

Content

Bruno Wenn

WELCOME ADDRESS	1
------------------------------	----------

Scott Templeton and David Zilberman

TECHNOLOGY, INCENTIVES, INSTITUTIONS AND SUSTAINABILITY	3
----------------------------------------------------------------------	----------

1 Conservation Technology and Incentives	4
2 Markets and Property Rights for Natural Resources	7
3 Purchasing Funds for Environmental Services	10
4 Other Institutions for Management of Natural Resources	12
5 Management of Environmental Risks	13
6 Global Cooperation to Manage Climate Change, Biotechnology, and Sustainable Development.....	16
7 References	17

Eyal Benvenisti

THE LEGAL FRAMEWORK OF JOINT MANAGEMENT INSTITUTIONS FOR TRANSBOUNDARY WATER RESOURCES: ANCIENT PRACTICES INFORMING CONTEMPORARY REGIONAL COOPERATION	21
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------

1 Introduction	21
2 The Lessons of Ancient Traditions.....	22
3 Collective Action as the Key to the Sustainability of Ancient Water Uses.....	27
4 Ancient Traditions and Contemporary Challenges	31
5 Institutional Responses to the Challenges of Transboundary Collective Action	46
6 Conclusions.....	58

Claudia Ringler

THE ROLE OF ECONOMIC INCENTIVES FOR THE OPTIMAL ALLO- ATION AND USE OF WATER RESOURCES – CASE STUDY OF THE DONG NAI RIVER BASIN IN VIETNAM.....	61
1 Introduction	61
2 Background on the Study Site.....	62
3 Water Management and Water Use Efficiency.....	63
4 Modeling Framework.....	65
5 Scenario Analysis.....	67
6 Conclusions.....	74
7 References	77
8 Annex	79
9 Appendix – Additional Equations.....	89

Knut Bourquain

ARE THERE HUMAN RIGHTS IN INTERNATIONAL LAW GUARANTEEING INDIVIDUAL FRESHWATER ACCESS?	93
1 Introduction	93
2 Freshwater access within the current international water law	94
3 Freshwater access within the international human rights instruments.....	96
4 Possible specification of the existing law in order to improve its efficiency	99
5 Conclusion	100

Jenniver Sehring

**'DO NOT FIX THE PIPES, FIX THE INSTITUTIONS THAT FIX THE PIPES'
- WATER GOVERNANCE AS A CRUCIAL FACTOR FOR SUSTAINABLE
AND EQUITABLE WATER MANAGEMENT 101**

1 Introduction 101

2 Managing Water – from sectoral to integrated approaches 102

3 What is Water Governance? 105

4 Challenges of realization 111

5 Conclusion 115

6 References 115

Walter Huppert

**'PRINCIPAL-AGENT' PROBLEMS IN WATER MANAGEMENT
– INVITING RENTSEEKING AND CORRUPTION 117**

1 Introduction 117

2 Problem analysis 117

3 Discussion of the findings 118

4 Conclusions 121

5 References 122

Wolfgang Bichmann

WATER AND HEALTH 123

Sabine Lattemann

SEAWATER DESALINATION – ENVIRONMENTAL IMPACTS OF BRINE AND CHEMICAL DISCHARGES ON THE MARINE ENVIRONMENT.....	131
1 Introduction	131
2 Physical properties of desalination plant reject streams.....	132
3 Chemical constituents of desalination plant reject streams.....	133
4 Estimates of chemical loads discharged into the Arabian Gulf	137
5 Chlorine loads.....	140
6 Copper loads	140
7 Antiscalant loads	140
8 Environmental fate and impacts of chlorine	141
9 Environmental fate and impacts of copper	141
10 Environmental fate and impacts of antiscalants	142
11 Discussion.....	143
12 Acknowledgements	144
13 References	144

Veronika Deffner

A THEORY-DIRECTED PROBLEM ANALYSIS IN THE SECTOR OF URBAN WATER MANAGEMENT IN DEVELOPING COUNTRIES	149
1 Area of Conflict Between Geographical Development Research and Development Cooperation.....	150
2 The Meaning of Socio-Cultural Aspects of Projects in the Water Sector.....	151
3 The Project Example: „Assainissement de la Ville de Mahajanga (ASSMA)“.....	154
4 Socio-Geographical Approach to a Problem Analysis in the Sector of Urban Water Management	155

X

Content

5 Problem Analysis 159

6 Necessity to Consider the Concepts of Social Sciences
Within the Frame of Technical Development Cooperation..... 164

7 References 166

P. Michael Schmitz

CLOSING REMARKS 169

ANNEX..... 171