Contents

Pı	refaceis
	troduction: Supplying the population as societal
D	iana Hummel
P	art A: The analytical framework
	iana Hummel, Christine Hertler, Steffen Niemann, Alexandra Lux, edric Janowicz
1	The demographic background
2	The central analytical concept: Supply systems
3	Research object: Interactions between demographic processes and transformations of supply systems



Part B: Case studies

Christine Hertler				
1	Modeling food supply and demography in prehistoric			
	human populations	73		
	A challenge: Reconstructing prehistoric populations 74 — Hominins as users in			
	supply systems 76 – Habitats and resource dynamics 83 – Early hominins in their			
	habitats 87 – Hominin migrations 92 – Conclusions 98			
Si	teffen Niemann			
2	-L	99		
	The densely populated north of Namibia 103 – Migration and resource-distant			
	population concentration 105 — IWRM and its specific spatial conception 113 — 'Area of alimentation' and 'area of consumption' 118 — Conclusion 124			
C	edric Janowicz			
3	The world goes urban: Food supply systems and			
	urbanization processes in Africa	129		
	Global hunger and the Malthusian legacy 131 – The world goes urban:			
	Urbanization processes in the 21st century 136 - Feeding African cities:			
	Accra as case study 140 - Conclusions 158			
A	llexandra Lux			
4	Shrinking cities and water supply	161		
	Facets of demographic shrinkage 162 – Effects of demographic trends on water			
	consumption 164 – Consequences for water supply—learning from eastern Germany			
	171 – Impulses for future decision-making: Uncertainty and adaptability 174 –			
	Conclusions: Designing infrastructure using the concept of supply systems 178			
D_{i}	iana Hummel			
5	Population changes, water conflicts, and governance			
	in the Middle East	181		
	Resource scarcity, population dynamics and conflict 183 – Population dynamics the			
	Jordan River Basin 185 – Water supply systems in the Jordan River Basin 194 –			
	Potentials and risks of a virtual water strategy 202 - Conclusion 209			

Part C: Synthesis	Part	C:	Syn	the	sis
-------------------	------	----	-----	-----	-----

Diana Hummel, Christine Hertler, Cedric Janowicz, Alexandra Lux, Steffen Niemann

1	Synopsis of case study results	213
2	Building sustainable supply systems: Requirements and prerequisites	233
3	Conclusions and perspectives	249
Re	ferences	255
Lis	st of figures and tables	291
Αŀ	out the authors	293