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٤٧١٥

A STUDY ON NITROGEN FIXATION IN THE GULF OF SUEZ

BY

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Thesis

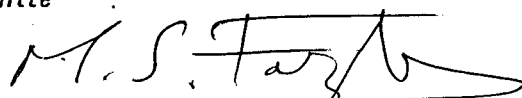
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INTRODUCTION

INTRODUCTION

Nitrogen in the atmosphere is a diatomic gas, it consists of molecules made up of two atoms each, denoted N_2 . It makes up almost 80 percent of the atmosphere. Molecular nitrogen is nearly inert because the chemical bond joining the atoms is exceptionally strong and stable, it is a triple bond and large quantity of energy must be supplied in order to break it.

Nitrogen is a scarce nutritional resource, it is an essential constituent of proteins. High amount of it is required by all forms of life, and thus, be regarded as the "element of princes" for man.

Land surface receives nitrogen from many different sources, principally from fertilizer, biological nitrogen fixation, manure, organic matters, and waste water. Nitrogen can be lost from the land surface through run-off into streams, denitrification and volatilization into the atmosphere and leaching into ground-water.

1.1 The Nitrogen Cycle

Nitrogen compounds are present in aquatic systems as cellular constituents, non-living particulate matter, soluble organic compound and dissolved inorganic ions. The reactions that interrelate these forms are collectively known as the nitrogen cycle which represents the flow of nitrogen form