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# Information on the Need for Promotion of Bio-Resources Conservation in Nepal's Environmental Sanitation Sector

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## Let's Capture and Utilize the Bio-resource in Nepal Sanitation Sector

### 1. Country Background

Nepal is rich in ecological, socio-cultural and economical diversity. Its topographic features range from about 70m from mean Sea level to 8000+ m with snow covered mountains in the Great Himalayan Region. So is the variation in the ecology and natural systems. Within a limit of about 200 KMs we can experience vast differences in the ecological and the socio-cultural systems. Within such an array of diversities, the economy is trying to get improved and get out of the poverty trap of about 30% of its population still living below 1 USD per day.

### 2. Observed Gaps in Bio-Resource Utilization

We can take simple examples that Nepal's bio-resources are not adequately utilized. We can see the combustion of agricultural wastes in every cluster of houses. We can also see under-utilization of the human wastes (fecal/biological) in agriculture through nutrient recycling processes. On the other side, we can see the economy being heavily dependent on imported fertilizers and pesticides which not only incur high expenses for the agriculture production, but also degrading the soil condition and loss of productivity. It indicates that Nepal's economy has not properly used the existing bio-resources available at every household level. There are some policies to support for conservation of the bio-resources, but they are still ineffective. The traditional cultural practices in agriculture and livelihood strategy of the people are not towards properly utilizing the bio-resources. The same story is applicable for the industry sector based on agriculture.

### 3. Needs for Intervention in Nepal's Environmental Sanitation Sector

It needs a detail estimation of the lost bio-resources annually.

Obviously, the conservation efforts and programs will outweigh the combustion practice or wasting the human manure and degrading the quality of water in the natural water bodies. If the 30 million populations will be encouraged and supported to utilize the freely available and wasting bio-resources, Nepalese economy and environmental condition will be improved. Technologies are available to conserve and utilize the bio-resources. Just we need a dedicated effort from the government and strong coordination for the specific purpose. The government is also trying to invest for protection of the environment. In such a context, an aggressive program for conservation with awareness and use of the bio-resources will become truly supportive and revolutionary effort for the economy and environment of Nepal.

Below are the qualitative Key Findings from the professional experience I have gained in the environmental sanitation sector in Nepal:

1. The waste products at household level are not being fully utilized for economic benefits. There is a large scope of utilization of the locally generated waste materials. So is the scope for innovation and action for improvement of the livelihood at the marginalized communities.
2. The human waste (urine and fecal matters) if managed and treated properly is one of the best examples of bio-resources awaiting proper utilization for agriculture. There are already technologies developed and promoted to build on for mass promotion. The innovation is required for devising strategies and socio-economic tools that could help to motivate the marginalized communities for proper utilization and taking sustainable benefits from human waste at the household level. The cultural and institutional barriers are to cross occupying a large space for innovation.
3. An assessment of existing and potential bio-resources at the community level will be an entry point for supporting to the local people to appraise about their lost or underutilized waste products. So innovation starts at community level.