

FISHERIES AND AQUACULTURE DEVELOPMENT IN SABAH

*Implications for Society,
Culture and Ecology*



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Implications for Society, Culture and Ecology

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CONTENTS

List of Figures	vii
List of Tables	vii
List of Appendices	ix
Foreword	x
Preface	xi
Acknowledgements	xiii

Chapter 1

Aquaculture Transition in Western and Northern Sabah: Sociocultural and Ecological Aspects	1
---	---

Fadzilah Majid Cooke

Chapter 2

The Challenges and Prospects of the Aquaculture Industry in Sabah	11
--	----

Wong Hock Tsen & Lee Hock Ann

Chapter 3

The Impact of Climate Change on Aquaculture Production in Sabah	39
--	----

Lee Hock Ann, Ejria Saleh, Wong Hock Tsen & Alameen Abdul Majeed

Chapter 4

Philippine Labour and the Flow of Live Grouper across the Malaysia-Philippines Border	55
--	----

Alameen Abdul Majeed & Fadzilah Majid Cooke

Chapter 5

Community Participation in the Planning Stage of the Tun Mustapha Park Establishment	79
---	----

Sofia Johari, Fadzilah Majid Cooke & Ejria Saleh

Chapter 6

Fishers and the Adaptation of Traditional Knowledge in the Fish Cage Industry	101
--	-----

Nivasini Tamothran, Fadzilah Majid Cooke & Sofia Johari

Chapter 7

Local Entitlements and Commercial Shrimp Farming in Sabah, Malaysia	117
--	-----

Joyiemini Min, Fadzilah Majid Cooke & Gusni Saat

List of Contributors	135
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Index	139
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LIST OF FIGURES

Figure		Page
4.1	Cross-border flow of finance and grouper in the live reef fish trade	59
4.2	Stopping points for vessels to collect live grouper	65
5.1	Map of Tun Mustapha Park showing Marudu Bay	84
5.2	Community resource use map produced from a mapping activity	88
5.3	Typical guard house at a sea cucumber farm	92
6.1	The TGGG Hybrid	105
6.2	Fish cage of Kampung Tampakan using wood and plastic combination	109
7.1	<i>Togonok</i> sacred stone in mangrove area	127
7.2	Sketch map of livelihood areas in Kampung Sungai Eloi, Pitas, Sabah	128

LIST OF TABLES

Table		Page
2.1	Import and export of fisheries commodities in Sabah 1992 – 2010	15
2.2	Gross fish aquaculture production in Sabah, 2012 – 2013	17
2.3	Estimated aquaculture production in Sabah, 2005 – 2013	18
2.4	Estimated gross brackishwater aquaculture production in Sabah, 2012 – 2013	19
2.5	Estimated gross freshwater aquaculture production in Sabah, RM('000) and metric ton, 2012 – 2013	19
2.6	Number and area of freshwater fish ponds by division and distribution of freshwater fish fry in Sabah, 1994 – 2009	20
2.7	Wholesale value of brackishwater aquaculture production in Sabah, RM('000), 2005 – 2013	21
2.8	Wholesale value of freshwater aquaculture production in Sabah, RM('000), 2005 – 2013	22
2.9	Wholesale value of brackishwater aquaculture production in Malaysia, RM('000), 2007 – 2013	24

2.10	Wholesale value of freshwater aquaculture production in Malaysia, RM ('000), 2007 – 2013	25
3.1	Major climate impact change in Malaysia, 1990 – 2010	41
3.2	Variables in the ARDL Model	44
3.3	Stationarity tests	45
3.4	ARDL model for freshwater aquaculture production	45
3.5	ARDL model for brackishwater aquaculture production	46
3.6	Cointegration relationship test for freshwater aquaculture production	47
3.7	Cointegration relationship test for brackishwater aquaculture production	48
3.8	The estimates of fluctuations in freshwater aquaculture production caused by a shock in climate change	49
3.9	The estimates of fluctuations in brackishwater aquaculture production caused by a shock in climate change	50
3.10	The impulse responses of freshwater aquaculture production to a shock in climate change	50
3.11	The impulse responses of brackishwater aquaculture production to a shock in climate change	51
4.1	Estimated price for the main targeted species of live grouper at Kudat, 2015	67
4.2	Dynamics of the trade in live grouper trade and their effects towards the ship captains	70
5.1	Factors influencing transfer of information on TMP in Damaian and Aman	96
6.1	Application of adaptation knowledge in fish cage culture	107
6.2	Fishers' knowledge of weather patterns at Kampung Tampakan, Kudat	110
6.3	Application of adapted knowledge of weather patterns in fish cage culture	112
7.1	Household income	121
7.2	Total number of households that depend on mangroves	125
7.3	Cultural significance of practices by belief systems	129

LIST OF APPENDICES

Appendix		Page
1	Estimated nett price for live grouper in Kudat from January to December 2015	75
2	GPS picture of vessel owned by LLFB in Kudat used by the ship captain who originated from the Phillipines	76

FOREWORD

Sociologists, economists and marine scientists working together to produce a book on the sociological context and implications of aquaculture production is a welcome addition to socio-ecological knowledge and to the general literature on Sabah's development. The chapters in this book are empirically-based, focussing on social-cultural, economic and ecological change of the Marudu Bay, a large part of which lies within the Tun Mustapha Marine Park, which is the Malaysian side of what is known as the Coral Triangle. Well documented are the macro aspects of change in economy and climate that have relevance to the long term sustainability of the aquaculture industry in Sabah. Experiencing change at a micro level the practical adaptation of livelihoods by coastal communities are examined through extended fieldwork. Such fieldwork enables valuable in-depth analyses of micro level experiences of livelihood change by coastal communities through aquaculture production. The changes in livelihood, when analysed by the team, do not happen in a vacuum, nor are they inevitable. They are driven by opportunities and limits that are, in nature, ecological (carrying capacity and climate change effects), socio-cultural (availability or otherwise of social capital) and economic (capacity to meet, keep abreast or negotiate demands of the aquaculture industry or be excluded from the industry altogether).

More importantly, such empirically-based work (in terms of data collection and analysis), from the perspective of Universiti Malaysia Sabah (UMS), is an important contribution to Sabah's development in the building of human capital. Led by a senior sociologist, internationally known for her work on natural resource governance, the team is composed of mid-career economists and marine scientists as well as postgraduate students of UMS who will form the next generation of social scientists. Building the next generation of researchers who can work in a multi-disciplinary manner is one of the key aims of the Ministry of Education Malaysia in providing UMS with the Niche Research Grant 0007. In this instance, it is money well spent.



Prof. Dr. Shahril Yusof

Deputy Vice Chancellor (Research and Innovation)
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December 2016

PREFACE

This book is innovative in the way in which it views adopted paths of economic development not as an inevitable given but as a dilemma.

First, it views the development of the aquaculture industry in Sabah in terms of a dilemma for governance and social life. In the book, governance dilemmas emerge in the management of border issues created by the live reef fish trade, given that the trade depends on social networks, business linkages and labour relations that transcend national boundaries so that strict border regimentation (over labour flows and citizenship issues) have to be relaxed.

Second, chapters in the book view technology as a source of social dilemma. Ecological degradation from the new technology of shrimp farming and from cultivating the hybrid grouper create dilemmas for local community governance. In this regard, the destruction of mangrove for shrimp farming has created social division within communities which can only be resolved through counter-discourses and practices on development that provide alternatives to environmental destruction.

Third, the diversification of local economies through adoption of hybrid grouper generates long term implications for the sustainability of fisheries in terms of changes in ecology. One concern is over the extent to which fisheries stock from the wild could sustain demand for live feed for the cultivation of the hybrid. The dilemma is clear because small scale artisanal fishers are increasingly dependent on aquaculture for their livelihoods as part of household economic diversification strategy. The ecological change associated with aquaculture production coupled with the industry's own potential vulnerability to climate change raises questions concerning its long term sustainability.

Lastly, conservation practices as translated in the formation of the Tun Mustapha Marine Park in the area, originally meant for the public good through the protection of biodiversity is often accompanied by concerns over exclusion for populations living in and around the newly gazetted Park.

In the Tun Mustapha Park area certain exclusionary processes have begun to emerge through the appointment of ‘guardians’ of a coastal area at the exclusion of other potential users. Yet, in conservation language this practice serves as a ‘model conservation area’ that deserves emulation.

Lastly, this book is one in a series of publications to come from Universiti Malaysia Sabah’s research into ‘ecological aquaculture’ – the socio-economic component. The contributing authors of this book have benefited from the creativity that comes from collegial teamwork and good leadership.

Editors

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In terms of administration we wish to thank Universiti Malaysia Sabah's Centre for Research and Innovation as represented by Deputy Vice Chancellor Research and Innovation, Professor Dr Shahril Yusof; the Director of Research and Innovation, Associate Professor Dr Lee Ping Chin as well as her staff. Their encouragement in facilitating the quick publication of this book is exemplary, for which we are truly grateful.

Our supporters in the field are many. To the villagers of Marudu Bay in the districts of Kudat and Kota Marudu, as well those in Pitas District, and the fisheries business establishments at Kudat, all of whom were our mentors and partners in research, we thank you for sharing your time and understanding. We hope the partnership will continue because our project is ongoing. We further wish to express appreciation of help given to us in many different ways by the Sabah Fisheries Department, Sabah Parks and Worldwide Fund for Nature, Malaysia, for access to statistics and documents.

The book chapters have been peer reviewed; suggestions for improvement have been much appreciated and included in the final versions. To the reviewers we are grateful.

