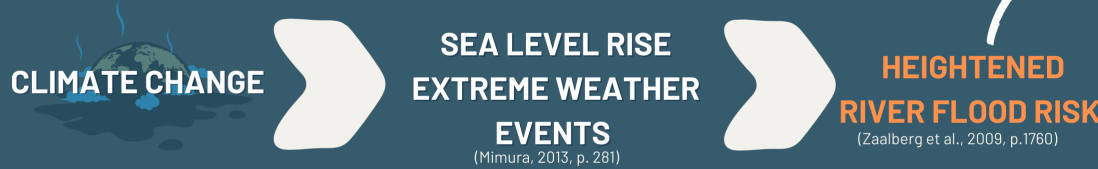


FLOOD MITIGATION IN MAASTRICHT

GREEN INFRASTRUCTURE & THE UM STUDENT BODY

! THE PROBLEM



2021 Flood in Maastricht

- Severe rainfalls
- Overstretch of the capacities of the city's sewer system
- Evacuation of 10000 citizens
- Considerable damage

(Eghuizen, 2022, p. 15-16)
(Gemeente Maastricht, 2023)

Current grey infrastructure does not provide sufficient flood protection

HOW CAN MAASTRICHT BE MORE FLOOD RESILIENT?

GREEN INFRASTRUCTURE (GI)

= "Strategically planned network of natural and semi-natural areas", that uses natural resources in order to mimic nature and its services, thereby ensuring that ecosystems can deliver their natural functions, such as flood protection

(European Environmental Agency, 2014)

BENEFITS

- Reduce pressure of grey infrastructure
- Public safety: Mitigation of drowning risk
 - More cost-effective
 - Multifunctionality

+ Possible incorporation of citizens

- Incorporation of local expertise
- Acceleration of the development of efficient and accepted flood risk management
- Increase of societal context
- Heightened awareness & knowledge within the community

(United States Environmental Protection Agency, 2023)
(Schyns, 2022)

STUDENT CITY MAASTRICHT

~120.000 inhabitants
2021: > 22.000 students at Maastricht University (UM)

(Maastricht University, 2022)
(Statista, 2023)

OUR METHODS

SURVEY: HOW CAN UM STUDENTS CONTRIBUTE TO GREEN INFRASTRUCTURE?

PARTICIPANTS

- UM students
- Distribution via WhatsApp
- 28.03-16.04.2023
- No incentives

STUDY DESIGN

- Qualtrics
- Questions on:
 1. Personal information
 2. Self-assessed climate change awareness
 3. Willingness to support
 4. Actual support of GI

RESULTS

- **GAP** between the hypothetical support students would be willing to provide and actual support they are providing
- **BIGGEST OBSTACLES:** Time constraints, lack of knowledge and lack of awareness
- **FACTORS ENCOURAGING SUPPORT:** More information and knowledge & accessible opportunities to support
- **MORE KNOWLEDGE and CONCERN** about climate change and flood protection in Maastricht might result in **HIGHER PERCEIVED IMPORTANCE** of flood protection in Maastricht

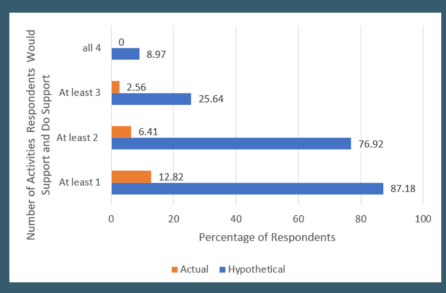


Figure 1: Difference between hypothetical and actual support of GI

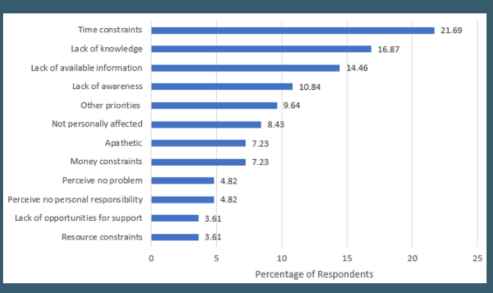


Figure 2: Barriers to support

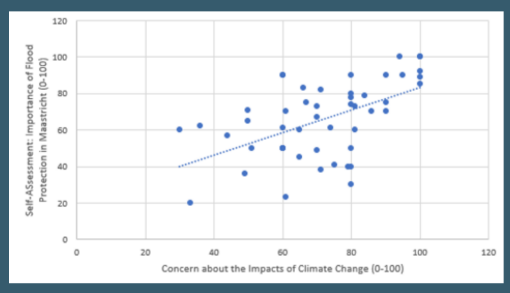


Figure 3: Linear Regression between Concern about Climate Change Impacts and the Perception Importance of Flood Protection in Maastricht

OUR PROPOSAL for Maastricht University

A three-step plan to make Maastricht a safer place for living and learning

1 RAISING AWARENESS

- Educational events on the heightened flood risk in Maastricht
- Using different UM platforms
- Accessible information & resources
- Not time-consuming

2 INCREASING KNOWLEDGE

- Educational events on the potential of green infrastructure
- Workshops in cooperation with local experts and student associations
- No/low participation costs

3 TAKING ACTION

- Supporting green infrastructure to make Maastricht more flood resilient
- Research projects
- Partnerships with local organisations
- Planting rain gardens, green roofs, etc.

Consistent monitoring and evaluation of the process