

# EFFECT OF ALGAL BIOFILM AND OPERATIONAL CONDITIONS ON NITROGEN REMOVAL IN WASTEWATER STABILIZATION PONDS



MOHAMMED BABU



## **Table of Contents**

Chapter 1	Introduction .....	1
Chapter 2	The effect of baffles on algal-bacterial biofilm structure and composition of zooplankton in wastewater stabilization ponds.....	21
Chapter 3	Comparison of hydraulic flow patterns of four pilot scale baffled wastewater stabilization ponds .....	49
Chapter 4	Nitrification in bulk water and biofilms of algae wastewater stabilization ponds .....	62
Chapter 5	Nitrification rates of algal-bacterial biofilms in wastewater stabilization ponds under light and dark conditions.....	74
Chapter 6	Effect of operational conditions on the nitrogen removal in a pilot scale baffled wastewater stabilization ponds under tropical conditions .....	87
Chapter 7	Nitrogen mass balances for pilot scale biofilm stabilization ponds under tropical conditions.....	100
Summary .....	119	
Samenvatting.....	124	

## **Curriculum vitae**