

LIST OF FIGURES

Fig. 1.1	Trend of World Fisheries and Aquaculture Production.	2
Fig. 1.2	Global Trends in the State of World Marine Stocks since 1974.	2
Fig. 1.3	Curve of Renewable Stock-Flow Resources	4
Fig. 1.4	Two Fishing Grounds of Different Productivities.	7
Fig. 1.5	Primary Stakeholders in Fisheries Management.	10
Fig. 1.6	Components of Vulnerability.	11
Fig. 1.7	Geographic Characters of the Lagoon Environment.	14
Fig. 1.8	Image on Fishery Resource Marketing Flow from Fishers to Consumers.	20
Fig. 2.1	Map of Chilika Lagoon.	26
Fig. 2.2	Trend of Mean Maximum/Minimum Temperature in the Chilika Lagoon Region.	29
Fig. 2.3	Trend of Rainfall in the Chilika Lagoon Region.	31
Fig. 2.4	Trend of Fish Landing Quantity from 1929 to 2008.	33
Fig. 2.5	Location of Fishing Grounds in Chilika Lagoon.	37
Fig. 2.6	Starting Year of Loan Finance for Fishing Equipment.	44
Fig. 3.1	Map of Saroma Lake.	60
Fig. 3.2	Trend of Maximum/Minimum Temperature in the Saroma Lake Region.	62
Fig. 3.3	Trend of Rainfall in the Saroma Lake Region.	63
Fig. 3.4	Historical Changes in Japan's Coastal Fisheries Institutions.	65
Fig. 3.5	Comparison of Fishing Rights Category between Meiji Fishery Law and Fishery Law.	68
Fig. 3.6	Fisheries Coordinating Organizations at Multilevel Scales.	69
Fig. 3.7	Trend of Fish Landing Quantity and Fishing Population in Japan.	70
Fig. 3.8	Map of Aquaculture Grounds in Saroma Lake.	73
Fig. 3.9	Flow Chart of Scallop Culture in Saroma Lake.	74

Fig. 3.10	First Mouth and Old Mouth.	77
Fig. 3.11	Trend of Scallop Landing Production in the Saroma Lake Region.	81
Fig. 3.12	Annual Trend of Iced-Over Water Days in Saroma Lake.	84
Fig. 4.1	Hydrological Map of Songkhla Lake.	90
Fig. 4.2	Monthly Mean Temperature in the Songkhla Lake Region.	94
Fig. 4.3	Trend of Rainfall in the Songkhla Lake Region.	95
Fig. 4.4	Fishing Gears Used in Songkhla Lake through Questionnaire Survey.	98
Fig. 4.5	Monthly Trend of Fish Landing Quantities in Four Interconnected Lakes of Songkhla from January 2003 to December 2008.	100
Fig. 4.6	Seasonality of Fish Landings in Songkhla Lake from 2003 to 2008.	101
Fig. 4.7	Range of Water Depth in Fishing Grounds.	102
Fig. 4.8	Fishing Grounds in Songkhla Lake.	102
Fig. 4.9	Pak Ra Wa Water Gate.	106
Fig. 4.10	Trend of Fish Landings in Songkhla Lake Watershed from 1977 to 2006.	109
Fig. 4.11	Ratio of Alternative Jobs in Songkhla Lake.	113
Fig. 4.12	Institutional Structure of Fishery Co-Management Regime in Songkhla Lake.	116
Fig. 4.13	Location and Establishment Year of Conservation Zones in Songkhla Lake.	117
Fig. 5.1	Historical Trends of Fishery Resource Stocks through Comparative Analysis.	130
Fig. 5.2	Three Factors behind Closure of Sea Mouth.	137
Fig. 5.3	Maps of Saroma Lake with Social Backgrounds behind Opening of First Mouth.	140
Fig. 6.1	Scenery of Dengai Pahad Watershed.	149
Fig. 6.2	Institutional Structure of DPPIMP.	151
Fig. 6.3	Nutrient Loads from Upstream to Downstream of Saroma Lake.	154
Fig. 6.4	Trends of Performances on Fishers-Based Forest Management.	157
Fig. 6.5	Community Network for Songkhla Lake Watershed Restoration and Development.	165

Fig. 6.6	Emerging Arena for Integrated Songkhla Lake Watershed Management.	167
Fig. 6.7	Map of Kuraburi Estuary Watershed.	168
Fig. 6.8	Diagram on NRM Network Building in Kuraburi Estuary Watershed.	175
Fig. 7.1	Scope of Integrated Lagoon Fisheries Management. . .	180
Fig. 7.2	Three Basic Approaches on Long-Enduring CPR Institution Enhancement.	185
Fig. 7.3	Sea Mouth Management Strategies.	188
Fig. 7.4	Characteristics of Lagoon Watershed Management in Four Case Study Sites.	191
Fig. 7.5	Framework for Integrated Lagoon Fisheries Management.	197
Fig. 8.1	Trajectories toward Integrated Lagoon Fisheries Management in Case Study Sites.	204
Fig. 8.2	Way Forward for the Development of Integrated Lagoon Fisheries Management.	206