Water Institutions: Policies, Performance and Prospects

Contents

Preface

1. Water Allocation and Management in Hawaii: A Case of Institutional Entropy, by Chennat Gopalakrishnan
   1.1 Introduction 1
   1.2 Institutions: An Overview 1
   1.3 Institutional Entropy 3
   1.4 Hawaii’s Water Institutions: An Evolutionary Perspective 4
   1.5 Performance of Hawaii’s Water Institutions: A Case Study 12
   1.6 Hawaii’s Water Institutions: A Case of Institutional Entropy 18
   1.7 Future Directions 19
   1.8 References 21

2. Institutions for Resources Management: A Case Study from Sri Lanka, by Asit K. Biswas
   2.1 Introduction 24
   2.2 Public and Private Institutions 25
   2.3 Analysis of a Sri Lankan Institution 29
   2.4 Concluding Remarks 44
   2.5 References 45

3. Water Institutions in India: Structure, Performance, and Change, by R. Maria Saleth
   3.1 Introduction 47
   3.2 Objectives and Scope 48
   3.3 Analytical Framework 48
   3.4 Water Institutional Environment: An Overview 52
   3.5 Water Institutional Structure: A Macro Perspective 54
   3.6 Water Institutional Structure: Micro Perspective 65
   3.7 Evaluating the Performance of Water Institutions 69
   3.8 Institutional Change: Nature, Extent, and Causes 72
   3.9 Concluding Remarks 77
   3.10 References 78

4. Uphill Flow of Reform in China’s Irrigation Districts, by James E. Nickum
   4.1 Introduction 81
5. Institutions for Water Management in Mexico, by Cecilia Tortajada and Nancy Contreras-Moreno

5.1 Introduction 99
5.2 River Basin Commissions, 1946-1986 100
5.3 Factors which influenced the performance of the river basin commissions 118
5.4 Regional approach for water policies and institutions 122
5.5 Concluding Remarks 125
5.6 Acknowledgements 127
5.7 References 127

6. Water Institutions in the Middle East, by Peter Beaumont

6.1 Introduction 131
6.2 The Beginnings of Water Institutions 131
6.3 Islam and Water 133
6.4 Modern Water Institutions 135
6.5 National Case Studies 136
6.6 Overall Assessment of Water Institutions in the Middle East 150
6.7 References 152


7.1 Introduction 154
7.2 The Southern African Hydropolitical Complex 154
7.3 History of Development in the South African Water Sector 157
7.4 An Assessment of Post-Apartheid Institutional Development 164
7.5 Concluding Remarks 168
7.6 References 168

8. Property Rights, Water Rights and the Changing Scene in Western Water, by Charles W. Howe

8.1 Introduction 175
8.2 The Definition and Evolution of Property Rights 175
8.3 “Optimising” the Property Rights System 176
8.4 The Evolution of Western U.S. Water Rights 178
9. Finding a Modern Role for the Prior Appropriation Doctrine in the American West, by Ray Huffaker

9.1 Introduction 187
9.2 The Prior Appropriation Doctrine 188
9.3 Flaws in Principle and in Application 189
9.4 A Modern Role for the Prior Appropriation Doctrine 196
9.5 Concluding Remarks 198
9.6 References 198