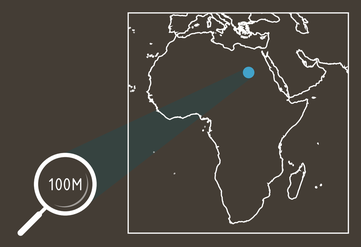
Food and Agriculture Organization of the United Nations



FAO WaPOR NATIONAL LEVEL MAPS (100M)

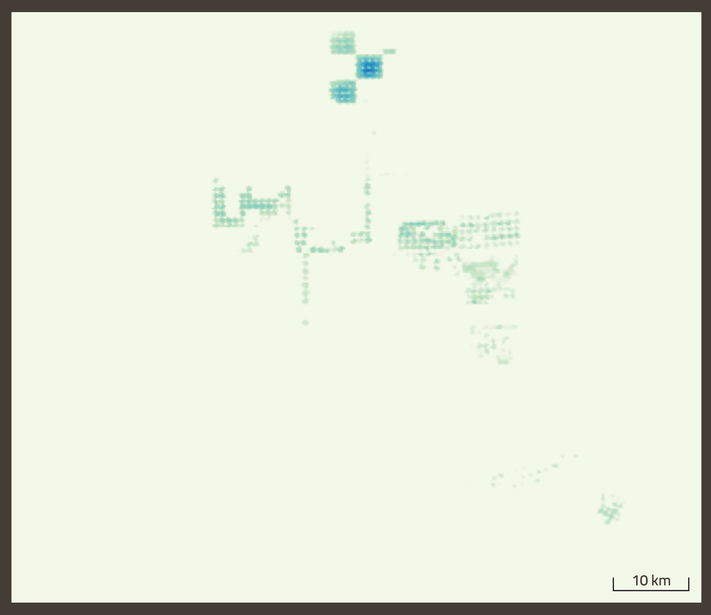
EXPANDING IRRIGATION AREAS | SOUTHERN EGYPT

These maps show the expansion of irrigation in a desert area that draws water from the Nubian Sandstone Aquifer. Each circle is about 800 metres wide, irrigated with sprinklers rotating around a central pivot. These lands are mainly used to grow fodder crops. The advantage WaPOR maps have is that they provide fundamental information on the amount of water that is consumed through crop evapotranspiration, meaning the amount of water released back into the air through soil evaporation and plant transpiration. This allows for the assessment of the amount of water withdrawn from the aquifer to sustain investments in agriculture and irrigation systems. In this case, the data allows for the estimation of annual water consumption of about 400 million cubic metres.

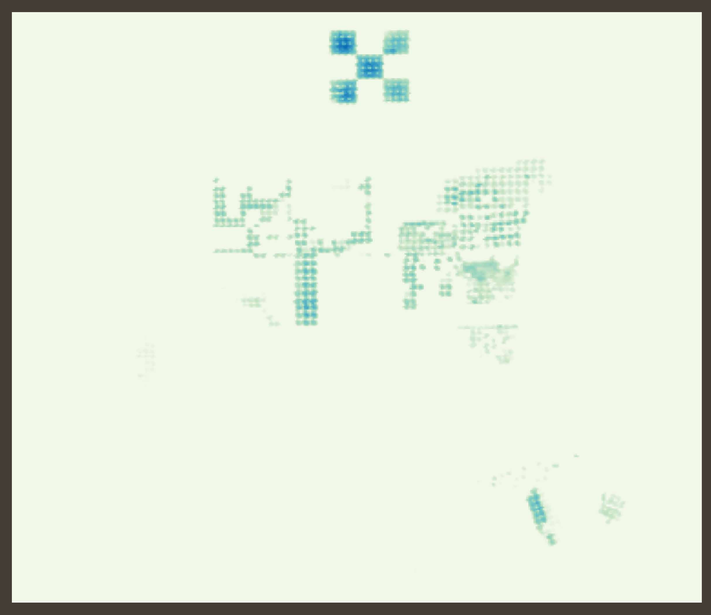
Legend (water consumed, mm/year)

1000 mm | 2000 mm | 5000 mm | 7000 mm | 9000 mm | 9000 mm

2009



2010



2012

2014

2016

2018

This photo shows desert areas in southern Egypt, represented by the lightest colour on the map. These areas are not suitable for cultivation unless irrigation water and other inputs are applied. The longer term sustainability of these types of interventions needs to be properly evaluated.

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This photo shows how the blue areas in the map may look on the ground, with an example of pivot irrigation. WaPOR evapotranspiration data over time, as shown in the maps, provides clear evidence of the expansion of such irrigation in otherwise uncultivated land as more water is being consumed by crops.

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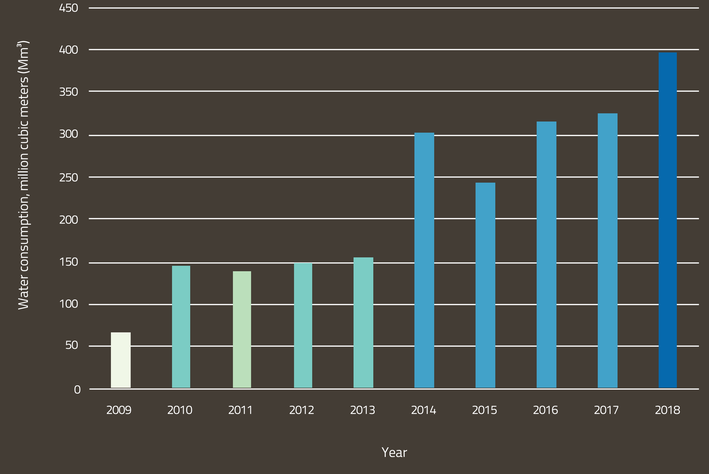
This chart represents the increase in water consumption in this area of southern Egypt over a 10-year span from 2009 to 2018. The increase of water consumption following the expansion of the irrigation systems is clear.

Estimated water consumption in the area of interest in southern Egypt (Mm^3)



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