management, transportation, open and public spaces and urban agriculture.

### B.1 Appoint thematic, urbanisation and climate change experts with a special focus on high altitude regions:

Thematic experts, urban planners and climate change experts were hired for assisting in the development planning, including Anuj Malhotra (former Traffic Advisor to Government of Jammu & Kashmir), Adarsha Kapoor (urban designer), B. R. Balachandran (urban planner), ROHA (landscape architecture firm), Saurabh Agnihotri (SWM expert) and Dr. Srikanta K. Panigrahi (Indian Institute of Sustainable Development).

### B.2 Developing Leh Vision 2030:

LAHDC, Leh set up a Strategic Planning Committee (SPC) under the supervision of Mr C. Phunsog (former Chief Secretary, Jammu and Kashmir state) and guided by B. R. Balachandran, an experienced urban planner, to develop an actionable and practical vision for Leh town. Mass public consultation meetings were held with residents

and stakeholders to collect ideas and feedback. The SPC also engaged sectoral experts in traffic, water, sanitation, disaster planning, economic development, climate change and other themes to develop a vision that suited the realities, aspirations and possibilities for Leh.

The overarching desire of the people was to create a "Happy Town" that encompassed protection of culture and environment, development of the economy in a responsible and sustainable manner, creation of suitable public services and ensuring life in Leh is healthier, sustainable, resilient and happier. It has been recommended that an Empowered Standing Committee must be created to ensure a time-bound implementation of this vision.



## LEH VISION-2030 (Skid-Pe-Lehchen-Soma)

### 1. Purpose:

Leh Vision 2030 is a significant milestone in a process that was initiated in 2017-18 by the Ladakh Autonomous Hill Development Council, Leh. The Strategic Planning Committee (SPC) was formed to create a coherent, inclusive and actionable vision for Leh's future. This document is the result of their efforts, and consultations with the people of Leh, inputs from local and international experts over two years.

The vision, first and foremost, represents the aspirations and desires of the people of Leh, considering their material comforts as well as social, emotional and spiritual needs. Diverse voices participated in public discussions, which helped shape the strategies and recommended actions. A key objective is to balance short-term needs and long-term priorities in the context of environmental sustainability and mitigation of risks. Given its unique history, culture and location, Leh needs a unique vision and development plan. Most importantly, the vision and goals must be actionable and achievable. This consideration has been central to identifying the actions required to achieve these goals. The vision is a living guide to help make and implement decisions. By identifying strategies, actions and the role of key stakeholders, it starts to create a roadmap but this now be expanded further and implemented. Everyone has to play a role to achieve this vision, which has been developed by the people of Leh for the people of Leh.

## 2. Process:

On 7th August 2018, this initiative was formalised through a Government Order, constituting an eight member Special Committee headed by Mr C Phunsog, IAS (retired) to develop a strategic plan for Leh town. The Special Committee, supported by experts from various fields related to urban planning and urban management. It's mandate was to understand the problems with development in Leh and identify and frame planning strategies and approaches suited to the distinctive climatic and sociocultural conditions of the mountain town.

To guide this planning process, a formal Strategic Planning Committee (SPC) was formed with three groups of members:

1. Governing Members to oversee all the work and outputs of the committee
2. Working Group Members: Eminent individuals from various fields who are active in Leh to provide relevant inputs
3. A Secretariat with administrators to coordinate work between Governing Members, Working Committee Members, external advisors, citizens and other stakeholders.

The SPC is chaired by Padma Shri C. Phunsog, IAS (Retd.), Vice-Chancellor, University of Ladakh and Former Chief Secretary of J&K and its members included key government officials, business leaders and representatives of various local organisations:

C. Phunsog (Retd. IAS), Vice Chancellor, University of Ladakh;  
Tsering Sangdup, Deputy Chairman, LAHDC, Leh;  
Dr Ishey Namgyal, President, Municipal Committee, Leh;  
Dr Zahida Bano, ADC, District Administration, Leh;  
Rigzin Spalgon, ACR, District Administration, Leh;  
Sonam Chosjor, CEO, Leh Development Authority;  
Deleks Namgyal, General Secretary, ALTOA;  
Stanzin Norboo, Joint Secretary, ALTOA

## 3. Vision and the Strategic Planning Process:

The Strategic Planning Committee conducted meetings with citizens, local businesses, religious groups and other stakeholders, and experts in urban development, water and sanitation, education, healthcare, heritage conservation, environment, economic development and transportation, to collect data to compile this report. The report provides a comprehensive assessment of the situation and issues in Leh, and frames strategies and courses of action for the future. It is intended to serve as a basis for discussion and debate amongst various stakeholders in Leh as well as a guide for future prioritisation and projects.

## 4. Structure of the vision document:

Leh Vision 2030 is organised around eight themes, which are divided into separate sections:

- Theme 1: **A thriving and resilient Economy**
- Theme 2: **Mobility of people and goods**
- Theme 3: **Water, sanitation and solid waste management**
- Theme 4: **Social infrastructure**
- Theme 5: **Environment and climate change**
- Theme 6: **Heritage conservation**
- Theme 7: **Spatial planning and urban design**
- Theme 8: **Urban governance**

Each theme includes the following sections:

1. **Assessment** (Where we are)
2. **Vision 2030** (Where we want to go)
3. **Strategies and actions** (How to get there)

## 5. Way Forward:

Leh Vision 2030 was formulated through extensive consultations with the people of Leh and with inputs from experts. The planning process for the formulation of LVD 2030 along with detailed proceedings of the meetings conducted during the month-long mass public consultations along with views and suggestions of experts and citizens of Leh can be viewed on the Leh Vision 2030 website ([www.lehvision2030.com](http://www.lehvision2030.com).)

Leh Vision 2030 sets goals for the future and identifies important strategies and actions that must be taken to achieve these goals. Each theme also includes a list of actionable recommendations or projects including :

1. Studies and preparation of more detailed plans,
2. Policy/programme/regulatory interventions, and
3. Capital investment projects.

The recommended actions need to be expanded through stakeholder consultations and expert inputs. While there is generally a focus on capital projects, it is very important to conduct studies so that the knowledge required to make the right decisions is available. Meaningful plans must be prepared that take local factors and risks into account, and regulations must be developed and enforced.

Without the right data and knowledge, planning and regulations, even the built infrastructure and budget expenditure will not achieve the goals of the government or people. Each Project should be owned and managed by a single agency, but several other relevant organisations and departments from the government and outside should be closely involved to ensure proper planning, design and outcomes. The work of realising this vision begins now. This requires three steps:

### 1. Participation

Every major government and private institution involved in local development and governance must review this vision to identify their roles and responsibilities. More importantly, this vision must guide future decisions and actions of all parties, especially in creating and enforcing institutional frameworks and regulations.

### 2. Execution

The LAHDC, Leh must create a new Empowered Standing Committee (ESC) to plan and monitor the implementation of Vision 2030. This Committee of 12 to 15 members should include government officers, citizens and experts and hold monthly meetings and publish its proceedings for public feedback, and coordinate various projects related to the development of Leh. Members can be appointed for a two-year tenure with half the members rotated each year to ensure overlapping tenures and continuity.

### 3. Evolution:

The vision must become a living document that is periodically reviewed, debated and updated. A continuous schedule of public feedback consultations and expert meetings should be planned. The ESC must produce an "Annual Implementation Status Report" and update the vision and action roadmap each year so that the vision remains relevant and people can participate in the process.



A Mass Public Consultation meeting in progress in one of the Municipal wards of Leh town.

## 6. Forewords:

1. **Tashi Gyalton, Chief Executive Councillor, LAHDC, Leh:** Ever since Ladakh was opened to the outside world, it has witnessed tremendous change- culturally, economically and climatically. Therefore, a sustainable approach to our development is required if we are to preserve our heritage and culture without compromising our future. Leh is becoming the hub of all commercial activities and there is a huge surge in rural to urban migration. This is altering the entire fragile ecosystem of the region. COVID-19 has shown us how dependent we have become on the outside world. We have left no stone unturned in preparing a vision that addresses both macro and micro problems of the town and its people so that our future is happier and safer. I thank all the citizens, experts and SPC members who have helped us create this roadmap for our future.
2. **Jamyang Tsering Namgyal, Member of Parliament, Ladakh:** Leh town has played a pivotal role in meeting the aspirations of the youth, the elderly, agriculturists, entrepreneurs and other sections of society while also keeping them in tune with the environment through sustainable practices. The people of Ladakh are primarily reliant on agro-based activities and need to embrace sustainable practices, especially in the tourism sector as the region is witnessing a dramatic growth. We should also make Ladakh plastic-free. As envisioned by the Hon'ble Prime Minister of India, Shri Narendra Modi, Ladakh will soon be developed as the first carbon neutral region of the country, and it shall also emerge as a centre of learning of sustainable living
3. **C. Phunsog, IAS (retired) Vice Chancellor, University of Ladakh/Advisor, Strategic Planning Committee (SPC):** It has been my pleasure to serve as advisor to the Strategic Planning Committee. The SPC undertook a comprehensive study of the unique features of Leh town, particularly its socio-economic and environmental problems it, and the development imperatives for this unique Trans Himalayan town. The SPC members identified pressing problems such as haphazard growth of the town without a long-term perspective for any sector; adverse impact of climate change such as depletion of water sources and frequent flash floods along with droughts; and a mismatch in creation of jobs and job-seekers leading to unrest among the youth. The SPC has ensured that this Vision Document for Leh includes tables with objectives, strategies, target beneficiaries, implementing agencies, sources of funds, etc. to ensure that the relevant agencies can take up the proposals for implementation



Upper Leh Councillor addressing the residents of Leh town during a mass public consultation meeting



Chairman, LAHDC Leh, extended full support for the Mass Public Consultation meetings



C Phunsog (second from left) who is the advisor of the Strategic Planning Committee during a meeting with the SPC members

**B.3: Develop detailed, integrated plans to improve these four services—water and sewage, solid waste, traffic, and public spaces and parks—with sector experts and create necessary infrastructure:**

*Four comprehensive Detailed Strategy Plans (DSPs) were prepared by the team*

- 1. Water and sewage:** The Water and Sanitation (Watsan) team worked and completed the Detailed Strategy Plan (DSP) on water resource management in consultation with the PHE Department. LEDeG's FSM team is assisting MC, Leh in the collection and treatment of faecal sludge from hotels, guesthouses and households. With inputs and trainings from sector experts, PHE Department also implemented the 24x7 continuous water supply in the upper part of Leh town. The LEDeG team is also assisting MC Leh in the Safaimitra Suraksha Challenge that is aimed to ensure that no person needs to enter a sewer or septic tank unless unavoidable in the interest of public hygiene. This initiative is in line with the vision of the Prime Minister of India.
- 2. Solid waste:** The LEDeG team took help from a sanitation expert to compile and complete the DSP on solid waste. The same sanitation expert is also assisting the Urban Local Body (ULB) of Leh town to improve its service and understand the operation of the solid waste management plant installed in Leh.
- 3. Traffic:** The LEDeG team comprising urban planners and architect worked and completed the mobility plan and public transport to improve traffic movement in Leh town. The LEDeG team held meetings with officials of the traffic department, state pollution control board, drivers and other stakeholders to get their inputs for the DSP on traffic and air pollution.
- 4. Public spaces and parks:** The Planning and Development team also completed the DSP on public spaces and parks. LEDeG submitted a few plans to the local government to improve existing public spaces in Leh town to enhance the walking experience of its citizens. The local government also approached LEDeG to assist them in the conceptualisation and realisation of the Eco-Cultural Park in the town centre. The LEDeG team was also called upon by the ULB to prepare plans to improve the footpath and pedestrian paths in Leh town.



### **Result 3 : Improving services: Satisfactory**

The project aimed to establish FSM services across Leh town using the first Faecal Sludge Treatment Plant (FSTP) in Leh, which is India's first public-private partnership project for faecal sludge management. The mushrooming of hotels and guest housings due to the increase in tourist numbers and a preference for flush toilets has put pressure on the local government and MC, Leh to treat the faecal sludge generated from these establishments. Under the EU-Liveable Leh project, the staff drafted FSM Regulation and assisted MC, Leh in treating the faecal sludge to help Leh become India's first ODF++ hill town.

The project staff also conceptualised and implemented a one-of-its-kind greenhouse. They carried out research and analysis of different models and technologies available on greenhouses across regions and countries. Consultation meetings were held with various stakeholders to identify the best greenhouse model for Leh town to support floriculture horticulture using the treated water from the FTSP. The revenue generated from the sale of flowers and plants will be re-invested to support the operations and maintenance of the FSTP.

**C.1 Water audit conducted:** The audit was conducted and a report was also published and disseminated.

**C.2 Water Safety Plan developed together with concerned officials:** The WSP report for Leh town was prepared in collaboration with the PHE Department. Technical University Munich, Germany with assistance from the LEDeG team.

**C.3 Draft regulations for town-scale FSM prepared and presented to MC, Leh. Final FSM Regulations also prepared:** A policy on FSM Regulations will be framed and adopted by MC, Leh.

**C.4 Plan and complete scheduled septic tank cleaning for households, particularly low-income households :** The FSTP at Leh remains closed for almost five months, and the current capacity of the FSTP to clean faecal sludge is 12,000 litres per day. Despite the challenges, more than 2,000 trips have been completed to date.

**C.5 Design a compact, easily mobile device to clean septic tanks:** Most of the hotels and guest houses in Leh are in narrow lanes and remained inaccessible for the suction truck. To address this problem, the team developed an innovative and

low-cost design in the form of a compact and mobile device called the double-boosting pump. This device can clean septic tanks from a distance of 450 ft. This innovation received a national award and many companies and experts have asked for details to replicate it in other locations.

#### **C.6 1 Public toilet is renovated and maintained:**

A non-functional and poorly designed public toilet was renovated and converted into an all-weather toilet-cum-café. Water in toilets freeze in the winter due to the extreme cold. This makes it difficult to keep public toilets functional throughout the year. This is the first all-weather public toilet in Ladakh that is functional even in the winter. The toilet-cum-café has been leased to PAGIR, an organisation for the differently-abled (<https://pagir.org>) that is now responsible for its operations and maintenance.

**Avny Lavasa, former Deputy Commissioner/CEO of LAHDC Leh, said:** *"This intervention has completely changed the look of the town. People are appreciating the efforts to provide hygienic and functional toilets to the people of Leh, especially women. The aesthetically pleasing public toilet also works as a business model to sustain the operation and maintenance of such toilets."*

**C.7 Develop a plant nursery at the FSTP using treated water and sludge:** The one-of-a-kind greenhouse was developed to promote floriculture in Leh town. The LEDeG team researched models and technologies for greenhouses in different regions and countries. The revenue generated from the sale of flowers and plants using treated water from the FSTP will be re-invested to sustain the operations and maintenance of the FSTP.



### **Result 4: Citizen engagement: Not satisfactory**

Engaging citizens and key local stakeholders helped improve accountability and transparency in developing, implementing and maintaining these programmes.

Citizens and key stakeholders were engaged for the conceptualisation and implementation of the one-way, pedestrian-friendly Changspa street and for the conceptualisation and drafting of Leh Vision 2030 document. However, the project failed to create structural changes in how local authorities interact with citizens to make it an on-going and continuous dialogue to improve performance, accountability and

transparency in governance.

**D.1 Conduct town hall-style meetings for citizens to learn about government initiatives, and provide feedback and complaints:** Eighteen townhall talks and roundtable discussions were conducted with key officials and citizens of Leh town to discuss and share information on climate change

**D.2 Help LAHDC, Leh publish a quarterly newsletter with updates about current/new programmes and information about climate change:** Monthly reports were published to disseminate updates from the project. Similarly, quarterly newsletters were published for MC, Leh to share information on climate change.

**D.3 Produce films about the project and Leh as an inclusive, liveable town:** Two thematic films, including a series of short films around the character of Kaga Thelmet with a dash of humour and satire, were produced to highlight issues of Leh town. A film on the project was also produced.

**D.5 Improve LAHDC, Leh's social media content and viewership:** The Liveable Leh page on Facebook (<https://www.facebook.com/Liveable-Leh-2045408152444640/>) has 3,932 followers and 2,959 likes, whereas the Instagram page ([https://www.instagram.com/liveable\\_leh/](https://www.instagram.com/liveable_leh/)) has 939 followers. Similarly, the Liveable Leh YouTube page ([https://www.youtube.com/channel/UCAmc1SgAtQeZ\\_HXtNTZPcsQ](https://www.youtube.com/channel/UCAmc1SgAtQeZ_HXtNTZPcsQ)) has 252 followers.

**D.6 Create interactive exhibits, games and artwork on climate change and sustainability and display in public places, parks, markets and schools:**

An exhibition on menstrual cups to highlight the challenges of plastic pollution posed by the use of disposable sanitary pads and tampons was organised on 2 October to mark Swachh Bharat Abhiyan or Clean India Mission. Since gender inclusivity is one of the objectives of the Liveable Leh project, the topic was chosen as it connects well with climate change mitigation as the plastic used in sanitary pads and tampons pose a huge environmental challenge.

**D.7 Disseminate published reports through online portals, relevant organisations and events:** A total of 11 reports were published and disseminated.

**D.8 Organise a global competition on solutions to make high altitude towns resilient and sustainable:** LEDeG collaborated with Ethos ([www.ethosindia.in](http://www.ethosindia.in)) to conduct a global design competition (<https://ethosempowers.com/#!/ideace/events/LEDEG>).

A total of 280 entries were received, including 42 international registrations, out of which 40 were complete as per the submission criteria. Cash prizes were given to the top three winners, whereas special prizes were given to two entries. Four jury members, with experience in practising sustainable solutions, were engaged to shortlist the entries. Ramon Magsaysay awardee Sonam Wangchuk was invited for a live talk (<https://www.youtube.com/watch?v=Nd41FHxVnjk>) with the participants on 'Responsive and Responsible Design for Liveable Leh' to encourage more participation and entries.

**D.9 Present the project work and outputs at leading urbanisation, liveable city and climate change conferences in India and abroad:** A total of 14 presentations were delivered on the project work on various national and international platforms.

## 7. Challenges and lessons learnt

### 1. Building a strong relationship with the government and CSOs:

The success of a project is largely dependent on the relationship the implementing agency shares with local government agencies and CSOs. The pilots, meetings, trainings, workshops and exposure visits helped foster a strong relationship between the government and CSOs.

Even though the implementing agency enjoyed a cordial relationship with LAHDC, Leh, additional efforts were made to develop a more cordial working relationship when Municipal Committee elections were held in 2018 to elect the President and Municipal Ward Members. Similarly, once Ladakh was declared a Union Territory (UT), the implementing agency took initiatives to foster a good relationship with administrative secretaries and the Lieutenant Governor to ensure that the project was a success. Frequent political changes in Leh during the project period, however, made the process of building strong relationships more difficult.

### 2. The collaborative process between various organisations (government, CSOs) managed to break departmental silos

The EU-Liveable Leh Project focused primarily

on bringing together stakeholders from different government agencies under LAHDC, Leh, such as PHE, LDA, PWD and MC, Leh, and CSOs such as ALTOA, All Ladakh Hotels and Guest House Association (ALHGHA) and Ladakh Arts and Media Organisation (LAMO). Despite the conflicting priorities between government agencies and CSOs, the LEDeG team managed one-on-one engagement with all stakeholders. The stakeholders (government and CSOs) repeatedly noted how the EU-Liveable Leh process managed to break various silos to create a platform to work cohesively to achieve the dream of helping Leh become an inclusive, resilient and liveable mountain town by 2030. It remains to be seen if this cohesiveness can be sustained without direct support from the project team.

### 3. Demonstrative actions, especially pilot projects or quick-wins, are needed early to change the perception of the project as positive for the town

The first activity that the EU-Liveable Leh Project undertook was the pilot to transform Changspa Street, a busy two-way street in the heart of Leh town. Previous experience suggests that simple and demonstrative actions need to be undertaken as early in the process as possible to engage stakeholders with the project.

Similarly, the renovation of an existing toilet using local material and traditional style to make it functional throughout the year was another pilot project completed in the first year of the project to create a positive perception amongst stakeholders.

These pilot interventions helped get the larger project going in a short time. Also, residents of Leh town have been demanding such interventions due to the lack of pedestrian-friendly paths and absence of public toilets that remained functional even in the winter.

### 4. Bottom-up approach instead of a top-down approach:

Since the Liveable Leh Project aims to make Leh a resilient, inclusive and liveable mountain town by 2030, it requires participation and feedback from local stakeholders. During stakeholder meetings, townhall talks and public consultation meetings, the residents of the town complained of the top-down approach used by the government to implement schemes and projects.

However, the project team used a bottom-up

approach from the beginning and placed local stakeholders at the centre of the conversation. This helped complete the pilot projects and getting high quality inputs for the Leh Vision 2030 and other planning exercises.

#### **5. Co-ownership of the project:**

It was critical that local authorities own the project, and openly use and accept help from LEDeG, BORDA and other implementation partners. This not only ensures government support for various activities but increases buy-in and likelihood that the project deliverables (like plans) will be used and implemented in the years to come.

#### **6. Continuity of staff, government officials and leaders:**

There were several changes in government leadership and staff during the project period, including major political changes like Ladakh

becoming a UT. For example, there were four chairpersons in LAHDC, Leh during the course of the project and three Deputy Commissioners in the district administration. It is important for such projects to plan for such changes, which are normal for government agencies.

#### **7. Maintain the momentum of the project:**

Due to various elections and the declaration of Ladakh as a UT, the key people and power structures kept shifting which may dilute some of the outcomes. There is need for on-going activities to make the project a long-term success but finding funds and human resource remains a challenge.

## **8. Way Forward:**

Even though the Liveable Leh project has come to an end, the impact of the project is expected to be visible till 2030. As the project focused on capacity-building of government officials, the outcome of the trainings, workshops and exposure visits cannot be ascertained immediately. It will take time to implement the recommendations and project works proposed in the Leh Vision 2030, four DSPs and other reports.

Therefore, it is the responsibility of the concerned officials, including UT and District Administration, LAHDC Leh and MC, Leh, to sustain the momentum generated by this project. The ideas, plans and proposals that emerged from project will be successful only if they continue to enjoy support from government agencies, CSOs and other stakeholders.

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