

## ROLE OF HYDRIC SOILS IN ECOLOGICAL BALANCE IN VARIOUS CLIMATE FACTORS

**\*DR.D.VIJAYA KUMAR & \*\*CH.NIRANJAN REDDY**

**\*PRINCIPAL, KODADA INSTITUTE OF TECHNOLOGY FOR WOMEN, KODADA - TELANGANA.**

**\*\*ASSITANT PROFESSOR, DEPT.OF.CHEMISTRY, KITS FOR WOMEN, KODADA - TELANGANA.**

### **ABSTRACT:**

*Hydric soils provide numerous important services for people, fish and wildlife such a protecting and improving water quality providing habitats for fish and wildlife, storing flood waters , maintaining surface flow during dry periods and reducing soil erosion. The prolonged presence of water creates conditions that favour the growth of specially adapted plants and promote the development of characteristic (hydric) wetland soils.*

**Keywords:** *Hydric, soils, Ecological balance, Climate Factors.*

### **INTRODUCTION:**

Hydric soils are the areas where water covers the soil is present either at (or) near the surface of the soil all year (or) including during the growing season, water saturation determines the soil develops and the types of plants and animals communities living in and on the soil. Water lands occur naturally on every continent. The main wet land (hydric soils) types are swampy, marshy, bog and few.

Water saturation (hydrology) largely determines the soil, develops and the types of plants and animals communities living in and on the soil, hydric soil may support total aquatic and terrestrial species. The prolonged presence of water creates conditions that favours the growth of specially adapted plants (hydrophytes) and promote the development of characteristic hydric soils. The water in wet lands (hydric soils) is either fresh water, brackish (or) salt water, wet lands can be tidal or non-tidal, the largest wet lands include the Amazon river basin, the west Siberian plain, the pant anal in south. America and the Sundarbans in the Ganges– Brahmaputra delta. The UN Millennium Ecosystem Assessment determined that environmental degradation is more prominent

within wet land systems than any other ecosystem on earth. Constructed wet lands used to treat municipal and industrial waste water as well as storm water runoff. They may also play a role in water sensitive urban design.

Wet lands (hydric soils) vary widely be caused regional and local differences in soils , topography, climate hydrology , water chemistry , vegetation and other factors including human disturbance. Indeed wet lands are found from the tundra to the tropics and an every continent except Antarctica. Two general categories of wet lands are recognized: coastal on tidal wet lands and inland (or) non – tidal wet lands. Coastal / tidal wet lands in the United States, as their name suggests are found along the Atlantic, pacific, Alaskan and gulf coasts. They are closely linked to our nation’s estuaries where sea water with fresh water to form an environment of varying sanities. The salt water and the fluctuating water buds combine to create another difficult environment for most plants. Consequently, many shallow coastal areas are un-vegetated mud flats (or) sand flats. Some plants, however have successfully adapted to this environment.

Certain grasses and grass like plants that adapt to the saline conditions form the tidal salts marshes that are formed along the Atlantic, gulf and pacific coasts. Mangrove swamps with salt loving shrubs or tree are common in tropical climates such as in southern florida and Puerto rico. Same tidal fresh water wet lands from beyond the upper edges of tidal salt marshes where the influence of salt water ends.

### **NEED OF STUDY:**

Wet lands (hydric soils) are considered to have unique ecological features which provide numerous products and services humanity. The major services include carbon- sequestration, flood control, ground water recharge, nutrient removal, biodiversity maintenance. Wet lands (hydric soils) are important in supporting species diversity because wet lands provide an environment where photosynthesis can occur and where the recycling of nutrients can take place, they play a significant role in the support of food chains. 10 more wet lands (hydric soils) of India get international importance tag in a major recognition towards government of India’s effort towards conservation, restoration and rejuvenation of its wet lands. Ramgar on 28<sup>th</sup> Jan 2020 declared. 10 more wet lands sites from India as sites of international importance. The aim of the ramgarlist is to develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of the ecosystem components, processes and benefit.

The government has recently in July launched the new “NAL SEJAL” which aims to provide piped water connection to every house hold by 2024.

**CONCLUSION:**

Wet lands (hydric soils) in India account for 4.7% of the total geographical area of the country, these wet lands provide numerous ecosystem goods and services, but are under stress reasons for wetlands loss in India are urbanisation, land use changes and pollution, there is no proper regulatory frame work for conservation of wet lands in India, future research should focus on institutional factors influencing their conditions.

In 2007, the UNESCO estimated that global climate change is expected to become an important driver of loss and change in wet land ecosystem these findings are important for India which has been experiencing the flood drought flood cycle for the last 2 decades. In the past six months, ministry of environment forest and climate change has prepared a four prolonged strategy for the restoration of wet lands which includes preparing a base live data , wet land health cards, enlisting wet land mitras and preparing targeted and management plans. The ministry would be working closely with the state wet land authorities to ensure wise use of these sites.

**REFERENCES:**

1. Balesdant . J & Balabane M, 1996 , Major contribution of roots storage suffered from maize cultivated soils, soil boil bio chem, 1261-1263.
2. Dominate .T. Juvinezz. J. J. Gioia .C. Measey . G.J & Lavella , P. 2006.the values of soil- animals foe conservation biology. Eur .J.Soil , Biol . 60:817-819.
3. KuzyyoKov.Y,2002. Review .factors affecting rhizosphere priming effects, journal of plants nutrition & soils science.
4. RasseD.P.Rumpel.C&Didvae .M.F. 2005 , Is soil carbon mostly root carbon mechanics for a specific stabilisation plant and soil.
5. Employment news (weekly) , new delhi 15-21 Feb 2020 wet lands