

September

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# High-level Expert Workshop on Climate Adaptation Modelling



European  
Commission

September

08

# Adaptation Policy

organised by the European Commission, DG Climate Action in cooperation with the Euro-Mediterranean Centre on Climate Change, Deltares, the Institute for Environmental Studies - Vrije Universiteit Amsterdam, and Paul Watkiss Associates

Building resilience to climate variability and change is a shared concern of the EU internal and external actions. The EU and Member States' committed to the 2030 Agenda for Sustainable Development and complementary multilateral frameworks, including the Paris Agreement on Climate Change and the Sendai Framework for Disaster Risk Reduction 2015-2030. The Paris Agreement is the first universal, legally binding global deal to combat climate change and adapt to its effects. The Paris Agreement embraced bold actions set to curb the global temperature rise. The adaptation goal focuses on ability to adapt to the adverse impacts of climate change and on climate resilience, so contributing to sustainable development

The Workshop offers an opportunity for modellers and experts from academia, public agencies, business enterprises and societal organisation to exchange knowledge and good practices on adaptation to climate change and strengthen professional networks.

The results of the study CLIMA.A3/ETU/2018/0010 Study on Adaptation Modelling will be presented during the workshop. The study aims at summarising the state-of-the-art across the adaptation modelling fields, identifying gaps and unused opportunities, and contributing to improving access to and uptake of climate data and open access/source modelling tools for the purpose of better-informed policy and decision making.

## High Level Panel

**16.00 - 17.30**

Central European Summer  
Time (CEST)

Register

<https://bit.ly/2ELupQJ>

**Elena Višnar Malinovská**, European Commission, DG CLIMA  
The revised EU Adaptation Strategy - challenges and priorities

**Nacira Boulehouat**, European Commission, DG ECHO  
Overview of natural and man-made disaster risks the EU may face

**Philippe Tulkens**, European Commission, DG RTD  
Mission Area on Adaptation to climate change and societal transformation

# Adaptation Modelling

September

09

## Community Workshop

### Sectoral adaptation

A. Sánchez-Arcilla  
E. Borgomeo  
H. Sanderson  
F. Larosa  
V. Murray  
K. C. Kersebaum D.  
Perez Blanco  
M. Pulido-Velazquez

### Policy & planning

C. Giupponi  
M. Zebisch  
M. Ruiz-Ramos  
R. Schwarze  
T. Carter  
M. Máñez Costa  
R. Wilby

### Integrated modelling

R. Pant  
T. Wagener  
J. Sillmann  
F. McGovern  
P. Forster  
J. Maire  
R. Street  
B. van den Hurk

### Climate extremes

B. Kalsnes  
H. Kreibich  
M. Scholer  
L. M. Bouwer  
F. Lefebvre  
O. M. Ferreira  
J. Neal

10.00 - 13.00

Central European Summer  
Time (CEST)

Only for invited  
participants

## Hands-on tutorials

A. Trabucco, CMCC, Forest fire vulnerability (<https://bit.ly/34XfXjP>)  
D. Wagenaar, Deltares, Coastal flood risks (<https://bit.ly/2YQdBiw>)  
P. Mercogliano, CMCC, Calculating heat stress (<https://bit.ly/3hNLCHI>)  
K. van Ginkel, Deltares, Adaptation pathway generator (<https://bit.ly/3gJHDur>)

14.00 - 15.30

Central European Summer  
Time (CEST)

## High Level Panel

Carlo Buontempo, ECMWF – European Centre for Medium-Range  
Weather Forecasts

Copernicus Climate Change Service

Blaz Kurnik, EEA – European Environment Agency

Assessing climate risks and monitoring adaptation progress

Luc Feyen, JRC – Joint Research Centre

Adaptation study in PESETA and beyond

Zintis Hermansons, ESPON European Grouping of Territorial Cooperation

Climate change adaptation modelling at the ESPON

16.00 - 17.30

Central European Summer  
Time (CEST)

Register

<https://bit.ly/32M0v78>

September

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# Adaptation SAM-PS Study

## Study on Climate Adaptation Modelling

10.00 - 11.30

Central European Summer  
Time (CEST)

### Introduction

Project overview and key component  
Desk review and gap analysis  
Recommended approach to analysis  
Use case and case studies and rapid assessment

11.30 - 13.00

Central European Summer  
Time (CEST)

### Detailed presentation

| EU policies<br>& investments          | Regional & urban<br>adaptation                              | Private sector<br>& insurance                   |
|---------------------------------------|---|---|
| K. van Ginkel<br>U. Taner<br>R. Wilby | J. ter Maat<br>D. Perez Blanco<br>H. Goosen<br>A. Markanday | W. Botzen<br>P. Ward<br>N. Kroener<br>G. Mulder |

Only for invited  
participants

### Hands-on tutorials

14.00 - 15.30

Central European Summer  
Time (CEST)

A. Trabucco, CMCC, Forest fire vulnerability (<https://bit.ly/3bhec26>)  
D. Wagenaar, Deltares, Coastal flood risks (<https://bit.ly/34SM5os>)  
P. Mercogliano, CMCC, Calculating heat stress (<https://bit.ly/2YU8Cxl>)  
K. van Ginkel, Deltares, Adaptation pathway generator (<https://bit.ly/2QKWA57>)

### Summary and conclusions

16.00 - 17.30

Central European Summer  
Time (CEST)

Only for invited  
participants

Francesco Bosello, Euro-Mediterranean Centre on Climate Change  
Jeroen Aerts, Institute for Environmental Studies, Vrije Universiteit  
Enrico Scoccimarro, Euro-Mediterranean Centre on Climate Change  
Ad Jeuken, Deltares  
Claus Kondrup, European Commission, DG CLIMA  
Farewell talk and next steps

## Sectoral adaptation 09/08/2020

## Detailed agenda Community workshop

Chair: **Jaroslav Mysiak**, Euro-Mediterranean Centre on Climate Change, and **Ad Jeuken**, Deltares

- 10.05 - 10.20 **Agustín Sánchez-Arcilla**, University of Catalonia  
Hybrid modelling for coastal adaptation
- 10.20 - 10.35 **Edoardo Borgomeo**, University of Oxford  
Water resource system modelling for climate adaptation
- 10.35 - 10.50 **Hans Sanderson**, Aarhus University  
Cascading Transitional Climate Risks in the Private Sector – Risks and Opportunities
- 10.50 - 11.05 **Francesca Larosa**, Euro-Mediterranean Centre on Climate Change  
Making the business case for climate services: lessons learnt from Europe
- 11.05 - 11.30 --- Coffee break ---
- 11.30 - 11.45 **Virginia Murray**, Public Health England  
Climate Change Adaptation and Societal Transformation – what are the public health challenges and opportunities?
- 11.45 - 12.00 **Kurt Christian Kersebaum**, Leibniz-Zentrum für Agrarlandschaftsforschung  
Modelling to evaluate climate resilience of crop rotations under climate change
- 12.00 - 12.15 **Dionisio Perez Blanco**, University of Salamanca and CMCC  
Navigating deep uncertainty in complex human-water systems
- 12.15 - 12.30 **Manuel Pulido-Velazquez** University of Valencia  
A top-down meets bottom-up approach for climate change adaptation in water resource systems

## Adaptation policy & planning 09/08/2020

Chair: **Bart van der Hurk**, Deltares and **Jeroen Aerts**, Institute for Environmental Studies

- 10.05 - 10.20 **Carlo Giupponi**, University Ca' Foscari of Venice  
Operationalizing climate proofing in decision/policy making
- 10.20 - 10.35 **Marc Zebisch**, Eurac Research  
Climate impact chains - A conceptual modelling approach for climate risk assessment in the context of adaptation planning
- 10.35 - 10.50 **Margarita Ruiz-Ramos**, Universidad Politécnica de Madrid  
Reducing and managing uncertainty of adaptation recommendations to increase user's uptake
- 10.50 - 11.05 **Reimund Schwarze**, Helmholtz-Centre for Environmental Research  
Modelling the cost and benefits of adaptation
- 11.05 - 11.30 --- Coffee break ---
- 11.30 - 11.45 **T. Carter, S. Fronzek**, Finnish Environment Institute (SYKE)  
A model-based response surface approach for evaluating climate change risks and adaptation urgency
- 11.45 - 12.00 **María Máñez Costa**, Climate Service Center Germany – GERICS  
Weather and Climate services to support a risk sharing mechanism for adaptation of the agricultural sector
- 12.00 - 12.15 **Robert Wilby**, Loughborough University  
Stress-testing adaptation options
- 12.15 - 12.30

## 09/08/2020 Integrated modelling

Chair: **Francesco Bosello** and **Andrea Bigano**, Euro-Mediterranean Centre on Climate Change

|  |               |
|--|---------------|
| <b>Raghav Pant</b> , University of Oxford                                  | 10.05 - 10.20 |
| Advances in climate adaptation modelling of infrastructure networks        |               |
| <b>Thorsten Wagener</b> , University of Bristol                            | 10.20 - 10.35 |
| On the evaluation of climate change impact models for adaptation decisions |               |
| <b>Jana Sillmann</b> , Center for International Climate Research           | 10.35 - 10.50 |
| Cross-sectoral challenges for adaptation modelling                         |               |
| <b>Frank McGovern</b> , JPI Climate  | 10.50 - 11.05 |
| Adaptation modelling: a JPI Climate perspective                            |               |
| --- Coffee break ---   | 11.05 - 11.30 |
| <b>Piers Forster</b> , University of Leeds                                 | 11.30 - 11.45 |
| Relationship Between Net Zero Emissions and Adaptation Policy              |               |
| <b>P. Alexander, A. Arneeth, J. Maire</b> , University of Edinburgh        | 11.45 - 12.00 |
| A new modelling approach to adaptation-mitigation in the land system       |               |
| <b>Roger Street</b> , University of Oxford                                 | 12.00 - 12.15 |
| Climate services supporting adaptation modelling                           |               |
| <b>Bart van den Hurk</b> , Deltares  | 12.15 - 12.30 |
| Impact oriented climate information selection                              |               |

## 09/08/2020 Adaptation to climate extremes

Chair: **Wouter Botzen**, Institute for Environmental Studies and **Enrico Scoccimarro**, Euro-Mediterranean Centre on Climate Change

|   |               |
|---|---------------|
| <b>Bjørn Kalsnes</b> , Norwegian Geotechnical Institute                                 | 10.05 - 10.20 |
| Use of vegetation for landslide risk mitigation   |               |
| <b>Heidi Kreibich</b> , Deutsches GeoForschungsZentrum (GFZ)                            | 10.20 - 10.35 |
| Dynamic flood risk modelling in human-flood systems                                     |               |
| <b>Marie Scholer</b> , European Insurance and Occupational Pensions Authority           | 10.35 - 10.50 |
| Climate change adaptation in insurance  |               |
| <b>Laurens M. Bouwer</b> , Climate Service Center Germany                               | 10.50 - 11.05 |
| The roles of climate risk dynamics and adaptation limits in adaptation assessment       |               |
| --- Coffee break ---  | 11.05 - 11.30 |
|   | 11.30 - 11.45 |
| <b>Filip Lefebvre</b> , Flemish Institute for Technological Research                    |               |
| Climate-fit City: urban climate data and services                                       | 11.45 - 12.00 |
| <b>Óscar Manuel Ferreira</b> , Universidade do Algarve                                  |               |
| Modelling risk reduction measures to minimise future impacts of storms at coastal areas | 12.00 - 12.15 |
| <b>Jeffrey Neal</b> , University of Bristol   |               |
| Recent innovations in flood hazard modelling over large data sparse regions             | 12.15 - 12.30 |

# Detailed agenda

## SAM-PS presentation 10/08/2020

### Adaptation modelling for European policies and investments

Link: <https://bit.ly/3h0uG4a>

- 11.45 – 11.55 Session introduction  
Moderator: Paul Watkiss, Paul Watkiss Associates
- 11.55 – 12.10 Kees van Ginkel, Deltares  
Climate impact on Road networks
- 12.10 – 12.25 Umit Taner, Deltares  
World Bank decision tree framework
- 12.25 – 12.40 Rob Wilby, University of Loughborough  
Tools for climate resilient investments
- 12.40 – 12.55 Philip Ward, Institute for Environmental Studies  
Acqueduct tools for global analyses
- 12.55 – 13.00 Wrap up

### Adaptation modelling for private sector and insurance

Link: <https://bit.ly/32WuGcb>

- 11.45 – 11.55 Moderator: Ad Jeuken, Deltares  
Session introduction
- 11.55 – 12.10 Wouter Botzen, Institute for Environmental Studies  
Flood Insurance models
- 12.10 – 12.25 Craig Davies, EBRD - Integrating physical climate risk into the supervision of financial markets
- 12.25 – 12.40 Nico Kroener, South Pole  
Application of climate risk tools for companies
- 12.40 – 12.55 Gerhard Mulder, Climate Risk Services  
Applications of climate risk tools in the financial sector
- 12.55 – 13.00 Wrap up

### Adaptation modelling for regional and urban adaptation

Link: <https://bit.ly/3gFkBFa>

- 11.45 – 11.55 Moderator: Robert Mc Call, Deltares  
Session introduction
- 11.55 – 12.10 Judith ter Maat, Deltares  
Water allocation and distribution for the Rhine
- 12.10 – 12.25 Dionisio Perez Blanco, University of Salamanca and CMCC  
Hydro micro-macroeconomic modeling for agricultural decision making
- 12.25 – 12.40 Hasse Goosen, Climate Adaptation Services  
Tools for climate stress testing in the Netherlands
- 12.40 – 12.55 Ambika Markanday, Basque Centre for Climate Change  
RESIN tools: the adaptation options library
- 12.55 – 13.00 Wrap up