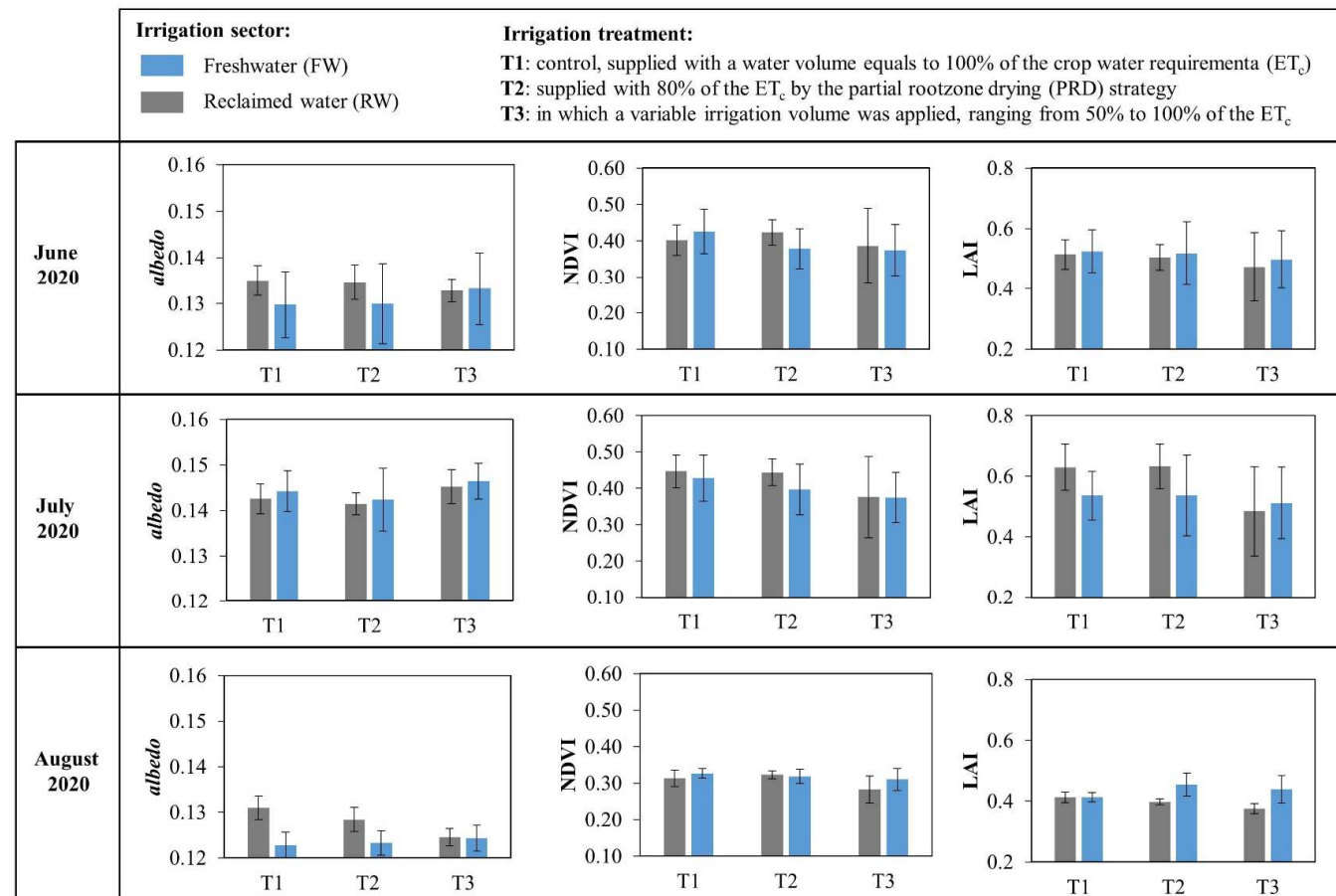


# Supplementary material

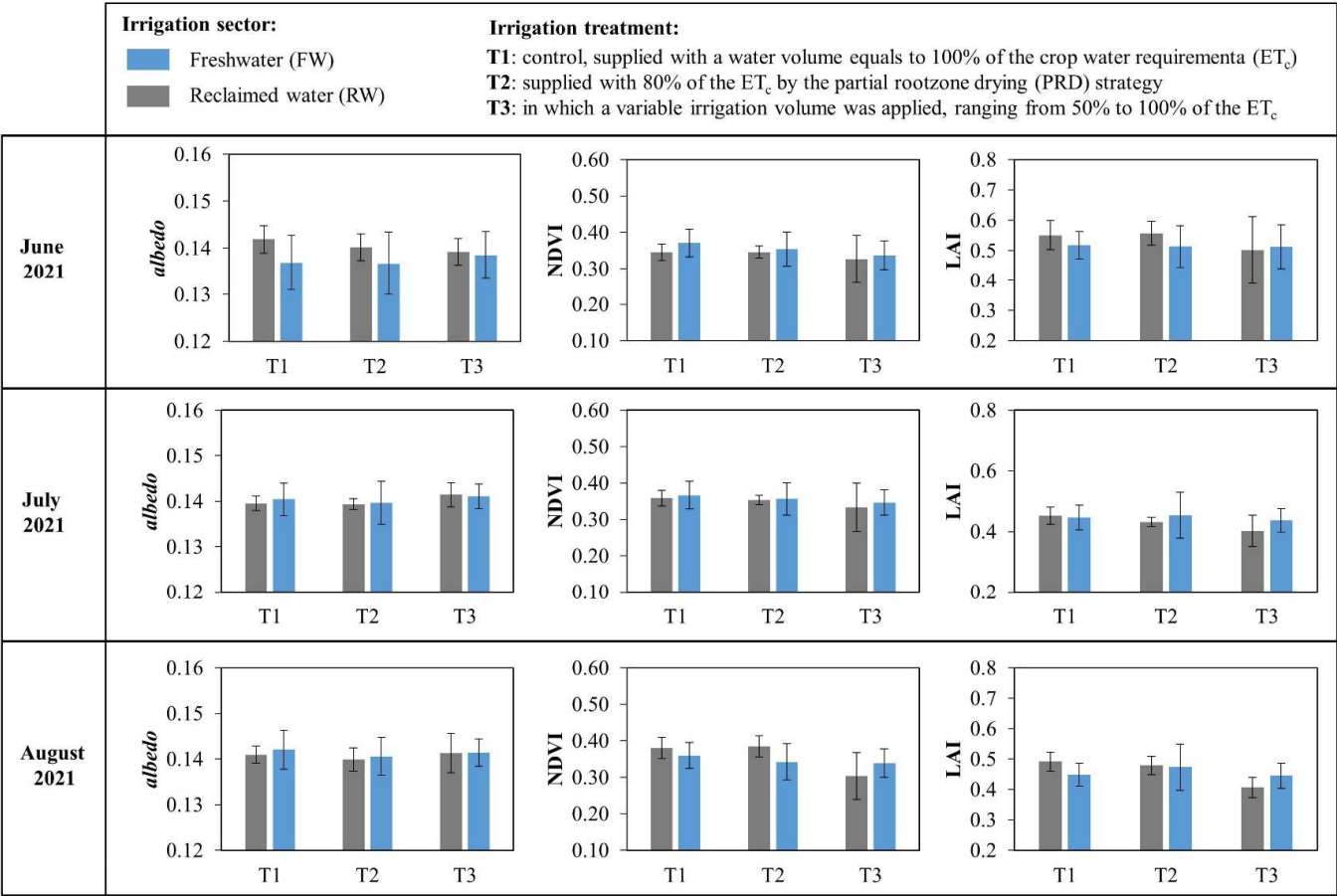
**Table S1.** Summary of the main findings concerning the adoption of reclaimed water (RW) for olive trees.

Olive cultivar	Years	Location (Country)	Main findings	Reference
‘Nabali Muhassan’	2008-11	Ramtha area (Jordan)	The application of RW showed increases in annual shoot length as compared to rain-fed (RF) condition. Average olive tree yield was higher under fresh water (FW) than RF and RW. Fruit oil content was higher in RF than FW and RW	[73]
<i>Olea Europaea</i> L.	2006	Al-Tafilah (Jordan)	The trend of heavy metal transfer from soil to olive fruits and leaves showed a consistency under RW	[74]
‘Chemlali’	2003-04	Central-Eastern Tunisia	No injuries were observed on shoot growth of trees under RW. RW increased the concentration of nutrients in the leaves	[58]
‘Chemlali’	2003-04	Central-Eastern Tunisia	N, P, K, Zn, Mn, and Cl contents in fruit were higher under RW than under RF and FW conditions. Similar values for Ca, Mg, Na, and Cl contents were obtained under FW and RW	[75]
‘Chemlali’	2003-12	Central-Eastern Tunisia	pH, EC, OM, major elements, salts and heavy metals contents increased in soil under RW. Standard quality indices of oil were not affected by water quality. Instead, chlorophyll, total phenols, induction time and $\delta$ -tocopherol values decreased under RW. Both fruit water content, and concentrations of $\beta$ -carotene and tocopherols increased in oil under RW	[59]
‘Chemlali’	2002-12	Central-Eastern Tunisia	No effects on oil content and $K_{270}$ were obtained either by using RW or FW. Effects on free acidity and $K_{232}$ were obtained. Palmitoleic and stearic acid contents decreased under RW; differently the content of total phenols, chlorophyll and minor and major nutrients in the leaves RW increased	[60]
‘Frantoio’	2008-10	Toscana region (Italy)	Different irrigation regimes had not effects on free acidity, peroxide value, and fatty acid composition of olive oil	[62]
‘Barnea’ and ‘Leccino’	2006-13	Coastal plain of Israel	Considerable amounts of N, P and K were observed under RW. Fruit yield was higher in RW compared to FW. Sodium absorption ratio of the soil solution increased under RW	[76]
‘Arbequina’	2007-09	Toledo (Spain)	No differences in morphological features were detected under RW and FW. Oil production decreased up to 21% under RDI	[77]
‘Leccino’	2003-04	Toscana region (Italy)	DI allowed a doubling of oil yield compared with severely stressed trees and fully-irrigated (FI) trees, providing substantial water savings. The difference in oil yield between FI and DI trees was less than 20%	[78]
‘Muhasan’	5-years	Eastern coastal plain of Israel	Reduction in fruit and oil yields under RDI compared to FI was 18.5 and 12.5%, respectively	[79]

‘Picual’	1996-99	Cordoba (Spain)	The yield response under FI and RF was less favorable than that observed in the DI treatments	[20]
‘Maiatica’	2000–06	Basilicata region (Italy)	No microbial contamination was recorded on fruit harvested directly from the canopy under RW. Contaminations on fruits sampled from the ground under RW and RF were similar	[80]
‘Koroneiki’	2010-12	Heraklion, Crete (Greece)	No differences in mineral leaf content were observed. Accumulation of nutrients and salts was observed in soils under RW. Absence of microbial contamination was detected in leaves and fruits of olive trees under RW	[81]
‘Arbosana’	2017-18	Apulia region (Italy)	The combination of RW and RDI neither decreased the fruit yield; however, it reduced oil yield since oil content per fruit dry weight was strongly reduced (40%) compared to control trees	[82]
‘Barnea’ and ‘Leccino’	2006-09	Coastal plain of central Israel	No effect on vegetative growth and productivity was observed under RW. Increased salt loads into and beyond the root zone was obtained under RW	[83]
‘Arbosana’	2017-18	Apulia region (Italy)	The highest level of pathogenic bacterial contamination was observed under RW treatments	[84]



**Figure S1.** Average and standard error values of the satellite-based biophysical indices (*albedo*, NDVI and LAI) at the different irrigation sectors in 2020.



**Figure S2.** Average and standard error values of the satellite-based biophysical indices (*albedo*, NDVI and LAI) at the different irrigation sectors in 2021.