

Sustainability and the Art of Long-Term Thinking

**Bernd Klauer, Reiner Manstetten,
Thomas Petersen, and Johannes Schiller**

**With contributions from
Beate Fischer, Frank Jöst, Mi-Yong Lee,
and Konrad Ott**

Translated by Kathleen Cross

 **Routledge**
Taylor & Francis Group
LONDON AND NEW YORK

earthscan
from Routledge

Contents

<i>List of figures</i>	xi
<i>List of tables</i>	xiii
<i>Preface</i>	xv
<i>Foreword – Malte Faber</i>	xix

PART I

Sustainability and time 1

1 Different approaches to sustainability policy 3

- 1.1 *Time* 3
- 1.2 *Academia and sustainability policy* 5
- 1.3 *Persistence as an expression of the time inherent to things* 9
- 1.4 *The time for action: political judgement* 11
- 1.5 *The conceptual framework of stocks as a heuristic for sustainability policy: themes and structure of the book* 12

2 Sustainability: theory and policy 16

- 2.1 *Sustainable development: nice sounding but meaningless or a sound strategy for future-oriented policy making?* 16
- 2.2 *The origin of the concept of sustainability* 17
- 2.3 *The philosophical debate about sustainability* 19
- 2.4 *Operationalising sustainability* 25
- 2.5 *Sustainability policy and the concept of stocks: shortcomings and ways to ameliorate them* 27

PART II

The conceptual framework of stocks 31

3 The perspective of stocks 33

- 3.1 *Origins of the concept of stock and its German translation Bestand* 33

3.2	<i>Aim of the conceptual framework of stocks</i>	35
3.3	<i>Framing the problem, using a systemic approach and adopting a stocks perspective</i>	36
4	Material stocks	43
4.1	<i>Definitional approach</i>	43
4.2	<i>Time horizon and timescale under consideration</i>	43
4.3	<i>Definitions</i>	44
4.4	<i>An equivalent definition of persistence</i>	47
4.5	<i>Examples of material stocks</i>	48
4.6	<i>Reasons for the persistence of material stocks</i>	49
4.7	<i>Empirical information about stocks</i>	50
5	Immaterial stocks and institutions	53
5.1	<i>What are immaterial stocks?</i>	53
5.2	<i>The observability of immaterial stocks</i>	54
5.3	<i>Behaviour and behavioural patterns</i>	56
5.4	<i>Behavioural patterns and understanding actions</i>	57
5.5	<i>Behavioural patterns, regularity and rule</i>	59
5.6	<i>Rules and the study of rules: theories of institutions</i>	61
5.7	<i>On the connection between institutions and other immaterial stocks</i>	65
6	The persistence of institutions	68
6.1	<i>Two theoretical approaches to understanding the persistence and changeability of institutions</i>	68
6.2	<i>Institutional economics and the issue of persistence</i>	69
6.3	<i>Arnold Gehlen's philosophical theory of institutions and the question of persistence</i>	75
6.4	<i>The legitimacy of institutions as a factor in their persistence</i>	89
6.5	<i>The stocks perspective in relation to institutions</i>	93
7	Judgement	98
7.1	<i>What is judgement?</i>	98
7.2	<i>Knowledge, science and politics</i>	100
7.3	<i>Difficulties associated with 'scientific knowledge'</i>	103
7.4	<i>Practical knowledge</i>	105
7.5	<i>Practical knowledge and judgement</i>	106
7.6	<i>Characterising judgement</i>	107
7.7	<i>Judgement and science</i>	113
7.8	<i>Judgement in politics and sustainability policy</i>	114

8 Time and the practical dimension of the concept of stock	119
8.1 <i>Preliminary comments</i>	119
8.2 <i>Theoretical and practical dimensions of the concept of stock</i>	120
8.3 <i>Time</i>	120
8.4 <i>A sense of time: two examples</i>	127
8.5 <i>Conclusion: the stocks framework and judgement</i>	133
PART III	
Applying the stocks framework	137
9 Shaping institutional change in the course of contamination management in Saxony-Anhalt	141
9.1 <i>Introduction</i>	141
9.2 <i>The problem of inherited contamination in eastern Germany</i>	143
9.3 <i>Exemption from liability for inherited contamination in Saxony-Anhalt</i>	146
9.4 <i>Success factors</i>	149
9.5 <i>Summary: the importance of a sense of time</i>	152
10 Ways of achieving sustainable land use in Germany: a stocks-based analysis	154
10.1 <i>The German government's sustainability target</i>	154
10.2 <i>Past development trends in land dedicated to human settlements and transport infrastructure</i>	155
10.3 <i>Factors influencing the development of land use</i>	158
10.4 <i>Discovering windows of opportunity for land use governance</i>	166
10.5 <i>Conclusion</i>	170
PART IV	
The art of long-term thinking	175
11 The stocks framework as a heuristic for sustainability policies	177
11.1 <i>The stocks framework as a heuristic</i>	177
11.2 <i>A reminder: the core elements of the stocks framework</i>	177
11.3 <i>Weaving together a heuristic for sustainability policies</i>	186
11.4 <i>Possibilities and limitations of the heuristic</i>	199
12 Applying the heuristic: key elements of a sustainable inland shipping policy	201
12.1 <i>Applying the heuristic to inland shipping policy</i>	201

x	<i>Contents</i>	
	12.2 <i>How can politicians manage inland shipping in Germany in a sustainable way?</i>	202
	12.3 <i>Reflection</i>	217
13	Stocks: a schooling in long-term thinking	219
	13.1 <i>Begin with things as they are</i>	219
	13.2 <i>A focus on 'time'</i>	220
	13.3 <i>Judgement and developing a 'sense of what is essential'</i>	221
	13.4 <i>The art of long-term thinking</i>	222
	<i>Bibliography</i>	223
	<i>Index</i>	238
	<i>Persons index</i>	244