

Detailed Survey of Hotels, Inns and Lodges –
Waste and Water Disposal
Area: Corbett Landscape, Uttarakhand, India.



Conducted By

**WASTE WARRIORS**

A Voluntary Organization and Registered Society

FOR
UTTARAKHAND ENVIRONMENT PROTECTION AND
POLLUTION CONTROL BOARD

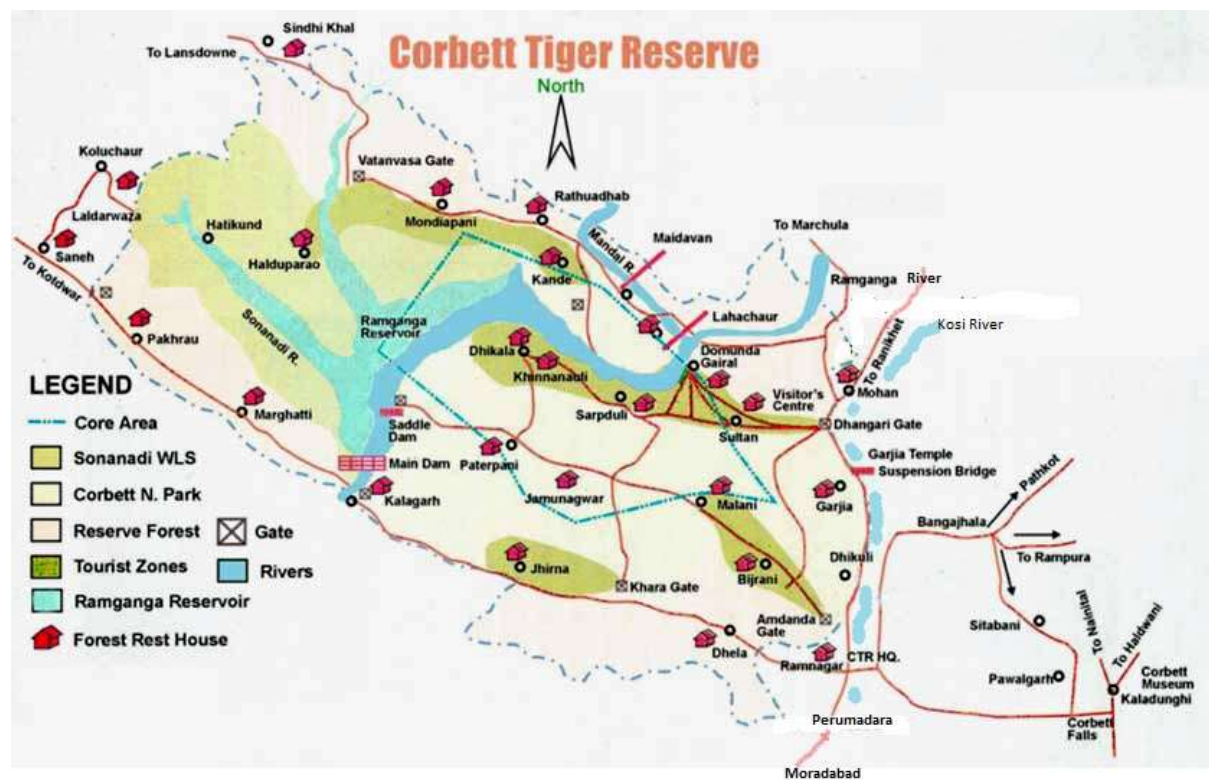
FINAL REPORT
November 2015

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1. INTRODUCTION TO THE CORBETT LANDSCAPE

*Corbett Tiger Reserve has captured the imagination of many, with its diverse wildlife and breathtaking landscapes. The natural uniqueness of the area was recognised long ago. In 1936 Corbett attained the distinction as the first Tiger Reserve to be established in mainland Asia.

The Tiger Reserve lies in two districts Nainital and Pauri in the hill state of Uttarakhand, in northern India. Its northern boundary, borders Almora district. It covers an area of 521 sq. km and together with the neighboring, Sonanadi Wildlife Sanctuary and Reserve Forest areas, forms the Corbett Tiger Reserve in over 1288 sq. km.



It is geographically located between the Himalayas and the Terai and the forest streams, rivers and ridges crisscrossing the terrain, present Corbett with a remarkable variety of landscapes. This vivid mosaic of habitats wet and dry, plain and mountainous, gentle and rugged, forests and grasslands supports numerous plant and animal species, some endemic to the area.

The most famous of Corbett's wild residents are the Royal Bengal Tiger and the Asiatic Elephant, but with about 600 species of avifauna Corbett is one of the richest bird regions of India.

**Source: Official Website of Corbett Tiger Reserve, Ramnagar , Nainital*
<http://corbettonline.uk.gov.in/corbettdefault.aspx>



1.1 STATUS OF WASTE & WATER IN CORBETT

The Ministry of Tourism conducted a survey* on all lodging and tourist establishments in villages around Corbett Tiger Reserve in December 2009. Approximately 77 existing hotels and resorts and 17 under construction across Kosi and Ramganga rivers (major wildlife corridors) were surveyed and these were the results:

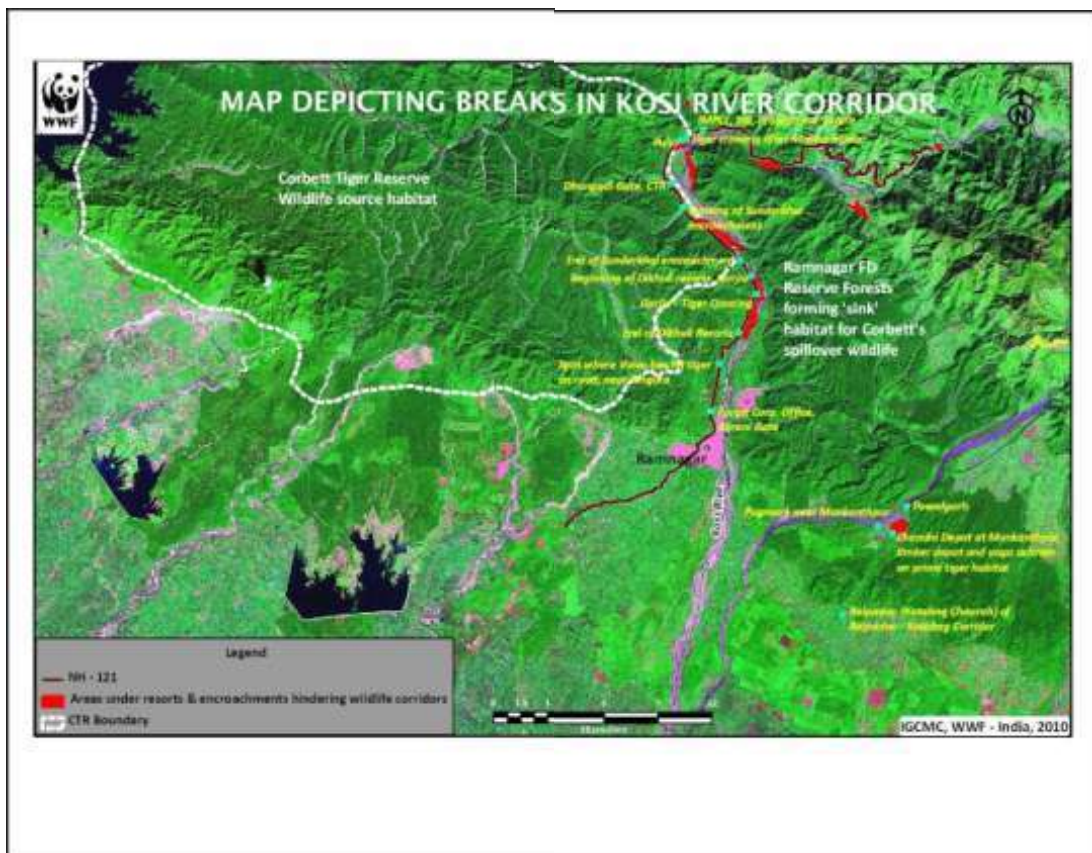
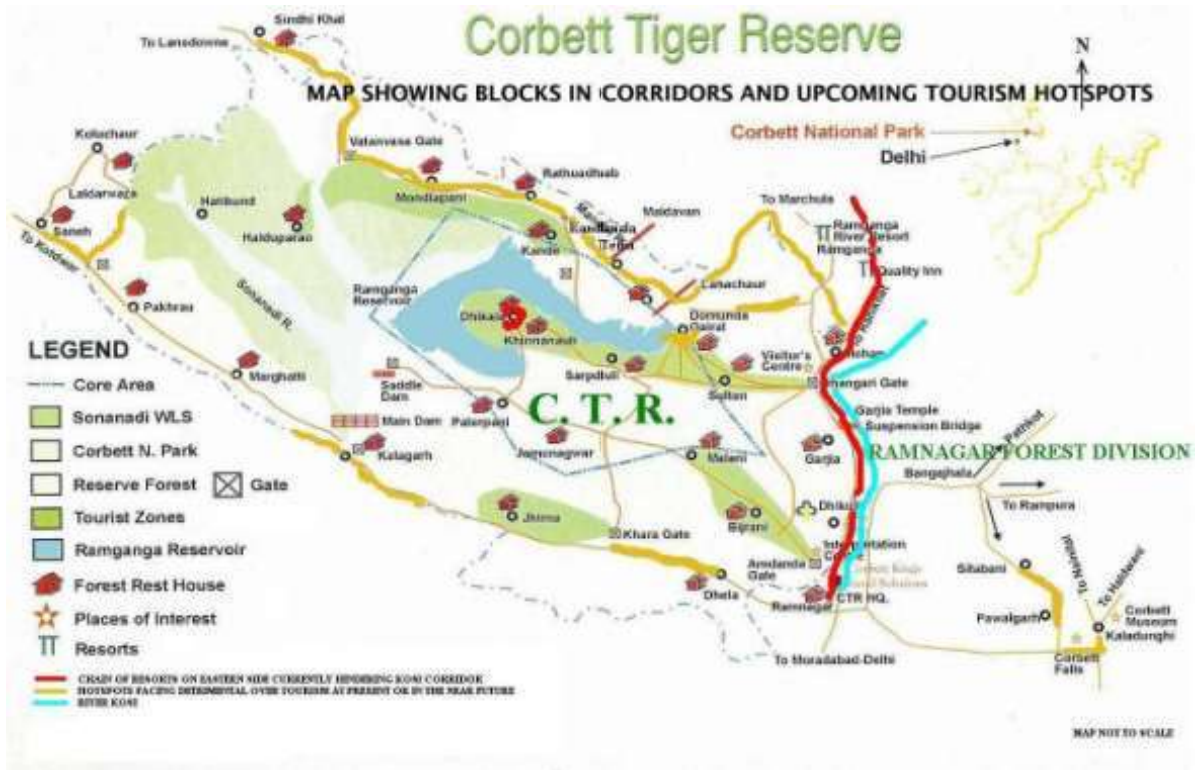
- ∴ 62% hotels do not segregate their waste
- ∴ A handful of hotels dump their waste at the Ramnagar Municipal dumping site (near the Kosi river and hence a source of pollution in itself)
- ∴ The rest randomly dump garbage around their premises, into the forest, into streams and rivers or burn their waste
- ∴ Hotels also claim to dispose of wet waste in soak pits or sewage treatment plants but the survey revealed that wet waste is directly being dumped into the rivers.
- ∴ Chemically treated swimming pool water is being dumped into rivers.

The improper disposal of waste has been known to cause:

- ψ Ecosystem damage due to air, water and land pollution
- ψ Diseases
- ψ Human-wildlife conflict

**Survey Source: Corbett Report- Survey of hotels and lodging establishments in and around Corbett Tiger Reserve- Survey for the Ministry of Tourism, Govt. of India- Institute of Hotel Management Pusa- New Delhi*

Below are maps depicting the concentration of tourism along the boundary of Corbett Tiger Reserve, as per the survey done in 2009



1.2 ABOUT US

Waste Warriors is a voluntary organization & a registered society committed to cleaning up India little by little through a combination of direct action, liaison, education and awareness raising. Our main objective is to promote and provide affordable and sustainable waste management systems that improve our environment, health and quality of life. We also aim to reduce the social stigma attached to waste and ensure waste workers are respected and paid fairly.

The #Municipal Solid Waste Management & Handling Rules 2013 was created to provide a legal compliance framework within which urban local bodies and municipal corporations could address the growing waste disposal and water pollution problems that India is facing.

A large part of the implementation is centered on Tier I and II cities with solutions rolled out in the form of large Public Private Partnerships. There are also many civil societies working with rag pickers and sanitation workers, providing bottom up data and solutions for waste management in these cities.

Our concern is in the areas that do not have any clear jurisdiction or the presence of an organized urban local body who can handle and enforce the rules. We work in The Corbett Landscape - a prime tourist destination with high economic buoyancy.

We have demonstrated expertise in the professional collection, segregation and disposal of waste with a strong leadership of empowered women. Supported by 10 years experience working in sustainable tourism in the area, we intend to assist the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB), Dehradun by collecting and providing data of hotels, lodges and inns in the Corbett Landscape.

Waste Warriors currently manages:

- 1) a rural project in Dharamsala (Himachal Pradesh),
- 2) an urban project in Dehradun (Uttarakhand),
- 3) and our first initiative in a protected area around the Corbett Landscape (Uttarakhand)
- 4) Apart from this, we also manage waste for large gathering, events, marathons, IPL matches, music festivals and so on.

Source: #Municipal Solid Waste Management & Handling Rules 2013

OUR MISSION

1. **Awareness raising** for the community members including schools, homes, shops, government departments, hotels and other tourism outfits.
2. **Providing a sustainable waste management system** to each member in the society.
3. **Improving living standards** for the local communities around Corbett Landscape.
4. **Increasing livelihood options** for the local community.

OUR ACCOMPLISHMENTS

The team at Corbett seeks to introduce a system of waste management in an area (stretching over 120 villages and 100 kms) where no system currently exists. Our intended areas of work fall under the southern, eastern & northern boundary of Corbett Tiger Reserve. These regions are characterized by high population, abundance of waste and no systems of correct waste disposal.

Since our launch in October 2013 we have expanded to 46 locations including 35 villages, 9 forest rest house complexes, 3 entry gates of Corbett Tiger Reserve, an ayurvedic factory area, 2 PWD bungalows, an Eco Tourism Centre & a Forest office compound.

We collect, process, transport, store & dispose waste from over 2300 homes, 300 shops, 35 schools & 2 temple complexes. We have already provided

intensive training on sustainable waste management to 7 hotels around the Corbett landscape.

The map below depicts WASTE WARRIORS area of work around the Corbett Landscape from October 2013 to August 2015.



- ✧ We conduct regular **awareness programs** with the children of each village.
- ✧ We have an **evening class each weekday** for the kids of Bhakrakot village
- ✧ We provide **door to door, sustainable waste management & disposal system** to each member **in the village including homes, hotels, schools and shops.**
- ✧ We have created **decentralized composting units** with the farming community for all the food waste collected.
- ✧ Our **waste is segregated at primary source** and then collected by us during the weekly or bi-weekly **door to door collection waste collection into DRY (recyclable), WET (organic) & REJECT (non-recyclable) waste.**

- ★ We conduct **surveys and capacity building workshops** with each member before working together.
- ★ All our **work is documented** with proper data collection, compilation & periodic reports.
- ★ All the **waste collected is further sorted, stored, recycled, composted, processed or disposed responsibly.**
- ★ We organize, manage & execute **transformation & cleanup projects** in all our villages to ensure that they remain clean.
- ★ We **provide dustbins** converted from old oil cans in each room of the schools we work with.
- ★ With personal donations, we have started **providing water filters** to all our member schools
- ★ We are **initiating women self help groups** within our villages to supplement their meagre income.

All this and more with generous aid from **Mahindra Holiday & Resorts India Limited, Mr. Anand Mahindra, Clover Organics, Tesna Tech, Uttarakhand Forest Dept, Avisfera Adventures, Royal Expeditions, CHEA, friends, family, well wishers, the dedicated work of our entire team and the regular flow of volunteers** from far and near have been constant pillars of support.

We do not inherit the
earth from our ancestors,
we borrow it from our
children.

– Native American
Proverb

2. OBJECTIVE

To assist the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB), Dehradun in collecting primary data on waste & water disposal by conducting a detailed survey of hotels, lodges and inns in the Corbett Landscape.



3. DETAILS OF THE SURVEY CONDUCTED

Waste Warriors, based on its technical bid for the purpose, has been commissioned to conduct a detailed survey of Hotels, Inns and Lodges - Waste and Water Disposal in the Corbett Landscape area by the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB).

This is a final report, as specified in the Technical Bid document, after updates and inputs from UEPPCB.

It explains the survey methodology, gives a summary of the establishments surveyed from May 2015 to July 2015 and of the collated responses with reference to their waste management practices, waste water management practices, energy management practices and a note on their infrastructure.

This report also includes a note on progress and challenges with recommendations.

Annexures with detailed profiles of establishments, their responses to the questionnaires, the questionnaires used in the surveys & the authority letters issued by UEPPCB are provided with this report for perusal and verification.



3.1 SURVEY METHODOLOGY

Activity Timeline

Activities Timeline “Hotel Survey-Corbett Landscape”			Months					
			March	April	May	June	July	August
PHASE	1a	Mapping of hotels and their classification on the basis of area/ zones & size						
	1b	Development of Questionnaire as per Data required by Pollution Control Board						
	2a	Data Collection and Data Cleaning						
	2b	Analysis and Inputs						
	3	Draft Report Development, Field Data Verification and Input from Pollution Control Board						
	4	Final Report Submission						
Report to Uttarakhand Pollution Control Board								

Detailed activity at each phase

1a. Mapping of hotels, Inns & Lodges in the Corbett landscape and their classification on the basis of size

Time taken: 4.5 months

The Project Leader, with the help of an Intern and a Field Assistant mapped the tourism heavy belt around the Corbett Landscape, mainly along the southern, south-eastern, eastern & north-eastern boundary of the Tiger Reserve.

Half way through the survey & then at the end, we provided a detailed database giving location of each unit and a basic factsheet with contact information for all Hotels, Inns, Lodges, Resorts, Camps, Retreats, Spas & Home Stays along this belt.

1b. Development of Questionnaire as per Data required by Pollution Control Board.

Time taken: *15 days

The Project Leader provided a detailed questionnaire to the Board for approval, additions & amendments. We worked with the Environment Officers at Uttarakhand Environment Protection and Pollution Control Board (UEPPCB), Dehradun on criteria & indicators to assess, streamline and finalise the questionnaire.

* Two questionnaires were used for this survey. The first 37 hotels have one format, which has been called Questionnaire A, while the rest have a slightly amended version after further inputs from UEPPCB and Field Director Corbett tiger Reserve, called Questionnaire B.

Please refer **Annexure** for details on both questionnaires.

2a. Data Collection and Data Compilation

Time taken: 4 months

An authority letter was provided *twice by UEPPCB for representatives of Waste Warriors to conduct the survey.

An advisory, after consultation with UEPPCB, was sent to each unit on the proposed survey. This was the first step for data collection, though nobody acknowledged or replied to the email.

Our team then called, made appointments and visited each unit to conduct physical surveys covering approx 2-4 units per day, thereby covering approx 10 units per week. Some hotels did not allow the team to take photographs.

Travel along this 100 kms stretch was done by public transport like bus or auto rickshaw wherever possible or the Waste Warriors jeep, kindly donated by Mahindra & Mahindra, when it was not being used for our ongoing door to door waste collection service & composting activities.

*Midway through the survey, The Corbett Hotel & Resorts Association requested us to stop conducting the survey. This was resolved after UEPPCB was asked for guidance & instructed us to resume the survey, later re-issuing a letter to extend dates to conduct the survey.

2b. Analysis and Inputs

Time taken: 4-5 months

This has been an ongoing process since the survey was initiated.

Midway through the survey the Project Leader sent UEPPCB, a detailed database of the units surveyed.

3. Draft Report Development, Field Data Verification and Input from Pollution Control Board.

Time taken: 1 month

In the last month the Project Leader and Project Consultant will work closely with UEPPCB on development of the draft report to ensure that the information being compiled is in line with what is desired.

4. Submission of Final Report to Uttarakhand Environment Protection & Pollution Control Board.

After approval from UEPPCB, the Project Leader will submit a printed report of the survey.

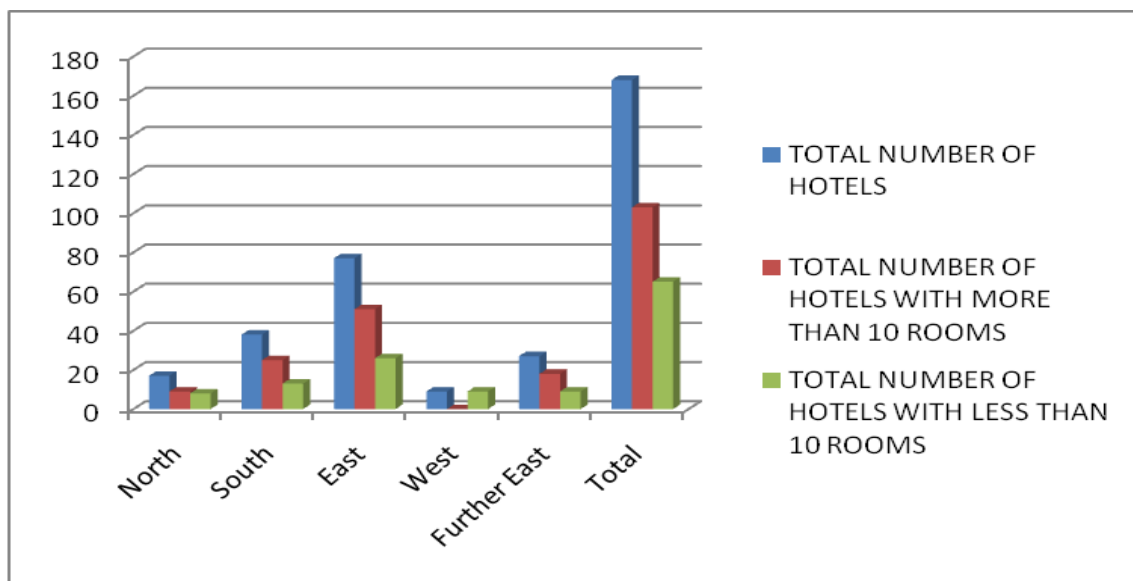
3.2 DISTRIBUTION OF HOTELS, INNS & LODGES AROUND THE CORBETT LANDSCAPE

As per the survey conducted from May to July 2015, the Corbett Landscape has **168** hotels, inns & lodges spread across 5 zones (directions) across the Corbett Landscape. There are a total of **2976** rooms within the 168 accommodation providers.

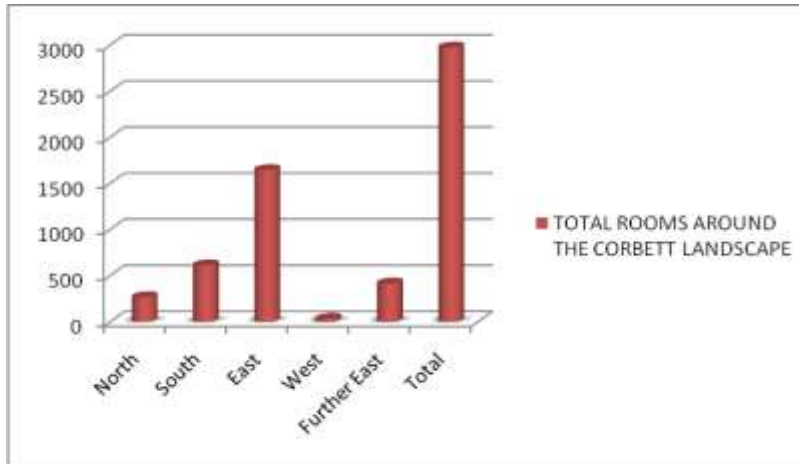
For better understanding we have named these zones **North, South, East, West & Further East** according to their direction in relation to Corbett Tiger Reserve AND further classified them on the **number of rooms**.

DISTRIBUTION OF HOTELS ACCORDING TO SIZE / ZONES

PARTICULARS/ ZONE	North	South	East	West	Further East	Total
TOTAL NUMBER OF HOTELS	17	38	77	9	27	168
TOTAL NUMBER OF HOTELS WITH MORE THAN 10 ROOMS	9	25	51	0	18	103
TOTAL NUMBER OF HOTELS WITH LESS THAN 10 ROOMS	8	13	26	9	9	65

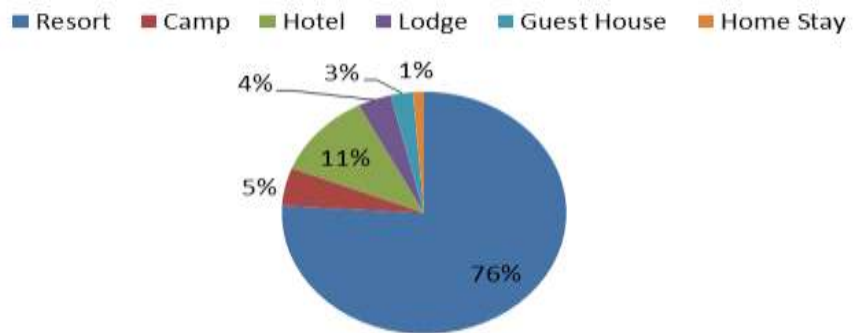


DISTRIBUTION OF HOTELS ACCORDING TO NUMBER OF ROOMS

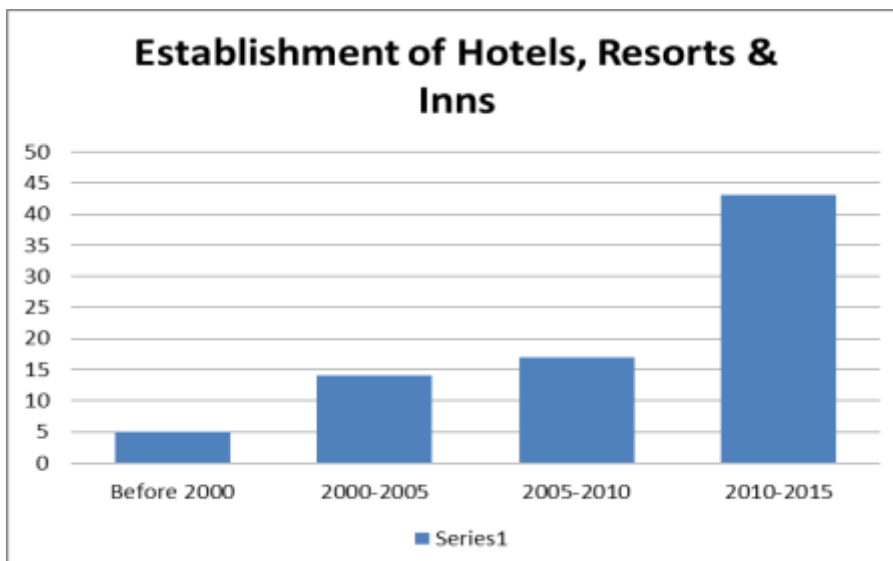


The chart alongside gives an indication on the distribution of rooms along each zone, around the Corbett Landscape.

Distribution in terms of type of Accomodation



Establishment of Hotels, Resorts & Inns



MAPPING OF HOTELS

The map below (not to scale) represents location of all hotels, inns & lodges around the Corbett Landscape as per the survey conducted.



Refer Annexure 1 Corbett Landscape Hotel Database for UEPPCB July 2015 for detailed list.

3.3 LIST OF HOTELS SURVEYED

A survey of **79** establishments was completed successfully, as on July 21, 2015. The survey was conducted in two stages with two questionnaires. Samples of both are attached as annexure.

On request from The Corbett Hotels and Resorts Association the survey was suspended temporarily for over a week from 9th to 16th June 2015 and resumed after intervention from UEPPCB.

HOTELS SURVEYED ALONG THE CORBETT LANDSCAPE. MAY TO JULY 2015.

SR NO	DATE	TOTAL SURVEYS CONDUCTED	NAME OF HOTEL
QUESTIONNAIRE 'A'/ 42 HOTELS SURVEYED			
1	06-May-15	2	Corbett Riverview Resort
2			Treff Hotel
3	07-May-15	2	Corbett River Creek
4			Ramganga Resort
5	08-May-15	2	Corbett Riverside Resort
6			Patlidun Safari Lodge
7	11-May-15	4	Wild Iris Spa & Resort
8			Clarks Inn
9			Camp Hornbill
10			Tiger Groove
11	13-May-15	2	Corbett View Resort
12			Jim's Jungle Retreat
13	26-May-15	4	Wild Exotica
14			Leela Vilas
15			Suman Grand
16			Namah Spa & Resort
17	27-May-15	3	Jungle Treasure
18			Corbett Rattan
19			Hridyesh Spa & Resort
20	28-May-15	2	LaPerle Resort

21			HumTum Resort
22	29-May-15	4	Jungle Paradise
23			The Wildcrest
24			Monal's Nest
25			Aamod Resort
26	30-May-15	2	Corbett County
27			The Krishna Wilderness
28	02-Jun-15	6	Woodcastle Spa and Resort
29			Myrica
30			Corbett Aroma
31			Rosewood resort
32			Jukaso Manu Maharani
33			Country Inn
34	05-Jun-15	4	Corbett Comfortable Resort
35			Samsara
36			Corbett Tiger Den
37			Corbett Holiday Forest Resort
38	07-Jun-15	2	Corbett Mango Bloom
39			Corbett Roop Resort
40	08-Jun-15	3	The Solluna Resort
41			Sterling Holidays Tree Top Resort
42			Saalvan

SR NO	DATE	TOTAL SURVEYS CONDUCTED	NAME OF HOTEL
QUESTIONNAIRE 'B' / 36 HOTELS SURVEYED			
43	17-Jun-15	2	Corbett Wilds
44			Tiger Camp
45	18-Jun-15	2	Corbett Machaan
46			Falcons Nest
47	19-Jun-15	4	Camp Jungle Lore
48			Corbett Wood Resort
49			Ashoka Tiger Trail Resort
50			Corbett Solitaire
51	20-Jun-15	2	Gajraj Trails Resort
52			Aahana Resort
53	23-Jun-15	8	Corbett Aroma Park
54			Corbett Kingdom
55			Corbett Plaza
56			Corbett Motel
57			Hotel Rameshwaram
58			New Everest Hotel
59			Hotel Anand
60			Corbett Club Mahindra Resort
61	25-Jun-15	4	Mapple Resort
62			Parvati Wild Abode
63			Tourist Rest Huose, Dhela
64			Infinity Resort
65	27-Jun-15	2	Corbett Tusker Trails
66			City Hotel Ramnagar
67	29-Jun-15	1	Kyari Corbett Resort
68	30-Jun-15	2	Corbett Bijrani Camp
69			The Golden Tusk
70	02-Jul-15	1	Tourist Rest House, Mohan
71	03-Jul-15	3	Serenity Resort

72			Tourist Rest House, Ramnagar
73			Corbett Fun Resort
74	11-Jul-15	1	Hotel Corbett Tulsi Palace
75	12-Jul-15	2	The Buckscent
76			Corbett Jungle Club Resort
77	13-Jul-15	1	Corbett Blue Sky
78	17-Jul-15	1	The Den
79	18-Jul-15	1	Maya the forest Resort



3.4) INFRASTRUCTURE PROFILE

Materials used for construction:

All the 79 surveyed establishments, 77 are primarily built of bricks and cement, with additional features in stone (27 respondents), thatch (22 respondents), with 31 hotels using features with mud, bamboo, wood, etc.

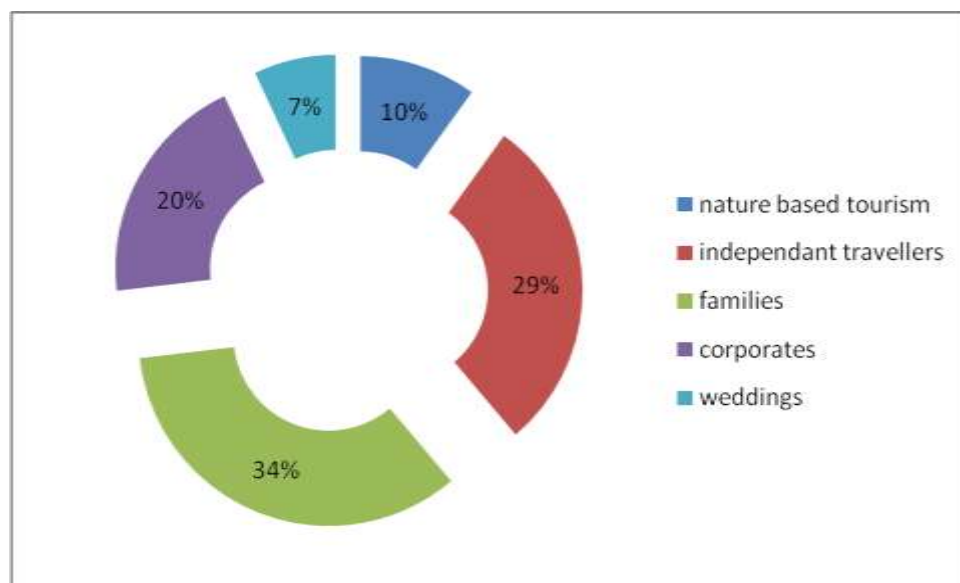
Attached toilets:

All the surveyed establishments, except for one, have attached toilets. One respondent has two attached toilets per room while another one does not have attached toilets for the tents.

Nature of clientele:

While majority of the establishments cater to independent travelers (58), families (69), corporate groups (40), **only 20 respondents (of the 79 surveyed establishments) refer to nature based or adventure based clientele.**

An average of 14 surveyed establishments, also cater to group events like marriages, parties, conferences, etc.



Proximity of farm animals:

Of the surveyed establishments, only 20 respondents affirmed the presence of farm animals near their property, which included chickens,, cows, buffalos, goats, rabbits and ducks (varying across the establishments).

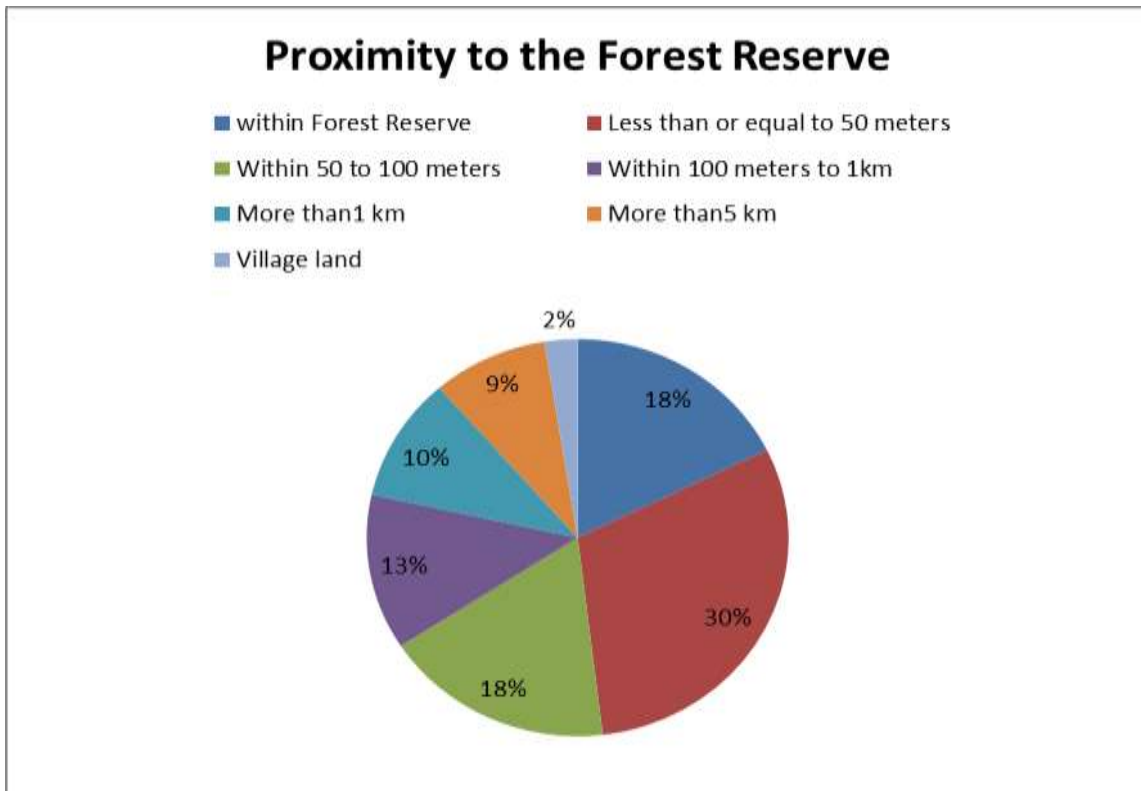
Ownership of Vehicles:

Around 40 of the surveyed establishments own vehicles, out of which 32 own large vehicles such as the Gypsy, Pick up, Van, etc.

3 of the establishments hire vehicles like gypsy for their work.

Proximity to the protected forest areas:

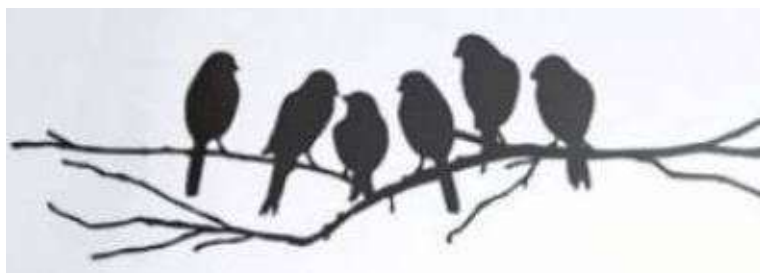
Majority of the surveyed establishments fall close to the border or in the range of 20-500 metres from the protected forest areas, while 14 fall within the forest reserve area.



4. **WASTE MANAGEMENT FOR HOTELS, INNS & LODGES AROUND THE CORBETT LANDSCAPE**

In recent years, massive commercialization has led to the unchecked growth of insensitive and unsustainable real estate infrastructure, real estate mafia, aggressive tourism and gimmicks not to mention ongoing encroachment of villages and other settlements. A major by-product of this commercialization and growth is the generation of waste.

The study conducted focuses primarily on Waste management included water management, solid waste management & energy or air management.



4.1 WATER MANAGEMENT

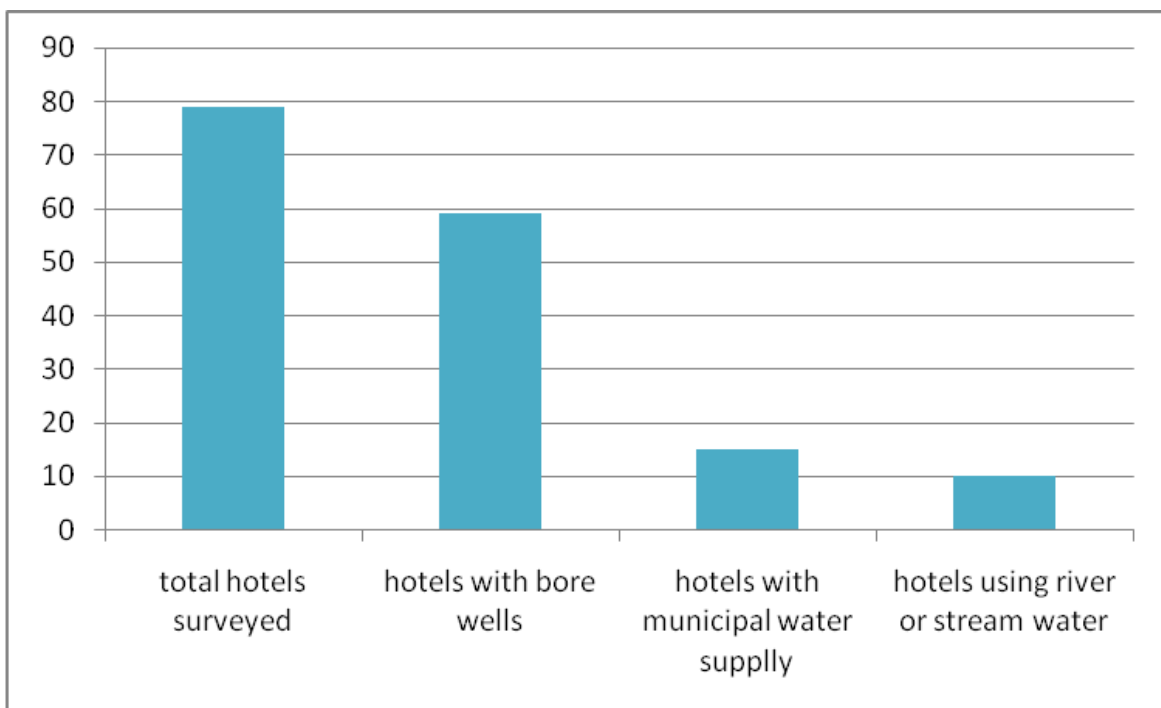
Source of water:

Establishments are largely dependent on bore wells.

59 respondents rely on water from bore wells, of which the number of bore wells varied from mainly one per establishment to at some places from 2 – 4.

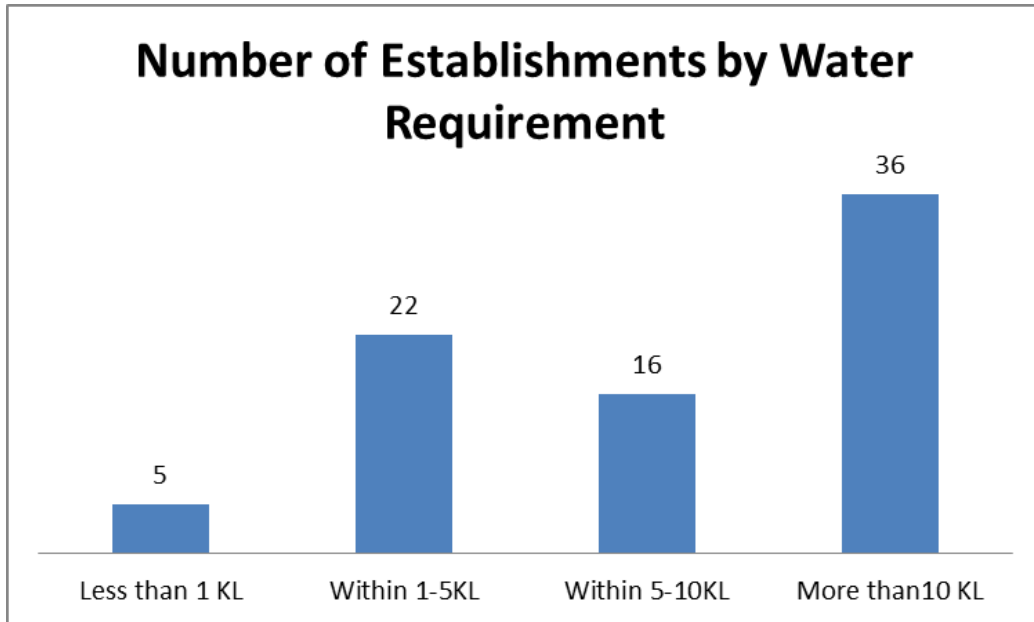
15 establishments rely solely on municipal supply, with 4 in combination with the bore wells (included above),

4 on stream/ river water, while 6 used stream/ river water as supplementary supply.

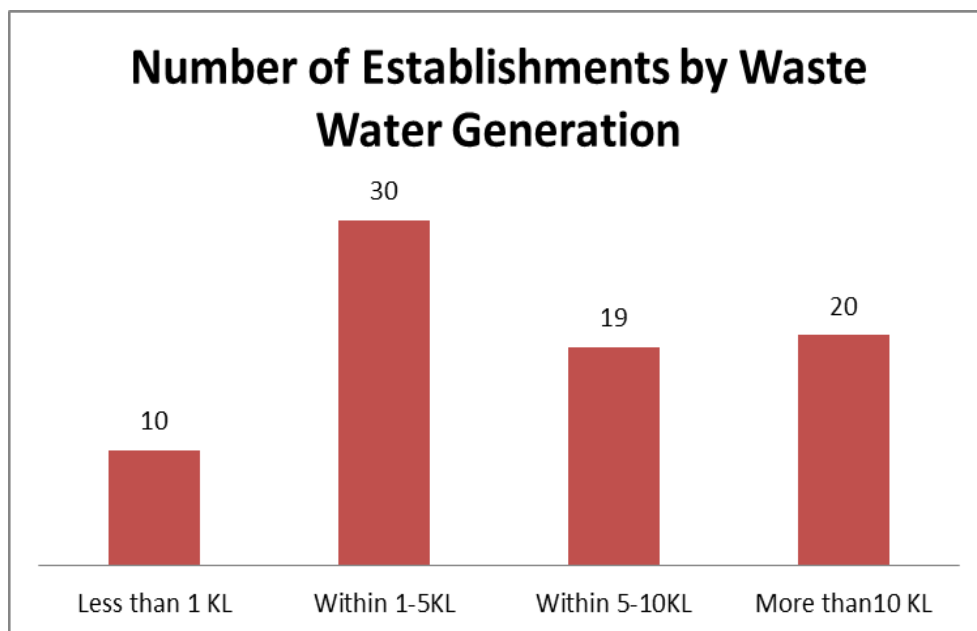


Daily water requirement:

Based on size of establishment, water requirement can be between 0.5 K.L (1000 ltrs) up to 30 K.L. (there is even an outlying figure of 50 K.L. stated by one hotel) per day for tourism establishments surveyed.



Daily generation of waste water: In line with the above, quantum of waste water generated can vary from 0.5 to 20 K.L. per day.



Disposal of waste oil:

From the surveyed establishments,

13 have grease traps,

26 establishments reuse or repurpose waste oil, and the remaining

35 either, do not distinguish or dump/ discard such waste (including as part of regular garbage, in drains, septic tanks, compost pits, burying, etc.).

9 establishments state they do not have any waste oil, and

2 do not have kitchens on their property.

Treatment of BLACK water (from toilets):

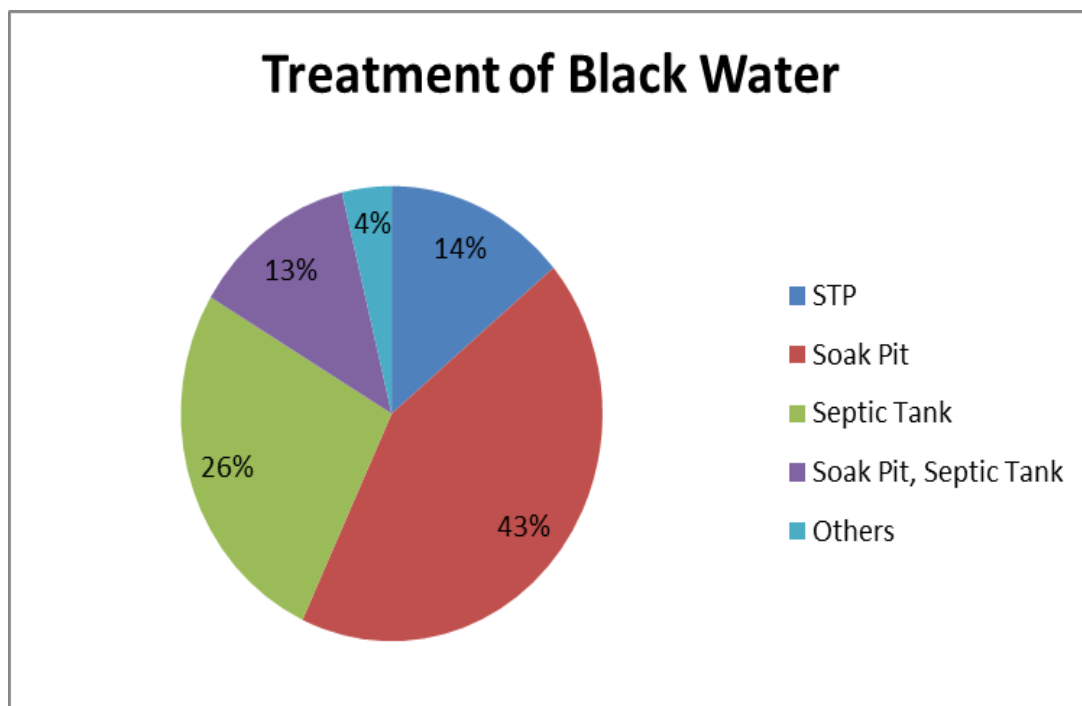
35 of the surveyed establishments rely solely on soak pits,

21 establishments have septic tanks,

11 use a combination of soak pits and septic tanks, and

12 establishments have their own STPs (with 1 under construction).

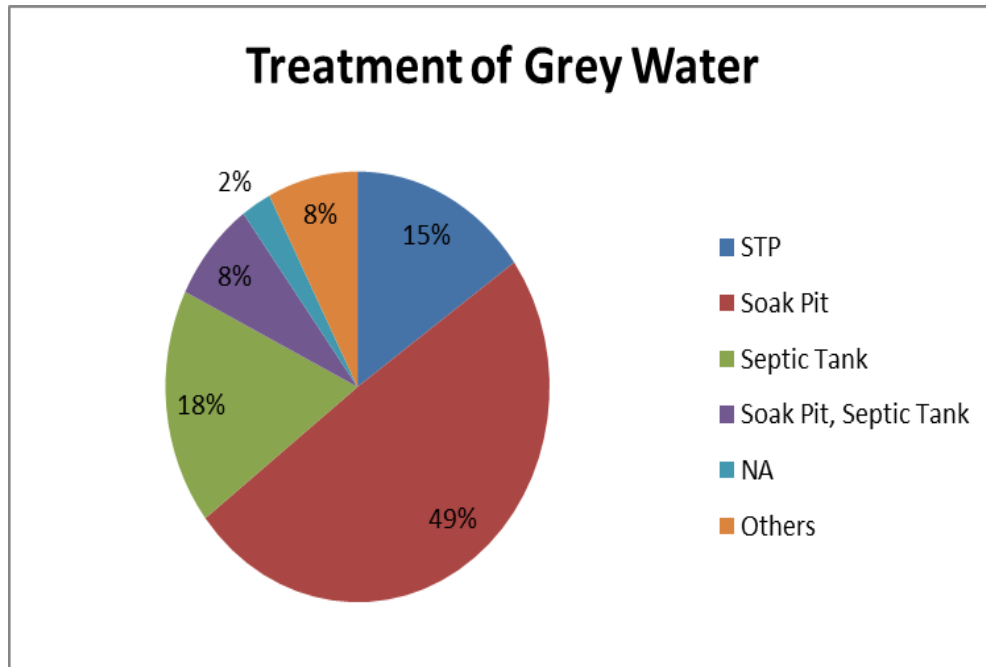
1 establishment stated that they dumped the black water through underground pipes into the forest.



Treatment of GREY water (from kitchen, bathroom and swimming pool):
 Treatment of GREY water appears to be largely undistinguished from treatment of BLACK water in almost all establishments surveyed.

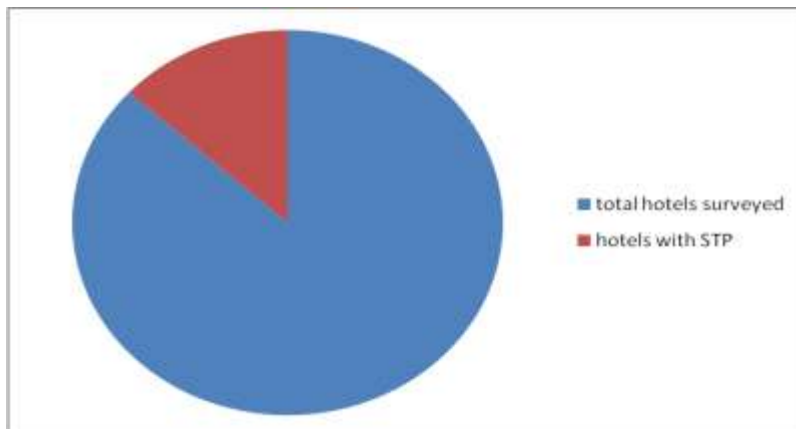
Only 1 has an organic STP and another has a separate septic tank for this purpose.

One establishment dumps its GREY water in the canal, while one uses it for gardening purposes.



STPs and use of filtered water:

Of all surveyed establishments, only 12 establishments claim to have STPs with another stating that they have one under construction.



11 reuse the filtered water in their lawns and
 2 reuse the filtered water for toilets.

Setting up of Water treatment system:

Out of the 37 respondents asked if they would be willing to set up a water treatment system at their establishments, only 8 expressed their willingness, while an equal number were undecided stating the decision dependent on the management.

1 establishment already has a water treatment system at their property.

Facing any problems while treating waste water:

Out of the 37 respondents, only 4 said that they were facing problems while treating their waste water.

9 establishments confirmed that they would like professional help if offered for treating waste water (includes the 4 above),

while 2 were undecided as they did not have the authority to take a decision on the matter.

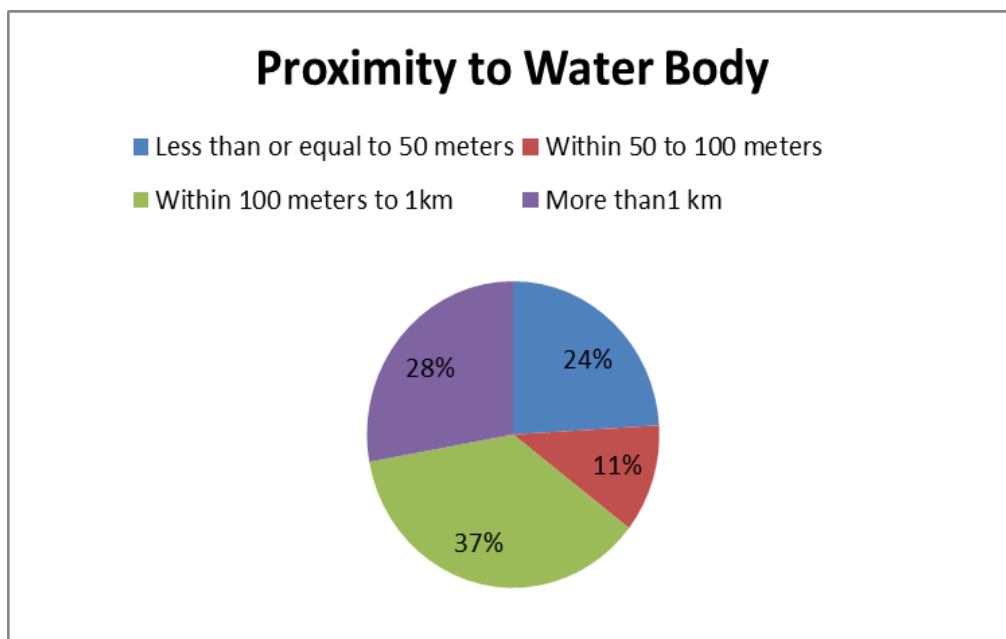
Filtration plant for swimming pool:

of 55 establishments with swimming pools, only 2 do not have filtration plants.

Proximity to a water body:

66 of the surveyed establishments fall very close to rivers or streams.

Majority of them are close to Kosi River, while the others are closer to Dhela River, Khichdi River or Ramganga River.



4.2 SOLID WASTE MANAGEMENT

Current garbage storage facility:

Only 28 of the surveyed establishments cited the use of closed containers, either entirely or in combination with open containers and plastic bags.

29 respondents referred to their use of open containers, either entirely or in combination with closed containers and plastic bags.

35 respondents listed the use of plastic bags.

8 respondents have garbage rooms,

14 have open pits on the property, and

6 respondents have worked with Waste Warriors, Corbett for their waste collection and management services.

Segregation of waste before disposal:

46 of the surveyed establishments responded in the affirmative, as segregating their waste before disposal,

while for 4 of the respondents it was observed that they were not segregating their waste.

The remaining 33 stated that they do not segregate their waste before disposal, out of which 2 believed that they were not required to segregate their waste.

Mode of disposal for biodegradable waste:

40 of the surveyed establishments disposed of biodegradable waste through dumping in landfills,

6 more through municipal collection or Nagar Pallika (also intended for landfill),

3 dumped biodegradable waste on their own property,

6 burned their biodegradable waste and

1 establishment dumped its biodegradable waste in the river.

Of the remaining surveyed establishments,

8 have a pits for biodegradable waste,

7 establishments feed biodegradable waste to livestock and

16 have composting units

Mode of disposal for non-biodegradable waste:

44 of the surveyed establishments dump their non-biodegradable waste in the landfill, 6 of which do it in combination with recycling, Waste Warriors collection, burning and dumping/burying of such waste on property, respectively.

3 establishments dump their non-biodegradable waste on their property and 8 avail of municipal waste collection services.

6 establishments avails of Waste Warriors weekly waste collection (including as above),

12 make use of services of a kabari for their non-biodegradable waste, out of which 5 solely depend on the kabari service,

17 burn their entire non-biodegradable waste, of which 5 disposes of non-biodegradable waste through a combination of kabari and burning and 2 through a combination of burning and dumping in the landfill.

As noted already, only one establishment claims to recycle, which is selectively and in combination with landfill dumping.

Generation and management of horticultural waste:

74 of the surveyed establishments generate horticultural waste.

36 establishments burn their entire horticultural waste and

10 dump their horticultural waste in the landfill, and

3 more through Municipal collection (also intended for landfill).

7 of the establishments' disposes of horticultural waste by burying such waste and

36 by burning, with 9 dumping in a pit or some place on the property.

Of the remaining,

17 compost their horticultural waste,

3 gives it to the surrounding villagers for feeding livestock and

another 2 to as food waste daily to their gardeners or for mixing in manure.

Generation of demolition and construction waste:

17 of the surveyed establishments have generated demolition and construction waste in the past three years.

3 establishments send this waste to the landfill,

7 make use of landfills on their own property for disposal,

while 1 sold their waste.

Frequency of emptying out garbage from premises (in days):

7 establishments surveyed empty out their garbage on a daily basis,

14 do so every 2-3 days,

7 empty out garbage twice a week and

3 do so on a weekly basis.

2 establishments dispose of food waste daily and the rest once/ twice a week.

1 disposes of garbage every alternate day in summer and every 4-5 days in winter.

Of the remaining 3, 1 disposes of garbage every 15 days, another once in 6 months from their pit, and the last burns all garbage on premises.

Access by Kabari, frequency, income from kabari:

From the surveyed establishments, 24 are visited by kabariwalas and 6 only by Waste Warriors Corbett.

The frequency of the visits also vary – 3 establishments have the kabari on call, 2 establishments are visited daily, 3 establishments are visited every 2-4 days, 2 are visited weekly, 3 get visits twice a month, 7 have monthly kabari visits. 2 establishments are visited by the kabari once in 2 months and another once in 3 months.

Accordingly, the approximate income from sale to the kabari is also varied – from Rs. 50 to Rs. 1000/ 3000 at any one time.

Most do not see the value in their waste as focus is on tourism & tourists, not waste management.

In the event of a waste collection centre located in the community, willingness of establishment to carry its garbage to it:

64 establishments stated themselves willing to carry their garbage to a local waste collection centre if this were an option, 7 refused and 8 were undecided, with some citing lack of transportation as an issue.

Willingness to pay a nominal amount for waste collection services:

54 establishments expressed their willingness to pay a nominal amount for waste collection services, six of which were already making use of Waste Warriors collection services @ Rs.5-7 per room, per day.

20 establishments were undecided as most of them said that the authority for such decisions did not lie with them, while 5 refused.

4.3 ENERGY MANAGEMENT

Electrification of establishment:

With the exception of one establishment, all of the others 78 surveyed are electrified. The average electricity bill varies with the size of establishment.

Use of boilers:

Only 9 of the surveyed establishments use boilers, 70 do not.

Use of thermic fluid heaters:

Only 4 of the surveyed establishments use thermic fluid heaters.

Use of electric geysers:

66 of the surveyed establishments use electric geysers.

Use of Air conditioners/ Heater for cooling and heating of the rooms:

Of the 37 establishments, 17 use air conditioners for cooling and heating of the rooms, while 12 provide radiators or blowers for heating.

Use of DG set:

77 establishments use a diesel generator set while 2 do not.

The number of DG set varies from one to two or three depending on the size of the establishment.

Use of commercial LPG:

Majority of the surveyed establishments use commercial LPG, though 3 also rely on induction.

Average usage varies with size of establishment.

2 establishments do not use LPG as they do not have kitchens on their property.

Use of solar energy:

Only 16 of the surveyed establishments make use of solar energy though for limited uses as lighting, for lanterns, etc.

6 respondents use solar energy for heating water also.

Type of lights used:

All of the surveyed establishments use CFLs, LEDs, or a combination of both. There is limited supplementary use of incandescent bulbs in a couple of cases.



5. STATUS OF REGULATORY COMPLIANCES

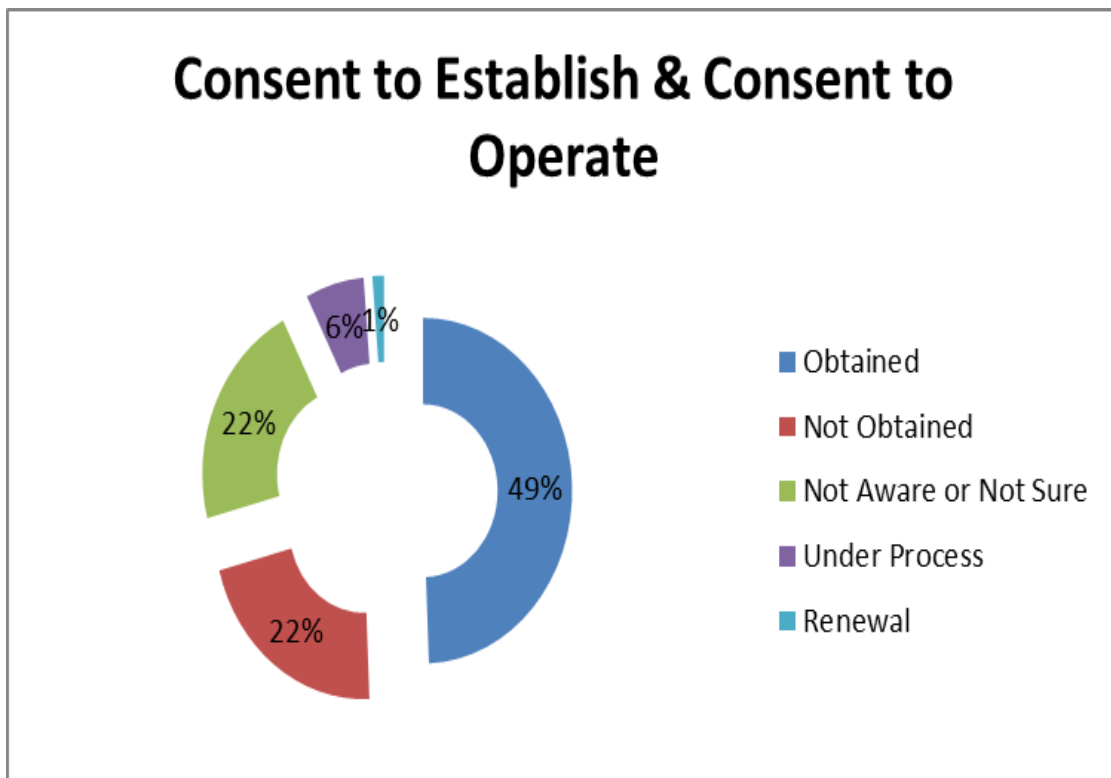
Consent to Establish and Consent to Operate under Water Act-1974 & Air Act-1981 and Authorization under Hazardous Waste Rules obtained:

39 establishments stated that they have obtained consent establish and consent to operate under Water Act 1974 and Air Act 1981, and authorization under Hazardous Waste Rules.

17 stated they have not, and

17 were not aware or not sure.

5 establishments have applied for the same with the application under process, while one is awaiting approval for renewal.



6.NOTE ON PROGRESS, CHALLENGES & RECOMMENDATIONS

Certain challenges faced by the survey team have already been discussed with UEPPCB, specifically in terms of lack of knowledge, the resistance by hotels to the survey being conducted, photographs being taken, no winning rationale for hospitality establishments to engage in sustainable waste management and so on.

The Corbett Hotel Association had also raised concerns which were communicated to UEPPCB.

It is also noted that with a few exceptions, most hotels are not run by owners but by managers who do not have the wherewithal to undertake structural changes or make infrastructure related decisions for their properties.

There is a lack of policy coverage for Rural Panchayat areas especially those around protected areas. There is an urgent need for sound guidelines or a government policy with infrastructure and incentive based support for those engaging in sustainable waste management. Specific process based recommendations for waste management in the specific areas are included in Annexure 6, Waste Warriors Advisory to Accommodation providers on sustainable waste management.

It is believed that a certain degree of involvement by UEPPCB is important, especially in terms of engaging with Hotel Association to allay their fears of a crackdown as well as communicating the potential support that the Board should offer such establishments, which have so far been operating in a regulatory vacuum as well as without any infrastructure or policy support.

It is also important for the UEPPCB to provide official directive to tourism establishments operating under government umbrellas (including forest rest houses and eco zones, KMNTRHs, etc.), to cooperate and comply with the survey for effective coverage.

There is overall need for targeted awareness and for renewed emphasis on wildlife and ecotourism in the area and a more participatory engagement between regulatory authorities and tourism stakeholders.

7.ANNEXURES

- 1) Excel sheet with detailed profiles of all establishments, titled, '**Corbett landscape hotel database for UEPPCB July 2015**'.
For better understanding we have divided the area into 5 zones, namely North, South, East, West & Further East. This list has a consolidated list of all zones and then separately for each zone with details on, name of the establishment, area, address, contact number, contact person, his/ her designation & contact number, email id, number of rooms, information on survey conducted and remarks (if we have anything special to mention)
- 2) Map of the area covered with an indication on different zones, as per the '**Corbett landscape hotel database for UEPPCB July 2015**', mentioned above.
- 3) The authority letters issued by UEPPCB. There are two. One dated & issued in **April 2015** and valid till mid June 2015 and the second, dated & issued in **July 2015** and valid till 20th July 2015.
- 4) The questionnaires used in the survey. There are two that have been used. To avoid confusion, the first one is called '**Questionnaire A**' and was used from April till early June 2015. The second, called '**Questionnaire B**' and was used from mid June till the end of the survey on 20th July 2015.
- 5) Responses to the questionnaires. Again there will be two separate annexes for this, owing to the two separate questionnaires used. '**Survey responses to Questionnaire A**' are for establishments surveyed till early June 2015, using Questionnaire A. '**Survey responses to Questionnaire B**' are for establishments surveyed from mid June to 20th July 2015, using Questionnaire B.
- 6) Waste Warriors Advisory to Accommodation providers on sustainable waste management.

WASTE WARRIORS

Is a voluntary organisation committed to cleaning up India.

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