



 National Research Council
Institute of BioEconomy



World Meteorological Organization Regional Training Centre Italy

*Connecting people to build knowledge and competencies
in weather, water and climate services.*

WMO RTCs and Training Partners

WMO RTCs

- 28 WMO Regional Training Centres
- composed of 43 components, providing a diverse portfolio education and training opportunities
- includes residence classes, distance-learning and blended learning
- <https://public.wmo.int/en/resources/meteoworld/wmo-regional-training-centres>

Many other WMO fellowship and training partners have MOUs in place

WMO Regional Training Centres



Competencies of an RTC

- Identifying learning needs
- Designing the learning service
- Delivering the learning service
- Assessing learning and evaluating the learning service
- Administering and managing the learning service

Role of WMO-ETR office in supporting the RTCs

Providing guidance and support to the RTC network, external assessments

Establishing best practices for regional needs assessment

Training the trainers in RTCs and national services

Increasing opportunities through sharing knowledge on distance learning and expanded learning approaches

Establishing partnerships to support all of the above

Clarifying roles and responsibilities of RTCs

Role of the Permanent Representative in supporting RTCs

Inform WMO if the Director of the RTC changes

Ensure ongoing communication between the RTC and the regional association

Promote support of the RTC through national and international funding mechanism

Review and approve annual reports on the RTC activities to be submitted to WMO

Collaborate with other PRs that host RTCs

Advocate for the RTC to comply with national and WMO standard sand guidelines, and keep pace with evolving technological and education developments

Role of the Director of an RTC

Monitor and plan the RTC's activities based on understanding of regional needs

For vocational training, use WMO-1114 or ISO 29990 to guide processes

Develop requirements for RTC staff and infrastructure, keeping pace with evolving technological and educational developments

Submit annual reports to WMO

Promote the RTC to WMO Members, including through WMOLearn

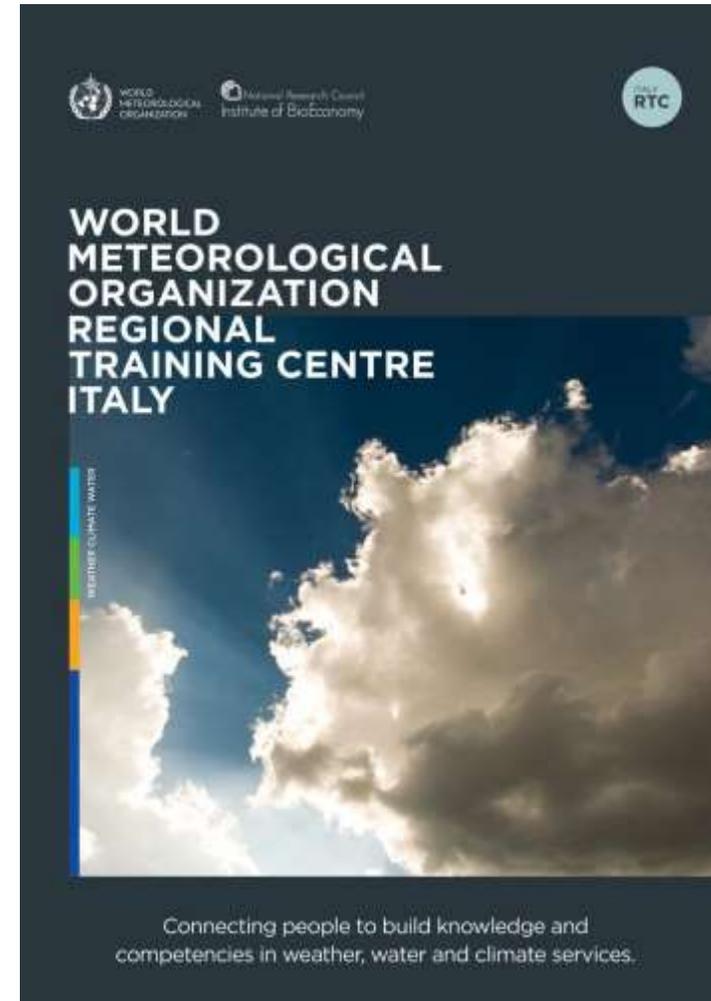
Work with other RTCs to coordinate activities and share resources and experiences

Seek funding and resource opportunities

The Regional Training Center in Italy

CNR-IBE runs the WMO Regional Training Centre Italy of the World Meteorological Organization (WMO), since mid-nineties.

The centre is based in the main campus of the Italian National Research Council in Florence.



Training at WMO-RTC in Italy: a 35-year-long history



Home — About us — Celebrating 70 Years of Progress in Weather, Climate and Water — Stories from Members — North-South cooperation to prevent natural disasters

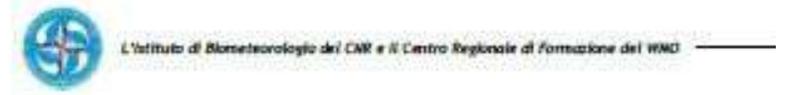


North-South cooperation to prevent natural disasters

35 years of collaboration between the WMO Regional Training Centre in Italy and WMO in education ;



The 35-year-long history of cooperation between WMO, RTC- Italy and AGRHYMET demonstrates that this is not only feasible, but a win-win strategy to be pursued with determination.



L'ISTITUTO DI BIOMETEOROLOGIA DEL CNR ED IL CENTRO REGIONALE DI FORMAZIONE DEL WMO IN ITALIA storia ed attività

Dr. sso M. BALDI, Dr. V. TARCHIANI, Dr. F. SABATINI, Dr. A. RASCHI¹



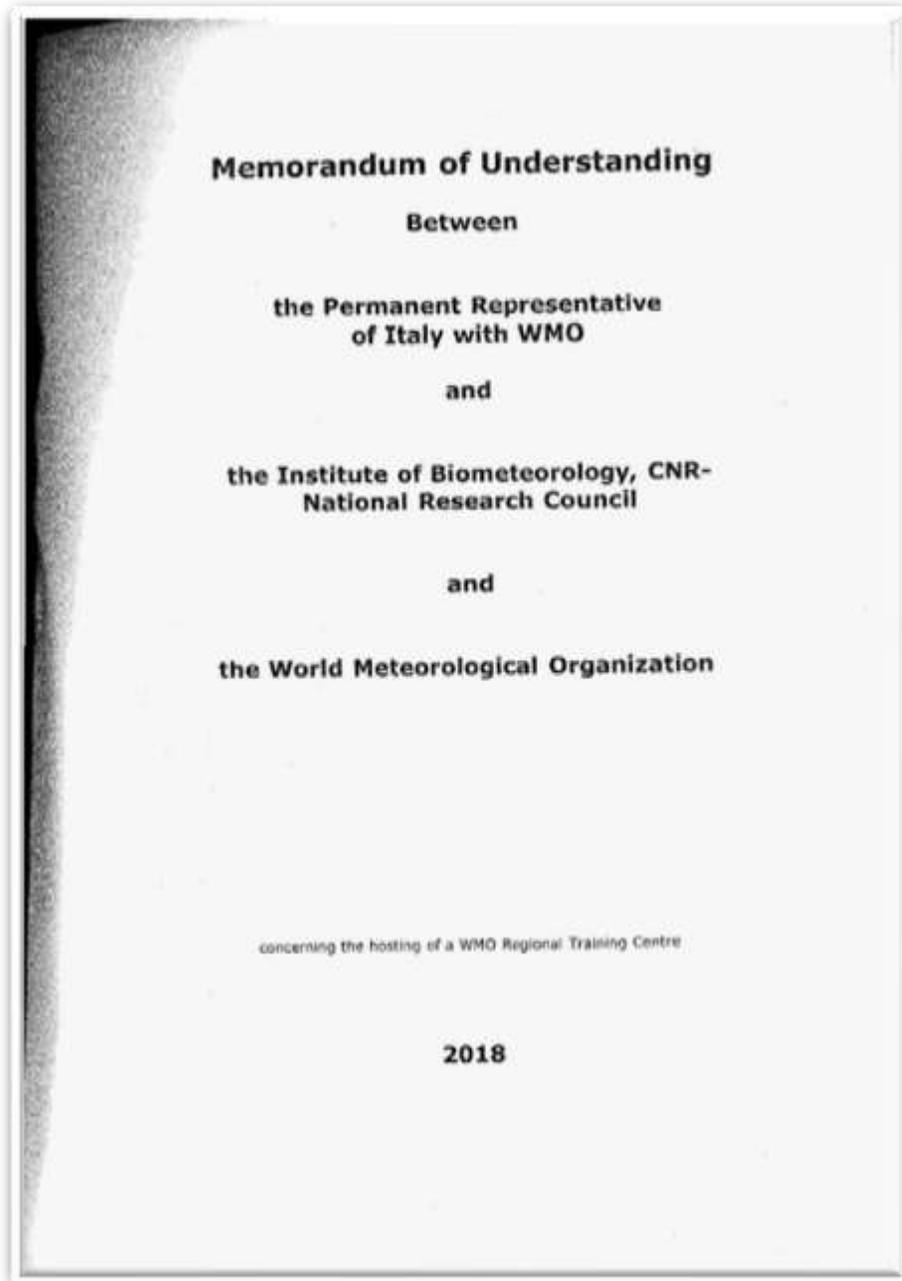
Foto di gruppo RTC

Riassunto

La rete dei Centri Regionali di Formazione della Organizzazione Meteorologica Mondiale (WMO-Regional Training Centers, WMO-RTC) è formata da 27 centri dislocati nelle sei Associazioni Regionali (Regional Associations, RA) del WMO e coinvolge oltre 40 istituzioni e altrettante componenti che ne assicurano la gestione e lo svolgimento delle attività. Il ruolo del WMO-RTC consiste nell'identificare e rispondere alle esigenze di educazione e formazione per coloro che operano nei servizi Meteo-Idrografici Nazionali (NMHS), fornire suggerimenti e assistenza ai Paesi Membri in merito ad educazione e formazione e favorire opportunità di formazione qualificata che vengano incontro alle esigenze e alle priorità regionali ed internazionali. Il WMO-RTC che opera in Italia è gestito e mantenuto dall'Istituto di Biometeorologia del Consiglio Nazionale delle Ricerche, CNR-IBIMET, con sede a Firenze e serve i Paesi Membri del WMO nelle regioni WMO RA-VI (Europa) e RA-I (Africa). Nell'articolo si ripercorre la storia del WMO-RTC in Italia e dell'Istituto di Biometeorologia del Consiglio Nazionale delle Ricerche, Istituto nato con l'obiettivo di effettuare ricerca nel settore della meteorologia applicata all'agricoltura e all'ambiente e con una ampia e riconosciuta esperienza nella formazione ed educazione in queste discipline.

¹ CNR - Consiglio Nazionale delle Ricerche - IBIMET
Rivista di Meteorologia Aeronautica n° 2 - 2017

A new MoU signed in 2019



Courses and workshops

Short-term training courses or workshops held in Italy and abroad, and long-term stages (2-4 months).

Custom Designed Training

Domestic and international training activities organized on the basis of emerging training needs.

Elearning

The Center develops online training packages open and designed to build Knowledge and Skills.

Trainers

Highly qualified and experienced trainers: CNR scientists, faculty from other Institutions appointed specifically, based on the course content.



Learning solutions

Courses usually include

- Classroom lectures in the morning
- Practical sessions in the afternoon
- Group discussions
- Field trips



Distance Learning Module DLM offered as pre-course activity, using Moodle, with the purpose of offering to participants the basic tools and background knowledge useful for the face-to-face training.

Fully online courses since the pandemic started



Topics

- climate change and variability and their effects on natural resources, water and agriculture
- sub-seasonal to seasonal forecast/predictions as a tool for water and agriculture management.
- agrometeorology and innovative solutions for climate-smart agriculture and food security



Physical and IT infrastructure

- Conference Center in Sesto Fiorentino and CNR facilities in Rome
- Operation room at LaMMA
- Field site
- Access to CNR online library
- Fast internet connection
- Extensive use of Moodle platform



Assessing knowledge and competency of students

- Badges
- Certificate of attendance
- Certificate of completion



Evaluating effectiveness and quality of learning services

- External assessment (PACC-RRC)
- Course evaluation questionnaire
- Course final report

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E-Learning & Scientific Communication



Agricultural Meteorology for a Climate Smart Agriculture. Course Report.

Marina Baldi, Marco Simonetti, Guido Pighini*

The WMO-RTC (World Meteorological Organization – Regional Training Centre) run in Italy by the Institute of BioEconomy of the National research Council is part of a Network of Centres whose main aim is to promote education and training in meteorology, hydrology, climate and related areas. The Italian Centre, since it was established in Florence, is offering training in agrometeorology, agrometeorology, climate impacts, disaster risk reduction and climate services and communication, with short-term courses and workshops, long-term stages, round seminars, training events on demand. Training solutions adopted include Face-to-Face events, Distance Learning, and E-Learning packages for self-paced learning. In 2020 the Italian Association of Agrometeorology (AIAM) launched the 1st Edition of the International Advanced School in Agricultural Meteorology, and the WMO-RTC, in agreement with AIAM and the important contribution of FAO, designed and put in place a new course on Climate Smart Agriculture to be held face-to-face at CNR headquarters in Rome. Due to the Covid-19 pandemic, the format of the school was completely revised, the course opened to a much wider audience (43 students from 19 Countries) and run (synchronous) fully online. The success of the school was determined by several factors including: the theme of the school, the expertise of appointed trainers, and the use of an easy to use e-learning platform like Moodle. In addition, the continuous support ensured by the technical staff, the role played by facilitators and chairs of the sessions, and the cohesion of the scientific committee and technical staff were all ingredients contributing to the success of this online learning initiative. In this paper, Authors discuss the results of the training initiative, and present the comments from participants to the school.

Keywords: Online learning, Higher education, Challenges, Teaching/learning strategies.



1 Background

Since its foundation in 1977, Associazione Italiana di Agrometeorologia (AIAM) (<http://www.agrometeorologia.it/joomla/en.html>) has been involved in enhancing and promoting agrometeorological research through conferences, seminars, and training courses. It also acts as a link between the services and research activities. This connection has the result of promoting researches on relevant agrometeorological themes, which are internationally disseminated through the Italian Journal of Agrometeorology.

As part of its mission, AIAM was proud to launch the First Edition of the International Advanced School in Agricultural Meteorology, aiming to build up knowledge about the use of integrated tools and advanced technologies for a sustainable management of agroecosystems.

The 2021 edition, co-organized with WMO-RTC (<https://training.climate.wmo.int/>) and with the technical cooperation of FAO (<http://www.fao.org/faocsa/en/>), is focused on the role of Agricultural Meteorology for a Climate Smart Agriculture (CSA), and wants to provide young researchers and professionals with high-level innovative knowl-

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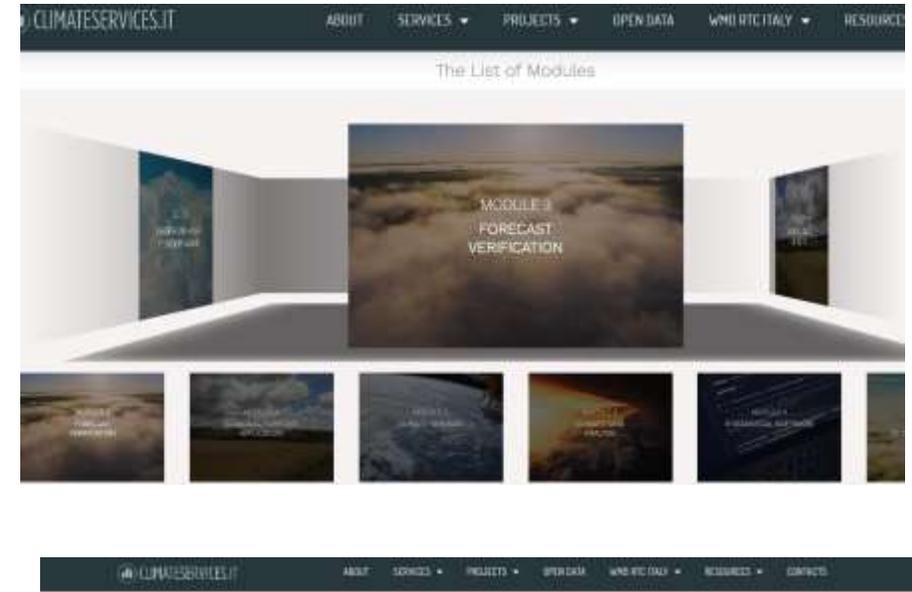
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Follow up from the courses

WMO Competency 3 for Climate Services

- from Seasonal Forecast to the T.O.P. Course Package
- from the PACC-RRC courses to the TOPaCS Course Package



TOPACS TRAINING OPERATIONAL PACKAGE FOR CLIMATE SERVICES

A PERMANENT AND OPEN LEARNING INITIATIVE
A joint initiative of World Meteorological Organization and CNR-IRI, with the collaboration of IC-CNR.



Get Connected

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<https://climateservices.it/>
<https://climateservices.it/rtc-italy/>

