WASH BASELINE

Assessment of Small and Medium Towns (Kargil-Ladakh)

2022 Ladakh Ecological Development Group



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List of Abbreviations

BORDA Bremen Overseas Research and Development Association **CPHEEO** Central Public Health and Environmental Engineering Organisation FHTC Functional household tap connection FS Faecal sludge Faecal sludge treatment plant **FSTP** Gol Government of India KLD Kilo litres per day LPCD litres per capita per day Municipal Committee Kargil МСК MLD Million litres per day NRW Non-revenue water PHED Public Health and Engineering Department PWD Public Works Department STP Sewage Treatment Plant SWM Solid Waste Management TPD Ton per day ULB Urban local body Union Territory UT



FIGURE 1: LOCATION MAP OF KARGIL

01

Town Profile

In the ancient times, a major part of present Kargil was named as Purik. This name has been given by the Tibetan scholars as the people living in this part of the land have the features of Tibetans. Drass is inhabited by the people of the Dard race and Zanskar has Ladakhi – Tibeto stock. The racial stocks of Kargil are Aryans, Dard, Tibetans, and Mongoloids. Kargil is a place where people of multi- ethnic, multi-languish, multi- cultural are living in. The types of people are Brogpas, Baltis, Purik, Shinas and Ladakhi. The languages spoken are Shina, Balti, Purig, Ladakhi etc. As the Balti and Shina languages are written in Urdu script, Urdu is common in the area.

Islam came to Kargil in 15th century. Mir Shams-ud-Din Iraqi, a scholar of Shia school of central Asia visited Baltistan and Kargil with his missionaries to preach Islam. The chief of Baltistan embraced Islam first and it was later followed by the Chiefs of Kargil. Prior to Mir Shams-ud-Din Iraqi Khawaja Noorbaksh visited Kargil and done a lot of Islamic preaching. Thus, Buddhism remained squeezed in Kargil to the places like Sapi, Phokar, Mulbik, Wakha Bodh-Kharboo areas a Darchik Garkon and Zanskar.

Kargil became a separate district in the Ladakh region during the year 1979 when it was bifurcated from the erstwhile Leh district. Ladakh Autonomous Hill Development Council (LAHDC) Kargil was commissioned in July 2003 in the district. The LAHDC has 30 Councillors out of which 26 Councillors are elected while the remaining 4 are nominated. Kargil district consists of nine administrative blocks. (Feedback Infra, 2020). Ladakh has been declared Union Territory in the year 2019 and became the joint capital of UT Ladakh.

Kargil Town

Kargil has shown a significant change in growth potential after 1999's Kargil war. The growth of Kargil town was adversely affected due to outmigration and disturbed social condition during that period. The administrative boundaries were redefined in 2006 and Poyen, Bagh-E-Khumaini, Baroo and Goma towns were added in the Kargil municipal committee area. The demand for serviced land has increased tremendously to accommodate the increasing population in and around the Kargil town. It shows immense pressure on land and infrastructure of the town. In 1990s, an effort was made by the Government of Jammu and Kashmir for the preparation of Master Plan for Public Health Engineering Department (PHED), Kargil but it was not implemented due to unavailability of financial resources. Insufficient funds for plan implementation led the town to grow in an organic pattern with inadequate basic amenities. Due to the absence of building byelaws and proper planning strategies, the haphazard pattern of growth can be seen in the town. Town has showed encroachments on steep hill slopes in Chanchik-I ward as well as in Pashkyum at Ando colony. Town has also shown growth in Poyen, Baroo, Chutuk, Khurbathang and Pashkyum area.

Urbanization

The existing physical growth pattern of the town is in the north and south direction majorly along the Shilikchey-Baroo Road. The major residential developments are concentrated in Shilikchey, Goma Kargil, Poyen, Lankoor & Chanchik. The administrative buildings and offices are in Baroo area. The new residential developments are coming near Degree college & Satellite colony areas. The hilly terrain & defence area the planning area is restricting the physical growth of the town in an organic manner. The recent development of LAHDC area in the plateau region will further enhance the growth of the town and will visualize the new developments in near future.

Demography

As per the census 2011, Kargil municipal area had a population of 16,338 persons. The growth rate of Kargil town had shown significant change (53.31%) in last decade i.e, 2001-11. The main reason is due to the rapid urbanization and promotion of tourism, socio-economic activities, livelihood management etc. by the state and the central government.

There is a great variation found in the gross population density in different parts of Kargil municipal committee area. The average gross population density of the developed area within the Master Plan Area is 34-persons per hectare. The estimated gross population density in total planning area is very low i.e., 9-persons per hectare (Feedback Infra, 2020). The low gross population density of Kargil planning area can be ascribed due to the presence of undevelopable, undulated hilly slopes making it unfavourable for habitation.

During the year 2001, the sex ratio of the town declined to 559. This decline in sex ratio is due to the increase in male population because of in-migration of male workers. This also reflects that urbanity is replaced the rural imprints in the town. Also, the town showed a very low sex ratio (i.e., 559) comparing with states urban area's sex ratio of 819 in 2001. During the decadal year 2011, the sex ratio of Kargil was 621, which is on lower side in comparison of district level sex ratio of 810.

Literacy rate of Kargil city is 83.55 % higher than state average of 67.16 %. In Kargil, Male literacy is around 92.82 % while female literacy rate is 67.82 %. (Kargil, Census Data 2011)

TABLE 1: TOWN PROFILE (KARGIL, CENSUS DATA 2011, N.D.)

Name of the Town/City	Kargil				
Province/District/State/UT	Ladakh				
Area of the Town (Sq Km)	8.93				
Number of administrative division (Ward)	13				
Total population	2011: 16,33	88	Estimated P	Present: 17,122	
	(Census 20	11)	(survey done	by MC Kargil	
			employees ir	the year	
			2016-17)		
	Male	Female	Male	Female	
	10,082	6,256	8,452	8,670	
Sex Ratio	621 (2011 (Census)	103		
Population growth rate (%)	53.31 % (20	01-11)			
Floating population (If applicable)	15, 000 per	day (include	s tourist, Lab	ors, Local	
	migrants) (S	Source: MCK)			
No. Properties	Residential	Commercial	Institutional	Others	
	2,446	1,018	95	There are	
	Households	(hotels &	(Govt Offices)	no industrial	
	(Average	Shops)	31(Schools an	d establishments	
	height of	(Maximum	Colleges)	within the town.	
	buildings is	height of			
	G+2)	hotel in			
		Kargil is			
		G+3)			
Average HH Size	7				
No. of Notified Slum	4				
No. of Non-Notified Slum	9				

Economy

The economy of the Kargil town is dependent on the tertiary sector or service sector. Being a district headquarter town, it has all the district level governmental offices located inside the town which caters the maximum share of working population of the town.

Ward-wise Characteristics

Out of the 13 wards in Kargil town 4 have been notified as slums. There are about 701 households which are living in slums, which makes up about 5,815 people.

TABLE 2: WARD LEVEL DATA

Word No	Namo	Aroa (Sa Km)	No. of	Population			
Walu. NO.	Name	Alea (Sy Kill)	Households	Total	Male	Female	
Ward 1	Chanchik-1		177	1305	657	648	
Ward 2	Chanchik-2		105	1173	635	538	
Ward 3	Thaskangrong Lankore		166	1432	695	737	
Ward 4	Dreythang Baltibazaar		230	2011	928	1083	
Ward 5	Dass Pishu		332	1390	637	753	
Ward 6	Goma Kargil-1		130	803	387	416	
Ward 7	Goma Kargil-2		107	869	391	478	
Ward 8	Poyen		189	1326	674	652	
Ward 9	Bagh-e-Khomeini		235	1379	667	712	
Ward 10	Baroo-1		220	1508	783	725	
Ward 11	Baroo-2		79	560	285	275	
Ward 12	Baroo-3		60	551	285	266	
Ward 13	Baroo-4		416	2815	1428	1387	
TOTAL		8.93	2,446	17,122	8452	8670	

(MCK, 2021) Note: Based on survey done in 2016-17

TABLE 3: SLUM DATA

			Category			Population		
Sr. No.	Slum name	Location / Ward	(Notified, Recognized, Identified)	Area (Hectare)	No. of Households	Total	Male	Female
1	Chanchik-1	1	Notified		177	1305	657	648
2	Chanchik-2	2	Notified		105	1173	635	538
3	Balti Bazar	4	Notified		230	2011	928	1083
4	Poyen	8	Notified		189	1326	674	652

(MCK, 2021)









Access To Toilet

2.1 **Baseline Status**

All the households in Kargil have their private toilets, 70% of households have toilets with a flush, and the rest 30% use dry toilets which are emptied using manual labours (without any proper protection gear). There is no concept of community toilets in Kargil. Only public toilets are available.





FIGURE 5: Typical Flush Toilet In Kargil

Hotspots

There are some hotspots near Kargil town one is identified in Changchik area circular road near Jafaria Academy) and the other one near Balti Bazaar



FIGURE 6: Hotspot At Changchik Area (Circular Road Near Jafaria Academy)

TABLE 4 : ODF STATUS

Is the town open defecation free?	Yes
If yes, what is the next status the city is trying to achieve? (Ex: ODF+, ODF++)	ODF in the year 2019, (MCK has applied for ODF+ in Feb 2021)
If not, then how many more toilets need to be constructed, and what expected timeline.	Not applicable
	(MOK 2021)

(MCK, 2021)

Individual toilets:

Historically people of Ladakh had toilets in every household hence, all the individual households (2,446) have their toilets. Due to lack of sewerage management in the town people use septic tanks for wastewater at the household level. The septage from these septic tanks is collected by the MCK using their suction machines which are then transported to the FSTP where it is treated and recycled. Slums in Kargil town have similar sanitation situation as the rest of the town, there is no sewerage system in the slums also, People in the slums use on-site sanitation system like the other parts of the town. The septage is collected by the MCK desludging trucks and conveyed to the FSTP for treatment.



Figure 9: local dry toilet at lankoor



Figure 11: local dry toilet at changchik



Figure 12: local dry toilet at changchik

TABLE 5: STATUS OF IHHL

Ward	Total		Remarks		
	HHS	Having individual toilets	Dependent on community toilets	Practicing open defecation	(Status)
Chanchik-1	177	YES	NO	NO	Slum
Chanchik-II	105	YES	NO	NO	Slum
Thaskangrong- Lankore	166	YES	NO	NO	
Dreythang- Baltibazar	230	YES	NO	NO	Slum
Dass-pishu	332	YES	NO	NO	
Goma Kargil-1	130	YES	NO	NO	
Goma Kargil-II	107	YES	NO	NO	
POYEN	189	YES	NO	NO	Slum
Bage-e- khomeini	235	YES	NO	NO	
Baroo-I	220	YES	NO	NO	
Baroo-II	79	YES	NO	NO	
Baroo-III	60	YES	NO	NO	
Baroo-IV	416	YES	NO	NO	

(MCK, 2021)

Public Toilets:

The septage from the septic tanks of the public toilets is collected by the MCK using their suction machines which are then transported to the FSTP where it is treated and recycled. Water for the public toilets is supplied through a borewell which is lifted through a submersible pump to overhead tank.

The public toilets are leased through a tendering process, tender costs for each public toilet vary based on their location capacity and condition.

The lease cost can vary from 60k per year to 1.5 lakhs per year. The public toilets are cleaned on a daily roster basis.

Out of all the public toilets, 3 are not functional in winters as they have exposed water tanks and piping systems. The others run for the whole year as their water tanks are underground and pipes have adequate insulation as well.



FIGURE 8: PUBLIC TOILET CHANCHIK



FIGURE 7: PUBLIC TOILET MAIN MARKET AREA



FIGURE 11: PUBLIC TOILET CHANCHIK



FIGURE 9: PUBLIC TOILET LAL CHOWK



FIGURE 10: PUBLIC TOILET MAIN MARKET AREA



FIGURE 12: PUBLIC TOILET LAL CHOWK

Cost Recovery (%			No data available											
User charges (Rs)		Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-	Rs. 5/-
Owned & maintained	by	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil	MC Kargil
Complaint redressal	system available							No data available						
Functional status	(water, lighting, etc)	YES	YES	YES	YES	YES	YES	NO (In Winters)	YES	YES	NO (in winters)	NO (in winters)	YES	YES
Waste disposal	arrangement (sewer, septic tank, open drains, etc)	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK	SEPTIC TANK
	Women	0	_	0	0	0	0	0	0	0	0	0	0	0
No of Seats	Men Urinals	2	m	4	2	2	m	2	F	_	F	_	-	m
	Men	2	m	4	m	m	m	2	F	_	F	_	2	4
Avg.no of users per	day	55	55	50	46	50	40	35	50	50	30	40	45	40
Location of the public	toilet	Chanchik-1	Chanchik-II	Chanchik-II	Chanchik-II	Chanchik-II	Thaskangr - ong Lankore	Thaskangr- ong Lankore	Dreythang-Balti- bazar	Dass-Pishu	Goma Kargil-1	Baroo-II	Baroo-IV	Baroo-IV
Sr. No.		L	5	ო	4	Ŋ	Q	7	0	0	10		12	13

TABLE 6: STATUS OF PUBLIC TOILET

2.2 Gaps & Issues

Coverage of Toilets

(Individual & Community): There is no gap for IHHL toilets in Kargil. However, toilet can be improved as most of them are in poor condition.

Public Toilet Blocks- There is a need for public toilets in some parts of the town as per MCK:

- Byamathang
- Poyen



- The toilets need to be made winter ready by providing good insulation and other means.
- The toilets need to be made more hygienic as the current condition of the running toilets are not hygienic



Figure 13: public toilet circular road

Water supply

3.1 Baseline Status

The Public Health and Engineering Department (PHED) of Kargil manages the water supply for the entire town. The main sources of water are the Wakha River in the main town area, Suru River in the Baroo and Poyen area, and the springs in Goma Kargil. Water from the Wakha river is collected and then pumped to the service reservoirs (SR) and distributed to all the neighbourhoods using a gravity system. Around 28% of the town has individual house tap connection, the rest of the town relies on public

stand posts and water tankers for water. There are 4 water tankers that are deployed daily to areas without a tap connection by MCK.

A Water Treatment Plant of 260 KLD capacity is under construction.

PHE charges Rs 1,610 per household per year and Rs 4,800 per commercial establishment per year for the water supply.

TABLE 7: TOWN WATER PROFILE

Source of drinking water supply in the Town/City Ex: Groundwater, Surface water, if both- Indicate in %) -For Groundwater source, Mention No of borewell, location, and capacity) -For Surface water, Mention Name, location, and distance from the town	River Suru, River Wakha, and Springs Wakha river source is around 6-7 kms from the Changchik SR, and the PHE Department has a provision of desilting the water at the source and gravity feed to the Changchik SR and then the water gets distributed to Kargil town, they do test of the water 2-3 times in a year and have not found any pollution in the drinking water source as per BIS standard.
Total water supplied to the town per day (KLD)	250 KLD
Total No. HH with Functional Household Tap Connection (FHTC)	750
Total No. of HH without FHTC?	1, 896
The total length of water supply network? (Km)	40 Km
Existing arrangement for water supply in non-networked and slum area	Water Tanker, Public Water Stand Post
Per capita supply of water (lpcd)	30 LPCD

Number of Water treatment Plant with capacity (or) Specify mechanism for the treatment of raw water from	1 WTP with a capacity of 260 KLD (Under construction)
the source	
Existing water usage charges for Residential and	Residential 1610/ year
commercial use	Commercial 4800/year
Is there any groundwater recharge structure in the city?	No

Table 8: zonal water supply status

Water zone	Water source	Capacity (KL)	Wards served	No. of HH	No. of connections	Water Quality	Per capita sup- ply (Adequate, Inadequate)	Frequency of water supply	Hours of supply
Kargil Town	Wakha River	250	5	1010		Good	30 LPCD	Intermediate	2 Hrs
Baroo	River	150	4	775	750	Good	30 LPCD	Intermediate	2 Hrs
Poyen	River	150	2	424	750	Good	30 LPCD	Intermediate	2 Hrs
Goma Kargil	Spring	150	2	237		Good	30 LPCD	Intermediate	2 Hrs



Figure 14: existing & proposed water supply system in kargil

Kargil does not have any water management plan. This causes major problems, problems like haphazard water supply which in turn leads to neighbourhoods excluded from the whole plan.

A Water management plan for the whole of Kargil will ensure an equitable and accessible water supply to the whole town and ensure an optimum system that would cost less and simultaneously be more efficient.

The water connection charges as of now are collected physically, there is no digital and e-payment mode for payment of water bills.

One Project named 24 X 7 water supply to Kargil town under SDP has been sanctioned and it will cater to the need of water supply toward Goma, Kargil I and II, main bazaar and Baroo I and II.

3.2 Gaps and Issues

Water demand vs Supply:

There is a demand for about 1,284 KLD (As per CPHEEO Standards – 75 lpcd) of water in Kargil, but as of now Kargil only supplies 250 KLD of water. There is a gap of 1,034 KLD of water in Kargil.

Zonal level water supply:

- There is insufficient water supply connection (only 750 connections),
- Right now, PHE only supplies 30 LPCD which

is not up to the standards set by CPHEEO (75LPCD).

• Some areas are at a very high altitude due to the nature of topography in this town these areas/zones are very difficult to provide water supply and have a high O&M cost.

Non-Revenue Water (NRW)

The PHE has no data regarding NRW in Kargil. But if we take the CPHEEO norm which is 15% of the total water supplied it is about 37.5 KLD.

Cost Recovery: Data is not available

Main issues of Water Supply :

- The existing gravity system used by PHE is inefficient due to the undulating topography. which leaves a few neighbourhoods as unserved areas.
- The main problem for distribution line is due to the dense built-up area in some areas which makes it hard to lay down pipes.
- People of Kargil are very resistant to give land for any sort of infrastructure laying, this coupled with very little availability of land due to the high built up is a huge problem.
- The existing water supply system causes major problems in winter. Water should be made to work in winters also.
- The PHE is not considering the floating population (around 15,000) for the water supply.



Figure 15: water supply scheme under construction

Management of water bodies

The main water bodies in Kargil are the **Wakha** *river* and *Suru river*

4.1

Baseline Status

Kargil has not done any sort of survey or research on water bodies to this date.

Department of Irrigation and Flood Control (I&FC) looks after the small irrigation channel which uses river water for irrigation. The river is a source for the water supply system for Kargil managed by PHED. MCK looks after the cleaning of the riverside areas with a cleanliness drive conducted whenever necessary.

No such ongoing / upcoming Projects to improve existing water bodies is with the department.

TABLE 9: WATER BODY STATUS

No. of water body present within the administrative boundary.	Suru River (1)	Wakha River (1)	Goma (spring cluster)
Type of water body present?	River	River	Spring
Area of the water body? (Sq. Km)	-	-	-
Present condition of the water body (Visual observation)	Moderate (but need cleaning)	Moderate (but needs cleaning)	Good
Quality of the water?	Not potable needs water treatment	Not potable needs water treatment	Good
Is there discharge of wastewater/Sewage into the waterbody?	No	No	No
Are these waterbodies used for any purpose?	Fishing, Irrigation and Drinking	Fishing, Irrigation and Drinking	Drinking



Figure 16: washing of vehicles at riverbank

4.2 Gaps & Issues

Main issues of Waterbodies:

- Spring sources are drying rapidly due to groundwater depletion which could be because of over exploited groundwater extraction.
- The riverside needs to be cleaned thoroughly, as instances of waste dumping are very common.

Waste-water management

5.1 Baseline Status

Kargil has no sewerage network system. People here rely on septic tanks and dry toilets only.

5.1.1 Wastewater disposal arrangement

There is no data on wastewater generated in the town. So, using the CPHEEO norms which is 80% of the water supplied (taken as 75 lpcd), Kargil generates 1027 KLD of wastewater. The wastewater is collected onsite using a septic tank, which is transported to the FSTP using suction trucks (run by the MCK). Rs 2000 is charged for a single trip of the suction truck.

The slum areas also follow the same system and do not have any special considerations.

Ward	No. of Households	Wastewater in HH (No.)	disposal arr	angement	Wastewater disposal arrangement in Slum-HH (No.)			
		Sewerage system	Onsite sanitation	No. of Insanitary latrines	Sewerage system	Onsite sanitation	No. of Insanitary latrines	
All	2446	-	Septic tanks	-	-	Septic tanks	-	

TABLE 10: WASTEWATER DISPOSAL ARRANGEMENTS

5.1.2 Septage management

Kargil has an FSTP of 10 KLD. It is responsible for the treatment of septage from all the town. Septage from the septic tanks is transported to the FSTP using 4 suction Trucks (run by MCK) with a capacity of 2000 Ltr each. The FSTP is operated by UY Tri enviro Pvt Itd (Kanpur) on a turnkey basis. The FSTP is not functional during the winter months (November – April). The FSTP had a cost of Rs 3.04 Cr and an additional cost of 70 Lakhs was proposed for the transmission of electricity and other services. The treated water is proposed to be used in agriculture fields and the treated sludge is composted and used as manure.





Figure 17: faecal sludge treatment plant

TABLE 11: DETAILS OF FSM

Existing mechanism for emptying of containment unit?Suction trucksNo. of desludging trucks ownedBy ULB04By Private Operator0Capacity of the TruckBy ULB2,000 Ltr eachBy Private Operator0Avg. No. of desludging trips in a monthBy ULB20 trips during peak seasonBy Private Operator0Is there a Faecal Sludge treatment unit in the town?YesCapacity of FSTP? (If yes)10 KLDWhere does the sludge get emptied? (If No)Liquid-	Type of containment systems in town (Septic tank/Pit system/Lined tank without partition)	Septic tank			
No. of desludging trucks ownedBy ULB04By Private Operator0Capacity of the TruckBy ULB2,000 Ltr eachBy Private Operator0Avg. No. of desludging trips in a monthBy ULB20 trips during peak seasonBy Private 	Existing mechanism for emptying of containment unit?	Suction trucks			
Capacity of the TruckBy ULB2,000 Ltr eachBy Private Operator0Avg. No. of desludging trips in a monthBy ULB20 trips during 	No. of desludging trucks owned	By ULB	04	By Private Operator	0
Avg. No. of desludging trips in a monthBy ULB20 trips during peak seasonBy Private 	Capacity of the Truck	By ULB	2,000 Ltr each	By Private Operator	0
Is there a Faecal Sludge treatment unit in the town?YesCapacity of FSTP? (If yes)10 KLDWhere does the sludge get emptied? (If No)-End use/Disposal of treated wasteSolid-Liquid-	Avg. No. of desludging trips in a month	By ULB	20 trips during peak season	By Private Operator	0
Capacity of FSTP? (If yes)10 KLDWhere does the sludge get emptied? (If No)-End use/Disposal of treated wasteSolid-Liquid-	Is there a Faecal Sludge treatment unit in the town?	Yes			
Where does the sludge get emptied? (If No)-End use/Disposal of treated wasteSolid-Liquid-	Capacity of FSTP? (If yes)	10 KLD			
End use/Disposal of treated waste Solid - Liquid -	Where does the sludge get emptied? (If No)	-			
	End use/Disposal of treated waste	Solid	-	Liquid	-

(MCK, 2021)

TABLE 12: STATUS OF FSTP

Name of FSTP	Treatment process / technology	Installation year	Capacity (KLD)	Operational status	O&M done by	Reuse arrangement (Solid/Liquid)
Septage	Septage to	2017-2018	10 KLD	Summer	Turnkey Basis	-
Management	compost			May-October		
& Procurement						
of Equipment's						
at Kargil town						

(MCK, 2021)

- MC Kargil said that the Solid/Liquid is proposed to be reused for agricultural purposes. Currently, there is no provision of taking the liquid and solid to the fields as the FSTP is nearly 10-15 Kms away from the town
- An additional 70 Lakhs have been proposed for transmission of electricity, water supply.

5.2 Gaps and Issues

Kargil has no sewerage network system. People here rely on septic tanks and dry toilets only.

5.2.1 Gaps in Wastewater disposal arrangement

- No Sewerage system and STP for the Town
- A WWM plan does not exist for the town,
- Provision of sewerage system would be difficult due to the topography of the town.

5.2.3 Gaps and issues related to FSM

Septage collection & conveyance:

- Suction trucks are not able to access some areas due to narrow lanes and high built-up.
- There is no data on the number of septic tanks at household level or for commercial establishment.
- Desludging of septic tanks is not carried out regularly (once every 2-3 years) and there is no awareness campaign about this also.
- People have very little knowledge about septage management and FSM.
- Manual scavenging is practised in cleaning of dry toilets.
- Sanitation workers do not use sufficient PPE kits.

Septage treatment & disposal / Reuse:

- The treated water or sludge is not reused as of now
- The FSTP is not functional in the winter months.

Grey water management

6.1 Baseline Status

There is no separate management of greywater in Kargil. The onsite septage management system has combined pipes for both black water and greywater. Also, greywater management is not practiced by any of the Individual households in Kargil.

6.2 Gaps and Issue

- There is a huge lack of technical knowledge on greywater management.
- There is no segregation of blackwater and greywater. Both are collected in the septic tank at the household level.
- In some areas, greywater is directly discharged into streets or the drains.
- Some areas mainly the main market areas mix greywater with the local waterbody.



FIGURE 18: GREYWATER DISCHARGED INTO WATER BODY

TABLE 13: STATUS OF GREYWATER MANAGEMENT

Does HH have a different discharge point for greywater and Blackwater?	No
What is the common practice in the town wrt. greywater management	GW is disposed along with BW to the septic tanks
Are there any greywater treatment units in the town?	No
How is greywater managed in areas without a sewerage	All houses are having Septic Tank at the household level,
network?	as per PHE Officials.
Is there any common discharge point in the town for	No
greywater collection?	
Any special initiative was taken in the town towards	No
greywater management?	

No upcoming projects for greywater management, as of now Kargil is dealing with providing basic sewerage management and septage management.

Solid waste management

7.1 Baseline Status

MCK is responsible for the solid waste management waste of Kargil town. As of now, Kargil does not have a solid waste management plan. A new solid waste management plan has been proposed.

The waste is being segregated at the household level, and collected in separate trucks, for dry and wet waste.

As of now, the MCK collects waste from D2D and their community bins also. The collected waste

is then transported to their unofficial Dumpsite in Kumbathang (2 Kanal). A 5 Kanal land just above the old unofficial dump site is identified for the SWM plant which would be proposed for the upcoming SWM plan.

The MCK collects waste once in the morning (7 am) and once in the noon (2 pm). They have a fleet of 5 garbage trucks (60 quintals) and 1 mini truck. The vehicles collect the waste from the community bins in the morning and then in the noon they collect waste from D2D.

D2d waste is not collected in the ward (6,7,11 and 12) which have rural characteristics, waste is collected every week from these wards as they do not generate much waste.

TABLE 16: SOLID WASTE MANAGEMENT STATUS

Quantity of waste generated from the town (MT/D)	12.5 Tones / Day
Does the town have a D2D collection system/Primary collection	Yes
Coverage of Door-to-Door waste collection (%)	80%
D2D Waste collection frequency	Daily basis (ward 6,7,11 and 12 on weekly basis)
Number and Type of equipment present for Solid waste	5 garbage trucks (60 quintals) and 1 mini truck
management	dump site (1 No.)
Number of community bins available for secondary	80 No.
collection	
Quantity of waste collected from the town per day (MT)	12.6 T
Waste management system in slums	Same as in the whole city

The Bio-medical waste of the Kargil hospital is collected and transported by the hospitals itself. But they are also using the same unofficial dump site of the MCK only without any sort of treatment or scientific disposal.

Processing (Treatment) of Solid wastes: Kargil does not have any sort of treatment plant for solid waste.

Disposal of Solid wastes: The only form of disposal is in the form of dumping at the unofficial dump site at kumbanthang (2 Kanal). The dump site is not managed and plans to clear its legacy waste are already in motion. Kumbathang receives an average of 12.6 tons of waste every day which includes dry waste, wet waste, C&D waste, and Biomedical waste.



FIGURE 19: SOLID WASTE DUMPING SITE (KUMBATHANG)



FIGURE 20: BURNING OF WASTE AT DUMPING SITE

Financial information the MCK does not collect any form of user charge for the waste collection as of now.

7.2 Gaps & Issues

Primary and secondary collection:

- Unavailability of a door-to-door collection system. (Individuals must bring their waste to the predefined routes. So, there is a very little D2D collection going on, but MCK still insist that 80 % of D2D is going on.)
- There is no source of segregation practiced as of now,
- People must physically come to the office for the complaint.
- There is also a lack of capacity and training for MCK workers.
- Lack of C&D waste management

Conveyance (Transportation) to Treatment facility:

- MCK has inadequate vehicles for the waste management system they have 5 tippers and 1 mini truck and have placed an order for 2 compactors but still, there is a need for 3 more compactors.
- The vehicles have a capacity of 60 quintals, but they do not the capacity to collect segregated waste as they don't have that feature in their trucks,

• Trucks must do 2 to 3 round trips because of their lack of vehicles.

Processing (Treatment) of Solid wastes:

- There is no form of treatment for solid waste in Kargil.
- Bio-medical waste is dumped without any treatment or proper disposal in the unofficial dump site.

Disposal of Solid wastes:

- There is a lack of scientific dump site facility,
- Solid waste management rules are being formulated up till then there are no SWM rules and hence ill effects of open dumping of solid waste in Kumbathang are visibly clear.

80

Health and hygiene of sanitation workers

8.1 Baseline Study

TABLE 17: MANPOWER DATA

Total number of sanitation workers working in t	he town
Under SWM (Specify contractual employees	Sanitary Inspector 1 Nos
separately)	Sanitary Supervisor 3 Nos
	Driver 3 Nos
	Driver Helper 3 Nos.
	Permanent Sweeper 18 Nos
	Contractual Employees = 6 (Driver) + 40
	(Sweeper) = 46 Nos
Under wastewater management (Specify	Suction Truck Driver = 4 Nos. (casual
contractual employees separately)	Employees)
	Driver Helper = 4 Nos. (Casual Employees)
Operatore under water euroly	4 Dermanant Tankar driver
operators under water supply	
	15 Casual laborers engaged by PHE.
	10 Driver Helpers.
Others	FSTP is Operated and Maintained by UY
	Trienviro Pvt ltd (Kanpur)

Water and sanitation-related facilities:

There are no facilities for the sanitation workers to clean up or to rest. It is proposed to construct a WASH facility for sanitation workers by MCL.

Training on safety:

There have been 2 trainings on safety for the sanitation workers. PPE kits were provided to the sanitation workers by MCK and is being used by the workers.

Existing living / housing condition:

Sanitation workers live in rental housing or municipal committee quarters. Some of the workers are also locals, so they live in their own houses, the municipal Committee Quarters have 10 sets in which around 13 people live. MCK needs accommodation for at least 40 more sanitation workers.

8.2 Gaps and issues:

Some issues may include:

- Lack of awareness on the safe working procedure even after 2 modules of training for the sanitation workers were conducted
- Poor living condition without access to basic services for the sanitation workers.
- Sanitation workers need more quarters (40 Nos.). The existing quarters have handpumps and submersible pumps for their water supply but in the future, it is recommended that PHE would provide a 24x7 water supply through their schemes.

Institutional arrangement

9.1 Baseline Status

The main institutions responsible for sanitation in Kargil town are PHED and MCK. The PHE Department of Kargil looks after the water supply for the whole Kargil town. While the MCK looks after the solid waste management, public toilets, and septage management of Kargil town. As of now, Kargil does not have any form of the Sewerage system, but MCK has floated an RFP inviting tenders for preparing the DPR for Sewerage management in Kargil, in the future, the MCK will be responsible for the O&M of the sewerage system of the Kargil town.

MCK also presently looks after the septage management of the Kargil town, but the FSTP is run by a private company on a turn-key basis.

TABLE 14: INSTITUTIONAL ROLES AND RESPONSIBILITY UNDER WASH

Urban Services	Institutions in charge of planning	Institutions in charge of implementation	Institutions in charge of O&M	Institutions in charge of collecting user charges
Water Supply	PHED Kargil	PHED Kargil	PHED Kargil	PHED Kargil
Sewerage	MC Kargil	MC Kargil	MC Kargil	MC Kargil
Septage management	MC Kargil	MC Kargil	MC Kargil	MC Kargil
Storm Water Drainage				
Solid waste management	MC Kargil	MC Kargil	MC Kargil	MC Kargil
Public Toilets	MC Kargil	MC Kargil	MC Kargil	MC Kargil

9.2 Gaps & Issues

Institutional arrangement:

- There are unclear roles and overlapping responsibilities among departments and MCK
- There are a lot of vacant posts related to the sanitation sector in the ULB, overlapping/ diffused / unclear roles & responsibilities (concerning planning, implementation, O&M, and M&E) concerning water supply, public toilets, wastewater, septage management, stormwater, water bodies & solid waste management.

Municipal finance

10.1 Baseline Status

TABLE 15: OVERVIEW OF MUNICIPAL BUDGET UNDER WASH

ULB's overall budget for the last 3 years	77.00 Lacs + 635 lacs
ULB's budget under water and sanitation last 3 years	25.00 Lac
Where does the budget come from (e.g., taxes, grants,	State CAPEX, district plan, AMRUT, and SDP (Special
etc.)?	development plan).
ULB's budget year marked for the next 3 years under	13 Cr
water and Sanitation	
Name the schemes running in your city that include	AMRUT
sanitation/ water supply funding as one of their	
components?	
Has the city received any funds from an external funding	No
agency for WASH projects (CSR?)	

(Source: MCK, 2021)

10.2

Gaps & Issues

- O&M cost is very high in Kargil due to its topography and extreme climate.
- The Departments responsible for managing the infrastructure and assets have very little capacity and hence there is mismanagement of the assets and infrastructures.
- There is a huge dependency on central support for implementing/improving sanitation services.
- Poor cost recovery from the water supply, public toilets, wastewater, and solid waste management,
- There is a high establishment cost for managing sanitation services,
- There is a lack of financial reforms (e.g., double-entry accounting) & monitoring mechanisms for transparency.

Capacity enhancement

11.1 Baseline Status

The employees of MCK and PHED have received at least 3 training/exposure tours to date. Most of the training/exposure tours have been organized by the NGO, LEDeG in collaboration with UDD/MCK.

Two training on the safety and protection of sanitation workers were provided. An exposure visit for the PHE Officials to the Shimla water supply scheme, solid waste, and septage management of Shimla city was organised.

TABLE 16: TRAINING AND WORKSHOP UNDER WASH

List number and type of traini	ing received by ULB of	ficials/sanitation worker	s/ operators under WAS	SH
Solid waste management	Water supply/	Wastewater	Governance	Any other
	Management	management		
Shimla Exposure Tour on	Shimla Exposure	Shimla Exposure	-	-
SWM.	Tour on Water	Tour on Wastewater		
	Supply Scheme of	management in Shimla		
	Shimla town.	town.		
2 Trainings on safety and	-	-	-	-
protection of sanitation				
workers				

11.2 Gaps & Issues

- There is a lack of capacities (technical & managerial) even after numerous training.
- Kargil as of now has no capacity and manpower for the inception of new technologies and innovative projects.
- There is a lack of planned capacity-building strategy for improving sanitation services.
- The ULB needs to fill out their vacant post (31 vacant posts) while also creating a new post (e.g., MIS Experts, GIS expert, Structural engineer, an engineering wing, Town planner, etc.)

Main issues of Capacity Enhancement:

- 1. The puny capacity of the concerned departments who deals with the sanitation of Kargil town.
- 2. The lack of interest of the departments in preparing their own DPRs and the over dependency on external firms/ consultants for all the projects.

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NOTES



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