



Towards Adaptation Strategies to Climate Change in the BSR

Challenges, Demands and
Recommendations for Policy-Making

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- A. Need for adaptation
- B. The role of policy making
- C. Adaptation in the Baltic Sea Region
- D. Future Perspectives

A. Selection of planning horizons



- ≡ Forest lease agreements (~ 20 yrs.)
- ≡ Wood plantation for coastal protection (30-40 yrs.)
- ≡ Tourism infrastructure (40-60 yrs.)
- ≡ Sewage system, rainwater basins (50 – 80 yrs.)
- ≡ Residential housing (~ 80 yrs.)
- ≡ Dikes, embankment dams, bridges (~ 100 yrs.)



Need to consider climate change impacts in an early stage

A. Impacts of climate change



- ≡ International consensus on changing climate (IPCC)
- ≡ ASTRA Project results:
 - winter storm study
 - climate change scenarios for the Baltic Sea Region
- ≡ Flooding and storms as major threat in the BSR
 - impact of storms is enhanced (recovery time reduced) when extreme weather events follow each other shortly
- ≡ Climate change impacts affect various sectors
 - Urban area, coastline, water, energy, tourism, transport, forestry

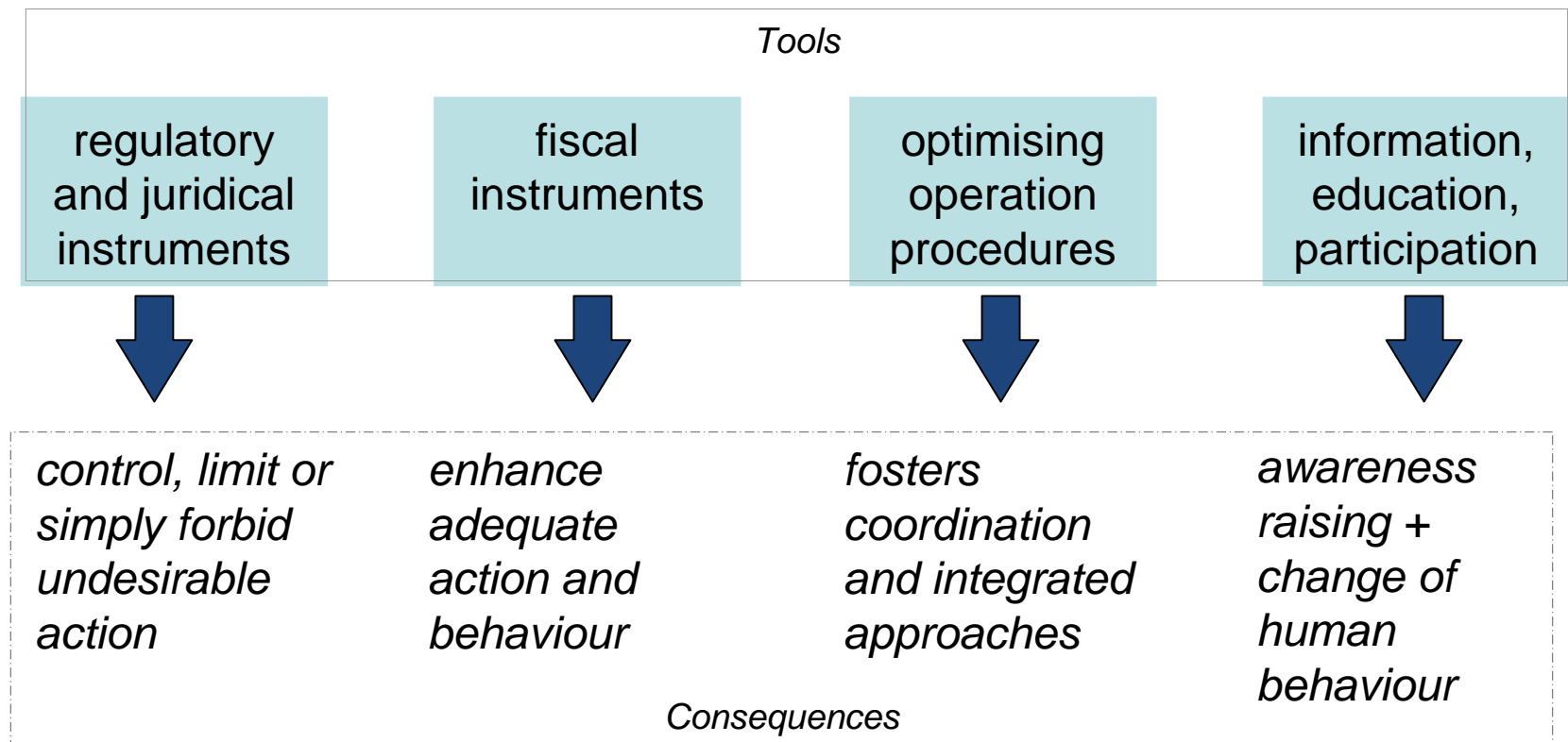
A. Challenges when addressing climate change



- ≡ Climate change models include uncertainties and risks
 - Increasing knowledge - providing proactive approach to adaptation is key
- ≡ Complexity: cross-border and cross-sectoral issue
 - Co-operation from the beginning on
 - Treating adaptation as cross-cutting issue
- ≡ Perception: Lack of awareness in need and possibilities
 - Fostering better understanding of CC impacts +corresponding adaptation needs
 - Input for formulation of strategies and implementation of measures needed

B. The role of policy-making

The co-ordination of interests, assisting in efforts towards coping with climate variation and addressing the long-term problems associated with climate change.



C. Types of adaptation

Spontaneous Adaptation

Planned Adaptation

Reactive Adaptation

Adaptation is triggered due to ecological changes in natural systems and perceived impacts without being conscious of climate changes.

Adaptation takes place after climate change impacts have been observed and based on the awareness that climate conditions have changed.

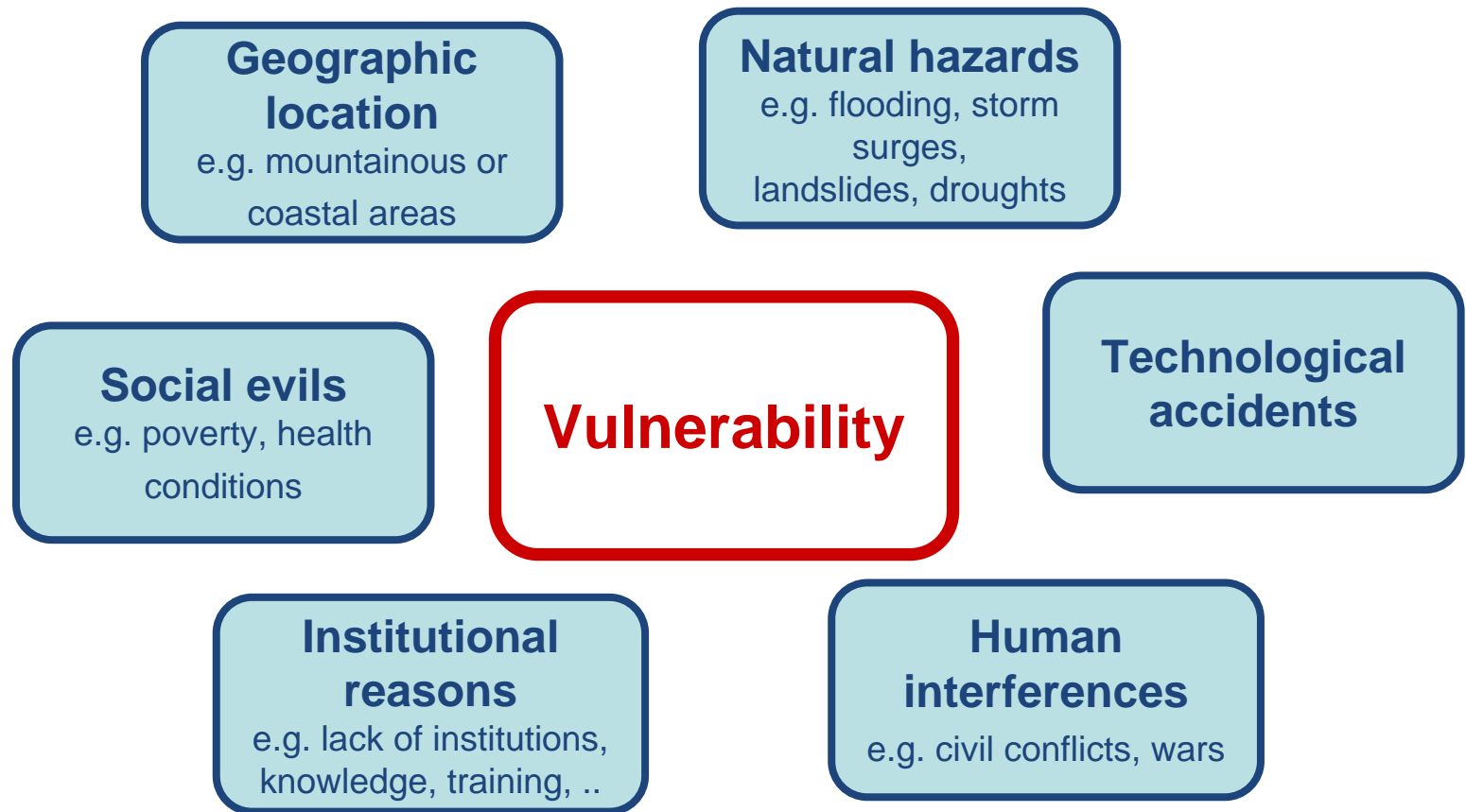
Anticipatory Adaptation

not applicable



Adaptation takes place before climate change impacts are observed on the basis of policy decisions and awareness that conditions are about to change.

B. Concept of vulnerability



D. Existing approaches I

≡ EU level – adaptation is recognised

- Working group on adaptation in the European Climate Change Programme [ECCP II] process
- Green Paper on Adaptation
- Flood Directive
- Integrated Coastal Zone Management
- Green Paper on Maritime Policy

⇒ Are recommendations implemented in member states?

D. Existing approaches II



≡ Integrated approaches at national level

- Finnish national adaptation strategy
- German national competence centre

⇒ Is information gained at national level transferred to lower levels, and transformed into concrete measures?

D. Existing approaches III

≡ Sectoral approaches

- Coastal Protection,
- Flood Protection,
- Forestry

- Strategic programmes, strategies and research programmes at national level
- Concrete measures at local level (esp. regarding flood protection)

⇒ To what extent is future climate change taken into account?

D. Approaches towards CC adaptation



Hazard-based approach

How to strengthen resilience against extreme weather events?

**ASTRA project:
Winter Storm Study**

Vulnerability-based approach

“Who is vulnerable to what, in what way and where?”

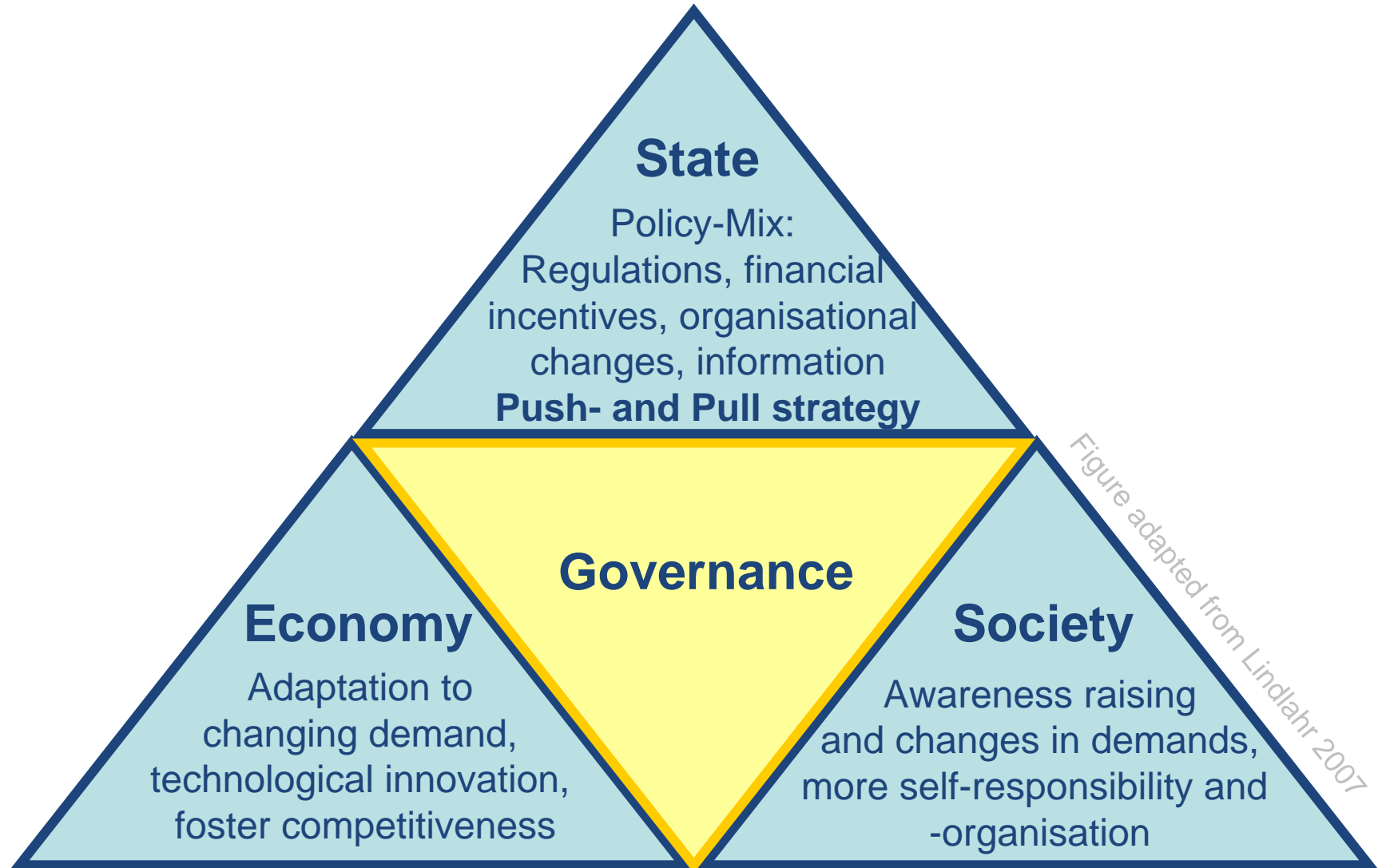
**ASTRA project:
Lithuanian regional workshops**

Policy-based approach

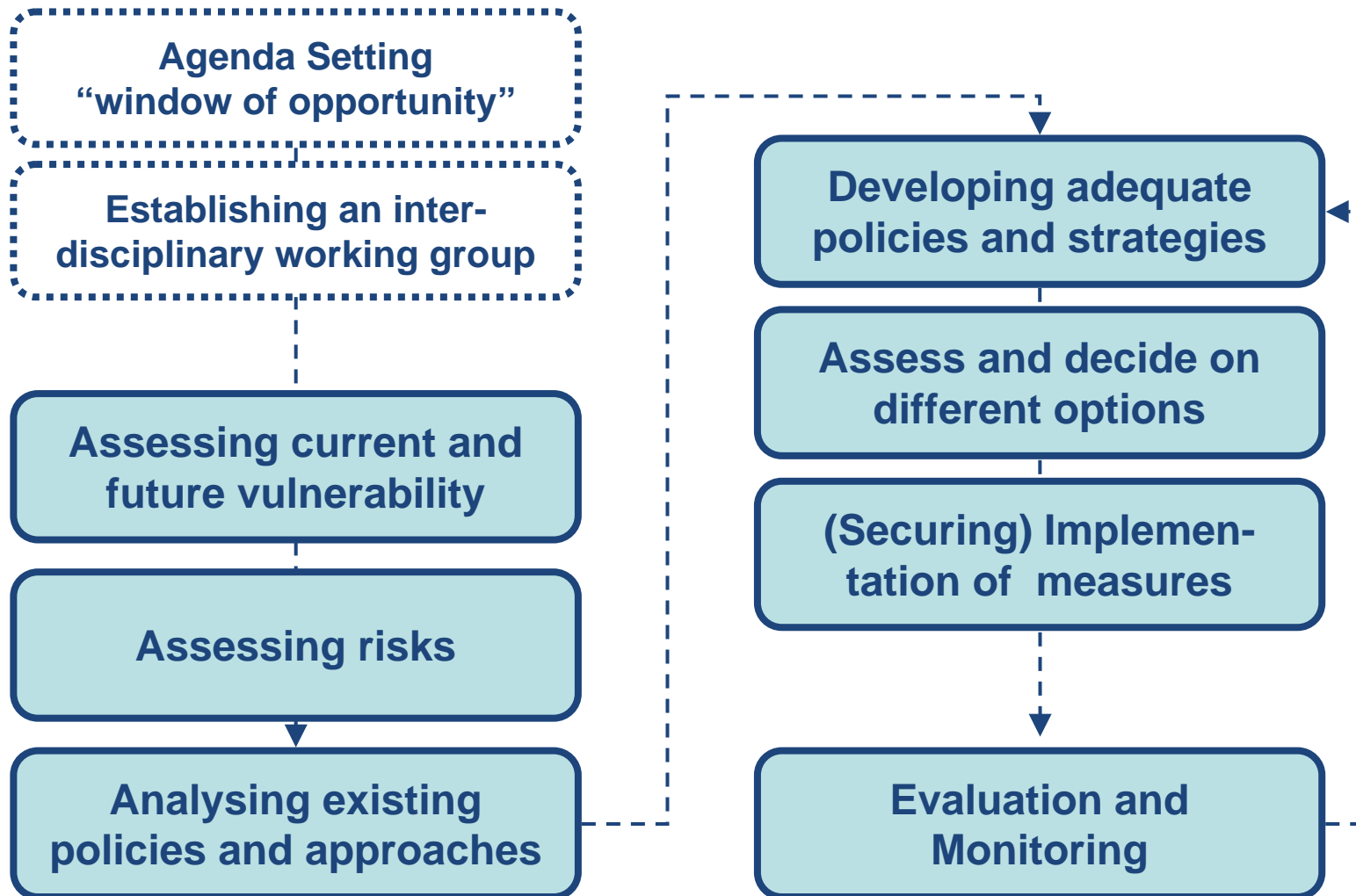
To what extent do existing policies consider adaptation needs?

**ASTRA project:
Assessment of existing policies**

D. The changing role of public authorities



E. Framework for developing adaptation strategies



E. Perspectives

- ≡ Continue with awareness raising on adaptation needs and measures
- ≡ Conduct sectoral vulnerability assessments at national and local level
- ≡ Co-operate across sectors, administrative levels, regions
- ≡ Create organizational structures that foster knowledge transfer
- ≡ Involve (all!) your stakeholders
- ≡ Secure implementation of adaptation strategies and measures, and monitor progress.
- ≡ Communicate benefits of pro-active adaptation and explore positive development opportunities

Thank you for your attention.



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