



Climate Smart WATer Management
and Sustainable DEVelopment
for Food and Agriculture in East Africa



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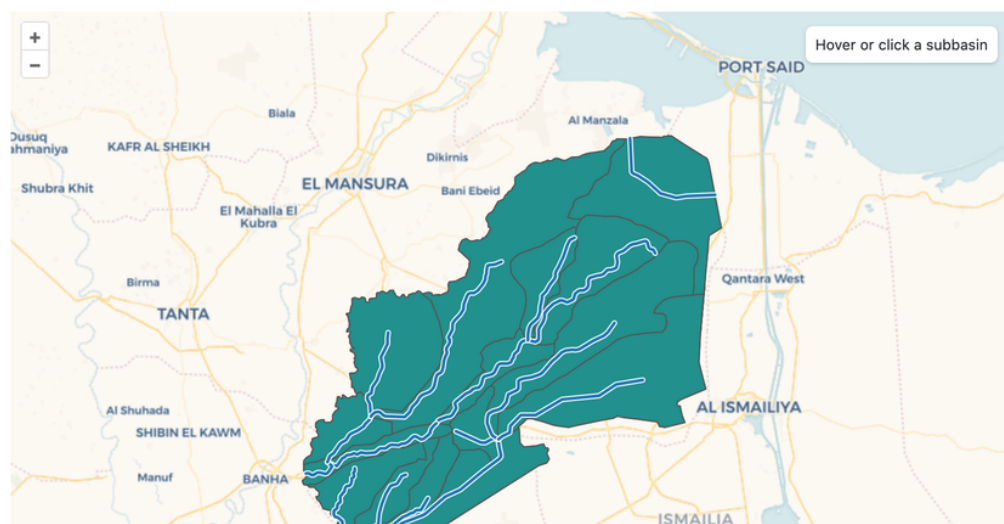
THE WATDEV TOOLBOX: TURNING KNOWLEDGE INTO BETTER DECISIONS

A digital tool to support climate-smart water, soil and agricultural planning across WATDEV partner countries.

1. THE WATDEV TOOLBOX

Study area: [Egypt](#) [Ethiopia](#) [Kenya](#) [Sudan](#)

Subbasins — Egypt



Controls — Egypt

Datasets / scenarios

Default datasets

- ☒ Intercropping ⓘ
- ☐ Conjunctive Water Use ⓘ
- ☐ Drip Irrigation ⓘ
- ☐ Composting ⓘ
- ☐ Baseline ⓘ

Use the checkboxes to enable or disable scenarios.

None of the selected datasets are currently available for download.

Metric

Nitrate in groundwater

Average nitrate leaching to groundwater per hectare, aggregated to subbasin and crop.

The WATDEV Toolbox is one of the key outputs of the WATDEV project. **Developed to support evidence-based decision-making, the Toolbox allows users to explore agricultural scenarios, compare Best Management Practices and assess their possible effects on water, soil, productivity and socio-economic conditions.** It brings together modelling results, field data and local knowledge in a single digital environment, helping decision-makers, researchers and technical experts understand what works best, where, and under which conditions.

[Explore the WATDEV Toolbox](#)

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2. TOOLBOX EXPLAINED

A Video to Explain the Toolbox in Simple Terms



What is the WATDEV Toolbox?

Why does it matter?

How can it support better decisions for water and soil management?

The Toolbox Explainer Video answers these questions in a clear and accessible way. Through animation and simple visual language, it introduces the purpose of the Toolbox and shows how it can help decision-makers simulate future agricultural scenarios, compare options and support more resilient planning at basin/landscape level.

[Watch the Explainer Video](#)

3. TOOLBOX FOR USERS

The Technical Manual



For users who need to work directly with the Toolbox, WATDEV has developed a **dedicated technical manual**. The manual is a practical guide for specialized users, including **researchers, modellers, planners, technical experts and institutional actors**. It explains how to access the tool, navigate its functions, interpret outputs and use the Toolbox to support planning and decision-making processes. While the explainer video introduces the Toolbox in simple terms, the manual provides the operational guidance needed to use it in a more technical and independent way.

Download the Technical Manual

4. BEHIND THE TOOLBOX

Training, Validation, and Capacity Building



The WATDEV Toolbox was not developed as a stand-alone digital product. It is the result of a broader process of research, testing, training and validation involving researchers, modellers, decision-makers and local partner institutions. For more info about the whole process, look at: [AA.VV., 2024.\(From the Selection of the Best Management Practices to the Identification of Scenarios - Egypt, Ethiopia, Sudan, Kenya\).](#)

Through the WATDEV training and coaching programme, participants from Kenya, Ethiopia, Egypt and Sudan were introduced to the use of the Water Planning Toolbox and its modelling applications. The process combined theoretical sessions, hands-on tutorials and group exercises. **Participants learned how to visualize model results, compare Best Management Practices, generate new scenarios and use Multi-Criteria Analysis to support evidence-based decisions.** The training path also helped strengthen a regional community in practice, connecting technical experts, researchers and policy-oriented users around a shared objective: making the Toolbox useful, understandable and applicable in real planning contexts.

5. TRAINING CHRONICLES

Building Regional Capacity Around the Toolbox

The development of the Toolbox was accompanied by a series of Regional Toolbox Trainings designed to strengthen technical and institutional capacity across WATDEV partner countries. These trainings created practical opportunities for participants to engage directly with the Toolbox, test its functions and understand how modelling outputs can support decisions on water and agricultural management.



5.1 Regional Training for Modellers in Wageningen, The Netherlands

The first Regional Toolbox Training focused on researchers and modellers. Participants worked on the technical use of the Toolbox, including model parameters, simulation outputs and the assessment of Best Management Practices. This training **helped consolidate the technical foundations needed to use and further apply the Toolbox in the different study areas**. Participants provided helpful suggestions for improving the usability of the Toolbox and the readability and interpretability of the results.

[Read More](#)

5.2 Regional Training in Addis Ababa, Ethiopia

The Ethiopia Regional Training focused on the practical use of the WATDEV Modelling Toolbox for decision-making. Participants from Ethiopia and Kenya explored how to **visualize model results, compare BMP scenarios and discuss how the Toolbox can support planning in different agro-environmental and socio-economic contexts**.

[Discover the Ethiopia Training](#)



5.3 Regional Capacity Building in Cairo, Egypt

The Egypt training brought together decision-makers, **technical staff and representatives from Egypt and Sudan**. Egyptian beneficiaries from the WATERKNOWLEDGE project were also involved. The sessions focused on the use of the WATDEV Toolbox as a practical support tool for public decision-making, planning and investment choices in sustainable water and agricultural management.

[Explore the Egypt Training](#)

BEST MANAGEMENT PRACTICES



Join the conversation online



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