

Table of Contents

ACKNOWLEDGEMENTS	i
List of tables	iv
List of figures	vi
INTRODUCTION	1
MATERIALS AND METHODS	19
Study area	19
Ecological parameters	21
Hydrographic conditions	21
Nutrients	21
Chlorophyll <i>a</i>	21
Suspended particulate matter	23
Sedimentation rate	23
Size fraction analysis of deposited sediments	25
Total carbonates and organic matter in sediments	25
Petroleum hydrocarbons	26
Heavy metals	29
Biological parameters	30
Coral Community structure	30
Population density of zooxanthellae	33
Coral diseases	35
RESULTS	36
Ecological parameters	36
Hydrographic conditions	36
Nutrients	40
Chlorophyll <i>a</i>	48
Suspended particulate matter	48
Sedimentation rate	54
Total carbonates in sediments	65
Total organic matter in sediments	68
Petroleum hydrocarbons	72
Heavy metals	80
Biological parameters	92
Coral Community structure	92
Population density of zooxanthellae	113
Coral diseases	113
DISCUSSION	120
Hydrographic conditions	121

Eutrophication	125
Suspended particulate matter	130
Sedimentation rate	133
Oil pollution	139
Heavy metals pollution	144
Variations of biological parameters between studied reef sites	148
Coral cover, hard coral density, species richness, species diversity and evenness index	148
Population density of zooxanthellae	152
Coral breakage	152
Dominant species of hard corals	157
Sea urchins	159
Soft corals	161
Coral diseases	163
SUMMARY AND CONCLUSION	170
REFERENCES CITED	178
APPENDIX	