



Increasing preparedness for local acting on emergencies resulting from the climate change impacts – case from Slovakia

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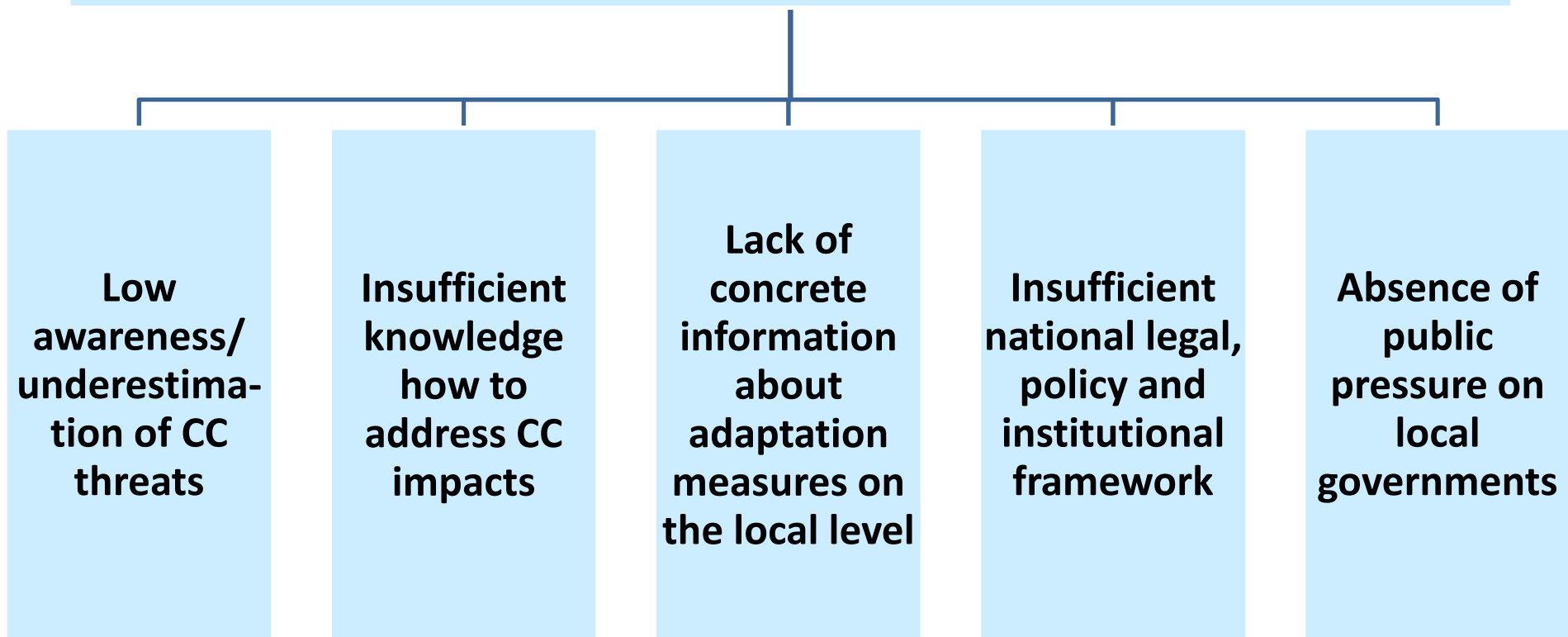
Resilient Cities 2011
2nd World Congress on Cities and Adaptation to Climate Change
C2 Mainstreaming adaptation and resilience planning
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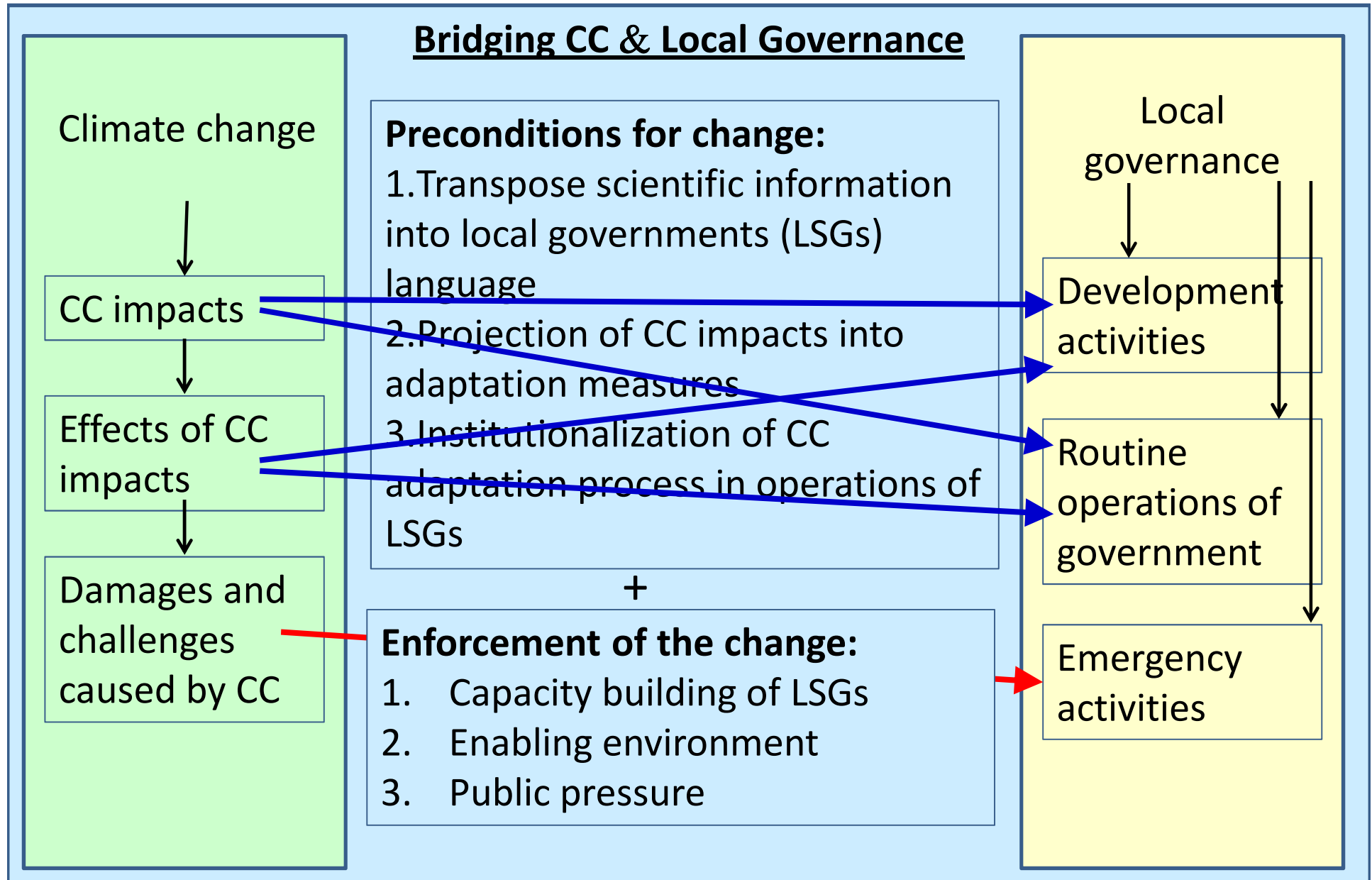
- is an independent, professional, non-profit organization of the "think-tank" type, inspiring and enforcing comprehensive environmental, social and economic development of regions and municipalities. Our mission is to promote systematic changes in favour of sustainable development of territories through the formation of an ideologically independent and critical intellectual environment.

Problem which is being tackled

Inactivity of local governments in Slovakia in the area of adaptation to climate change (CC) impacts



Our approach



Preconditions for change (1)



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1. Transpose scientific information into local government language

How to grasp the theme of adaptation to climate change impacts at the local level?

- by **sectors** (water resources management, forest management, agriculture...)
- by **impacts** (extreme weather events, torrential rains, heat waves, droughts...)
- by **topics** (green and blue infrastructure, energy ...)
- by **tools** of local self-government (local legal regulations, tax/fee, spatial plan...)
- by **territory**

Preconditions for change (2)



2. Projection of CC impacts into adaptation measures – specific measures

Structure of adaptation measures by impacts – example (1st step)

Impact of CC: Heat waves

Effects of heat waves:

1. Very high temperatures in buildings
2. Very high temperatures in public open spaces
3. Decline of quality and exploitability of transport infrastructure
4. Worsening of conditions of public transport and transport of goods
5. ...

Adaptation measures:

1. Thermal insulation of buildings; shielding of transparent parts of buildings ...
2. Design of air circulation corridors in the urban and landscape architecture, increasing rate of heat-resistant trees to lawns ...
3. Modify materials and technology of road constructions ...
4. Air-condition in public transport - environmentally friendly measures
5. ...

Preconditions for change (3)



2. Projection of CC impacts into adaptation measures – local government roles and tools

Structure of adaptation measures by impacts – example (2nd step)

- Connection of the adaptation measures with local government tools
- Different roles of local government
 - Executor
 - Partner/ supporter/ initiator
- Different tools for different roles
 - Spatial plan
 - Development plan
 - Local legal regulations
 - Permission process
 - ...

Preconditions for change (4)



2. Projection of CC impacts into adaptation measures – specific measures – examples of measures and their effects

New information about some measures – show more effectiveness as we thought:

1. Example: **Introducing green infrastructure to reduce impacts of heat waves**

- Difference between air temperature in park with trees and parking lot close to mall is 12-15°C. Composition of green infrastructure – difference between air temperature on lawn and under the tree is up to 14,6°C.

2. Example: **Forest management – reducing impacts of torrential rains** via natural forests preservation, elimination of clear-cuts, minimization of forest roads,...

- without this measures – floods at 40-70 mm precipitation
- including those measures – no floods even at 112, 122, 149 mm precipitation

Preconditions for change (5)



3. Institutionalization of CC adaptation in operations of LSGs

There is not enough to change just type of thinking, it is necessary this change institutionalize.

Institutionalization:

- a) **Climate Change Adaptation Policy** – on the top of local political agenda and is transposed into all activities and decisions of local governments
- b) Local government **Climate Change Plan** – as an integral part of local Development Strategy as well as reflected in all local government's activities and budget
- c) Local government **Internal guidelines and regulations** – tasks and responsibilities of individual departments and personnel

Enforcement of the change



How to be implemented?

- 1. Capacity building:** detail handbook, trainings, pilot applications, knowledge sharing centre, ...
- 2. Public pressure:** awareness raising campaigns, work with massmedia, cross-sector coalitions ...
- 3. Enabling environment:** elaborate and enforce changes in state legislation, support instruments (economic, advisory,...)

In conclusion



For tackling the problem are crucial:

- Motivation
- Knowledge and skills
- Institutionalization of CC adaptation process

**Thank you for being interested in this
topic!**



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