



Rural Water Supply and Sanitation Project in Western Nepal (RWSSP-WN)

Completion Report of First Phase Synopsis

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Location: Nepal
Prepared by: Project Support Unit of RWSSP-WN

FACT SHEET

Project name:	Rural Water Supply and Sanitation Project in Western Nepal
Sector:	Rural Water Supply and Sanitation; Micro-infrastructure
Competent authorities:	The Government of Nepal; Ministry of Finance The Republic of Finland; Ministry for Foreign Affairs
Project agreement signing date:	May 22, 2008
Starting budget year:	August 2008
Termination budget year:	Original: July 2012, No cost extension until July 2013
Project area:	Western Development Region Dhaulagiri zone: Districts of Baglung, Myagdi and Parbat Gandaki zone: Districts of Syangja and Tanahun Lumbini zone: Districts of Kapilvastu, Rupandehi and Nawalparasi Mid-Western Development Region Rapti zone: District of Pyuthan
Project implementation organization:	Government of Nepal: Ministry of Local Development; Department of Local Infrastructure Development and Agricultural Roads District Development Committees of participating districts Village Development Committees Users Government of Finland Ministry for Foreign Affairs of Finland Embassy of Finland in Kathmandu Consultant
Project budget (planned):	The Government of Nepal: NRs 292,677,000 The Government of Finland: Euro 9,703,000 District Development committees: 3% calculated from the water supply investment costs and 5 % calculated from the hygiene and sanitation promotion costs Village Development Committees: 2,5% from the water scheme construction costs and 10 % from the VDC WASH plan and hygiene and sanitation promotion costs Users: 21 % for the construction and O&M calculated from the construction costs of the water scheme (1% in cash and 19 % in kind for construction and 1% for the O&M)
Foreign currency source:	Grant
Strategy and approach:	Alignment, decentralization, downward accountability, institutional and human resource capacity development, gender and social inclusion mainstreaming, programmatic approach, ownership and behavioral change approach, service contract management

Synopsis

Rural Water Supply and Sanitation Project in Western Nepal (RWSSP-WN) Phase I was a sector support program focused in implementing water, sanitation and hygiene (WASH) activities in Nepal. The period for the Phase I of RWSSP-WN was of five years from August 2008 to July 2013. The second phase of RWSSP-WN was planned to start immediately after the first phase.

RWSSP-WN Phase I was funded by the Governments of Nepal and Finland. In addition, the District Development Committees, Village Development Committees and the users contributed to their respective WASH programs. As per the project document the total project budget was 14.6 million Euros.

The overall objective of Phase I of RWSSP-WN was the increased wellbeing of the poorest and excluded. *The purpose* was to fulfill the basic needs and ensure rights of access of the poorest and excluded households to safe domestic water, good health and hygiene through decentralized governance system. *The program components* as reported to the National Planning Commission of Nepal were (a) hygiene and sanitation (b) domestic water supply (c) arsenic mitigation (in the three Terai districts) and (d) WASH governance.

The responsible agencies of RWSSP-WN at national level were the Ministry of Federal Affairs and Local Development (MoFALD) and its Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR). The Government of Finland was represented in Nepal by its Embassy in Kathmandu. The program was executed by the local bodies, namely the District Development Committees (DDCs) and Village Development Committees (VDCs), and implemented and managed by the communities. The communities were supported by the district WASH units formed under the District Technical Offices (DTOs) of the DDCs; and by the VDCs. The WASH program of the districts and villages was coordinated in the district and village WASH coordination committees.

The RWSSP-WN approach

During the inception phase of the Project new scope and intervention strategy were developed against the background of the new context of international aid architecture, the water supply, sanitation and hygiene (WASH) sector and the governance system of Nepal. The approach was developed in line with the Paris Declaration of Aid Effectiveness, Accra Agenda for Action and Government of Nepal's efforts to move towards a sector-wide program in the WASH sector.

The following are the key aspects of the approach:

- **New Holistic WASH Approach:** Emphasis on hygiene and sanitation through a community led behavioral change program where domestic water is only one component in the process of behavioral change. Sanitation is seen as an entry point. With the community led approach follows that no subsidy in sanitation is provided.
- **Gender Equality and Social Inclusion:** Increased GESI responsive, effective participation and ownership of communities starting from participatory VDC WASH planning process.
- **Promote Sector-Wide Approach:** Change from the project approach to the programmatic approach at local level.
- **Decentralization:** Devolution of power to District Development Committees, Village Development Committees and User Groups to ensure sustainability and ownership.
- **Funding:** New fund channeling from consultant based funding to Government to Government funding.
- **Alignment:** Change from project specific procedures and practices to aligning with government systems.
- **Coordination:** Improve coordination of WASH sector implementation.
- **Scope:** WASH sector instead of integrated water resource management sector.

The approach adopted proved successful in the sense that RWSSP-WN went far beyond the overall population targets set to it originally and strengthened capacity of local government to deliver services. Service delivery by the local bodies ensures sustainability of the activities. Unlike a project

organization, the local bodies can be held accountable by the citizens of Nepal after completion or phasing out of RWSSP-WN. All the activities conducted under the RWSSP-WN Phase I in the nine districts can be replicated in other districts of Nepal.

Policies, changes to the environment, and constraints to the approach

RWSSP-WN supported coordination and harmonization of WASH activities at the local level, and aligned its activities to the Government of Nepal's own processes, policies, rules and regulations. Most important policies, acts, rules and guidelines for RWSSP-WN were the National Rural Water Supply and Sanitation Policy, Local Self Government Act, Local Bodies Financial Administration Rules, Joint WASH Sector Review of 2011, and the National Sanitation and Hygiene Master Plan.

Mainly due to the non-conducive political environment in the country RWSSP-WN had to take some steps back from fully relying on the national systems of Nepal. The major constraint at the local level to ensuring efficient delivery of services was the lack of elected bodies at the local level. The consultant had to continue facilitation of transfer of the funds of Government of Finland to the District Development Committees. This means that the initially proposed Government to Government fund flow of investment funds did not realize.

Activities of RWSSP-WN

The activities of RWSSP-WN at district level were conducted under four components, a) hygiene and sanitation (b) domestic water supply (c) arsenic mitigation (in the three Terai districts) and (d) WASH governance. All the investment funds were channeled through the local bodies to the communities. Thus, the community-level activities were implemented the communities supported by the local bodies.

In addition to the activities conducted by the local bodies and the communities, the technical assistance team of RWSSP-WN supported and advised the nine participating districts in all aspects of the WASH program. The support to the districts was given in the form of training, on-site advisory support, model guidelines and manuals, research and development regarding pilot activities, monitoring and evaluation, and cross-learning and coordination events.

Population benefited

RWSSP-WN Phase I operated in nine districts. In each district on average six VDCs were selected as program VDCs for the implementation of the domestic water supply and arsenic components. In sanitation and hygiene a district-wide approach was adopted. Poverty, remoteness, drinking water coverage, sanitation coverage, prevalence of excluded groups and women literacy were the indicators used for ranking. However, in the three Terai districts the DDCs also considered the concentration of arsenic level as selection criteria. The following number of people benefited from RWSSP-WN under its four components.

Component	Total project targets	Cumulative achievement 15 July 2013	%	Ongoing activities as of 15 July 2013	Projected achievement
Sequential implementation of DWS schemes (pop)	80,000	141,982	177%	39,923	181,905
Nos. of DWS schemes	400	446	112%	45	491
Hygiene and sanitation (pop)	250,000	1,236,183	494%		
Nos. of toilets constructed	50,000	225,840	452%		
Nos. institutional toilets	213	284	133%	37	321
Arsenic mitigation (pop)	10,000	14,125	141%	4,866	18,991
Capacity building, income generation and environmental conservation (pop)	200,000	166,337	83%		

Health benefits

RWSSP-WN carried out a health impact study in 2013. The findings based on the qualitative research conducted show that incidence of diarrhoeal diseases has reduced after the RWSSP-WN intervention. The determinants of diarrhoea before the intervention were open defecation, contaminated food and drinking water, poor personal hygiene, and cultural taboos: no liquid fed during loose motion, and no breast milk given to children during diarrhoea. RWSSP-WN managed to address these determinants through its intervention. According to the study, the number of children experiencing diarrhoea was reduced after some time from open defecation free (ODF) declaration. Likewise, there were less malnourished children after some time from ODF declaration in the study area. Further, the respondents to the study had sufficient knowledge about the reasons and prevention of diarrhoea.

Economic benefits

As a result of the RWSSP-WN intervention, with the decrease in the incidence of diseases, the ability of people to work and earn more increased. In addition, money otherwise spent for medical treatment annually was saved. The baseline household survey of 2009 of RWSSP-WN program districts shows that among the total 55,892 households in the program districts annually NPR 10,500 on average was spent on health treatment. It can be assumed that with the reduction of diseases, the previous expenses in health treatment were – at least partly - saved.

The benefit monitoring study (2013) carried out by RWSSP-WN showed that on average two hours per household was saved after the installation of improved water supply schemes. In total 24,912 households were served under the 446 completed schemes, hence in total 49,824 hours per day have been saved. If NPR 600 is taken as the prevailing daily wage rate of skilled labor, the total economic benefit comes to NPR 1,500,000 per day due to RWSSP-WN intervention. This shows a significant long-term economic benefit to the program communities.

Also, after the installation of the improved water schemes, the communities started using the excess and waste water to maintain kitchen gardens and started vegetable farming at semi-commercial scale. Out of total 55,892 households of the program districts, in total 17,902 households (i.e. 32%) were involved in vegetable farming and earning on average NPR 3,500 per household annually i.e. in total NPR 62,657,000.

Employment generation

To implement the WASH activities the program districts created new job positions leading to the creation of new employment opportunities. In total, the program generated 898,956 paid wage-days against the total target of 968,475 wage-days. By program components, the status of employment generated is presented in the table below.

Major Components / Activities that promote employment	Cumulative Target vs. Cumulative Achievement till 15 July 2013		Total Achievement %
	Total Target (Labor Days)	Total Achievement (Labor Days)	
A. Construction of DWS schemes	543,857	482,562	89
B. Sanitation and hygiene program	243,129	189,420	78
C. Arsenic mitigation program	66,736	29,049	44
D. Environment conservation, income generation, capacity building etc.	114,753	197,820	172
Total	968,475	898,956	93

Quality, quantity, accessibility, reliability and continuity of domestic water supply

According to a benefit monitoring study conducted (2013) the increment of water consumption approximately reached to 35 liters per capita per day from 20 lpcd. By technology type, source improvement and groundwater lift schemes had the highest water consumption increment, while shallow tube wells had the lowest. The study also revealed that the net time saving to fetch a trip of

water was negative in case of hand dug wells, whereas it was 5.56 hours per household per day in the case of rainwater harvesting. The average time saved per household per day was 1.99 hours. The average increment of the reliability and continuity of the sources were respectively 1.82 months per year and 6.61 hours per day. The details of the study are shown in the table below.

Service levels/ Technology	Shallow Tube Well	Hand Dug Well	Surface Water Lift	Ground Water Lift	Rain Water Harvesting	Gravity	Source Improve ment	Aver age
Water Consumption - Before (lpcd)	25.91	17.69	14.42	23.95	26.32	20.63	16.01	20.70
Water Consumption - After (lpcd)	34.63	31.45	27.58	43.11	39.47	34.34	35.97	35.22
Increment in Water Consumption (lpcd)	8.71	13.76	13.16	19.16	13.16	13.70	19.97	14.52
Net Average Time Saved (A) (Hrs/d/HH)	0.19	-0.75	4.20	0.17	5.56	3.51	1.07	1.99
Reliability Increment, R (m/y)	0.00	4.00	3.87	1.88	1.83	1.19	0.00	1.82
Continuity Increment, C (h/d)	1.32	12.00	2.67	7.00	12.00	2.26	9.00	6.61

Achievement in sanitation and hygiene

The sanitation and hygiene component of RWSSP-WN was extremely successful. 376 VDCs were declared open defecation free (ODF) in ten districts and out of the nine RWSSP-WN program districts six districts reached 100% coverage in basic sanitation. In addition, the replicated district of Mustang reached 100% coverage. Mustang together with three RWSSP-WN program districts, Parbat, Baglung and Myagdi form the Dhaulagiri zone, which was expected to declare itself the first ODF zone of Nepal.

Due to the sanitation coverage gap and high household numbers in Terai 12% of the households in RWSSP-WN program districts still remained without basic sanitation. At regional level, the basic sanitation coverage increased 14% due to RWSSP-WN intervention whereas at national level the increment was 3%.

During the last trimester of fiscal year 2012/2013, the progress in sanitation and hygiene was impressive especially in the three Terai districts of *Kapilvastu*, *Rupandehi*, and *Nawalparasi*. By population these districts are the largest districts of RWSSP-WN. In terms of number of toilets constructed, the people of *Nawalparasi* and *Kapilvastu*, due to RWSSP-WN intervention, have constructed third and fourth largest number of toilets out of the RWSSP-WN districts.

Achievements in domestic water supply

A total of 156,107 people benefited by the completed 446 schemes, which is 173% of the total target of 90,000. Out of the completed schemes *Kapilvastu* and *Syangja* have by far the highest number of population benefiting, whereas *Nawalparasi* and *Baglung* had the lowest number of population benefiting. In addition to the completed schemes there were still 45 schemes ongoing in seven districts. Majority of these schemes were expected to be completed within two first months of the fiscal year of 2013/14.

Several rural water supply technologies were used in the program VDCs. The highest number of people benefited by new gravity schemes, followed by solar and electrical pumping 'lift' schemes, hand drilled shallow tube wells, gravity rehabilitation, point source improvement, hand dug well rehabilitation, and rain water harvesting.

According to the provision made in the Local Self Governance Act, the regular operation and maintenance management of a water supply system is one of the prime responsibilities of the users. Hence, to ensure sustainability RWSSP-WN has involved of the users throughout the implementation of the schemes from planning to post-construction. The status of O&M and management of completed schemes against selected O&M indicators is as presented in the table on the next page.

Progress status on the key O&M indicators for sustainability of DWS schemes

Key O&M Indicators	Cumulative progress up to 15 July 2013	
	No.	%
Completed DWS schemes	446	
WUSG/Cs Representing Completed Schemes	412	
WUSGs Registered under Water Resource Act	368	89
WUSCs Managed Initial O&M Fund	412	100
WUSCs Maintained Proper Financial Records/Minutes	321	78
WUSCs conducted Final Public Audit	393	95
WUSCs Selected Maintenance Workers/Pump Operators	361	87
WUSCs Started Collecting Regular Water Tariff and Payment to MWs/Operators	227	55

Note: WUSG: Water Users and Sanitation Group WUSC: Water Users and Sanitation Committee (representing WUSG)

Achievements in arsenic mitigation

In the Terai, the water coverage figures are high – most of the people already have access to water in their homes. A specific problem for the Terai districts is that of arsenic. The long-term effects of arsenic affected water can be severe. As with sanitation and hygiene, improvement of water quality is however often not a ‘felt’ need of people as the negative effects of poor quality water to people’s lives are not as tangible and direct as the effect of not having access to water as is the case in the hills.

In the case of arsenic mitigation, RWSSP-WN promoted *avoidance* of arsenic instead of the *removal* of arsenic from already contaminated water. This approach was adopted due to the previous experiences of removal strategies not being sustainable in the long-run.

As a result of the avoidance strategy, arsenic mitigation schemes were implemented to provide people in the arsenic affected areas with safe water. The technologies used for arsenic mitigation were gravity extension, shallow tube well, hand dug well rehabilitation, mini and micro overhead system with solar and electrical lifting.

Achievements in governance and capacity building

RWSSP-WN built capacity of the WASH actors and institutions at national, regional, district and village level through several types of training and capacity building activities. In addition, RWSSP-WN developed several guidelines and strategic documents, and supported the development of national level guidelines and policies. In addition, all nine participating districts have a fully equipped and functional district WASH unit that will continue their work in the second phase of RWSSP-WN.

In terms of coordination, RWSSP-WN supported activation of district WASH coordination committees (DWASHCC) and village WASH coordination committees (VWASHCC). In all the nine districts the DWASHCCs became active and the success in sanitation and hygiene campaign was largely due to the effective work of the DWASHCCs and VWASHCCs; and the ability of the local governments to mobilize all stakeholders towards achieving common goals. However, further efforts need to be made in order to have one WASH sector program and budget in place in the districts.

A proper planning process is needed in order to achieve harmonized, effective, and coordinated fund utilization and implementation of WASH program that takes equity concerns into account. Thus, RWSSP-WN supported preparation of VDC and District WASH plans in all the nine districts and in the program VDCs.

Many aspects of the model district WASH implementation guideline (2009) developed by RWSSP-WN were adopted in national level manuals and plans. DoLIDAR showed interest to replicate the model in its own WASH program implemented in all the 75 districts of Nepal and importantly, the National Sanitation and Hygiene Master Plan of Nepal drafted in 2011 – two years after the district WASH implementation guideline was finalized - is in line with the RWSSP-WN approach.

Gender equality and social inclusion

The results obtained indicate that RWSSP-WN was GESI sensitive. As a result of the intervention, people – especially women and adolescent girls - experienced reduced hardship and thus had more energy and time in their use for productive activities. In addition, due to affirmative action, RWSSP-WN achieved the targets set in terms of participation of the poorest and the excluded in community level organizations, committees, and trainings.

GESI sensitive WASH initiative aims to ensure the following:

PARTICIPATION – meaningful at all levels/decision making. **SENSITIVITY** –Language, behavior, and policies
ACCESS/CONTROL- Resources, opportunities and benefits. **STATUS** – condition/position,

Climate sustainability

RWSSP-WN activities contributed to climate change adaptation and were in line with the activities defined in the NAPA of Nepal. Climate change needs to be taken into account both in planning and implementation processes. Therefore, RWSSP-WN included climate change issues in the district strategic WASH plans, and provided practical tools for communities to address climate induced hazards e.g. through water safety planning and groundwater recharge ponds.

Resource utilization

In terms of investment costs, the Project achieved more than the expected targets both in sanitation and hygiene as well as domestic water supply without increment in the total budget and with competitive per capita investment costs.

As presented in the table below, the overall expenditure of Government of Finland funds was 95% whereas the expenditure of Government of Nepal funds was 103%. The DDCs contributed 181% against the originally budgeted amount. Remarkably, the communities contributed 216% against the originally budgeted amount. Households also invested a significant amount of money to construct household level toilets. These funds are not included in the community contribution.

S.N.	Source of Fund	Planned Budget		Actual Uses		% Utilization
		EURO	%	EURO	%	
1	GOF - Investment	7,403,940	51%	6,840,010	44%	92%
	GOF - TA	2,299,060	16%	2,348,755	15%	102%
	GOF Sub total	9,703,000		9,188,765		95%
2	GON	3,300,893	23%	3,412,454	22%	103%
3	DDC	194,058	1%	351,165	2%	181%
4	VDC	511,715	3%	511,105	3%	100%
5	Community (Cash, Kind)	938,406	6%	2,025,476	13%	216%
	Grand Total	14,648,072	100%	15,488,965	100%	

The total per capita (crude) cost on sanitation and hygiene from RWSSP-WN budget was NPR 215. Before the RWSSP-WN intervention and drafting of National Sanitation and Hygiene Master Plan the practice at the districts was to give households hardware support equivalent to NPR 1,250 to construct household level toilets. According to a crude analysis presented in the table below the costs of RWSSP-WN in domestic water supply were competitive.

Table 1 Per capita cost of DWS of different agencies

	RWSSPWN	RWSSFDB	GWS	RVWRMP	CBWSSSP (ADB/DWSS)
PCC (NPR)	3,699	3,117	6,328	6,017	5,309
Source	DWASHMIS, 15 July 2013	Annual Report, 2011	GWS/MIS	Scheme status report 2012, RVWRMP	CBWSSSP draft completion report 2012

The investment funds from Government of Nepal and Government of Finland were transferred to the District Development Funds (DDFs) of the nine districts. Through the DDFs the WASH program under 'RWSSP-WN' budget heading at local level was financed. The total expenditure of the Project at local

level including local contribution during the whole Project period was NPR 1,131,301,000. This represents 81% achievement against the targeted NPR 1,400,002,000. It is to be noted that the target was set by the districts in their annual plans. Against the financial target set in the project document more than 100% expenditure was reached.

Measured by expenditure incurred at local level (DDF, VDC, and local contribution) during the project period the domestic water component was the largest component (61%) followed by hygiene and sanitation component (21%) and governance (13%). The arsenic component was the smallest component in financial terms (6%). The expenditure by districts is presented in the below figure.

