



8th Annual Conference

# ClimRisk2020: Time for Action!

Raising the ambition of climate action in the age of global emergencies

## PROGRAMME OVERVIEW

Wed, 21 Oct	Thu, 22 Oct	Fri, 23 Oct
08:45-09:15 Registration of participants	08:45-09:15 Registration of participants	08:45-09:15 Registration of participants
09:15-11:00 - PARALLEL SESSION 1 <i>Explore, predict and project climate variations and extremes</i> <i>Climate related impacts, risks and adaptation options</i> <i>Climate policies and transition pathways in the context of sustainable development</i>	09:15-11:00 - PARALLEL SESSION 3 <i>Explore, predict and project climate variations and extremes</i> <i>Risks and adaptation options in a warmer world</i> <i>Climate action: societal transformations and behaviours</i>	09:15-11:00 - PARALLEL SESSION 5 <i>Explore, predict and project climate variations and extremes</i> <i>Mitigation technologies for ambitious climate targets</i> <i>Special session: Economic modelling under climate change – case studies from Asia</i>
Coffee break	Coffee break	Coffee break
11:30-12:30 KEYNOTE LECTURE Sabine Fuss	11:30-13:00 POSTER SESSION 2	11:30-12:30 KEYNOTE LECTURE Andra Meneganzin
Lunch break	Lunch break	Lunch break
14:00-15:30 POSTER SESSION 1	14:00-15:00 KEYNOTE LECTURE Scott Barrett	14:00-15:30 SISC General Assembly
Coffee break	Coffee break	Coffee break
16:00-17:25 - PARALLEL SESSION 2 <i>Urban areas: assessing, predicting and managing the current and future risk</i> <i>Climate related impacts on natural and human systems</i> <i>Climate policies and transition pathways in the context of sustainable development</i>	16:00-17:45 - PARALLEL SESSION 4 <i>Explore, predict and project climate variations and extremes</i> <i>Climate services and their potential to support adaptation and risk management</i> <i>Climate action: societal transformations and behaviours</i>	16:00-16:30 <i>Reflections on the conference and Award session</i>

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### PROGRAMME

(last updated: 19 Oct 2020)

Wed  
**21**  
Oct

8:45 – 09:15 (CEST) - Registration

#### PARALLEL SESSION 1

Wed  
**21**  
Oct

9:15 - 11:00 (CEST)  
**S.1.1 – Explore, predict and project climate variations and extremes**  
Chair: C. Cassardo

- 09:15-09:20 Introduction
- 09:20-09:40 **Atmospheric Fe supply has a negligible role in promoting marine productivity in the Glacial North Pacific Ocean**  
**Francois BURGAY**, Paul Scherrer Institut, Switzerland  
Author(s): F. Burgay, A. Spolaor, J. Gabrieli, G. Cozz, C. Turetta, P. Vallelonga, C. Barbante
- 09:40-10:00 **Regional Arctic sea ice response to abrupt climate changes: a focus on Dansgaard-Oeschger events**  
**Federico SCOTO**, CNR-ISAC, Italy  
Author(s): F. Scoto, C. Barbante, A. Saiz-Lopez, P. Vallelonga, D. Dahl Jensen, A. Spolaor
- 10:00-10:20 **200 years of Equilibrium-Line Altitude variability across the European Alps (1901-2100)**  
**Renato R. COLUCCI**, CNR - ISMAR, Italy  
Author(s): M. Zebre, R.R. Colucci, F. Giorgi, N.F. Glasser, A.E. Racoviteanu, C. Del Gobbo
- 10:20-10:40 **Paleoclimatological characterization of Grand Combin alpine site based on dust, organic fraction and heavy metals, in the framework of Ice Memory project.**  
**Azzurra SPAGNESI**, Ca' Foscari University of Venice, Italy  
Author(s): A. Spagnesi, F. De Blasi, F. Dallo, D. Zannoni, J. Gabrieli, C. Barbante
- 10:40-11:00 **Alpine-wide trend assessment of total snow depth over recent decades from a harmonized database of validated in-situ observations**  
**Alice CRESPI**, Institute for Earth Observation, Eurac Research, Bolzano, Italy, Italy  
Author(s): A. Crespi, M. Matiu, G. Bertoldi, C.M. Carmagnola, D. Cat Berro, G. Chiogna, L. De Gregorio, I. Gouttevin, S. Kotlarski, B. Majone, C. Marty, L. Mercalli, S. Morin, C. Notarnicola, M. Petitta, G. Resch, W. Schonert, U. Strasser, S. Terzago, M. Valt, M. Zebisch

## Raising the ambition of climate action in the age of global emergencies

Wed  
**21**  
Oct

9:15 - 11:00 (CEST)  
**S.1.2 – Climate related impacts, risks and adaptation options**  
Chair: J. Mysiak

- 09:15-09:20 Introduction
- 09:20-09:40 **5 kyr of fire history in the High North Atlantic Region: natural variability and ancient human forcing**  
**Delia SEGATO**, Ca' Foscari University of Venice, Italy  
Author(s): D. Segato, M. Del Carmen Villoslada Hidalgo, E. Barbaro, R. Edwards, P. Vallelonga, B. Vinther, N. Maffezzoli, D. Battistel, C. Barbante, A. Spolaor
- 09:40-10:00 **Tipping Oceans in a Changing Climate**  
**Alessandra CONVERSI**, Consiglio Nazionale delle Ricerche - National Research Council, Italy  
Author(s): A. Conversi
- 10:00-10:20 **Climate Change Impacts on the Aquaculture Sector for European Islands**  
**Lena SCHENKE**, AquaBioTech Group, Malta  
Author(s): L. Schenke, K. Hoevenaars, T. Bardocz, G. Piscane
- 10:20-10:40 **Multi-risk Scenario Analysis in the Apulia shoreline: A Machine Learning approach Supporting Coastal Erosion Risks Assessment and Management**  
**Maria Katherina DAL BARCO**, CMCC@Ca' Foscari, Italy  
Author(s): M.K. Dal Barco, E. Furlan, H. Vuong Pham, S. Torresan, A. Critto, A. Marcomini
- 10:40-11:00 **C3S Demo Case Soil Erosion: Assessing Climate Change Impacts on Soil Erosion over Italy**  
**Guido RIANNA**, Centro Euro-Mediterraneo sui Cambiamenti Climatici, Italy  
Author(s): R. Padulano, M. Santini, G. Rianna, M. Mancini, M. Stojiljkovic, S. Noce, E. Rapisardi

Wed  
**21**  
Oct

9:15 - 10:40 (CEST)  
**S.1.3 – Climate policies and transition pathways in the context of sustainable development**  
Chair: E. Verdolini

- 09:15-09:20 Introduction
- 09:20-09:40 **Pathways of Transition and the Characteristics of Competing Technologies: A Taxonomy and a Policy Experiment**  
**Kerstin HÖTTE**, Bielefeld University, Germany  
Author(s): Kerstin Hotte
- 09:40-10:00 **Drivers of Climate Policies: A Machine Learning Approach**  
**Angelika VOGT**, Humboldt-Universität zu Berlin, Germany  
Author(s): E. Caliskan, A. Hagen, A. Vogt
- 10:00-10:20 **Energy Taxes, Public Debt and Endogenous Growth Engines in OECD Countries**  
**Mahmoud HASSAN**, Toulouse School of Economics, France  
Author(s): M. Hassan, W. Oueslati, D. Rousseliere
- 10:20-10:40 **A land-based approach for climate change mitigation in the livestock sector**  
**Maria Vincenza CHIRIACÒ**, Fondazione CMCC, Italy  
Author(s): M.V. Chiriaco, R. Valentini

## Raising the ambition of climate action in the age of global emergencies

Wed  
**21**  
Oct

11:00 - 11:30 (CEST)– Coffee break

Wed  
**21**  
Oct

11:30 - 12:30 (CEST)  
**PL.01 - Plenary Session 1**  
Chair: R. Valentini

**The role of Carbon Dioxide Removal for CO<sub>2</sub> Neutrality**  
Keynote speaker: Sabine Fuss

*Reaching net-zero emissions by the middle of the century is a necessary condition for reaching the Paris climate goals according to the IPCC Special Report on 1.5°C Global Warming. Carbon Dioxide Removal (CDR) is an important component of all 1.5°C pathways with limited or no overshoot. While there is now more knowledge on the different technologies and practices for CO<sub>2</sub> removal (CDR) and there is some flexibility to reduce the dependence on it through more ambitious emissions reductions via the demand side, it is clear that CDR will play a role (especially with further delays in increasing the emission reduction ambitions), though it cannot substitute for radical and swift emissions reductions. Which pathway is ultimately chosen - including the extent and type of carbon removal – will also be a societal choice. Still, few countries consider deliberation of CDR portfolios or policies for scaling up CDR in their current discussions on carbon neutrality. In this keynote I want to give an overview of the scenario space, options to withdraw CO<sub>2</sub> from the atmosphere and illustrate the challenges of implementation using a country case.*

Wed  
**21**  
Oct

12:30 - 14:00 (CEST)– Lunch break

Wed  
**21**  
Oct

14:00 - 15:30 (CEST)  
**Poster Session 1**

**Climate trends: changes in means and extreme events in observations, simulations and projections**

[POSTER] **A decadal time series of particle fluxes in the Kongsfjorden (Svalbard)**

**Leonardo LANGONE**, CNR, National Research Council of Italy, Institute of Polar Sciences, Italy  
Author(s): L. Langone, F. Giglio, S. Miserocchi, M. Mazzola, T. Tesi, P. Giordano

[POSTER] **Assessing tools for improving seasonal forecasting of climate services in Mediterranean areas**

**Jose Maria COSTA SAURA**, Università di Sassari, Italy  
Author(s): J.M. Costa-Saura V. Bacciu, V. Mereu, A. Trabucco, D. Spano

[POSTER] **Changes in rainfall distribution patterns over Liguria Region**

**Antonio IENGO**, Hydro-Meteorological Centre of Liguria Region (ARPAL), Italy  
Author(s): L. Onorato, F. Durante, A. Iengo, L. Rusca, Claudio Monteverde

[POSTER] **Estimation of Probable Maximum Precipitation over Euro-Mediterranean under Climate Change**

**Ali DIDEVARASL**, University of Sassari, Italy  
Author(s): A. Didevarasl, A. Trabucco, D. Spano

[POSTER] **European Precipitation Extremes Using High Resolution Model (WRF)**

**Mostafa HAMOUDA**, University of Milano Bicocca, Italy  
Author(s): M.E. Hamouda, C. Pasquero

[POSTER] **Heat content trends of the Mediterranean Sea derived by Argo float data from 2000 to 2020**

**Elisabeth KUBIN**, OGS - Institute of Oceanography and Applied Geophysics, Italy  
Author(s): E. Kubin, P.-M. Poulain, E. Mauri, M. Menna, G. Notarstefano

[POSTER] **Heat Events in the Indian Subcontinent under a warming climate scenario: Detection and its Drivers**

**Ritika KAPOOR**, Ca Foscari University, Venice/CMCC Bologna, Italy  
Author(s): R. Kapoor, C. Alvarez-Castro, E. Scoccimarro, S. Materia, S.Gualdi

## Raising the ambition of climate action in the age of global emergencies

[POSTER] **Orographic forcing and climate trends in Central Italy: using a validated regional dataset over Umbria to compute climate indices**

**Lorenzo SILVESTRI**, CIRIAF-CRC, University of Perugia, Italy

Author(s): P. Bongioannini Cerlini, L. Silvestri, M. Saraceni

[POSTER] **Spatio-temporal correlation of extreme climate indices and river flood discharges**

**Matteo PESCE**, Politecnico di Torino, Italy

Author(s): M. Pesce, J. von Hardenberg, A. Viglione

[POSTER] **Two centuries of Temperature Observations in the Alpine city of Trento (1816-2020)**

**Mattia MARCHIO**, University of Trento, C3A - Center Agriculture Food Environment, Italy

Author(s): M. Marchio, M. Brunetti, L. Zaniboni, M. Vinante, L. Giovannini, D. Zardi

[POSTER] **Validation of the convection-permitting regional reanalysis SPHERA: benefits of the high resolution in detecting severe weather events**

**Antonio GIORDANI**, ARPAE-SIMC, Department of Physics and Astronomy (DIFA) - University of Bologna, Italy

Author(s): A. Giordani, I. Cerenzia, T. Paccagnella, S. Di Sabatino

### *Climate policies and transition pathways in the context of sustainable development*

[POSTER] **Sustainable Fashion for Climate Change**

**Alessia VACCA**, University of Lincoln, UK

Author(s): A. Vacca

### *Risks and adaptation options in a warmer world*

[POSTER] **Assessing the effects of urban morphology on air temperature in the Euro-Mediterranean context**

**Carmela APREDA**, Centro Euro-Mediterraneo sui Cambiamenti Climatici, Italy

Author(s): C. Apreda, A. Reeder, P. Mercogliano

[POSTER] **Climate and ecological crisis: a systemic response to risks and vulnerabilities by strengthening sustainability, resilience and preparedness in Italy**

**Giovanna TAGLIACOZZO**, Istat, Italy

Author(s): G. Tagliacozzo, A. Ferruzza

[POSTER] **Climate change adaptation: water reuse practices identified by AQUARES Interreg**

**Sara ZANINI**, Lombardy Foundation for the Environment, Italy

Author(s): S. Zanini, A. De Carli, M. Lapi, L. Cozzi, A. Ballarin Denti

[POSTER] **Integrated application of ecosystem-based model and Bayesian Network on freshwater to explore the trade-offs among potential impacts and adaptation options changing world**

**Hung Vuong PHAM**, CMCC@Ca'Foscari, Italy

Author(s): H.V. Pham, A. Sperotto, S. Torresan, A. Critto, Elisa Furlan, A. Marcomini

[POSTER] **Resilience assessment for coastal systems to natural disasters: the case study of the Metropolitan City of Venice**

**Beatrice SAMBO**, University of Ca' Foscari, Italy

Author(s): B. Sambo, M. Bonato, A. Sperotto, J.H. Lambert, I. Linkov, A. Critto, S. Torresan, A. Marcomini

[POSTER] **The impact of drought on the domestic water security of the Chilean population, in the context of climate change: a fuzzy-logic approach**

**Marco BILLI**, Center for Climate and Resilience Research, Chile

Author(s): J. Navea, T. Monsalve, A. Allendes, N. Prieto, R. Calvo, M. Billi, A. Urquiza

### *Urban areas: assessing, predicting and managing the current and future risk*

[POSTER] **Anchoring transition imperatives within municipal structures: Resilience as a new approach for public action**

**Alix BURGUN**, Sciences Po University and Sorbonne University, France

Author(s): A. Burgun, S. Maire

[POSTER] **Ephemeral gardens, or spaces of necessary happiness**

**Maria MACCARRONE**, Università IUAV di Venezia, Italy

Author(s): M. Maccarrone

## Raising the ambition of climate action in the age of global emergencies

[POSTER] **Fuzzy Logic Modelling to assess high resolution spatial urban climatic risk Impact in Valparaiso, Chile**

**Nicolás ÁLAMOS**, Universidad de Chile, Chile  
Author(s): N. Alamos, A. Ugalde, A. Munoz, C. Valdebenito, C. Amigo, C.R. Larraguibel, J. Casanova, J.T. Videla, M. Contreras, M. Billi, P. Winckler, V. Vargas

[POSTER] **Mapping supply and demand of urban ecosystem services**

**Helena DUCHKOVÁ**, Global Change Research Institute of the Czech Academy of Sciences; Charles University in Prague, Czech Republic  
Author(s): H.E. Duchkova, D. Vackarova

[POSTER] **Participatory foresight methods as a tool for climate change adaptation planning, the case of the Czech Republic**

**Lenka SUCHÁ**, Global Change Research Institute, Czech Academy of Sciences, Czech Republic  
Author(s): L. Sucha, HE. Duchkova, D. Vackarova, P. Basta, E.K. Lorencova

Wed  
**21**  
Oct

15:30 - 16:00 (CEST) – Coffee break

## PARALLEL SESSION 2

Wed  
**21**  
Oct

16:00 - 17:25 (CEST)

**S.2.1 – Urban areas: assessing, predicting and managing the current and future risk**  
Chair: P. Mercogliano

- 16:00-16:05 Introduction
- 16:05-16:25 **Co-Production of Urban Climate Services under the SPF UK Climate Resilience Programme**  
**Victoria RAMSEY**, UK Met Office, United Kingdom  
Author(s): V. Ramsey, C. Scannell, R. Parfitt, N. Garrett, N. Golding, E. Fuller, L. Vilarkin
- 16:25-16:45 **Climate adaptation strategy development in small and medium-sized municipalities**  
**Helena DUCHKOVÁ**, Global Change Research Institute, Czech Academy of Sciences, Czech Republic  
Author(s): H. Duchkova, L. Sucha, S. Vano, P. Basta, D. Vackarova, E.K. Lorencova
- 16:45-17:05 **Integration of heterogenous data to high resolution temperature maps for urban planning and management in the ClimaMi project.**  
**Giuseppe FRUSTACI**, Fondazione Osservatorio Meteorologico Milano Duomo, Italy  
Author(s): F. Giuseppe, E. Montoli, C. Lavecchia, S. Pilati, P. Turchiarulo
- 17:05-17:25 **Flood hazard mapping in urban areas: modelling perspectives under climate change**  
**Roberta PADULANO**, Centro Euro-Mediterraneo sui Cambiamenti Climatici, Italy  
Author(s): P. Mercogliano, R. Padulano, Guido Rianna, P. Costabile, C. Costanzo



## Raising the ambition of climate action in the age of global emergencies

Wed  
**21**  
Oct

16:00 - 17:25 (CEST)

**S.2.2 – Climate related impacts on natural and human systems**

Chair: V. Marletto

- 16:00-16:05 Introduction
- 16:05-16:25 **An estimate of solar resource and PV power production over Italy in a changing climate.**  
**Riccardo BONANNO**, RSE S.p.A. - Ricerca sul Sistema Energetico, Italy  
Author(s): R. Bonanno, M. G. Riva
- 16:25-16:45 **Trends of phenological response to climate change and orography in Central Italy.**  
**Miriam SARACENI**, Department of Civil and Environmental Engineering (DICA) University of Perugia, Italy  
Author(s): P. Bongioannini Cerlini, M. Saraceni, L. Silvestri
- 16:45-17:05 **Sustainable sport in a warmer world**  
**Dario BATTISTEL**, University Ca' Foscari Venezia - Dept. Environmental Science Informatics and Statistics, Italy  
Author(s): D. Battistel, M. Benedetti, P. Cescon, G. Finotto, A. Gambaro, A. Pecci, O. Rossi
- 17:05-17:25 **A Climate of War or Peace? Forecasting the Effect of Drought on Conflict Dynamics**  
**Paola VESCO**, Uppsala University, Sweden  
Author(s): P. Vesco

Wed  
**21**  
Oct

16:00 - 17:05 (CEST)

**S.2.3 – Climate policies and transition pathways in the context of sustainable development**

Chair: M. Davide

- 16:00-16:05 Introduction
- 16:05-16:25 **Measuring methane emissions from ruminants. Transposing lessons between different methods of greenhouse gas accounting for ambitious climate targets.**  
**Elisavet ZOUPANIDOU**, University of Geneva, Switzerland  
Author(s): E. Zoupanidou
- 16:25-16:45 **Local climate change adaptation in the mountain region: an indicator-based decision support system methodology**  
**Pasquale LA MALVA**, "G. D'Annunzio" University of Chieti-Pescara, Italy  
Author(s): L. Cetara, P. La Malva, M. Pregolato, A. Ballarin Denti
- 16:45-17:05 **Anchoring transition imperatives within municipal structures: Resilience as a new method for public action**  
**Alix BURGUN**, Sciences Po University and Sorbonne University, France  
Author(s): A. Burgun, S. Maire
- 17:05-17:25 **Mobilising finance for hydropower to achieve sustainable development and energy transition**  
**Francesca LAROSA**, Fondazione CMCC and Ca' Foscari University of Venice, Italy  
Author(s): F. Larosa, J. Rickman, N. Ameli

## Raising the ambition of climate action in the age of global emergencies

Thu  
**22**  
Oct

8:45 – 09:15 (CEST) - Registration

### PARALLEL SESSION 3

Thu  
**22**  
Oct

09:15-11:00 (CEST)

**S.3.1 – Explore, predict and project climate variations and extremes**

Chair: V. Pavan

09:15-09:20 Introduction

09:20-09:40 **Degradation of the climate signal preserved in Svalbard ice archives**

**Andrea SPOLAOR**, Institute of Polar Sciences National Research Council of Italy (ISP-CNR), Italy

Author(s): A. Spolaor, G. Dreossi, C. Barbante, E. Barbaro, F. Burgay, M. Casado, D. Zannoni, D. Cappelletti, F. De Blasi, J. Gabrieli, J.-C. Gallet, C. Larose, T. Martma, F. Scoto, B. Stenni, C. Turetta

09:40-10:00 **Scenes from a Monopoly: Renewable Resources and Quickest Detection of Regime Shifts**

**Daniele RINALDO**, Cambridge University, UK

Author(s): N. Deopa, D. Rinaldo

10:00-10:20 **Long term monthly precipitation database reconstruction for drought assessment**

**Ouafik BOULARIAH**, University of Salerno, Italy

Author(s): O. Boulariah, A. Longobardi, V. Nobile, M. Sessa, P. Villani

10:20-10:40 **Analysis of the observations of temperature carried out at the meteorological station of the institute of Physics**

**Claudio CASSARDO**, Department of Physics - University of Turin, Italy

Author(s): C. Cassardo, S. Ziero, V. Andreoli, D. Bertoni, S. Ferrarese, A. Golzio, M. Manfrin

10:40-11:00 **Chinese lockdown as aerosol reduction experiment**

**Hans VON STORCH**, private, Deutschland

Author(s): H. von Storch, B. Geyer, L. Yan, V. Matthias, B. Rockel

Thu  
**22**  
Oct

09:15-10:40 (CEST)

**S.3.2 – Risks and adaptation options in a warmer world**

Chair: G. Messori

09:15-09:20 Introduction

09:20-09:40 **Risks and options for action: a common equation for investigating analogies and differences between Covid-19 and climate crises**

**Antonello PASINI**, CNR, Institute of Atmospheric Pollution Research, Italy

Author(s): A. Pasini, F. Mazzocchi

09:40-10:00 **Identification of adaptation measures to cope with sea level rise in coastal areas**

**Alessandro DE BONIS TRAPPELLA**, Sapienza, Italy

Author(s): A. De Bonis Trapella, F. Cioffi, U. Lall



## Raising the ambition of climate action in the age of global emergencies

10:00-10:20 **Coping with changing climate extremes in large regulated river basin**

**Matteo GIULIANI**, Politecnico di Milano, Italy

Author(s): A. Castelletti, M. Giuliani, J.D. Quinn, P.M. Reed

10:20-10:40 **Socioeconomic vulnerability on climate change. Poland case study**

**Malgorzata BURCHARD-DZIUBINSKA**, University of Lodz, Poland

Author(s): M. Burchard-Dziubinska

Thu  
**22**  
Oct

09:15-10:20 (CEST)

**S.3.3 – Climate action: societal transformations and behaviours**

Chair: A. Ballarin-Denti

09:15-09:20 Introduction

09:20-09:40 **Facing the Hard Truth: Evidence from Climate Change Ignorance**

**Pamela CAMPA**, Stockholm Institute of Transition Economics, Stockholm School Of Economics, Sweden

Author(s): P. Campa, F. Szucs

09:40-10:00 **Climate Regime Shift and Mental Health Adjusment**

**Paolo CIANCONI**, Università Cattolica Rome Italy, Italy

Author(s): P. Cianconi, F. Grillo, B. Hanife, L. Janiri

10:00-10:20 **Managing Climate Change Risk: The Case of the Italian Churches**

**Francesco DE MASI**, University of Salento, Italy

Author(s): F. De Masi, D. Porrini

Thu  
**22**  
Oct

11:00 - 11:30 (CEST) – Coffee break

Thu  
**22**  
Oct

11:30 - 13:00 (CEST)

**Poster Session 2**

### *Climate action: societal transformations and behaviours*

[POSTER] **The necessary spaces: the reuse of road. Case study on the Nebrodi Mountains in Sicily around Floresta**

**Maria MACCARRONE**, Università IUAV di Venezia, Italy

Author(s): M. Maccarrone

### *Climate policies and transition pathways in the context of sustainable development*

[POSTER] **Piano di adattamento ai cambiamenti climatici**

**Davide PINI**, Università di Bologna, Italy

Author(s): D. Pini

### *Climate related impacts on natural and human systems*

[POSTER] **A Machine learning-based approach for water quality assessment: exploiting functionalities of Artificial Neural Networks in the Venice lagoon case study**

**Christian SIMEONI**, CMCC@Ca'Foscari, Italy

Author(s): C. Simeoni, E. Furlan, A. Torcinovic, F. Pelosin, S. Vascon, A. Critto, M. Pelillo, A. Marcomini

[POSTER] **Agricultural total factor productivity growth, technical efficiency, and climate variability in Sub-Saharan Africa**

**Frank BANNOR**, PEERC, University of Johannesburg, South Africa

Author(s): F. Bannor, J. Dikgang, D. Kutela Gelo

## Raising the ambition of climate action in the age of global emergencies

[POSTER] **Climate Change, Armed Conflicts and Resilience**

**Mariagrazia D'ANGELI**, Università degli Studi di Urbino Carlo Bo, Italy  
Author(s): M. D'Angeli, G. Marin, E. Paglialunga

[POSTER] **Climate Variability, Migration and Population in Kenya**

**Mélanie GITTARD**, Paris School of Economics (PSE) and CIREN, France  
Author(s): M. Gittard

[POSTER] **Decomposition of the temperature-driven output losses in India: Plant-level evidence for the climate change adaptation policy**

**Olexiy KYRYCHENKO**, CERGE-EI, Czech Republic  
Author(s): O. Kyrychenko, M. Portnykh, T. Liu

[POSTER] **Droughts and extreme events in agriculture: A comparison of three November - June periods in Italy**

**Antonella PONTRANDOLFI**, Council for Agricultural Research and Economics, Italy  
Author(s): A. Pontrandolfi, R. Alilla, F. De Natale, B. Parisse, A.G. Pepe

[POSTER] **Impact of heatwaves on stroke and heart attacks in Sofia**

**Cvetan DIMITROV**, National Center of Public Health and Analyses, Bulgaria  
Author(s): Z. Spasova, T. Dimitrov

[POSTER] **Impacts of Eastern Mediterranean Transient on marine biota: A review**

**Maurizio AZZARO**, Institute of Polar Sciences, Italy  
Author(s): M. Azzaro, G. Caruso, R.G. Maimone, F. Azzaro, F. Decembrini, M. Leonardi, A. Cosenza, F. Filicciotto, A. Lo Giudice, E. Crisafi, R. La Ferla

[POSTER] **Impacts of Global Climate Change on Duration of Logging Season in Siberian Boreal Forests**

**Anna CHUGUNKOVA**, Siberian Federal University, Russia  
Author(s): A. V. Chugunkova, A.I. Pyzhev

[POSTER] **Initial analysis of Essential Climate Variables from ESA's Lake\_CCI Satellite Data Package**

**Monica PINARDI**, Consiglio Nazionale delle Ricerche, Istituto per il Rilevamento Elettromagnetico dell'Ambiente, Italy  
Author(s): M. Pinardi, G. Free, M. Bresciani, C. Giardino, S. Simis, J.-F. Cretaux, C. Merchant, H. Yesou, C. Duguay (6), B. Coulon

[POSTER] **Invasive alien species and climate change**

**Daniele PAGANELLI**, Lombardy Foundation for the Environment - University of Pavia, Italy  
Author(s): D. Paganelli, A. Occhipinti, M. Lapi, L. Cozzi, A. Ballarin Denti

[POSTER] **Time of emergence of extreme climate-induced economic impacts**

**Predrag IGNJACEVIC**, Vrije Universiteit Amsterdam, Nederland  
Author(s): P. Ignjacevic, F. Estrada, W. Botzen

[POSTER] **The inter-twinned crises: COVID-19 and climate crises on the vision of the One-Health concept**

**Domenico VITO**, FLA -Polimi, Italy  
Author(s): D. Vito

[POSTER] **Weather and Crop Yields in Ethiopia: Evidence from Panel Data Analysis**

**Amsalu Woldie YALEW**, Potsdam Institute for Climate Impact Research, Germany  
Author(s): A.W. Yalew, C. Gornott, B. Schauburger

*Climate services and their potential to support adaptation and risk management*

[POSTER] **Integrating forest fire simulators for fire risk assessment in Apulia region**

**Jose Maria COSTA SAURA**, University of Sassari, Italy  
Author(s): J.M. Costa-Saura, V. Bacciu, C. Sirca, D. Spano

*Glaciers, ice sheets, sea-ice: climate of the past and future tipping points*

[POSTER] **Swiss stone pine (Pinus cembra L.) tree-ring data as a proxy for extending glacier mass-balance series in the Italian Rhaetian Alps**

**Riccardo CERRATO**, University of Pisa, Italy  
Author(s): R. Cerrato, M.C. Salvatore, B.E. Gunnarson, H.W. Linderholm, L. Carturan, M. Brunetti, C. Baroni

*Mitigation technologies for ambitious climate targets*

[POSTER] **Artificial Ocean Alkalinization in a 5 to 10-year perspective**

**Beatriz BECCARI BARRETO**, Politecnico di Milano, Italy/ Brazil  
Author(s): B. Beccari Barreto, S. Caserini, P. Renforth

Thu  
**22**  
Oct

13:00 - 14:00 (CEST) – Lunch break

## Raising the ambition of climate action in the age of global emergencies

Thu  
**22**  
Oct

14:00 - 15:00 (CEST)  
**PL.02 - Plenary Session 2**  
Chair: F. Bosello

The status and future perspectives for the global cooperation on climate change  
Keynote speaker: Scott Barrett

Thu  
**22**  
Oct

15:00 - 16:00 – Coffee break

### PARALLEL SESSION 4

Thu  
**22**  
Oct

16:00-17:45 (CEST)  
**S.4.1 – Explore, predict and project climate variations and extremes**  
Chair: J. Pal

16:00-16:05 Introduction

16:05-16:25 **Interannual to decadal variability within and across the major Eastern Boundary Upwelling Systems**

**Giulia BONINO**, Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici, Italy  
Author(s): G. Bonino, E. Di Lorenzo, S. Masina, D. Iovino

16:25-16:45 **Northern Hemisphere atmospheric blocking in future climate in CMIP3, CMIP5 and CMIP6 models**

**Paolo DAVINI**, Institute of Atmospheric Sciences and Climate (CNR-ISAC),  
Author(s): P. Davini, F. D'Andrea

16:45-17:05 **Heavy Daily Precipitation Events in the CMIP6 Worst-Case scenario: Projected Twenty-First-Century Changes**

**Enrico SCOCCIMARRO**, Fondazione CMCC, Italy  
Author(s): E. Scoccimarro, S. Gualdi

17:05-17:25 **Local Atmospheric Response to Gulf Stream Sea Surface Temperature Front shifting: Impact of horizontal resolution in HighResMIP models**

**Luca FAMOOSS PAOLINI**, Ca' Foscari University, Italy  
Author(s): L. Famooss Paolini, A. Bellucci, P. Ruggieri, P. Athanasiadis

17:25-17:45 **Trend analysis of flood quantiles in the Italian Alps**

**Pierluigi CLAPS**, Politecnico di Torino, Italy  
Author(s): P. Claps, I. Brignolo, D. Ganora, I. Monforte, A. Viglione

## Raising the ambition of climate action in the age of global emergencies

Thu  
**22**  
Oct

16:00-17:45 (CEST)

**S.4.2 – Climate services and their potential to support adaptation and risk management**

Chair: F. Larosa

- 16:00-16:05 Introduction
- 16:05-16:25 **Seasonal forecasts of mountain snow depth: an application in the Alps**  
**Silvia TERZAGO**, CNR-ISAC, Italy  
Author(s): S. Terzago, G. Bongiovanni, F. Cali Quaglia, J. von Hardenberg
- 16:25-16:45 **Climate Services for the Energy Sector: current state and future development.**  
**Marcello PETITTA**, ENEA, SSPT-MET-CLIM, Italy  
Author(s): M. Palma, F. Catalano, I. Cionni, M. Petitta
- 16:45-17:05 **MED-GOLD Living Lab 2020: the story of an online training event**  
**Alessandro DELL'AQUILA**, ENEA, SSPT-MET-CLIM, Italy  
Author(s): A. Dell'Aquila, S. Calmanti, L. Ponti, M. Bruno Soares, M. Pasqui, M. Sanderson, F. Caboni
- 17:05-17:25 **Can Artificial Intelligence improve seasonal forecasts and inform reservoir operations?**  
**Matteo GIULIANI**, Politecnico di Milano, Italy  
Author(s): M. Giuliani, M. Zaniolo, G. Davoli, P. Block, A. Castelletti
- 17:25-17:45 **Considerations on the use of third party data in spatial interpolation for climatological applications**  
**Cristian LUSSANA**, The Norwegian Meteorological Institute, Norway  
Author(s): C. Lussana

Thu  
**22**  
Oct

16:00-17:05 (CEST)

**S.4.3 – Climate action: societal transformations and behaviours**

Chair: C. Cattaneo

- 16:00-16:05 Introduction
- 16:05-16:25 **The Scientists for Future South Tyrol initiative**  
**Giacomo BERTOLDI**, Eurac Research, Italy  
Author(s): Scientist for Future South Tyrol team
- 16:25-16:45 **Sustainable Energy, Water and Food Security Solutions for Arctic Regions, Small Island Developing States ("SIDS") and WANA (Western Asia and North Africa) Considering COVID-19**  
**Magdalena MUIR**, AINA & Energy Management Program, Haskayne Business School & University of Calgary, Canada  
Author(s): M.A.K. Muir, S. Areikat, K. Lienweber
- 16:45-17:05 **Fostering transformation in individuals toward climate change by playing with challenges: an empirical study with secondary school students**  
**Giulia TASQUIER**, Alma Mater Studiorum – University of Bologna, Italy  
Author(s): G. Tasquier, E. Cogo
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Fri  
**23**  
Oct

8:45 – 09:15 (CEST) - Registration

### PARALLEL SESSION 5

Fri  
**23**  
Oct

09:15-11:00 (CEST)

**S.5.1 – Explore, predict and project climate variations and extremes**

Chair: P. Ruggieri

- 09:15-09:20 Introduction
- 09:20-09:40 **Assessment of Seasonal Forecasts Skill over the Mediterranean area**  
**Filippo CALÌ QUAGLIA**, Ca' Foscari University of Venice, Italy  
Author(s): F. Cali Quaglia, S. Terzago, J. von Hardenberg
- 09:40-10:00 **Seasonal prediction of ocean variables: towards user-relevant indicators**  
**Ronan MCADAM**, Fondazione CMCC, Italy  
Author(s): R. McAdam, S. Masina, S. Gualdi, G. Coppini
- 10:00-10:20 **Predicting Climate Change over the multi-annual range**  
**Alessio BELLUCCI**, Centro EuroMediterraneo sui Cambiamenti Climatici, Italy  
Author(s): A. Bellucci, P. Ruggieri, D. Nicoli', P. Athanasiadis, S. Materia, S. Gualdi
- 10:20-10:40 **Changing atmospheric predictability in a changing climate**  
**Gabriele MESSORI**, Uppsala University, Sweden  
Author(s): G. Messori, S. Scher, D. Faranda, C. Alvarez-Castro
- 10:40-11:00 **Predictability of large scale drivers leading intense Mediterranean cyclones**  
**Carmen ALVAREZ-CASTRO**, UPO-CMCC, Spain  
Author(s): M.C. Alvarez-Castro, S. Gualdi, P. Yiou, M. Vrac, R. Vautard, L. Cavicchia, D. Gallego, P. Ribera, C. Pena-Ortiz, D. Faranda

Fri  
**23**  
Oct

09:15-11:00 (CEST)

**S.5.2 – Mitigation technologies for ambitious climate targets**

Chair: A. Castelletti

- 09:15-09:20 Introduction
- 09:20-09:40 **Fossil and renewable energy sources for a negative emission technology based on ocean alkalinity enhancement and hydrogen production: Comparison through a life cycle assessment**  
**Francesco Pietro CAMPO**, Politecnico di Milano, Italy  
Author(s): F.P. Campo, S. Caserini, M. Grosso
- 09:40-10:00 **Alkalinization strategies to remove atmospheric CO2 and mitigate acidification in the Mediterranean Sea**  
**Tomas LOVATO**, Fondazione CMCC, Italy  
Author(s): T. Lovato, M. Butenschon, S. Masina, S. Caserini, M. Grosso
- 10:00-10:20 **Cost analysis of carbon capture and storage: A review**  
**Beatriz BECCARI BARRETO**, Politecnico di Milano/ Heriot-Watt University, Italy/ Brazil  
Author(s): B. Beccari Barreto, S. Caserini

## Raising the ambition of climate action in the age of global emergencies

- 10:20-10:40 **Enhanced Pressurized Weathering of Limestone as an option to store CO<sub>2</sub>: Technological aspects, advantages, limitations and research needed**  
**Daive RIGHI**, Politecnico di Milano, Italy  
Author(s): D. Righi, G. Cappello, S. Caserini, M. Grosso
- 10:40-11:00 **How does the interaction between environmental policy and intellectual property rights affect environmental innovation? A study of 7 OECD countries**  
**Aneeq SARWAR**, Swinburne University of Technology, Australia  
Author(s): A. Sarwar

Fri  
**23**  
Oct

09:15-11:00 (CEST)  
**S.5.3 – Special session: Economic modelling under climate change – case studies from Asia**  
Chair: Ulrike LEHR, Institute for Economic Structures Research, Germany

- 09:15-09:20 Introduction
- 09:20-09:40 **Why Climate Resilient Economic Development Matters**  
**Sebastian HOMM**, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Germany  
Author(s): S. Homm
- 09:40-10:00 **Modeling frameworks for different levels of expertise**  
**Frank HOHMANN**, GWS mbH, Germany  
Author(s): F. Hohmann
- 10:00-10:20 **Economics of climate change adaptation in a small country in transition – the case of Georgia**  
**Markus Flaute**, Institute for Economic Structures Research, Germany  
Author(s): M. Flaute, U. Lehr
- 10:20-10:40 **Economics of climate change adaptation in a resource-based economy – the case of Kazakhstan**  
**Anett GROßMANN**, GWS mbH, Germany  
Author(s): A. Großmann, F. Hohmann
- 10:40-11:00 **Economics of climate change adaptation in a highly vulnerable economy - the case of Vietnam**  
**Christoph SCHULT**, Halle Institute for Economic Research, Germany  
Author(s): C. Schult

Fri  
**23**  
Oct

11:00 - 11:30 (CEST) – Coffee break

Fri  
**23**  
Oct

11:30 - 12:30 (CEST)  
**PL.03 - Plenary Session 3**  
Chair: S. Caserini

**From niche construction to ecological traps: an evolutionary perspective on anthropogenic climate change**  
Keynote speaker: Andra Meneganzin

*Climate change has historically been an evolutionary determinant for our species, affecting both hominin evolutionary innovations and extinction rates, and the early waves of migration and expansion outside Africa. Today Homo sapiens has turned itself into a major geological force, able to cause a biodiversity crisis comparable to previous mass extinction events, shaping the Earth surface and impacting biogeochemical cycles and the climate at a global level. We argue that anthropogenically driven climate change must be understood in terms of a monumental niche construction process, generating long-term ecological inheritance and eco-evolutionary feedbacks that are putting our health and well-being and those of future generations at risk. We then list five major sources of climate change counter-intuitiveness,*



## Raising the ambition of climate action in the age of global emergencies

*highlighting how evolved cognitive biases and heuristics may stand in the way of providing effective responses within tight deadlines. Drawing on our framing of the climate breakdown, we finally call for an evolutionary perspective in approaching the adaptive challenge posed by climate change: we argue that putting the brakes on a genuine self-endangering evolutionary trap ultimately depends on our counteractive niche constructing abilities, played at the level of our institutional and innovation capacity.*

Fri  
**23**  
Oct

12:30 - 14:00 (CEST) – Lunch break

Fri  
**23**  
Oct

14:00 - 15:30 (CEST)

SISC General Assembly (Zoom)

Fri  
**23**  
Oct

15:30 - 16:00 (CEST) – Coffee break

Fri  
**23**  
Oct

16:00 - 16:30 (CEST)

Reflections on the conference and Award session