



Food and Agriculture Organization
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ESCWA

Guidelines on Improved Water Allocation for Agriculture

Moving Forward

18-10-2022





1 History

INFO

- Commissioned by the High-Level Joint Water-Agriculture Technical Committee of the League of Arab States
- Preparation undertaken by FAO and ESCWA
- Interviews, analysis, literature review
- Approved by Ministerial Conference van Arab League on 27 January 2022
- Putting these in practice through pilots

Definition (OECD 2015)



“**Water resources allocation** determines who is able to use water resources, how, when and where...”

Moving pilots into action

Four factors:



Shared understanding
Data, maps, tools



Leadership
Mandate, agendas



Engagement
Broad stakeholders
Coordination

Ownership
Diverse users
Self assessment



An aerial photograph of a vast agricultural landscape. The terrain is a patchwork of rectangular and irregular fields in various shades of brown, tan, and grey, indicating different crops or stages of cultivation. Numerous circular patterns are scattered across the fields, which are characteristic of center pivot irrigation systems. The overall scene is flat and open, with some small clusters of buildings or structures visible in the distance.

Moving Guidelines into Action: the country pilots

September 26 - 27 Meeting

- Four countries expressed interest in piloting the guidelines:
 - Egypt
 - Jordan
 - Palestine
 - Tunisia
- LAS and AOAD convened a meeting organized and directed by FAONE and UNESCWA



September 26 - 27 Meeting

- Four countries were asked to prepare concept notes or outlines of concept notes to discuss during the meeting.
- Focus was on identifying potential project areas for piloting the guidelines:
 - Representative for water (allocation) challenges in the country
 - Manageable size
 - Good chance of improvement
 - Positive local ownership and interest
 - Data availability

September 26 - 27 Meeting

- Activities for implementation of guidelines were presented and discussed by FAONE and UNESCWA consultants
- Member countries presented their concept notes



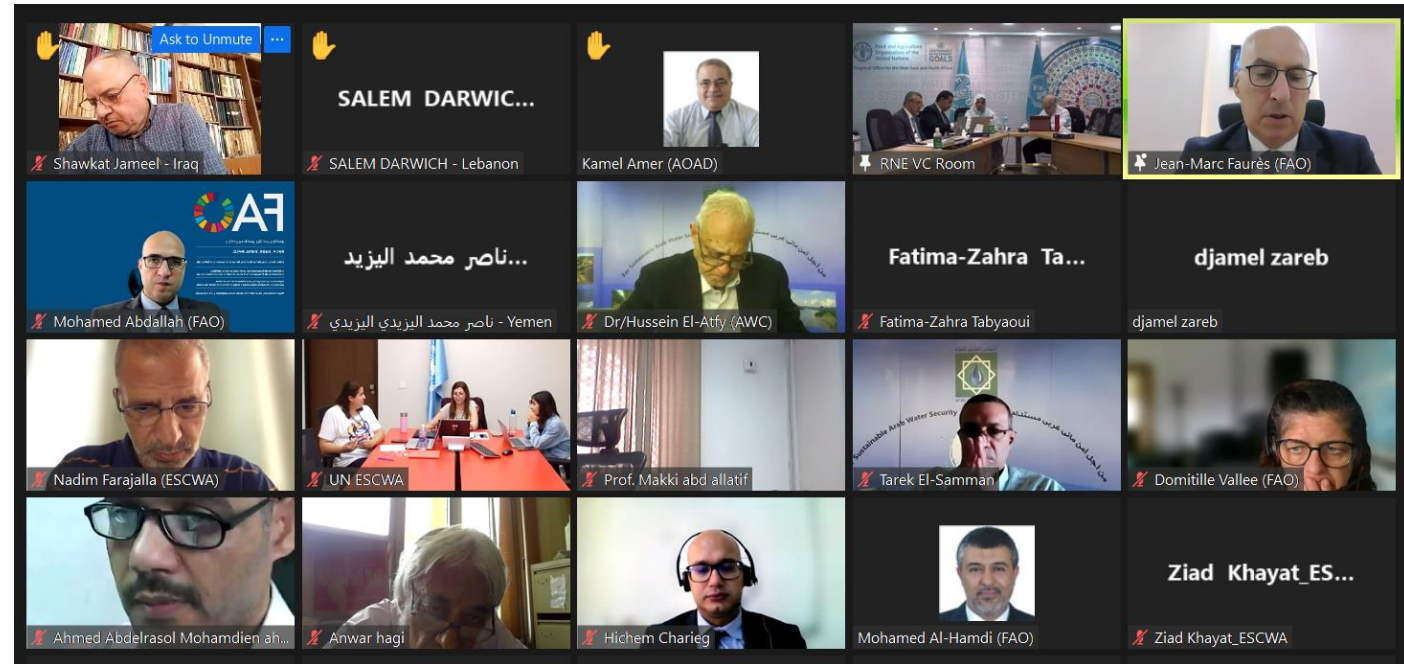
September 26 - 27 Meeting

- The member states representatives engaged in two major activities:
 - Role-playing exercise
 - Water accounting



October 3 - 4 Meeting

- Participants in the in-person Cairo meeting were able to share with a wider audience their work in a virtual meeting held over two days



Key Takeaways from the Meetings

- The teams from the four countries were able to elaborate their concepts which included:
 - Description of their country's major water problems
 - Some description of available data
 - Current activities to improve water sector condition
 - Description of some active stakeholders
 - Justification for selection of the pilot area

Key Going Away Questions

- To aid in understanding how the guidelines would improve water allocation a set of questions were developed:

Key Going Away Questions – 1

1 Water allocation for improved productivity

Are there ways to increase the biophysical water productivity. i.e., to get more 'crop per drop', either on 'more crop' side or on the 'less drop' side?

What would be the economic benefits of increased water productivity – in terms of total returns, jobs created, food security? Which systems optimizes economic water productivity?

What would be the social benefits of increased water productivity? Who benefits how much – producers, laborers, suppliers, traders, processors? Which systems optimizes social water productivity?

Key Going Away Questions – 2

2 Improved management of drought and abundance?

Is there storage in the water allocation system? For instance, in upstream reservoir, local storages, in canal storage, systematic use of groundwater? What is the capacity of these storages in terms of time?

How is water managed during times of shortage and drought? Can the water allocation during times of shortage be improved?

How are abundance/ flood situations managed within the water allocation system? Where does excess water (either during periods of low demand, high supply, or heavy rainfall) end up? Can such excess water be better used?

Is there scope to increase/ create new storage in the water allocation system?

Are the sequence of water turns over the different users systematic – from upstream to downstream for instance or from downstream to upstream? Would adjustments be desirable?

Are there other ways to reduce water supplies for irrigation?

Key Going Away Questions – 3

3 Drainage water reuse and water quality management

Is drainage water being reused? In what way? Is it part/ can it be part of the overall water allocation?

Is there drainage water that is not being reused? What is the reason? Is there scope to reuse?

Are there water quality issues which effect the current or future reuse of drainage water? Can they be mitigated for instance by reducing point or non-point pollution or by isolating highly contaminated water?

Key Going Away Questions – 4

4 Balanced management of surface water and groundwater

Are there areas that suffer from water logging? When and where does it occur? How is it related to the water allocation system, for instance in case of high supplies? Is there scope to make corrections/reduction in the water allocation system?

Is shallow groundwater being used? How are the patterns of groundwater use influenced by the water allocation system? Is there scope to better adjust surface and groundwater use?

Are the irrigation duties relatively high or low? Have they ever been adjusted? Is there scope to readjust them?

Is overuse also caused by unauthorized water diversions? Are there ways to control these?

Key Going Away Questions – 5

5 Substitution of water resources

Are there alternative sources of water (such as treated wastewater, industrial process water) that can substitute the current surface and groundwater? Would this be useful?

Are there options to safely mix lower quality (saline, moderately polluted) water with higher quality water to improve water supply?

Key Going Away Questions – 6

6 Optimizing irrigation schedules and supplies

Are current irrigation cycles (=duration of irrigation turns) harmonized with the main or the preferred crops? If not, what would be the way to better harmonize with preferred irrigation interval (shorter or longer cycles)?

Is the volume of water per water turn adequate – not too much and not too little? Would adjustments be desirable?

Is the duration of the normal irrigation turn adequate – not too short and not too long? Would adjustments be desirable?

Are the sequence of water turns over the different users systematic – from upstream to downstream for instance or from downstream to upstream? Would adjustments be desirable?

Are there other ways to reduce water supplies for irrigation?

If the water is saved, where would it be used?

Key Going Away Questions – 7

7 Improved demand orientation?

Is there flexibility in the water allocation system? Is there a scope to use more/extra or less water if one so requires?

Can water rights be transferred temporarily or permanently between water users?
Would this be desirable?

Is there scope to have 'open' shares in the water allocation system that can be used by the persons most needy?

8 Improved multifunctionality

Is the water in the agricultural system used for other purposes: drinking water, industrial water, effluent disposal, wetlands, environmental flows, navigation, etc?
Are these uses regulated?

Can the supply of water services for these other uses be improved?

Key Going Away Questions – 8

9 Equity measures and protection of vulnerable people

Is there large inequity in the system? Is this inequity part of the existing water allocation or is caused by mismanagement? Can this be corrected by adjustments in the water allocation or the way the system is managed?

Are there special groups of vulnerable users that require more protection? Can this be given special attention in the water allocation?

Work Plan for Activity Areas

1. Select pilot area, description of area and challenges (short), justification of pilot

2. Proposed improvement in water allocation, objectives of the area

3. Proposed activities:

3.1 Stakeholder engagement

- Stakeholder mapping (local, national)
- How to engage local leadership and stakeholders
- How to enforce national leadership and engagement

3.2 Improved water allocation preparation plan

- Use agenda tool for the pilot area
- Define what would need to be done to explore and set in motion

3.3 Improved (local) governance arrangements

- Use agenda tool to identify bottlenecks and priority actions

3.4 Supporting studies

- Compile existing studies
- Water accounting
- Remote sensing / WaPOR (maps, trends)
- Others

3.5 Support capacity building and familiarization activities

- How to create awareness, skills, ownership

3.6 Monitoring, reporting, sharing

- Timelines, proposed deliverables
- Proposed communication outputs

Moving Forward

AOAD, FAONE and UNESCWA have pledged to support country teams in further elaborating and detailing their implementation of pilot scale study

- A. Bilateral meetings, mainly virtual, between the country teams and FAONE and UNESCWA consultants**
- B. Potential for further meeting end of this year or early next year**
- C. Work on securing funding for support in implementation of pilot scale projects in the four countries**
- D. Support the addition of more countries to the pilot scale implementation of the guidelines**



Thank You

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