



APCAT(2012) 15

EUROPEAN AND MEDITERRANEAN MAJOR HAZARDS AGREEMENT
(EUR-OPA)

European Master Course on

**Climate change: impact on health, human environment and
water**

*Université de Strasbourg
Faculté de Médecine de Strasbourg,
Université de Lorraine, Faculté de Médecine de Nancy,
Ecole Nationale du Génie de l'Eau et de l'Environnement de Strasbourg (ENGEES)
Council of Europe*

12 November – 16 November 2012

Draft Programme

Key points of the programme

There is an unanimous consensus that gas emission generated by humans will change climate, recently warming by 1.4-5.8°C (prediction for 2100). The main effects will be thermal stress, extreme weather events, infectious diseases changing in their location or frequency. A more global approach has to take into account difficulties in food yields, social, demographic and economic imbalances, which could by themselves favour emerging infectious pathogens.

The aim of this course given in Strasbourg (12 Nov. – 16 Nov. 2012) is to develop specific knowledge on the main features of climate change, and of its impact on health, human environment and water. Data on Earth physics modifications in case of climate change (past and future) will be reported. Basic and applied features will be presented for their impact on human health and on environment: virology, parasitology, bacteriology, risks in emergency medicine and respiratory syndromes, modifications in the oceans (wildlife, coral), environmental impact (especially water); at last, the crucial role of health authorities and governments will be highlighted.

The programme will cover the following topics:

- EUR-OPA context
- Physics and climate change : basic knowledge and risk management
- Energy threshold of climate risk and impact on health : example of Sahara for 10 000 years and limits of people to adapt
- Continental hydrology: climate and water circulation in continents, characterization of extreme events, ecology of humid areas
- Coral reefs and climate tendencies
- Water resources: drinking water, water cleaning networks
- Emerging viral diseases and climate change
- Bacterial diseases and enteric concern in case of climate modifications
- Malaria favoured by a large distribution of insects dispersing the infectious agents
- Emergency medicine/respiratory diseases
- Socio-economic aspects of climate change in their international context

The course is devoted to young people with high scientific background from Europe or from member-countries of the EUR-OPA Agreement: engineers, geologists, biologists, students in medicine. Lessons will be given in English without any simultaneous interpretation. The lecturers belong to European Universities, National Research Centres and International Organisations.

There is no registration fee. The Council of Europe will cover the travel and subsistence expenses for a limited number of participants after examination and selection of applications. On request, students may benefit of 3 ECTS (European Credit Transfer System) after agreement with their own university.

The course will be held in the *Ecole Nationale du Génie de l'Eau et de l'Environnement de Strasbourg (ENGEES)*, France, from 12 November to 16 November 2012. – room to be defined

The registration form is attached to the announcement.

The course is addressed to European countries or member-countries of the EUR-OPA Agreement.

Deadline for application: 8 October 2012

☛ Information and application forms:

- *Dr Evelyne Schvoerer, Laboratoire de Virologie, 3 Rue Koeberlé, 67 000 Strasbourg, France ; eschvoerer@gmail.com;*
and from September 2012: Laboratoire de Virologie, CHU de NANCY - Hôpital Brabois Adultes, F-54511 Vandoeuvre-lès-Nancy, France
- *Or*
- *Caroline SIEBECKE, Council of Europe, EUR-OPA, DG II, F-67075-Strasbourg Cedex, <http://www.coe.int/euoparisks> / caroline.siebecke@coe.int*

DRAFT PROGRAMME

Monday

12 November 2012

- 9:30-10:45** **Introduction of the Course**
- 15 min : Evelyne Schvoerer & Caroline Grégoire - Université de Strasbourg
- Emerging viral diseases and climate change -1 (vector-related viruses)**
- *E Schvoerer, Laboratoire de Virologie, Faculté de Médecine et Université de Lorraine*
- Guidelines for final reports to be done by the students**
- 10h45-12:30** **Physics and climate change: gas emission and risk management**
Socio-economic aspects of climate change in their international context
- *J-P Massue, Member of the National Council of Orientation for the Prevention of Major Natural Hazards of the MEEDM*
- 12:30-13:30** lunch
- 13:30-15:00** - **Climate change and cultural heritage: energetics considerations, threats and strategies of prevention**
- **In Sahara since 10 000 years, climatic crises, health and human adaptation strategies**
- *Max Schvoerer, Centre de Recherche en Physique Appliquée à l'Archéologie, Université de Bordeaux III, France*



Registration (checking) for foreign students

Tuesday
13 November 2012



- 10:00-11:00** **Continental hydrology: climate and water circulation in continents, characterization of extreme events, ecology of humid areas**
- *C Grégoire and colleagues, Ecole Nationale du Génie de l'Eau et de l'Environnement de Strasbourg (ENGEES)*
- 11:00-12 :30** **Coral reefs, are they subject to the storm climate ?**
- *Mrs Joannot, Océanographe, Paris*
- 12:30-14:00** lunch
- 14:00-16:00** **Water cleaning networks (collection and treatment)/ Drinking water**
- *A Sadowski, Ecole Nationale du Génie de l'Eau et de l'Environnement de Strasbourg (ENGEES)*
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Wednesday
14 November 2012



- 9:30-10:30** **Emerging viral diseases and climate change -2 (social crisis and viruses : respiratory viruses and viral gastroenteritis)**
- *H Jeulin and A Velay, Laboratoire de Virologie, Faculté de Médecine et Université de Lorraine*
- 10:30-11:30** **Climate change: bacterial diseases and enteric concern**
- *B Jaulhac, Laboratoire de Bactériologie, Faculté de Médecine et Université de Strasbourg*
- 11:30-12:30** **Malaria favoured by a large distribution of insects dispersing the infectious agents**
- *E Candolfi, Laboratoire de Parasitologie, Faculté de Médecine et Université de Strasbourg*
- 12:30-14:00** lunch

14:00-15:30 **Extreme weather events, water concern and emergency medicine, infectious and respiratory diseases**

- *T Lavigne, Infectious Diseases, University Hospital of Strasbourg*
V Hébinger (Emergency medicine), University Hospital of Strasbourg
N Amarouch, Physician, Casablanca, Morocco

15:30-16h30 **Applied exercises for Thursday**

Description of an extreme weather event and questions on its monitoring (environment and health)

- *C Grégoire and colleagues ENGEES Strasbourg &*
H Jeulin or A Velay Virology, Nancy

Thursday
15 November 2012



Applied exercises

Working subgroups by students :

Students will be able to work in a room at the ENGEES with access to internet

10:00-17:00 **Analysis of an extreme weather event and its monitoring for environment and health**

Friday
16 November 2012

10:00-13:00 **Evaluations**

Oral presentation (location : Council of Europe) of the analysis of the climatic accident and its environmental and health consequences, by the students

– E. Schvoerer & C. Grégoire

with the participation of Eladio Fernandez-Galiano, Council of Europe

Departure of the students

Students will be proposed a subject in order to write a 5 pages-manuscript, which will be sent by e.mail to E Schvoerer (needed to obtain the 3 ECTS)