

**June 2013**

**DISTRICT STRATEGIC WATER  
SUPPLY, SANITATION AND  
HYGIENE PLAN, MYAGDI  
2013-2017**

**District Water Supply, Sanitation and Hygiene  
Coordination Committee (DWASHCC), Myagdi**

**Preface**  
**(By DG, DoLIDAR)**

**Acknowledgements**  
**(By NPC and NPD)**

## FOREWORD

This strategic plan forms an integral part of the District Development Committee of Myagdi's continuing efforts to focus on development of drinking water, sanitation and hygiene in the district. DDC, Myagdi has been implementing a series of activities from its own fund and human resources and also coordinating with other agencies engaged in the development and promotion of the sector. The report is an endeavor to develop better approaches further for adoption in achieving the target of universal coverage of water supply, sanitation and hygiene goal by 2017 as stipulated by GoN in its' Millennium Development Goal 2015.

The report includes inventories of all the 41 VDCs with status of drinking water coverage, sanitation, hygiene and hygiene behaviour, poverty, factors vulnerable to climate change in Gender and Social Inclusion perspective. Accordingly, need of development interventions in water, sanitation and hygiene in each VDC is outlined and required fund and human resources pointed out. In the effort, areas/pockets facing hardship of WASH by VDCs have been identified. In the manner, VDCs have been ranked by poverty, remoteness, vulnerability to climate change uncertainties and diarrhoeal disease incidences. Accordingly, institutions engaged in the development of sector both at the public and private level have been listed and both the fund and human resources that the institutions have been investing in the WASH sector has been analysed and a gap has been projected so as to achieve the universal coverage of water supply and sanitation services by 2017. The district has already been declared ODF in 2012. This district strategic water, sanitation and hygiene plan (DSWASHP) has been prepared by DWASHCC in close collaboration of the sector agencies both at the public and private levels.

It is hoped that the report will serve as guideline to all the agencies/institutions to engage in the development of WASH sector to work in coordinated manner and synergise each others' efforts in achieving the universal coverage of WASH by 2017 in the district as stipulated by GoN.

The report is outcome of participatory and inclusive process of top down and bottom-up planning. It includes the target, operational strategies, plan of actions for development of water supply, sanitation and hygiene and environment. As we could realize the preparation of this document was not an easy task. It is a result of a very committed and consolidated effort made by the all stakeholders at district and VDC levels and of intensive interactions with multi-stakeholders, political leaders and other knowledgeable persons of social life. We take this opportunity to appreciate the enthusiastic participation of the sector agencies active in the district and substantive contribution they made in preparation of this report.

Finally, we express our commitments to materialize the implementation of this plan and request all the other concerned agencies / resource organizations to extend their support in this regard.

Thanks.

Bishnu Prasad Sharma

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Date: 4<sup>th</sup> June 2013

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Thanks.

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## **Executive Summary**

### **Background**

In line with the thrust of Gon to achieve universal coverage of water supply and sanitation by 2017, Myagdi too aims to achieve the target by then, therefore a clearcut strategic plan with integrated approach is a dire need to assert concerted action and clear-cut direction to ensure uniformity in implementation modality and streamlining the funding from various sources. Based on the past experience in WASH sector, need of a strategic WASH plan was felt by all sectoral actors in order to undertake concerted actions to achieve universal coverage of WASH in the district as envisioned at the national level. It is therefore, DWASHCC, Myagdi formulated Strategic WASH Plan in common consensus and commitment of the all the stakeholders and political parties to implement the plan to achieve the stipulated target. DSWASHP is a response to widely felt need and an instrument for local actors to drive the WASH sector properly.

### **Objectives of the Plan**

The main objectives of the plan is to contribute to the national goal of achieving universal coverage of water supply and sanitation in the district by 2017.

### **Methodology**

A Core Team under DWASHCC was formed to steer ahead preparation of the plan. The plan is primarily based on the published/unpublished reports, existing records, profiles, documents, updated database of WSSDO, DPHO, DEO, DDC, VDC and other institutions active in the district. Policy guidelines and national strategies pertaining to the WASH sector have also been utilised wherever relevant. Accordingly, National Census data/information, 2011 and topographic digitised data of Department of Survey have also been the sources of information in preparation of the plan.

Data/information in NMIP, District Sanitation Strategy, District Post ODF Strategy and information relevant for the purpose from various documents were utilized. Additional information required were gathered from the VDCs and other institutions existing in the district.

The information collected were collated and edited to maintain consistency and objectivity. Revisit was done to collect missing information from the concerned VDCs and other institutions active in the district. The collected data were coded and digitized in data sheet first. The processed data were analysed by using MS-Access database computer programme. Such an analysis was done by VDC in order to determine the priority status in the district. A draft plan including activities by year and by milestones was prepared. The plan was shared with multi-sector forum participated by all the stakeholders, political entities and other personalities with knowledge and experience in WASH sector of the district for comments and suggestions. Relevant comments and suggestions received from the forum were incorporated in the draft and finalized. The final report was presented again in the DWASHCC for approval. The relevant comments and suggestions received from DWASHCC were incorporated and finally, the report finalized for dissemination in multi-stakeholders' forum.

### **Water Supply, Sanitation and hygiene Situation in the District**

#### **Water Supply**

Water supply coverage is recorded at 78.1% of the population in the district, however, the existing water supply system mostly the gravity flow systems that consist of about more than 99 percent suffer from standard norms implicating poor water quality, needing major rehabilitation, poor functionality therefore, these either need to be improved with application of water safety plan along with the functionality improvement or provision should be made for alternatives for drinking purpose. In addition, the unreached 21.9 percent people need some alternative technologies or improvement of existing systems.

## **Sanitation**

With the major supports from DDC/RWSSP-WN and WSSDO, the sanitation campaign took place intensively from 2009. 5 VDCs were massively supported by WSSDO and the remaining 36 VDCs were by DDC/RWSSP-WN. The principal approach followed in the sanitation campaign was localized version of community-led total sanitation. As the results, the district was declared ODF in September 2012. The district has prepared and followed the District Sanitation Strategy 2010 and District Post ODF Strategy 2012. The major focus on sanitation component required is the school sanitation, other institutional sanitation and sustained hygiene and sanitation behaviour change at household level.

## **Poverty, Gender and Social Inclusion**

Myagdi is ranked in 17 among the 75 districts of Nepal indicating widespread poverty in the district. Average annual per capita income in the district is calculated at US\$ 1209 below than the national average of US\$ 1310 (District Annual Plan 2069/70, Myagdi). Furthermore, analysis of poverty by DAG, 2013 within the district indicates the wide gap by gender, caste, ethnicity and by VDCs of the district. Among the 41 VDCs, information reveal that average poverty incidence in the district records at 2.0 with highest incidence in Kuinemangale (3.14) and the lowest incidence in Ramche (1.57).

## **Environment and Climate Change**

The climate change uncertainties and risks in the context of water were assessed in terms of existing biogas, ICS, micro-hydro, solar lift systems, water source depletion status, recharge ponds and ecological sanitation activities. The vulnerabilities of VDCs were viewed in terms of exposures to extreme events caused by nature or human impacts like flooding, landslide, snowing, thunderstorms, fire, earthquake etc. from district disaster development plan. All 41 VDCs are ranked using 10 pre-defined and agreed climate change uncertainty indicators.

**Detailed water pollution** data is not available, but the water quality data (at least presence and absence of coliform) from district DWS inventory survey indicates that ...% of tested samples has been found contaminated with coliform. The wastewater/sewage from the growing semi-urban cities like Beni bazaar, Darbang, Babiyachaur, Galeswor, Tatopani are directly dumped into Kaligandaki and Myagdi rivers without any treatment, which has been polluting these rivers. The safe disposal of solid wastes semi-urban settlements is becoming a problem day by day.

## **Targets**

A number of crucial activities to materialise the set target on sustained basis have been set in order and the major milestones crucial in achieving district target by year starting from 2013-2017 are underlined:

Activities	No. Of VDC/Municipality by year				
	2013	2014	2015	2016	2017
Preparation of V-WASH plan, CAPA	21	20			
Review/updating of V-WASH plans, CAPA	6				41
Preparation of District Solid Waste Management and sanitation Plan		1 district			
Preparation of LAPA		1 district			
Post ODF activities in VDCs	41 VDCs				
Adaptation of Water Safety Plan in VDCs	20	10	11		
Basic Water Supply Coverage (with full functioning schemes and WSP applied)				21	20
Preparation of V-WASH plan, CAPA	21	20			
Review/updating of V-WASH plans, CAPA	6				41
Preparation of District Solid Waste Management and sanitation Plan		1 district			

Guiding principles and operational strategy have been formulated in order to ensure the achievement of the set target and stipulated milestones of the activities.

## Fund Requirement

Estimate of fund requirement are based on the present unit rate for man and material prevailing in the district. In the manner, the services are provisioned for the incremental population too.

The fund estimate takes into account inflation rate of 9.95% recorded during the month of June-July 2012 as per the estimate of Nepal Rastra Bank. Accordingly annual population growth rate of 1.29% of 2011 is considered to accommodate the population increase for services in each of the succeeding years.

Fund estimates are based on the activities planned to reach the universal coverage of water supply by 2017 and sustained hygiene and sanitation behavior change by 2017. The size of the fund goes relatively smaller for the succeeding years of 2016 and 2017. The total fund amount required is estimated Rs. 536 million rupees and fund requirement by year are:

Year	Fund Estimate (,000Rs)
2013	90,685
2014	96,767
2015	106,094
2016	116,651
2017	125,874
<b>Total</b>	<b>536,071</b>

## Abbreviations

CAPA	Community Adaptation Plan for Action
CC	Coordination Committee
CGD	Child, Gender and Disable friendly
CLTS	Community Led Total Sanitation
DDC	District Development Committee
DEO	District Education Office
DPHO	District Public Health Office
DoLIDAR	Department of Local Infrastructural development and Agriculture Road
DTO	District Technical Office
DWASH-CC	District Water, Sanitation and Hygiene Coordination Committee
DWSS	Department of Water Supply and Sewerage
DSWASHP	District Strategic Water, Sanitation and Hygiene Plan
FY	Fiscal Year
GoN	Government of Nepal
HH	Household
I/NGO	International/Non Government Organization
LAPA	Local adaptation Plan for Action
LSGA	Local Self-Governance Act
MDG	Millennium Development Goal
MLD	Ministry of Local Development
MPPW	Ministry of Physical Planning and Works
MWASHCC	Municipal Water Sanitation and Hygiene Coordination Committee
NMIP	National Management Information Program
NPC	National Planning Commission
ODF	Open Defecation Free
OHT	Overhead tank
SLTS	School Led Total Sanitation
WUC	Water User Committee
VDC	Village Development Committee
V/M-WASHCC	VDC/Municipality WASH Coordination Committee
V/M-WASHP	VDC/Municipality WASH Plan
WASH	Water, Sanitation and Hygiene
WSSDO	Water Supply and Sanitation Sub-Divisional Office

# **1 Background**

## **1.1 Introduction**

Water is life and sanitation as dignity of living. It is therefore, safe drinking water, sanitation & hygiene are considered as one of the important pillars of social development. Access to safe water and sanitation facilities are imprinted human rights of citizen by the UN.

Water supply and sanitation sector has been taken as one of the core compnent in priority order of the government of Nepal upon declaration of Water Supply and Sanitation Decade by the United Nations in 1981. Policy, ststrategy programme, acts and corresponding rules & regulations have been formulated for speedier progress the sector. In the effort, Nepal has empahsised for decentralization of development activities to address the geo-political and socio-economic realities existing in Nepal. In the course, the LSGA (1998) provides an overall framework for decentralized governance and planning. Emphasis is given to the formulation of periodic plans, programs and projects to ensure harmony at the national, the district and the VDC levels. There has been achievements being made in the sector. The National Census, 2011 data estimateed that the coverage of water supply in the country have gone up to 85.4% and that of sanitation to 61.8% of population. The existing coverage compares with the MDG targets for 2015 of 73% in water and 53% for sanitation. The information indicate that at present, 794,083 households do not have adequate water service and 2,069,812 households lack adequate sanitation facilities in Nepal. The national target is for universal access to water and sanitation by 2017.

In continuous effort for speedier achievemnt in the sector, Water Resources Act, 1992 and its regulation 1993, Local Self-Governance Act 1998 and its regulation 1999, Environmental Protection Act 1997 and its regulation 1998 and National Sanitation and Hygiene Master Plan 2011 have been enunciated for speedier progress in the sector. The National Rural Water Supply and Sanitation Sector Strategy (RWSS Strategy: 2004) spells out that plans prepared in the district and village level forms the basis for planning purpose and allocation of budget corroborates accordingly. The DDCs and VDCs are made responsible for planning, implementation, coordination and monitoring of the rural water supply and sanitation plans in their respective districts.

## **1.2 Brief Introduction of the District**

### ***Geography and Land Resources***

Myagdi district lies in Dhaulagiri zone; it is one of the seventy five districts of Nepal. The district is located in the Western development Region and is surrounded by Kaski and Parbat in the east, Baglung, Dolpa and Rukum in the west, Mustang and Dolpa in the north and Baglung in the south. The district spreads over 83° 08' to 83° 53' East Longitude and 28° 20' to 28° 47' North Latitude. The district with Beni as its district headquarters covers an area of 2297 square kilometers. The border of the district was updated in 2031 BS after merging of 20 VDCs of Parbat and Mustang districts. Now the district has 41 VDCs and before merging of VDCs from Parbat and Mustang, it had only 21 VDCs.

Myagdi district is one of the most popular destinations for tourism. The world famous Poon hill lies in the Ghara VDC of this district. Ghorepani is another attraction for travelers. The trekking/ hiking trails Ghorepani Poon hill trek is considered as easy and most liked trail in the Annapurna Himalaya region. The deepest gorge in the world “Andha Galchhi” also lies in Dana VDC of the district.

Myagdi is geographically located in the mid-hill to upper mountainous region. Dhaulagiri (8167 m) is the tallest mountain of the district. Among the total area, most part (56%) lies on the high hill, 36% in the himalaya region and 8% lies on the low land. Only 13.43% of the total land is cultivable, 49.8% land is covered by others (cliffs, rivers, landslides, snow covered peaks, rocks, roads, human settlements) and 36.8% land is covered by forests. The lowest and highest elevations of the district are respectively 792 meters and 8167 meters.

### ***River System***

The major rivers of Myagdi district are Kaligandaki, Myagdi khola, Mistri khola, Begkhola, Rahuganga, Gharkhola. Other feeder rivers are Gurjakhola, Darkhola, Ritungkhola, Dangkhola and Arjekhola. Some of the major hot springs of the district are Bhurung tatopani, Singa tatopani and Dagnam tatopani. Under lakes and water falls, the popular are Peribharani lake, Barah tal, Rupse Chhahara and Ekrate Chhahara.

### ***Population and Ethnic Composition***

Estimate of 2011 indicates that total population in the district is 113,641 with 51,395 male and 62,246 female in 27,762 households (CBS, 2011). The population density is 49/ km<sup>2</sup>. The ethnic distribution in the district as of CBS 2011 is presented in table 1 below:

**Table 1: Ethnic distribution in the district**

S.No.	Ethnic Group	Percentage
1	Dalit	18
2	Adibasi/ Janjati	56
3	Brahmin/ Chhetri	24
4	Others	2

The composition of population by age group in Myagdi depicts that about 46% of the district population is composed of the age group less than 20 years, 43% by age group of 20-59 years and 11% by the old age group of plus 60 years.

### ***Religion***

Of the total population 87.15% follow Hinduism followed by Budhism (10.33%) and Christianity (1.33%) (Source: CBS, 2011).

### ***Literacy***

Literacy rate is recorded at 77 percent of the total population (District Development Plan 2069/070). The literacy rate is high among the male compared to that of female. There are altogether 270 schools (242 community and 28 private) with 33,215 students (F1-School WASH Data Collection Format).

### ***Development Index***

The district is rated fairly well developed among 75 districts of Nepal with overall development index of 17 ranking (Districts of Nepal, Indicators of Development, CBS in collaboration with ICIMOD and SNV). The standing of Myagdi against the national development index by selected indicators is presented in table 2 below.

**Table 2: Selected development indicators in perspective of Nepal**

Indicator	Nepal	District
Adult literacy	36.72	48.9%
Per capita gross domestic production (dollar)	1310	1209
Average life expectancy in years	60.98	66.62
HDI	0.471	0.498

Source: DDP 2069/070, Myagdi

## 2 Water, Sanitation & Hygiene Situation

### 2.1 Water Supply Situation

#### *At Household Level*

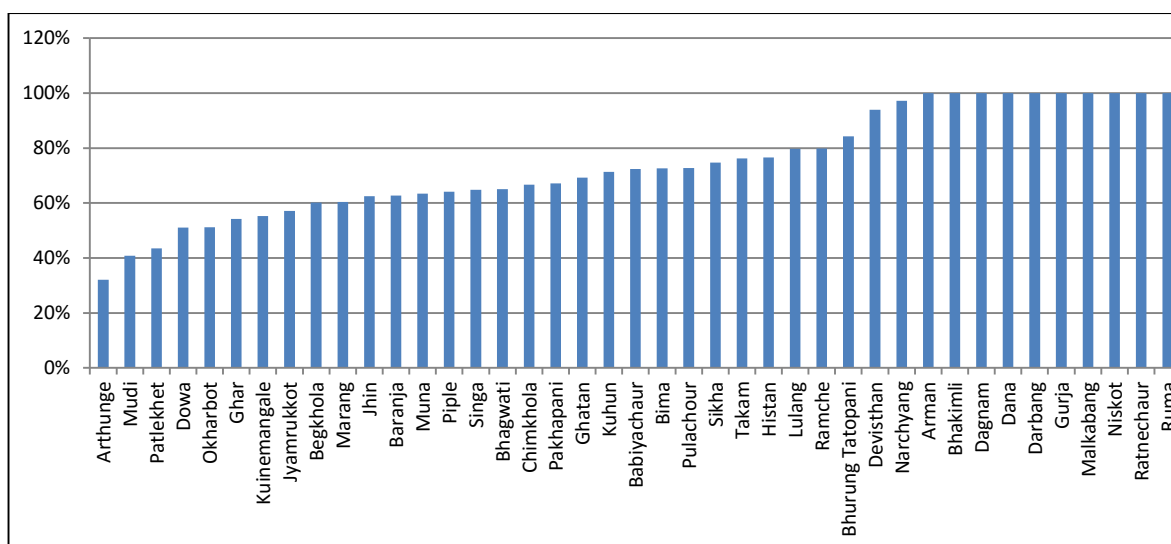
Gravity flow water through spring sources is the major source of water supply followed by spring/stone spouts system in the district. Information of WSSSDO, 2011 and updated NMIP reveal that 78.1% of the total households (27,762) have access to water supply in the district. The remaining 21.9% population are accessing the unimproved system either from rivers or unprotected springs and dangling pipes. **At the time of this report preparation, district DWS inventory preparation was ongoing, therefore the VDC wise actual coverages, water quality situation, source mapping and unreached households could not be included.** Table 3 presents the detail on the existing situation of water coverage in the district.

**Table 3: Households coverage by different water supply systems in the district**

Taps	Tube wells	Protected Springs	Unprotected springs	Stone Spouts	Rivers/ streams	Others
24,238	6	136	527	2,264	410	146
87.3%	0.0%	0.5%	1.9%	8.2%	1.5%	0.5%

Source: DDP, 2069/070 and CBS 2011

Annexes-1.1 and 1.7 present the water supply coverage, existing water supply systems and functional status by VDC. By VDCs, Arthunge (capital VDC of the district) has the lowest coverage of water supply, while few VDCs (Ruma, Ratnechaur, Niskot, Malkabang, Gurja, Darbang, Dana, Arman, Bhakimli) have reached almost 100% of the water supply services, which is shown in the following graph.



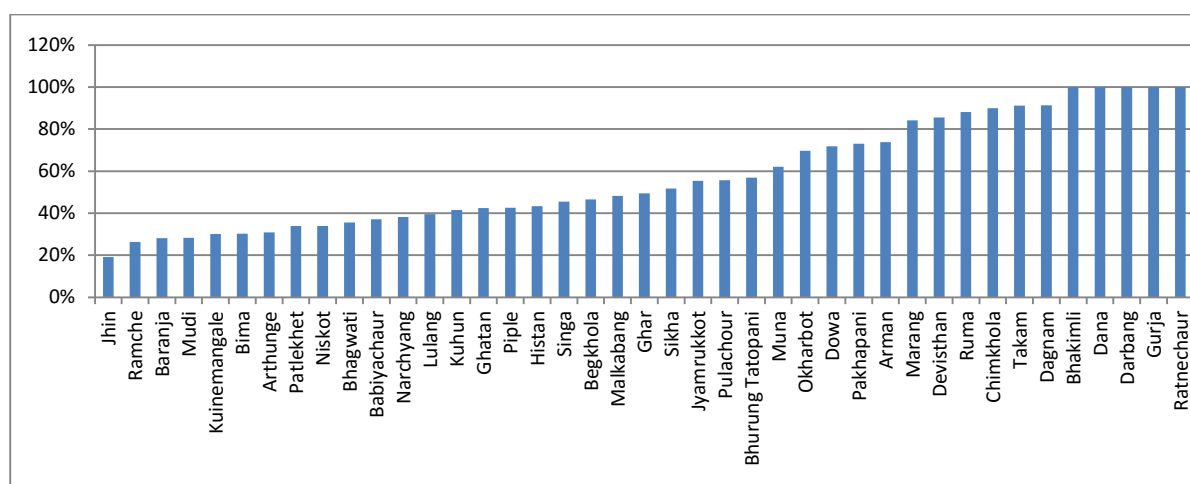
**Chart 1: Basic Water Supply coverages of VDCs**

### *Functional status of Water Supply Schemes*

Analysis of functional status of pipeline systems reveal that 56% of schemes are fully functioning and 23% in need of minor repairs (Table 4). The total numbers of the gravity systems in the district are 542.

**Table 4: Functional status of pipeline systems in the district (to be updated by Inventory)**

Functional Status	Total		
	No. of Schemes	Household Served	Percent
Fully Functional	303	15,463	56%
In need of minor repair			%
In need of major repair/ rehabilitation			
<b>Total</b>	<b>542</b>	<b>24,238</b>	<b>100%</b>



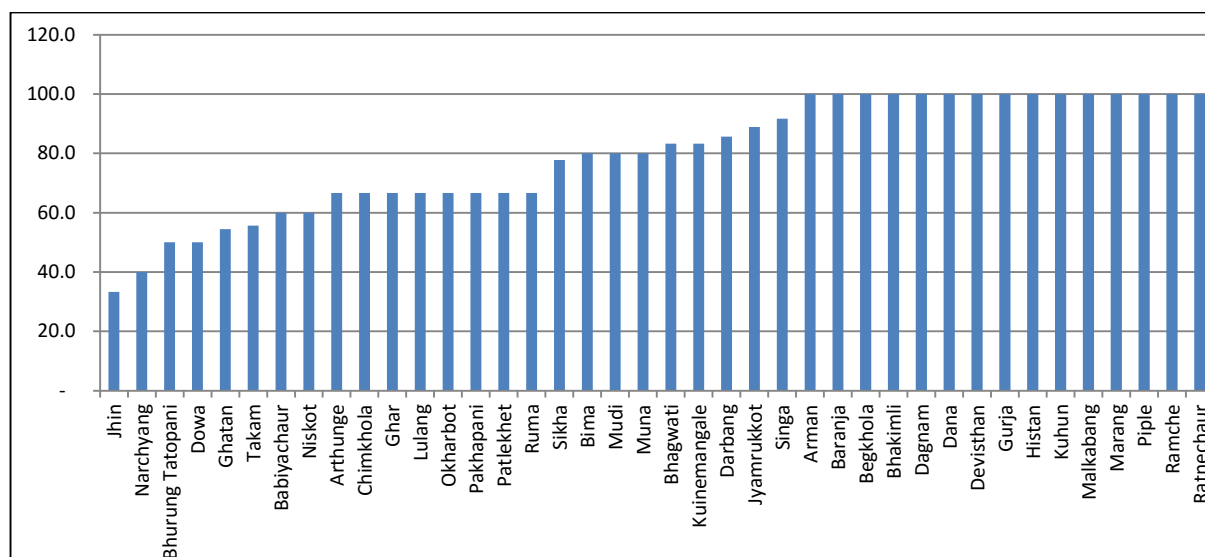
**Chart 2: Water Supply functionalities of VDCs**

### *At Institutional Level*

#### *Schools*



Of the total of 270 schools in the district, 244 (90%) have water supply facilities and the rest 26 (10%) do not have any. The students of these schools lacking water supply systems either carry water themselves or visit the houses in the neighbor of their schools or go far to spring sources for water when they are thirsty. Of the existing water supply systems in schools, gravity systems are the major systems found in the schools. Analysis of the system about their functional status indicate that 43% are fully functional, 35% are in need of minor repair, 4% need major repair and 18% are waiting for rehabilitations or new constructions.



**Chart 3: Ranking of VDCs by WS functionalities in schools**

#### *At Other Institutions*

There are 245 institutions in the district. Of them, only 176 (72%) are found to have water supply facility and the rest 69 (28%) do not have any. The functional status of the existing water supply systems and the estimated number of users a day in the institutions are presented in table 5 below:

**Table 5 : Water supply system and their functional status in institutions**

No. Of institutions	Daily visitors	Status of water supply systems (no. of institution)				
		Good	Need minor repairs	Need Major repairs	Need rehabilitation	No system
<b>245</b>	<b>2,897</b>	<b>101</b>	<b>60</b>	<b>6</b>	<b>9</b>	<b>69</b>
Percent		41%	24%	2%	4%	28%

## **2.2 Sanitation and Hygiene Situation**

### **Sanitation at Household**

The NMIP, 2010 reveals that 48.2% of the total population were using toilet in 2010. The CBS 2001 says that among the total households of 24,435, only 10,057 households (41.16%) had toilets and no any VDCs were declared ODF by that time. There were no practices to allocate budget for the sanitation, though it was mandated to allocate at least 20% of the annual WASH budget by RWSS sector policy 2004. With the major supports from DDC/RWSSP-WN and WSSSDO, the sanitation campaign took place intensively from 2009. 5 VDCs were massively supported by WSSSDO and the remaining 36 VDCs were by

DDC/RWSSP-WN. The principal approach followed in the sanitation campaign was localized version of community-led total sanitation. As the results, the district was declared ODF in September 2012. The district has prepared and followed the District Sanitation Strategy 2010 and District Post ODF Strategy 2012, which are given in the annexes 4 and 5 respectively. The year-wise ODF declared VDCs are presneted in the following table 6.

**Table 6: Existing status of household level sanitation coverage in the district**

Year	Nos. of VDCs declared ODF	Percent
2010	6	15%
2011	26	63%
2012	9	22%
Total	41	100

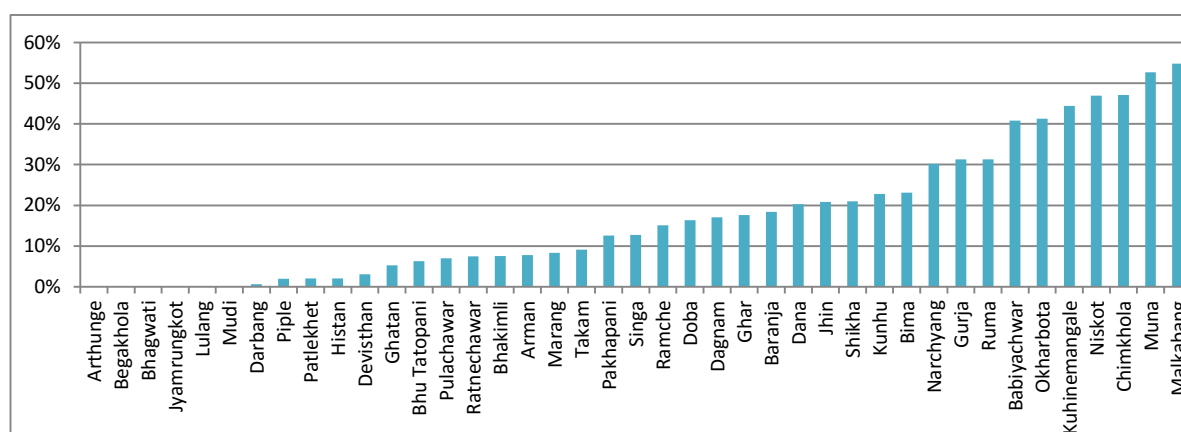
Source: District ODF Status, 2012

Detail on the percentage of households with toilet by VDC is provided in annex-1. The numbers of temporary hygienic toilets are still more than 3,500 existing in the district (Source: updated date of district ODF, Sept. 2012), which are presented in the following table and chart. The VDC having maximum numbers of temporary hygienic toilets is Malkabang, and is followed by Muna, Chimkhola, Niskot, Kuinemangale, okharbot and Babiychaur. The district was declared ODF with the total households toilet of 23,882 numbers.

**Table 7: Existing status of household level temporary sanitation coverage**

Particular	Households	Percent
Households with permanent improved toilets	20,353	85%
Household with temporary hygienic toilets	3,529	15%
Total household	23,882	100%

Source: District ODF Status, 2012 September



**Chart 4: VDCs having temporary hygienic toilets**

## At Institutional Level

### School

There are a total 270 schools with student population of 33,215 (Boys-, Girls-) and staff population of 1,940 in the district. Of the total schools, 233 (88%) have latrine for girl students and 253 (95%) for boys and 4 schools were lacking any type of latrine facilities. However,

among the 4 schools, 3 have built toilets during the preparation of MSF for this plan. Of the schools with toilets, 124 (47%) schools have urinal for girls and 97 (36%) schools for boys (table 8). The numbers of schools without urinals are 147 (55%).

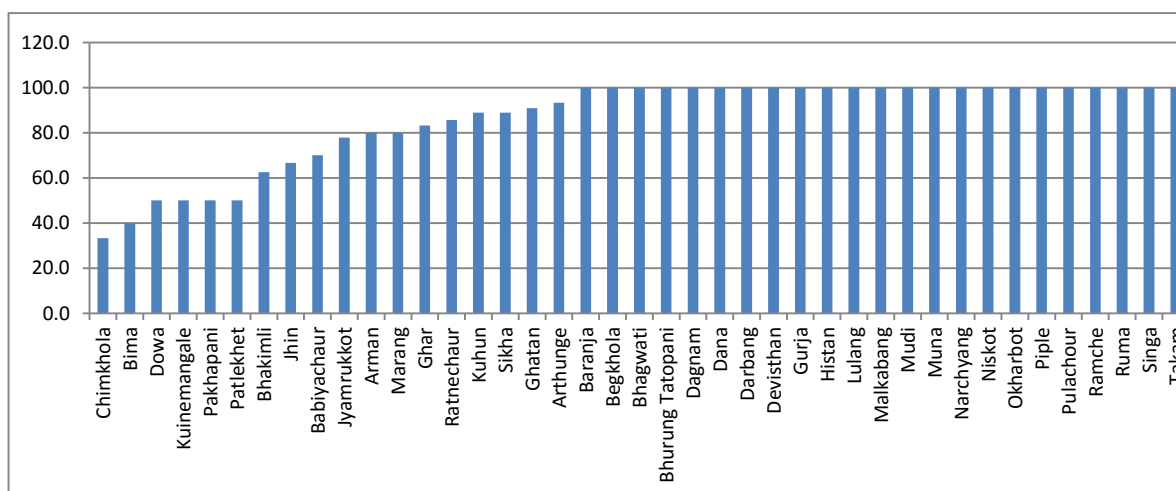
**Table 8: By gender latrines facilities in schools**

Total no. of school	Total no. of students and teachers	School with latrine			School with urinal		
		Girls	Boys	No latrine	Girls	Boys	No urinal
<b>270</b>	<b>33,215</b>	<b>233</b>	<b>253</b>	<b>4</b>	<b>124</b>	<b>979</b>	<b>147</b>
Percent		88%	95%	2%	47%	366%	55%

Analysis on the adequacy of latrine facilities in schools with toilet facilities indicate that the existing student- toilet ratio is more than double (1:68) indicating inconvenience to the students as the established norms or toilet requirement is 1:50 indicating massive efforts required in improving sanitation facilities in schools. Table 9 presents number of latrine units and the respective users.

**Table 9: Latrine - student ratio in schools**

Type of latrine	No of schools	No of cabins of latrine	Girls	Boys	Toilet:Student ratio
Female latrine	233	233	16,940		72
Male latrine	253	253		16,275	64
<b>Average/Total</b>	<b>486</b>	<b>486</b>	<b>33,215</b>		<b>68</b>



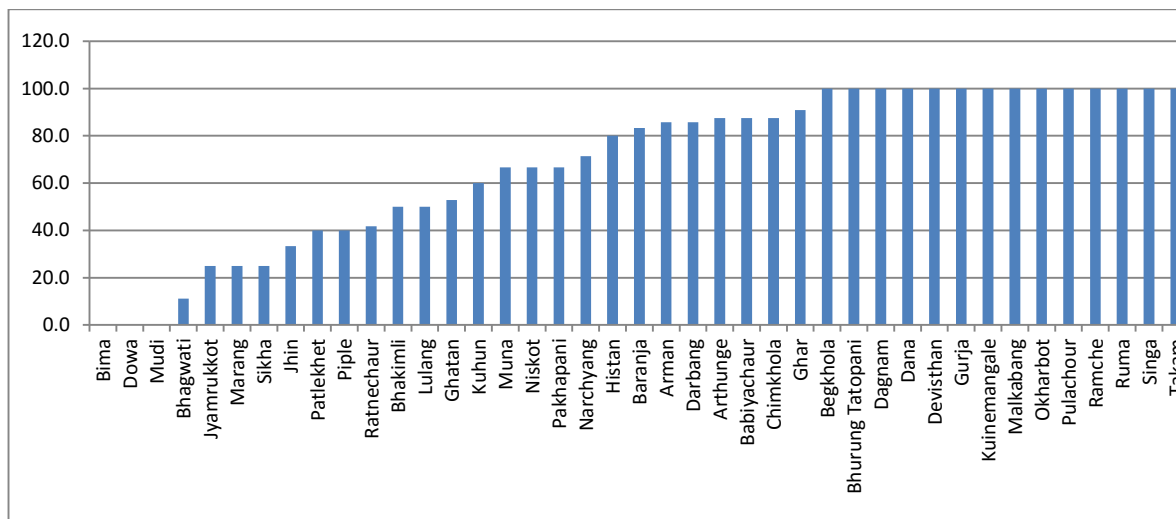
**Chart 5: VDCs having coverage of toilets for girls**

## Other Institutions

Besides schools, there are other 245 institutions in the district. These institutions are visited by 2,897 people every day, number of visitor depends upon the nature of services to be provided by the institution. Of the 245 institutions, only 162 (66%) are found to have toilet facility, of which 46 are equipped with facility for female too (Table 10).

**Table 10: Nos. of institutions having latrine and urinal facilities**

No. Of institutions	Daily visitors	No. of institutions with latrine				No. of institutions with urinal		
		Female latrine	Male latrine	Common latrine	No latrine	Female urinal	Male urinal	No urinal
245	2,897	46	45	111	84	7	7	236
Percent		19%	18%	45%	34%	3%	3%	96%



**Chart 6: VDCs having toilets in other institutions**

## Health & Hygiene

### Hygiene Facilities in the schools and other institutions

Of total 270 schools in the district, 92 (35%) have soap for hand washing in/around the latrine, 17 (6%) with wash basin and 103 (39%) with solid waste pits or buckets (Table 11)

**Table 11: Hand-washing facilities and solid waste management in schools**

Facilities	No. of schools			
	Yes	No	No response	Total
Soap available for hand washing	92	178	0	270
Wash basin	17	253	0	270
Waste disposal System	103	167	0	270

In same manner, of the 245 institutions besides schools, 58 have soap for hand washing in/around the latrine, 11 with wash basin and 122 with solid waste pits or buckets (Table 12).

**Table 12: Hand-washing facilities and solid waste management in institutions**

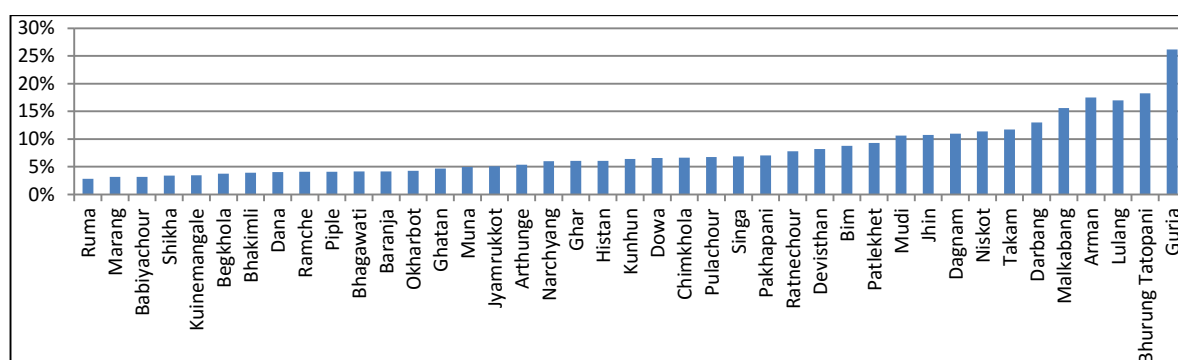
Facilities	No. of Institutions			
	Yes	No	No response	Total
Soap available for hand-washing	58	114	73	245
Wash basin	11	146	88	245
Waste disposal	122	75	48	245

## Incidence of Water Borne Diseases in the District

Health Information available with DPHO for 3 years (2009-2011) indicate that diarrhoea and related diseases are found to be endemic placing a huge burden on families as well as inhibiting child growth. The available data indicate a positive correlation between safe water, latrine facilities and hygienic behaviour (washing hand with soap water in critical time) as the water borne diseases is found to be more prominent among the Dalit, poor families and the areas lacking safe water facility Detail on the water borne diseases by VDC is presented in annex-1.

**Table 13: Incidence of water borne diseases in the district**

S.No.	Water-borne Disease	Incidence of water borne disease			
		2066-67	2067-68	2068-69	Average
1	Diarrhoeal disease incidence	-	6948	8820	7884
2	Child mortality <5 years due to diarrhoeal disease	20	16	17	18



**Chart 7: VDCs Ranking by Diarrhoeal Disease Incidences**

### Climate change vulnerability and risks in the District

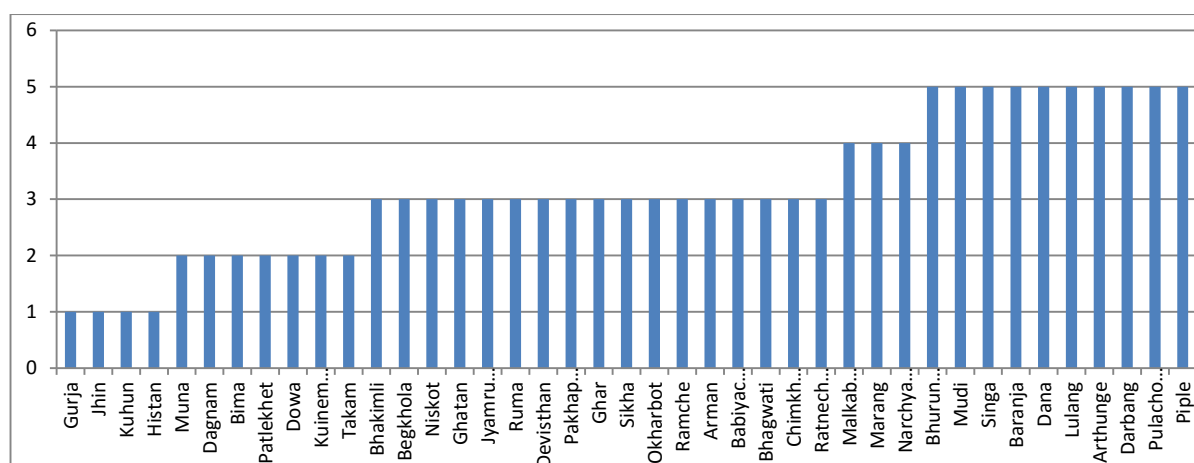
The climate change uncertainties and risks in the context of water were assessed in terms of existing biogas, ICS, micro-hydro, solar lift systems, water source depletion status, recharge ponds and ecological sanitation activities. The vulnerabilities of VDCs were viewed in terms of exposures to extreme events caused by nature or human impacts like flooding, landslide, snowing, thunderstorms, fire, earthquake etc. from district disaster development plan. All 41 VDCs are ranked using 10 pre-defined and agreed climate change uncertainty indicators. The summary is presneted below and details are shown in the annex.

**Table 14: Climate change adaptation/mitigation status and CC vulnerabilities**

S.No.	CC Adaptation/mitigation/ Vulnerabilities	Nos. of cases/ events
1	Recharge ponds	273
2	Improved Cooking Stoves	5,402
3	Biogas	786
4	Solar lighting	2,245
5	MHP	53 (511 KW)
6	Water source depletion	71

S.No.	CC Adaptation/mitigation/ Vulnerabilities	Nos. of cases/ events
7	Ecosan (urine diversion)	50
8	Improved water mills	48

The climate change vulnerabilities were categorized using three major indicators (flooding, landslides and water source depletion) and the VDCs were ranked accordingly. The result is presneted in the chart below (1= low risk, 5= high risk).



**Chart 8: VDCs Ranking with CC Vulnerabilities**

### 3 Key Challenges

The efforts made to attain target of universal coverage in water and sanitation is in upward trend in the country. The present trend of achieving the national target, if continues in the same pace shows that achievement of MDG target by 2015 is not a difficult task, however, achievement of UATs by 2017 needs a really concerted effort from all dimensions. Due to the commitments from political arena, Myagdi has been declared ODF district. But the sustainability of ODF and changing behaviours in a sustained manner for long run has become really a challenge. Many agencies are contributing their efforts in post ODF sanitation. Harmonizing these efforts has been a great concern of the DWASHCC in the district. Sustaining the hygiene and sanitation behaviours and providing access to improved and safe drinking water to the people of the poor community and marginalized groups is a challenge ahead. Moreover, the other major challenge in the water supply is to serve the 21.9% unreached population of the district, which needs expensive and sophisticated technologies. In addition, the following pertinent issues are to be taken care of:

- Reaching to unreached populations
- Improvement in functionality of the schemes
- Effect of climate change on the availability of water sources
- Resources (financial as well as human) gap in the WASH sector
- Consolidation of planning and programming of different stakeholders
- Ensuring uniformity in approaches in implementation

- vii. Need of objective study on semi-urban sanitation and solid waste management and investment required for appropriate disposal and treatment of solid and liquid waste

### 3.1 Water Supply

In the district, 78.1% of the population has access to basic water supply at present. However, of the existing water supply systems, 56% of gravity flow systems are found to be fully functional, .... are partially functional and .... are defunct. Accordingly, the other system of water supply (point sources) need to be improved to ensure water quality and making them self-sustained at community level. Furthermore, the provision of safe water services to the unserved 21.9% population is really the big challenge in the district. Besides these tasks, the district has great challenge ahead to provide universal access to the population in the district by 2017 as stipulated by GoN.

### 3.2 Sanitation

Since Myagdi district is already declared ODF in 2012, the sustained hygiene and sanitation behaviours through post ODF activities like Small Doable Actions (SDA) has become the challenge. Upgrading of 15% temporary hygieneic toilets to permanent improved toilets at household level is another challenge to the district, which needs financial resources as well sectoral coordination. Of the schools with toilet, a large number of schools are yet to construct toilets separately for girls and boys. Moreover, the toilet-student ratio is 1:68 at present indicating the need for construction of more number of toilets in educational institutions to come at accepted ratio of 1:50. Likewise, the toilets for other institutions has become a big challenge requiring huge resources. Solid waste and waste water problems are growing rapidly as there is massive population influx in the district since the recent past. The rate of growth of per capita waste is also growing coupled with poor drainage affecting safe water.

### 3.3 Poverty, Gender and Social Inclusion

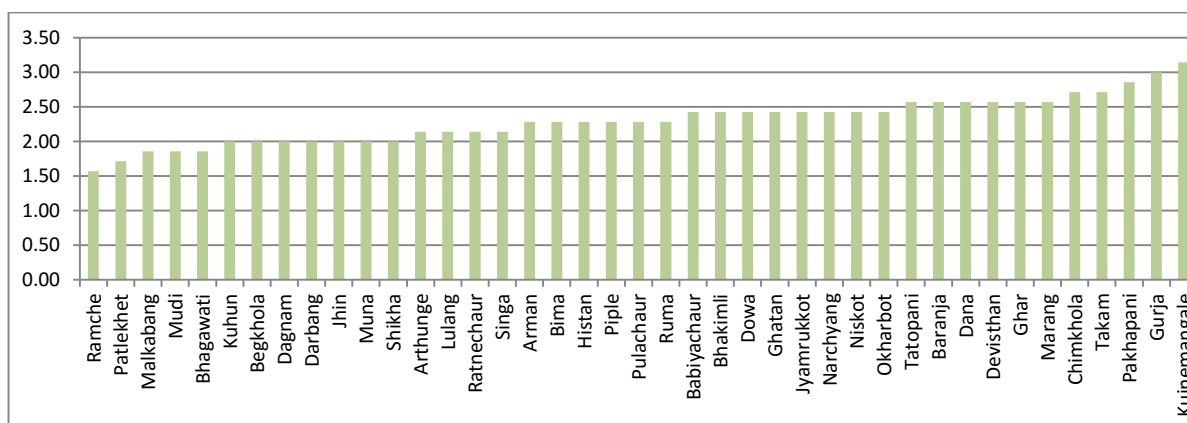
Myagdi is ranked in 17 among the 75 districts of Nepal indicating widespread poverty in the district. Average annual per capita income in the district is calculated at US\$ 1209 below than the national average of US\$ 1310 (District Annual Plan 2069/70, Myagdi). Furthermore, analysis of poverty by DAG, 2013 within the district indicates the wide gap by gender, caste, ethnicity and by VDCs of the district. Among the 41 VDCs, information reveal that average poverty incidence in the district records at 2.0 with highest incidence in Kuinemangale (3.14) and the lowest incidence in Ramche (1.57). Table 15 and the chart (1 – rich, 4- poorest) below present scenario of incidence of poverty by VDCs in the district.

**Table 15: Incidence of poverty by Ilakas in the district**

Poverty value	Nos. of VDCs	Highest Poverty Value VDCs
1-2	12	Kuinemangale, Gurja
2-3	28	
3-4	1	
Average 2	7	

*Source: District DAG Mapping, 2013*

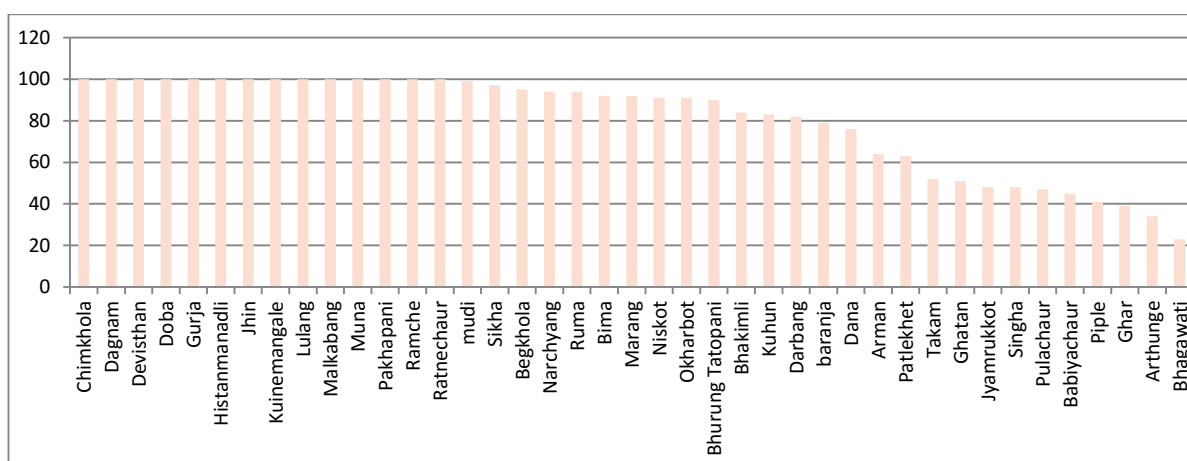
Like the national scenario, the social exclusion by gender, ethnicity and caste is a persisting problem. Gender-based exclusion in Nepal is pervasive and deep-rooted, with discrimination against women reducing their physical survival, health and educational opportunities, ownership of assets, mobility, and overall status. Poverty incidence is higher among ethnic minorities such as Dalits, Muslims and other minority groups. Caste-based social exclusion has been manifesting in disparities in both poverty incidence and human development indicators.



**Chart 9: Poverty ranking based on the 7 indicators of DAG mapping, 2013**

The national census data indicate poverty incidence to be significantly lower among the highest-caste group than for the lower-caste groups in Nepal. Although separate data is not available for the district, the national scenario does not differ in case of Myagdi too. It is the same case of other human development indicators between lower- and upper-caste groups.

The social groups analysis shows the VDC wise prevallences of Dalits and Adibasi/Janjati settlements in the district. The VDCs are ranked with the percentages of Dalits and Adibasi/Janjati existing in the VDCs, which is shown in the following chart.



**Chart 10: Percentages of Dalits and Adibasi/Janjati (VDC-wise)**

The existing scenario warrant that Myagdi district is in need of adopting meaningful poverty reduction and human right based approach in WASH sector with emphasis on improving the poor's access to resources especially among the powerless.

### 3.4 Environment



Geographically, Myagdi district can be divided into high Himalaya, high mountains, middle mountains and valley lands on the river banks. High Himalaya, high and middle mountains are more important in regards to water recharges through snow melting and percolation. The landslides and erosion problems have been faced specifically along the river banks and deforested areas. Similarly, soil scouring in the settlements along the river banks is another recurring serious problem in the district which calls for undertaking mitigation measures in priority.

**Detailed water pollution** data is not available, but the water quality data (at least presence and absence of coliform) from district DWS inventory survey indicates that ...% of tested samples has been found contaminated with coliform. The wastewater/sewage from the growing semi-urban cities like Beni bazaar, Darbang, Babiyachaur, Galeshwor, Tatopani are directly dumped into Kaligandaki and Myagdi rivers without any treatment, which has been polluting these rivers. The safe disposal of solid wastes semi-urban settlements is becoming a problem day by day.

The other environmental problems are seen along the trekking routes. These are generally associated with sanitation (toilet), solid waste and drinking water supply facilities on the routes. There are needs to manage these problems with the multi-sectoral coordination.

### **3.5 WASH Basket Fund and Programmatic Approach**

Four major challenges are considered in this area. They are establishment and functionality of district WASH basket fund, sustained functionality/mobilization of VWASHCC for WASH program, sustainability/functionality of WASH units at DDC and VDCs and coordination/harmonization of all WASH stakeholders at district level. In Myagdi, a district WASH fund has already been established and started to mobilize the funds in basket approach.

## **4 Rationale Behind in Preparation of Strategic WASH Plan**

GoN has envisioned for accessing universal coverage of basic water supply and sanitation services to its citizens by 2017. Myagdi too aims to achieve the target by then, therefore a clearcut strategic plan with integrated approach is a dire need to assert concerted action and clear-cut direction to ensure uniformity in implementation modality and streamlining the funding from various sources. Accordingly, formulation of objective indicators to ensure the principle of “*putting the last to the first*” into action is another pertinent need in the direction. All of these make the DWASHCC to formulate Strategic WASH Plan for Myagdi district in common consensus of the all the stakeholders and political parties and implement the plan to achieve the target envisioned at the national level. Based on the past experience in WASH sector, need of a DSWASHP was felt by all the sector actors in order to undertake concerted action to achieve universal coverage of WASH in the district.

DSWASHP is a response to widely felt need and an instrument for local actors to drive the WASH sector properly. It is an integrated, participatory and inclusive approach to WASH sector planning. This process ensures identification of needs at local level. It provides a common platform to the local community, including disadvantaged groups, and empowers them to claim their right for equitable sharing of WASH services within communities. The

DSWASHP equally puts emphasis on social sensitization of community on various issues such as gender and inclusion, environmental aspect, climate change.

The main objectives of the District Strategic WASH Plan are to:

- Align and harmonize WASH sector for effective coordination and collaboration amongst local district level stakeholders;
- Show the way on how the district can achieve MDG targets on 2015 and Universal Targets by 2017 in water supply and sanitation;
- Map and organize all available human and financial resources to be used effectively;
- Introduce decentralized and coordinated monitoring of the activities;
- Prioritize the areas for support needs;
- Promote transparency and awareness among the partners and beneficiaries of the district;
- Attract external funding for the implementation of the plan;
- Guide district project prioritization in annual planning process;
- Institutionalize WASH planning and implementation at district level;
- Build the DDC and VDC WASH sector capacity;
- Formulating district-specific MDG indicators and establish WASH baseline;
- Get support from political parties in WASH implementation;
- Help to recognize WASH sector in the district periodic plan and in the district profile;
- Promote equity and inclusiveness in WASH.

## **5 Objectives**

The overall objective of District Strategic Water, Sanitation and Hygiene Plan (DSWASHP) is to contribute to the national goal of achieving universal coverage of water supply and sanitation by 2017 as envisioned by the government of Nepal by setting district targets, milestones and formulating implementation strategies.

The specific objectives of DSWASHP are to:

- i. assess existing WASH situation in the district;
- ii. set target and milestones for the district in line with goal envisioned by National Rural Water Supply and Sanitation Policy, 2004;
- iii. prepare plan of actions to achieve the district milestones;
- iv. estimate available fund resources and resource gap for implementation of the planned activities; and
- v. formulate strategies to bring sector actors active in the district under single umbrella for implementation of the plan

## **6 Methodology**

A Core Team composed of the representatives of DDC, WSSSDO, DPHO, SUAHARA, NRCS, Civil Society and DEO was formed by DWASHCC in order to steer ahead the DSWASHP preparation activities effectively and efficiently. Firstly, type and nature of data required for preparing the plan was listed in perspective of set indicators. Available data/information in NMIP, District Sanitation Strategy and information relevant for the purpose from various published and unpublished documents were utilized. Additional information required were gathered from the VDCs and other institutions existing in the district. The type and nature of information gathered include:

- Water supply coverage – household, school, institution – first to the hardship area
- Sanitation Coverage - household, school, institution – priority to poor sanitation area
- Functionality of water supply schemes
- Hygiene situation (hand washing practices, waste disposal) – School and institution
- Incidence of water borne diseases
- Poverty situation
- Social composition- concentration of deprived and disadvantaged groups
- Remoteness
- Vulnerability of climate change

The information collected were collated and edited to maintain consistency and objectivity. Revisit was done to collect missing information from the concerned VDCs and other institutions active in the district. The collected data were coded and digitized in data sheet first. The processed data were analysed by using MS-Access database computer programme. The information were geo-coded and analyzed using ArcGIS programme. Such an analysis was done by VDCs in order to determine the priority status in the district. A draft plan including activities by year and by milestones was prepared. The plan was shared with multi-stakeholders forum (MSF) participated by all the stakeholders, political entities and other personalities with knowledge and experience in WASH sector of the district for comments and suggestions. Relevant comments and suggestions received from the forum were incorporated in the draft and finalized. The final report was presented again in the DWASHCC, VDC Secretaries and MSF for approval. The relevant comments and suggestions received from DWASHCC, MSF and VDC Secretaries were incorporated and finally, the report finalized for dissemination in multi-stakeholders' forum for implementation.

## **7 District WASH Targets**

Myagdi district, in line with the Rural Water Supply and Sanitation National Policy, 2004 of GoN, aims to provide basic level services of water supply and sanitation to 100% of the population by the year 2017. In the effort, the major milestones of the activities set by the district crucial in achieving set targets by year starting from 2013-2017 are presented in table below. Accordingly, guiding principles, and implementation strategy have been formulated in order to ensure the achievement of the set target and stipulated milestones of the activities.

**Table 16: Major Milestones**

Activities	VDCs by year				
	2013	2014	2015	2016	2017
Preparation of V-WASH plan, CAPA	21	20			
Review/updating of V-WASH plans, CAPA	6				41
Preparation of District Solid Waste Management and sanitation Plan		1 district			
Preparation of LAPA		1 district			
Post ODF activities in VDCs	41 VDCs				
Adaptation of Water Safety Plan in VDCs	20	10	11		
Basic Water Supply Coverage (with full functioning schemes and WSP applied)				21	20

## 8 District WASH Strategies

### 8.1 Principle WASH Strategy

The fundamental aim of the DSWASHP is to streamline the scattered and uneven efforts of the stakeholders for achieving set WASH targets for the district. Therefore, all the government and non-government institutions, private sector working in the district WASH sector will strictly adhere to this principle strategies while planning and implementing WASH projects:

- i. DWASHCC will be responsible for maintaining coordination with stakeholders and other agencies to ensure implementation of the strategic plan and to raise financial resources to meet the resource gap of the plan.
- ii. WASH sector agencies active in the district will plan their activities aligning with the strategy, target and action plans framed in the district strategic WASH plan on mandatory basis.
- iii. VDCs will prepare their respective VWASH plans basic water supply coverage by 2017.
- iv. VDCs will allocate at least 10% of their total capital budget for WASH activities annually. Similarly, DDC will allocate at least 10% of their capital budget to support the WASH activities in the district. Such annual allocation of budgets by local authorities may need to be increased upon nature and extent of activities in the respective areas.
- v. All VDCs will prepare Community Adaptation Plan for Action (CAPA) aiming at reducing adverse effects of climate change as well as prepare adaptation plan in order to cope with possible risks emanating from climate change.
- vi. DWASHCC will formulate District Solid Waste Management and city sanitation plan with primary focus on mitigating problems of core-urban, sub-urban and highway corridor. Accordingly, it will implement at least one urban sanitation project (e.g. DEWATS) on pilot basis in order to see operation of the activities on sustained basis.
- vii. DWASHCC will carry out study on status of source depletion and recharge ponds, water quality, pollution risk and recharge status along with the LAPA. It will formulate policy and strategy for water source use for adaptation and sustainability.

- viii. A significant gap between the fund requirement and projected fund resources at the disposal of the sector actors at the district level exists, therefore mobilization of resources at the disposal of the sector actors at the local level with concerted efforts is an warranted task in achieving the set target of the plan on one hand and tapping the external fund resources on the other is compelling challenge in materialising the stipulated target in the Strategic Plan. Therefore, institutional capacity enhancement more of the DWASHCC members and VWASHCC members in tapping of the fund resources and channelling the fund and human resource as underlined in the strategic plan is a warranted need. Therefore the capacity enhancement of the WASH institutions forms an important strategy in the plan.
- ix. DWASHCC holds responsibilities of monitoring and updating the Strategic WASH Plan. VWASHCCs are made responsible for monitoring and updating of their respective VWASH plans.
- x. DWASHCC will coordinate the concerned stakeholders in the district in smoothing fund and human resource supports for materialising planned activities of VDCs/VWASHCCs in achieving set targets of sustained H&S behaviours and basic water supply coverage by 2017.
- xi. VDC/VWASHCC and user committees/groups hold the sole responsibilities of implementation and smooth operation of activities/schemes planned for their respective areas in line with the spirit of decentralisation and Sanitation and Hygiene Master Plan of GoN.

## **8.2 Sustained H&S Behaviour Change Strategy**

The sanitation behaviour change strategy for the district also corresponds to the spirit of the national sanitation strategy. In the vein, the district has worked out strategies on sanitation in socio-economic and geographical realities existing the district and they include:

- i. Post-ODF activities will be carried out for sustained hygiene and sanitation movement by the support institutions actively engaged in hygiene and sanitation activities in the district in concerted effort of DWASHCC;
- ii. Temporary hygienic toilets will be upgraded by VDCs gradually in active and effective leadership of VWASHCC. The movement will be driven ahead with fund and technical support of government and no-government agencies.
- iii. Hygiene and sanitation activities will be tied with the day to day life of the people in the district and this will be driven ahead as common issues of development activities.
- iv. Discussion events, advocacy and mass awareness raising programme will be the means to reach the programme at the household level as well as at the individual level. In doing so, both the formal and informal media will be actively mobilised as partner in the movement.

## **8.3 Operational Strategies**

## **WASH Operational Strategy**

The Rural Water Supply and Sanitation National Strategy (2004) will be the main guideline in implementation of activities. The approach and strategy to be adapted in course of implementation WASH schemes basically will be:

- i. Adhere the Sanitation and Hygiene Master Plan of DWSS 2011 and Rural WASH Approach of DoLIDAR 2011 in implementation of project activities including co-ordination between inter-sector and intra-sectoral programs, training, preparation of manuals and technical guidelines, studies and research activities, maintaining database, etc.
- ii. The scheme implementation will follow step-by-step approach of the District WASH Implementation Guideline.
- iii. Technology for scheme implementation will be selected to match with geographical condition and community needs. Accordingly, the selected technology will be local resource based, labour intensive, low cost, easy to operate and maintain by the community.
- iv. Design of water supply schemes will primarily be based on the national standards and guidelines. Water Safety Plan will form an integral part of the scheme design and VDC-wide Water Safety Plan will be implemented following the Handbook on Community-wide Water Safety Planning.
- v. Participation of people will invariably be an in-built approach. The communities will be involved in all stage of project cycle - project identification, survey and planning. GESI approach inclusive of poor, deprived and disadvantaged groups, elderly, children and people with disability will be the core thrust in the process.
- vi. Proportional representation of gender, caste and disadvantaged ethnic groups in formation of WUSCs will form as the mandatory condition.
- vii. Contribution level for the identified community households will be in line with the National Rural WASH policy. While implementing the WASH activities, contribution from the community will vary based on the relative poverty status, and GESI approach and remoteness of the given area.
- viii. Issues relating to Climate Change (CC) and Disaster Risk Reduction (DRR) will be addressed to the extent possible. Avoiding the factors and activities that are vulnerable to climate change will be the core thrust. In the effort, construction activities will avoid soil erosion, landslide/slide. Activities will be geared in mitigating the prominence of soil erosion, landslide/slide, river cutting, flood and other related measures. Towards the direction, Local Adaptation Plan for Action (LAPA) will be prepared to serve as a guide at the district level and CAPA at the VDC and community levels. All the VDCs in the district will prepare Community Adaptation Plan for Action (CAPA) for detailed actions.

- ix. Source protection measures will be an in-built component in every gravity flow based water supply schemes.
- x. VDCs for implementation of WASH activities will be done on priority basis. In doing so, the following indicators with corresponding weight will be considered. Total score or composite index will be the determining factor in ranking the VDCs in order and extending support from the sector actors for implementation of the activities.
- xi. The nine point principles laid down in the Sanitation and Hygiene Master Plan, 2011 will be the guiding principles in promotion of sanitation and hygiene activities. Implementation of the hygiene and sanitation activities- safe disposal of human excreta, hand washing, protection of water & food, clean household yards, oral rehydration therapy (ORT) and waste water management will include the main activities in sanitation and hygiene promotion both at the household and institutional level.
- xii. Community system with suitable options will be established to ensure safe water supply to the households with substandard water quality and also in the communities using water from open sources – river, canal, Kuwa, Panero etc. Households willing to have connection for private use from community system will have to invest on their own.
- xiii. Existing established water supply systems will be upgraded so as to make functional ensuring quality water. Minor repair will be done by the community/VDCs itself with technical and training support. External support will be extended in case of major repair and rehabilitation.
- xiv. Households with temporary toilets will be encouraged to construct of permanent structure.
- xv. Schools and other institutions will be mandated to establish GCD friendly sanitary facilities maintaining 1:50 user ratio.
- xvi. Public toilet will be facilitated in the needy areas – bus station, Hat Bazaar area, temples, touristic trekking routes and other areas of public events. In doing so, facilities will invariably be of GCD friendly. Existing toilets of temporary nature in public areas will be upgraded with permanent structure and GCD friendly.
- xvii. Reduction, Reuse and Recycle (3R) will be the basic principle while promoting solid waste management at the households, institutions (school and public office) and public places. Zero Waste will be the core thrust for the rural areas and also reduction of wastes to the minimum will be main strategy in municipal areas. Attempt will be made to establish proper management system for collected waste to reuse and recycle.
- xviii. Information about existing human and fund resources with the sector actors will be collected and future possibility will be assessed. Based on the available information resource need will be projected and resource gap will be found identified keeping in view of the achievement to made in with universal coverage of WASH by 2017. The

resources available at hand and possible in future with the sector agencies will be coordinated and harmonize in line with the plan.

- xix. Marketing to meet the gap of resources to meet the WASH target by 2017 will be done at all levels starting from VDC, district and centre. In the endeavour, various events - workshops, seminar, and use of media, at various levels will be held to tap the resources required to meet the gap.
- xx. Indoor smokeless VDC declarations will be replicated to all VDCs of the district, ecological sanitation promotion, carbon credits/trades (biogas, ICS, HWTS) will be promoted in the district.

## **Operational Strategy for Sustained Hygiene & Sanitation Behaviour**

The working strategies for sustained hygiene and sanitation behaviour change to be adapted in achieving post-ODF movement will be:

### **i. Discussion, Advocacy and Mass Awareness Movement**

The methods and means to be utilised so as to take the programme at the household and personal level will be:

- Mobilisation of mass media
- Training/workshop/seminar/mass rally etc.
- Observe sanitation week
- Sanitation exhibition/festivals
- Observation tour
- Leaflets, pamphlet, hoarding board
- Door to door visit, street drama, folklore music competition
- Other means on local ethos and values

### **ii. Recognition, Reward and Punishment**

- Cash prize, recognition and appreciation letters will be provided to the VDCs for continuity of post ODF (total sanitation). A fund will be established at the VDC level for the purpose.
- Prize and certificate will be awarded to the various institutions, volunteers and Hygiene and Sanitation Committees at the community level.
- Deprived/disadvantaged family/ies with model latrine/sat the outset of the programme will be awarded special prize. Individuals and institutions with innovative sanitation activities will also be awarded.

### **iii. Monitoring and Evaluation**

- Committees' right from the district to community level will be formed and made active to ensure effective implementation of programme on regular basis. For the purpose, a set of objective indicators will be worked out and self-monitoring, participatory monitoring and joint monitoring will be done.



- Mid-term and final evaluation will be carried out either by the programme sponsoring institution or external agencies to assess the impact of the programme.

**iv. Public toilet construction and Its Operation and Management**

- GCD friendly toilet with water facility will be constructed at public places, common yard, Hat Bazaar (periodic market place), highway corridor, trekking routes in cooperation of private and public institutions.
- Public toilets will be connected with bio-gas plant and ECOSAN (use of urine and excreta for manure purpose) and a suitable operational mechanism to entrust the toilet management to community/ies will be worked out.

**v. Type and Nature of Support to be Extended to Ultra Poor Family**

V/ WASHCC will identify ultra-poor households in the VDC and decide the type and nature of support to such households in promoting toilet construction.

**vi. Development of Rules for Use of Constructed Facilities**

Rules and regulations at community level for making use of constructed facilities to see hygiene & sanitation as way of day to day life of people will be formulated and implemented.

**vii. Capacity Development and Awareness Raising Activities**

- Training/workshop/seminar/mass rally etc.
- Awareness raising activities aimed at community level actors and institutions
- Conduct experimental programme
- Sanitation exhibition/festivals
- Observation tour
- Carry out self-assessment exercise

**viii. Integration of Sanitation and Hygiene Activities in Development Programme**

Sanitation and Hygiene activities will be made integral part of all the development programmes including education, transport, tourism, agriculture, energy etc.

**ix. Communication, Coordination and Cooperation**

- Publicise hygiene & sanitation activities
- Publish and broadcast articles and interviews related to notable sanitation activities.
- Broadcast and publish the inspiring information on hygiene and sanitation
- Include Hygiene and Sanitation as one topic in meeting and workshop events at local level.
- Broadcast and publicise “Sanitation as indicator Civilized life”
- Allocate fund for model project for publicity
- Prepare pamphlets/leaflets and keep hoarding board at schools and public places.
- Drive the special publicity works on hygiene and sanitation

**x. Innovative Technology**

- Selection of technology will be tuned to socio-economic and geographic condition
- Emphasis will be laid in establishing bio-gas plants and the income from carbon trade will be invested in sanitation programme activities. Political and administrative effort will be geared to bring income from carbon sale in the district.

**xi. Inter-agency Cooperation**

- The movement to achieve ODF in the district will be driven ahead in the district with support and cooperation of the government and non-government the agencies and institutions active in district.
- Budget allocated by GoN for water supply and sanitation for schools will also be channelized based on the priority and programme stipulated in the strategic plan.

**xii. Programme Model**

Either localized version of CLTS or SLTS model can be applied in driving the post ODF sanitation movement however VDC/VWASHCC should be prime loci on mandatory basis.

**xiii. Establishment of WASH Fund**

- A District WASH Fund at district will be established where in the fund earmarked for sanitation programme of all the actors engaged in implementation of sanitation programme will be deposited. This fund will be managed as per the procedures formulated by DWASHCC. As per now, existing policy and corresponding rules are yet to be tuned in this direction however; sanitation programme will be implemented by integrating the programme of the sector actors till such fund is established.
- A Sanitation Basket Fund will be established at the VDC level too to be operated and managed separately
- At school level, a Sanitation Fund with the donation of people will be established aiming at supporting the poor households in the given community.
- Book keeping and record keeping of such funds under the post ODF sanitation movement programme will be maintained as per the given financial rules of the government. The progress achieved and expenses made will be made public to ensure financial transparency in the programme.

## **9 Priority Ranking of VDCs for WASH Program Interventions**

Implementation of WSH activities is not possible to start in all the 41 VDCs both from the financial and human resources constraints. Therefore, implementation of the activities has to be phased by VDCs considering the service level and pertinent cross-cutting issues persisting in the respective VDCs. In determining the weightage a total of 75 points for service levels like water supply, sanitation and 25 for cross-cutting indicators considering geographical and environmental and socio-economic realities existing in the district. The service level weightages are again distributed sub-indicators of service levels. As the basic sanitation services have been already met, the major weightage is given to water supply (50 points) to address the major challenges of water like reaching to unreached, functionality improvement

and water quality improvement through water safety planning. The indicators and corresponding weightage include:

**Table 17: Indicators with corresponding weight**

Indicators	Weight
Water Supply	35
Sanitation	25
Functional status of water supply schemes	15
Excluded Groups	5
Poverty	5
Remoteness	5
Incidence of diarrhoea / water borne disease	5
Vulnerability to climate change	5

The VDCs for implementation of WASH activities will be done on priority basis using the total composite index calculated from the above weighted score. Based on the calculated composite index, name of the VDCs in order for implementing the activities by priority order follow as:

**Table 18: VDCs in o priority order based on the calculated composite index**

VDC code	VDC	Composite score	Priority Rank	VDC code	VDC	Composite score	Priority Rank
	Dowa	29.05	1		Niskot	18.80	22
	Jhin	28.00	2		Pulachour	18.55	23
	Kuinemangale	27.10	3		Begkhola	18.30	24
	Chimkhola	26.90	4		Narchyang	18.05	25
	Mudi	26.70	5		Bhagwati	17.75	26
	Patleket	26.25	6		Singa	17.30	27
	Pakhapani	26.20	7		Arman	17.30	28
	Muna	24.60	8		Takam	17.05	29
	Bima	24.50	9		B- Tatopani	16.70	30
	Okharbot	24.50	10		Dagnam	16.50	31
	Jyamrukkot	24.10	11		Bhakimli	16.30	32
	Arthunge	23.60	12		Histan	15.70	33
	Marang	23.55	13		Malkabang	15.30	34
	Ghar	23.30	14		Piple	14.90	35
	Ghatan	22.35	15		Devisthan	14.35	36
	Sikha	22.25	16		Darbang	14.05	37
	Lulang	22.10	17		Ratnechaur	13.75	38
	Babiyachaur	21.30	18		Ramche	13.10	39
	Baranja	20.75	19		Dana	12.70	40
	Kuhun	20.00	20		Ruma	11.30	41
	Gurja	19.65	21				

## 10 Programme of Action

### 10.1 Water Supply

## Establishment of New Water Supply Schemes

At present, available NMIP updated database, 2012 reveal that a total of 24,895 presentat population (6,072 HHs) have been using water from unprotected sources such as Kuwa, stream, canal and other water points. Therefore, new water supply systems will be established to serve these population in the district by different water supply technologies - gravity flow system, pumping systems. Likewise, 26 schools and 69 other institutions need to be supplied by new water schemes. Table 19 below provides the population and households to be served by these type of technology. In estimating the size of population to be served every year the projected population growth has been considered therefore the number of population to be covered is in incremental rate by 1.29% in every succeeding year. **In serving the population only 10% is planned to be served in year 2013 and 20, 35, 20 and 15 percents in the years 2014, 2015, 2016 and 2017 respectively.**

**Table 19: Population to be served by new schemes by type**

SN	Type of Water Supply System	Present population to be served	Projected population to be Served					
			2013	2014	2015	2016	2017	Total
1	Gravity Flow and pumping system at HH level	24,895	2,490	5,043	8,940	5,174	3,931	25,577
2	New gravity flow schemes at schools	26 schools						
2	New gravity flow schemes at other institutions	69 institutions						

## Improvement of Existing Water Supply Systems (Major and Minor Repairs)

Population to be covered by gravity system after improvement is estimated at 37,511 by minor repair schemes, 25,391 by major rehabilitation schemes. In serving the population only 10 % is planned to be served in year 2013 and 20, 35, 20 and 15 per cents in the years 2014, 2015, 2016 and 2017 respectively (Table 20). Likewise, the numbers of schools and other institutions to be served by minor repair repair schemes are respectively 22 and 9 and by major rehabilitation schemes are respectively 11 and 6.

**Table 20: Population and institutional Coverage by schemes under major repair**

S N	Type of Water Supply System	Present population to be served	Projected population to be Served					
			2013	2014	2015	2016	2017	Total
1	Gravity Flow & pumping schemes at HH level (minor repair)	37,511	3,751	7,599	13,470	7,796	5,923	38,539
2	Minor Repair schemes for schools	22 schools						
3	Minor Repair schemes for other institutions	9 institutions						
4	Gravity Flow & pumping schemes at HH level (major repair)	25,391	2,539	5,144	9,118	5,277	4,009	26,087
5	Major Repair schemes for schools	11 schools						

6	Major Repair schemes for other institutions	6 institutions						
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### Adaptation of Community-wide Water Safety Plan

Quality of water from the existing schemes for drinking purpose has been questioned in various liturgies, calling for immediate improvement. Water safety plan will be built-in in new schemes to be constructed in design phase itself and in case of existing scheme, provision for physical improvement programme has been made to ensure safe water to the people in the district. In the front, all the VDCs will implement community-wide Water Safety Plan in all the water points and schemes on mandatory basis in a campaign approach. **The implementation of community-wide water safety plan** will be integrated with other major concepts like regular O&M as a backbone and integral part, simple steps applicable for all types of technologies, integration of climate vulnerabilities into source/catchment hazard assessment, simple illustrative figures of WSP and safe water VDC declaration etc. The WSP will be implemented throughout the year 2013- 2017. Provision for Pooled Fund has been made to facilitate the purchase of laboratory equipments and reagents and human resource to ensure the safe quality water in the supply system in each VDC of the district. The following table depicts the major activities under community-wide WSP implementation:

**Table 21: Community-wide WSP activities in VDCs**

Milestones	VDC by Year				
	2013	2014	2015	2016	2017
Physical improvement of system (for WSP application)	7	10	15	4	4
Implementation of community-wide WSP in the VDC	10	10	10	6	5
Establishment of pooled fund for WSP monitoring in the VDC	20	21			
Support for equipment and laboratory in VDC	10	10	10	6	5
Water quality monitoring and test	10	10	10	6	5

## 10.2 Sanitation

Permanent improved toilets will be constructed in 3,529 households. Likewise, 4 school toilets will be constructed in 2013. The milestones for upgrading of 3,529 household level temporary hygienic toilets in 34 VDCs is presented in the following table:

**Table 22: Upgrading of Temporary HH hygienic toilets and new toilets in VDCs**

Milestones	VDC by Year				
	2013	2014	2015	2016	2017
Upgrading of temporary hygienic toilets	17	17	-	-	-
New toilets for schools	4 schools	-	-	-	-
New toilets for other institutions	10 Nos.	30 Nos.	30 Nos.	10 Nos.	4 Nos.
New toilets for public places and trekking routes	10 Nos.	10 Nos.	10 Nos.	10 Nos.	10 Nos.

Mobilization of mass communication media will be done in order to intensify the hygiene and sanitation behaviour change as a post ODF support right to the individual level. In the same manner, reward/ prize/recognition to the outstanding workers and institutions are also provisioned to accelerate the hygiene and sanitation activities in the district.

**Table 23: Activities to be undertaken in sustained H&S behaviour change**

SN	Activities	Unit	Quantity
<b>A</b>	<b>Post ODF Activities (for sustained H&amp;S behaviour change)</b>		
1	Training to district level human resources	Person	250
2	Training to VDC level human resources	Person	820
3	Training to community level human resources	Person	1,025
4	Mason's training for ECOSAN and Biogas and market chain	Person	123
5	Community mobilisation for post ODF activities in VDC	VDC	41

### 10.3 Solid Waste Management

Situation study on solid and liquid waste in the district mainly in the core sub-urban and highway corridor will be conducted. The findings made from the study are aimed to prepare district solid waste management plan (DEWATS plan) focused to urban sanitation. In the course, some of the selected activities related to waste management will be implemented on pilot basis in two of the selected areas in the district in order to experiment the suitability of technology followed in countries other than Nepal. The study is planned to be carried by DWASHCC by the year 2014. The detailed of the activities are given in the following table:

**Table 24: Activities to be undertaken under solid and liquid waste management**

SN	Activities	Unit	Quantity
<b>A</b>	<b>Solid &amp; Liquid Waste Management Activities</b>		
1	Preparation of solid waste management plan in core sub-urban (Beni, Darbang, Babiyachaur) and highway areas in the district- City Sanitation Plan (DEWATS)	District	1
2	Implementation of pilot project in selected area	Scheme	2

### 10.4 Adaptation and Mitigation to Climate Sustainability

Preparation of CAPA (Community Adaptation Plan for Action) integrated with VDC WASH Plan and Local Adaptation Programme of Action (LAPA) will start from 2013 and completed by 2014 in all the VDCs. The CAPA will be the integral part of the VWASH plan. Other activities of climate sustainability to cope adverse impacts of climate change are given in the following table:

**Table 25: Activities to be undertaken under climate sustainability**

SN	Activities	Unit	Quantity
<b>A</b>	<b>Climate change adaptation/mitigation activities</b>		
1	Implementation & promotion of ICS program	VDC	41
2	Establishing carbon credits for HWTS and monitoring mechanism	VDC	41
3	Source conservation in water source catchment in foothills	Sources	600
4	Promotion of recharge ponds	VDC	41

## 10.5 Income Generation

Time saved from fetching water and improved health due to coming of WS facilities and promotion of hygiene and sanitation activities needs to be utilized for potential income generation in the district. Therefore, women, poor and deprived groups will be focused in the regard. In the front, a mechanism with the related institutions – WDO, SAHAMATI, Cooperatives, etc. will be developed to link these chunks of the population for income generation activities. They will also be linked with financial institutions and with the institution/s active in organizing various skill development events and in market promotion front (table 26).

**Table 26: Activities to be held for promotion of income generation**

SN	Activities	Unit	Quantity
1	Capacity building	Person	738
2	Promotion and linkage	VDC and Municipality	41

## 10.6 Plan Preparation at VDC and District Levels

Formulation of VDC WASH plans integrated with the CAPA for implementation of WASH activities will be the first step in each VDC. DWASHCC will prepare VWASH Plan preparation guidelines in order to ensure uniformity in preparing the plan by VDCs. NGOs will be engaged in assisting the VWSHCC in preparation of the plan. Capability of NGOs will be carefully taken into account in mobilizing them in assisting the VWASHCC. DWASHCC will organize orientation programme to the selected NGOs. In the manner, VDCs will prepare their WASH plans starting from 2013. Based on the projection of fund and human resource available, the VWASH plan preparation is phased for two consecutive years starting from 2013. In the course, there will be 20 and 21 VDCs respectively in the phases. Likewise, preparation of CAPA integrated VWASH plans will start from 2013 and completed by 2014 in all the VDCs. Updating of the VDC WASH plan prepared in the past will be update by the 2014 and that of the plan prepared from 2013 onward will be updated upon the lapse of each 3 year. The VDCs shall be phased in order in preparation of the plans according to the composite priority rank presented in Annex 2.

**Table 27: Preparation and Updating of VDC level WASH plans**

Activities	VDC/District by year				
	2013	2014	2015	2016	2017
Preparation of V-WASH plan/ CAPA	20	21			
Review/updating of V-WASH plans		9			
Preparation of LAPA	1				
Updating of VWASH plans/ CAPA/ LAPA					42

## 10.7 Institutional Development

Training events/ workshops/ seminars will be held regular on basis to strengthen the capacity of the respective coordination committees as well as overview the progress in planned activities, resolving the problems/constraints faced and to streamline the planned activities as

intended. Cross study visits also will be organized to learn from the best cases. The number of the participants for the various events to be organized follows in the table 28 below.

**Table 28: Capacity development events at the institutional level**

SN	Capacity building training activities to	Persons
1	VWASHCC	820
2	DWASHCC	150

## 10.8 Coordination, Monitoring and Updating of DSWASHP

Coordination meetings will be held on trimester basis to review the progress and resolve the problems faced. Accordingly, workshop to coordinate the actions of the actors to meet the resource gap will be held on half-yearly basis. Moreover, one event in each year will be held in participation of multi-stake holders, political party representatives, mass media and other relevant persons in the sector to update the progress and prepare plan of actions for the remaining period of the plan (table 29).

**Table 29: Coordination and updating of District Strategic WASH Plan**

SN	Activities	Events
1	Coordination meeting with WASH (Trimester)	15
2	Workshop to streamline financing the planned activities (Half-yearly)	10
3	Review and update the action plan (annual)	4

## 11 Resource Analysis

### 11.1 Fund Requirement

#### Unit Rate of materials, training/workshop, studies and rewards

Estimate of fund requirement are based on the present unit rate for man and material prevailing in the district. The unit rates considered in projecting the cost requirement for planned activities are presented in table 30 below. The fund estimate takes into account the inflation rate of 9.95% recorded during the month of June 2012 as per the estimate of Nepal Rastra Bank in the succeeding years of 2013- 2017. Accordingly annual population growth rate of 1.29% recorded in the year 2011 is considered to encompass the population increase in the district in each of the succeeding years. In the manner, the services are provisioned for the incremental population too.

**Table 30: Unit rate of man and materials for activities**

SN	Type of Scheme	Per capita estimate (Rs)
1	Gravity WSS	5,000
2	Surface electrical pumping system	6,000
3	Surface solar pumping system	6,000
4	Point source improvement	6,000
<b>B</b>	<b>Major repair of water supply scheme</b>	
1	Gravity WSS	4,000
<b>C</b>	<b>Rehabilitation of water supply scheme</b>	
1	Gravity WSS	4,000



SN	Type of Scheme	Per capita estimate (Rs)
<b>D</b>	<b>Latrine promotion and construction</b>	
1	School latrine with two cabin & two urinal	300,000
2	Public latrine with two cabin and two urinals	300,000
3	Institutional latrine of 2 cabin for office	150,000
4	Institutional latrine of single cabin for office	100,000
5	ECOSAN-latrine with 2 cabin with 2 urinal for institutions	325,000
6	ECOSAN latrine with 2 urinal	70,000
7	ECOSAN latrine with 1 urinal	45,000
8	Biogas connected latrine	40,000
<b>E</b>	<b>Human resources development – ODF Related Training</b>	
1	At district level	1,000
2	At VDC level	1,000
3	At community level	500
4	Mason training and market chaining	1,000
<b>F</b>	<b>Sanitation movement for post ODF</b>	
1	In VDC	250,000/VDC
2	Post-ODF activities in VDC	300,000/VDC
4	Equipment Support to VDC	100,000/VDC
<b>G</b>	<b>VDC level planning</b>	
1	Preparation of VWASH plan and CAPA	150,000/VDC
2	Preparation of District LAPA	35,000/Ward
3	Updating of VWASH plan	25,000/VDC
4	Updating of CAPA/LAPA	15,000/Ward
<b>H</b>	<b>WSP</b>	
1	Physical improvement of WS system (for WSP application)	200,000/VDC
2	Implementation of WSP in the VDC	100,000/VDC
3	Establishment of Basket Fund for WSP monitoring in the VDC	100,000/VDC
4	Support for equipment and laboratory in VDC	50,000/VDC
5	Water quality monitoring and test	60/test sample
<b>I</b>	<b>Environment and climate change</b>	
1	Water source area conservation (gravity scheme source)	50,000 /Scheme
2	CAPA preparation	50,000 /VDC
3	Study on ground water risk in the district (risk to contamination and depletion of water table) and preparation of district ground water use policy for reduction/adaptation to the risk	700,000/Study
<b>J</b>	<b>Capacity building for advocacy &amp; implementation of strategic WASH plan</b>	
1	Capacity building of VWASH-CC	500
3	Capacity building of DWASH-CC	1,000
4	Meeting/workshop at district level	600
5	Mason's training , etc	1,000
<b>K</b>	<b>IG</b>	
1	Capacity building	500
2	Promotion and linkage	100,000 /VDC

SN	Type of Scheme	Per capita estimate (Rs)
L	Other (honour/reward to person/institution, etc)	
1	Honour and Reward (person/institution working in WASH)	60,000 /District

## 11.2 Projection of Fund

Fund requirements are estimated based on the activities planned to reach the universal coverage of water supply by 2017. The size of the fund goes relatively smaller for the succeeding years of 2016 and 2017. The total fund amount required to achieve the universal coverage of water supply and sanitation in the district is estimated at Rs. 536 million rupees. The fund required by year are as:

**Table 31: Fund requirement by year**

Year	Fund Estimate (,000Rs)
2013	90,685
2014	96,767
2015	106,094
2016	116,651
2017	125,874
<b>Total</b>	<b>536,071</b>

Analysis of fund required by activity reveal that a little less than three-fourth (74%) of the fund required has to be invested in establishing new water supply schemes and rehabilitation of the old schemes both at the household, educational and other and institutions. Accordingly, 13 percent of fund requirement is estimated for the activities related to post ODF activities at household, school, public places and other institutions (Table 32).

**Table 32: Fund requirement by planned activities**

SN	Activities	Total five year budget (2013-2017)		Projected Amount by Year (,000Rs)				
		(,000Rs)	Percent	2013	2014	2015	2016	2017
1	खानेपानी सरसफाइ तथा स्वच्छता सम्बन्धि गाविस स्तरीय भिवास प्लान, कापा, लापा तयारी तथा अद्यावधिक	४,४१०		२,९२५	२७५	-	-	१,३१०
2	खानेपानीको सुविधा स्तर सुधार	३३६,९९७		६७,३९९	७४,१०६	८१,४७९	८९,५८६	९८,५००
3	खुला दिसामुक्त पश्चात्का क्रियाकलापहरु	४४,७७१		८९५४	९८४५	१०८२५	११९०२	१३०८६
4	विद्यमान खानेपानी योजनाहरुको दीगो संचालन तथा खानेपानी सुरक्षा योजना कार्यान्वयन	१६,५०८		३,३०२	३,६३०	३,९९१	४,३८८	४,८२५
5	ठोस तथा तरल फोहरमैला व्यवस्थापन	५,५००		१,२०९	१,३३०	१,४६२	१,६०८	१,२०९
6	जलवायु परिवर्तन अनुकुलन क्रियाकलापहरु	२४,३००		५,३४४	५,८७५	६,४६०	७,१०३	५,३४४
7	क्षमता अभिवृद्धि (खुलादिसामुक्त पश्चात्का क्रियाकलापहरुको लागि)	१,७०६		३७५	४१२	४५४	४९९	३७५

SN	Activities	Total five year budget (2013-2017)		Projected Amount by Year (,000Rs)				
		(,000Rs)	Percent	2013	2014	2015	2016	2017
8	संस्थागत विकास	५६०		१२३	१३५	१४९	१६४	१२३
9	आयमुलक गतिविधि	२,४१९		५३२	५८५	६४३	७०७	५३२
10	जिल्ला रणनीतिक बास योजनाको पैरवी, अनुगमन तथा अद्यावधिक	२,३७५		५२२	५७४	६३१	६९४	५२२
	<b>Total district budget</b>	<b>439,546</b>	<b>100.0</b>	<b>९०,६८५</b>	<b>९६,७६७</b>	<b>१०६,०९४</b>	<b>११६,६५१</b>	<b>१२५,८७४</b>

### 11.3 Institutions active in WASH in the District

As of now, WSSSDO, DDC, DEO and DPHO include the public sector institutions active in the WASH sector in the district. The Fund Board and RWSSP-WN are the other institutions supporting the sector actively in the district. RWSSP-WN funded by the Government of Finland which works through DDC has been active since last 4 years. The major activities carried and respective coverage are in the district is presented table 33.

**Table 33: Actors active in development of WASH sector in the district**

SN	Name of Agency	Nos. of Working VDCs	Major Activities
1	DDC/DTO (including RWSSP-WN)	41 VDCs	H&S, DWS, Arsenic Mitigation, Water Quality Improvement,
2	WSSSDO	41 VDCs	WASH
4	DEO	41 VDCs	School WASH
5	DPHO	41 VDCs	Health and Hygiene
7	Fund-Board	41 VDCs	WASH
	<b>Annual budget (MNRs)</b>		

### 11.4 Fund Sources and Gap

Of the total fund requirement (Rs. 536 million), a little a less than one-fourth (20.6 percent) of the fund is expected from VDC/Municipality (4.3 percent) and from the users including both cash and kind (16.3 percent). Of the remaining more than 75 percent of the required fund amount is tapped from WSSSDO, DDC, DEO, DPHO and other actors engaged in the sector- Fund Board, UNICEF, PAF and other national and international institutions (Table 33).

**Table 34: Expected contributions from the sector actors**

Sources	Budget by year					Total	Percent
	2013	2014	2015	2016	2017		
VDC							
User cash							
User kind							
Support agency							
<b>Total</b>							
Percent	10.5%	21.9%	25.1%	27.0%	15.4%		

However, analysis of the capital budget of the sector actors with incremental trend of 12% each year indicate 60 percent will be available from the sector actors indicating a gap of 40 percent (Rs. 552 million) to materialize the planned activities in the district. The fund gap pin point that DWASHCC should actively opt for the strategy to meet the fund gap required for implementation of the planned activities. In the direction, DWASHCC should make its utmost effort in urging sector actors working in the district to increase their fund resources to meet the fund gap for the strategic WASH plan on the one hand, create buoyancy of pressure to the government machinery at the centre to provided the required fund either from its own source or tap the fund from the multi/bi donors active in the sector.

**Table 35: Expected contributions from the sector actors**

Source	Budget by year					Total
	2013	2014	2015	2016	2017	
Support agency (required fund)						
Support agency (existing budget trend)						
Deficit	(20,424 )	(161,991 )	(184,173 )	(182,139 )	(3,470 )	(552,197 )
Deficit percent	-13.2%	-51.9%	-52.3%	-49.2%	-1.6%	

## 12 Endorsement and Advocacy

The DSWASHP at the district level, as an official district strategy has already been endorsed by the DWASHCC, therefore, is an official policy document to be followed by all the WASH stakeholders in the district. The plan is to be endorsed and enforced by the District Council in order to become official district policy document. The DWASHCC will soon firstly organise a dissemination workshop in participation of multi-stakeholders and representatives of political parties as the first step of advocacy of the plan for VDC secretaries and VDC-WASH Coordination Committee (VWASHCC) members in all district VDCs. It will be followed by workshop and coordination meetings in every six months to review the progress, identify the problems and support needs. Finally the concerned WASH stakeholders will be reminded to adhere the DSWASHP strictly. Moreover, there is a significant gap between available fund and required amount for entire implementation of planned activities therefore, DWASHCC should make its utmost efforts to tap the fund especially from the government at the centre and also in convincing the multi/bilateral donors active in the sector for their support in the regard.

## 13 Implementation of the Plan

DWASHCC will be responsible to ensure that the plan concerned WASH stakeholders implement the activities laid in DSWASHP in the spirit of the Local Self Governance Act and the Principles underlined in the Rural Water Supply and Sanitation Strategy (2004).

## 14 Monitoring and Updating of the Plan

### Monitoring of the Plan

Monitoring system will be established at the district and VDC level. The existing District Core Team within DWASHCC will be responsible for periodic monitoring of the WASH

activities undertaken in the district. At the VDC, VWASHCC will form a Monitoring Team, the members for which will be decided by VWASHCC. Such a team may compose of member/s of VWASHCC, school teacher, political representatives, people listened by community etc. The team on behalf of the DWASHCC and VWASHCC will be responsible to oversee the monitoring of the planned activities. For monitoring purpose, a set of objective output and process indicators will be developed. The Monitoring Team will carry out the monitoring of the activities in participation of the users, user committee/s and agency engaged in facilitating the activities.

### **Review and Updating of the Plan**

Review of the plan will be undertaken at the end of each year both at the VDC and district levels and it will be the responsibility of the DWASHCC. Level of the progress achieved against the planned activities and problems/constraints faced will be the main aspects to analyse and recommend required adjustment in planned activities and update the plan accordingly however, but not compromising with target of achieving universal coverage of water supply by 2017.

## **15 Institutional Set up and Resource Management**

DWASHCC will lead the forum for planning, programming, coordination, monitoring and advocacy of WASH sector in the district and the VWASHCC at the VDC level. The composition of office bearers in DWASHCC and VWASHCC will be as guided by national Sanitation and Hygiene Master Plan 2011. Roles and responsibilities of the coordination committees in implementation of the plan follow as.

### **DWASHCC**

- Prepare strategic plan on DSWASHP and get it endorsed by District Council
- Coordinate, provide support and assistance to VDCs and Municipality in preparing procedures and formulating of their VWASH plans.
- Carryout performance monitoring of the WASH activities being implemented in VDCs
- Establish and manage the WASH Fund at the district level
- Help extend fund support to VDCs from the District Wash Fund and encourage them in achieving the ODF and the universal coverage of water supply in their areas.
- Organise workshop and meetings on regular basis to review the WASH programme going in VDC and Municipality.
- Organise meeting/workshop to review and update DSWASHP activities in every six months.
- Prepare implementation and monitoring plan upon common consensus of the stakeholders for undertaking WASHP activities.
- Help create conducive environment to encourage private sector for their involvement in WASH sector.
- Establish District WASH Resource Centre and update its data base.
- Monitor and supervise on regular basis the expenditure incurred from WASH funds established at the district, VDC level
- Get support required for implementation of WASH Plan in cordial relation with stakeholders of civic society and external support agencies.
- Maintain coordination and cooperation with regional and national WASHCC for mutual exchange of information WASH

- Asses and analyse resource available with stakeholders to utilise in implementing the WASH plan.

## **VWASHCC**

- Prepare and update the V/M-WASH Plan together with budget, plan of action and responsibilities and get it endorsed from the Village Council
- Analyse WASH issues and strategies to overcome the implementation barriers
- Form a monitoring team monitor and provide technical backstopping services to the communities and schools.
- Organise review workshop and other events during implementation and monitoring of their plans.
- Maintain coordination and cooperation with DWASHCC
- Look for the actors and fund/human resources to expedite effective implementation of planned activities
- Organise meetings in each 3 month to assess the progress status in the respective of the VDCs/municipality

### **15.1 District Core Team and WASH Unit**

A Core Team under DWASHCC responsible to see programme management will be formed in the district and a Unit responsible for entire WASH programme under the supervision of the Core Team will be established under DDC. Similarly, a WASH Unit under VWASHCC may also be established at VDC level depending upon the need. Capacity enhancement of the Coordination Committees at the district and VDC level will be strengthened in fulfilling their expected roles and responsibilities effectively and efficiently. Accordingly, the VWASHCC—the instrumental entities which are in frontline in implementation of WASH programme need to be institutionally strengthened equally. Therefore, various activities such as training, workshop, seminars, study visits etc., to the office bearers of entities are planned in the direction.

### **15.2 WASH Basket Fund**

District WASH Fund at the district level will be established where in the fund earmarked for water, hygiene and sanitation activities of all the agency and actors engaged in development of WASH sector will be deposited. Such a fund will be managed as per the procedures formulated by DWASHCC. As of now, existing policy and corresponding rules are yet to be tuned in this direction however, the programme will be implemented by bringing the respective programmes of sector actors under single umbrella till such fund is established. Similar mechanism will be followed in case of VDC level too. The Book keeping and record keeping of the funds at the district and VDC level will be maintained as per the given financial rules of the government. The progress achieved and expenses made will be made public to ensure financial transparency in the programme.

A huge gap of Rs. ..... million between the fund required and projected fund resources at the disposal of the sector actors at the district level exists, therefore mobilization of resources either from the national and international sources is an warranted imperative besides efficient use of available resources. At the fore, actors involved in the development of the WASH sector but more that of the DWASHCC members will play a significant role in marketing the DSWASHP for tapping the fund resources both from the national and international sources.

Equally crucial role of the VWASHCC is seen in channelling the available fund for the WASH sector as well as tapping the fund resources from the district and national levels.

### **15.3 Roles and Responsibilities of Sector Actors**

Roles and responsibilities of the relevant actors in implementation of the plan are followed succeedingly.

#### **District Development Committee (DDC)**

- Instruct local bodies to implement WASH policies and plan and monitor implementation status of the planned activities.
- Allocate at least 10 percent of total capital budget for WASH activities and take the lead role in raising fund resources to implement the planned activities of DSWASHP.
- Construct and help construct public/community toilets
- Allocate budget for hygiene and sanitation activities and for cash reward to ODF VDCs and Municipality.

#### **Water Supply and Sanitation Sub-Divisional Office (WSSDO)**

- Ensure coordination of all the WASH activities in the district
- Extend/provide technical support to DDC, Red CROSS and other agencies engaged in WASH activities
- Prepare a roster of resource persons and facilitators and mobilize them in need
- Prepare and implement Stand Alone Sanitation activities in the manner that overcome the persisting weaknesses at present
- Extend support and assistance to various agencies in implementing programme like Eco-san and POU in translating the concept of safe water VDC
- Coordinate and cooperate the DWASHCC and VWASHCC in operation of WASH programme.
- Take lead role in declaring the district a “Safe Water Zone”

#### **District Education Office (DEO)**

- Take lead role in establishing water supply and CGD friendly latrines in the schools in the district.
- Mobilize schools to celebrate Baishakh as Sanitation Month and to observe National Sanitation Week
- Ensure that schools are equipped with CGD friendly water supply and sanitation facilities and help school in achieving post ODF activities in catchment areas of schools.
- Establish Sanitation Desk in Resource Centres of schools

#### **District Public Health Office (DPHO)**

- Establish Sanitation Desk in all Health Post, Sub-health Post, Health Centres and Hospitals
- Maximize mobilization of FCHVs and CMs network in awareness raising drive on hygiene and sanitation at household level in the district

#### **District Technical Office (DTO)**

- Extend support and assistance to achieve post ODF activities and sustained H&S behaviour in VDCs and municipality by mobilizing schools and communities under
- Integrate latrine construction and promotion activities in water supply and sanitation projects to contribute in achieving sustained H&S and safe water VDCs
- Extend/provide technical support to DDC, Red CROSS and other agencies engaged in WASH activities
- Extend support in implementing WASH activities in the district
- Provide help and support DWASHCC and VWASHCC in operation of WASH programme.

#### **District Soil Conservation Office (DSCO)**

- Extend support on plastic rain water harvesting ponds, roof catchment rainwater harvesting, terrace improvements, soak pits, drying racks, composting pits, cowshed improvements, biogas promotion, social mobilization for ecosan
- Provide support on flood and landslide control activities

#### **District Forest Office (DFO)**

- Extend support on the plan preparation of climate change like CAPA, LAPA and VDC WASH plans
- Provide support on implementation of climate change mitigation/adaptation activities

#### **District Agriculture Development Office (DADO)**

- Extend support to protect the watershed catchments, manage wastes (solid and liquid)
- Support to manage the micro-irrigation activities linked with the livelihoods

#### **Women and Child Development Office (WCDO)**

- Integrate hygiene and sanitation activities in income generating activities of women groups.

#### **Village Development Committees (VDCs)**

- Prepare and update the VWASH Plan together with budget, plan of action and responsibilities and get it endorsed from the Village Council
- Allocate at least 15 percent of total capital budget for WASH activities
- Analyse WASH issues and strategies to overcome the implementation barriers
- Promote latrine construction for poor dominated and landless settlements in coordination with NGO and WASH stakeholders
- Drive hygiene and sanitation activities as integral part of post ODF movement in respective areas
- Establish and update database on WASH
- Establish public and community toilets in needy locations and ensure smooth operation of these toilets
- Maintain coordination and cooperation with DWASHCC
- Look for the actors and fund/human resources to expedite effective implementation of planned activities
- Organise meetings in each 3 month to assess the progress status in the respective of the VDCs



**NGO Federation**

- Ensure coordination with different NGOs active in the district
- Implement awareness raising activities through the medium of NGO Networks.
- Provide support and assistance to fortify the communication and political commitment.

**FECOFUN**

- Extend support on climate change adaptation activities

**Expected Roles by All Political Parties**

- Mobilise the ancillaries in the VDC as committed at the district level
- Make effort in finding resources and their mobilisation for contributing to implementation of planned WASH activities
- Include hygiene and sanitation messages in the publicity materials
- Participate in the monitoring of WASH activities

**Mass Media**

- Observe either singly or in group the latrine use, WASH programme activities, post ODF movement going-on in the district and include them in the various forums of mass media.

**Teachers' Association**

- Provide support to build GCD friendly toilets in schools
- Extend support on awareness on WASH activities in schools

**Donor Agencies**

- Provide financial, material, technical and human resource supports for implementation of planned WASH activities approved by the District/VDC Councils

## References

- National Population and Housing Census 2011, Central Bureau of Statistics, Kathmandu, Nepal, 2012
- Nepal MDGs Acceleration Framework, Improving Access to Sanitation, National Planning Commission, Nepal
- National Management Information Project (NMIP), DWSS, Kathmandu March 2011
- Sanitation and Hygiene Master Plan, steering committee for national sanitation action, 2011
- District Sanitation Strategy, DWASHCC, Myagdi, 2010
- District Post ODF Strategy, DWASHCC, Myagdi, 2012
- WASH Sector Status Report-2011, Ministry of Physical Planning and Works, 2011
- Nepal living standards survey, statistical report 2010/11, volume-1, Central Bureau of Statistics, 2011.
- Nepal monitoring the situation of children and women, MICS- 2010, UNICEF, 2011
- Three Year Plan Approach Paper (2010-2012), National Planning Commission, 2010
- National Framework of Child Friendly School for Quality Education, Department of Education, 2010
- Drinking Water and Sanitation Coverage in Nepal, Department of Drinking Water and Sewerage, Ministry of Physical Planning and Works, Kathmandu, Nepal, 2010
- National Drinking Water Quality Standards (2006) Department of Drinking Water and Sewerage, Ministry of Physical Planning and Works, Kathmandu, Nepal
- Small area estimation of poverty, caloric taken and malnutrition in Nepal, World Food Programme and Central Bureau of statistics, 2006
- National Adaptation Programme of Action (NAPA), Ministry of Environment, Nepal 2011
- National Water Plan, National Planning Commission, Nepal, 2005
- Rural water supply and Sanitation national policy and strategies and strategic action plan, MPPW, Nepal, 2004
- National Policy on Rural Drinking Water Supply and Sanitation (2004) Department of Drinking Water and Sewerage, Ministry of Physical Planning and Works, Kathmandu, Nepal
- Tenth Plan- Poverty Reduction Strategy Paper, National Planning Commission, Kathmandu, Nepal, 2002
- DAG Mapping of Myagdi district (unpublished report), 2013