ACKNOWLEDGMENTS

This thesis is for Prof. Gaylord V. Skogerboe.

This study was supported by The Royal Golden Jubilee Ph.D. Program (RGJ). In addition, International Water Management Institute (IWMI) supports two training courses that are Remote Sensing and GIS course at Asian Institute of Technology (AIT) and Surface Energy Algorithm for Land (SEBAL) course at IWMI-HQ, Sri Lanka. For MODIS and Landsat 7 images, they are supported by Geo-Informatics and Space Technology Department Agency (Public Organization) or GISTDA. Also, I would like sincerely like to acknowledge the efforts of many people who contributed to the research and to this thesis in particular. Without them, the work would never have been undertaken.

Technically, I am profoundly indebted to my thesis advisors Assoc. Prof. Dr. Kobkiat Pongput, Assoc. Prof. Dr. Viraphol Taesombut, Assoc. Prof. Dr. Jesda Kaewkulaya, and Assoc. Prof. Dr. Honda Kiyoshi for their direction, suggestion, and encouragement. Addition, I am greatly indebted to Mr. Tissa Bandaragoda, Dr. Hugh Turral, and Dr. Mobin-ud-Din Ahmad of IWMI, who give me valuable knowledge during my visit to IWMI-HQ at Colombo, Sri Lanka, in April to June 2003 and Dr. David Tarboton of Utah State University (USU), who is my advisor during my visit to USU in June 2004 to April 2005.

Finally, my appreciation devote to my parents and sisters who always give me hearty supports.

Preeyaphorn Kosa January 2007