



1st International LIFE REWAT Summer School

Digital water management and water-related agroecosystem services: geostatistics, hydroinformatics and groundwater flow numerical modelling



September 3rd—14th, 2018
Scuola Superiore Sant'Anna
Pisa, Italy



OBJECTIVES

The Summer School *Digital water management and water-related agroecosystem services: geostatistics, hydroinformatics and groundwater flow numerical modelling* is organized within the framework of the EU LIFE REWAT project (*sustainable WATER management in the lower Cornia valley through demand REDuction, aquifer REcharge and river REstoration*; www.liferewat.eu).

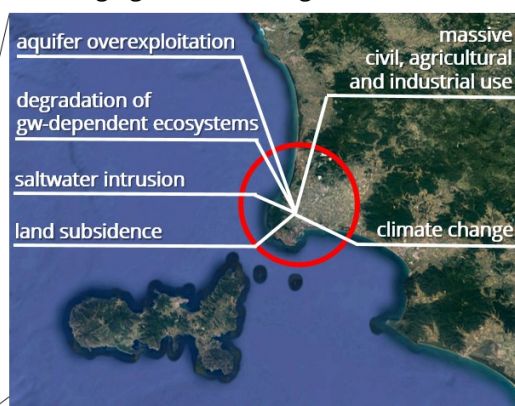
The LIFE REWAT project takes place in the coastal Cornia plain (Tuscany, Italy). There, the aquifer system provides the only source of water for drinking, irrigation, industrial purposes and it also contributes to the water needs of the nearby Elba island. Since 60 years, intensive exploitation of groundwater resulted in consistent head lowering and water balance deficit, causing subsidence, reduction of groundwater dependent ecosystems, and salinization of freshwater resources.

Rebalancing the water budget of the hydrologic system by means of innovative concepts (such as those of water-related agroecosystem services and Nature-Based Solutions - NBS) is the main objective of the LIFE REWAT project.

Five demonstration measures (river restoration; managed aquifer recharge; reuse of treated wastewater for irrigation; high irrigation efficiency scheme; leakage management in water distribution systems) are set in place for promoting water resource management, along with capacity building and participatory actions in a changing climate setting.

Information and Communication Technologies (ICT; sensors and software use) are widely used in order to monitor the impact of such actions and to monitor quantitative and qualitative status of the groundwater resource.

Taking steps from the LIFE REWAT activities, the Summer School aims at proposing innovative ideas on water resource management by focusing on the concept of water-related agro-ecosystem services and on NBS and blue infrastructures. Digital tools (software applications) constitute the other pillar of the Summer School, aiming at preparing the participants to develop the skills for dealing with the management and analysis of water-related spatial data by using state-of-the-art ICT.



TARGET PARTICIPANTS

The Summer School is designed for early career scientists (MSc students, PhD students or post-doc), technicians from public authorities (water authorities, river basin authorities, environmental protection agencies) and geo-environmental companies, water utilities operators with at least a 1st level degree or an MSc degree in engineering, environmental sciences, earth sciences, agricultural engineering, physics, mathematics, informatics.

As the Summer School will be held in English, applicants must have an advanced knowledge of the English language.

Because of the need of keeping ICT applied laboratory small, enrolment will be limited to a maximum of 24 participants. The Summer School will be activated with a minimum of 12 participants.



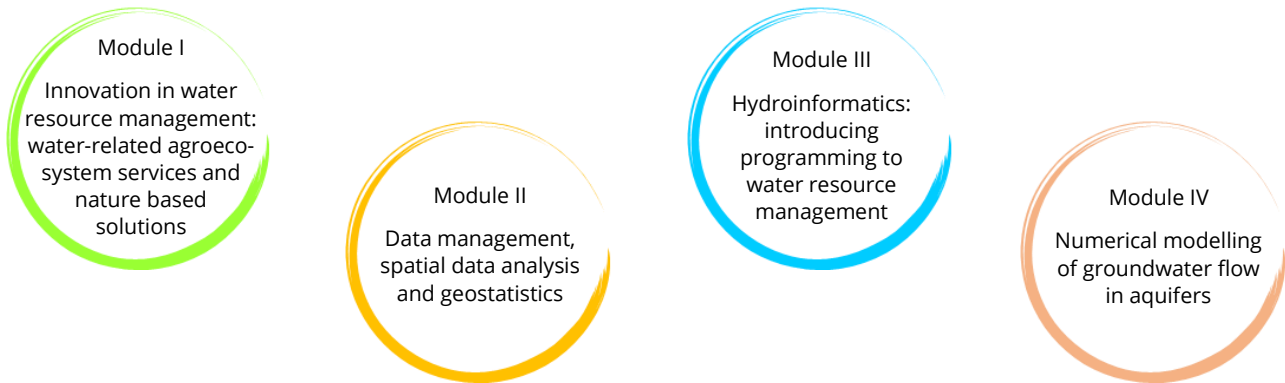
STRUCTURE AND TEACHING METHODS

The Summer School is structured in:

- 8 days of class lectures and practical exercises (software application);
- a one-day Technical Trip at the innovative pilot schemes designed and realized in Val di Cornia (Tuscany region, Italy) within the framework of the EU LIFE REWAT project;
- a one-day International Workshop where up-to-date application of the water-related agroecosystem services and NBS concepts will be showcased by speakers drawn from relevant EU and international projects.



Class lectures and exercises are divided in four modules:



The teaching activities will make use of an extremely interdisciplinary approach granted by the diverse competences of the key staff members. Theoretical and applied lectures will make use of real data collected at the Val di Cornia coastal plain within the framework of the EU LIFE REWAT project.

The Summer School programme capitalises also on the experience of the FP7 MARSOL (www.marsol.eu) and H2020 FREEWAT (www.freewat.eu) projects.

Free and Open Source Software will be used for applied lectures. QGIS (<https://www.qgis.org/en/site/>) will be used as a GIS desktop. The FREEWAT platform will be used in Module IV.

HOW TO APPLY

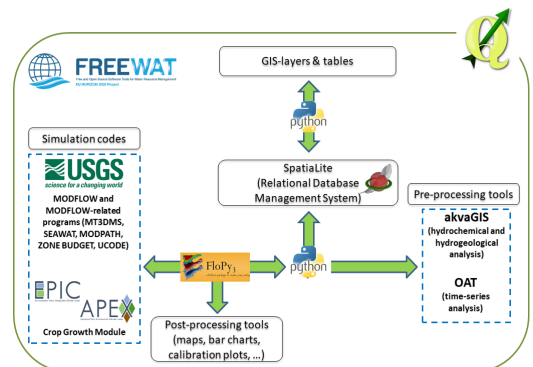
Apply Now!

Applicants shall submit their application on-line through the website <http://www.santannapisa.it/diwa/application> **no later than July 17th 2018 at 12:00 AM (GMT)**.

The online application requires a registration and login procedure.

Applicants are required to attach:

- an up-to-date CV in .pdf file
- a presentation and motivation letter (500 words maximum)
- other documents considered of interest (e.g., scientific publications, awards, etc.)
- a scanned copy of a valid passport/ID card



A Committee will evaluate the documents submitted by each applicant and will select the candidates eligible to attend the Summer School, by producing a ranking list. Successful candidates will be notified by e-mail with an admission notice.

ENROLMENT FEE

The Summer School enrolment fee amounts to € 400,00. It includes: attendance to all the lessons, lectures' handouts and the canteen facility (lunch and dinner) during the 10 Summer School days (including the Technical Trip and the International Workshop). Any other expense – such as visa, accommodation and travel costs, etc. – is to be covered by the participants.

The first 12 eligible students in the ranking list will benefit of a reduced fee of € 260,00 and free accommodation. The accommodation consists in a double room for 13 nights (from Sunday 2nd September to Saturday 15th September) in an apartment in a residence 15 minutes walking from Scuola Superiore Sant'Anna premises.

FURTHER INFO, ONLINE RESOURCES AND CONTACTS



Participants are required to use their own laptop.

A final assessment test is foreseen at the end of the Summer School.

The acknowledgement of 5 European Credit Transfer and Accumulation System (ECTS) is envisaged for students attending 90% of the whole Summer School programme and passing the foreseen learning test. Training credits are foreseen for Italian engineers, geologists, agronomists on the basis of specific agreements signed with the respective professional bodies in Italy.

Further information can be retrieved consulting the Summer School call for application (<https://www.santannapisa.it/en/education/advanced-education-courses>).

Write to Rudy Rossetto (r.rossetto@santannapisa.it) or Giovanna De Filippis (g.defilippis@santannapisa.it) to get further information on the Summer School programme and modules.



CREDITS

LIFE REWAT project partners



LIFE REWAT project co-financers



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MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE



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