

# Risk Assessment from Injection of Carbon Dioxide into Sea

**Poonam Kumari**

*ABES Engineering College, Ghaziabad*

---

## ABSTRACT

Capturing of CO<sub>2</sub> from various industries and injecting into deep ocean water is being considered as a mitigating technique for decreasing the CO<sub>2</sub> concentration in the atmosphere. However, this leads to the reduction in pH of water in Ocean nearby the site of injection which has a toxic effect on marine organisms .The exposure of CO<sub>2</sub> to Ocean water takes place through various routes such as pipeline failure or diffusion of the liquid CO<sub>2</sub> layer at the bottom of the ocean which leads to mortality of aquatic life due to sudden reduction in pH. Based on mortality data of various species as a function of pH, a model is formed in this paper to give an idea of the fraction of species that will get extinct on exposure from faulty pipeline or diffusion of liquid layer due to induced pH reduction. In addition to the suggested failure routes, this paper also gives some recommendations regarding risk management.

**Keywords:** Carbon Sequestration, Hazard Identification, Risk Assessment, Risk Zonation