

Book Outline:

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Title:

“Asian Agriculture in a climate change-driven and increasingly risky world” “Working Title)

Editors: Hermann Waibel¹, Sabine Liebenehm² and Ernah³

General Idea of the Book:

This book is synthesizing over forty years of field research in agriculture in Asian developing countries including in East Asia, South Asia and South East Asia. The monograph will take stock of the development and the transition of agriculture by offering a comprehensive review of development events and policies on a country level. These are combined with case studies based on own field research. The experience of some 20 researchers who belonged to the same research group (90 % are PhD students of H Waibel), provides a rich source of empirical evidence and lessons learned.

The overall context of the book is the increasing global risks including, in particular, climate change risks.

Part I

1: Review of Asian Agricultural Development

(this chapter reviews the major milestones of agricultural development in the Asian developing countries, including East Asia (China), South Asia (India, Bangladesh) and South East Asia (Indonesia, Thailand, Vietnam) during the past 50 Years. Both significant events of the green revolution and post green revolution period will be synthesized).

(Hermann Waibel; Germany and Sabine Liebenehm, Canada)

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Chapter 2: Climate Change and Weather Extremes in Asia

(This chapter reviews evidence from the literature about changes in climate and its effect on agriculture in Asian developing countries. Hereby we are setting the scene for specific country case studies presented in this book).

(Shi Min, China; Sabine Liebenehm, Canada; and Hermann Waibel, Germany)

Chapter 3: A review of Risk and Agriculture: methodology and empirical evidence

(The concept of risk has always played an important role in the analysis of Agricultural Systems. The advancement in the research about risk in recent years is remarkable. This chapter reviews the latest methodologies on risk as applicable to agriculture).

(Sabine Liebenehm, Canada and Miriam Al Lily, Bahrain)

Part II: Country Case Studies

Chapter 4: Philippines

(Review of agricultural development and policy; case studies a) fruit tree development in mountain areas and b) integrated rice fish farming in the lowlands)

(Justus Wesseler, The Netherlands and Gesa Horstkotte-Wesseler, Belgium)

Chapter 5: China I

(Review of agricultural development and policy with two case studies from Southwest China: a) Carbon balances of rubber land use systems and b) development of off-farm labour markets and its implications for small-scale farming)

(Min Shi, Shaoze Jin, Beijing and Haowen Zhuang, all China)

Chapter 6: China II

The role of biotechnology in Chinese agriculture with a case study of Bt Cotton)

(Review the rapid expansion of genetically modified crops in China, its later decline and summarize two case studies on Bt cotton and Farmer Field Schools in Shandong Province, China)

(Diemuth Pems, USA and Wu Lifeng, China)

Chapter 7: Vietnam I

(Review of agricultural development and policy; with two case studies: a) impact of climate change on rice farming; b) vulnerability to poverty of small-scale farmers in the Central Highlands)

(Houng Jaretzky, Vietnam and Marc Völker, Thailand)

Chapter 8: Vietnam II

(The role of sand extraction from the Mekong River and its implications for agriculture in the Delta)

(Jonathan Pincus, USA and Hermann Waibel, Germany)

Chapter 9: Laos

(Review of agricultural development and policy with a case study on the effect of farming systems development for food security)

(Priyanka Parvathi, India and Hermann Waibel, Germany)

Chapter 10: Thailand I

(Agricultural development and policy change since the nineteen eighties)

(Nipon Poapongsapon, Thailand and Hermann Waibel, Germany)

Chapter 11: Thailand II

(Integrated and organic farming with case studies from rice, vegetables and fruit trees)

(Thanaporn Krasuaythong and Somkid Naprom, both Thailand)

Chapter 12: Thailand III

(Agricultural Transformation and the future role of rural villages)

(Chompunuch Nantajit, Thailand and Hermann Waibel, Germany)

Chapter 13: Bangladesh

(Review of agricultural development and policy with a case study on the role of Homestead fish ponds for food security in Bangladesh)

(Badrun Nessa Ahmed, Bangladesh)

Chapter 14: Indonesia

(Review of agricultural development and policy with a case study on oil palm in Indonesia: lessons learned)

(Eko Ruddy Chayadi and Ernah, both Indonesia)

Chapter 15: India

(Review of agricultural development and policy with a case study on organic pepper)

(Priyanka Parvathi, India/Germany)

Part III: The Future

Chapter 16: Singapore

(Singapore's target of 30 % nutritional self-sufficiency by 2030)

(Tomoki Fujii, Singapore; Christoph Waibel, Switzerland and Hermann Waibel, Germany)

Chapter 17: Special topic

(Multiple Borrowing and Over indebtedness in rural Asia)

(Bezawit Beyene Chichaibelu, and Hermann Waibel, both Germany)

Chapter 18: Synthesis and Outlook

The risks ahead and possible ex- ante coping strategies: synthesis and policy recommendations

(Hermann Waibel, Germany; Sirman Purba, Indonesia and Sabine Liebenehm, Canada)