

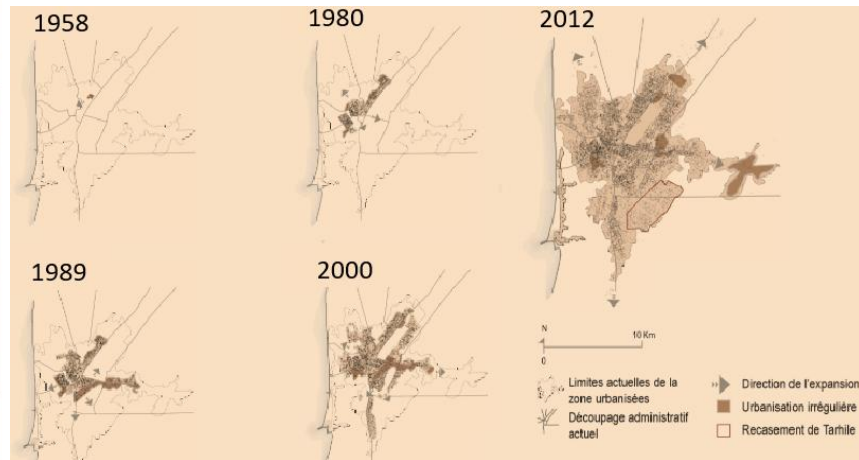
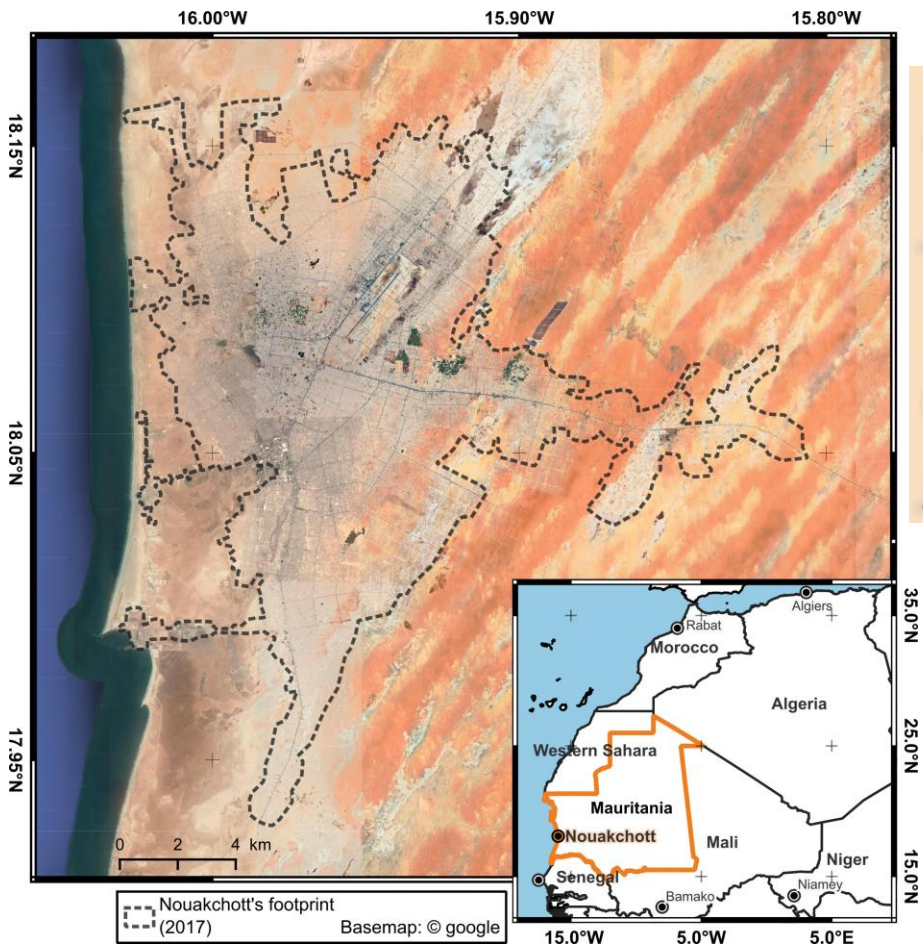


**Research project EIRA: Enhancing
Infrastructure Resilience to Flooding using
Afforestation, the Case of Nouakchott city,
Mauritania**

PL-LCH, PERL, Région de Nouakchott

11.11.2025

1. Introduction

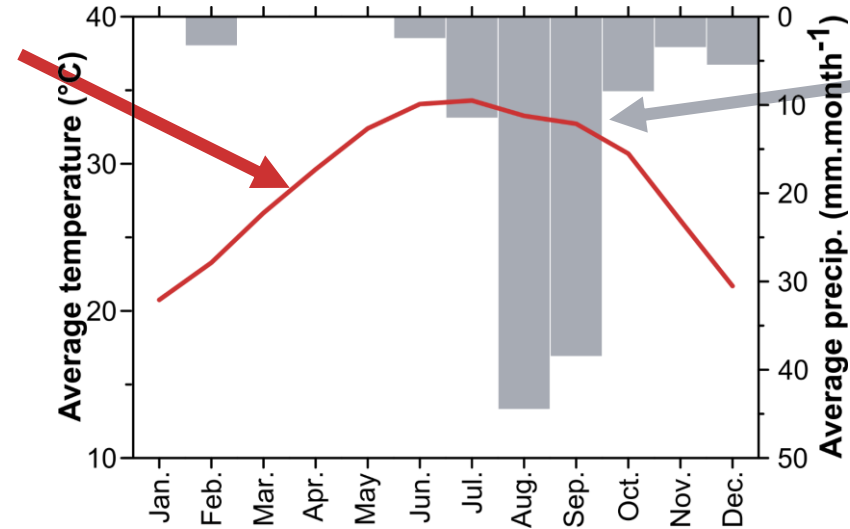


Development of Nouakchott, Les ateliers, 2014

1. Introduction



Temperature



Precipitation

2. Major flooding problem

'The best solution? Move the Mauritanian capital': water on the rise in Nouakchott

The Guardian



Since 2010: recurrent flooding problem

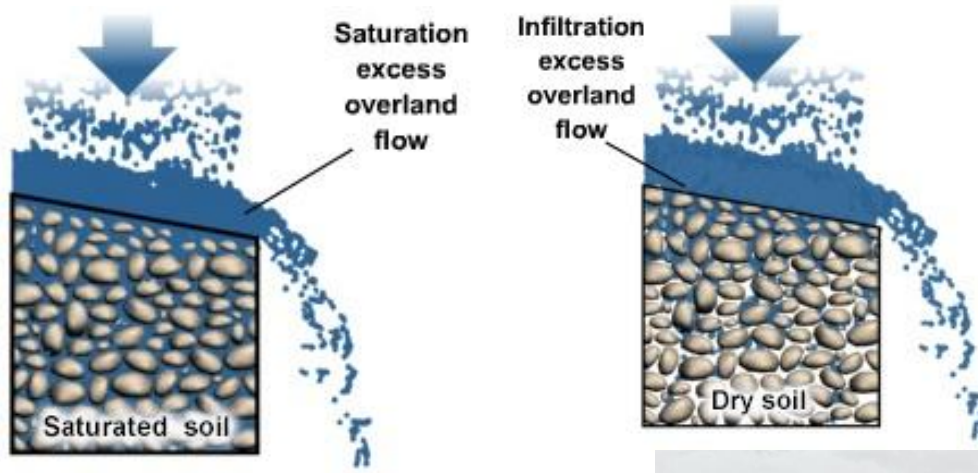
- Damage to the urban infrastructure
- Property losses
- Health and salubrity problems

What is causing the flooding?

3. Origine of the flooding



3.0rigine of the flooding

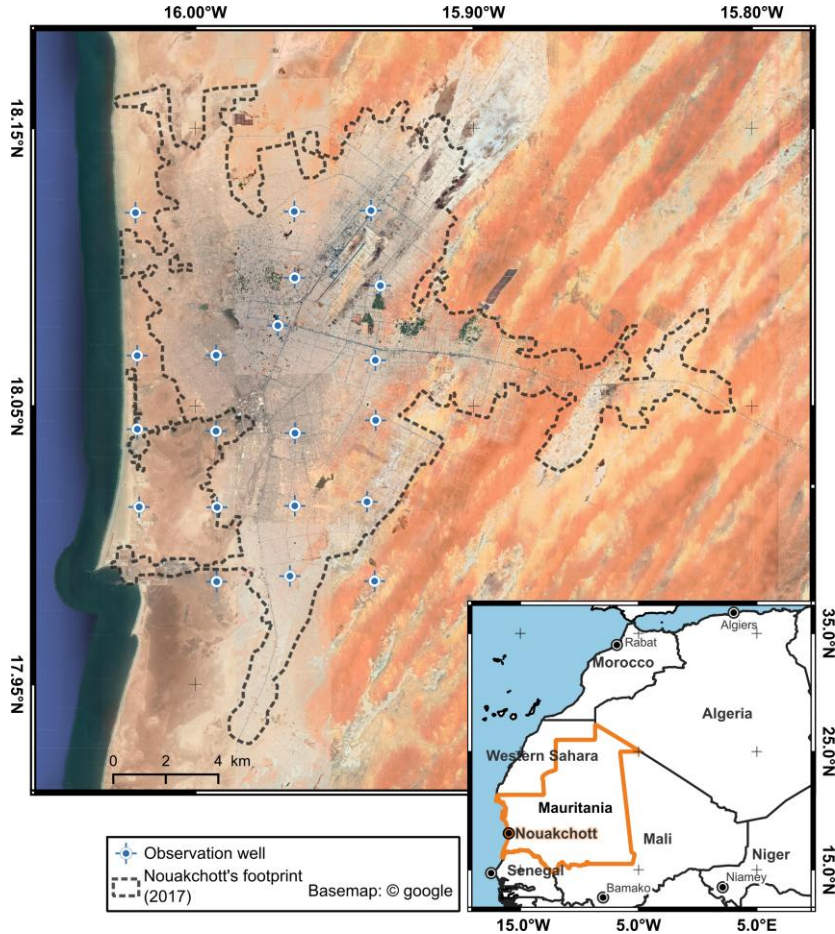


3. Origine of the flooding

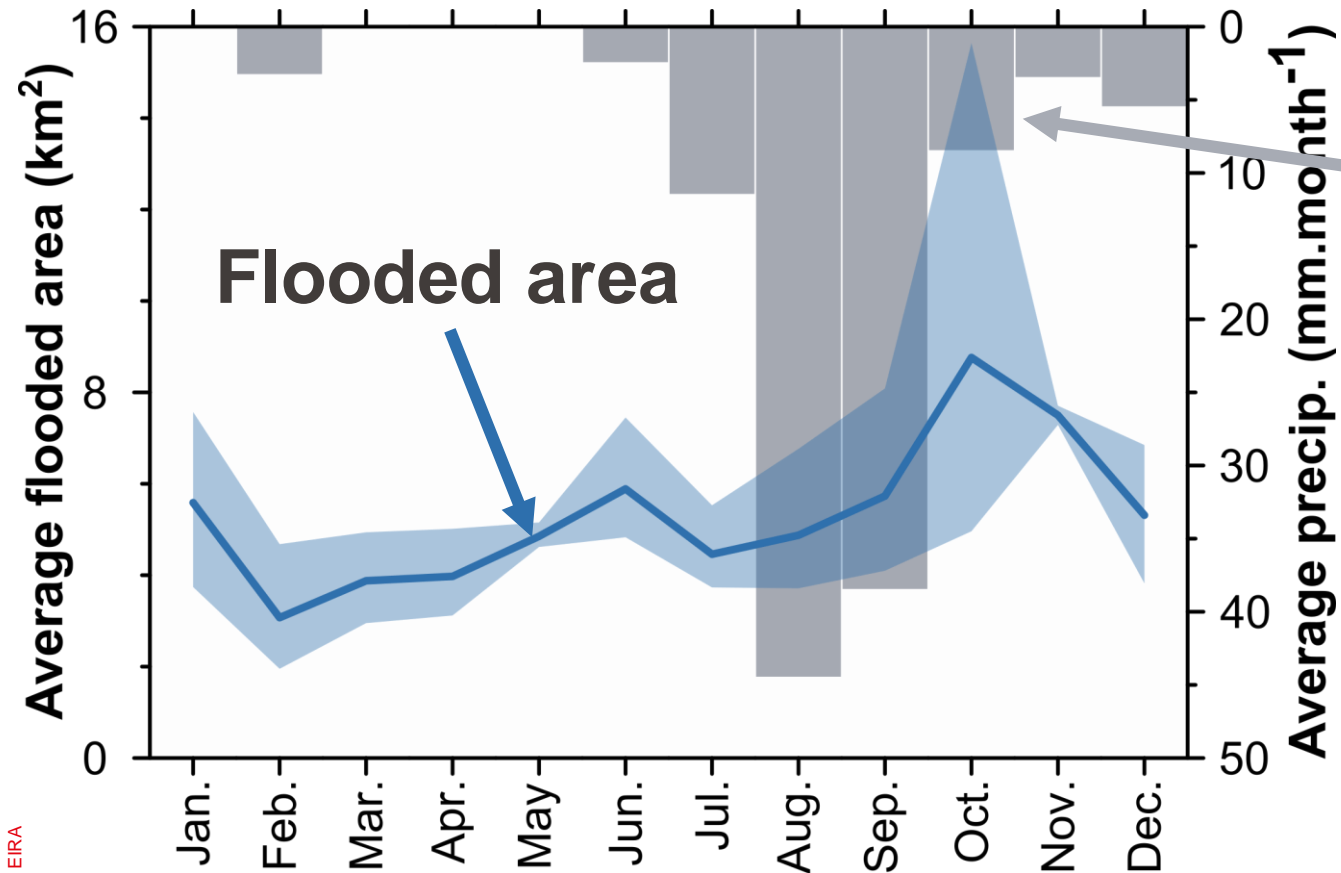


March 2023

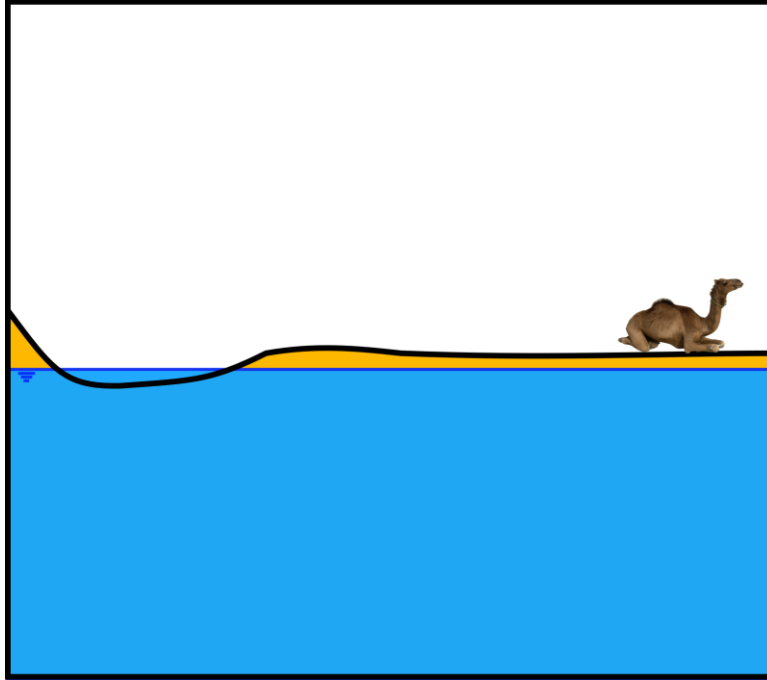
4. Groundwater



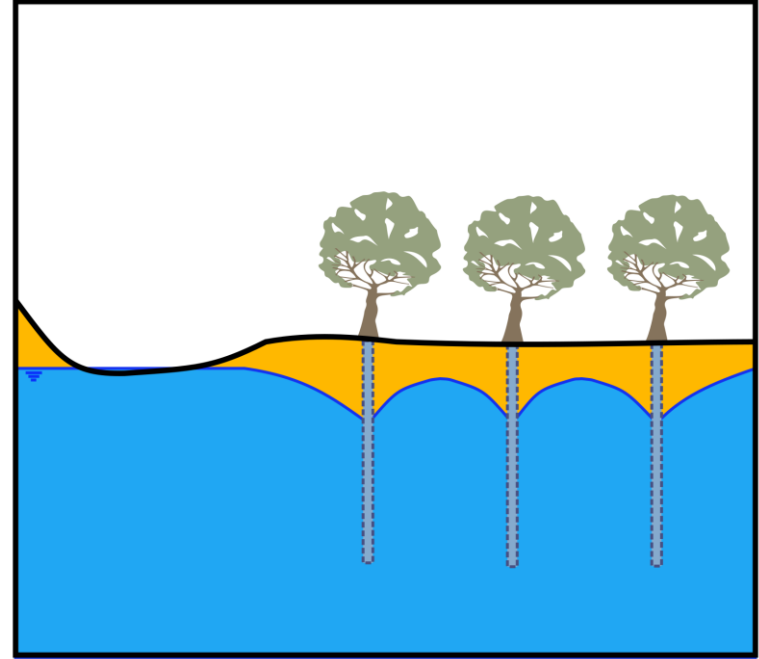
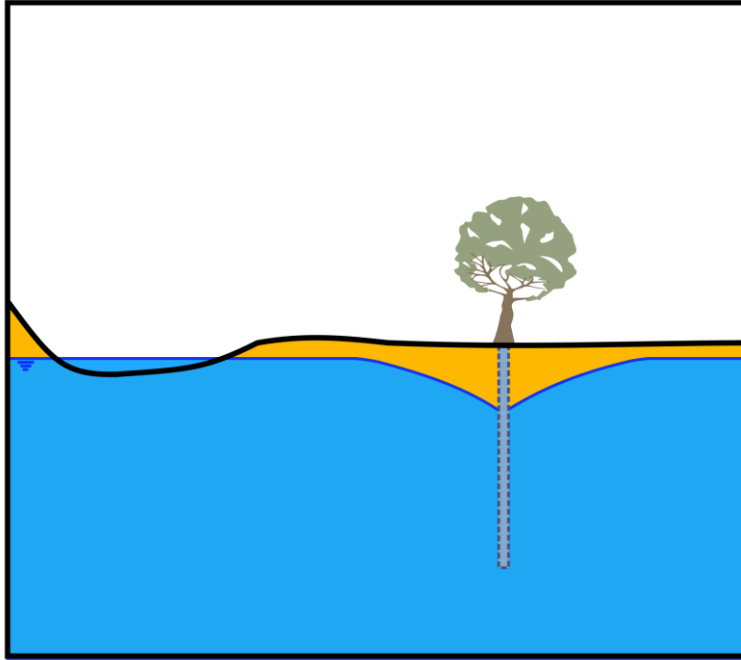
4. Groundwater



Precipitation



5. Nature-based solution



6. Tree candidates



Tamarix aphylla



Phoenix dactylifera



Azadirachta indica

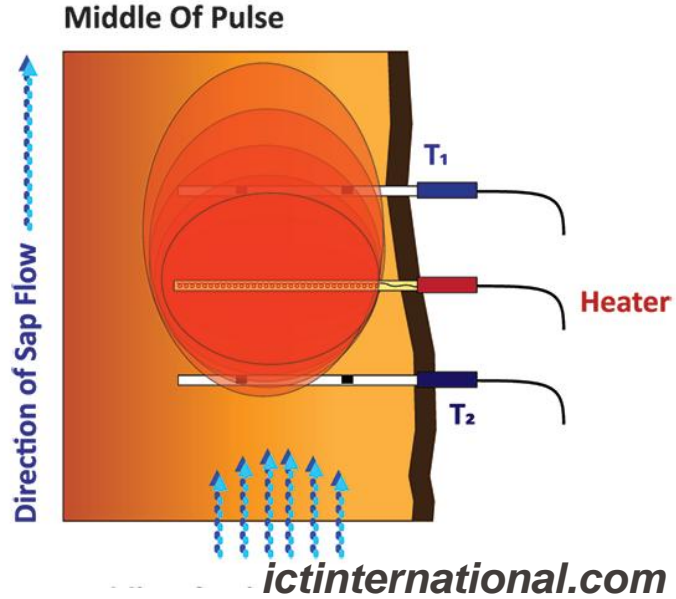


Eucalyptus camaldulensis



Casuarina equisetifolia

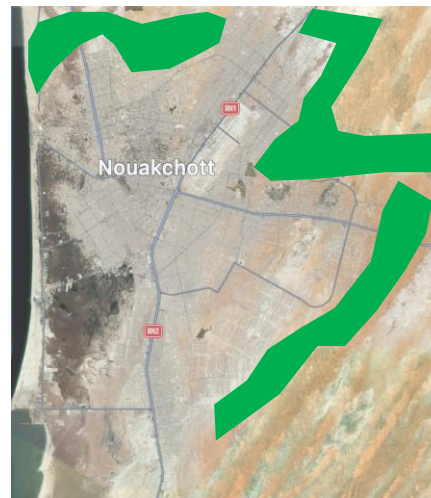
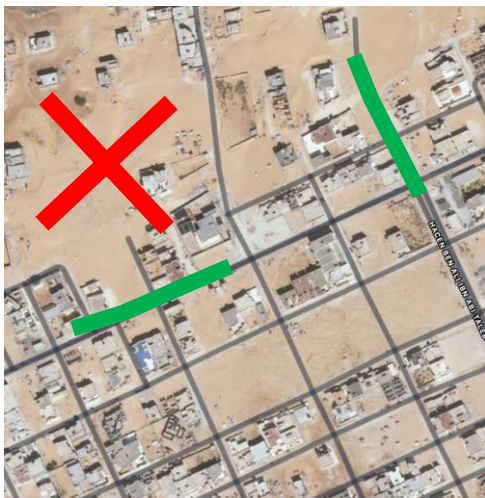
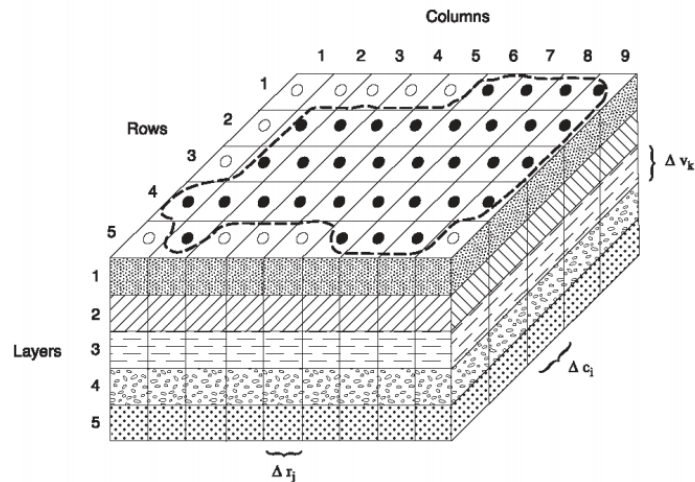
7. Transpiration measurement



8. Outcomes of the project

- Eco-hydrogeology modelling

→ Tree-planting scenarios



8. Outcomes of the project

- Socio-eco-hydrogeological considerations



9. Project for the course

- **Based on the EIRA project (location, context, data)**
 - **Simulate groundwater dynamics and impact of tree-planting scenarios**
- Create two tree-planting scenarios and discuss the results**