



LUNCH & LEARN WEST AFRICA

 world
waternet

11th May 2021, 12:00-12:45u

A lunchtime trip to Ghana, Mali and Burkina Faso

- 12:00-12:05 Music, welcome by Koen Maathuis & introductions
- 12:05-12:15 **Omedi Ochieng** – What African Philosophy can teach you about the good life
- 12:15-12:20 **Jaap Bos** – Ghana: nature-based solutions
- 12:20-12:25 **Ruth Wijland & Thierno Sissoko** – Mali: drinking water connections & NRW
- 12:25-12:30 **Marina Gatón Gonzalez** – Mali: wastewater management
- 12:30-12:35 **Kevin Dipama** – Burkina Faso - ECDD Project
- 12:35-12:40 **Edith Tea** - Thesis presentation
- 12:40-12:45 Q&A



Nature based solutions in Ghana

Integrated Water Resources Management



Examples of Nature based Solutions

- Restore and protect forests and wetlands in catchments → water availability
- Mangrove planting → coastal protection
- Reforestation riverbanks → less siltation basins
- Agroforestry → less evaporation
- Water harvesting → overcoming dry season
- Sand motor (NL) → coastal protection

Advantages

- Enhances sustainable water management
- Creates low skill and fast implementing jobs
- Fairly easy and quick to implement
- Appeals to donors (Payment for Ecosystem Services: trees, CO2)
- Suitable for pilots IWRM – cooperation
- Visible results enhance Blue Deal



Nature based Solutions in Ghana

- Reforestation of Riverbanks – White Volta Basin - **film**
- Songor Lagoon Mangrove - Volta Delta (in preparation)



Drinking water in Mali

Water Operators' Partnership
with SOMAGEP





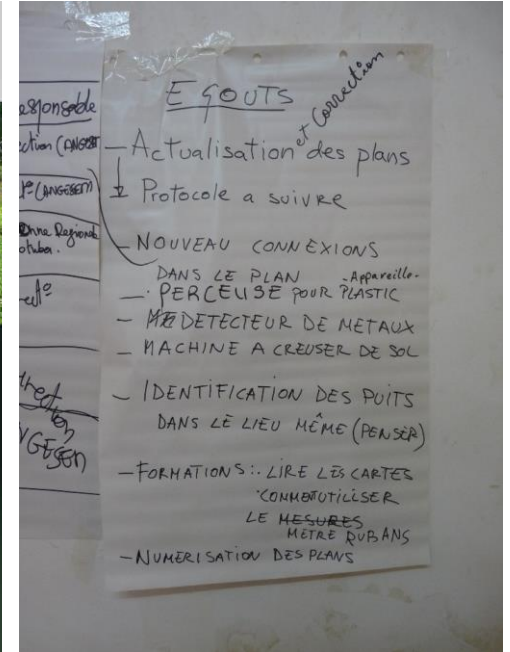
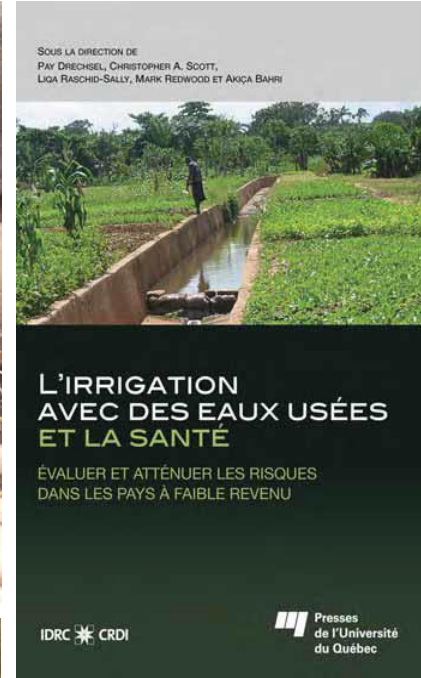
Wastewater treatment in Mali

Water Operators' Partnership
with ANGESEM





The people



The challenges



ECDD

Eau, CLE (comité local de l'eau) et development durable
Water, Local water committee and sustainable development

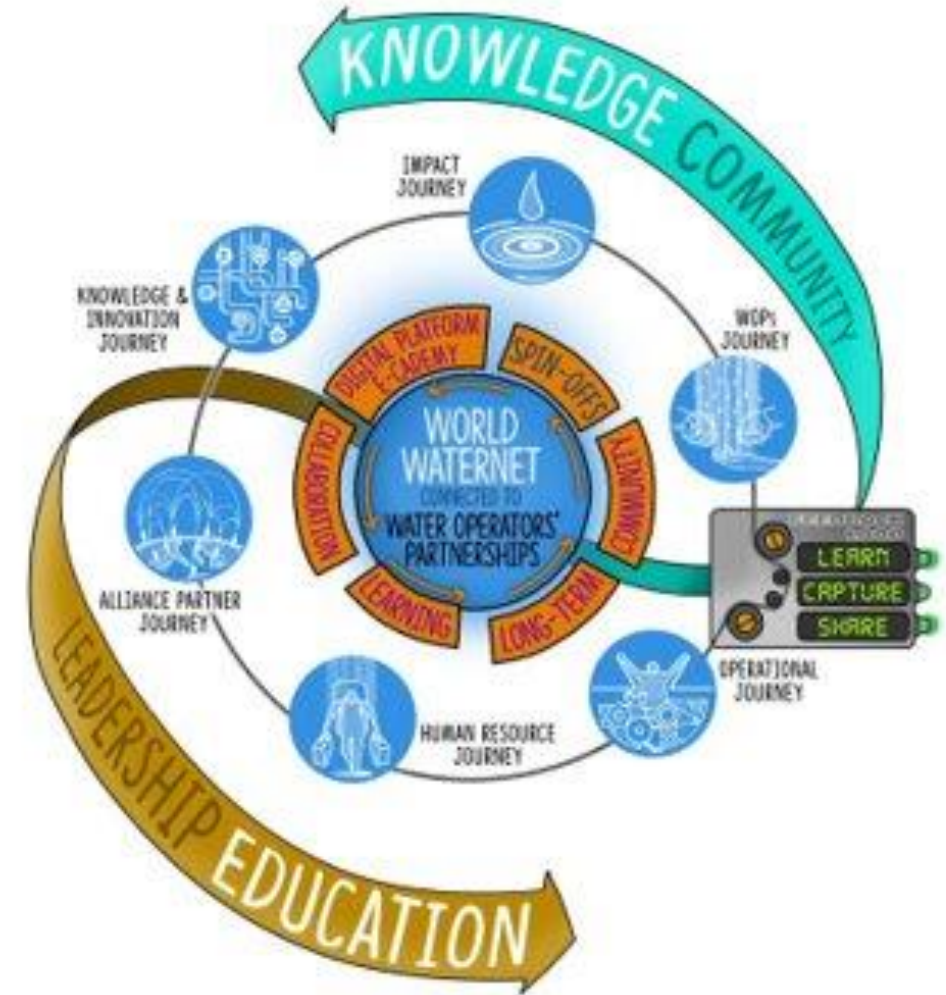
World Waternet and SNV





MSc Hydrology

Remote sensing soil salinity

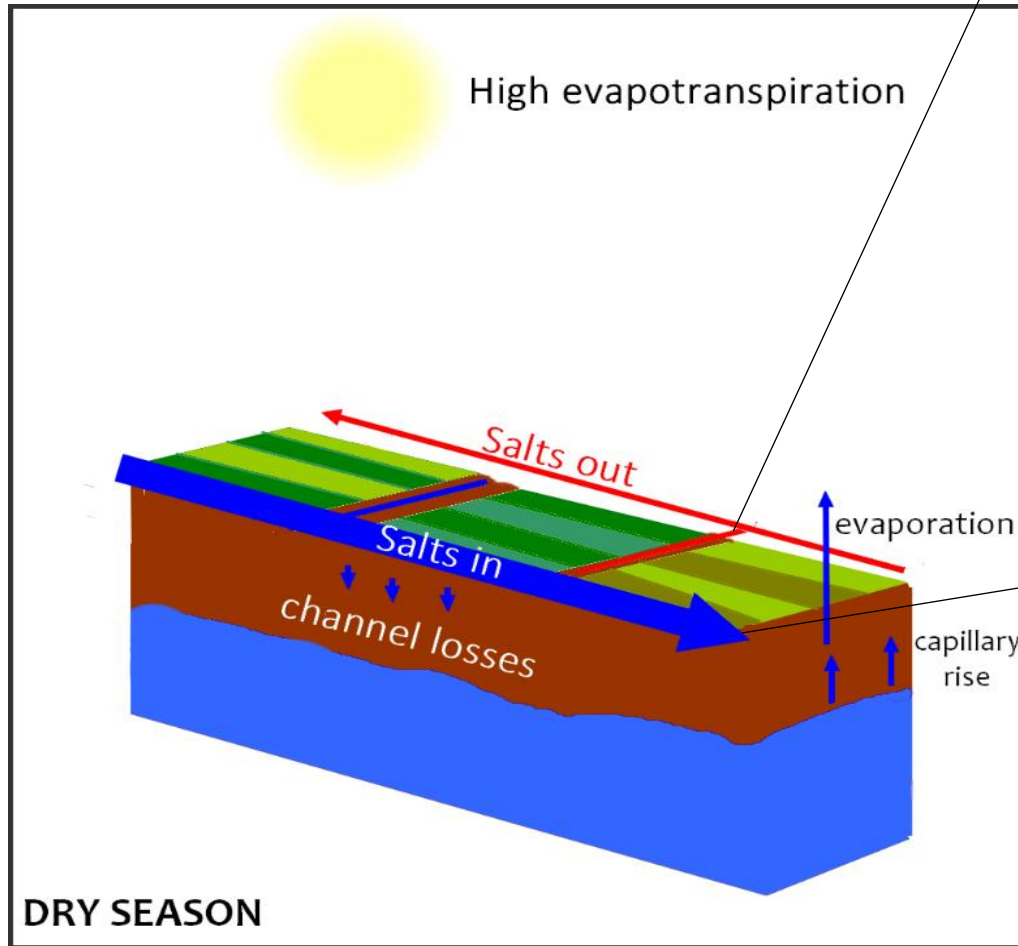


Modeling soil salinity using Remote sensing: The case of the Office du Niger

Edith Tea

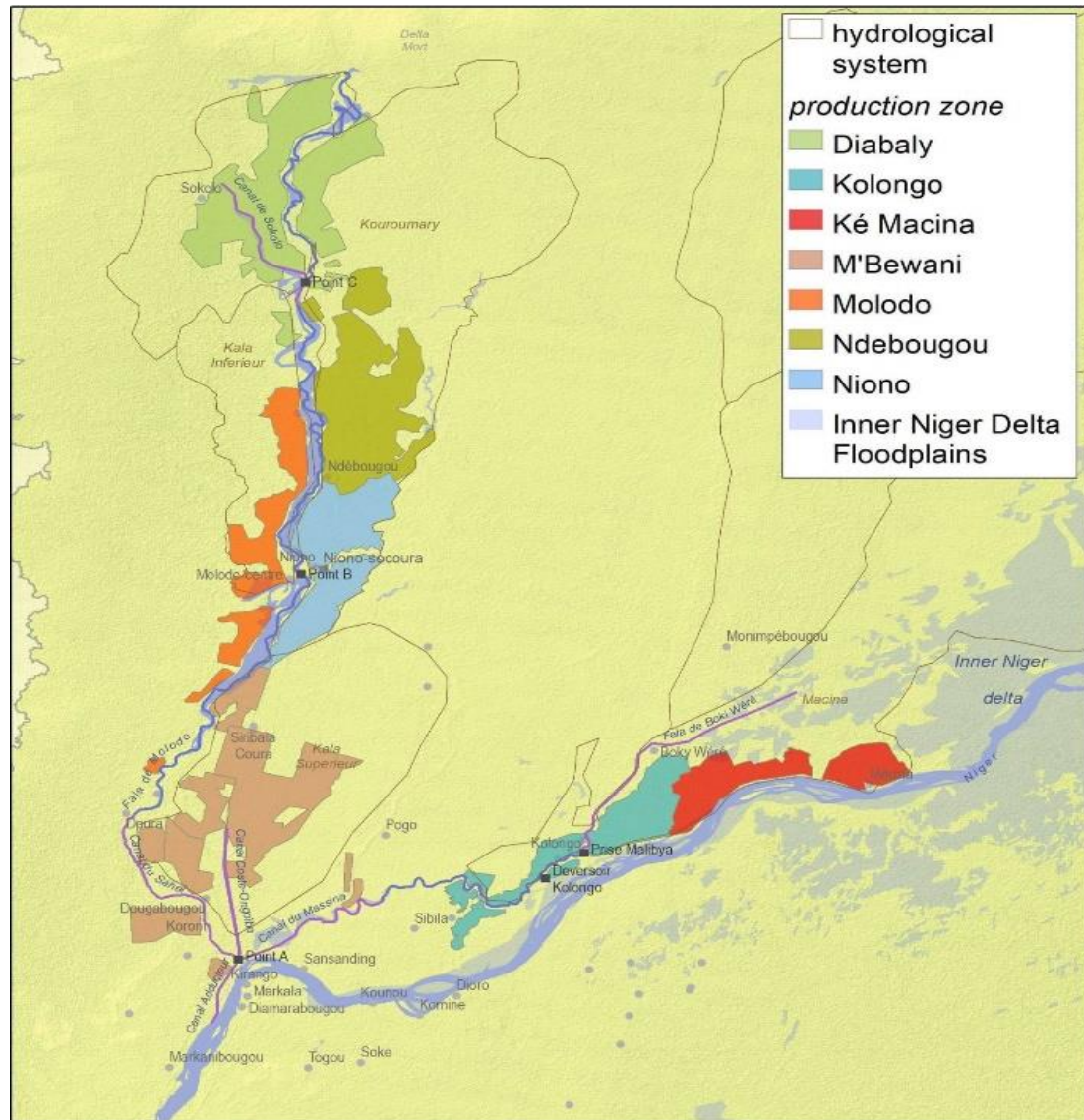


Salinization



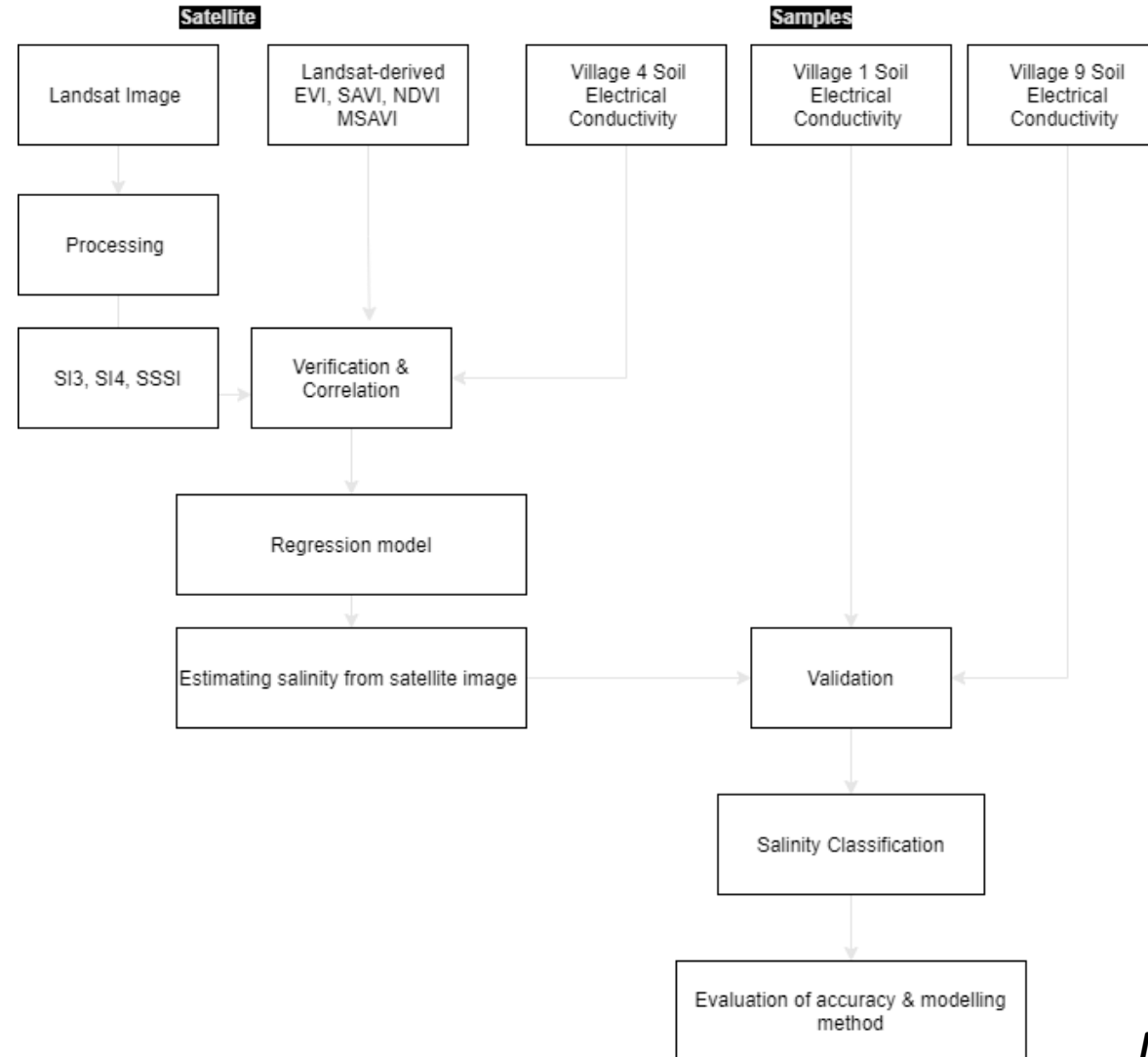
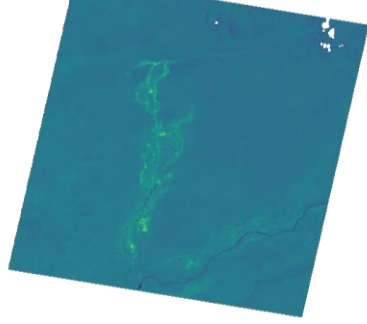
- Insufficient rainfall
- High evaporation
- Insufficient drainage

Office du Niger

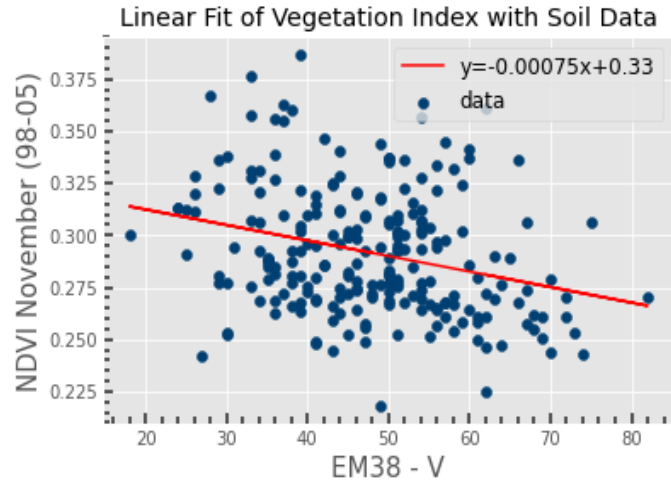


- More than 50% of Malian rice
- 82,000 hectares
- Rice as the dominant crop

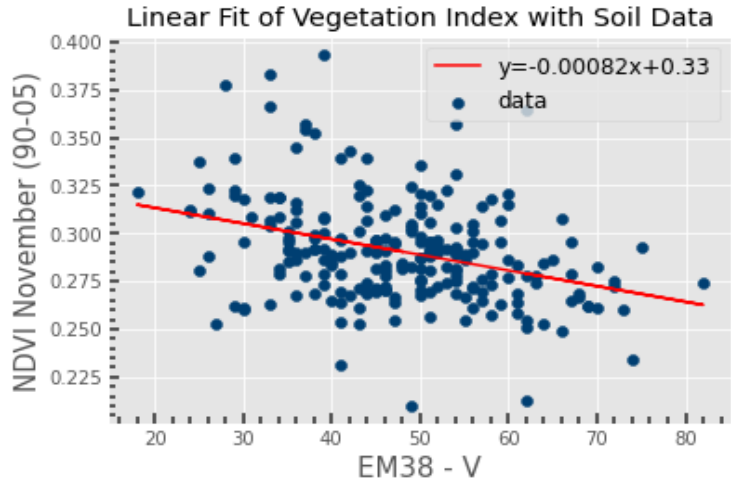
Method



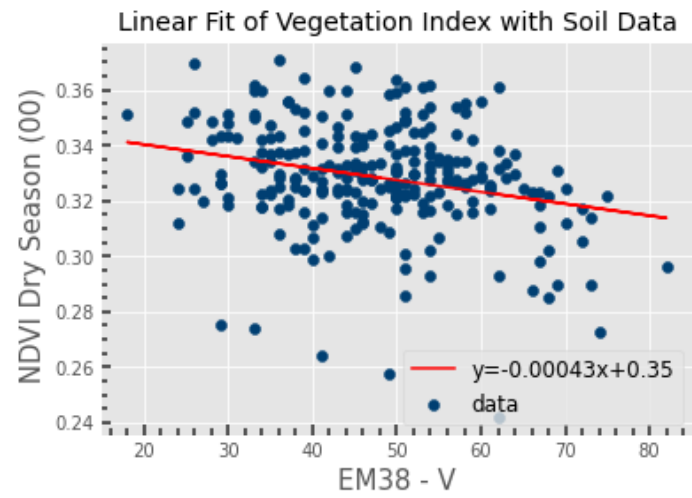
Preliminary Results



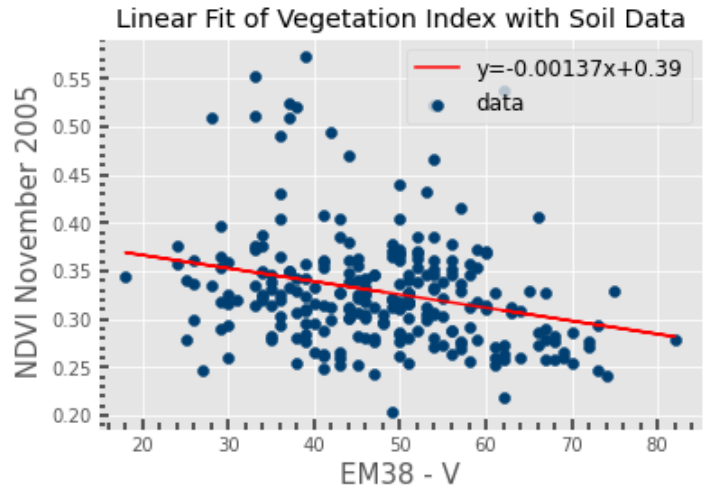
Pearson Correlation Coefficient: 0.31
 $r^2 = 0.08$
P value : 1.6808769187693266e-06



Pearson Correlation Coefficient: 0.35
 $r^2 = 0.12$
p value : 7.955090673270977e-07



Pearson Correlation Coefficient: 0.26
 $r^2 = 0.06$
3.551281309463064e-05



Pearson Correlation Coefficient: 0.27
 $r^2 = 0.07$
p value : 1.9050323406783462e-05

- r^2 below 60% : Insufficient for prediction
- Best correlations:
 - 2000-2005 (delay in response)
 - November (driest month)

Conclusions & Next steps

- Knowledge & Innovation in use of remote sensing
- Analyze different regions:
 - do previous conclusions repeat?
- Writing, writing, writing!

A circular observation tower with a blue and white diamond pattern. The tower has a white base with blue columns and a blue and white diamond pattern on the upper section. The text "THANK YOU!" is overlaid in white on the tower's side. The tower is surrounded by green foliage and a clear blue sky.

THANK YOU!