

CHAPTER – I

INTRODUCTION

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Endosulfan is a globally used pesticide which causes a great threat to the balance of the environment. It comes under the organochlorine group which is mainly hazardous for the existence of life, during its whole run from the time of spraying till its degradation. It has two isomers, alpha and beta. Both will be degraded into different substrates, among which endosulfan sulfate is more toxic compared to others. Its extensive use throughout the world has made it a hazardous chemical to human beings, which has become the reason for its ban in most of the countries.

Organochlorine pesticides are being extensively used in agriculture and disease control purposes for the last more than fifty years worldwide and their long persistence in soil have been reported. This pesticide residue is capable to affect the soil fertility, crop productivity, ecological imbalance and caused human health problems (Verma et al., 2011). In developing countries such as India where the economy depends largely on agricultural products, one cannot afford to loose the harvest to pests. In India, fifteen to twenty percentage of the total harvest is destroyed by pests resulting in uncontrolled use of pesticides by the Indian cultivators. Endosulfan is a widely used insecticide in India to maintain crops and food productions, fight against infecting pests, safeguard humans from vector borne diseases and related epidemics (Ayub et al., 2003). However, this pesticide has significant toxicity to non-target organisms including humans. The major routes of exposure to these chemicals are through food chain series, dermal contact, respiratory tract etc. The workers in the field and those involved in the application of these insecticides are at high risk of toxicity manifestations by these chemicals.

Endosulfan pesticide was used widely on crops like cashew, cotton, tea, paddy, fruits and others until 2011, when the Supreme Court banned its production and distribution. The health effects of the chemical include neurotoxicity, late sexual maturity, physical deformities, poisoning, among others. People, especially newborns, have suffered deformities, health complications and loss of family members due to exposure to the agrochemical. Over 20 years of aerial spraying on cashew plantations in Kerala and other

states has left many with mental and physical disorders. Studies have established linkages between aerial spraying of the pesticide and the growing health disorders in Kasaragod district. Over the years, other studies confirmed these findings, and the health hazards associated with endosulfan are now widely known and accepted.

OBJECTIVES OF THE STUDY

- To examine the impact of endosulfan on social life in Karadka
- Analyze the broader social consequences of endosulfan-related health crises
- To Assess the impact on local economies and livelihoods.
- Examine existing regulations and government interventions related to endosulfan use.
- To make recommendations to mitigate the social impact of endosulfan and prevent similar issues in the future.

LIMITATIONS OF THE STUDY

- The time limit was the major limitation of this study.
- Endosulfan victims involve relatively small sample sizes due to the localized nature of the exposure.

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