

**A Project proposal on  
Construction of proper dish washing basin and reuse of grey water in a remote village of  
Parbat**



***Summary***

*Water is a precious commodity, so finding ways to re-use waste water, especially in arid regions is essential to sustainability. Researchers in many countries have now carried out a study of various waste water filtration systems for kitchen waste water and found that even the most poorly performing can produce water clean enough for horticulture or agricultural use. This project “A Project proposal on construction of proper dish washing basin and reuse of grey water in a remote village of Parbat” is designed to provide the villagers of Parbat district with sanitized dish washing pits with the purpose of maintaining healthy and sanitary practice. The major objective of this project is to construct sanitary dish washing pits in 100 households of Parbat district and train the villagers to reuse waste waters collected from the washing pit. The project duration is 6 months would be implemented by “Kali lamaya laghu udhyami mahila sahakari”, the women-cooperatives based in Parbat. The project aims on changing the dish washing practice and induce practice of reusing waste waters for irrigation and multi-purpose.*

**1. Need Assessment**

Water is a precious commodity, so finding ways to re-use waste water, especially in arid regions is essential to sustainability. Researchers in many countries have now carried out a study of various waste water filtration systems for kitchen waste water and found that even the most poorly performing can produce water clean enough for horticulture or agricultural use.

The International Journal of Environment Technology and Management, “Recycling domestic wastewater” is becoming an important part of water management and emerging technology and a shift in attitude to waste in the developing world means that more people would be willing to reuse this so-called gray water given the choice. Unfortunately, affordable and effective domestic wastewater treatment is not yet available particularly in parts of the world where financial and technical constraints are acute. Nevertheless domestic wastewater from showers, kitchen sinks and laundry washing in homes and offices offers a potential resource that differs from industrial wastewater.”

According to Census, 2011, the options for main source of drinking water were Tap or piped water, Tube-well or hand pumped water, Covered and Uncovered well or “kuwa”, Spout water and River or stream water, which in present context is highly polluted and unsafe to drink. In rural areas however pollution is less but there is no any other systematic procedure to get safe drinking water.

The first piped water for drinking purpose was launched in Kathmandu during the time of Bir Shumsher. Water was bought through pipes from Shivapuri area, in the north of Kathmandu and store in a reservoir in Maharajung. At present, the reservoir is known by the name of “Pani Pokhari”. In 1965, government laughed at water supplied project at Sundarijal. From the First Five Year Plan (1956-61), clean drinking water was supplied by making reservoirs. Drinking water cooperation was supply clean drinking water in various parts of the country. As a result, by 2001 AD, 52.5 % of people were able to enjoy this facility. (Prabin, 2010)

However, when it comes to utilization of waste water, not much priority is seemed to be given by government in Nepal. No doubt, water has multi-purpose rather than mere drinking and in fact, the reutilization of water also provides various benefits especially in places facing water shortages. Reutilization of wastewater is an imperative approach for safeguarding water possessions, wastewater management is not a main concern of governments, municipal authorities or industrialists because it is not treated as one of the profit-making processes. (Ajay Kumar Jha, Tri Ratna Bajracharya)

In the absence of waste treatment technologies and transmission of water-borne diseases, as is normally the case in Nepal, the environmental damage costs to the society works out to be more than the financial costs. Due to the national and international legislation and standards, some of the waste streams were being started to treat since past some years. There are a few number of wastewater treatment plants, mainly located in Kathmandu valley (Shrestha et al., 2001) but most of the plants based on central waste water treatment strategy are not operating well.

Decentralized wastewater treatments such as constructed wetlands are amongst the proficient technologies to treat wastewater in Nepal (WaterAid, 2008).

## 2. Project Area

Parbat is a district lying in Dhaulagiri zone of Western Development Region. It currently shares its border with Kaski and Syangja in the East, Baglung and Myagdi in West, Myagdi in North and Syangja and Gulmi in South. It has Kusma as its District Headquarter. Parbat is extended in an area of 494 sq.km. There are a total of 32,731 houses in the district. A total of 72,942 male and 84,884 female inhabit the district.

Parbat is a far flung hilly district in Western Nepal. The district is detached from many vital facilities and services. Illiteracy and backwardness plagues the district and people are lagging behind in terms of social development. The district has many villages where there is no easy access to basic facilities. Health and Sanitation also does not seem to be highly regarded in the village. The villagers here still wash their dishes outside the house without proper outlet and proper water basin. The way they have been washing their dishes without a proper outlet and without the basin is very unhealthy and a major reason behind spread of many diseases. Due to the lack of awareness and ignorance people don't channel the used water while doing the dishes but with proper construction of the basin and the outlet that helps reserve the used water in a small pit which can be further utilized to water the plants in the fields. While the people will be saving themselves from the spread of disease and keep the surrounding clean and healthy they will also be able to reuse the water for the crops after the construction of the proper water basin.



The people here have no basic awareness about the impact of such unsanitary way of life and moreover they don't have enough capital to spend for the construction of the basin which would prevent them from many diseases and also make the surrounding beautiful.

## 3. Project approach

The project uses infrastructure development for livelihood improvement approach. As the construction of washing bins and pits will help the villagers get better facility to practice healthy and proper washing practices, it will help to enhance their living condition. The reason behind

people not using proper facilities is not because they cannot afford, but because they are not aware of it. The project will increase their awareness and knowledge about utilizing waste waters which are collected from washing dishes. The project also uses re-usage of waste water for agriculture development approach as the waste waters will be used for irrigation purpose. The villager will be trained on using the waste waters so that their irrigation practice can go smoothly.

#### **4. Target group and beneficiaries**

The project targets 100 households of Parbat district at the beginning where the washing pits will be constructed. The basins will be used to facilitate women of Parbat district who will use it as a purpose of dish washing and maintaining sanitation and cleanliness. The washing bins can be helpful for dishwashing as well as farming purpose through the grey waters collected in the pit.

The major beneficiaries of this project are 100 families of Parbat district who have been practicing improper washing practice till date. As mentioned above, the households lack proper place to wash dishes and clothes which has resulted in unhygienic surrounding. The family members are prone to water based diseases. A proper washing bin will help the family get a well-sanitized and healthier environment. So, if the minimum size of family is 4 members, than the project aims to benefit 400 people directly. The project will further provide facility of re-using grey waters into irrigation. This process will help to solve water shortage problem for agriculture and even provide space for new irrigation plants. This will help the families to earn their livelihood in more secure ways and result in benefitting the wider population of village. This means the beneficiaries of this project is not limited to 400 people. Then again, this project is more of an act of inspiration. By observing the enhanced livelihood of some villagers that too in a low cost, it will surely inspire other villagers to invest in washing bins and pits. Therefore, this project directly serves 100 households, but indirectly benefits more than 1000 people.

#### **5. Objectives of the project**

The broad objective of the project is to improve livelihood of locals of Parbat district by providing wash-bins in their household which will help to maintain hygiene and sanitation in the village. The specific objectives include:

1. Improved sanitation and clean method of washing the dishes through construction of wash-bins in 100 household of Parbat district.
2. Induced method of recycling waste water to preserve the water resource and to boost sustainability among the villagers of Parbat district.

#### **6. Activities to be undertaken**

Following are the proposed activities that will be undertaken to meet the objectives.

### **6.1 Selection of households**

The project aims to provide 100 household of Parbat district with washing bins and pits. Therefore, on the 1<sup>st</sup> week of project, organization representatives will visit the area and select the households. The households will be selected on the basis of utmost necessity of family, area of house located, feasibility for transportation of materials. The selection will be done in collaboration with locals and leaders.

### **6.2 Transportation of the construction material to the village**

The activities will be started by transportation of construction material to the village. The materials include cement, sand, pipes, water taps and other construction materials. The materials will be transported from Kathmandu or nearby city and will require around 1 week to get transported completely. Local transportation or rented trucks will be used for materials transportation.

### **6.3 Hiring laborers and mobilizing locals for construction works**

The construction requires skilled and experienced laborers. Therefore, 3 laborers will be initially hired if available from the village and if not, from the nearby areas. Then, other local villagers will be trained to construct the washing pits and bins and hence, they will be mobilized for completing construction. Altogether, 100 households will be provided with washing pits and bins.

### **6.4 Construction of concrete wash basin**

There is a need to construct these basins in each and every household of the village. 10 to 12 square feet of basin requires 2 sacks of cement, half a mini-truck sand, 400-500 bricks and pipes according to the distance between the pits and the basin. The basin will basically be constructed in the area around the front yard of the house and a plastic pipe big enough for the waste water to flow will be attached to the basin and then where the pipe ends, a medium sized pit will be dug.

### **6.5 Collection of the waste water in pits**

The water which is used to wash the dishes and other activities in the basin will be collected in a small pit nearby connected through the plastic pipe. The grey water though not treated can be useful for irrigation and other purposes.

### **6.6 Training on re-use of waste water**

One day training will be provided to the households owning water pits and bins on the re-use of waste water on irrigation. Trainers for this will be hired by organization and the representative (male or female) from all the houses will be trained. Altogether, 100 people will be trained on re-

using the waste water. The collected water then can be used in the fields for vegetables and other crops. In this way the water will be recycled and it will support farming as well.

## 7. Project duration

The estimated project duration is 6 months, if project carries without any obstruction.

## 8. Sustainability

The sustainability of the project is ensured through the use of water pits and washing bins. Currently, the village faces a huge problem regarding improper washing practices. The availability the washing bins and pits will help for female of household to practice dish-washing properly and in easier way. This will result in cleaner and well sanitized environment. There will be less chances of water borne epidemics and less pollution. In addition, the water reused from the basins will be helpful in irrigation practices which will help to develop the environmental and livelihood status in sustainable way. Thus, the project will maintain sustainability since the use of washing bins and pits will definitely be used and it will help for many other sustainable practices.

## 9. Budget

SN	Particulars	Unit	Rate	Qty	Total (NPR)
1	<b>Materials for construction of washing pits</b>				
	Cement		850	200	170000
	Sand	cube feet	100	100	10000
	Water taps	piece	750	100	75000
	Water pipes (16 mm )	meter	50	1000	50000
	Iron	kg	90	100	9000
	Shovel	piece	800	3	2400

2	<b>Laborers</b>	5	750	90	337500
3	<b>Transportation of materials</b>				75000
4	<b>Training on reusage of waste water</b>				
	Trainers	2	2500	2	
	Training materials	ls			80000
5	<b>Miscellaneous</b>				75000
	<b>Total</b>				<b>883900</b>

In words, Eight lakhs eighty three thousand and nine hundred only.