

ERA4CS

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*European Research Area
for Climate Services*



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Courses, workshops, webinars and masterclasses on using climate services

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1. Introduction

One barrier to user uptake of climate services can be lack of knowledge and understanding in what a climate service is and how it can help with climate change adaptation. In this milestone report, assorted different types of training, courses and classes have been found using different methods, and assessed in comparison to the different production chain steps. The assessment was used to identify the main training themes, to highlight any training gaps, and to summarise the variety of different training forms.

Towards the end of the project, a training workshop specifically targeted to engineering consultants will be held to develop capacity in climate impact assessments and use of climate data from climate services developed in AQUACLEW. It will incorporate the lessons learned from the review of training, courses and classes in this milestone.

2. Methods

Different training, courses, and classes were discovered through online searches and information from other partners. Climate service training and courses that were relevant to the water management sector were included. The trainings were reviewed according to the following questions:

- What part of the production chain does this training address?
- Who is the target audience of the training?
- Who is providing the training?
- Why is the provider delivering the training?
- How is the training delivered? (for example, online, in-person, traditional class format etc)

Trainings, courses and classes were not included in the review if the answers to the above questions could not be found due to missing information. Future iterations of this milestone will include further trainings, course and classes.

3. Results

The reviewed training was categorised into the different steps of the production chain (Table 1) and answers to each of the questions from Section 2 were compiled into Section 3.1. Each training type has a short description and links to information available online. Further trainings will be investigated as the project continues.

The services reviewed in this iteration were found through google-searching 'training in using climate services':

- C3S User Learning Service
- UN CC elearn Climate Information and Services
- WUR Climate Services Training
- GFCS Climatology, foundation for Climate Services training by Météo-France
- Climate Services for Disaster Prevention (within agriculture)

'climate change impact assessment training'

- Applied climate change - Gaining practical skills for climate change adaptation

'how to use a climate service'

- Accessing Managing and Using Climate Information
- Climateurope – What is a climate service?

The next iteration of this milestone will include input from the partners leading the seven case studies in the AQUACLEW project, and the clients/stakeholders involved in the case studies. It will summarise what formal training has been taken and any feedback on benefits when using climate change information in decision-making processes.

It appears that future scenarios and impact modelling are not often included in trainings (2 of 9 trainings included these topics), while training about data information was very often delivered (8 out of 9 trainings, Table 1). However, this is preliminary information and further training opportunities need to be included. It should also be noted that training future scenarios and impact modelling may have been included at some level, but were not described in the available information.

Table 1. Main production chain aspect focussed on by each training opportunity assessed from online descriptions.

| Title and link | Future scenarios (RCPs) | Climate models | Bias Adjustment, tailoring | Impact modelling (hydrological) | Data and Information | Web interface | Decision making |
|---|-------------------------|----------------|----------------------------|---------------------------------|----------------------|---------------|-----------------|
| C3S User Learning Service | | x | x | x | x | x | |
| UN CC elearn Climate Information and Services | | | | | | x | x |
| WUR Climate Services Training | | | | | x | x | x |
| GFCS Climatology, Foundation for Climate Services training by Météo-France | | x | x | | x | | x |
| Climate Services for Disaster Prevention: PACC-RRC Training Programme | | | x | | x | | |
| Applied climate change - Gaining practical skills for climate change adaptation | x | x | x | | x | | x |
| Caribbean Weather Impacts Group (CARIWIG) Portal and Climate Change Impacts Tools | | | | | x | x | |
| weAdapt: Accessing Managing and Using Climate Information | x | x | x | x | x | x | x |
| Climateurope multimedia information | | x | | | | | x |

3.1 Compilation of training and course information

Each of the reviewed trainings have a brief summary below provided in the titled sub-sections below.

C3S User Learning Services

This is an online learning platform combined with blended learning opportunities delivered by a Copernicus Climate Change Services contract led by Wageningen Environmental Research.

C3S User Learning Services offers free training on how to use the Climate Data Store platform and its content. Target audiences are:

- Practitioners working on climate change adaptation issues in the water, agriculture and energy sectors.
- Researchers and scientists who use climate data.
- 3rd year undergraduate students or masters' students in climate studies, meteorology, hydrology, physical geography or related fields who want to acquire additional skills.

The blended learning opportunities include using the online platform, in-person trainings and online follow-up in webinars and through the platform.

Climate Information and Services (UN CC:learn)

UN CC:Learn has an online learning platform with an e-tutorial on "Climate Information and Services" for decision-makers and professionals from Africa and beyond, which has been developed in collaboration with United Nations Economic Commission for Africa ([UNECA](#)). The tutorial is available on [UN CC:e-Learn platform](#). This tutorial introduces climate information and services and their application in decision-making. It has been developed by UNITAR in collaboration with UNECA's African Climate Policy Center (ACPC) and the Pan-Africa component of the Weather Information Services for Africa (WISER) program, kindly supported by UK's Department for International Development (DfID).

It is based on the WISER toolkit "Mainstreaming/Integrating Climate Information and Services into Legislation, Development Policies, Plans and Practices", and is directed towards busy professionals in national, regional, and local governments and other relevant stakeholders.

WUR Climate Services Training

This workshop (held in 2017) trained consultants using global and regional climate model data, and data on the known impacts of climate on water and water dependent sectors on their application in different decision making contexts. The training addresses the use of both long term climate data as well the rapidly evolving seasonal prediction data. It addresses both the use of primary parameters as well as derived statistics and indicators on climate and its impacts. It was held in-person, over three days and used three online platforms in different activities.

GFCS Climatology, foundation for Climate Services training by Météo-France

Météo-France, in collaboration with the World Meteorological Organization (WMO), organises and hosts the “Climatology, foundation for climate services” training. Held every year, this course offers National Meteorological and Hydrological Services (NMHSs) training in the latest state-of-the-art technologies and best practices in climatology in order to provide the end-user community with the most appropriate and authoritative climate information.

This training course is offered in French every two years and in English the following year.

In 2017, the in-person training session is aimed at updating the participants' knowledge to enable them to carry out the various operational tasks of a national climate office in the context of climate change. The topics covered in this course follow the WMO guidelines with a focus on climate data management and key applications. It is directed towards professionals working for national services.

Climate Services for Disaster Prevention

This training is one of the steps of the PACC-RRC Training Programme on Climate Change Adaptation and Disaster Risk Reduction in Agriculture. It aims to reduce the impacts of Natural Disaster and Climate Change on the agricultural sector in West Africa.

It was run in-person in November 2017 at the CNR Research Area of Sesto Fiorentino, over a week. The workshop course has been preceded by a Distance Learning Training Course attended by all participants. Participants are working for national meteorological and hydrological services from countries in West Africa.

The Florence Workshop was structured in Theoretical lecture in the morning and “hands-on” afternoons. At the end of the course the participants had an online component to complete.

Applied Climate Change - Gaining practical skills for climate change adaptation

This course was delivered by University of Toronto and provides an overview of the knowledge, tools and resources needed to become more effective leaders and managers in adapting to climate change. It is held in-person over four days and participants are expected to develop practical skills through lectures, step-by-step approaches, case studies and hands-on activities. As part of the course, each participant completes a climate change impacts and adaptation study for their own region of geographic interest that will include: how the climate has changed in the past; how the climate is projected to change in the future; how these changes have/will impact the region; and how best to adapt to these anticipated impacts.

Caribbean Weather Impacts Group (CARIWIG) Portal and Climate Change Impacts Tools

The Caribbean Community Climate Change Centre (CCCCC/5Cs) and the United Nations Development Programme (UNDP) in collaboration with Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development and Immigration through the National Climate Change Office (NCCO) is hosting a national training on the Caribbean Weather Impacts Group (CARIWIG) Portal and Climate Change Impacts Tools. This in-

person, nine day, training workshop was funded by the Japan-Caribbean Climate Change Partnership (J-CCCP) project.

weAdapt: : Accessing Managing and Using Climate Information

The weADAPT online guidance is designed for use by technical staff working in government agencies and non-governmental organisations, as well as researchers and consultants involved in planning and policy processes, particularly at sub-national levels. Using the guidance requires a basic to moderate level of knowledge on climate dynamics, the interactions between environmental, social and economic systems, as well as statistics. It consists of online material in short case studies, videos and articles. An in-person 'winter school' is also offered.

Climateurope Multimedia information

This is not described as a training programme, but it gathers useful information in one place online regarding climate models, ongoing news in climate service development, and examples of climate service use in real applications. Online webinars are also offered. It does not have a clear target audience beyond users of climate services. It is collated by the Climateurope network.