



The Water Harvesting Lab (WHL)

Department of Agricultural Food and Forestry System
University of Florence

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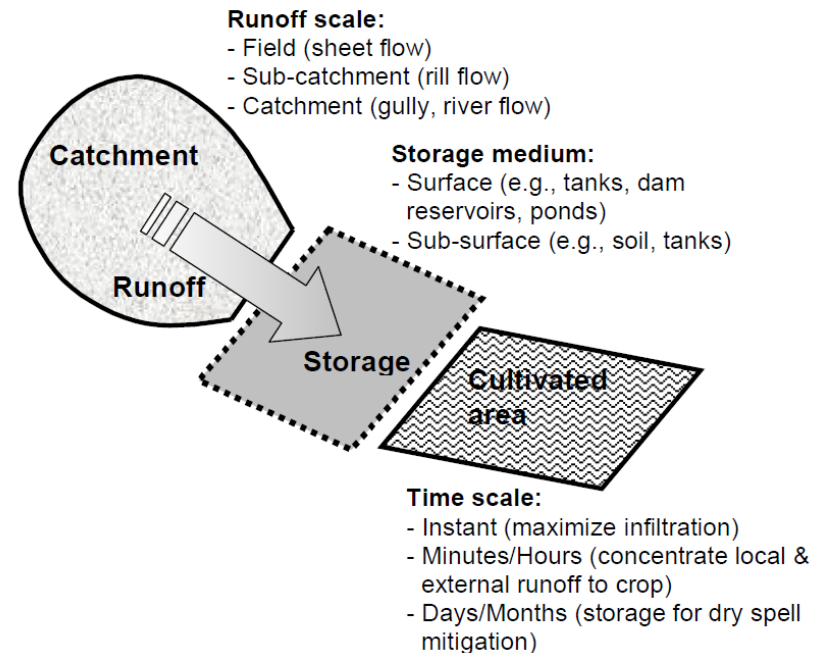


Water Harvesting Lab (WHL)

The Water Harvesting Lab of the Department of Agricultural, Food and Forestry Systems (GESAAF) is active on **inter-disciplinary research in the field of Water Harvesting.**

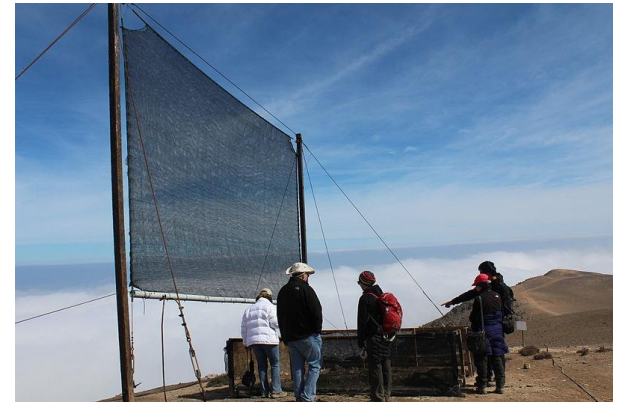
It was established in 2017 by Professor Elena Bresci and Giulio Castelli

Water Harvesting: *“the process of concentrating precipitation through runoff and storing it for beneficial use” (Oweis, 2006).*



WHL research lines

1. Participatory approach to Water Harvesting (WH) systems design and management
2. Effects of WH on ecosystem services and microclimate
3. Fog collection
4. Flood Based Farming Systems (FBFS)
5. Water Conflicts
6. Wadi Hydrology
7. Water Related Ecosystem Services
8. Nature Based Solutions (NBS)



Water Harvesting Lab: Resident Staff



Scientific Coordinator:

[Prof. Elena Bresci](mailto:elena.bresci@unifi.it) – Associate Professor – [elena.bresci\[at\]unifi.it](mailto:elena.bresci@unifi.it)



[Prof. Fabio Salbitano](mailto:fabio.salbitano@unifi.it) – Associate Professor – [fabio.salbitano\[at\]unifi.it](mailto:fabio.salbitano@unifi.it)



[Ing. Giulio Castelli](mailto:giulio.castelli@unifi.it) – Post PhD – [giulio.castelli\[at\]unifi.it](mailto:giulio.castelli@unifi.it)



[Beatrice Laurita](mailto:beatrice.laurita@unifi.it) – PhD Student – [beatrice.laurita\[at\]unifi.it](mailto:beatrice.laurita@unifi.it)

Water Harvesting Lab: Visiting Staff



Dr. Mohamed Ouessar
Visiting Researcher 2018
Senior Researcher in Eremology
Institut des Régions Arides (IRA) de Médenine, Tunisie



Lucas Allan de Olivera
Visiting PhD 2018 - 2019
PhD student in Agricultural Engineering
Universidade Federal de Viçosa, Brasil



Zobaer Ahmed
Visiting MSc student 2018
Erasmus Mundus International Master of Science in Rural Development (IMRD)
Bangladesh



Prof. Eyasu Yazew Hagos, PhD.
Visiting Professor 2017
Associate Professor in Land and Water Development
Mekelle University, Ethiopia

Past project and research

Guatemala, Corredor Seco
Projecto SOBERANOS – Rooftop Water Harvesting Systems (2017-18)

Italy
Water Values
Participatory Evaluation of Water Ecosystems Services (2018)



Ethiopia, Tigray region
Research on Flood Based Farming Systems (2014-2017)

Bolivia, Santa Cruz Department:

- **Aguacruz:** Hydrological modelling of nature based solutions (2015-17)
- **Valles Resilientes:** Environmental risk assessment (2017-18)

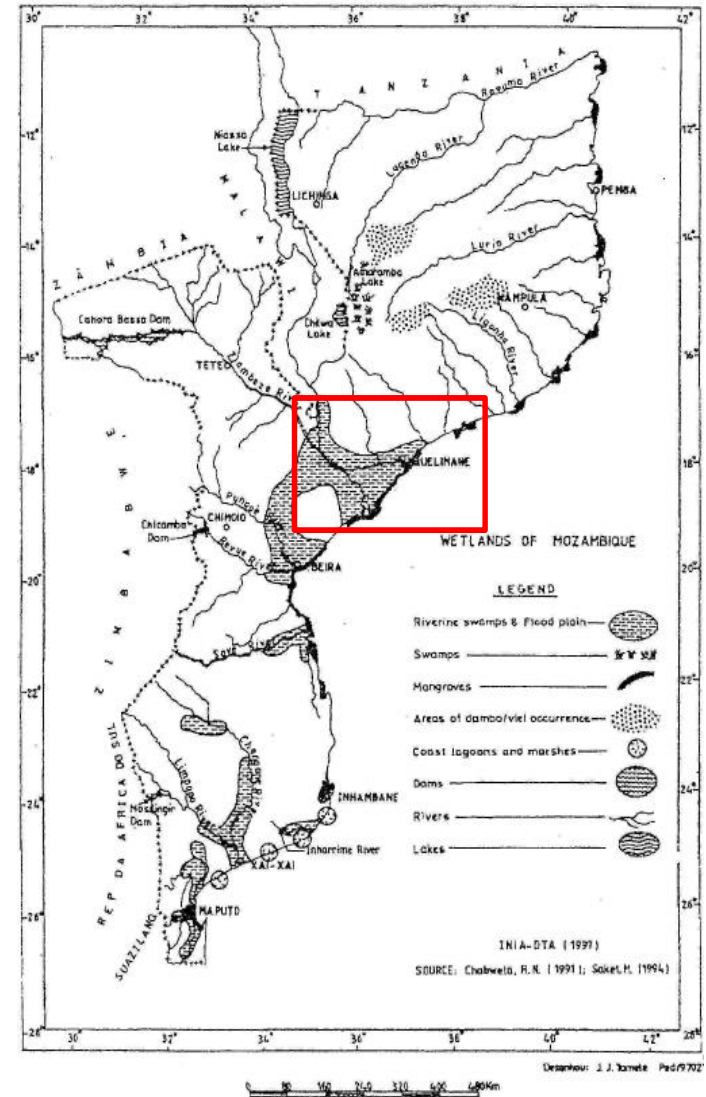
Current Projects

Quelimane Agricole - Mozambique

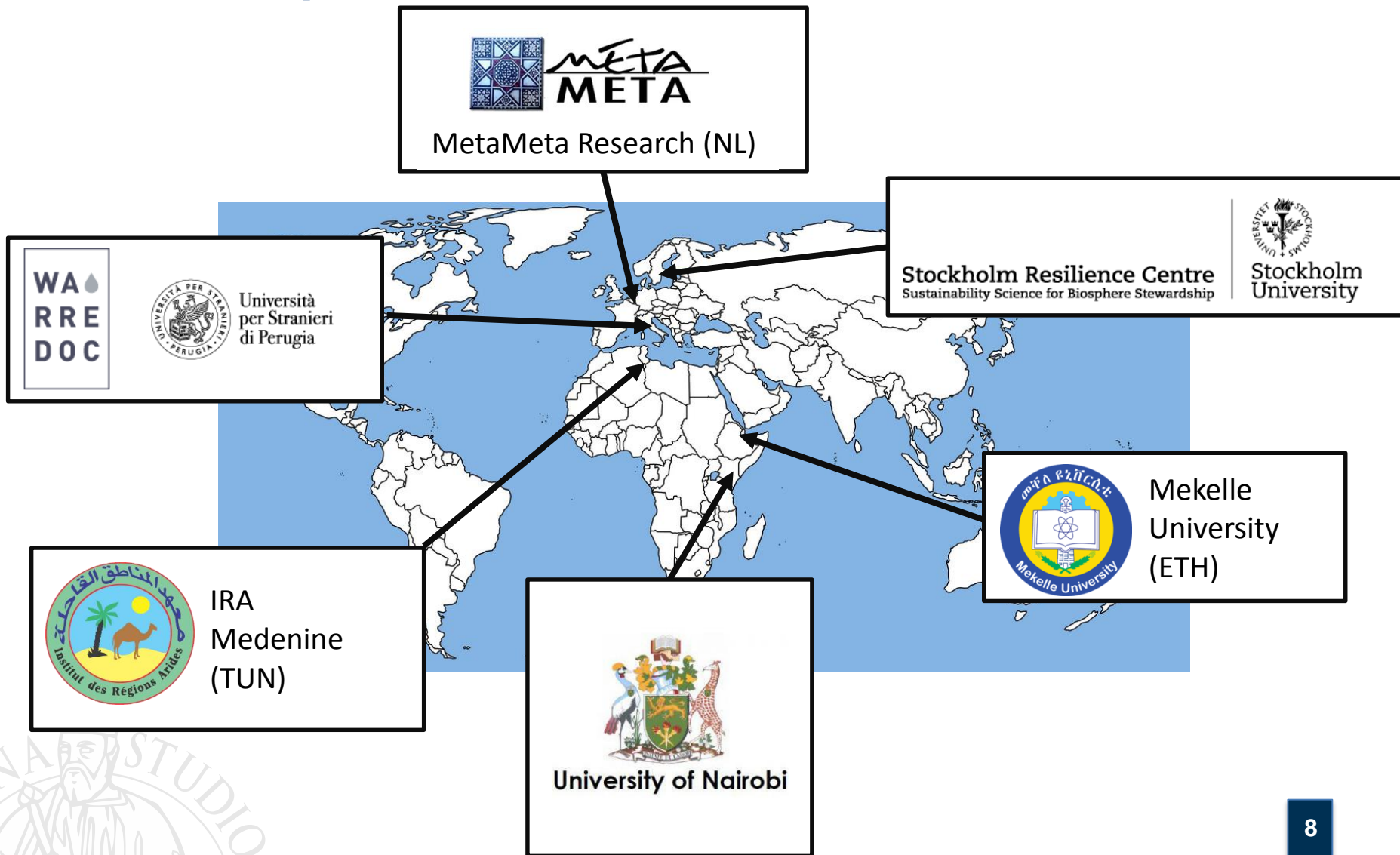
Rooftop Water Harvesting and Wetland Development with Flood Wells (2018-21)

Funding: Italian Agency for Development Cooperation

Leader: ManiTese NGO



Active cooperations



Research and scientific outreach

Since 2017

- 5 Indexed papers (SCOPUS and ISI)
- 1 Book chapter (SPRINGER Publishing)
- 12 Conference talks in national and international conferences
- 5 BSc and MSc thesis
- 2 Awards from national institutions

Latest out:



ELSEVIER

Agricultural Water Management

Volume 210, 30 November 2018, Pages 286-295



A participatory design approach for modernization of spate irrigation systems

Giulio Castelli ^a  , Elena Bresci ^a  , Fabio Castelli ^b  , Eyasu Yazew Hagos ^c  , Abraham Mehari ^d  

 [Show more](#)

<https://doi.org/10.1016/j.agwat.2018.08.030>

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International Online course on Water Harvesting

EDITION 2018-2019: Water Harvesting for land ecological restoration

Enrolment starts soon



University of Nairobi



UNIVERSITÀ
DEGLI STUDI
FIRENZE

GESAAP
DIPARTIMENTO DI GESTIONE
DEI SISTEMI AGRARI,
ALIMENTARI E FORESTALI

Since 2015

	2015-'16	2016-'17	2017-'18	2018-'19
ECTS	6	4	4	4
Fee	300 €	150 €	150 €	150 €
Places reserved for emerging countries (no fee)	0	10	10	10
Enrollment number	13	35	30	??



MSc Thesis Call: Announcement of preferential topics

General Topic: “Water/Land resource/risk management using geospatial data and models”



Aimed to explore human-nature interactions (land use changes dynamics and human-flood and human-ecosystem interactions) with Big/Open datasets and advanced cloud-based GIS platforms: **Google Earth Engine** and **ESRI ArcGIS online**.

MSc candidates will also receive **professional advanced training**

Free course to get you started on the use of the ESRI ArcGIS online platform to use **Open Big Data and Citizen Science for understanding the **Water, Food, Energy and Environment Nexus****

3th Digital Mapping Course

**Water, Food, Energy
and Environment Nexus**

Computer Lab
Building Lupattelli

PERUGIA 21 november 2018



Deadline for application: November 16th

Riconoscimento Accademico Mario Falciai



An **Official Academic Award** from the GESAAF Department for the best BSc or MSc thesis on “**Water and Cooperation**”.

Open to:

- Theses discussed in 2015-‘16 and 2016-‘17 Academic Years
- Theses discussed in Italian Universities

Dedicated to **Professor Mario Falciai**, died in 2015, who was a pillar of the International cooperation activities of University of Florence, especially on water and rural development.

**APPLICATIONS ARE OPEN UNTIL 26.11 @ 13:00 – FIND MORE INFO ON
WHL WEBSITE**

NEXT INTERNATIONAL SEMINARS



Dr. Frank van Steenberg

10-14 December 2018

- Head of MetaMeta
- More than 15 years experience in Water Consultancy (ARCADIS)
- Author of FAO guidelines on Spate Irrigation
- More than 20 years of experience in International Water Management
- 37 publications, H-index 12 (SCOPUS-based)

Announced topics: Flood Based Farming Systems, Mesoclimate Management in Agroecosystems, Road Water Harvesting

Thanks!

Water Harvesting Lab

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- Mailing list: <http://eepurl.com/dBQGOn>
- Check our Website: <https://www.gesaaf.unifi.it/vp-466-wh-lab.html>
- Follow us on UNIFIMagazine (we often publish articles on field work)

TALK WITH US! WE ARE JUST HERE!