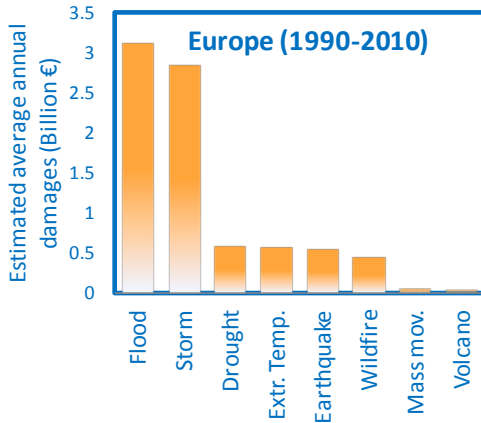




Short course on:

ADVANCED TECHNIQUES FOR FLOOD HAZARD ASSESSMENT IN A CHANGING ENVIRONMENT

CYPRUS, Limassol 8 - 12 October 2012



In terms of both lives lost and damage to infrastructure, flooding is one of the most important natural hazards facing Europe and elsewhere. Risks to people, property, and the prospects for economic growth and sustainable development are further exacerbated by global warming and other anthropogenic changes such as urbanization, flood plain development and wetland drainage, which increase vulnerability by altering both the frequency and consequences of flood events

LEARNING OBJECTIVE

The aim of this training course is to provide participants with a foundation in flood frequency analysis and flood hazard assessment, providing them with the necessary theoretical background and practical insight to predict design-flood events for gauged and ungauged basins in the context of environmental change

MAIN TOPICS

- Regional Flood Frequency Analysis: the L moment approach, theory and **R-package lmomRFA**
- Predicting design flood in ungauged basins with Top-kriging, theory and **R-package rtop**
- Predicting and adapting to flood hazard and risk in a changing environment
- Risk based design for flood management in a nonstationary environment

LEARNING METHODS

5-day, 9 hours per day, intensive course. Theoretical lectures and keynote seminars, coupled with practical computational experiences and discussions under the supervision of international professional and academic experts in flood management

PARTICIPANT PROFILE

The course is designed for graduate students, young scientists, practitioners and water managers working on flood-risk assessment and management (basic knowledge of hydrology and statistics is a prerequisite)

COURSE FEE:

EUR 250
Including:
Lectures, lunches & coffee breaks

COURSE DATES:

October 8-12, 2012



VENUE:

Teaching and seminars will be held in the Ladas – Ayios Tychonas Exhibition Building, on the sea front of Limassol, where also lunches will be served

APPLICATION INFO:

Online applications until August 31, 2012 through Floodfreq website (financial support for COST members): <http://www.cost-floodfreq.eu/>

E-MAIL:

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INTERNATIONAL SCIENTIFIC COMMITTEE

Attilio	CASTELLARIN	IT,	Univ. of Bologna
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Antonis	TOUMAZIS	CY,	Dion. Toumazis & Associates
Jose Luis	SALINAS	AT,	Vienna Univ. of Technology
Richard M.	VOGEL	US,	Tufts Univ.



Monday, October 8

Morning:

Presentation of the Short Course; frequency analysis of extreme hydrological events; estimation of design variables in gauged and ungauged sites (basic concepts of statistical regionalization).

Afternoon:

An introduction to *The R Project for Statistical Computing*; the R language: basic functions and commands; data import and export; examples of graphical commands and functions.

Tuesday, October 9

Morning:

Regional Flood Frequency analysis: an approach based on L moments, theory and real-world examples.

Afternoon:

Regional Flood Frequency analysis: an approach based on L moments – utilization of the R-package ImomRFA, presentation of the associated hands-on computational experience in R.

Wednesday, October 10

Morning:

Smooth hydrological predictions in ungauged basins via spatial interpolation: predicting design flood in ungauged basins with Topological kriging (Top-kriging), theory and examples.

Afternoon:

Applying Top-kriging: utilization of the R-package rtop and GIS representation of regional information, presentation of the associated hands-on computational experience.

Thursday, October 11

Morning:

Seminar series - changing our perspective: understanding environmental change, detection, attribution, and modelling of trends in flood observations.

Afternoon:

Open discussion of morning seminars, revision and discussion of the hands-on computational experiences assigned during the course.

Friday, October 12

Morning:

Seminar series - changing our perspective: estimation of flood design events in a nonstationary world. Development of nonstationary stochastic streamflow models for use in design of flood control structures in a changing world. Risk-based approach to the determination of when adaptation responses to climate and other environmental change is warranted.

Afternoon:

Open discussion of morning seminars, revision and discussion of the hands-on computational experiences assigned during the course.

Lecturers

Attilio	CASTELLARIN	IT,	Univ. of Bologna
Silvia	KOHNNOVA	SK,	Slovak Univ. of Technology
Jose Luis	SALINAS	AT,	Vienna Univ. of Technology
Richard M.	VOGEL	US,	Tufts Univ.

Getting to Limassol (Cyprus):

One has to travel by plane to either Larnaca or Paphos International Airport. Each airport is approximately 70km from Limassol Town Center. Shuttle busses run from both airports to Limassol and the cost is €9 per person. You can visit the company's website for more information at <http://www.airportshuttlebus.eu>.