Enhacing cities' capacity to manage vulnerability to climate change
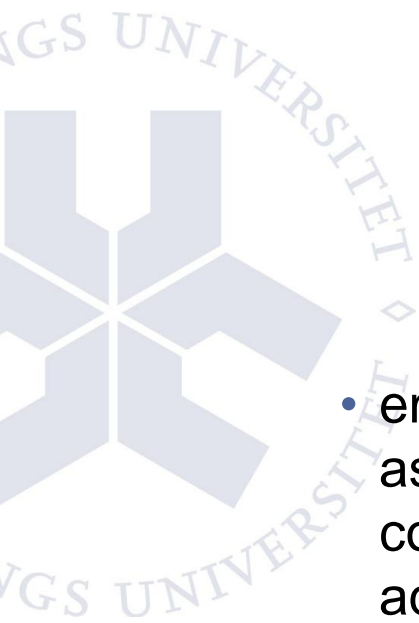### Anna Jonsson, CSPR
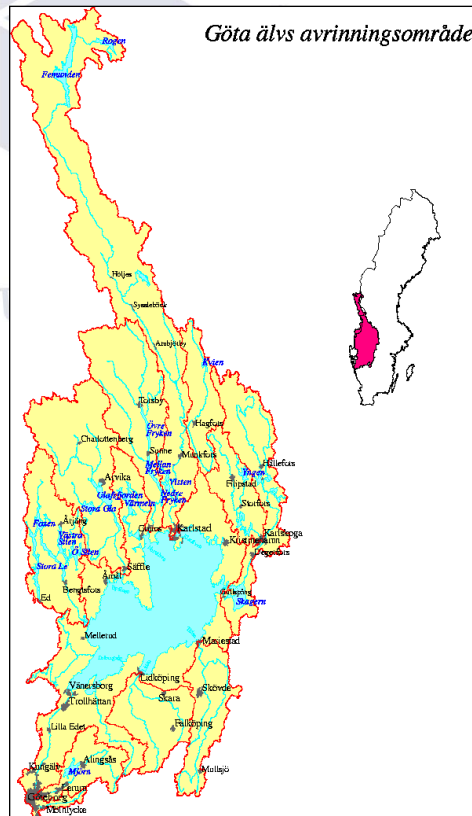
(financed by FORMAS 2007-10)

Aims of the project

1. **Develop techniques/tools for integrated vulnerability assessment with a focus on social science perspectives**

2. **The techniques should be useable**

3. **Co-learning: combining practical knowledge of lay experts and academic knowledge of vulnerability and its components**

- emphasize the qualitative aspects of vulnerability assessments, where vulnerability is seen as "a context in which climate risks are dealt with and adapted to" (Adger, 2006:273) intended to compliment quantitative assessments of the elements of vulnerability in the form of various indices

Case area: lower Göta Älv catchment

- Gothenburg: Gullbergsvass
- Lilla Edet: Knutpunkt Lödöse

Göta älvs avrinningsområde

Gullbergsvass Gothenburg	Lödöse Station Area Lilla Edet
City planning	City planning
Water and sanitation	Water and sanitation
Environmental management	Environmental management
Traffic	
Railroads (reg)	
Energy	
Parks	
Real Estate Management	

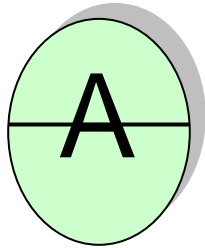**Participatory vulnerability assessment exercises conducted in the Gullbergsvass and Knutpunkt Lödöse cases.**

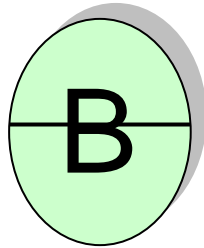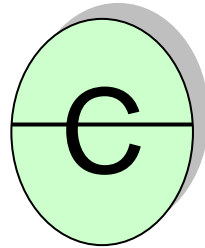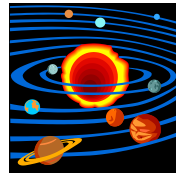|	AIM	MAIN VULNERABILITY ELEMENT	SCALE	DESIGN/ INTERMEDIARY OBJECT
A. Broad Risk Identification	risk brainstorm	Exposure	Global, regional, national and local	Brainstorm/Whitebord
B. Climate change related risks		Exposure	Local: the municipality borders	Facilitated group discussions/ppt presentation
C. Socioeconomic stressors	To identify, rank the main social change that affect the system	Exposure	national	Quaestionnaire
D. Downscaled socio-economic scenarios	To identify the most sensitive sectors and activities	Sensitivity	Moving from global to local	Questionnaire
E. Multi-sectoral analysis	To overlay sensitivity of different sectors	Sensitivity	Local: case areas	Overlay ersises/ Maps of case area
F. Adaptive Capacity	To identify and rank main factors of adaptive capacity	Adaptation capacity	Local Municipal administration	Playing cards/ Sun feather
G. Identification of key actors	Identify actors that can/should contribute to the adaptiation process	Adaptation capacity	Local Municipal administration	Planetary system
H. Evaluations	Evaluate the usefulness of the tool	Process feedback loop	All participants	Cross
I. Debriefings	Scrutinize the co-learning process	Process feedback loop	Research participants	Semi-structured group interview

The co-learning process

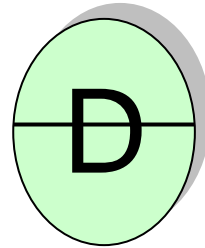**Processmöte A-D**

Möte 1 — Erfarenhets-utbyte

A — Kunskapsbehov & beslutssituationer

B — Sårbarhetsbedömning innehåll

C — Sårbarhetsbedömning, resultat & beslutskontext

D — Tillämpning

Möte 2 — Slutsatser regionen
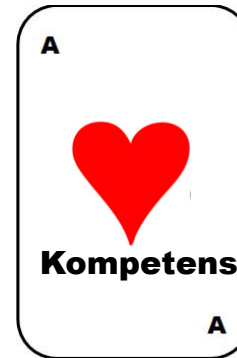
Möte 3 — Slutsatser nationellt

Participatory vulnerability assessment exercises conducted in the Gullbergsvass and Knutpunkt Lödöse cases.

	AIM	MAIN VULNERABILITY ELEMENT	SCALE	DESIGN/ INTERMEDIARY OBJECT
A. Broad Risk Identification	risk brainstorm	Exposure	Global, regional, national and local	Brainstorm/Whitebord
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I. Debriefings	Scrutinize the co-learning process	Process Feedback loop	Research participants	Semi-structured group interview

F. Adaptive Capacity
"intermediary object"

Possibilites for changing these factors to facilitate/enhance decisions on adaptation Gullbergsvass

♣♣♣ = mycket viktigt, ♣♣ = viktigt, ♣ = mindre viktigt	
Good	Politisk vilja ♣♣♣ Stor budget (bolag) ♣♣♣ Kunskap bland politiker ♣♣ STYRKOR Kunskap om anpassningsåtgärder Kunskap bland allmänheten ♣♣ Kunskap i kommunens förvaltningar ♣♣ Kontinuitet i kommunens förvaltningar ♣♣ Omvärldsbevakning Kunskap om klimatrisker
Possible	Politisk prioritet ♣♣♣ Riktlinjer från nationella myndigheter ♣ Kapacitetsutnyttjande ♣ Långsiktighet ♣ Klar ansvarsfördelning♣♣ KRÄVER SPECIELL FOKUS Tydlig organisation ♣♣ Nationella ramar ♣
Less good	Stor budget (taxefinansierad) ♣♣♣ Starka finanser – lång sikt ♣♣♣ Lagstiftning ♣
Impossible	Stor budget (skattefinansierad) ♣♣♣

Strengths

Needs particular attention

SMHI

What happens during the co-learning process?

- Social learning/co-research
- Clashing of perspectives
- Intermediary objects/concepts
- Help to "think our of the box"