SFG2798

December 2016

Environment and Social Management Plan (ESMP)

Uttarakhand Health System Development Project (UKHSDP)

Abbreviations

AD	Auto-Disable	HRG	High Risk Group
AIDS	Acquired Immune Deficiency Syndrome	IC	Infection Control
ANM	Auxiliary Nurse Midwife	ICDS	Integrated Child Development Services
APD	Additional Project Director	IC-WM	Infection control and Waste Management
ART	Anti-Retroviral Treatment		
BCC	Behaviour Change Communication	ICTCe	Integrated Counseling and Testing Centr
BMW	Bio Medical Waste	ICTCe	Integrated Counseling and Testing Centr
CBWTF	Common Biomedical Waste Treatment Facility	IDU	Intravenous Drug User
CD4	Cluster of Differentiation 4	IMEP	Infection Management and Environment Plan
CHC	Community Health Centre		
CPCB	Central Pollution Control Board	IV	Intravenous
DAPCU	District AIDS Prevention and Control Unit	JD	Joint Director
		M&E	Monitoring and Evaluation
DFID	Department for International Development, Government of UK	MDG	Millennium Development Goals
		MIS	Management Information System
DHO	District Health Officer	MOEF	Ministry of Environment & Forests
DHS	Director of Health Services		
DIC	Drop in Centre	MOHFW	Ministry of Health & Family Welfare
DOHFW	Department of Health & Family Welfare, GoI		
		NACO	National AIDS Control Organization
DPIP	District Programme Implementation Plan	NACP	National AIDS Control Program
DTC	District Tuberculosis Centre	NGO	Non-Governmental Organization
EA	Environmental Assessment		
EAG	Empowered Action Group	NHM	National Health Mission
EIA	Environmental Impact Assessment	NPIP	National Programme Implementation Plan
EU	European Union	NRHM	National Rural Health Mission
FRU	First Referral Unit	NRL	National Reference Laboratory
FW	Family Welfare	OI	Opportunistic Infections
GO	Government Order	PCB	Pollution Control Board
GoI	Government of India	PCC	Pollution Control Committee
HCE	Health Care Establishment	PEP	Post Exposure Prophylaxis
HCW	Health-Care Worker	PHC	Primary Health Centre
HCF	Health Care Facility	PIP	Project Implementation Plan
HFW	Health and Family Welfare	PLHA	People Living with HIV /AIDS
HIV	Human Immune Deficiency Virus	PPE	Personal Protective Equipment
		PPP	Public Private Partnership
HIV / AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome	PPTCT	Prevention of Parent to Child Transmission
		RCH	Reproductive and Child Health
HSB	Health Seeking Behaviour	RNTCP	Revised National Tuberculosis

	Control Program	TOR	Terms of Reference
Rs.	Rupees	TTI	Transfusion Transmitted Infections
SA	Social Assessment		
SAD	State Allopathic Dispensary	UIP	Universal Immunization Programme
SACS	State AIDS Control Society		
SC	Sub-Centre	UN	United Nations
SPCB	State Pollution Control Board	UNICEF	United Nations International Children Education Fund
SPCB	State Pollution Control Board		
SPIP	State Programme Implementation Plan	UP	Universal Precautions
		USAID	United States Agency for International Development
SRL	State Reference Laboratory (HIV)		
		UT	Union Territory
STD	Sexually Transmitted Diseases (synonymous with STI)	WB	World Bank
		WHO	World Health Organization
STIs	Sexually Transmitted Infection	WM	Waste Management
SWAp	Sector Wide Approach	$	US Doller
TI	Targeted Interventions		

1 Background

1.1 An Overview

Uttarakhand was formed on the 9th November 2000 as the 27th State of India, when it was carved out of northern Uttar Pradesh. Spread over 53, 484 sq. km, about 88% of the state is hilly mountainous terrain, with thick forest cover. Geographically the state is divided into broadly three zones: upper hills, middle hills, and the foothills – of Himalayas. The western half of the state is known as Garhwal region and the eastern half as Kumaon. Almost 80% of the population of the state lives in middle and foothill zones of the state.State shares international boundaries with China (Tibet) in the north and Nepal in the east. It is rich in natural resources especially water and forests with many glaciers, rivers, dense forests and snow-clad mountain peaks, and also has great diversity of flora and fauna. It has vast forest area covers almost 65% of the state. It is also home to various rare species of plants and animals mostly protected by sanctuaries and reserves. The state is sparsely populated with 10 million people at a density of 189 people per sq.km (Census 2011). More than 80% of the population of the state lives in villages (clusters) with less than 500 people. Administratively the state is divided in to 13 districts with its capital located in Dehradun.Key indicators of the state are mentioned in Annex-I

1.2 Health System of Uttarakhand

The Uttarakhand health systems constitutes a large network of health care facilities based on three-tier system. The objective of the system is to reduce disease burden through preventive and curative health services and also to work on other indirect health determinant like water and sanitation, health education etc.

The National Health Mission (NHM) acts as convergence medium for departments of medical and health with the departments of national programs at state and district level. The state NHM is objected to strengthening infrastructure, increase involvement of community mobilizer, preparation and Implementation of an inter-sectoral District Health Plan including drinking water, sanitation & hygiene and nutrition among others.

The state health system falls under state ministry of health and family welfare, which is further headed by principal health secretary (PHS). State health system is divided into 4 departments i.e.
1. Directorate of medical and health is responsible to regulate administration and medical education. It looks after the affairs related to drugs & logistics, medical treatment, mobile health component, public private partnership (PPP) communicable and non-communicable disease, IDSP, birth and death registration system.
2. Director of national programme is responsible to regulate all national health programmes through its corresponding departments, including RNTCP, National Vector Borne Disease Control Progrrame, RCH-II, Universal Immunization Programme, Leprosy, Blindness control, HIV/AIDS,NACP ARSH, Prevention and Control of Non Communicable Disease, National Mental Health Programme, Menstural Hygeine   etc. The department is also

responsible to generate awareness through IEC and to map implementation progress.

3. Finance
4. Drug controller.

From 2000-2008, the state implemented the Uttaranchal health Systems development project, supported by the World Bank which aimed at improving the health status of state through investments in health, strengthening management component of health system, improvement in service delivery, health sector policy reform and human resources development.

1.3 Health Infrastructure

S. No	Health Facility	Number
1	District Hospital	12
2	Female Hospital	6
3	Base Hospital	3
4	Combined Hospitals	15
5	Community Health Centres (CHCs)	55
6	Primary health centers (PHCs)	239
7	State Allopathic Dispensaries	543
8	Sub Centre	1765
9	Ayurvedic Hospitals & Dispensaries	543
10	Homeopathic Dispensaries	107
11	Unani Hospitals	3
12	Blood Banks	23
13	TB Clinics	13

1.4 Human Resources in Health

HR status	Sanctioned	In position		Gap
		Regular	Contractual	
Doctors (Allopathic)	2429	1029	230	1170
Specialists	1209	292	12	905
Physiotherapist	46	37	0	06
Staff Nurses	975	871	305(NHM)	+201
X-ray tech	132	63	0	69
Pharmacists	772	762	0	10
MPW (Male)		195	0	0

			296 (214 2nd ANM's)	0
ANM	2251	2184		
Lab Technician	303	199	0	104
Optometrist	129	121	0	8
ASHA Facilitators	609	0	609	0
ASHA Co-ordinators	91	0	91	0

2 Uttarakhand Health System Development Project

2.1 Overview of the proposed Project

Uttarakhand Health Systems Development Project (UKHSDP), requested by the Government of Uttarakhand (GOUK); supported by the World Bank and being implemented by Uttarakhand Health and Family Welfare Society (UKHFWS), plans to improve equitable access to quality health services and providing health financial risk protection for the predominantly remote population of the state, through strengthening public and private health-delivery systems; promoting greater stewardship and managerial capacity in the state directorate; improving information systems; augmenting monitoring and research; and extending coverage of RSBY beyond hospitalization to include primary healthcare services.

The PDO is to improve access to quality health services and to expand health financial risk protection for the residents of Uttarakhand.

In particular, the project would focus on improving access to health services in remote areas of the state. A key area that the project intends to support is the development of innovative mechanisms for Uttarakhand to engage with private health care providers, expanding their role in meeting the unmet access needs of the state's population. A greater involvement of the private sector would create additional human resource availability for the public health system as a whole, while also providing an opportunity to redeploy existing public staff in a more efficient and effective manner. Interventions will support the state's plans for scaling up health system reform initiatives and making progress towards universal health coverage. Special focus would be on improving access to quality health services for the geographically dispersed and remote populations in the state, and finding innovative ways to engage with the private sector. The project also aims to reduce financial risk and make affordable, high quality healthcare available to all of the state's citizens.

The project will benefit the residents of the entire state of Uttarakhand, and in particular those residing in the remote, hilly and rural areas with poor availability of health services. Successful implementation of the project will have a particularly positive impact on the underserved population (women, elderly and communities living in remote areas). The strengthened availability of primary care services and

improved disaster response capabilities will also support the very large floating population that visits the state for business, pilgrimage and tourism.

The proposed project will have two components: a) Stewardship and system improvement and b) Innovations in engaging the private sector. The total project cost is US $ 125 million.

2.2   Integration of Environmental Aspects into core UKHSDP activities

Environmental aspects will be an integral part of the project with focus on institutional and skill strengthening, multisectoral coordination, and innovations in engaging with the private sector. Under component 1, the state will support strengthening of skills and systems needed for sound practices in infection control and good methods for treatment and disposal of infectious and hazardous waste, as well as engagement with related sectors. These include the Department of Environment, Uttarakhand-Pollution Control Board, urban authorities, municipalities for better monitoring and enforcement of waste transportation, treatment and disposal at central treatment facilities (CTFs). An integrated approach towards better sanitation, hygiene and infection management will support the project objective in providing cleaner health facilities and providing high-quality health services.

Under component 2, the state can strengthen the PPP system arrangements for waste collection and treatment with the centralized facilities and develop a waste tracking system. As the project is contemplating to increase engagement with private sector in health service delivery, it will be ideal to include Infection Control and Waste Management (ICWM) as integral part of contract. Performance based incentive can also include clauses related to proper ICWM which can be monitored on regular basis. Various innovative mechanisms of BMW management are needed to be thought through in certain PPP arrangements such as mobile health vans and outreach, surgical camps etc.

Mobile health vans provide health services to the remote populations often located in difficult to reach areas. BMW generated at such locations does not get disposed in proper manner due to lesser quantity and lack of availability of disposal mechanism. Interventions such as smaller vehicle retrofitted to carry BMW from such locations can be useful in these circumstances.

2.3   Environmental and Social Issues related to the health sector

2.3.1   Environmental:

The nature of this project provides tremendous opportunities to enhance the sanitation, hygiene and infection control and waste management systems and processes in the state so as to further promote sound public health outcomes, while also ensuring that there are no adverse impacts to the environment. There is

pressing need to strengthen the capacity on waste management and infection control, ensure the availability of human resources designated to waste management and strengthen the monitoring system to ensure compliance with the Government of India's national regulations.

2.3.2 Infectious waste

Biomedical waste is the waste that is generated during the process of patient care and their quantities in cities have been ranging from 1.5 to 2% of the municipal solid wastes. WHO fact sheet reported that from total of waste generated by health care activities 20% is hazardous[1]. Though quantity is relatively small, it can pose grave risks if not managed properly. All the biomedical waste generated (body parts, organs, tissues, blood and body fluids along with soiled linen, cotton, bandage and plaster casts from infected and contaminated areas along with used needles, syringes and other sharps) is very essential to be properly collected, segregated, stored, transported, treated and disposed of in safe manner to prevent spread of infection. Failing to do this might lead to spread of hazardous infections such as HIV, Hepatitis and other viral or bacterial infections, which pose huge risk to the health of the public, patients, medical professionals and contribute to environmental degradation.Improper occupational practices and unsafe handling of infectious waste potentially expose health care workers, waste handlers, patients and the community to infection and injuries. Open and uncontrolled slow burning of mixed waste which includes plastic waste produces emissions, such as dioxins and furans, which can be potentially hazardous and carcinogenic.

2.3.3 Wastewater from HCFs

Health-care wastewater is any water that has been adversely affected in quality during the provision of healthcare services. It is mainly liquid waste, containing some solids produced by staff and patients or during health-care-related processes, including cooking, cleaning and laundry. A large part of the wastewater from health-care facilities is of a similar quality to domestic wastewater and poses the same risks but smaller proportions of wastewater generated in HCFs will pose a higher risk than domestic wastewater depending on the service level and tasks of the health-care facility. The wastewater might contain chemicals, pharmaceuticals and contagious biological agents, and might even contain radioisotopes. This highly contagious water may leak into groundwater in absence of watertight and efficient sewers.

2.3.4 Clean water and sanitation

Provision of good health services requires maintenance of clean and hygienic healthcare facilities, with adequate supply of clean, potable water and proper systems for sanitation and cleanliness. Prevention of vector borne diseases and infections from poor quality food and water is essential for reducing the rate of Hospital associated infections. Proper solid waste management is also essential to prevent spread of diseases and infections to patients, healthcare providers and general community.

2.3.5   Mercury Waste

In health care facilities, products containing mercury include thermometers, sphygmomanometers, esophageal, Abbott & Cantor tubes and dental amalgams. Mercury is classified as a hazardous substance that is known to cause serious health impacts and can be fatal if inhaled and harmful if absorbed through the skin. Around 80% of the inhaled mercury vapour is absorbed into the blood through the lungs. The nervous, digestive, respiratory and immune systems and kidneys can be harmed, as well as the lungs. Adverse health effects from mercury exposure can be tremors, impaired vision and hearing, paralysis, insomnia, emotional instability, developmental deficits during fetal development, and attention deficit and developmental delays during childhood.

2.3.6   Environmental Enhancements

A health facility should be spacious, airy with provision for ample of natural light and pleasant greenery in sight. Rightly located departments and wards, ergonomic placement of ward furniture for patients, optimal yet efficient use of space and energy etc. creates positive environment for the patients and also reduce negative environmental footprint. In future plan should be to embrace use of appliances which use green energy such as solar water heaters, solar lightings, biogas plant etc. Under the proposed project, there is no major civil works or building any physical infrastructure.

2.4   Social& TribalIssues

The overarching issue that determines utilization of services and health outcomes appears to be the difficult geographical terrain. Several villages were inaccessible from the road, and located between 5-32 km deep into the hills and forests. While the 108 ambulances deployed across the state have significantly enhanced availability of emergency transport, communities that live deep inside hills and forests, this facility is not available. The difficult terrain, among other things, has had a negative impact on availability of human resources in the health sector. This is particularly felt at the community level, since often the only health service accessible to many remotely located communities is the community health worker.Indigenous people, categorized as tribal in Indian context endure specific disadvantages in terms of social indicators of quality of life, economic status, and usually as subjects of social exclusion. Consequently, they are unable to participate in the development process on an equal footing with the rest in the community, nor are able to reap a fair share of the benefits of developmental projects. It is important to identify issues that may constrain their participation in development process, suggest measures to enhance their involvement, and enable them to access healthcare at par with others.

There are significant differences in key maternal health indicators among rural-urban differential district-wise variation in disease prevalence.

Few key issues faced by tribal communities like- widespread poverty, low level of illiteracy, malnutrition, lack of personal hygiene, limited access to safe drinking water, lack of sanitary living conditions and health education, poor access to maternal and child health services, and ineffective coverage by national health and nutritional services. Tribal settlements tend to be small, isolated and difficult to reach with facilities and services. Tribals are also facing some key issues of state health system with their specific issues described above, like unavailability/lack of qualified health care providers and diagnostic services in vicinity of their dwellings; poor health infrastructure, lack of awareness, high prevalence of communicable diseases with increasing incidence of non-communicable diseases, perceived higher cost in seeking health care services, etc.

Low awareness of health issues and understanding of requirements among communities such as lack of treatment for diarrhea and regular immunization is a another issue that needs to be addressed.

The declining sex ratio, particularly in certain districts of the state, is a cause for concern. Although literacy rates are higher than the national average, there is a growing preference for male children. The easy availability of testing facilities, particularly in urban areas, could be a contributing factor. There is active monitoring of violations of the PCPNDT Act; however, the effectiveness of this in curtailing violations is questionable. This is only one aspect of the gender issue; access to health care is another important dimension that needs to be addressed, since there is some evidence that males are more likely to receive treatment for various conditions as compared to females (AHS 2011-12).

Healthcare provision to tribal community faces unique challenges such as theirperception that the doctors in public sector health facilities do not provide good care. Another reason for lack of utilization of the government health centers was lack of any health center near their dwellings. Tribal women face social, physical and economic barriers in seeking health care and are often seen to accord very low priority to their health care needs. The Jaunsari tribals of Uttarakhand, who are mainly centred on the Jaunsar-Bawar region of Dehradun and Mori region of Uttarkashi are polyandrous in nature. This gives rise to high parity and illegal abortions.

Sauka, Raji, Jaunsari, and Boxa, which have developed their own cultures based on available natural resources, characterize the socio-cultural fabric in the state, and use of locally growing medicinal plants forms part of the measures they adopt for addressing their health care needs.

The tribal habitants of the Upper Himalayas are mostly dependent on the local herbal cure system, which they inherited from their ancestors. Further, some of the other healing practices like "jhaad phook", "jaadu tona" and other traditional eating practices, lead to increase in health ailments among them.

3 Applicable Policies and Guidelines

3.1 Environmental Protection Act, 1986

The Government of India (GoI) enacted the Environmental Protection Act, 1986, under Article 253 of the Constitution. The purpose of this Act is to serve as an "umbrella" legislation designed to provide a framework for central government coordination for the activities of various established central and state authorities.

As this is an "umbrella" and all-encompassing legislation, this is relevant to the health sector activities as well. There are rules / notifications that have been brought out under this Act. These are directly relevant to the health sector. These rules / notifications are covered in the rest of this section.

3.2 Bio-medical Waste Management Rules, 1998 (amended 2012)

Under the Environmental Protection Act, 1986, the Bio-medical Waste Management Rules were introduced. These Rules are directly relevant to the health sector. The salient features of these Rules are as follows:

- Bio-medical wastes means waste that is generated during the diagnosis, treatment or Immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals.

- It is the duty of every occupier of an institution generating bio-medical waste which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment..

- Bio-medical waste shall be segregated into containers/bags at the point of generation in accordance with Schedule II and treated and disposed in accordance with Schedule I of these Rules. The Rules also require compliance with the standards prescribed in Schedule V, which gives standards for different treatment technologies. These are covered in the Operational Guidelines of this IMEP Guidance Manual.

3.3 Bio-medical Waste Management Rules, 2016

The New Rules are different from the previous one in a number of key ways:

- All generators including Health camps and Ayush have to obtain authorizations

- Biomedical waste is divided in 4 categories (instead of 10)

- Treatment and disposal of biomedical waste is mandatory for all health care providers

3.4 Other Regulations Related to Management of Health Care Waste

A number of environmental laws, regulations, which impact the health care sector and services, have been promulgated. Among those that focus on health care waste management include:

3.5   Environmental Protection Act, 1986

The Government of India enacted the Environmental Protection Act (EPA) under Article 253 of the Constitution. This Act serves as an "umbrella" legislation to provide a framework for coordination of environment activities of various established central and state authorities. It also empowers the Central Government to take appropriate measures to protect and improve environmental quality and to prevent, control and abate environmental pollution, including collection and dissemination of information. There are rules and notifications under this Act, which are directly relevant to the health sector.

3.6   Municipal Solid Wastes (Management and Handling) Rules, 2000

As a result of the plague epidemic in Surat, Gujarat, in 1994   the Supreme Court, under pressure from civic and environmental activists, directed to the Ministry of Environment and Forests (MOEF) to draft the Municipal Solid Wastes (MSW) Rules in 2000. These rules apply to every municipal authority responsible for collection, segregation, storage, transportation, processing, and disposal of municipal solid wastes.

3.7   The Water (Prevention and Control of Pollution) Act 1974

The Act establishes standards for water quality and effluent and also establishes an institutional structure for preventing and abating water pollution. Polluting industries must seek permission to discharge waste into effluent bodies. The Central Pollution Control Board (CPCB) was constituted under this Act.

3.8   Right to Information Act, 2005

The RTI Act confers a right on every citizen to secure access to information under the control of public authorities, consistent with public interest, in order to promote openness, transparency and accountability. It provides for the constitution of a Central or State Information Commission(s), which are empowered to enquire into complaints from persons who have not been able to secure information requested under the Act. The Indian Courts have also allowed citizens and social action groups and pressure groups access to public records, subject to the condition that disclosure may be refused for reasons of security.[1]

3.9   Guidelines for establishing and operating a Common Bio-medical Waste Treatment Facility

A Common Waste Treatment Facility for health care facilities (CWTF) is a set up where health care waste, generated from a number of health care units, is imparted necessary treatment to reduce adverse effects that this waste may pose. The CWTFs are cost effective, easy to operate and maintain rather than individual healthcare facilities having their own waste treatment and disposal options.

As a signatory to the Stockholm Convention on persistent Organic Pollutants and the Minamata Convention on Mercury, Government of India is required to take action on reducing the emissions of POPs (dioxins and furans) and mercury. In this regard,

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[1]Lal and Goswami, International Comparative Legal Guide Series on Environmental Law, India Associated Law Advisers.

These are addressed by GOI's mandate of centralized treatment facilities and phasing out of mercury containing healthcare equipment. The GOI has disseminated **"Environmentally sound management of mercury waste generated from the health care facilities" in 2012".**

The World Bank Operational Policy (OP) requires that Environmental Assessment of projects proposed for Bank financing be conducted to ensure that they are environmentally sound and sustainable with an objective to improve decision making process. This project has been classified as a **Category B p**roject as its potential adverse environmental and social impacts are well defined and manageable.

4   Current Status of Environmental and Social Aspects in Uttarakhand

In order to gauge IC & BMW situation at the facility level sample survey was conducted in all the state, details of sample survey is provided in Annexure. District Program Managers and Hospital Managers from all district hospitals were called for two day training to carry out sample survey. Participants were briefed to basic principles of IC & BMW along with introduction to survey tools. Based on consultation, following number of facilities were surveyed in each district:

Type of Healthcare Facility	No.
District Hospitals with Female hospital	1
Other large Hospital (Combined hospital & Base hospital)	2
CHC	1
PHC	1
SC	1
SAD	1
Mobile Unit	1
CTF	1
Total	**9**

Key findings from the survey is as follows

4.1   Status of Infection control and waste management:
The survey found that there is general lack of awareness and knowledge about good practices in infection control and proper segregation and disposal of bio-medical waste. Mixing of general waste with infectious waste is common practice. General cleanliness and hygiene in healthcare facilities is not upto standards and in general infection control and waste management is not prioritized and there is no regular administrative monitoring. Inadequate human resources and insufficient training further prevents good infection control practices to be implemented. The quality, quantity and use of consumables (colour-coded bags, bins, and PPE such as gloves and masks) is poor. Bins are not placed appropriately and often their size does not match quantity of waste generated. Storage areas are not appropriately located or maintained and often pose risk of infection

Many of the PHCs and SCs do not have deep burial pits, or unusable as they are already filled up with various types of waste. Open burning takes place in most of HCFs mainly due to constraints in disposal and poor awareness. There is no information flow or reporting and record keeping mechanism for waste management. Though Infection control and waste management plan is at almost every facility, there are no committees to oversee related activities. Little action has been taken with regard to mercury phaseout in the state.

In this regard the survey found that most healthcare facilities are not in compliance with GOI's BioMed Rules. Although, it was foundthere about 90% of government HCFs are registered with the UK Pollution Control Board, as required by the GOI BMW Rules

4.2   Status of Common Treatment Facilities

There are two CBWTF along with disposal facility exist in the state. The hospitals located in foothills of Grhwal area and Kumaun areas are utilizing the facility of M/S Medical Polution Control Committee and Mandawar in Hardwar district. This facility has incinerator of 100kg/hr capacity along with deep burrial facility. Another facility is located in Udham Singh Nagar district of M/s Global BMW services, which also has deep burrial and incinerator of 100 kg/Hour capacity. In the hills of the state, Government Order(GO) dated March 10th, 2006 is being followed for deep burial option for BMW the copy is Annexed

Status of BMW authorisation (Public+Private) for year 2013-14 (Source:UEPPCB)

SN	Region	No. of HCFs Identified	No. of applications received	Authorization granted	Authorization rejected	Pending
1	Dehradun	338	186	146	4	36
2	Roorkey	141	109	79	13	17
3	Haldwani	125	98	98	0	0
4	Kashipur	77	77	63	0	14

Following table depicts region wise status of HCF (Public+Private), quantum of waste generation and its classification (Source: UEPCCB)

SN	Regional Office	Total No of Hospitals	Total Beds	Quantity of BMW generated(kg/day)	Incinerable (kg/day)	Disposable(kg/day)	Recycleble(kg/day)
1	Dehradun	338	7490	1355	740	344	271
2	Roorkey	137	2408	185	104	23	558.25
3	Haldwani	77	2570	496	106	114	276
4	Kashipur	121	1565	221	115	77	29
	Total	673	14033	2257	1065	558	1134.25

Detailed list of health facilities is annexed

Pahal BMW Services for the collection and transportation of the bio-medical waste for its scientific disposal from the healthcare facilities in Uttarakhand. Currently there is no regular monitoring or enforcement system for CTFs and no system for waste quantity movement and tracking between source and disposal.

4.3 Status of Social Issues:

35% of those who had a home delivery reported that they did not think it was necessary to go to a health facility, and 35% reported that they felt they got better care at home. 21% of children with diarrhea were given no treatment, almost 50% were given less fluids to drink and 43% received less than usual breastfeeding, indicating poor awareness of simple life-saving interventions (AHS 2011-12). Similarly, when asked why their children were not immunized, 11% of respondents said they did not think it was necessary, almost 50% said they did not know about vaccines, and 14% did not know where to go to get vaccinated.

Up to 20% of ANMs are not available at the sub-centers; and the shortfall is even higher at the PHCs (RHS Bulletin, March 2012, M/O Health & F.W., GOI). When considering the availability of doctors and specialists, the situation is grim, with massive vacancies of all types of specialists, particularly obstetricians and pediatricians. Field visits to the CHCs being run under PPP arrangements by the same provider showed a similar pattern: in the CHC located in the peri-urban area (close to Dehra Dun), availability of necessary staff was not a problem; however, in the other CHC, located in a remote area, most posts were vacant. In other words, even the private sector was not able to procure the services of health personnel in areas where the terrain was difficult.

For example, diarrhea affects 1,402 in 100,000 in U.Kashi and 208 in Almora; acute respiratory infection affects 4,687 in 100,000 in T. Garhwal and 135 in Champawat; fever affects 22,523 in 100,000 in Haridwar and 881 in Bageshwar; and diabetes and hypertensions respectively affect 2,200 and 3,134 in 100,000 in Dehra Dun and 196 and 470 in Bageshwar (AHS 2011-12). While some districts report uniformly below-average disease burden, such as Bageshwar and Udham Singh Nagar, others have a mixed pattern, while yet others such as Haridwar and Dehra Dun are consistently high. It would be important to keep such variations in mind and track then over a period of time while deciding upon and prioritizing interventions. AHS 2011-12 data indicate that the mean distance traveled in rural areas for an institutional delivery was 11 km, while in urban areas it was 5 km; and the mean time taken to reach the facility was 47 minutes in rural areas and 24 minutes in urban areas. 30% of women opt for a home delivery due to no access to transport. More than 15% of women had to travel more than an hour to reach a health facility.

The state is prone to natural disasters such as flash floods,floods, landslides mainly

due to heavy rainfall during rainy season. Huge variations in the terrains and density of population in Uttarakhand, hampers health service delivery in the state and similar challenges are faced when it comes to Biomedical Waste Management (BMW). BMW need of Uttarakhand have large variations from most of other states in the country. Many of the HCFs are located in remote villages, which are not connected by motorable roads. Even the foot tracks are difficult to travel due to rugged topography. Problem of BMW disposals is persistent at such locations as usual solutions such as deep burial pits etc. are not possible due to variety of reasons. These facilities generate small amount of waste, which in absence of disposal facility need to be transported. Lack of road connectivity and rugged topography hampers this activity which leads to disposal of waste in environmentally unfriendly manner such as burning or plainly dumping in undesignated locations. HCFs based in plane areas generate large amount of waste which faces problem of its disposal due to less numbers of operational CBWTFs in the state.

Status of Tribal Community

The tribal population constitutes a little over 3 percent of the State's total population. The main tribes living in Uttarakhand are Bhotia, Buxa, Jaunsar, Raji and Tharu, predominantly inhabiting the Trans-Himalayan region in the State. They are mostly nomadic and undertake seasonal migration in response to the need for livelihood and employment. The table given below shows the regions and districts in which these tribes are mainly centred.

Figure: Regions in the State Inhabited by Major Tribal Groups

Sr.No.	Tribe	District	Region
1	Bhotia	Pithoragarh	Munsiyari
			Dharchula
		Chamoli	Joshimath
			Badrinath
		Utterkashi	Bhatwari
2	Buxa	Nainital	
		Pauri	
		Dehradun	
3	Jaunsari	Uttarkashi	Mozi
		Dehradun	Kalsi
			Chakrata
4	Raji	Pithoragarh	Berinag
			Didihat
			Kanalichhina
5	Tharu	Nainital	
		Udham Singh Nagar	

Source: Census of India, 2001

Eight out of 13 districts of the state have presence of one or the other tribes, and majority of the ST population is concentrated in four districts, namely, Udham Singh Nagar (43 percent), Dehradun (38.8 percent), Pithoragarh (7.5 percent), and Chamoli (4.1 percent). As presented in table ahead, Tharu tribe is the largest of the five scheduled tribes in Uttarakhand. They account for 33.4 percent of the state's total ST population, followed by Jaunsari (32.5 percent), Buksa (18.3 percent), and Bhotia (14.2 percent). The proportion of Raji tribe is the smallest.

Population and Proportion of STs, 2001 Census

Sr.No.	Name of the Scheduled Tribes	Total Population	Proportion to the total ST population
1	All Scheduled Tribes	256129	100
2	Tharu	85665	33.4
3	Jannasari	83262	32.5
4	Buksa	46771	18.3
5	Bhotia	36438	14.2
6	Raji	517	0.2

The STs in Uttarakhand are predominantly living in rural areas with 93.8 percent of them residing in rural areas and the balance 6.2 percent in urban areas. Bhotias have recorded a high of 25.8 percent living in urban areas followed by Rajis (8.9 percent urban dwellers). On the other hand Buksas and Tharus are predominantly living in rural areas with only 0.8 percent and 1.9 percent of them reportedly living in urban areas, respectively.

5 Proposed Mitigatory measures to address Environmental and Social issues:

5.1 Environmental Issues

S. No.	Type of Waste	Location	Segregation	Institution Treatment	End Treatment at CTF	Final Disposal At the Common treatment facility
1	Infectious anatomical waste	OT, Labour room, Wards	To be collected in yellow plastic bags kept in yellow buckets	-	Incinerator	Deep burial in case of PHCs & Subcentres
2	Infectious organic waste	All wards, OT, Labour rooms, Lab, ICU,	Red bucket lined with red plastic liners stored in red drums with plastic liners	-	Auto clave	Deep burial/ Secure landfill
3	Infectious plastic waste	All wards and departments	Red buckets stored in Red drum lined with Red plastic liner	5% Hypo chlorite solution for 30 minutes	Autoclave and shredding	secure landfill & Bags disposed by Recycling
7.	Sharps (needles, slides, bottles etc)	All wards departments All wards departments	mutilation by needle destroyer then put in sharps container with hypo chlorite solution 1%	1% hypochlorite for 30 minutes	Auto clave	Encapsulation or recycled
9.	Discarded medicines/expired drugs/Cytotoxic drugs	Kept at medical stores after collection from department	Kept in secured box in medical stores, then put in yellow bags	-	No treatment required	Secure land filling

S. No.	Type of Waste	Location	Segregation	Institution Treatment	End Treatment at CTF	Final Disposal At the Common treatment facility
11	Liquid waste/chemicals/blood	All wards/ Autopsy rooms	-	5% Hypo chlorite for 30 minutes & discarded in drain	-	-
12	Capacity building in occupational practices in infection control	• Provision of PPE (gloves, masks, boots etc) as required • Training and capacity building				
13	Wastewater management	• Designated/separate sewer system for wastewater - Operation and maintenance of sewer system • Pre-treatment of hazardous liquids before discharging • Integrate storage and sewerage systems into hospital building design, in consultation with relevant state agencies				
14	Mercury Waste	• Phase-out plan should be developed and implemented for mercury containing instruments • Should be treated as hazardous waste and managed as per GOI Guidelines				
15	Awareness building	• Awareness to be created among the community and Private health providers about the Health Care Waste Management, method of collection , storage, transportation disposal, and the end treatment at the CTF. • Health personnel & paramedical workers should be sensitized in segregation and safe disposal of Health Care Waste, risks in HCWM, etc. • Provision of awareness materials including hoardings, wall writing stickers etc				
16	Grievance readdresal	• Community based feedback mechanism • Designated person at facility, district and state level to raise grievance though convenient communication mode (phone, email, social media etc.)				

17	Procurement and Supply chain management of IC and BMW goods	• Needs assessment of IC and BMW consumables • Setting up specifications for goods with consultation with appropriate authority • IT based prompt supply chain management to ensure timely supply of goods and consumables • Feedback mechanism for quality and quantity of consumables

5.2   Social and Tribal Issues

1	Enhancing availability of primary care services	• Increasing the availability and outreach activities of Mobile Health Vans: The state had already deployed a number of MHVs that provide health care on a fixed schedule. • Expand number of mobile vans to increase both coverage and frequency such that communities could rely on these mobile units for their regular health needs. • There needs to be a strategic plan for reaching rural communities with key health messages, increasing their awareness of various health issues and serving as catalysts for action. • Increase the quality and availability of services in tandem in order to enhance the credibility of the system and make a sustainable change in health seeking behavior of communities. • Introduction of a Health Helpline that not only provides health information and advice, but also guides patients through the health systems to offer a more coordinated, systemic response • Monitoring and evaluation mechanisms will ensure the regular tracking of progress and impact of project interventions on women and vulnerable populations. • At all levels, data will be maintained on utilization of services by women, and this data will be regularly reviewed and evaluated. Similarly, disaggregated data on each district will be maintained and reviewed by an appropriately constituted team. This will ensure that regional and inter-district imbalances are appropriately addressed in a timely manner. • In addition, the report of the committee monitoring the implementation of the PCPNDT Act will be regularly reviewed by the Project Director and the Secretary Health to ensure that all violations are being strictly followed up. •

		• there is a need to pursue a multi-sectoral approach to health, especially at the community level. The community level workers are meant to work in a coordinated manner, with the ASHA, ANM and Anganwadi worker all working together with the common goal of serving the needs of children and their mothers. Similarly, the annual health check-up is done in coordination between the Health and Education departments. Mechanisms for coordination, such as joint state- and district-level committees that oversee the coordinated action of these departments, will greatly facilitate the quality and effectiveness of these programs.
2	Supporting Public Private Partnerships	• Partnering with NGOs: NGOs have proved to be effective partners in several programs, notably the Adolescent Reproductive and Sexual Health program, the Urban Health Centers and the ASHA Plus program. While the capacity of NGOs in UK is limited, and their location in the really remote areas is sparse, they could yet be effective resources to reach out to areas which are currently underserved. • The current PPP arrangement for the management of the CHCs should be evaluated and scaled up if possible. • With the increase in service delivery at the CHC close to the capital, there is a need to expand the physical infrastructure at the facility to sustain further increase in the service supply; however, this does not seem likely at this stage. • A deeper understanding of the costs of care. The reimbursement of services is done on the basis of number of diagnostic tests carried out, but it is not clear what the impact of this on over-prescription of diagnostic tests is, how much of that cost is borne by the patient, and whether this model is viable for the private partner. • The terms of the contract need to be examined critically to ensure that the private partner also comply with the requirements of the public health programs. The private partner is not held accountable under the contract for delivery of national programs. So there is a focus on diagnostic and curative care, but programs such as RNTCP, and VBDCP, are completely neglected.

3	Indigenous people: Difficult geographical terrain is barrier to access of health care services	To reach at the doorstep of indigenous people through innovative mechanisms by strengthening the expansion of MHV network under PPP
4	Low awareness regarding health care related issues among the tribal communities	Create awareness on key health issues through innovative solutions Development of IEC/BCC activities
5	Gender Imbalance	Create awareness on Gender issues via proper behaviour change activities Increasing awareness through IEC/BCC activities
6	Shortage of manpower	Innovative solutions as alternative for key health delivery activity Private sector engagement, outsourcing of CHC's
7	Due to Poverty, poor healthcare seeking practices	Innovation in financial risk protection by RSBY/MSBY
	Higher reliance on traditional healers & and local remedies	Increasing awareness through IEC/BCC activity, Increasing monitoring and regulatory mechanism

6 Action Plan

Waste Management	Actions to be taken	Responsibilities
Waste Storage, Transportation, Treatment and Disposal	<u>Central Facilities</u> i. Undertake needs assessment of waste generated and location of healthcare facilities ii. Discuss CTF strategy and prepare CTF mapping for the state in consultation with Pollution Control Board and Municipalities iii. Follow-up with stakeholders with regard to availability of land for placement of CTFs, bidding documents for CTFs etc iv. Coordinate discussions related to CTF contracting rates, frequency of collection, transportation and disposal options and other administrative logistics <u>PHCs/SCs</u> i. Needs assessments of conditions of deep burial pits ii. Discussions on next steps with (1) NHM for construction of new pits (2) PCB for one-time emptying of pits where scarcity of land iii. Discussions with stakeholders on innovative approaches for hilly/remote areas <u>Storage Areas</u> i. Provide guidelines for existing facilities to improve storage site ii. Provide recommendations for improved storage areas into hospital building design	**Health dept. with help from Environment consultant (Would hire private partner to carry out needs assessment)**
Consumables	i. Complete needs assessment of consumables (bags, bins, needle cutters, sharps boxes, PPE etc) for all facilities ii. Develop technical specifications and	

		include requirements into procurement plan	
	iii.	Develop time-schedule for annual procurement based on requirement from the facilities	
	iv.	Establish system of feedback on quality of consumables for improving technical specifications and procurement	
Capacity Building	i.	Prepare a training plan based on needs assessment; Review alternative options such as involving local NGOs, medical and nursing associations, medical colleges and private service providers to ensure state-wide capacity-building.	**Health dept. with help from Environment consultant (private partner will be hired to carry out task)**
	ii.	Develop training modules; All training and awareness material must be in the local language	
	iii.	Coordinate training activities in state; Training would be provided in train-the-trainer modules which would be replicated within individual facilities by designated trained staff on a regular basis	
	iv.	Set up system for receiving completion reports from individual facilities, for better monitoring.	
	v.	timely compliance with environmental authorizations and clearances.	
	vi.	Develop simple WM guidelines for Mobile health vans, outreach activities, camps, blood donation camps, boat etc	
Environmental Enhancements	i.	Water testing for quality	**Appropriate government authority (apart from health dept.) will be given inputs from Health dept.**
	ii.	Institute systems for improved sanitation and cleanliness	
	iii.	Good practices in hygiene	
	iv.	Consider options for more energy efficiency	
Environment consultancy for PPP contracts	All the PPP contracts can be given inputs from environmental cell about making strict provision in the contract about proper management of BMW. Private partner can be		**Health dept.**

	penalized for unsatisfactory compliance or incentivized for innovations in eco-friendly disposal of BMW	
Monitoring and enforcement	i. Establish monitoring system (including photographic evidence) and include into project MIS ii. Institute waste tracking and GPS systems, in consultation with PCB, for implementation by private operators iii. Develop innovative solutions for monitoring, such as joint departmental inspections, outsourcing to medical colleges, medical and nursing associations and NGOs or community based organizations. This monitoring should include health care facilities and CTFs, after discussion with Pollution Control Board. iv. Review options for community involvement in enforcement for CTFs v. Discussion with CTF for improved enforcement vi. All healthcare facilities will maintain records related to the generation, collection, reception, storage, disposal and/or any form of handling of bio-medical waste. All records will be subject to inspection and verification by the prescribed authority at any time vii. Institute systems for accident reporting and actions to be taken to treat the emergencies viii. HCF administration would undertake routine supervision and random checks within facilities and reporting of performance indicators and corrective measures ix. Undertake mid-term review of ESMP implementation x. Commission an independent evaluation of ESMP in year 5 of the project	**Health dept.**

Mercury phase-out	i. Develop phase-out plan for mercury containing equipment ii. Discuss with UK PCB as to systems for storage of decommissioned mercury equipment	**Health dept.**
IEC	i. Awareness to be created among the community and Private health providers about the Health Care Waste Management, method of collection , storage, transportation disposal, and the end treatment at the CTF. ii. Health personal &paramedical workers should be sensitized in segregation and safe disposal of Health Care Waste, risks in HCWM, etc. iii. The IEC activities will be given through mass media, and also the methods as suggested by communication experts	**Communication dept within directorate in consultation with Environment Consultant**
Social & Tribal Issues	Actions to be taken	
Expanding Public Private Partnerships (PPP's)	i. Provisioning of healthcare care services by expanding coverage of MHV ii. Increase number of CHC's under PPP mode for better delivery of health care in remote locations. iii. Improving financial risk protection by RSBY/MSBY	**Health Dept. (activities outsourced under PPP model)**
Previsioning of Primary care	i. Provisioning of Primary care services child care & NCD care through RSBY/MSBY mechanisms ii. Outpatient packages for Child care & NCD to be developed iii. Improving financial risk protection by RSBY/MSBY	**RSBY/MSBY cell**
IEC/BCC Activity	i. Awareness to be created among the community and Private Health providers about the Social issues. ii. Health personal & paramedical workers should be sensitized on gender issues, health seeking behaviour, institutional delivery, etc. iii. IEC/BCC activities to be developed for community on appropriate use of traditional medicine, faith healers & local remedies	**Health Dept.**

	iv.	The IEC activities will be given through mass media, and also the methods as suggested by communication experts	
	iv.		
Human resources for health	i.	Expanding PPP models for greater availability of qualified HR in remote locations	**PPP Cell**
	ii.	Increasing the availability and outreach activities of Mobile Health Vans & Community health centres through PPP integrated model.	
	iii.	Advocacy at state level for rational deployment of HR in state	
Monitoring and Evaluation	i.	Generating evidence by mapping of Indigenous communities in state, baseline on health needs & health seeking behaviors	**Health Dept. with help of evidence policy and health information cell of UKHSDP**
	ii.	Establish monitoring system and include into project MIS	
	iii.	Continues monitoring of healthcare utilization by community	
	iv.	Undertake mid-term review of IPDP implementation	
	v.	Commission an independent evaluation of IPDP activities in year 5 of the project	
Capacity building	i.	Prepare a training plan based on needs assessment, particularly focusing on healthcare needs and disease patterns at community level	**Health Dept.**
	ii.	Develop training modules; All training and awareness material must be in the local language	

7 Implementation arrangements

7.1 Institutional framework

For effective implementation, a proper institutional framework will be required at state as well as district level. Regular monitoring and periodical trainings are the key activities, which should be carried out by the team. State level team (IC & BMW Cell) can be placed/ created in the health directorate which can comprise of environmental specialist and other support staff across system such IT professionals, training coordinator and other support staff such as documentation assistant. Separate Joint Director (JD, IC & BMW) post can be created who will supervise activities of cell. At district level Deputy CMO can be empowered and supported to

facilitate related activities at district level. Training coordinator can coordinate training activities using NHM's existing training infrastructure under supervision of JD (Environment and Social) and JD (Capacity Building and Training). Periodical training of all categories of staff from all the levels of health facilities can be carried out. Following is the detailed organogram for Environment and Social arrangement

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┌─────────────────────────┐
│ Principal Secretary Health │
└─────────────────────────┘

┌──────────────────┐
│ DG Health Services │
└──────────────────┘

┌──────────────────┐
│ Project Director  │
│ (UKHSDP)          │
└──────────────────┘

┌──────────────────┐
│ Additional Project │
│ Director          │
└──────────────────┘

┌──────────────────┐
│ Joint Director    │
│ (Environment and Social) │
└──────────────────┘

┌──────────────────────┐
│ Consultant Environment │
│ and Social            │
└──────────────────────┘

┌──────────────────────┐
│ Dy. CMO Ad. Charge    │
│ (Environemnt and Social) │
└──────────────────────┘
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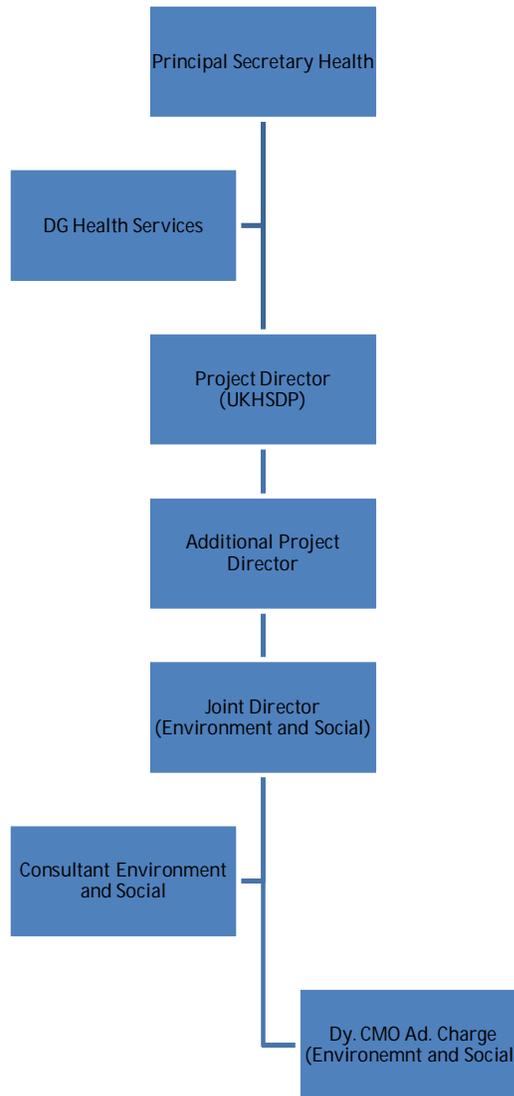
The team will develop and implement a road map for proper implementation of biomedical waste management and infection control activities as well as other environment related issues as per the regulations of Government of India and guidelines of Central Pollution Control Board. It will be responsible for issuance of instructions and guidelines related to environment management issues, including mercury phase-out, biomedical waste management, water and wastewater management, infection control and sanitation practices, promotion of energy efficient initiatives etc. The team will also manage, coordinate and provide focused

awareness and training for relevant state agencies and health care facilities and laboratories and general community. The team will be responsible for the instituting of effective and efficient systems for implementation, procurement, capacity building and monitoring and reporting on environmental management issues related to health care facilities. This will also include recommending the appropriate institutional structure to be established or strengthened at different levels of state administrations and of health care service delivery. The team will also review environmental issues related to construction and up-gradation of health care facilities, including issues related to site selection, design, materials used and construction waste management

Formation of IC&BMW committee at every HCF is also a key activity which would be carried out. Currently such committees exist in certain health facilities, usually larger facilities but their activities are not monitored or followed up. Various HCFs have such committees on paper but practically they are absent or dysfunctional. IC &BMW Committee can meet once in a month on a fixed day to assess the status of BMW every month. All the proceedings of the meeting will be intimated to district and state cells who will conduct periodic monitoring. IC & BMW committee will also be formed at district and state level composition of all such committees is as follows

State Infection Contol and Biomedical Waste and Social Management Committee		District Infection Contol and Biomedical Waste and Social Management Committee	
Principal Secretory-Health	Chairperson	District Collector	Chairperson
Member Secretory-UEPPCB	Member	Chief Medical Superitendant- DH	Member
Project Director,UKHSDP	Member Secretary	Chief Medical Officer	Member - Secretary
Director of Medical Services	Member	Deputy CMO (Environment and Social)	Member
Director of Medical Education	Member	District Representative-UEPPCB	Member
Director National Programs	Member	Junior Engineer-CMO office	Member
Commissioner of Municipal Administration	Member	IMA Representative-District	Member
IMA President-Uttarakhand	Member	NGO Representative	Member
Representative- Civil Society	Member	Commissioner, Municipality/CEO Zilla Parishad	Member

District Hospital Hospital Infection Contol and Biomedical Waste Management Committee	
Chief Medical Superitendant/PMS	Chairman
Hopsital Manager/ Quality Manager	Member
Head Nurse to be designated as infection control officer (ICO)	Member
Gynecologist/Orthopedician	Member
Chief Pharmacist	Member

- Institute sustained dialogue with state Pollution Control Board on streamlining waste management processes, including monitoring and quality standards of contracted service providers.
- Coordinating with multiple stakeholders such as municipal authorities, urban local bodies, water and sanitation agencies (e.g. through the establishment of a multi-sectoral taskforce) for management of water, sanitation, and proposed designs of construction and engineering controls
- Social & tribal activities will also be implemented by the same institutional structure and governing mechanisms.

8 Budgetary Allocations

Sr. No	Item	Cost $	Cost Rs.
1	Purchase Consumables and supply	700000	47600000
2	Undertaking Needs Assessment of CTFs and HCFs	10000	680000
3	Mapping and baseline study of HSB of communities and IP	10000	680000
4	Training and capacity building	100000	6800000
5	IEC	10000	680000
6	Monitoring and reporting	50000	3400000
7	Implementation of technology based solutions(waste tracking system etc.)	100000	6800000

8	Independent Environment and social audit by third party	50000	3400000
	Total	**$1,030,000**	7,00,40,000

Sr. No.	Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Identification of role, responsibility and scope of Unit carrying Environmental & Social (Tribal) activities	█	█	█																					
2	Identification of inter-sectoral coordination measures and implementatio n, &monitoring frameworks		█	█	█	█																			
3	Establishment of Unit in Directorate			█	█	█																			
4	Finalization of Roadmap for Implementatio						█	█																	

	n																					
5	Formation of State level, District level and Hospital level monitoring committees																					
6	Development Capacity Building Plan																					
7	Preliminary training of state, district officials																					
8	Needs Assessment & Mapping of CTFs																					
9	Needs Assessment of BMW Management in all HCFs																					

#	Activity																							
	Conduct study to generate evidence by mapping of Indigenous communities in state & baseline study on healthcare needs & health seeking behaviors						▓	▓	▓	▓														
10	Based upon assessment prepare procurement plan for purchase of consumbales and its supply									▓	▓	▓												
11	Hiring of support staff based on needs of HCF											▓	▓	▓										

12	Mid Term Evaluation																			
13	Independent evaluation of ESMP																			

Tribal Development Plan (Indigenous People Plan)
Uttarakhand Health System Development Project
Implemented by Uttarakhand Health and Family Welfare Society
Government of Uttarakhand

BACKGROUND

The objective of the Indigenous People Assessment is to assess the potential and adverse impacts on tribal community due to the implementation of the Uttarakhand Health System Development Project. Indigenous People Plan will measures the issues of tribal community as compared to the other developed communities in state and make efforts to devise strategies to address the same. Indigenous people are categorized as tribal in Indian context, who often become vulnerable in development projects, not only because their cultural autonomy is undermined as a consequence of the project outcomes, but also because they endure specific disadvantages in terms of social indicators of quality of life, economic status, and usually as subjects of social exclusion. Consequently, they are unable to participate in the development process on an equal footing with the rest in the community, nor are able to reap a fair share of the benefits of developmental projects. Therefore, the study also attempts to identify issues that may constrain their participation in the project, suggest measures to enhance their involvement, and enable them to access project benefits at par with others.

PROJECT BENIFICIERY & IMPACT

The project will benefit the residents of the entire state of Uttarakhand, and in particular those residing in the remote, hilly and rural areas with poor availability of health services. Successful implementation of the project will have a positive impact, particularly on the underserved/indigenous population (women, elderly and communities living in remote areas). The Project activities do not include any civil works or any other such activity which could have adverse impact on the indigenous population of the state.

DEMOGRAPHY OF TRIBALS IN UTTARAKHAND

The tribal population constitutes a little over 3 percent of the State's total population. The main tribes living in Uttarakhand are Bhotia, Buxa, Jaunsar, Raji and Tharu, predominantly inhabiting the Trans-Himalayan region in the State. They are

mostly nomadic and undertake seasonal migration in response to the need for livelihood and employment. The table given below shows the regions and districts in which these tribes are mainly centred.

Figure: Regions in the State Inhabited by Major Tribal Groups

Sr.No.	Tribe	District	Region
1	Bhotia	Pithoragarh	Munsiyari
			Dharchula
		Chamoli	Joshimath
			Badrinath
		Utterkashi	Bhatwari
2	Buxa	Nainital	
		Pauri	
		Dehradun	
3	Jaunsari	Uttarkashi	Mozi
		Dehradun	Kalsi
			Chakrata
4	Raji	Pithoragarh	Berinag
			Didihat
			Kanalichhina
5	Tharu	Nainital	
		Udham Singh Nagar	

Source: Census of India, 2001

Eight out of 13 districts of the state have presence of one or the other tribes, and majority of the ST population is concentrated in four districts, namely, Udham Singh Nagar (43 percent), Dehradun (38.8 percent), Pithoragarh (7.5 percent), and Chamoli (4.1 percent). As presented in table ahead, Tharu tribe is the largest of the five scheduled tribes in Uttarakhand. They account for 33.4 percent of the state's total ST population, followed by Jaunsari (32.5 percent), Buksa (18.3 percent), and Bhotia (14.2 percent). The proportion of Raji tribe is the smallest.

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| 5 | Bhotia | 36438 | 14.2 |
| 6 | Raji | 517 | 0.2 |

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TRIBAL LITERACY IN UTTARAKHAND
Among STs, 63.2 percent of the population has been recorded as literate (Census 2001), which is well above the national average (47.1 percent). The male and female literacy rate of 76.4 percent and 49.4 percent, respectively however indicates a wide gender gap in literacy. Bhotias with 79.9 percent literacy rate are well ahead of other STs in the state. The female literacy rate (69.1 percent) among Bhotia is also the highest among the five STs of the state. Raji have recorded the lowest literacy rate of just 35.8 percent1.

Literacy Rate in various Tries in Uttarakhand

Sr.No.	Name of the Scheduled Tribes	Literacy rate (+7 years and above)		
		Total	Male	Female
1	All Scheduled Tribes	63.2	76.4	43.4
2	Tharu	79.9	91.5	69.1
3	Jannasari	49.9	66	32.4
4	Buksa	58.9	71.7	44.8
5	Bhotia	35.8	47.2	22.5
6	Raji	67.0	80.4	53.1

As per 2001 Census, 76.6 percent of the ST population in the age group 5-14 years has been attending educational institutions. Bhotias have recorded the highest percentage (86.4 percent) of school attending population, closely followed by Tharus (82.3 percent). On the other hand, Rajis have the lowest proportion (50 percent) of the educational institution attending population. percent. The remaining two tribes, that is, Jaunsaris (75.1 percent) and Buksas (63.7 percent), also have recorded below the state average. Merely 4.3 percent of total literates among STs are having graduation and higher educational qualifications. Bhotias with 11.6 percent of their

literate population as graduate or having higher level of education are on the top among STs. On the other hand, Buksas have the lowest proportion (0.7 percent) of people with graduation and higher educational qualifications.1

ECONOMIC STATUS OF TRIBALS

In terms of sources of livelihood, tribals are largely dependent on farming and working as agriculture labour. These two economic activities contribute almost 80% of the total average household income of the tribals. As mentioned above, agriculture is the main stay of tribal communities in the state, but since they continue to practice traditional farming practices, their production and productivity is low. As a result, the economic status of vast majority of the tribals is low.2

As per Census 2001, 41.1 percent of the STs of the state have been reported as workers, which is below the aggregated national level for STs (49.1 percent). Of the total workers 73.1 percent have been recorded as main workers and 26.9 percent as marginal workers. The female WPR of 31.9 percent is significantly lower than male (49.9 percent)11. Bhotias have the highest WPR of 41.1 percent, while it is lowest among the Buksas (34.9 percent).1

ISSUES AND CONCERN OF THE TRIBALS

The consultation with communities, representatives from health department, women and child development department, NGO's working in tribal areas and field visits to some of the health facilities; and review of available literature revealed few key issues faced by tribal communities like- widespread poverty, low level of illiteracy, malnutrition, lack of personal hygiene, limited access to safe drinking water, lack of sanitary living conditions and health education, poor access to maternal and child health services, and ineffective coverage by national health and nutritional services.3 Tribal settlements tend to be small, isolated and difficult to reach with facilities and services. Even when rural tribal people live in larger villages, they may be separated in hamlets.3

Due to poverty, poor accessibility of health services and various socio-cultural beliefs, when the tribals fall ill, home remedies are the first resort. Only when symptoms don't ameliorate, help is sought from traditional healers. Illnesses are generally viewed as a curse for which Gods have to be placated by making offerings

at the local temple.4 Further, many of the prevalent beliefs about the diseases and treatment prevent the tribals from using and trusting the public health facilities.

Tribals perceive that the doctors in public sector health facilities do not provide good care. Another reason for lack of utilization of the government health centres was lack of any health centre near their dwellings. Tribal women face social, physical and economic barriers in seeking health care and are often seen to accord very low priority to their health care needs. The Jaunsari tribals of Uttarakhand, who are mainly centred on the Jaunsar-Bawar region of Dehradun and Mori region of Uttarkashi are polyandrous in nature. This gives rise to high parity and illegal abortions.4

Sauka, Raji, Jaunsari, and Boxa, which have developed their own cultures based on available natural resources, characterize the socio-cultural fabric in the state, and use of locally growing medicinal plants forms part of the measures they adopt for addressing their health care needs.5

The tribal habitants of the Upper Himalayas are mostly dependent on the local herbal cure system, which they inherited from their ancestors. Further, some of the other healing practices like "jhaad phook", "jaadu tona" and other traditional eating practices, lead to increase in health ailments among them.6

Tribals are also facing some key issues of state health system with their specific issues described above, like unavailability/lack of qualified health care providers and diagnostic services in vicinity of their dwellings; poor health infrastructure, lack of awareness, high prevalence of communicable diseases with increasing incidence of non-communicable diseases, perceived higher cost in seeking health care services, etc.

STRATEGY FOR TRIBAL DEVELOPMENT

The overall aim of the Uttarakhand Health System Development Project is to improve the present health situation in the State by promoting and ensuring equitable access to quality healthcare services for all. Project will support interventions to strengthen state health system to expand universal health coverage. Following interventions are based on the discussions with Health department, and various stakeholders like representative from women and child development department, NGO, health care provider, member of various communities, etc. who

have direct link to health care delivery mechanism. Various activities/interventions under UKHSDP are planned to address the specific issues faced by indigenous population and based on their health needs. These interventions are developed keeping in mind the status of the remote/tribal/indigenous population as compared to other people of state, so that all intervention have positive impact on them. .

The following categories of interventions are proposed to achieve the overall aim and general health objectives of the indigenous people in state –

(1) Enhancing availability of primary care services; and

(2) Supporting PPP in health care delivery.

Enhancing availability of primary care services

    (a) **Mobile** Health Vans are already reaching various parts of the state and provide the basic primary care services with set of diagnostic services to the remote populations by reaching on a fixed scheduled to the nearest health centre. Initial response from the community about MHV's is positive and people in remotely located areas depend on services provided by them. The number of such mobile vans are proposed to be increased to reach all remote located indigenous people of the state.

    (b) **Positively impacting the health care seeking behaviour**by improving the health awareness among the indigenous people as well the other communities of the state. Under the project, a strategic plan will be developed for reaching rural communities with key health messages, increasing their awareness of various health issues by introducing the various IEC/BCC activities, especially targeting the indigenous population of the state.

    (c) **The introduction of a Health Helpline**(Local language) that would not only provide health information and advice, but also guide patients through the health systems to offer a more coordinated, systemic response, In addition, the helpline would help raise awareness about simple life-saving interventions, as also direct the care seeker to the appropriate health facility for availing required services.

    (d) **Monitoring and evaluation mechanisms:**Under monitoring and evaluation activity, mapping of all indigenous community in state is proposed for aiding in strategic planning of interventions and for targeting of specific

people/communities for planed targeted interventions. In ddition, & E activity will also ensure the regular tracking of progress and impact of project interventions on women, child and indigenous populations.

(e) **Strengthening links between Health, Education and Women and Child Departments:** With the expansion of the School Health Program, there is a need to pursue and develop a multi-sectorial approach to health, especially at the community level, wherein the community level workers (ASHA, ANM and Anganwadi Worker) all work together in a coordinated and convergent manner with the common goal of serving the needs of rural, remote and indigenous population.

Supporting Public Private Partnerships

(f) NGOs have proved to be effective partners in several programs, notably the Adolescent Reproductive and Sexual Health program, the Urban Health Centres and the ASHA Plus program. Consultations reveal that a few NGO's have presence in tribal areas and are working on specific issues of indigenous people. In view of this, the project will endeavour to leverage this opportunity and try to develop targeted interventions which could be implemented by help of NGO's is the state.

(g) Uttarakhand state is already implementing PPP arrangement for management/operations of the CHCs. The CHCs being run in PPP mode have positive feedback from community, mainly because of the availability of trained staff and quality care provided by them. It is now required to evaluate their performance and scale-up the intervention to the remote areas of the state. Under UKHSDP it is proposed to develop an integrated model, wherein a single provider under PPP mode will provide primary, emergency and referral services. This would increase the availability and access of health care services to the remote areas and tribal communities through integrated model, which would not only provide the care, but also navigate the patients to concerned health facilities for availing required care/treatment, using innovative referral mechanism.

Strategies for tribal Development

Issues	Strategies	Proposed activity	Responsibilities	Possible linkage
Difficult geographical terrain is barrier to access of health care services	To reach at the doorstep of indigenous people through innovative mechanisms	Strengthening the expansion of MHV network under PPP	UKSDP/PPP provider/DoHFW	
Low awareness regarding health care related issues amongthe ttribal communities	Create awareness on key health issues through innovative solutions	Development of IEC/BCC activities	UKSDP/Health promotion/NGO/DoHFW	
Gender Imbalance	Create awareness on Gender issues via proper behaviour change activities	Increasing awareness through IEC/BCC activities	UKSDP/Health promotion/NGO/DoHFW	Women and child development department , PR and RD
Shortage of manpower	Innovative solutions as alternative for key health delivery activity	Private sector engagement, outsourcing of CHC's	UKSDP/PPP provider/DoHFW	
Due to Poverty, poor healthcare seeking practices	Financial risk protection mechanisms	Innovation in financial risk protection by RSBY/MSBY	UKSDP/PPP provider/DoHFW	
Higher reliance on traditional healers & and local remedies	Increasing awareness, increasing monitoring and regulatory mechanism	Increasing awareness through IEC/BCC activity	UKSDP/Health promotion/NGO/DoHFW	

INSTITUTIONAL ARRANGEMENT

The Uttarakhand Health System Development Project (UKHSDP) would be implemented by the Uttarakhand Health and Family Welfare Society (UKHFWS) constituted under the Department of Health and Family Welfare, Government of Uttarakhand. The Mission Director of the National Health Mission will also be the Project Administrator for UKHSDP and will lead the project implementation under the overall guidance and supervision of the Principal Secretary, Department of Medical Health and Family Welfare, who is also the Chairman of the Society (UKHFWS)

The Project team would consist of focal point for each of the key implementation areas, who will be supported by core group of experts and supporting staff. The project will be implemented by GoUK over a Six year period.

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10   Annexure II

11   Annexure III

12   Annexure IV

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[1]WHO fact Sheet No 253, Waste from health care activities.
http://www.who.int/mediacentre/factsheets/fs253/en/.