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Water and Biodiversity

The United Nations' Conference on Environment and Development held in Rio de Janeiro, Brazil from June 2–14, 1992, is regarded as important international effort taken in order to protect the biodiversity on the earth. The Convention on Biological Diversity (CBD) is the first global agreement for the conservation and sustainable use of biological diversity. The International Day for Biological Diversity was established by the United Nations to increase understanding and awareness of biodiversity issues. When it was first created by the Second Committee of the UN General Assembly in late 1993, 29th December (the date of entry into force of the Convention of Biological Diversity) was officially designated to celebrate the event. However, it was not celebrated until December 2000. Later on, the UN General Assembly changed the date to 22 May, commemorating the adoption of the text of the CBD which culminated on 22 May 1992 with the Nairobi Final Act of the Conference for the adoption of the agreed text of the CBD.

Now, we are at the verge of celebrating the International Day for Biological Diversity on 22 May 2013 with the theme “Water and Biodiversity” which also coincides with the UN Year of Water Cooperation (2013). Water is essential for life. No living-being on the earth can survive without it. It is a prerequisite for human health and well-being as well as for the preservation of the environment. Unfortunately, we are facing water crisis at the global scale. Moreover, climate change is anticipated to lead to increase water scarcity along with more frequent and more extreme flooding. Rise in temperature due to global warming is accelerating glacial melt in the Himalaya. Glaciers and icecaps regulate and provide a steady flow of water. But the flow of water is reduced when the size of icecaps and glaciers is reduced. Regular water supply is necessary for maintenance of the biodiversity.

Biodiversity or biological diversity is the term given to the variety of life on the earth and the natural patterns it forms. Nepal is rich in biological diversity due to its varied climate and altitudinal ranges within short distance. Nepal comprises only about 0.1% of the terrestrial area of the earth, but it harbours large diversity of flora and fauna at genetic, species and ecosystem levels. A total of 118 ecosystems with 75 vegetation and 35 forest types are found in Nepal. Over 2% of the world's flowering plants, about 9% of the world's birds species, and about 4% of the world's mammalian species are found in those ecosystems. In Nepal, this diverse

biological resource supports directly to the livelihood improvement of the people, agricultural/forest productivity, human health and nutrition.

Biodiversity, thus, has a stake with a valid claim on the nation's limited water resource. Regular flow of water will maintain biodiversity and water regulation will only be ensured by maintaining or restoring the ecosystems. More mouths to feed, more water and food we need in the years to come. Hence, a strategy of ecosystem management that maintains all the ecosystem functions and services will reduce water crisis on the one hand, and support biodiversity conservation on the other hand.