

Table of content

List of figures.....	4
List of tables	5
List of abbreviations	6
1. Introduction	7
2. Climate change in urban areas in Germany.....	9
2.1. Observed changes worldwide and in Germany	9
2.2. Projected changes worldwide and in Germany	11
2.3. Climate change in urban areas.....	13
3. Climate change adaptation in urban areas	16
3.1. Adaptation and adaptation strategies	16
3.2. The local scale matters.....	20
3.3. Urban areas are key	21
4. Barriers to adaptation	24
4.1. Defining key terms	24
4.1.1. Adaptation.....	24
4.1.2. Barriers to adaptation	25
4.2. Explanation of the underlying framework.....	26
4.3. Literature review to summarize barriers to adaptation into clusters	30
4.3.1. Conflicting timescales and conflicts of interest	36
4.3.2. Leadership.....	37
4.3.3. Resources.....	37
4.3.4. Science/scientific understanding	38
4.3.5. Governance and institutional constraints	38
4.3.6. Lack of awareness and communication.....	39
4.3.7. Attitudes, values and motivations	39
4.3.8. Politics	40
4.3.9. Adaptation process	40
5. Methodology	41
5.1. Setting, context and selection of case studies.....	41
5.2. Methods.....	42
5.2.1. Data collection	42
5.2.2. Data analysis	43
5.3. Introduction to the cases and status of adaptation	44
5.3.1. Karlsruhe	45

5.3.2.	Aachen.....	45
5.3.3.	Essen.....	46
5.3.4.	Saarbrucken (German: Saarbrücken).....	47
5.3.5.	Bad Liebenwerda.....	47
5.3.6.	Nuremberg (German: Nürnberg)	48
5.3.7.	Jena	49
5.3.8.	Syke	49
5.3.9.	Regensburg	50
6.	Results	51
6.1.	Overall patterns of barriers encountered across all cities.....	51
6.2.	Barriers in the nine cities	53
6.3.	Adaptation barriers by phase and stage in the process.....	57
6.3.1.	Barriers to climate change adaptation in the understanding phase	59
6.3.2.	Barriers to climate change adaptation in the planning phase	60
6.3.3.	Barriers to climate change adaptation in the managing phase.....	62
6.4.	Sources of barriers	63
6.5.	Origins of barriers	64
6.6.	Aids and advantages to avoid barriers	66
6.7.	Strategies used to overcome barriers.....	68
7.	Discussion	72
7.1.	Frequency of types of barriers	72
7.2.	Barriers encountered per stage	74
7.3.	Sources and origins of barriers.....	75
7.4.	Aids and advantages to avoid barriers	76
7.5.	Strategies used to overcome barriers.....	77
8.	Conclusion.....	78
References	80	
Appendix	95	
A1 Basic information on interviews.....	95	
A2 Interview script	96	
A3 Typologies of barriers, strategies, and aids and advantages.....	100	
Barriers.....	100	
Strategies	104	
Aids and advantages.....	106	

Statement of Originality.....	109
Acknowledgements.....	110