



World Meteorological Organization  
Organisation météorologique mondiale

Secrétariat  
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TEMPS – CLIMAT – EAU  
WEATHER – CLIMATE – WATER

Our ref.: 5503-12/ETR/CRS-512

GENEVA, 12 April 2012

Annexes: 2 (available in English only)

Subject: International Training Course on “Climatology, a step towards climate services”,  
Toulouse, France, 11 to 22 June 2012

Action required: For information and appropriate action, as necessary

Dear Sir/Madam,

I have the pleasure to inform you that Météo-France will organize an intensive training course entitled “Climatology, a step towards climate services”, in English only, from 11 to 22 June 2012, in the premises of the National School of Meteorology (ENM) in Toulouse, France.

The objective of this training course, which targets to meteorologists working as climatologists or observation network managers, is to update the knowledge to carry out various operational tasks of a national climate office in a context of climate change. The topics covered in this course follow the guidelines of the World Meteorological Organization (WMO) with a focus on climate data management. For detailed information on this international training course, please refer to the course programme attached (see Annex I).

The number of participants is limited to 18, and qualified candidates will be registered according to the date of arrival of the enclosed application forms (see Annex II). Please note that registrations fees of 2,437 Euros are chargeable to the participants as well as the expenses of travel and accommodation.

To attend this training course the application form and a short up-to-date curriculum vitae (CV), both signed by the director and authenticated by the seal of the organism where the applicant works, should be sent to the following address **before 4 May 2012**.

Monsieur Le Directeur de l' Ecole Nationale de la Météorologie  
42 avenue Gaspard Coriolis  
BP 45712  
31057 TOULOUSE CEDEX 01  
(Fax: +33 5 61 07 94 83 & Email: [enmf@meteo.fr](mailto:enmf@meteo.fr))

A limited number of fellowships may be granted by Météo-France, covering a part of the expenses. Parallel to the above registration, a motivated letter of fellowship request emanating from the Director of the National Meteorological Service should be sent **before the deadline of 20 April 2012** to the following address:

To: Permanent Representatives of Members of WMO English-speaking countries  
(limited distribution)

METEO-FRANCE

D21/INT

Monsieur le Directeur des Affaires Internationales,

A l'attention de M. Marc Gillet,

73. Avenue de Paris

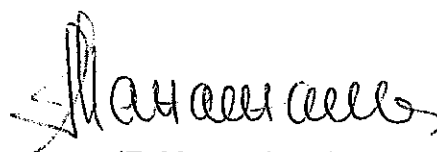
94165 SAINT-MANDÉ CEDEX

France

(Fax: +33 1 77 94 70 40 & e-mail: d2i-int-bilateral@meteo.fr)

In order to ensure the follow-up and treatment of the request, it is requested to transmit an e-mail to [enmfp@meteo.fr](mailto:enmfp@meteo.fr) and/or [d2i-int-bilateral@meteo.fr](mailto:d2i-int-bilateral@meteo.fr) indicating that an application form and possibly a fellowship request were transmitted. The accepted trainees will receive the relevant practical information after selection.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'E. Manaenkova', with a stylized flourish at the end.

(E. Manaenkova)  
for the Secretary-General



## Climatology, a step toward climate services

Update : 15 March 2012

### OBJECTIVES

This training session aims to update the knowledge to carry out various operational tasks of a national climate office in a context of climate change. The topics covered in this course follow the guidelines of the WMO with a focus on climate data management.

### TARGET AUDIENCE

Meteorologists working as climatologist or observation network manager.

### PREREQUISITES

Basic knowledge in meteorology and statistics. Experience in data management.

### CONTENT OF THE TRAINING COURSE

#### 1. Introduction, background information

- Climatology: its objectives, its resources, the state of knowledge;
- The international and regional climate programs;
- The tasks and missions of a national center for climatology.

#### 2. Meteorological observations and data quality

- Observations (surface and remote sensing). Inventory and ideas to find data;
- Quality and importance of metadata;
- Data Rescue.

#### 3. Data acquisition

- From the sensor to the Database;
- Overview of different data formats that a climate service can use and manage (ASCII, BUFR, GRIB, NETCDF, TAC, TDCF).

#### 4. Data management tools

- Database management system
- Statistical tools
- GIS (Geographic Information Systems)

#### 5. Data control

- Surface data series traditional control;
- Combination of different data types (surface and remote sensing);
- Homogenization.

#### 6. Data generation

- Different methods of data generation, including interpolation methods.



#### **7. Standard products**

- OMM-100 products overview - Climathèque/ Climascope/ Clisys tutorials;
- The climate indices.

#### **8. Models and climate**

- Presentation of different available models;
- Reanalysis;
- Downscaling;
- Seasonal forecasts;
- Climate change.

**Duration : 10 days**

**Number of participants : 18**

For further information, please contact Christel Icard ([christel.icard@meteo.fr](mailto:christel.icard@meteo.fr)).



**ENM Training Courses**  
**APPLICATION FORM**  
 (Please use one sheet per candidate)

**Please send this form until the 23rd of April 2012**

**By fax to : +33 5 61 07 94 83**

**Or by Email to: [enmfp@meteo.fr](mailto:enmfp@meteo.fr)**

**Or by postal mail to :** METEO-FRANCE  
 ECOLE NATIONALE DE LA METEOROLOGIE  
 Monsieur le Directeur  
 42, avenue Gaspard Coriolis, BP 45712  
 31057 TOULOUSE Cedex 1  
 France

**COMPANY OR AGENCY :**

Address :

Postal Code :

Town :

Country :

Phone :

Fax :

Email :

**INVOICING :**

Surname :

First Name :

Company/Agency :

Unit :

Address :

Postal Code :

Town :

Country

**COURSE :**

Title: **Climatology, a step toward climate services**

Dates: **11-22 June 2012**

Registration fees per trainee: **2437 euros**

TRAINEE INVOLVED : *	
SURNAME	
FIRST NAME	
SEX	
FONCTION	
ADDRESS	
PHONE	
FAX	
EMAIL	

**PRIORITY ORDER OF CANDIDATES PROPOSED BY THE COMPANY OR AGENCY :**

\*One application form per candidate

Done on (date) :

At (place) :

**Organisation signature and mark**