Table of Content

Prefac	ee of the Editors	I
Prefac	e and Acknowledgements of the Author	III
Table	of Content	VII
List of	f Figures	X
List of	f Tables	XI
List of	f Acronyms	XII
1	Introduction	1
1.1	Background of the project and the study context	2
1.2	Research objectives	5
1.3	Structure of the study	6
2	Theoretical considerations	9
2.1	Perception, knowledge, learning and behavior change	9
2.2	Uncertainty and its role in the innovation adoption process	13
3	Methodology, research process and data	17
3.1	Case study design	17
3.2	Selection of cases and study region	18
3.3	Research process and methods	20
3.3.1	Qualitative research methods	20
3.3.2	Quantitative survey methods	23
3.4	Challenges inherent in the research design	24
4	Experiences with fragmented innovation systems and	27
4.1	network brokerage in the NMR of Vietnam	
4.1	Abstract	
4.2	Conceptual framework	
4.3	•	
4.3.1	Communication and the degree of similarity	
4.3.2	Knowledge intermediaries provide bridging functions	
4.3.3	Implications for developing and transitional country agriculture	32
4.4	Background: Reforms in the agricultural innovation system and innovation in smallholder pig husbandry in mountainous NW Vietnam	33
4.4.1	The research and extension arena: Uplands, farmers and the role of	22
	ethnicity	33

VΙΙ

4.4.2	An extension system in transition	33
4.5	Case selection, methods and data analysis	35
4.6	Results	37
4.6.1	A diversifying innovation system	37
4.6.2	Limited system cohesion	38
4.6.3	System fragmentation along ethnic boundaries	39
4.6.3.1	The case of the H'mong: Weak external ties and a strong focus on the community	39
4.6.3.2	The case of the Black Thai: Diversification and strong linkages with public system actors	40
4.6.3.3	The case of the Kinh: Outward orientation and a shift towards private actors	41
4.6.4	Central actors as potential nodes of communication	42
4.7	Discussion	46
4.8	Conclusions	48
5	Group-based learning in an authoritarian setting? Novel extension approaches in Vietnam's northern uplands	49
5 5.1		
	extension approaches in Vietnam's northern uplands	50
5.1	extension approaches in Vietnam's northern uplands Abstract	50
5.1 5.2	extension approaches in Vietnam's northern uplands Abstract	50 50 51
5.1 5.2 5.3	extension approaches in Vietnam's northern uplands Abstract	50 51
5.1 5.2 5.3 5.4	extension approaches in Vietnam's northern uplands Abstract	50 51 52
5.1 5.2 5.3 5.4 5.4.1	extension approaches in Vietnam's northern uplands Abstract	50 51 51 52 52
5.1 5.2 5.3 5.4 5.4.1 5.4.2	extension approaches in Vietnam's northern uplands Abstract	50 51 52 52 53
5.1 5.2 5.3 5.4 5.4.1 5.4.2 5.4.3 5.4.4	extension approaches in Vietnam's northern uplands Abstract	505152525353
5.1 5.2 5.3 5.4 5.4.1 5.4.2 5.4.3 5.4.4 5.4.4.1	extension approaches in Vietnam's northern uplands Abstract	50515252535354
5.1 5.2 5.3 5.4 5.4.1 5.4.2 5.4.3 5.4.4 5.4.4.1	extension approaches in Vietnam's northern uplands Abstract	50515252535454

6	Why do people not learn from flood disasters? Evidence from Vietnam's northwestern mountains	61
6.1	Abstract	62
6.2	Introduction	62
6.3	Excess water, anthropogenic interference and attribution theory	63
6.4	Mountainous northwestern Vietnam in October 2007	65
6.5	Interdisciplinary approach to data collection and analysis	68
6.6	Flood perceptions and governance: Local perspectives and scientific findings	69
6.6.1	Institutions of water management and flood handling	69
6.6.2	Hydrological explanation for the flood of 2007	71
6.6.3	What triggered the event from the local people's point of view?	73
6.6.4	Facts and perceptions of agro-environmental impacts	74
6.6.5	Flood impact on household economy	76
6.7	Local responses and local non-responses	77
6.8	Discussion	78
6.9	Conclusions	80
7	General discussion	81
7.1	The micro level: Smallholders' management of uncertainty and the role of ethnicity	82
7.1.1	Effects on learning	84
7.1.2	Experiential learning to reduce uncertainty?	86
7.2	The macro level: Enabling contextual factors regarding institutional innovation to reduce uncertainty	87
7.3	Concluding remarks	90
8	Summaries	93
8.1	Summary: "We Vietnamese do new things differently" – Facing uncertainty in agricultural innovation	93
8.2	Zusammenfassung: "Wir Vietnamesen gehen neue Dinge anders an" – Der Umgang mit Unsicherheit bei der Innovationsübernahme im Agrarbereich	95
9	References	
•		
10	Annex	109