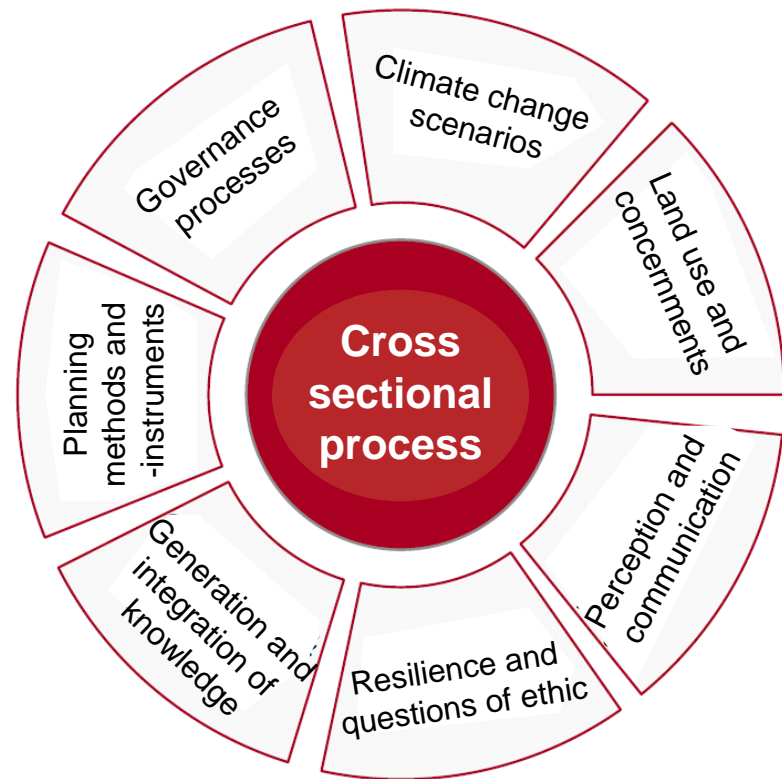


The project plan B:altic from the associates point of view in the urban region of Rostock

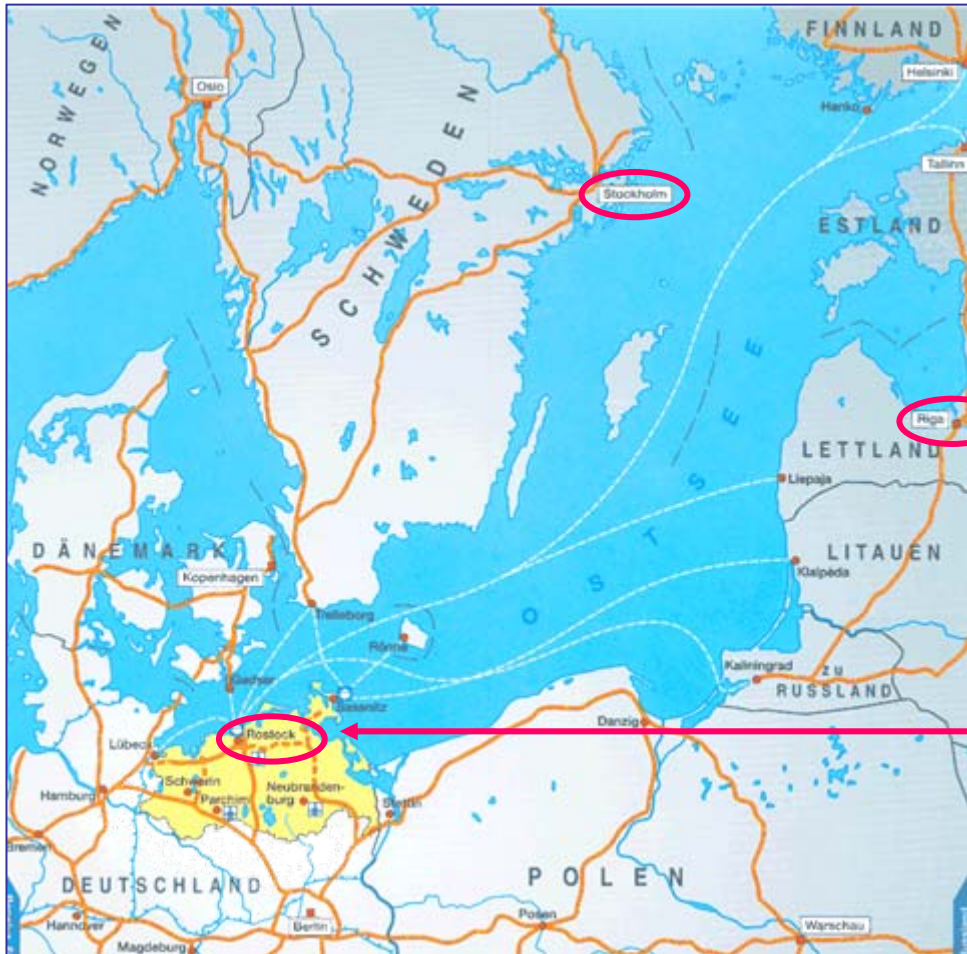
The Project

plan B:altic – climate change and spatial development

„ Adjustment strategies of the urban and regional planning in city regions within the coastal zone using the example of the Baltic sea region“



Model regions



Range of coastal city regions within the Baltic sea region

City of Rostock:

- 200.000 inhabitants
- biggest town in the federal state Mecklenburg-Western Pomerania but also economic, academic and cultural centre of that state
- strives to become „Regiopole“ („Metropolis light“)

Local Partnership



+



+



Hanseatic City of Rostock

- Urban Planning Agency
- Environmental Agency

County Bad Doberan - Planning Agency

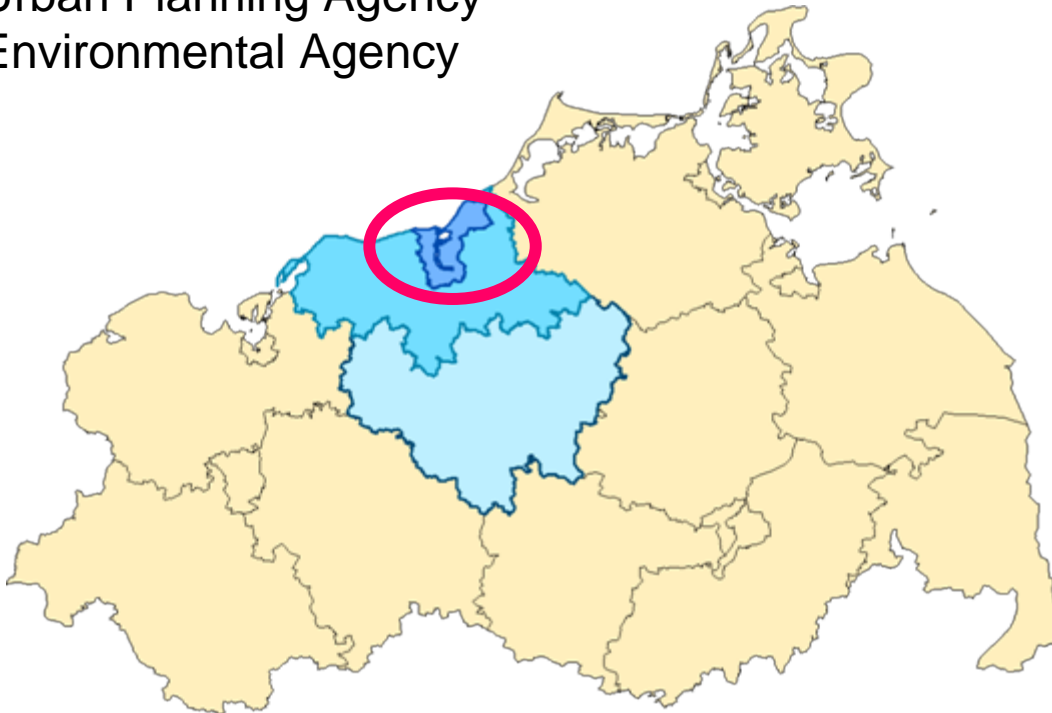
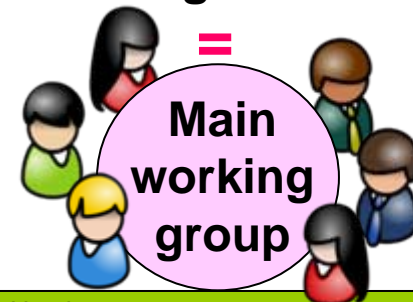
Region Middle Mecklenburg/Rostock

- Regional planning Association MM/R
- Department of Agriculture and Environment MM

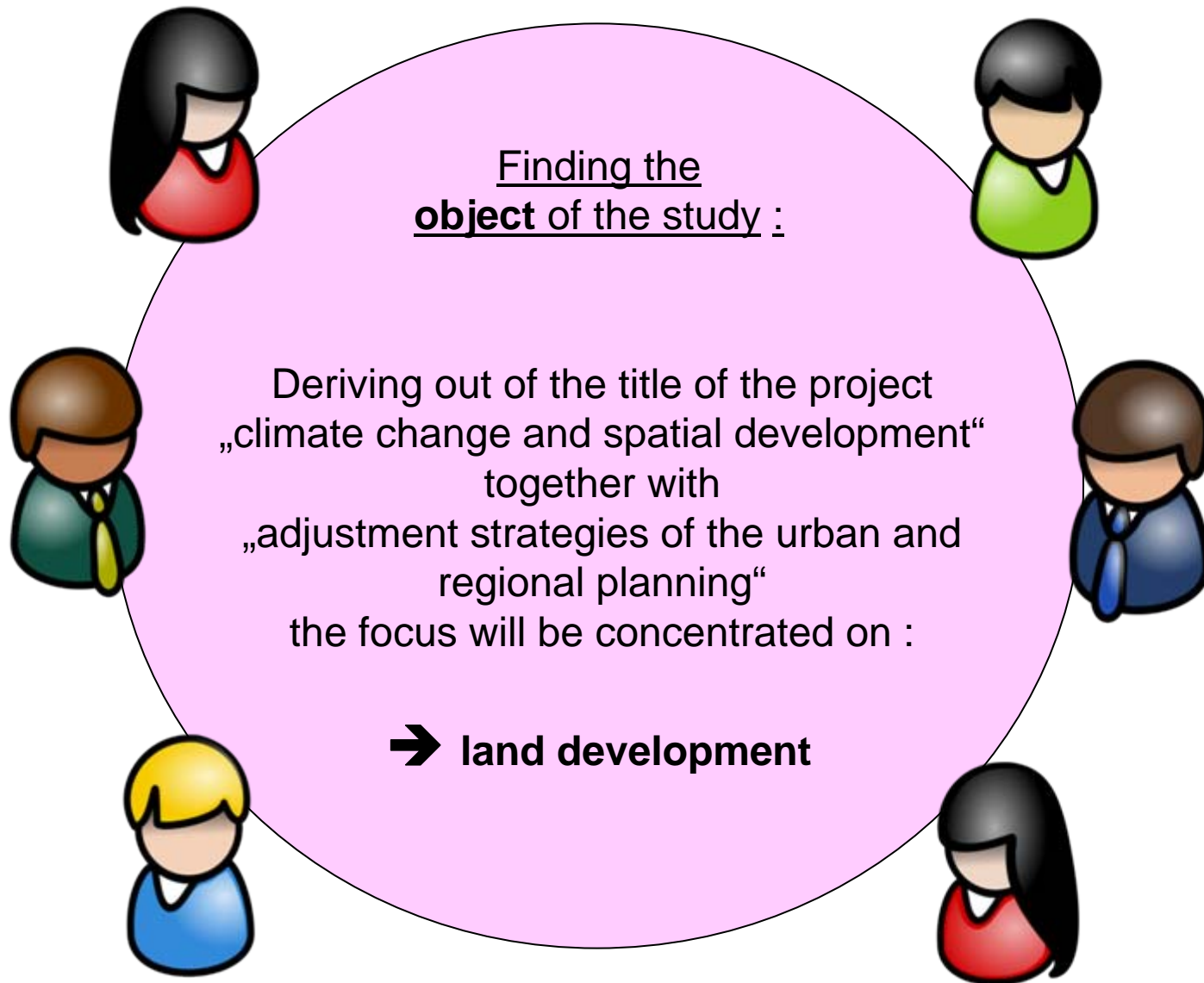
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Research group at the Hafen City University of Hamburg

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Procedure I 1

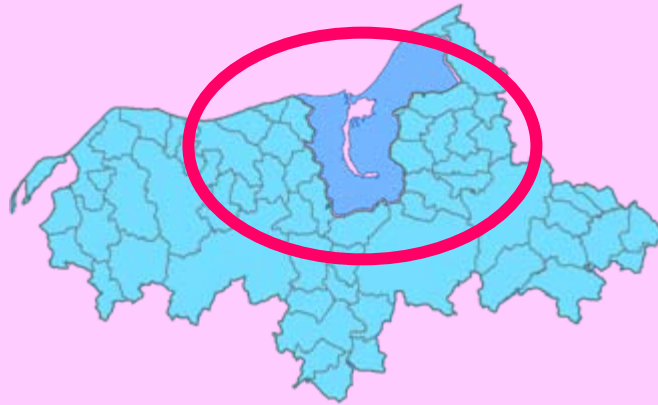


Procedure 1 2

→ 1 land development

Finding the investigation area:

How to borderline to the city region
Rostock?



Procedure 1 2

→ 1 land development

Finding the investigation area:



→ Sub-Urban-Region

Procedure 13

- 1 land development
- 2 Sub-Urban-Region

Data delivery:

Preliminary work of facts for the evaluation of the status quo and also for the deflection of future developments to the research group :

actual land-use
spatial development- and structure plan
population- and living space prognosis
landscape plans
u.v.m.

→ **data analysis**

Procedure 14

- 1 land development
- 2 Sub-Urban-Region
- 3 data analysis

Presentation of the method:
→ **scenario process**
incl. 3 scenario workshops

A - identification of the trends regarding the climate change and land development

B – determination of key facts as well as failures with regard to climate change and land development

C – scenario construction, analysis of interaction between different factors, interpretation of scenarios and visualisation

D – development of adaptation strategies

Procedure 15

- 1 land development
- 2 Sub-Urban-Region
- 3 data analysis
- 4 scenario process

Key factors of the climate development :

Increase of the average yearly temperature

Diversification precipitation amount and -allocation

increase of the sea level

Rise of the frequency and intensity of extreme weather conditions

**→ trend papers
climate factors**

presentation and discussion in the 1st scenario workshop

Example: trend paper climate factor

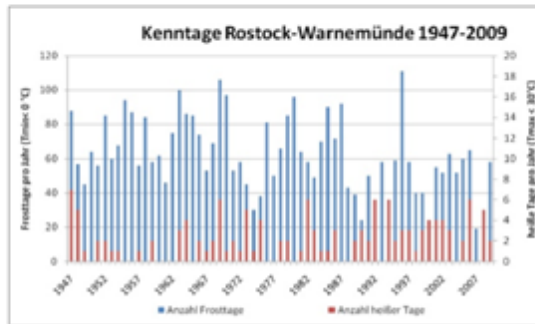
Increase and frequency of extreme weather events

Abstract

As extreme weather events you can name storms or heavy precipitation but also periods of heat waves or drought periods. They can be defined through a relative rarely appearance, high intensity or duration and relatively high damages. Those are characterized meteorologically through exceedingly high variations of the long-term average (e.g. 90% or 95%). The dynamic of the factor is especially high because mostly the events are difficult to expect and occur only for a short period.

Indicator 1: frequency of appearance of the classification days during certain periods (summer days, hot days, tropical nights, freezing days, icy days, days of precipitation with certain intensity, storm days)

Indicator 2: modification of the intensity of certain extreme events



Previous development

So far there could not be observed an increase of extreme high temperatures (very hot days (dog days?), warm nights and heat waves), on the contrary extreme cold days decreased. Furthermore during the winter time you can watch an increase of the intensity and frequency of extreme precipitation (rainfall in the middle crossed only every 100th day). Concluding to the change of storm climate and further to the appearance of storm tides there can not be proved a significant trend yet.



Development path 1

In Rostock still take place the deconstruction of untenanted flats, because due to the shrinking population the demand for residential space is decreasing. In the hinterland the residential construction is stagnating.

Development path 2

The demand concerning small flats is increasing, because of the raise of 1-2 people households. That is why the need of old-age housing is rising strongly. It is not required to have a new land use but a lasting apartment reconstruction, especially in Rostock. That is why the total area remains constant, while the amount of 1-2 room apartments is increasing, in the hinterland as well.

Development Path 3

The need of single-family houses and holiday homes in the hinterland is high. This is leading to a fast consumption of the remaining reserves there. Substantially there are built bigger houses with five or more rooms. The living area is increasing. New zonings in conflict regions (coastal protection, flood risks because of sea level changing, free spaces etc.) are politically desirable. In Rostock the removal of flats or apartment reconstructions still take place.

Development Path 4

Because of the decreasing interest of private homes in city borderlands and the increase of the need of inner-city living space in the attractive district lying centrally, it is coming to an reurbanization in Rostock and losses of population in the hinterland.

Unexpected events by a potentially great impact

A depopulation, caused by a financial crises conducts to empty flats. Wave of immigration especially of older people. Because of them it is not possible to cover the needs of age-based flats.

Quellen:
1. Entwicklungsrahmen für den Stadt-Umland-Raum Rostock (2010)
2. Statistiker des BfW Mühl

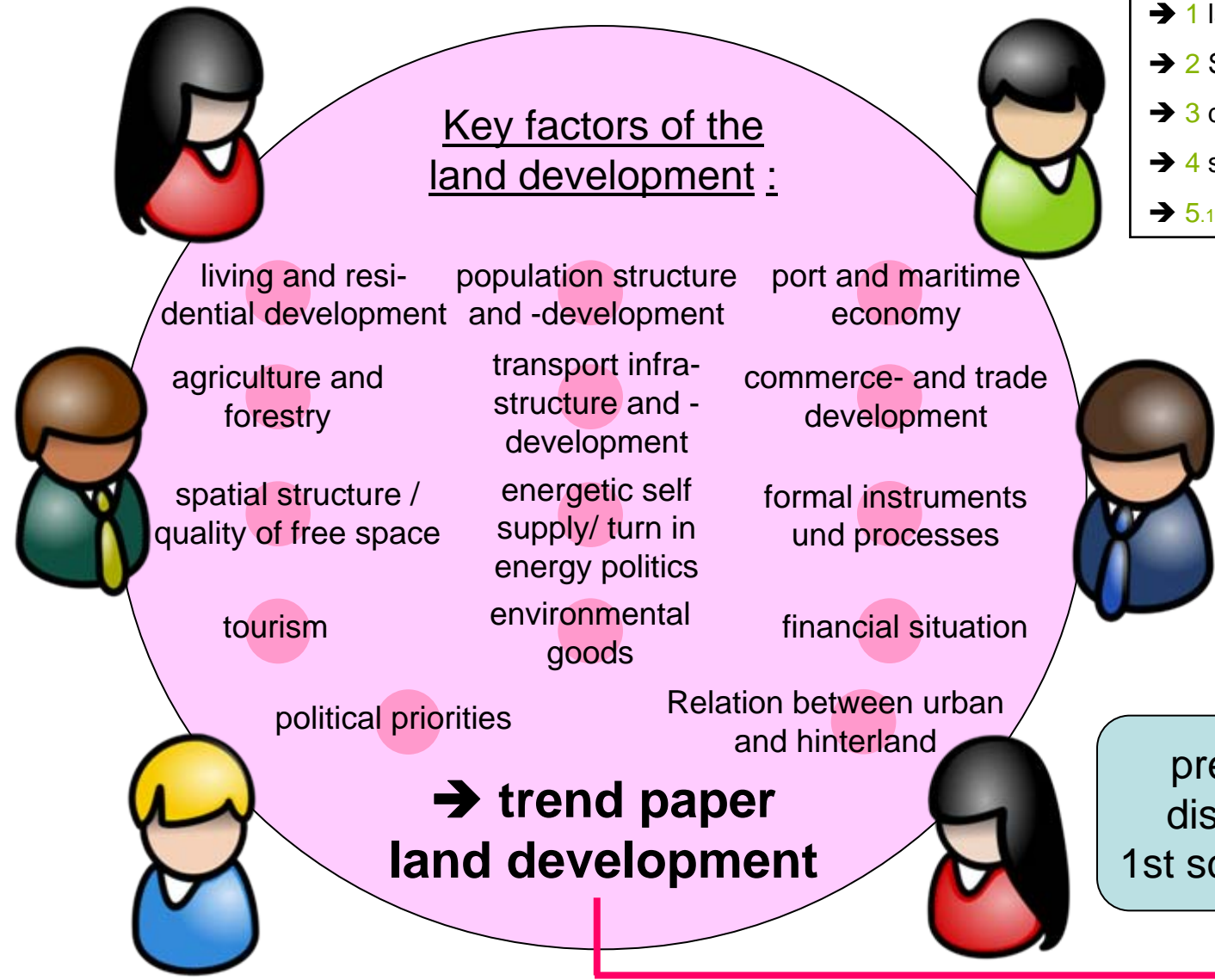
Meaning for the site development of the SUR:	
high	low
x	

Dynamic of the factor:	
high	low
	x

Reference to time of possible important changes:		
nowadays/ tomorrow	Up to 2030	Up to 2050
x		

Procedure I 5.2

- 1 land development
- 2 Sub-Urban-Region
- 3 data analysis
- 4 scenario process
- 5.1 trend paper climate factors



presentation and discussion in the 1st scenario workshop

example: trend paper factor land development

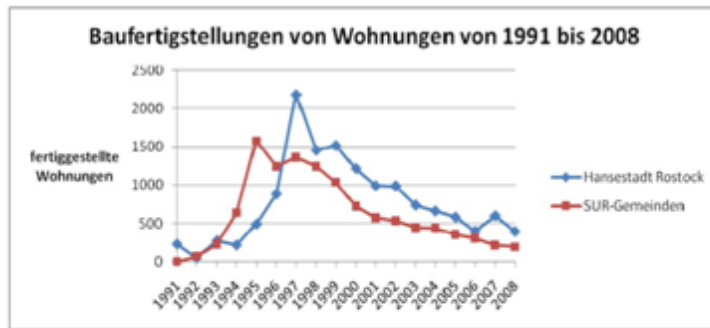
Living and residential development

Abstract

The demand of living space and the percentage of municipal needed buildings as well as their development have direct influence on the land use.

Indicator 1: living space per inhabitant

Indicator 2: allocation of living space per inhabitant



Previous development

According to the land using plans there are disclosed 762 ha living space, whereof 107 ha are still not in use. In the land development plan there are further reserves (266ha) of residential area included. The housing stock increased in 1991 to 2008, because of a high demand of one-family houses and individual types of housing. A high suburbanisation is ending. In Rostock the existing was increasing up to 13%. Since 2000 the housing construction is decreasing. Furthermore in Rostock happened a housing construction within the program "urban redevelopment east". In 2009 the housing stock in the SUR contained about 131.712 flats (86% in Rostock with a living space of 35sm/inhabitant, in the hinterland 14% with a living space of 41sm/inhabitant). Mainly there exist 3-4 (66%) than 1-2 (12%) room flats in Rostock. In the hinterland there are 47% of 3-4 room and bigger flats. 1-2 room flats are very seldom (6%).



Development path 1

In Rostock further occurs the deconstruction of flats. That is caused by a decreasing demand due to the demographic change. In the hinterland the construction is stagnating.

Development path 2

The need of little flats is increasing due to the raise of 1-2 people households. Furthermore the demand on age-based living is very high. That is why there is no need of new land using, but a lasting reconstruction of flats, especially in Rostock. Because of that the main area remains the same, whereby the percentage of 1-2 room flats is increasing, even in the hinterland.

Development Path 3

The need of single-family houses and holiday homes in the hinterland is high. This is leading to a fast consumption of the remaining reserves there. Substantially there are built bigger houses with five or more rooms. The living area is increasing. New zonings in conflict regions (coastal protection, flood risks because of sea level changing, free spaces etc.) are politically desirable. In Rostock the removal of flats or apartment reconstructions still take place.

Development Path 4

Because of the decreasing interest of private homes in city borderlands and the increase of the need of inner-city living space in the attractive district lying centrally, it is coming to an reurbanization in Rostock and losses of population in the hinterland.

Unexpected events by a potentially great impact

A depopulation, caused by a financial crises conducts to empty flats. Wave of immigration especially of older people. Because of them it is not possible to cover the needs of age-based flats.

Meaning for the site development of the SUR:	
high	low
x	

Dynamic of the factor:	
high	low
	x

Reference to time of possible important changes:		
nowadays/ tomorrow	starting 2030	starting 2050
x		

Quellen:
1 Entwicklungsrahmen für den Stadt-Umland-Raum Rostock (2003)
2 Statistiken des RPV MfL

Procedure I 6

Finding participants of the Scenario workshops:

Civil society: *associations, federations, Council of Agenda 21*

Economy: *chamber of industry and commerce, association of port development, water companies, transport services*

Administration: *municipality and district administration, regional planning*

Politics: *parliamentary group, representatives, mayor and district administrators*

Science: *University of Rostock, other research facilities*

➔ **List of participants**

- ➔ 1 land development
- ➔ 2 Sub-Urban-Region
- ➔ 3 data analysis
- ➔ 4 scenario process
- ➔ 5.1 trend paper climate factors
- ➔ 5.2 trend paper land developm.

Procedure 16

Finding participants of the Scenario workshops:

Civil society: *associations, federations, Council of Agenda 21*

Economy: *chamber of industry and commerce, association of port development, water companies, transport services*

Administration: *municipality and district administration, regional planning*

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→ list of participants

- 1 land development
- 2 Sub-Urban-Region
- 3 data analysis
- 4 scenario process
- 5.1 trend paper climate factors
- 5.2 trend paper land developm.
- 6 list of participants

1st Scenario workshop

motto: components for the future

Which facts and impacts are important for the land development in the Sub-Urban-Region Rostock and how do they developing?



Experten suchen wirksamen Schutz gegen Wassermassen

Im Ostseebad haben gestern Fachleute über Szenarien beim Klimawandel für den Rostocker Raum diskutiert.

Warnemünde – Dass die Temperaturen nach oben klettern, der Meeresspiegel ansteigt und Starkregen zum Alltag gehören werden, ist unstrittig. Eine Gruppe von Wissenschaftlern und Praxispartnern wollen jetzt Lösungsvorschläge anbieten, wie Rostock und das Umland mit diesem Wandel klarkommen können. Gestern war in Warnemünde der erste Workshop „Bausteine für die Zukunft“.

„Durch den Klimawandel verändern sich die Stadt und ihr Umland, wir wollen prüfen, wie stark diese Auswirkungen sein werden, und wie man sich anpassen kann“, sagt Sonja Deppisch von der Gruppe „plan Baltic“ der Hafen-City Universität Hamburg. Sie koordiniert das Projekt, das für den südlichen Ostseeraum exemplarisch für den Stadt-Umland-Raum von Rostock gemacht wird.

Als ersten Schritt schauen die Fachleute darauf, welche Einflüsse Auswirkungen auf die Bevölkerung, die Wirtschaft und die Siedlungsstruktur haben werden. Dann werden Szenarien entwickelt: Reicht unser Küstenschutz, dürfen wir in bestimmten Regionen nicht mehr bauen, brauchen wir eine neue Kanalisation? „Klimawandel ist ein allmählicher Prozess, doch wir müssen vor-

bereitet sein und können über Leitlinien bei der Planung den Klimawandel berücksichtigen“, findet Rostocks Bau- und Umweltsenator Holger Matthäus. An dem „Szenario-Prozess“ sind die Hansestadt, der Landkreis, der Regionale Planungsverband, das Amt für Landwirtschaft und Umwelt und die Hafen-City Universität beteiligt. Die Workshops sind in Warnemünde. *Thomas Sternberg*

*Ostseezeitung,
05.04.2011*

Further procedure in the course of the scenario process

Workshop 1

„Building blocks for the future“

Discussion possible coming developments (trends)



Workshop 2

„Scenarios as pictures of the future“

Discussion of the scenarios for the Sub-Urban-Region

Workshop 3

„Strategies as adaptation to the climate change“

Preparation of strategies regarding the handling with the climate change

Thank you for your attention!



Storm tide, autumn 2010

project plan B:altic – to be continued