



# STATUS OF FRESH WATER PONDS IN THE PRESENT CLIMATIC SCENARIO

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**Abstract:** The freshwater has been of vital importance to living beings for sustains of life and maintaining the balance of nature. Water is the nature's most wonderful, essential and an invaluable gift of living organisms. Ponds is an area filled with water, artificial or natural, sensitive, adaptive and vital ecosystem. Ponds enhanced regional biodiversity and provide biogeochemical, hydrological, education, economy, recreation and aesthetic function. Growing development is causing threat to the existence to these important ecosystems. Climate change has created potential major threat to pond biodiversity. Existing evidence for the potential impact of climate change on pond ecosystem indicating that the interaction between direct climate change and anthropogenic pressure that is likely to define way in which biodiversity is affected. It is necessary to formulate correct measures for the conservation of pond biodiversity.

**Index Terms:** Water, pond, biodiversity, climate change, conservation.

## I. INTRODUCTION

A fundamental of earth is abundance of water which covers about 71 % of its surface area with an average depth of 3000 meters. About 97.6% of the water existing on the earth distributed in oceans and of the 2.4 % of fresh water. Only less than 1 % is available for human consumption and other activities (Wetzel, 2001). Man utilizes water available from sources like lakes, ponds, rivers, streams, ground water, bogs and brooks etc.

Ponds are historically and ecologically important ecosystem representing around 30 % of the global surface area of standing water (Dowing et.al.2006, 2010). Ponds serve as cheap and convenient source of water for drinking, domestic, irrigation and industries. The services provided by the pond are ground water recharge, food alleviation, high local and regional aquatic biodiversity, culture, aesthetic and recreation (Chia et.al.,2009; Takaura, 2012; Cereghino, 2004; Yadav et.al. 2017). Ponds also provide an underutilized resource for teaching and training of the next generation of limnologist (Mullins and Doyle, 2019).

The present article a brief of the likely effect of climatic change upon the pond ecosystem is presented and possible action is safeguard the pond biodiversity in the face of climate change are discussed.

## II. IMPORTANCE

Ponds are shallow bodies of standing water with muddy or silty bottom allowing light to penetrate the whole water column (Caduto, 1990). Globally ponds play important role at carbon sequestration as much as carbon as the ocean and 12% of the global carbon pool play important role in global carbon cycle (Dowing et. al. 2008; 2010). Ponds play a potential role in rain water harvesting and recharge of ground water, thereby contributing to the overall maintenance of ground water level (Bhagyaleena and Gopalan, 2012). They also play an important place for people of all ages to find out about wetland wildlife and almost everybody knows