**Resources, Recycling and waste Management** 



## Adaptation to Climate Change in Nepal

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## Abstract:

Nepal is a land-locked Himalayan nation sandwiched between China and India. Nepal is endowed with bountiful water resources comprising of more than 6000 rivers and rivulets. The crucial impact of rapid urbanization has created many problems. In Kathmandu Valley daily Water demand is 430 Million Liters but the supply is only 130 Million Liters. Numerous queues of people with buckets for fetching water are a common sight in the capital city Kathmandu. Nepal is also in the more vulnerable situation in climate change activities. It will exert additional stress to the ecological and social systems. Twenty-four glacial lakes are forecasted to cause possible outburst of flood which is now a major concern for Nepal. In Nepal Climate changes have implications on reduction of snow pack on the mountains, water supply shortages, increase forest fires, increase in extreme weather, increase demand for irrigation, decreases power generation; wells dry up due to lower water table. Climate change seeks the two actions on the mitigation of greenhouse gases and adaptation to the climate change. This paper deals with the potential threats of climate change to water Supply, agriculture and food security, temperature increase, run-off patterns, glacial melt and floods. This paper highlights the lessons learnt in the process particularly in respect of and NPK recovery in eco toilets and strategy for such toilets development in different countries. It also deals with the practices of biogas generation and community led sustainable sanitation to cope with the challenges of water resources in Nepal. The uses of decomposed faeces as a soil conditioner has been described along with the challenges and prospects of the uses of urine in agriculture as eco-friendly fertiliser in the context of Nepal. Finally the paper exhibits a comparative study of all types of dry toilet developments in developed and developing countries like Australia, South Korea, Malaysia, China, India and Nepal. In conclusion it makes a plea for the acceptance of dry toilets for planners and decision makers with a set of pragmatic recommendations.

## **Biography:**

Water Supply Engineer (1978)/ Civil Engineer-g Armenia (1981)/ MSc Civil Engineer-g Ukraine (1986) /Msc Environmental Engineer-g (2003 funded by WHO)/ Environmental Eng-g at Finland, Holland (2003)/ Environmental Eng-g Murdoch University, West Australia (2005-2007)/ Water Supply & Environmental Eng: Sydney, Australia, Thailand, Germany, the Netherlands, and China (2007-2014)/ President Lions Clubs International, Nepal/Author of many Research Papers published in International Journals e.g. Water Science and Technology and current Reviewer of various Journals likewise PhD Thesis Supervisor, Teacher of Russian Language for the Foreigners.





<u>Climate change of Nepal: Challenges and</u> <u>perspectives for future generations</u>

<u>A sustainable approach towards rural</u> <u>development: Dry toilets in Nepal</u>

<u>Climate Change Adaptation, Climate Change</u> <u>Issues of Asia, Environmental Disasters of Nepal</u>

<u>Climate change of Nepal: Challenges and</u> <u>perspectives for future generations</u>

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