

# Climate risk & vulnerability assessment: Poznan case study

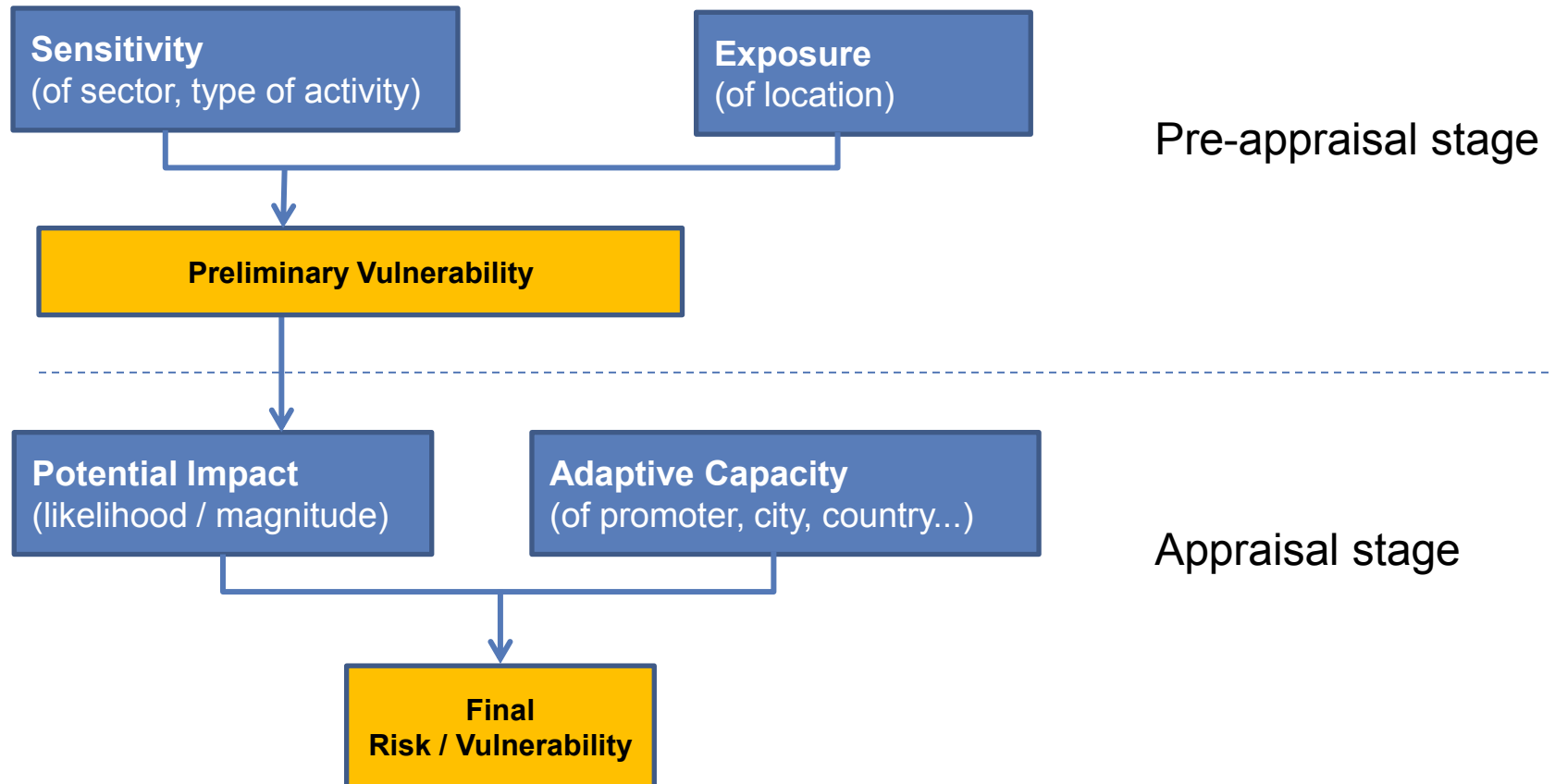
*Workshop: “Promoting climate change adaptation, risk prevention and management in the Water Sector”  
22 October 2014, Brussels*

- Rationale for CRVA
- Bank's Adaptation Toolkit
- Principles
- Proposed methodology
- Poznan case – Preliminary results and...
- ...first lessons



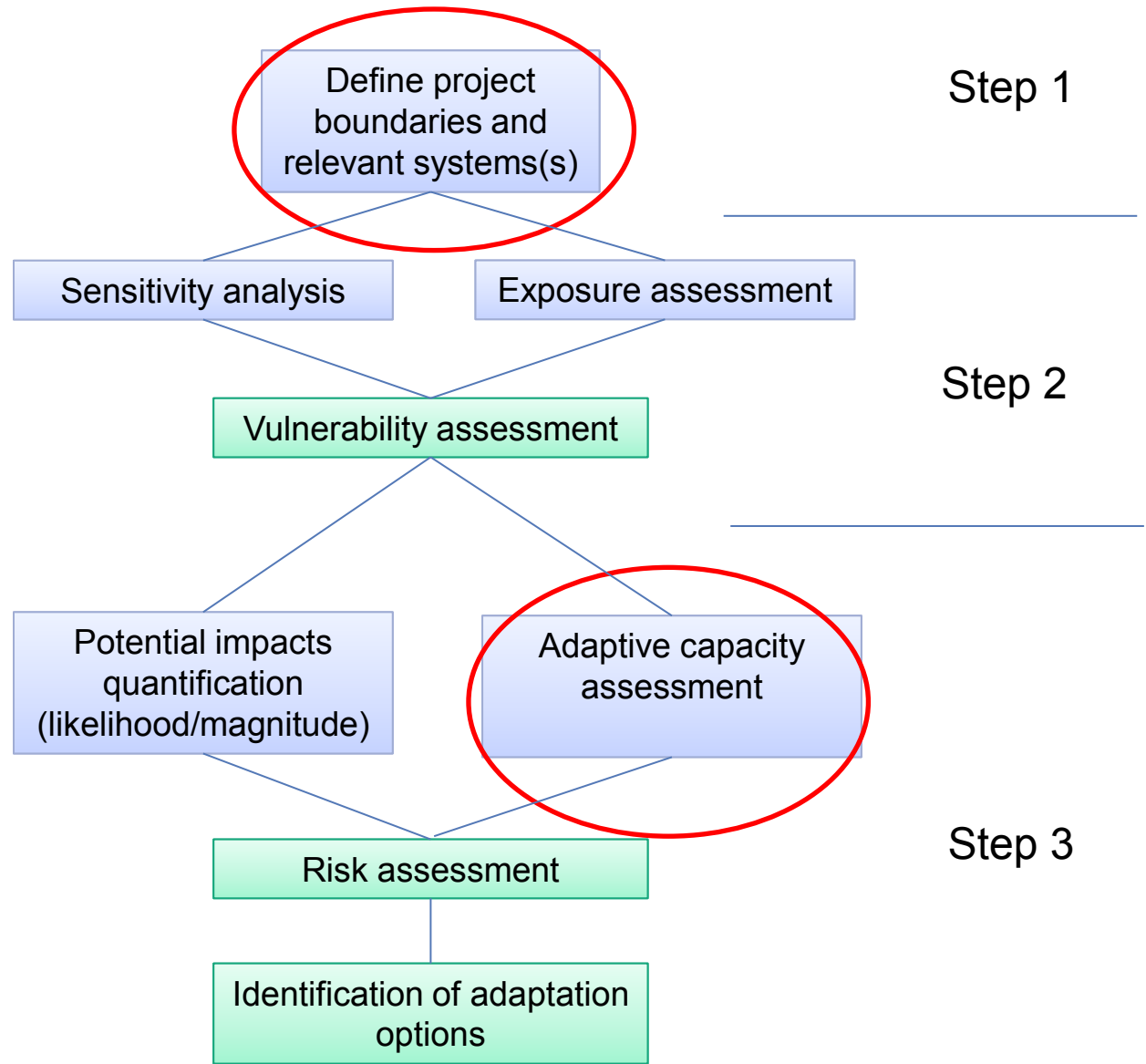
- Rationale for CRVA from the Bank's perspective:
  - assess whether a project is robust and resilient to climate-related risks
  - minimise reputational risk
  - avoid negative financial impacts
  - finance any necessary adaptation measures
- and the Promoter's perspective:
  - ensure business continuity
  - avoid negative financial impacts
  - identify and implement any necessary adaptation measures

- Screen projects for CC risk vulnerability
- Assess completeness and coherence of CC risk and vulnerability assessment (RVA) done by promoter
- Identify potential adaptation activities
- Appraise the appropriateness of adaptation activities
- Report on adaptation financing
- Communicate with clients on all of the above



- Simple methodological framework
- Concise reporting
- Engagement of Promoter at appropriate levels
- Involvement of key stakeholders
- 3 steps in analysis, each validated with stakeholders involvement (workshops)
- Decision on the adaptation options by the Promoter

# Proposed methodology



- Comprehensive investment programme of the water and wastewater operator in Poznan, including:
  - modernisation of 5 water treatment plants;
  - construction or upgrading of 90km of water mains;
  - construction or rehabilitation of 225km of sewers;
  - rehabilitation or modernisation of 4 wastewater treatment plants
- Approx. EUR 290m CAPEX
- About 740k customers
- Objective: 24/7 water supply of quality water and wastewater treatment to applicable standards





## Case study – procurement of consultant

- Estimated value EUR 100k
- Direct award possible for the water utility
- Several ‘big names’ invited
- 2 bids received
- No diversion from the methodology was proposed
- Additional modelling was offered for an extra fee

## Sensitivity Analysis

### Example for a water supply subsystem

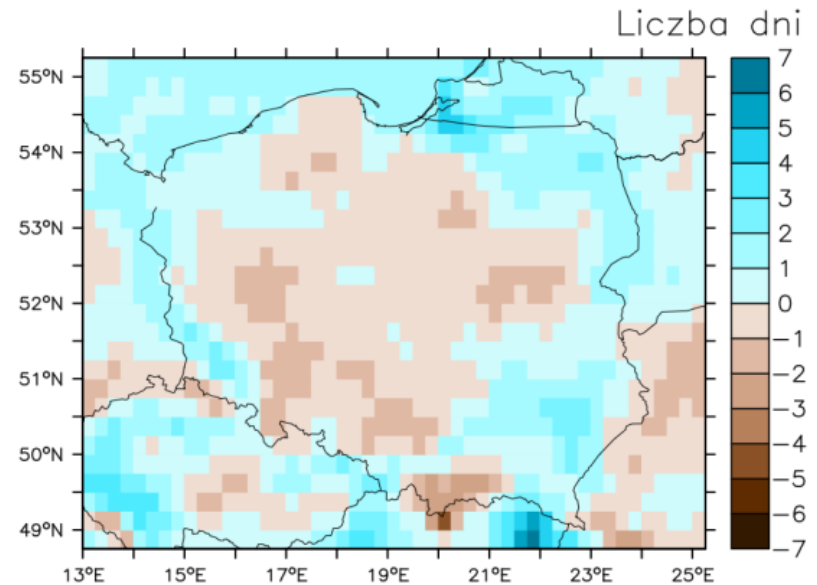
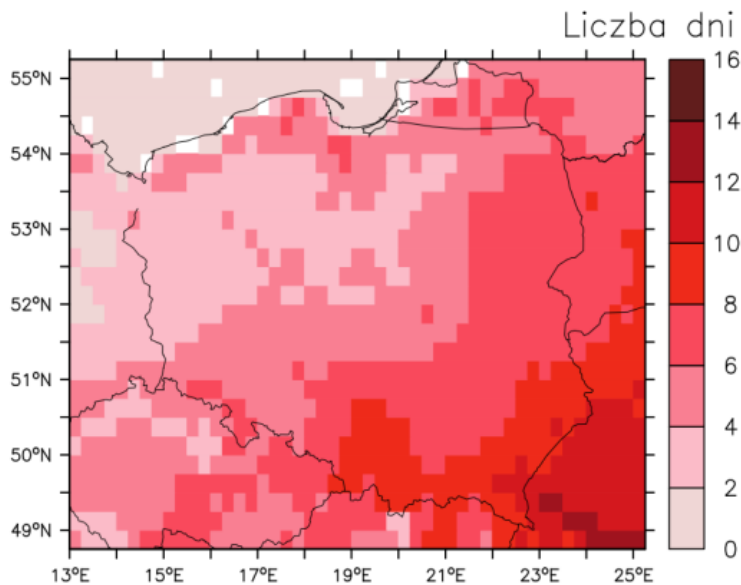
Climate Risk	1) On-site Assets and Processes	2) Inputs	3) Outcome	4) Network & Network Infrastructure
1) Average air <b>temperature</b> change (annual / seasonal / monthly)	2	2	2	1
2) Extreme (air) <b>temperature</b> change (frequency and magnitude)	3	2	3	1
3) Average <b>rainfall</b> change (annual / seasonal / monthly)	2	2	2	1
4) Extreme <b>rainfall</b> change (frequency and magnitude)	2	2	2	2
11) Water availability	2	3	3	1
12) Storm (tracks and intensity) including storm surge	3	2	3	3
13) River Flood	3	2	3	3

Risk:

High	Medium	Low	N/A
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## Exposure Analysis

- Average temperature expected to increase only slightly
- Main impacts expected from extreme weather events



- Expected vulnerabilities
  - Assets - Impacts of flooding
  - Inputs - Water resources stress
  - Outputs - Changes in peak demand
  - Networks - Energy supply
- Adaptation options
  - Rather soft ones than hard infrastructure
  - Emergency plans
  - Awareness of vulnerabilities to factor them in the future investment plans



- Consultant is learning and close supervision of the assignment is needed
- Active participation of the stakeholders and willingness to cooperate (data, NMT etc.)
- There are past cases to learn from, to build preparedness

- Internal stakeholders activated
- Participation of the top management
- Increasing evidence of the adaptive capacity of the company
- Need to coordinate various internal processes
- Some indications of the systemic issues (beyond control of the company)

## Contact

Monica Scatasta

Head of Water and Waste Management Division

Project Directorate

[m.scatasta@eib.org](mailto:m.scatasta@eib.org)

Sebastian Hyzyk

[s.hyzyk@eib.org](mailto:s.hyzyk@eib.org)

- Scope of ToR – defined methodology or open end?
- How to simplify the task whilst maintaining credibility of the outcome?





For info or further questions on this presentation, or on the activities of the JASPERS Networking Platform please contact:

Massimo Marra  
JASPERS Networking Platform Senior Officer  
ph: +352 4379 85007  
[m.marra@eib.org](mailto:m.marra@eib.org)

[www.jaspersnetwork.org](http://www.jaspersnetwork.org)

[jaspersnetwork@eib.org](mailto:jaspersnetwork@eib.org)