



## International Online Course on Water Harvesting for Microclimate Management

Changes in a landscape, can trigger changes to the microclimate. Farmers planting trees around their fields, communities digging bunds to improve water retention or spreading floodwater, are examples of interventions that change the local climate. Microclimate management is an overlooked route to handle climate extremes in simple and effective ways. When simple practices are wisely applied at scale, the climate on the farm can change, leading to better livelihoods.

The International Online Course of [Water Harvesting Lab](#), edition 2019-2020, will be focusing on “Water Harvesting for Microclimate Management” co-organized with the Centre for Microclimate Management, [MetaMeta](#) and the [Flood Based Livelihoods Network Foundation](#).

The course will highlight the possibility of regulating climatic factors, for example soil moisture or air temperatures, in arid and semi-arid areas by applying Water Harvesting measures that aims to store water in soils, thus affecting climate dynamics, such as evapotranspiration and heat and water fluxes.

The course will be organized by the [DAGRI Department](#) of [University of Florence](#) and hosted on the online [MOODLE](#) platform.

Students will interact with lecturers in a dynamic environment, via presentations, webinars and a course forum. The course accounts for 4 ECTS and it is an official Advanced Training Course by University of Florence.

Applications from developing and transitions countries are particularly welcomed, and 10 places will be available free of charge for selected students. Free places for University of Florence Students will be also available.

**Deadline** for applications is **February 7th, 2020**

**The call for application is available online at:** <https://www.unifi.it/p11611.html#water>

### Bibliography references:

Castelli, G., Castelli, F., & Bresci, E. (2019). Mesoclimate regulation induced by landscape restoration and water harvesting in agroecosystems of the horn of Africa. *Agriculture, Ecosystems & Environment*, 275, 54–64. <https://doi.org/10.1016/j.agee.2019.02.002>

Keys, P. W., Wang-Erlandsson, L., Gordon, L. J., Galaz, V., & Ebbesson, J. (2017). Approaching moisture recycling governance. *Global Environmental Change*, 45, 15–23. <https://doi.org/https://doi.org/10.1016/j.gloenvcha.2017.04.007>

<https://wle.cgiar.org/managing-microclimate>

Course program:

Module	Title	Lecturers
0	<i>Course introduction webinar</i>	Prof. Elena Bresci, Water Harvesting Lab Coordinator University of Florence <a href="#">Web</a>
1	<i>Introduction to Agroecosystems Management and Microclimate</i>	Dr. Giulio Castelli, Postdoctoral Scholar University of Florence <a href="#">Web</a>
2	<i>Managing Microclimate in practice</i>	Sander de Haas, Chief Technology Officer Justdiggit <a href="#">Web</a>
3	<i>Using Remote Sensing to Quantify Microclimate and Water Management in Arid Areas</i>	Dr. Frank van Steenbergen, Director MetaMeta Research / Flood Based Livelihoods Network Foundation. <a href="#">Web</a>  Francesco Sambalino, Project Manager MetaMeta <a href="#">Web</a>
4	<i>Soil water content increase in jessour systems (Tunisia) and in traditional water harvesting interventions</i>	Dr. Mohame Ouessar, Researcher and Head of the Training Division Institut des Régions Arides (IRA), Tunisia <a href="#">Web</a>  Dr. Fethi Abdelli, Watershed Management and Hydrologic Modeling Specialist Institut des Régions Arides (IRA), Tunisia <a href="#">Web</a>
5	<i>Webinar series*</i>  *Webinar will be delivered throughout the whole course, date will be fixed maximizing the presence of students live. Webinars will be recorded.	"Microclimate Management among traditional farmers" Martina Occelli, PhD Student, Institute of Economics Scuola Superiore Sant'Anna Pisa <a href="#">Web</a>  "Green water management and the atmospheric water cycle" Dr. Patrick W. Keys, Lead Scientist, School of Global Environmental Sustainability Colorado State University, USA <a href="#">Web</a>  "The Great Green Wall for the Sahara and the Sahel initiative: drylands restoration and monitoring to combat climate change" Laura Guarnieri, Land monitoring specialist, Climate and Environment Division Climate, Biodiversity, Land and Water Department, FAO <a href="#">Web</a>