



Evaluating adaptation to tidal flooding in urban Can Tho City

WISDOM
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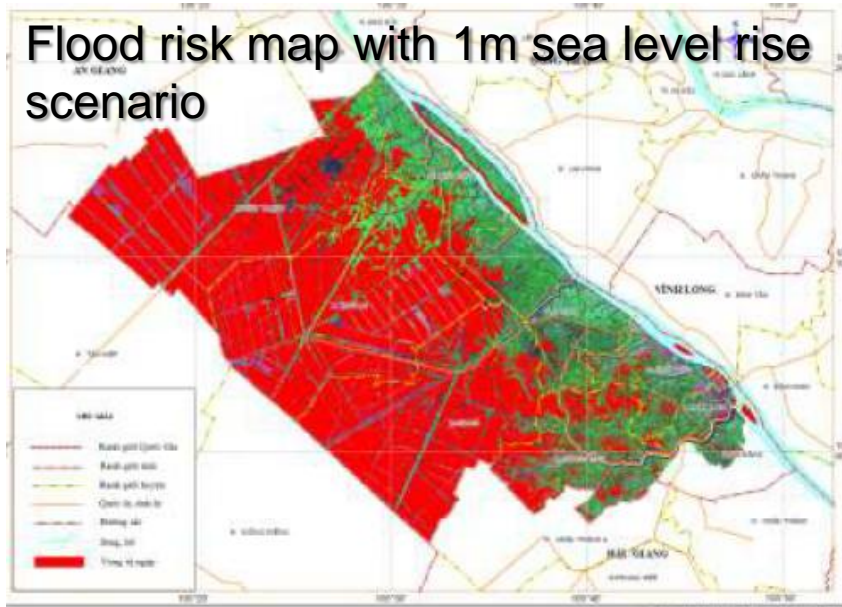
- ◆ Introduction
- ◆ Concept of risk
- ◆ Main research question and goal
- ◆ Theoretical approach
- ◆ Methodology for identification of evaluation criteria
- ◆ Selected findings
- ◆ Conclusion

Current flood situation (urban areas)

- Regular, tidal inundation (short duration)
- Temporary and permanent measures for flood protection
 - usually anticipatory (lunar calendar) but based on past flood level – not really future-oriented

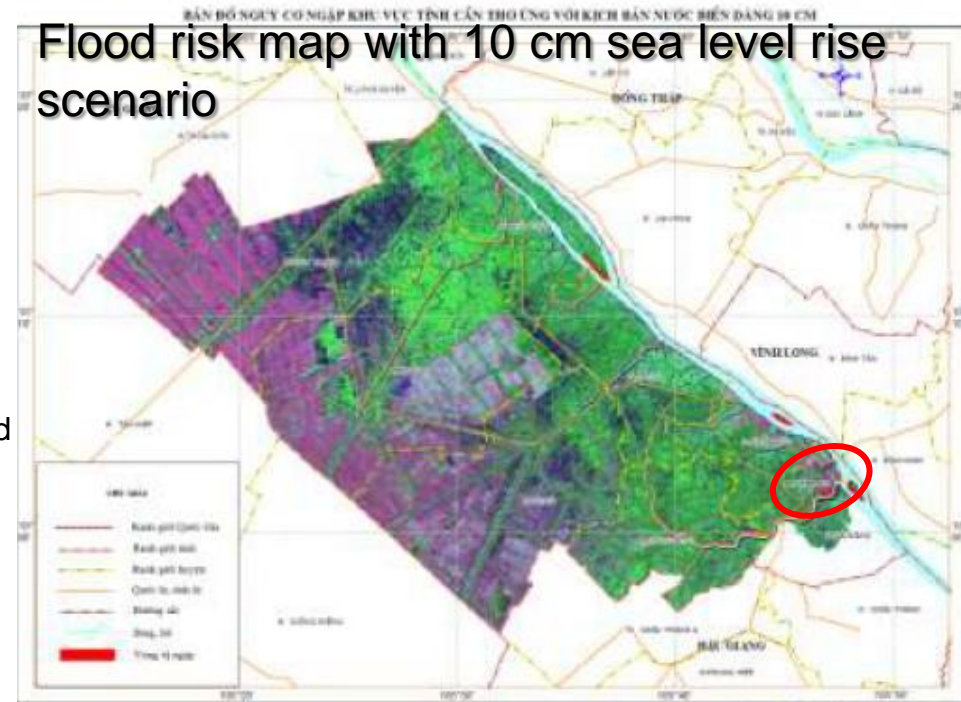


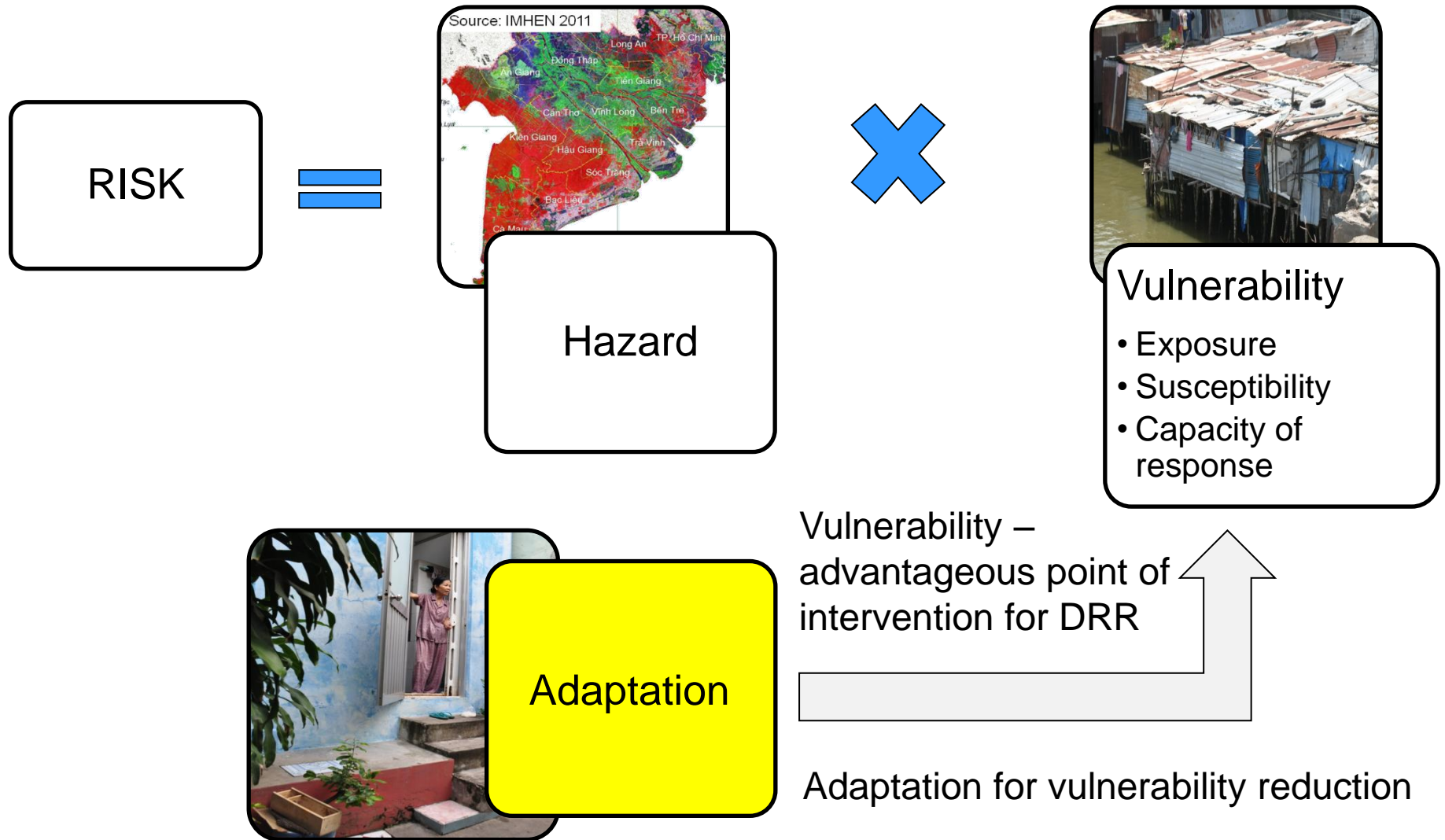
Flood risk map with 1m sea level rise scenario



Source: MoNRE, IMHEN, UNDP (2011): Climate Change and Sea Level Rise Scenarios for Can Tho City

Flood risk map with 10 cm sea level rise scenario





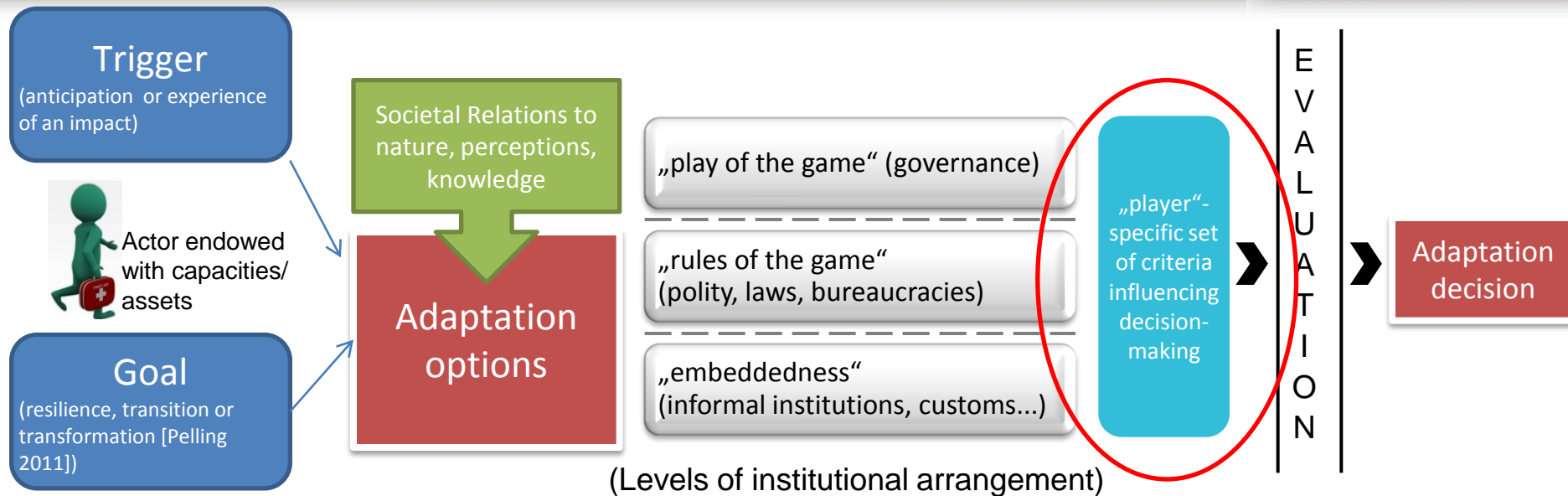
Based on Blaikie et al. 1994, Smit and Pilifosova 2003

- Which underlying drivers shape different stakeholders' evaluation of adaptation options and how does governance affect the outlook of different adaptation measures?
- In other words: Why do people decide for certain strategies over others and are the chosen strategies sustainable?

Aim: “identify combination of variables that affect the incentives and actions of actors under diverse governance systems” (Ostrom 2007:15181)

- Key: understand adaptation decision-making processes as human actions within a specific institutional setting

- Action-oriented approach
 - Premises (based on Werlen 1993/1997, Weichhart 2008):
 - Human action is
 - intentional, rational within the given actor's context (depending on situation, knowledge, perception etc)
 - influenced and constrained by the institutional setting
 - Action entails a decision-making process and aims at „effecting or preventing a change in the world“ (Wright 1971:83, as cited in Werlen 1993:11)
- Adaptation is seen as an intentional, goal-oriented outcome of action (adapting) that may entail both intended and unintended consequences



Adaptation decision-making process (individual actor's view);

own draft, based on WILLIAMSON 1998, KOPPENJAN & GROENEWEGEN 2005, MARCHAND ET AL. 2012, PELLING 2011

Assessing evaluation:

- Necessary in order to identify option(s) most prone to success (aimed at overall improvement of situation)
- Requires understanding not only of available resources, but also perceptions, beliefs, social norms and institutions

Methodology - criteria identification

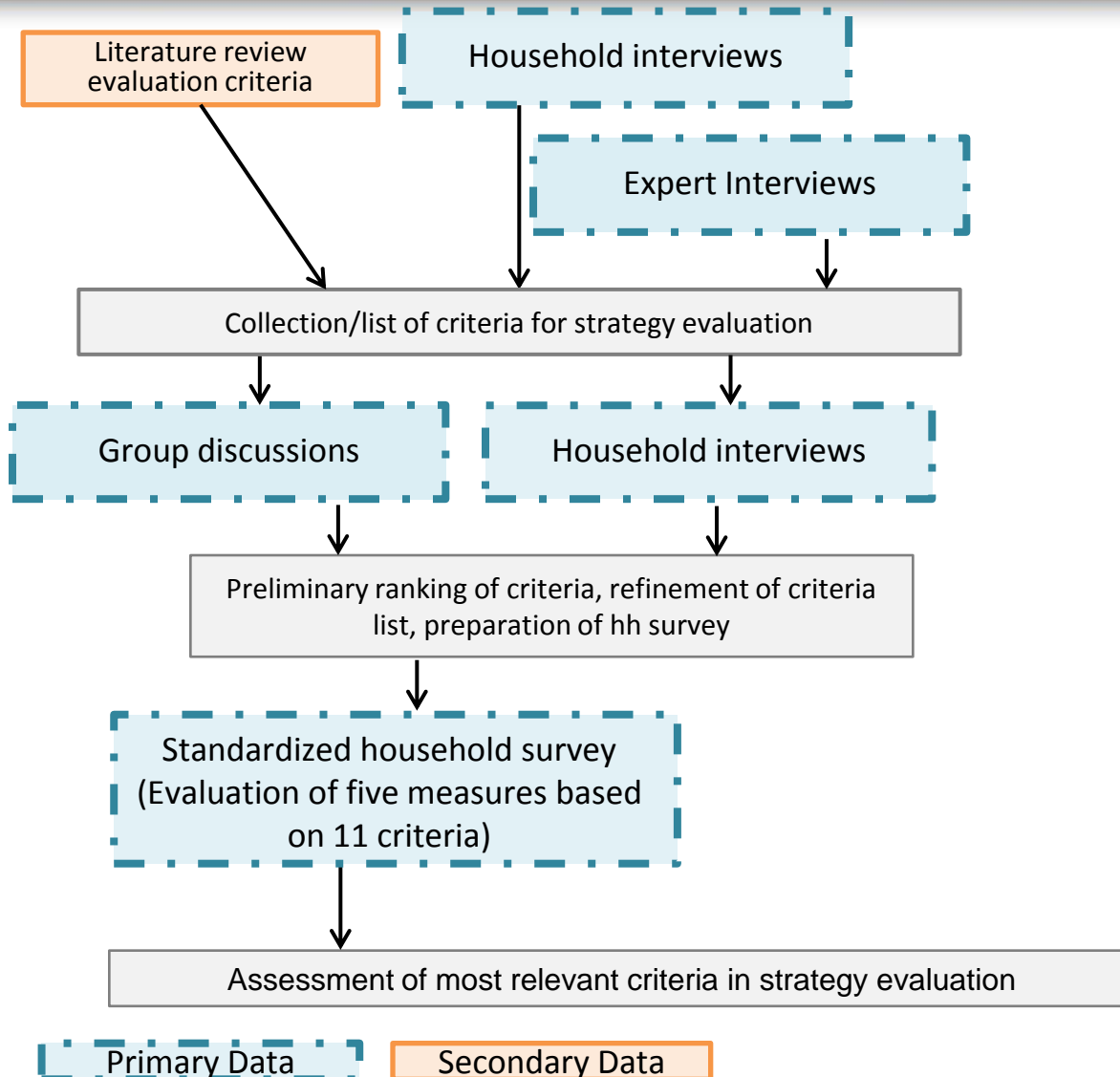


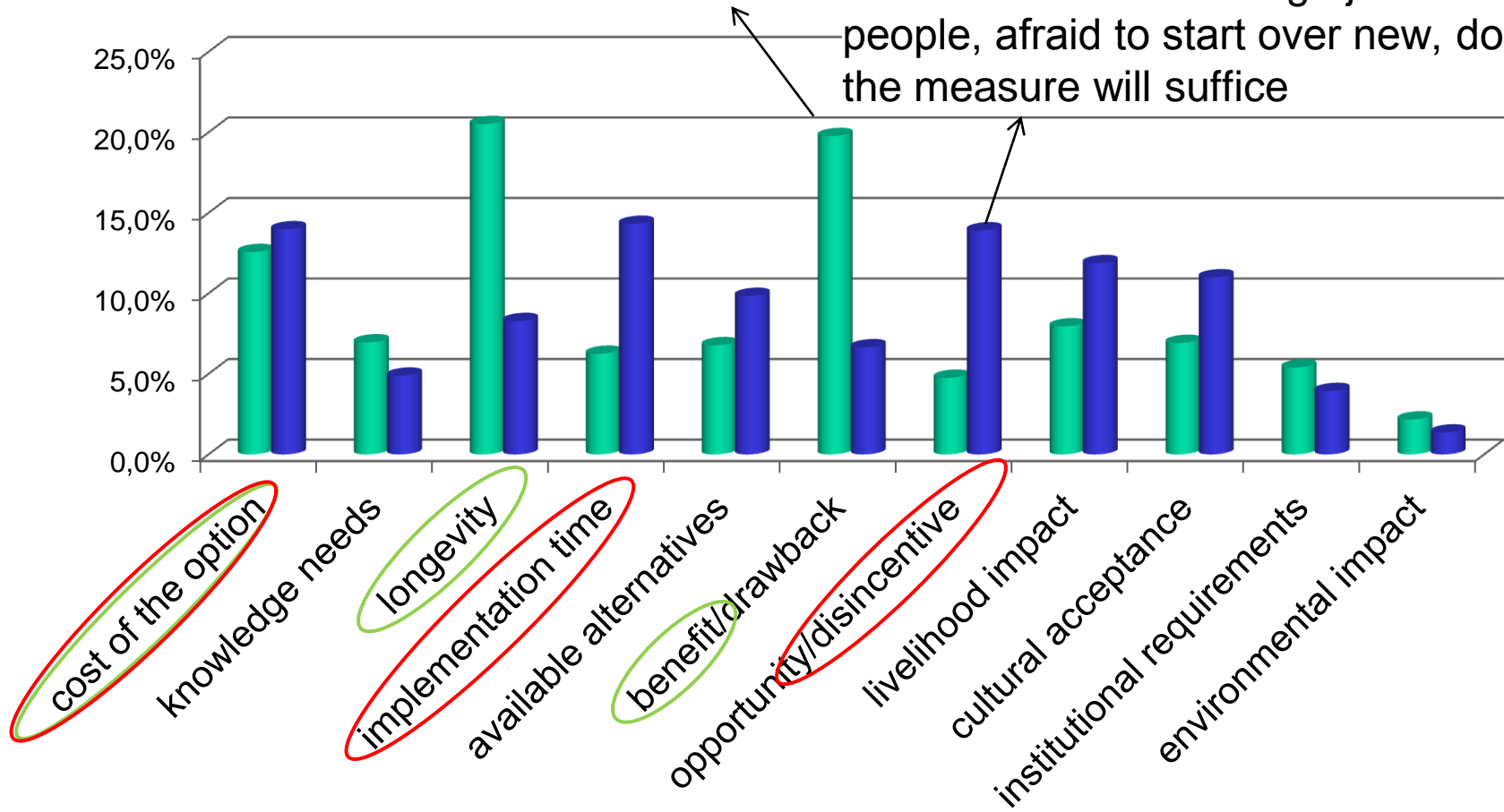
Table: Top three criteria in favor of selecting the respective strategy,
source: household survey

House elevation	protects house for a long time	improves living conditions permanently	belief, that house should be higher than the street
Alley elevation	improves living conditions permanently	cost can be shared	protects area for a long time
Small dyke	gets rid of flood with little investment	protects house for a long time	cost-efficient
Vocational training classes	can be done in addition to current job	improves income in the long term	easy for anybody to join a program
Moving	can get rid of flood problem entirely	can increase household income	no other solution will help against flooding in the long term

Relevance of criteria across measures

Benefits: improved living conditions,
improves other aspects of life, good
cost-benefit-ratio

Disincentives: not enough jobs for trained
people, afraid to start over new, don't think
the measure will suffice



■ advantages - combined for all 5 measures ■ disadvantages - combined for all 5 measures

- Assessing motifs and criteria that shape adaptation decision-making can help understand the prospects of success of different measures
- Adaptation measures should benefit people's livelihoods - address adaptation from a development perspective
- Identifying criteria that are largely neglected at larger-scale projects (such as disincentives or cultural acceptance) is key to address issues of acceptance of formal projects and strengthen sustainability
- Successful adaptation measures need to consider differential evaluation of proposed measures, create dialogue among stakeholders and resolve conflict and increase acceptance

**Thank you very much for your
attention and feedback!**



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