

# Preface

Cyclic nitramine explosives RDX, HMX, and CL-20 are commonly synthesized as most widespread conventional explosives. Their use in military munitions largely for the protection of national boundaries and mining operations, has resulted in widespread contamination of soil and water reservoirs. Residual explosives have the potential to move into soils as well as surface and ground water and affect various ecological and human receptors. Therefore, U.S. Environmental Protection Agency (USEPA) has included seven nitro-substituted explosives including TNT and RDX as priority pollutants. Labscale studies have revealed that TNT, RDX, and HMX are toxic to a wide spectrum of organisms including bacteria, algae, plants, earthworms, mammals, and humans. No doubt, traditional treatments of ammunition wastes, like open detonation and burning, adsorption onto activated carbon, photo-oxidation, etc., are not only costly, but also damaging the environment. Therefore, scientists are interested to develop an alternative technology based on microbes and plants which will be not only cost-effective, but also environment friendly.

In view of above facts, the editor has made his sincere efforts to compile the latest developments on biological remediation of explosive residues in an edited volume which will serve as a ready reckoner to the scientists, policy makers, teachers and students, and military personnel for the remedial measures to decontaminate the explosive residues in soils and waters by microbes and plants, alone or in combination.

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