

# IMPROVING LOCAL ADAPTATION STRATEGIES TO EXTREME EVENTS

## - THE CASE STUDY OF LISBON -

Inês Gomes Marques<sup>1</sup> (igmarques@fc.ul.pt), Emily Theokritoff<sup>2,3</sup>, Patrick Pringle<sup>2</sup>, Hugo Pires Costa<sup>1</sup>, Tiago Capela Lourenço<sup>1</sup>

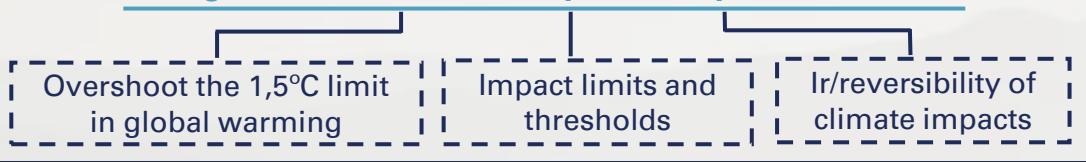
<sup>1</sup> Centre for Ecology, Evolution and Environmental Changes (cE3c), Faculdade de Ciências, Universidade de Lisboa, 1749-016 Lisbon, Portugal; <sup>2</sup> Climate Analytics; 10969 Berlin, Germany; <sup>3</sup> Geography Department & IRI THESys, Humboldt University of Berlin, Germany

### Introduction

Lisbon Metropolitan Area (AML) vulnerability to temperature hazards is high. AML municipalities are planning designing to decrease their vulnerability.

#### OBJECTIVE

Improve adaptation planning in AML municipalities by introducing *overshoot related adaptation topics* to stakeholders.



### Material and Methods

#### Timeline



**Overshoot Proofing Methodology (OPM)**  
A 7-question survey structured around 5 indicators. Practitioners scored from 0 to 4 (from less to higher application of new topics).

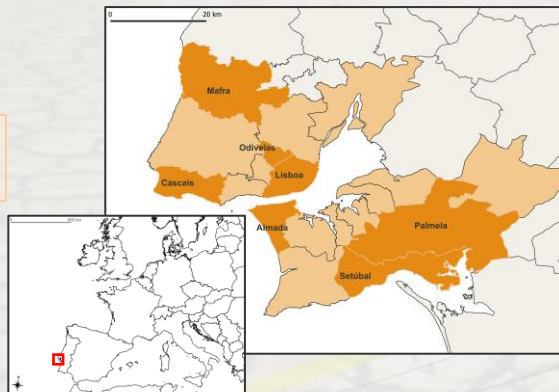
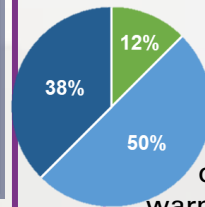


Figure 1 – AML (light orange) and the OPM participating municipalities (in dark orange).

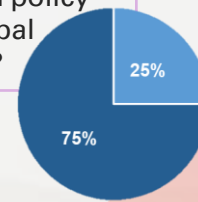
### Results

#### Overshoot Proofing of heat-related adaptation plans

Does the adaptation policy assess different global warming scenarios?

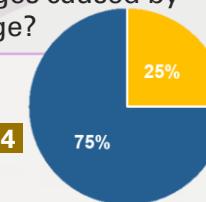


Does the policy identify specific changes caused by climate change?

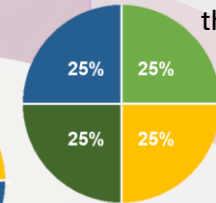


Scores  
0 1 2 3 4

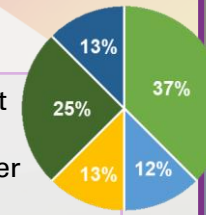
Have you considered a potential overshoot scenario of 1.5°C global warming in your adaptation planning?



Does the policy identify thresholds and/or limits?



Have you thought about impact ir/reversibility after overshoot?



#### Participatory workshop

Table 1 – Main challenges in aligning adaptation plans with the new climate overshoot topics.

Type	Description
Adequacy	Lack of connection between climate change scenarios and adaptation actions.
	Implementation measures lack sufficient detail and tend to be too generic.
Clarity	Poor understanding of the conceptual topic of impact ir/reversibility after overshoot.

Main challenge: lack of knowledge on critical thresholds, by practitioners and the population.

### Conclusions

Adaptation plans consider overshoot adaptation topics, but there was high variability in responses about the limits and thresholds, and about the ir/reversibility of impacts after overshoot.

#### Opportunities

- **Overshoot and reversibility of impacts:** topics can improve adaptation plans by changing the priorities of adaptation measures.

#### Challenges

- **Do more detailed risks** (e.g., thresholds, higher resolutions)
- **Difficulties in establishing thresholds** for plans that have too many / too generic adaptation options