

Acknowledgements

I would like to thank my advisor and co-advisor, Dr. Phattrawan Tongkumchum and Dr. Metta Kuning for their useful guidance and supportive. Also thanks to Prof. Dr. Don McNeil, Asst. Prof. Dr. Wanchamai Karntanut and for their great comments, Asst. Prof. Dr. Apiradee Lim, Dr. Sarawuth Chesoh for their helpful advice on my thesis, Greig Rundle, Fa-ezah Wasoh for editing my English.

I would like to thank to National Institute of Coastal Aquaculture (NICA) and Southeastern Regional Meteorological Center, Songkla province for providing useful data, graduate school for funding.

Finally, I would like to thank my parents, Mr. Abdulrohim Salea my lovely husband, siblings and friends for their encouragements.

Sameerah Hajimasaid