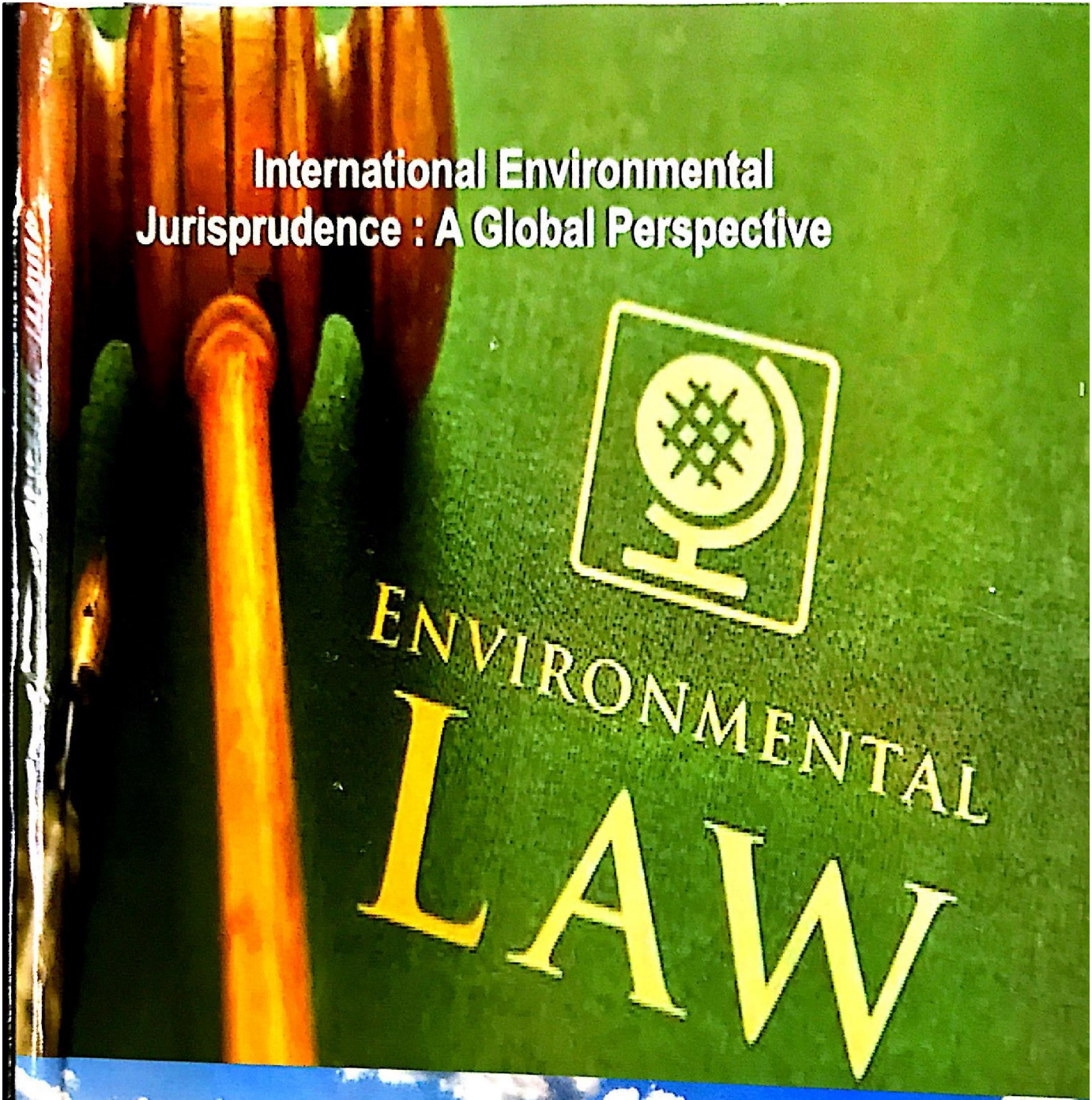
International Environmental Jurisprudence : A Global Perspective



ENVIRONMENTAL LAW

Editors : Dr. Priyadarshini Agnihotri
Dr. Santosh Kumar Tiwari

JRF

Edition 1, Vol.1, 2018

IMPACTS OF ELECTROMAGNETIC RADIATIONS ON PLANTS, HUMAN HEALTH AND ENVIRONMENT

Meenal Gupta[1*], P. K. Singh[1], Ritu Yadav[2], Pushpa Singh[3], Smita Shukla[3]

[1]School of Basic Sciences and Research, Sharda University, Greater Noida-201310, India

[2]Department of Chemistry, Dr. H. S. Gour University, Sagar, 470 003 (M. P.), India

[3]Department of Zoology, SSN College University of Delhi, New Delhi-110036, India

Radiation is the emission or transmission of energy in the form of waves or particles through space or through a material medium. These radiations are harmful to immune system of the human body which is already reported. These reports clearly show that effects of various types of radiations is gradually increasing which is responsible of decreasing immune system. Radiation can penetrate into living cells and results in the transfer of radiation energy to biological material. The damage to a living cell by radiation takes place at molecular level. It is already reported that the absorbed energy can cause various changes to DNA, membrane lipids, and protein. It can increase the reactive oxygen species and can break chemical bonds and causes ionization of different biologically essential macromolecules. Damage to the cellular membrane release the hydrolytic enzymes responsible for various catabolic processes and leads to cell death.

It may occur either directly by release of energy from the tissue, within the structure of the molecule itself or indirectly by formation of highly reactive free radicals which interact with sub cellular constituents. Membrane can be easily damaged by the per-oxidative decomposition of their phospholipids. In addition, a