



Agreement N. 1826

PRIMA-SAFE Project

'Sustainable water reuse practices improving Safety in Agriculture, Food and Environment'

Annual Mid Term Meeting

Ibn Tofaïl University
4th-6th October 2023

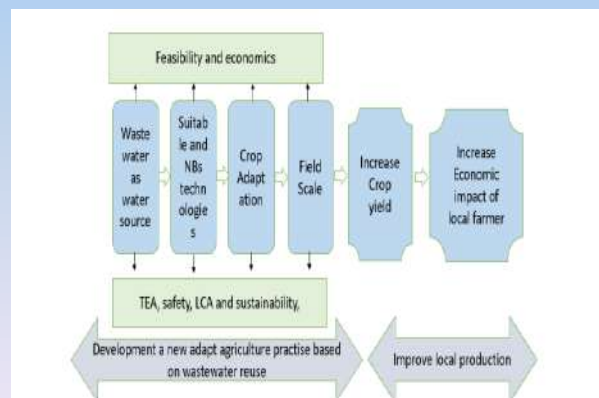


Global overview

In Mediterranean countries, smallholder farmers are the primary food producers. As global populations continue to rise, there's mounting pressure on these farmers to increase their productivity. However, challenges like climate fluctuations and water scarcity due to climate change make farming increasingly arduous. Efficient and cost-effective water use and wastewater treatment are crucial to address this scarcity.

Future wastewater treatment methods should aim to boost crop yields. One solution is using treated wastewater for irrigation, but this introduces challenges like organic micro-pollutants, excessive nutrients, and heightened salinity in the soil. All these strategies will be collaboratively designed and implemented with smallholder farmers, taking into account various socio-environmental contexts from both the northern and southern Mediterranean coasts.

Methodology



Overall Methodology of the SAFE project

Scientific, environmental, and economic impact

Due to the increasing global population, farmers are under increasing pressure to improve productivity and ensure food security and safety. SAFE will address these challenges by studying i) decentralized wastewater treatment based on natural base solutions (NBS), ii) assessment of water reuse for crop irrigation, and its impact on production and quality of plants, iii) the promotion of environmentally friendly practices such as pest control using biofertilizers such as *Trichoderma* sp., and, iv) evaluation of local biodiversity and co-benefits.

SAFE's major challenge is the development and improvement of tools to: increase yields through good quality of water for irrigation, soil and pest management; improve adaptation of plants to salinity conditions, wastewater; and improve agricultural practices

Participants





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International Workshop

"Agriculture and water scarcity in the context of climate change: What prospects?"

Ibn Tofail University
6th October 2023
(Salle Polyvalente, Fac. Sc. Kenitra)



Context of the Workshop

This workshop is aligned with the progress meeting of the PRIMA Project, hosted by Ibn Tofail University. The project, titled "Sustainable Water Reuse Practices Enhancing Safety in Agriculture, Food, and the Environment" or "SAFE" for short, is scheduled at Ibn Tofail University, Morocco, from October 4th to 6th, 2023.

The session aims to enlighten Ibn Tofail University students about the challenges of traditional water scarcity against the backdrop of climate change. With agriculture being impacted by climate shifts, it's pivotal to adopt sustainable and efficient water management strategies to ensure both food security and the long-term viability of farming in this changing climate.

Objectives of the Workshop

1. Assess the impact of climate change on water availability for agriculture;
2. Explore sustainable agricultural strategies and practices to cope with water scarcity;
- 3- Investigate the strategies for enhancing non-traditional water resources: recycling treated wastewater, converting seawater through desalination, harnessing rainwater, and interconnecting water basins.
4. Promote stakeholder awareness, particularly among students, regarding agricultural water management in the context of climate change;

Opening ceremony

9h00 - 9h10 : **President of Ibn Tofail University**

9h10 - 9h20 : **Dean of Kenitra Sciences faculty**

9h20 - 9h40 : **Principal and local conveners** of
Prima SAFE Project (Presentaion of
the project)

Scientific Programme

- 9h40-10h00. Presentation of PRIMA projet :
"Sustainable Water Reuse Practices Enhancing Safety in Agriculture, Food, and the Environment"
(**Prof. Monica Brienza, UNIBAS, Italie**)
- 10h-10h30. Coffee Break
- 10h30-10h45. The impact of climate change on agriculture (**Dr. Hassan Benaouda, INRA**);
- 10h45-11h00. The initiative for the Adaptation of African Agriculture: Concrete responses to face the problems of climate change and food insecurity and meet the challenges of sustainable agriculture. (**Dr. Riad Balaghi, INRA**);
- 11h00-11h15 Estimation of crop water needs in the context of the reuse of wastewater in agriculture (**Ehssan El Mknassi, IAV Hassan II, Rabat**);
- 11h15-11h30. Complementary treatments for the reuse of treated wastewater in agriculture (**Ghali Khianti, IAV Hassan II Rabat**);
- 11h30-11h45 Renewable energy sources (RES) to cover energy requirements of water reuse in agriculture towards neutral product carbon footprint (**Prof. Georgios Ntinis, Elgo, Greece**) ;
- 11h45-12h00. Environmental and health risks assessment related to reclaimed domestic wastewater reuse in irrigation (**Prof. Serge Chiron, Université de Montpellier, France**) ;
- 12h00-12h45. Desalination of seawater and its use in Agriculture (**DIAEA, MAPMDREF, Rabat**);
- 12h45-13h00. The interconnection of hydraulic basins: case of the water highway linking theSebou basin and the Sidi Mohammed Ben Abdellah dam (**DIAE, ORMVAG, Kénitra**);
- 13h00-13h15. Rain water harvesting (**Dr. Rachid Moussadek**).

Local conveners (Morocco)

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