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### Recipient, Award for Application of Science and Technology for Rural Development - 2010

Attribute it to the so called 'Climate Change' or, as many believe, to the 'cyclical natural phenomena' there is no denying the fact that nature has of late been manifesting itself in an unusually strange and extraordinarily unfriendly way intensifying natural hazards: floods, droughts, landslides etc.. a perceived change affecting the mountain ecosystem, biodiversity and water resources of the Himalayas is pervading not only through the length and breadth of the vast Himalayan region but all over the globe threatening lives, livelihoods and living standards of the mountain communities.

The recent cloud burst in Leh and the resultant widespread death and destruction that completely changed the landscape of many villages and habitations in the district is a living example of fury of the nature that could bring havoc on an unprecedented scale. Leh, the cold high altitude region known for its aridity with an annual rainfall of 50mm was the scene of unprecedented heavy downpour flattening even the concrete structures and brushing away everything that came its way.

On the contrary, people in this western Himalayan region heavily depend on natural resources for their livelihood and the water regimes are the key to their survival. 90% of the people in this part of the region depend on subsistence agriculture and limited livestock rearing livelihood. Glacial melt water is the only source of water for all their need which is scarce and hence precious for their sustenance.

Flash floods, deficient and erratic snowfall, outbreaks of pests, extended wintry conditions and delayed release of water from the glaciers and the resultant scarcity of water for sowing crops are some of the nature's perplexing manifestations the region has been experiencing over the last two decades.

It is widely and rightly been talked about that climate change is projected to have severe effects on water availability all around the globe. Changes in precipitation pattern could lead to a serious shortage of water for drinking and farming and there is every possibility of turning this as a major issue in the countries of the world and on this part of Asia in the coming years.

The easiest way to address the growing gap between demand and availability of water seems clear: store more water when it is available in excess and release it when it is needed.

The natural and man induced factors led us to the innovation of the technology of 'Artificial Glacier', a technology with social, economic and environmental relevance and best suited to high altitude areas across the globe. It is a technology to conserve surplus water at high altitude through an intricate network of structures, in ice form during the winter months when all sorts of activities cease due to intense cold conditions.

I have no word to express my sincere thanks and deep felt gratitude to the Bajaj Foundation for having recognized the initiatives.