Contents

1. Introduction	1-6
1.1 Significance of the study	2
1.2 Literature review	3
1.3 The study area	5
2. Materials and methods	7-10
2.1 Sea level measurements	7
2.2 Salinity measurements	8
2.3 Current measurements	8
2.4 Meteorological observations	9
3. Theory	10-18
3.1 Tides and harmonic analysis	10
3.2 A model for tidal choking	13
3.3 Water exchange	17

4. Data treatment	19-23
4.1 Sea levels	19
4.2 The choking model	20
4.3 Fresh water supply	21
4.4 Meteorological data	22
4.5 Salinities	22
5. Results	23-30
5.1 Harmonic analysis	23
5.2 Tidal choking	24
5.3 The model predictions	25
5.4 Fresh water inputs	26
5.5 Salinity and temperature	27
5.6 Water exchange	29
5.7 Residence time	29
6. Discussion and conclusions	31-34
7. Literature cited	35-36
8. Tables and Figures	
8.1 Tables	
8.2 Figures	
Annexes	
3.2.1 Bernoulli regime and choking coefficient	
3.2.2 MatLab program for the choking model	
4.1.1 Fluxes and channel velocities	•