

Salerno, 22-24 October 2025

13th Annual Conference of the Italian Society for Climate Sciences



Photo: Massimo Pica

PROGRAMME OVERVIEW

Tue 21 Oct 2025	Wed 22 Oct 2025	Thu 23 Oct 2025	Fri 24 Oct 2025		Sat 25 Oct 2025
		7:00-8:00 SIDE EVENT 5K at dawn on Salerno seafront			
		8:30-9:00 - Registrations	8:45-9:00 - Registrations		
		9:00-10:45 - Tavola rotonda Il valore strategico del PNRR per la ricerca sul cambiamento climatico in Italia ed in Europa	9:00-10:45 - Parallel session 4 <ul style="list-style-type: none">Impacts, Responses, and PoliciesClimate Hazard and Risk Assessment for Society		
	10:00-11:00 - Registrations	10:45-11:15 - Coffee break	10:45-11:15 - Coffee break		
	11:00-11:30 - Welcome and opening address	11:15-13:00 - Parallel session 2 <ul style="list-style-type: none">Heatwaves: Impacts and ResponsesGoverning and Analysing Decarbonization: Policies, Ecosystems and Climate	11:15-12:00 - Claudia Pasquero's Talk	10:00-12:30 SIDE EVENT Clima e Scuola*	10:00-12:30 SIDE EVENT Clima e Cultura*
	11:30-12:30 - Andrea Rinaldo's Talk		12:00-13:00 - Poster session 3		
	12:30-13:00 - Moving to the first floor				
	13:00-14:00 - Lunch	13:00-14:00 - Lunch	13:00-14:00 - Lunch		
	14:00-15:00 - Poster session 1	14:00-15:00 - Poster session 2	14:00-15:45 - Parallel session 5 <ul style="list-style-type: none">Tools for Climate AdaptationStrategies and Policies for Resilience		
	15:00-15:30 - Tea break	15:00-15:30 - Tea break	15:45-16:15 - Closing session and award ceremony		
	15:30-17:15 - Parallel session 1 <ul style="list-style-type: none">High-Resolution Climate Information: Methods and UsesTools and Strategies for Climate Action	15:30-17:15 - Parallel session 3 <ul style="list-style-type: none">Governing Climate ResilienceAdvanced Modelling and Forecasting Approaches for Climate and Earth System Processes	16:15-16:45 - Tea break (TBC)		
18:00-19:00 SIDE EVENT Clima da Leggere (1)*	18:00-19:00 SIDE EVENT Clima da Leggere (2)*		18:00-19:00 SIDE EVENT Clima da Leggere (3)*	18:00-19:00 SIDE EVENT Clima da Leggere (4)*	
		17:45-18:45 - SISC General Assembly of Members			
	20:00 - Social Dinner	19:15 - Aperitif			

(*) In Italian – open to general public. Further info at: SIDE EVENT PAGE: <https://www.sisclima.it/conferenza-annuale-2025/side-events/>

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Preliminary Programme

(Last update: 7 August 2025)

The Scientific Conference will be held from Wednesday 22 October to Friday 24 October 2025. Several SIDE EVENTS have been organized open also to the general public: a series of opportunities for reflection on the changing climate, fostering ongoing dialogue between current scientific knowledge, the public, policymakers, and younger generations. Because the side events are open to the citizenship they will be held in Italian.

Day -1 | Tuesday 21 October 2025

Tue 21 Oct	SIDE EVENT (in Italian) 18:00 – 19:00 (CEST) - Clima da leggere	Pinacoteca di Salerno
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CLIMA DA LEGGERE - Presentazione del volume:

La sfida climatica. Dalla scienza alla politica: ragioni per il cambiamento

Autore: Antonello Pasini – Fisico del clima, primo ricercatore CNR-IIA e divulgatore

Moderatore: Mariano Ragusa – Giornalista de “Il Mattino”

Abstract: La crisi climatica è un problema complesso e globale, che ci sfida in diversi modi. È una sfida scientifica e conoscitiva, perché richiede nuovi metodi per studiarla e una solida conoscenza dei processi in gioco su cui basare le nostre azioni, ma anche una sfida per la nostra visione del mondo, per il mondo della comunicazione e della politica. Da uno dei più autorevoli scienziati del clima italiani, il libro-manifesto che traccia il percorso per un cambiamento radicale del nostro modo di pensare e interagire con il mondo.

📍 Pinacoteca di Salerno, Via Mercanti 63, Salerno

L'evento è GRATUITO e aperto sia ai partecipanti della conferenza scientifica SISC che alla cittadinanza. Si chiede gentilmente di confermare la presenza compilando il modulo di iscrizione al singolo evento.

Maggiori informazioni: <https://www.sisclima.it/conferenza-annuale-2025/side-event-clima-da-leggere/>

Day 1 | Wednesday 22 October 2025

Wed 22 Oct	10:00 – 11:00 (CEST) - Registration of participants Pick your badge!	Palazzo di Città Teatro Augusto Hall
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Wed 22 Oct	11:00 – 11:30 (CEST) - Conference opening and welcome	Palazzo di Città Teatro Augusto
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Paola MERCOGLIANO, SISC President and Fondazione CMCC

Vincenzo NAPOLI, Sindaco Salerno (**TBC**)

Massimiliano NATELLA, Assessore Politiche Ambientali del Comune di Salerno (**TBC**)

Fulvio BONAVITACOLA, Assessore Ambiente della Regione Campania (**TBC**)

Arturo IANELLI, Presidente della Commissione Ambiente del Comune di Salerno

SISC2025 INNOVATION IN CLIMATE RESEARCH FOR SOCIETAL TRANSFORMATION

SISC 13th Annual Conference - Salerno, 22-24 October 2025

Wed
22
Oct

11: 30– 12:30 (CEST) – ANDREA RINALDO's Talk
Water science on the move: Metastatistics, limits, retooling, invisible structures
Chair: Monia Santini, Fondazione CMCC, Viterbo, Italy

Palazzo di Città
Teatro Augusteo

[Abstract Andrea Rinaldo Talk](#)

Professor Andrea Rinaldo, engineer and hydrologist, holds a Degree in Hydraulic Engineering from the University of Padua (IT) where he graduated with the highest honours in 1978. In 1983, he obtained his PhD (Fluid Mechanics) at Purdue University (US). In 2014, he was awarded a PhD Honoris Causa by the Université du Québec-Laval & INRS (CA) and in 2024 the University of Trento (IT) awarded him the Degree Honoris Causa in Environmental Engineering.

In 1986 he became Full Professor of Hydraulic Constructions at the University of Trento (IT). From 1992 to 2002, he worked as research fellow and visiting Professor at the Massachusetts Institute of Technology, Cambridge, in the Department of Civil and Environmental Engineering; from 2004 to 2006, he was a visiting professor at Princeton University. In 2008, he also became Professor and Director at the Laboratory of Ecohydrology at the Federal Polytechnic School of Lausanne (EPFL) in Switzerland.

On March 22, 2023, the Royal Swedish Academy awarded him the Stockholm Water Prize (commonly known as the Nobel Prize for Water), given to “a Swedish or foreign person for his or her outstanding contribution to the protection of the environment in the broadest sense or for having written illuminatingly on this subject.” Prof. Rinaldo is the first Italian who has received this prestigious award.

Since August 2024, Prof. Rinaldo is also the President of the “Istituto Veneto di Scienze Lettere ed Arti”, in Venice. He joined the CMCC Foundation in March 2025 as a Senior Fellow at the ICR Institute of Climate Resilience

Wed
22
Oct

12:30 – 13:00 (CEST) – Moving to the first floor

Wed
22
Oct

13:00 – 14:00 (CEST) – Lunch

Palazzo di Città
Sala del Confalone
(1st floor)

Wed
22
Oct

14: 00 – 15:00 (CEST)
POSTER SESSION 1

Palazzo di Città
Hallway
(1st floor)

Posters list will be included in the final programme. It will be available in mid September.

The whole poster list is available in the annex 1

Wed
22
Oct

15:00 – 15:30 (CEST) – Tea break

Palazzo di Città
Sala del Confalone
(1st floor)

SISC2025 INNOVATION IN CLIMATE RESEARCH FOR SOCIETAL TRANSFORMATION

SISC 13th Annual Conference - Salerno, 22-24 October 2025

Wed 22 Oct	15:30 – 17:15 (CEST) S1.1 – High-Resolution Climate Information: Methods and Uses Chair: Sandro Fiore, Università di Trento, Trento, Italy	Palazzo di Città Sala dei Marmi (1 st floor)
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Assessing the role of large scale forcings as predictors for generating high-resolution atmospheric fields using a conditional generative adversarial neural network for downscaling

Ilenia MANCO, Fondazione CMCC, Caserta, Italy

Author(s): Ilenia Manco, Mario Raffa, Paola Mercogliano, Antonio Navarra

Km-scale modeling of the Northern Adriatic region

Marco REALE, National Institute of Oceanography and Applied Geophysics-OGS, Trieste, Italy

Author(s): M. Reale, G. Giuliani, F. Giordano, M. García-Valdecasas Ojeda, L. Vargas-Heinz, E. Coppola, S. Querin, C. Solidoro, S. Salon

Analysis of Climate Trends in Italy Using High-Resolution Downscaled CMIP6 Models: Assessment of Climate Changes and Extremes for the Period 1985-2100

Giacomo Davide PAGLIARO, Agenzia ItaliaMeteo, Bologna, Italy

Author(s): Giacomo Davide Pagliaro, Deniel Pavone, Francesca Vittorioso, Giusy Fedele, Giuseppe Giugliano, Alfredo Reder, Paola Mercogliano

AI for high-resolution climate data: a deep learning Latent Diffusion Model to downscale climate projections

Elena TOMASI, Fondazione Bruno Kessler, Trento, Italy

Author(s): Elena Tomasi, Gabriele Franchi, Sandro Calmantì, Marco Cristoforetti

Toward High-Resolution Climate Projections: A Fast and Scalable Deep Learning Approach to Snow Depth

Alessandro DAMIANI, National Institute for Environmental Studies, Tsukuba, Japan

Author(s): Alessandro Damiani, Noriko N. Ishizaki, Sarah Feron, Raul R. Cordero

Enhancing Early-Warning Systems for Climate Extremes in Developing Countries Using Machine Learning Models and High-Resolution Datasets

Afshin SHAFEI, Università di Roma La Sapienza, Rome, Italy

Author(s): Afshin Shafei, Francesco Cioffi

Wed 22 Oct	15:30 – 17:15 (CEST) S1.2 – Tools and Strategies for Climate Action Chair: Chiara Cagnazzo, ECMWF, Bonn (Germany)	Palazzo di Città Sala della Giunta (1 st floor)
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GLORI4DE: Global to regional ICON for Destination Earth

Massimo GISONNI, CINECA, Bologna, Italy

Author(s): Massimo Gionni, Gabriella Scipione, Fabio Di Sante, Gian Franco Marras, Angelo Campanale, Gabriella Ceci, Mario Raffa, Alfonso Ferrone, Chiara Marsigli, Virginia Poli, Thomas Gastaldo, Roland Potthast, Michael Krämer, Thorsten Steinert, Xu Xu, Thomas Geenen, Emanuele Danovaro

Critical considerations for extending potential climate and environmental benefits of regenerative agriculture while avoiding ‘greenwashing’

Peter MCKEOWN, University of Galway, Galway, Ireland

Author(s): Emily Rehberger, Noel Ndlovu, Mukund Naryan, Angela Maina, Clestha Noknale, Paul C. West, Charles Spillane, Peter C. McKeown

Power Play: Balancing Efficiency and Protection in Fixed versus Variable Electricity Pricing

Cristina CATTANEO, Fondazione CMCC, Milan, Italy

Author(s): Jacopo Bonan, Cristina Cattaneo, Giovanna d'Adda, Jacopo Lunghi, Massimo Tavoni

Prov4WFs: a toolbox for tracking provenance in workflow management systems

Ludovica SACCO, University of Trento, Trento, Italy

Author(s): Ludovica Sacco, Carolina Soprani, Sandro Luigi Fiore

Fondazione Cariplo's commitment on local climate transition strategies

Federico BEFFA, Fondazione Cariplo, Milan, Italy

Author(s): Federico Beffa, Paolo Siccardi

High resolution analysis of SUHI dynamics in Milan under different climate conditions using ECOSTRESS data

Antonio ESPOSITO, University of Salento, Lecce, Italy

Author(s): Antonio Esposito, Gianluca Pappacogli, Piero Lionello, and Riccardo Buccolieri

Wed 22 Oct	SIDE EVENT (in Italian) 18:00 – 19:00 (CEST) - Clima da leggere	Museo Diocesano "San Matteo"
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CLIMA DA LEGGERE - Presentazione del volume:

La giostra del tempo senza tempo. I cambiamenti climatici e il patto tra le generazioni

Autore: Carlo Cacciamani, direttore dell'Agenzia ItaliaMeteo, climatologo ed esperto di comunicazione scientifica

Moderatore: Cinzia Ugatti - giornalista professionista e attrice

Abstract: I cambiamenti climatici, già evidenti e in accelerazione, hanno impatti significativi su ecosistemi, salute, attività produttive e biodiversità. L'aumento delle temperature continuerà se non verranno ridotte drasticamente le emissioni di gas serra. Senza interventi, nei prossimi decenni gli effetti saranno sempre più gravi, rendendo il futuro delle nuove generazioni in un mondo meno ospitale.

📍 Museo Diocesano "San Matteo", Largo Plebiscito 12, Salerno

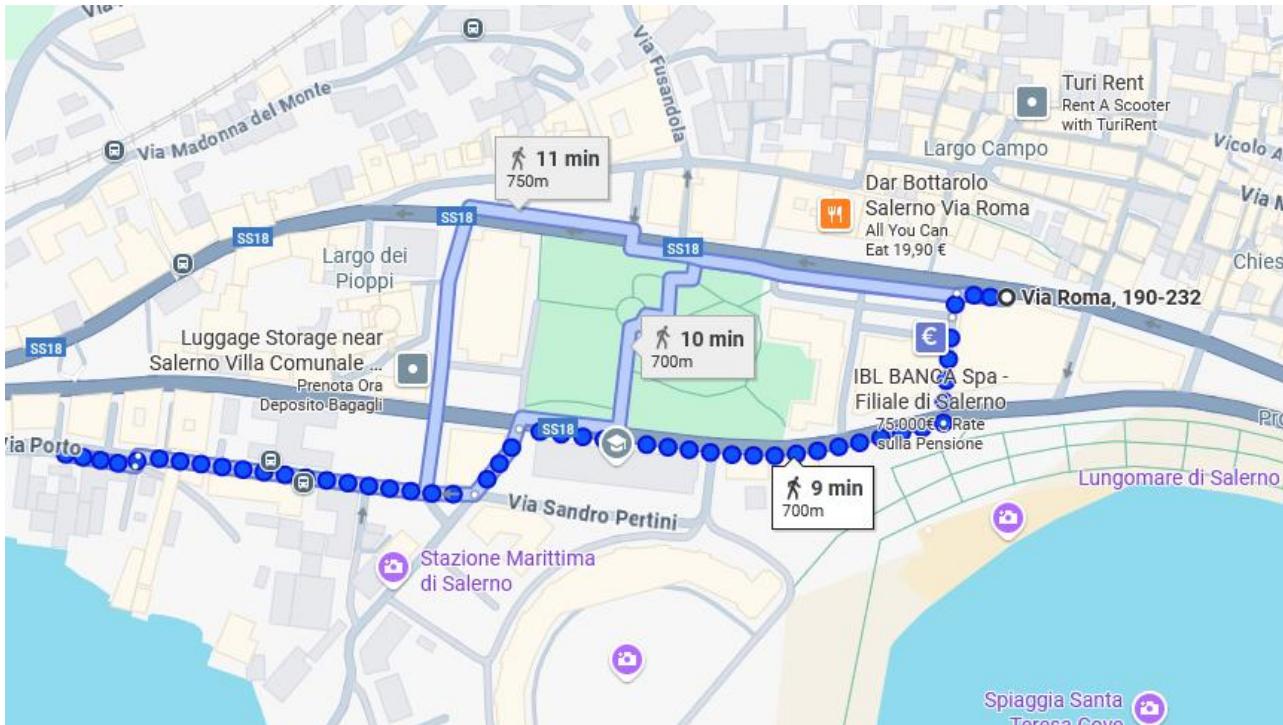
L'evento è **GRATUITO** e aperto sia ai partecipanti della conferenza scientifica SISC che alla cittadinanza. Si chiede gentilmente di confermare la presenza compilando il modulo di iscrizione al singolo evento.

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Wed 22 Oct	20:00 – Social dinner
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The Social dinner will be held at:

📍 Circolo Canottieri Irno, Via Porto 41, Salerno SA



Day 2 | Thursday 23 October 2025

Thu
23
Oct

SIDE EVENT
07:00 – 08:00 (CEST) - 5k at dawn on Salerno seafront

*A non-competitive walk/run on Salerno seafront.
Further info will follow.*

Thu
23
Oct

08:45 – 09:00 (CEST) - Registration of participants

Palazzo di Città
Hallway
(1st floor)

Thu
23
Oct

09:00 – 10:45 (CEST) - In Italian
TAVOLA ROTONDA - Il valore strategico del PNRR per la ricerca sul cambiamento climatico in Italia ed in Europa
Chair: Maria Cristina Facchini, CNR ISAC, Bologna, Italy

Palazzo di Città
Sala dei Marmi
(1st floor)
& streaming

Grazie a specifiche progettualità, il PNRR si è rivelato un volano per l'avanzamento della ricerca sul cambiamento climatico in Italia e in Europa. Questa tavola rotonda riunirà alcuni dei principali progetti finanziati, che hanno incluso le scienze del clima tra le loro attività, per condividere come tali fondi abbiano favorito innovazione scientifica e tecnologica. Attraverso un confronto aperto, saranno messi in luce punti di forza, criticità e prospettive future, delineando il valore strategico di questi investimenti e il loro impatto sulla società.

Intervengono:

- Centro Nazionale per la Biodiversità (NBFC) – Maria Chiara Pastore, Politecnico di Milano, Milano, Italy
- Centro Nazionale HPC, Big Data e Quantum Computing (ICSC) – Silvio Gualdi, Fondazione CMCC, Bologna, Italy
- Partenariato Esteso RETURN – Andrea Prota e Mario Losasso, Università Federico II Napoli, Napoli, Italy

Thu
23
Oct

10:45 – 11:15 (CEST) – Coffee break

Palazzo di Città
Sala del Confalone
(1st floor)

Thu
23
Oct

11:15 – 13:00 (CEST) – Parallel session 2
S2.1 Heatwaves: Impacts and Responses
Chair: TBC

Palazzo di Città
Sala dei Marmi
(1st floor)

Population and land-use exposure to future unprecedented climate extremes over Southern Europe

Jonathan SPINONI, Politecnico di Milano, Milan, Italy

Author(s): Jonathan Spinoni, Marta Mastropietro, Carlos Rodriguez-Pardo, Carmelo Cammalleri, Alessandro Dosio, Massimo Tavoni

A novel unsupervised framework for urban heat islands detection: an application on the city of Naples (Italy)

Rosa CAFARO, Università Federico II Napoli, Napoli, Italy

Author(s): Rosa Cafaro, Barbara Cardone, Valeria D'Ambrosio, Ferdinando Di Martino, Vittorio Miraglia

The Italian heat health adaptation plan and temporal changes in heatwave-related mortality impacts

Francesca DE' DONATO, Dipartimento di epidemiologia ASL Roma 1, SSR Lazio, Roma, Italy

Author(s): de' Donato F., Di Blasi C., De Sario M., Orrù D., Rossi P., Paola Michelozzi

A Climate Risk Assessment Framework for Heatwave Impacts on Airport Operations in Europe

Alessandro MOSER, AMIGO SRL, Rome, Italy

Author(s): Alessandro Moser, Sara Dal Gesso, Marco Venturini, Carlo Abate, Aurora De Bortoli Vizioli

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Changes in large-scale circulation behind the increase in extreme heat events in the Apennines (Italy)

Vincenzo CAPOZZI, Parthenope University of Naples, Napoli, Italy

Author(s): Vincenzo Capozzi, Annalisa Di Bernardino, Giorgio Budillon

Integrating urban morphology and meteorological data to assess thermal comfort in cities: the cases of Turin and Naples

Massimo MILELLI, CIMA Foundation, Savona, Italy

Author(s): Andrea Zonato, Luca Monaco, Massimo Milelli

Thu
23
Oct

11:15 – 13:00 (CEST) – Parallel session 2

S2.2 Governing and Analysing Decarbonization: Policies, Ecosystems and Climate

Chair: TBC

Palazzo di Città
Sala della Giunta
(1st floor)

Reduction in CO₂ emissions from energy use of residential buildings: cost estimate and policy design

Riccardo CAMBONI, University of Padua, Padova, Italy

Author(s): Alberto Corsini, Riccardo Camboni, Raffaele Miniaci, Paola Valbonesi

Industrial policies implication in the European decarbonization trajectory

Alice DI BELLA, Politecnico di Milano, Milan, Italy

Author(s): Alice Di Bella, Toni Seibold, Tom Brown, Massimo Tavoni

The Long-Term Impact of Forest Fires on Carbon Sequestration in Europe

Osman Hakan CAN, University of Barcelona, Barcelona, Spain

Author(s): Osman Hakan Can, François Cohen, Paola Ovando Pol

Land suitability and the carbon cycle: a tool for the Apulia region

Gabriele PIZZILEO, Fondazione CMCC, Lecce, Italy

Author(s): Gabriele Pizzileo, Simone Beltramo, Alessandra Nuzzo, Valentina Scardigno, Gabriele Tramonte, Sergio noce, Maria Vincenza Chiriacò

Geospatial big data analytics to decarbonize industry: a CCUS case study

Sara GIAROLA, Politecnico di Milano, Milan, Italy

Author(s): Sara Giarola, Marialuisa Volta, Elena Verdolini

A Granger causality analysis between Milanković cycles, temperature and CO₂ concentration over the last 800 kyr

Antonello PASINI, CNR, Rome, Italy

Author(s): Antonello Pasini, Umberto Triacca

Thu
23
Oct

13:00 – 13:50 (CEST) – Lunch

Palazzo di Città
Sala del Confalone
(1st floor)

Thu
23
Oct

13:50 – 14:00 (CEST) – Group Photo

Be ready with your best smile for the group photo!

Palazzo di Città
Sala dei Marmi
(1st floor)

Thu
23
Oct

14:00 – 15:00 (CEST)

Poster session 2

Palazzo di Città
Hallway
(1st floor)

Posters list will be included in the final programme. It will be available in mid September.

The whole poster list is available in the annex 1

Thu
23
Oct

15:00 – 15:30 (CEST) – Coffee break

Palazzo di Città
Sala del Confalone
(1st floor)

SISC2025 INNOVATION IN CLIMATE RESEARCH FOR SOCIETAL TRANSFORMATION

SISC 13th Annual Conference - Salerno, 22-24 October 2025

Thu 23 Oct	15:30 – 17:15 (CEST) – Parallel session 3 S3.1 – Governing for Climate Resilience Chair: Elisa Brussolo, Società Metropolitana Acque Torino S.p.A., Turin, Italy	Palazzo di Città Sala dei Marmi (1 st floor)
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BePrepARed: implementing Governance through Strategy and Action Plan for Climate Change with Nature-Based Solutions (NBS)

Antonino Libro, Emilia-Romagna Region Agency for Reconstructions, Bologna, Italy

Author(s): Enrico Cocchi, Antonino Libro, Barbara Parma, Antonio Curatolo, Stefano Marani, Romeo Farinella Elena Dorato, Alberto Grando, Alessandra Marin, Richard Lee Peragine Dimitra Rapti

The Reality of Positive Tipping Points amid the Climate Change Crisis

Ivan KANCEV, University of Ljubljana, Ljubljana, Slovenia

Author(s): Ivan Kanchev

Updated Fire Danger Projections over Italy

Paola FAGGIAN, RSE S.p.A., Milan, Italy

Author(s): Arianna Trevisiol, Paola Faggian

Climate change adaptation enablers: An assessment of socio-economic, institutional and environmental drivers behind the definition of adaptation policies inside the Covenant of Mayors framework

Filippo FRASCHINI, CIMA Foundation, Savona, Italy

Author(s): Andrea Pronti, Filippo Fraschini, Roberto Zoboli

Downscaled climate projections over Emilia-Romagna Region (Northern Italy): Supporting Sustainable Energy and Climate Action Plan and adaptation policies in TRANSCEND project

Rodica TOMOZEIU, Arpaee-Simc, Emilia-Romagna, Bologna, Italy

Author(s): Rodica Tomozeiu, Cinzia Alessandrini, Alice Vecchi

Climate Risk and Provisioning Ecosystem Services: An Explorative Hybrid Model of Adaptive Behaviour in Clam Harvesting

Federico CORNACCHIA, Ca' Foscari University of Venice, Fondazione Eni Enrico Mattei, Venice, Italy

Author(s): Federico Cornacchia, Sebastian Raimondo, Carlo Giupponi, Camilla Bertolini, Roberto Pastres

Thu 23 Oct	15:30 – 17:15 (CEST) – Parallel session 3 S3.2 – Advanced Modelling and Forecasting Approaches for Climate and Earth System Processes Chair: Piero LIONELLO, University of Salento, Lecce, Italy	Palazzo di Città Sala della Giunta (1 st floor)
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GLOBONE - Development of the CNR coupled climate model for subseasonal, seasonal and decadal prediction

Federico FABIANO, CNR-ISAC, Bologna, Italy

Author(s): Federico Fabiano, Alessio Bellucci, Paolo Davini, Guido Davoli, Valerio Lembo, Daniele Mastrangelo, Andrea Storto, Vincenzo De Toma, Chunxue Yang, Federico Serva

Toward an improved representation of the Mediterranean Sea dynamics: sensitivity tests on high-resolution atmospheric forcing

Federica BORILE, University of Bologna, Bologna, Italy

Author(s): Federica Borile, Francesco Maicu, Mahmud Hasan Ghani, Mario Raffa, Angelo Campanale, Paola Mercogliano, Nadia Pinardi, Lucia Gualtieri, Pietro Miraglio and Emanuela Clementi

Unravelling drivers of future Mediterranean precipitation paradox

Marco CHERICONI, IUSS Pavia, Pavia, Italy

Author(s): Marco Chericoni, Giorgia Fosser, Alessandro Anav, Marco Gaetani, Emmanuel Flaounas

Challenges in Simulating Sea Ice: Is the Resolution Effort Paying Off?

Doroteaciro IOVINO, Fondazione CMCC, Bologna, Italy

Author(s): Doroteaciro Iovino, Francesco Cocetta

Mediterranean extreme precipitation events in storm-resolving NextGEMS Earth System Models

Paolo LANTERI, University of Trento, Trento, Italy

Author(s): Paolo Lanteri, Simona Bordoni

Assessment of the Urbanized ICON-CLM Atmospheric Model for the Bologna Case Study

Angelo CAMPANALE, Fondazione CMCC, Caserta, Italy

Author(s): Angelo Campanale, Marianna Adinolfi, Mario Raffa, Jan-Peter Schulz, Paola Mercogliano

SISC2025 INNOVATION IN CLIMATE RESEARCH FOR SOCIETAL TRANSFORMATION

SISC 13th Annual Conference - Salerno, 22-24 October 2025

Thu 23 Oct	17:45 – 18:45 (CEST) SISC General Assembly of Members	Palazzo di Città Sala dei Marmi (1 st floor)
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Thu 23 Oct	19:15 (CEST) – Aperitif
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Further info will be available soon.

Day 3 | Friday 24 October 2025

Fri 24 Oct	08:45–09:00 (CEST) - Registration of participants	Palazzo di Città Hallway (1 st floor)
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Fri 24 Oct	09:00 – 10:45 (CEST) – Parallel session 4 S4.1 – Impacts, Responses, and Policies Chair: Antonio Trabucco, Fondazione CMCC, Sassari, Italy	Palazzo di Città Sala dei Marmi (1 st floor)
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Changes in Precipitation Distribution Probability in Lombardy in Climate Change Scenarios and its use for climate proofing of infrastructure

Mauro MUSSIN, ARPA Lombardia, Milan, Italy

Author(s): Mauro Mussin, Silvia Vaghi, Alessandro Dacomo

Drought-induced TREE Mortalities and REwilding in Apulia (TREEMORE)

Roberto INGROSSO, CNR, Lecce, Italy

Author(s): Roberto Ingrosso, Mara Baudena, Francesco Cozzoli, Valerio Lembo, Piero Lionello, Enrica Nestola, Francesco Salvatore Rocco Pausata, Gregorio Sgrigna, Shivangi Tiwari, Roberta D'Agostino

Simulating the urban thermo-hygrometric environment: bridging mesoscale and microscale dynamics with MLUCM BEP+BEM – Bari case study (Italy)

Gianluca PAPPACCOGLI, University of Salento, Lecce, Italy

Author(s): Gianluca Pappaccogli, Andrea Zonato, Alberto Martilli, Riccardo Buccolieri, Piero Lionello

CliNE: A novel portal of north-eastern Italy climate framework for the assessment of current and future climate-related impacts

Valentina GALLINA, ARPAV FVG, Teolo (PD), Italy

Author(s): Giovanni Massaro, Valentina Gallina, Fabio Zecchini, Andrea Cicogna, Enrica De Cian, Francesco Bosello, Giacomo Falchetta, Francesco Bartoli, Ricardo Garcia Silva, Marco Montanari, Francesco Rech, Arturo Pucillo, Stefano Micheletti

Recreational and cultural value of EU forests under alternative management options

Fabio EBOLI, ENEA, Rome, Italy

Author(s): Fabio Eboli, Melania Michetti

Potential effects of climate change on the provision of ecosystem services of the Rijana River

Liliana VIŽINTIN, Science and Research Centre Koper, Koper, Slovenia

Author(s): Liliana VIŽINTIN, Suzana Škof

Fri
24
Oct

09:00 – 11:10 (CEST)
S4.2 – Climate Hazard and Risk Assessment for Society
Chair: TBC

Palazzo di Città
Sala della Giunta
(1st floor)

A Framework for Mapping Global Climate Multi-Hazard Risks under Future Climate Scenarios

Jacopo FURLANETTO, Fondazione CMCC, Venice, Italy

Author(s): Jacopo Furlanetto, Edoardo Albergo, Ngoc Diep Nguyen, Marinella Masina, Marcello Sano, Matteo Carisi, Alex Zabeo, Andrea Critto, Silvia Torresan

A prototype service for the Resilience of the Electric Transmission grid to Extreme events (RETE)

Sandro CALMANTI, ENEA, Rome, Italy

Author(s): Sandro Calmanti, Federico Falorni, Nicola Amoroso, Alessandro Anav, Loredana Bellantuono, Roberto Bellotti, Simona Bordoni, Osvaldo Bottiglieri, Oliver Carlo, Roberto Cilli, Silvio Gualdi, Annalisa Cherchi, Gabriele Frank, Giusy Fedele, Marco Chiericoni, Chiara De Bartolo, Silvano Donvito, Alessandro Lazzarini, Piero Lionello, Nunzio Losacco, Michele Morelli, Paola Mercogliano, Luca Orrù, Ester Pantaleo, Francesca Scavo, Paolo Stocchi, Vito Tagarelli, Elena Tomasi

Assessing Hail Risk on PV Plants: A Tailored Framework for Italy's Renewable Energy Sector

Luca LISCIOTTO, Ca' Foscari University, Venice, Italy

Author(s): Luca Lisciotto, Wilmer Pasut

Hydraulic Risk Assessment with AI and Hydrodynamic Simulations: A Case Study in Piedmont, Italy

Francesco LUCARELLI, Eoliann S.R.L. Società Benefit, Turin, Italy

Author(s): Bartolo Albanese, Alessandro Bettuzzi, Roberto Carnicelli, Robin Castellani, Alessio de Sangro, Giacomo di Fuccia, Emidio Granito, Francesco Lucarelli, Giovanni Luddeni, Chiara Mugnai

TurboMeter: Attributing aviation turbulence events to climate change

Tommaso ALBERTI, Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy

Author(s): Tommaso Alberti, Lia Rapella, Erika Coppola, Davide Faranda

Assessing climate risk in urban revitalization: a comparative analysis of Poland and China

Adam CHORYŃSKI, Poznań University of Life Sciences, Poznań, Poland

Author(s): Adam Choryński, Iwona Pińskwar, Yingxin Wang, Iwona Pińskwar

Fri
24
Oct

10:45 – 11:15 (CEST) – Break

Palazzo di Città
Sala del Confalone
(1st floor)

Fri
24
Oct

11:15 – 12:00 (CEST) - Claudia Pasquero's Talk
Local and remote effects on the mid latitude climatic response to anthropogenic forcing
Chair: TBC

Palazzo di Città
Sala dei Marmi
(1st floor)

Local and remote effects on the mid latitude climatic response to anthropogenic forcing

The warming observed on the Earth over the last decades is not homogeneous: different characteristics of the surface are responsible for a faster temperature rise over continents than over oceans, for a strong polar amplification, and for an elevation-dependent climate change.

In this talk, atmospheric thermodynamic and dynamic processes associated with differential warming, active locally or remotely, will be presented. In particular, the effects of water availability contrasts in soils and oceans on mid latitude climate and meteorological variability, including the occurrence of winter cold spells, heavy precipitation, and droughts, will be discussed.

Claudia Pasquero is Associate Professor in Oceanography, Meteorology and Climatology at the University of Milano – Bicocca, where she studies interactions between oceans and climate. Recently, her research has focused on the dynamics of extreme meteo-climatic events, including tropical cyclones, mid-latitude storms, sudden stratospheric warming events, heavy rainfalls. Pasquero is part of the ESA Earth Explorer X "Harmony" Mission Advisory Group, and she leads related science projects on air-sea interactions. Recently, she has been an invited fellow at Ecole Normale Supérieure (Paris) and at Harvard University (USA). She has an active role in the communication of climate science to society (including writing popularization books and being the scientific director of the Planetaria festival).

Tailoring Regional Welfare Functions for Climate Adaptation: A Participatory Framework Aligning Local Priorities and Policy

Luca CETARA, Eurac Research, Bolzano, Italy

Author(s): Luca Cetara

Citizens' Priorities for Climate Adaptation: A Willingness-to-Pay Approach in Six European Countries

Andrea BIGANO, Fondazione CMCC, Milan, Italy

Author(s): Anna Alberini, Andrea Bigano, Adan L. Martinez-Cruz

Rising Temperatures, Shifting Paradigms: Exploring the Interplay Between Climate Change and Tourism Dynamics in the EU NUTS-2 regions.

Maria Grazia CITO, Università degli Studi di Bari "Aldo Moro", Bari, Italy

Author(s): Angela Stefania Bergantino, Maria Grazia Cito, Vicente Royuela

Fri 24 Oct	15:45 – 16:15 (CEST) – Closing session and award ceremony	Palazzo di Città Sala dei Marmi (1st floor)
Fri 24 Oct	SIDE EVENT (in Italian) 18:00 – 19:00 (CEST) - Clima da leggere	iMorticelli

CLIMA DA LEGGERE - Presentazione del volume:

Le parole giuste. Glossario ecologista (Fandango Libri)

Curatore: A Sud – Centro di ricerca e azione attivo su ambiente, clima e giustizia sociale

Intervengono:

- Marica di Pierri, giornalista, ricercatrice, divulgatrice, portavoce di A Sud
- Paola Mercogliano, presidente della SISC e autore di una voce del glossario relativa al cambiamento climatico

Modera: Arturo Iannelli, Presidente della Commissione Ambiente del Comune di Salerno

Abstract: Il glossario raccolge contributi provenienti dal mondo della scienza, della divulgazione, dell'attivismo, dell'informazione e dell'accademia. Il risultato è al tempo stesso una bussola per orientarsi e una cassetta degli attrezzi per approfondire teoria e pratica: dalle nozioni e concetti chiave fino alle sigle e ai vocaboli indispensabili per comprendere le questioni ambientali nelle loro molteplici sfumature.

📍 iMorticelli, ex chiesa di San Sebastiano del Monte dei Morti, Largo Plebiscito, Salerno

L'evento è GRATUITO e aperto sia ai partecipanti della conferenza scientifica SISC che alla cittadinanza. Si chiede gentilmente di confermare la presenza compilando il modulo di iscrizione al singolo evento.

Maggiori informazioni: <https://www.sisclima.it/conferenza-annuale-2025/side-event-clima-da-leggere/>

Day +1 | Saturday 25 October 2025

Sat
25
Oct

SIDE EVENT (in Italian)
10:00 – 12:00 (CEST) - Clima e Cultura: esplorare il clima oltre la scienza

iMorticelli

Clima e Cultura: esplorare il clima oltre la scienza

Un incontro che intreccia scienza, arte e antropologia per esplorare nuove narrazioni sul clima e stimolare un dialogo culturale aperto con la comunità.

Intervengono:

- **Andrea Mattiello:** storico dell'arte e ricercatore tra Oxford e NABA. Cura la rubrica So.N.Ar. – Società, natura, arti su Equilibri Magazine, FEEM, dove esplora l'intersezione tra arti visive, crisi climatica e trasformazioni culturali.
- **Elisabetta Dall'Ò:** antropologa ambientale. Professoressa del corso di "Modelli, Evidenze e Percezione dei cambiamenti climatico" al Politecnico di Torino.
- **Ludovica La Rocca:** architetta, co-fondatrice di Blam, collettivo di architette che si occupa di rigenerazione urbana e innovazione sociale, con particolare attenzione al riuso adattivo del patrimonio culturale.
- **Giulio Boccaletti:** direttore scientifico del CMCC, esperto di sicurezza ambientale e risorse naturali. È saggista, imprenditore e senior executive con esperienza sia nel settore privato che no profit.

Modera: Paola Mercogliano, Presidente SISC e Principal Scientist del CMCC

📍 iMorticelli, ex chiesa di San Sebastiano del Monte dei Morti, Largo Plebiscito, Salerno

L'evento è GRATUITO e aperto sia ai partecipanti della conferenza scientifica SISC che alla cittadinanza. Si chiede gentilmente di confermare la presenza compilando il modulo di iscrizione al singolo evento.

Maggiori informazioni: <https://www.sisclima.it/conferenza-annuale-2025/side-event-clima-e-cultura/>

Sat
25
Oct

SIDE EVENT (in Italian)
18:00 – 19:00 (CEST) - Clima da leggere

Giardino della Minerva

CLIMA DA LEGGERE - Presentazione del volume:

Il futuro della natura (edito da Mondadori)

Autore: Giulio Boccaletti, Scienziato e autore di saggi, esperto di sicurezza ambiente e gestione delle risorse naturali

Moderatore: Carla Errico, responsabile della redazione di Salerno de "Il Mattino"

Abstract: In un'epoca di guerre, pandemie e fughe verso Marte, Il futuro della natura spiega come comportarci sulla Terra, da custodi della nostra casa. Il pianeta sta cambiando. Le narrazioni apocalittiche non servono. Dobbiamo, invece, affrontare ciò che ci aspetta. Raccontare il futuro della natura, in fondo, significa raccontare il futuro di tutti noi.

📍 Giardino della Minerva, vicolo Ferrante Sanseverino 1, Salerno

L'evento è GRATUITO e aperto sia ai partecipanti della conferenza scientifica SISC che alla cittadinanza. Si chiede gentilmente di confermare la presenza compilando il modulo di iscrizione al singolo evento.

Maggiori informazioni: <https://www.sisclima.it/conferenza-annuale-2025/side-event-clima-da-leggere/>

Annex I – Posters

At the intersection of Big data, HPC and AI for Climate Science

1. **A Bayesian Optimization-based approach to improve Oil Spill simulations**
Marco DE CARLO, Fondazione CMCC, Lecce, Italy
Author(s): Gabriele Accarino, Marco M. De Carlo, Igor Atake, Donatello Elia, Anusha L. Dissanayake, Antonio Augusto Sepp Neves, Juan Peña Ibañez, Italo Epicoco, Paola Nassisi, Sandro Fiore, Giovanni Coppini
2. **A Hybrid Deep Learning and Geostatistical Framework for High-Resolution Spatiotemporal Temperature Forecasting in Apulia, Italy**
Nouman IQBAL, University of Salento, Lecce, Italy
Author(s): Nouman Iqbal, Sandra De Iaco, Monica Palma
3. **AI-based quantification of European temperature and precipitation anomalies from the Euro-Atlantic weather regimes**
Alessandro CAMILLETTI, Fondazione Bruno Kessler, Trento, Italy
Author(s): Alessandro Camilletti, Elena Tomasi, Gabriele Franch, Marco Cristoforetti
4. **Applying Generative AI Models to Climate Risk Assessment: a Weather Generator for Extreme Precipitation**
Elena TOMASI, Fondazione Bruno Kessler, Trento, Italy
Author(s): Gabriele Franch, Elena Tomasi, Rishabh Wanjari, Uladzislau Azhel, Guido Rianna, Ilenia Manco, Paola Mercogliano, Marco Cristoforetti
5. **Exploring machine-learning capabilities as a weather generator over the Italian Peninsula**
Leonardo ARAGÃO, Fondazione CMCC, Bologna, Italy
Author(s): Leonardo Aragão, Silvio Gualdi
6. **Leveraging Graph Neural Networks for Enhancing Posidonia Oceanica Conservation Across Mediterranean Sea: Tackling Climate Change and Human Impact**
Angelica BIANCONI, Fondazione CMCC, Venice, Italy
Author(s): Angelica Bianconi, Sebastiano Vascon, Elisa Furlan and Andrea Critto
7. **Modelling climate impacts on biodiversity with deep neural networks**
Carlos RODRÍGUEZ - PARDO, Politecnico di Milano, Milan, Italy
Author(s): Marta Mastropietro, Carlos Rodriguez-Pardo, Cindy Azuero Pedraza, Massimo Tavoni
8. **Optimizing climate data management and access: enhancing the CMCC Data Delivery System**
Gabriele TRAMONTE, Fondazione CMCC, Lecce, Italy
Author(s): Gabriele Tramonte, Donatello Elia, Valentina Scardigno, Mario Raffa, Massimo Muraro, Paola Mercogliano, Paola Nassisi
9. **RHEA-DAPT: Transforming decision making with AI tool for climate adaptation planning**
Maria Katherina DAL BARCO, Fondazione CMCC, Venice, Italy
Author(s): Favilli Fabio, Poddar Debashmita, Chiarello Federico, Dal Barco Maria Katherina, Biancardi Aleu Rebeca, Furlan Elisa
10. **Severe weather monitoring: Convolutional Neural Networks and Satellite data for detection of lightning activities over Italy**
Otavio MEDEIROS FEITOSA, Fondazione CMCC, Caserta, Italy
Author(s): Otavio Feitosa, Paolo Francesco Duminuco, Ilenia Manco, Alessandro Bonfiglio, Giuseppe Giugliano, Giusy Fedele, Davide Morale, Gabriella Ceci, Giuliana Barbato, Paola Mercogliano.
11. **TreeTalkers data for sustainable vineyards: visualizing sapflow insights and soil management effects on grape physiology**
Alessandra NUZZO, Fondazione CMCC, Lecce, Italy
Author(s): Alessandra Nuzzo, Valentina Scardigno, Simone Beltrmino, Maria Vincenza Chiriacò, Gabriele Pizzileo
12. **Using Wasserstein distance for clustering of climatological data**
Regina CASTROVILLI, University of Salento, Lecce, Italy
Author(s): Alessia Benevento, Regina Castrovilli, Fabrizio Durante, Daniela Gallo, Gianfausto Salvadori

Risk management, adaptation and social and economic transformations

13. **An integrated approach that includes ecosystem services in wildfire risk mitigation strategies: first results of CRITERIA project**
Valentina BACCIU, CNR Istituto per la BioEconomia, Sassari, Italy

Author(s): Grazia Pellizzaro, Valentina Bacciu, Liliana Del Giudice, Carla Scarpa Donatella Spano, José Maria Costa-Saura Fabrizio Pedes, Costantino Sirca, Mario Cozzi, Severino Romano, Michele Salis

14. Assessing the Quality of Urban Climate Adaptation Plans: Insights from 2205 Cities of the Global Covenant of Mayors

Filomena PIETRAPERTOSA, Institute of Methodologies for Environmental Analysis – National Research Council of Italy and NBFC, National Biodiversity Future Center, Palermo, Italy

Author(s): Filomena PIETRAPERTOSA, Aldo Treville, Diana Reckien, Monica Salvia, Vincent Vigué, Davide Geneletti, Byron Ioannou, Anna Krook-Riekkola, Paolo Bertoldi, Aoife M. Foley, Sonia De Gregorio Hurtado, Attila Buzási, Paris Fokaides, Klavdija Rižnar, Peter Eckersley, Oliver Heidrich, Efren Feliu, Luigi Santopietro, Hans Orru, Maria Szalmane Csete, Stelios Grafakos

15. Climate Change Adaptation Mainstreaming: a brisk methodology to assess and improve the capability of public administrations to integrate adaptation into urban planning practices

Stella PENNINO, University of Naples Federico II, Napoli, Italy

Author(s): Stella Pennino, Emilio Lèbre La Rovere, Romano Fistola

16. Climate Change Communication Campaign promoted by secondary school students

Lavinia LAITI, APPA, Provincia autonoma di Trento, Trento, Italy

Author(s): Roberto Barbiero, Lavinia Laiti, Laura Zumiani, Federica Pellegatti, Paulo Lima, Claudio Valenti, Sabrina Santorum, Laura Endrighi

17. Climate Impacts on Arabica and Robusta Coffee Yields: Projections and Adaptation Strategies

Raniero DELLA PERUTA, Fondazione CMCC, Venice, Italy

Author(s): Raniero DELLA PERUTA, Valentina Mereu, Donatella Spano, Serena Marras, Antonio Trabucco

18. Closing the gap between research and projects in climate change innovation in Europe

Francesca LAROSA, Royal Institute of Technology, Stockholm, Sweden

Author(s): Francesca Larosa, Marco Molinari, Panagiotis Varelas, Catalina Spataru, Jaroslav Mysiak

19. Conceptualizing a multi-risk Bayesian Network model to identify nature-based management solutions to face water quality degradation in a changing climate

Elena ALLEGRI, CMCC and Ca'Foscari University of Venice, Venice, Italy

Author(s): Elena Allegri, Francesc Maynou, Angelica Bianconi, Elisa Furlan, Hung Vuong Pham, Silvia de Juan, Andrea Critto, Antonio Marcomini

20. Food Hubs as catalysts for sustainable Food Systems: insights from the SWITCH project

Letizia ANDRIANI, Fondazione CMCC, Lecce, Italy

Author(s): Letizia Andriani, Chiara Trozzo, Kristel Polhuis, Laura Bouwman, Maria Vincenza Chiriacò

21. From climate risk assessment to adaptation: a transdisciplinary framework for co-designing strategic adaptation measures in South Tyrol

Fabio CARNELLI, Eurac Research, Bolzano, Italy

Author(s): Fabio Carnelli, Giacomo Bertoldi, Alice Crespi, Lydia Pedoth, Massimiliano Pittore, Michael Pörnbacher, Kathrin Renner, Marc Zebisch

22. Identifying and managing drought as a governance risk: emergency water-use restrictions, seeds of conflicts, and sentences

Francesca MUNEROL, CIMA Foundation, Savona, Italy

Author(s): Francesca Munerol, Margherita Andreaggi, Francesco Avanzi, Edoardo Cremonese, Marco Altamura

23. Intersectional Feminist Analysis of Italy's National Adaptation Plan: Addressing Gendered Climate Vulnerabilities and Regional Disparities

Berfin Tutku OZCAN, School of Advanced Studies Sant'Anna, Pisa, Italy

Author(s): Berfin Tutku Ozcan

24. Linking Temperature Extremes and Labour Productivity in Integrated Assessment Models: a new modelling framework in AD-WITCH

Gabriele MANSI, Fondazione CMCC, Venice, Italy

Author(s): Gabriele Mansi, Francesco Colelli

25. Mainstreaming Climate Change Adaptation Policies into Sub-national Level Governance

Aurora NURCE, Fondazione Lombardia per l'Ambiente, Milan, Italy

Author(s): Aurora Nurce, Mita Lapi, Gian Luca Gurrieri, Fabrizio Piccarolo, Monica Bernardi, Domenico Vito

26. Mitigation strategies can alleviate power system vulnerability to climate change and extreme weather: a case study on the Italian grid

Alice DI BELLA, Politecnico di Milano, Milan, Italy

Author(s): Alice Di Bella, Francesco Pietro Colelli

27. **Modelling systemic risk and resilience through networks: the AGILE case study in Venice**
Davide Mauro FERRARIO, Fondazione CMCC, Venice, Italy
Author(s): Margherita Maraschini; Samuele Casagrande, Davide Mauro Ferrario, Andrea Critto, Silvia Torresan
28. **Nature-Based Solutions and Risk Assessment for Enhanced Climate Change Adaptation in Coastal Areas**
Fabienne HORNEMAN, Fondazione CMCC, Venice, Italy
Author(s): Fabienne Horneman, Ignacio Gatti, Elisa Furlan, Andrea Critto, Silvia Torresan
29. **Resilience-oriented policy guidelines for mountain snow tourism destinations and communities.**
Andrea OMIZZOLO, Eurac Research, Bolzano, Italy
Author(s): Andrea Omizzolo, Philipp Corradini, Agnese Moroni
30. **Strengthening the resilience regarding CC-induced ecologic & socioeconomic effects in snow mountain destinations.**
Andrea OMIZZOLO, Eurac Research, Bolzano, Italy
Author(s): Andrea Omizzolo, Philipp Corradini, Agnese Moroni
31. **Summer 2025 in Piedmont: heatwaves and the new APP**
Agnese Maria COLIZZI, Arpa Piemonte, Torino, Italy
Author(s): Agnese Maria Colizzi, Barbara Cagnazzi, Chiara De Luigi, Manuela Bernardi, Cecilia Scarinzi, Cristiana Ivaldi
32. **Toward integrated and fire-smart land management in Sardinia: combining modelling and participatory approaches within a disaster risk reduction framework**
Valentina BACCIU, Institute of BioEconomy, National Research Council, Sassari, Italy
Author(s): Valentina BACCIU, Alessio Menini, Grazia Pellizzaro, Michela Bazzoni, Josè Costa Saura, Bachisio Arca, Pierpaolo Duce, Donatella Spano, Costantino Sirca
33. **What's in the Mud?! Community-led Biogeochemical Assessments of Unmonitored River Tributaries in New York's Disadvantaged Communities for Ecosystem Restoration and Accelerating Alternative Energy Solutions**
Brianna Elizabeth MIRANDA, Haverstraw Estuary Field Station, Haverstraw, New York, United States of America
Author(s): Brianna E. Miranda, Keith Tidball , Anna Davidson, Jose A. Andres, Ashley Morris, Chris Bowser, Jeffry Pecctraca, Emmet Sutton

Changes in means and extremes: trends and dynamic at multiple scales

34. **Classification of the atmospheric circulation schemes associated with katabatic wind events in the Ross Sea (Antarctica)**
Lauro D'ESPOSITO, Parthenope University of Naples, Napoli, Italy
Author(s): Lauro D'ESPOSITO, Vincenzo Capozzi, Pasquale Castagno, Giannetta Fusco, Giorgio Budillon
35. **Climate analysis for health impact evaluation in urban areas**
Giulio SETTANTA, ISPRA, Rome, Italy
Author(s): Giulio Settanta, Piero Fraschetti, Francesca Lena, Walter Perconti, Emanuela Piervitali
36. **Climate Change Attribution of hydroclimatic hazards in the Emilia-Romagna region of Italy through multivariate analogues techniques**
Valerio LEMBO, CNR-ISAC, Bologna, Italy
Author(s): Valerio Lembo, Tommaso Alberti, Mireia Ginesta, Davide Faranda
37. **CLIMED web site to investigate climate change over Italy**
Goffredo DECIMI, RSE S.p.A., Milan, Italy
Author(s): Goffredo Decimi, Arianna Trevisiol, Paola Faggian
38. **CMIP6 downscaling in EURO-CORDEX**
Alejandro VICHOT-LLANO, Fondazione CMCC, Caserta, Italy
Author(s): ALEJANDRO VICHOT LLANO, Mario Raffa, Angelo Campanale, Gabriella Ceci, Marianna Adinolfi, Paola Mercogliano
39. **Evaluating extreme precipitation events across different timescales: A comparison of high-resolution modelling and observed data in Emilia-Romagna**
Piero LIONELLO, University of Salento, Lecce, Italy
Author(s): Oliver S. Carlo, Giusy Fedele, Silvio Gualdi, Paola Mercogliano, Piero Lionello
40. **Investigating SST's role in Mediterranean tornado dynamics**
Elenio AVOLIO, CNR-ISAC, Lecce, Italy
Author(s): Elenio Avolio, Claudia Fanelli, Andrea Pisano, Mario Marcello Miglietta

41. **Multi-scale Assessment of Temperature Dynamics and Heat Wave Trends with High-Resolution Climate Data**
Stefania OLIVA, Fondazione CMCC, Caserta, Italy
Author(s): S. Oliva, M. Raffa, M. Adinolfi, A. Campanale, A. Reder, P. Mercogliano
42. **Statistical Downscaling over Italy using EQM: CMIP6 Climate Projections and related Key Climate Indicators for the 1985-2100 Period**
Giusy FEDELE, Fondazione CMCC, Caserta, Italy
Author(s): Giusy Fedele, Giuseppe Giugliano, Alfredo Reder and Paola Mercogliano
43. **The X-RISK-CC webGIS of alpine-wide climate extremes**
Piero CAMPALANI, Eurac Research, Bozen/Bolzano, Italy
Author(s): Piero Campalani, Alice Crespi, Elena Maines, Sebastian Lehner, Živa Vlahović, Maja Žun, Marc Zebisch
44. **Thermodynamic and Dynamic Contribution in Precipitation Extremes over Europe and the Mediterranean Basin**
Lisa BERNINI, CIMA Foundation, Savona, Italy
Author(s): Lisa Bernini, Stephan Pfahl, Antonio Parodi, Claudia Pasquero
45. **Time and space variability of tornadoes occurrence: an empirical approach**
Aqsa MUHAMMADI, University of Salento, Lecce, Italy
Author(s): Aqsa Muhammadi, Roberto Ingrosso, Gianfausto Salvadori, Piero Lionello
46. **Uncertainties in high-resolution extreme precipitation scenarios over Italy from dynamical and statistical modeling**
Sandro CALMANTI, ENEA, Rome, Italy
Author(s): Sandro Calmanti, Giusy Fedele, Paolo Lanteri, Elena Tomasi, Gabriele Franchi, Simona Bordoni, Paola Mercogliano

Climate related impacts on natural and human systems across landscapes

47. **A Methodological Approach to Assess Expected Crops Distribution to Satisfy Future Food Demand**
Simone BELTRAMINO, Fondazione CMCC, Lecce, Italy
Author(s): Simone Beltramino, Riccardo Valentini, Maria Vincenza Chiriacò
48. **A methodological framework to assess the impact of climate change on marine sediment bottom stress and erosion processes: preliminary results from the area of Taranto (southern Italy)**
Angela RIZZO, University of Bari, Bari, Italy
Author(s): Diana De Padova, Giuliana Barbato, Giuseppe Mastronuzzi, Paola Mercogliano, Michele Mossa, ANGELA RIZZO
49. **Advancing land-sea interface multi-hazard cumulative impact assessment in the Valencian Community through AI-powered strategic foresight analysis.**
Gea GRASSI, Fondazione CMCC, Venice, Italy
Author(s): Gea Grassi, Federica Zennaro, Elisa Furlan, Andrea Critto
50. **Assessing the suitability of pistachio as a diversification crop under climate change conditions in the Mediterranean regions: a literature review**
Bader IJAZ, University of Sassari, Sassari, Italy
Author(s): Bader Ijaz, Marta Debolini, Donatella Spano
51. **Assessing urban microclimate influences on air quality through integrated monitoring and dispersion modelling in Lecce (Southern Italy)**
Gianluca PAPPACCOGLI, University of Salento, Lecce, Italy
Author(s): Chiara Metrangolo, Adelaide Dinoi, Gianluca Pappaccogli, Riccardo Buccolieri
52. **Climate Services as Public Infrastructure: Lessons from European Research Partnerships**
Marcello PETITTA, Mathematics and Physics Department, Roma tre University, Roma, Italy
Author(s): Marcello Petitta, Sandro Calmanti, Matteo De Felice
53. **Coast-AId: A custom AI application to assess coastal risk and resilience**
Maria Katherina DAL BARCO, Fondazione CMCC, Lecce, Italy
Author(s): MARIA KATHERINA DAL BARCO, Veronica Casartelli, Marcello Sanò, Sebastiano Vascon, Silvia Torresan, Andrea Critto
54. **Enhancing Water Quality Resilience: AI-Based Multi-Risk Assessment for Climate and Land Use Change Adaptation**
Diep Ngoc NGUYEN, Fondazione CMCC, Venice, Italy
Author(s): Diep Ngoc Nguyen, Jacopo Furlanetto, Silvia Torresan, Andrea Critto

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55. **Exploring climate projections uncertainty propagation in the integration of adaptation strategies into practices for infrastructure design and maintenance**
Mattia SCALAS, Fondazione CMCC, Caserta, Italy
Author(s): Mattia SCALAS, Alessandro Pugliese, Luz Adriana Gomez Mogollon, Giuliana Barbato, Paola Mercogliano, Guido Rianna, Alfredo Reder
56. **Exploring Drivers of Forest Microclimates in Central Italy**
Autumn MANNSFELD, Fondazione CMCC, Viterbo, Italy
Author(s): Autumn Mannsfeld, Nafeesa Samad, Maria Vincenza Chiriacò
57. **Extreme Temperatures Risk: the case study of Turin in the Horizon Europe SDGs-EYES project**
Alessandro PUGLIESE, Fondazione CMCC, Caserta, Italy
Author(s): ALESSANDRO PUGLIESE, Marta Ellena, Mattia Scalas, Giuliana Barbato, Alfredo Reder, Alessandro D'Anca, Jishnu Jeevan, Paola Mercogliano, Nicolás Zengarini, Teresa Spadea, Elena Strippoli, Giulia Melis, Eduardo Di Gangi
58. **Future Health Impacts of Heatwaves in Italy Considering Climate Change Scenarios**
Francesca DE' DONATO, Dipartimento di epidemiologia ASL ROMA 1, SSR Lazio, Rome, Italy
Author(s): Francesca de' Donato, Alessandro Pugliese, Paola Mercogliano, Giuliana Barbato, Manuela De Sario, Chiara Di Blasi, Paola Michelozzi
59. **Global warming influence on shallow landslide events in northwestern Italy**
Christian RONCHI, Arpa Piemonte, Turin, Italy
Author(s): Davide Tiranti, Valentina Botto, Elisa Brussolo, Christian Ronchi
60. **Impact of precipitation anomalies on viticulture resilience and grape production: the case study of Molise, Italy**
Gianluca PAPPACCOGLI, University of Salento, Lecce, Italy
Author(s): Gianluca Pappacogli, Mirko Sodini, Francesco Landolfo, Giuseppe Rossetti, Giuliana Maddalena, Silvia Toffolatti, Filippo De Curtis, Mauro Confalonieri, Piero Lionello, Laura Rustioni
61. **Integrating Remote Sensing and Epidemiological Modelling to Assess the impacts of heat on urban health population**
Domenico D'AUSILIO, Parthenope University of Naples, Napoli, Italy
Author(s): Domenico D'Ausilio, Davide Morale, Massimiliano Cerciello, Marta Ellena, Paola Mercogliano, Claudio Parente, Alessandro Pugliese, Giuliana Barbato, Alfredo Reder
62. **Interpretability of Machine Learning Models to Analyse the Correlation Between Environmental Features and Respiratory Admissions in the Emergency Room**
Vito TELESCA, University of Basilicata, Potenza, Italy
Author(s): Vito Telesca, Marica Rondinone
63. **Linking climate change impacts on Net Primary Production in the Atlantic and mid-century global macroeconomic scenarios**
Gabriele STANDARDI, University of Milan, Milan, Italy
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64. **Modelling use and non use values of ecosystems in general equilibrium analysis**
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65. **Multi-hazard hot and dry events in the Adige River basin: combining AI and Earth Observation to advance multi-risk assessment**
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66. **Shifting Bioclimatic Conditions through Machine Learning High Resolution Global Environmental Stratification**
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67. **Species-Specific Responses of Stem Radial Growth and Water Transport to Flash Drought in a Mediterranean Forest: A Case Study from central Italy**
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- 68. **Too hot or too cold: Effect of weather shock on self-reported mental health outcomes in South Africa**
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 - 69. **Vine grapes productivity and weather fluctuations: evidence for Italian regions (2006-2022)**
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 - 70. **Water-Energy-Food-Ecosystem Nexus approach for integrated system assessment in Sardinia region**
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- 71. **Future of residential electricity demand in Saudi Arabia and the role of energy efficiency in 2060's net zero pledge**
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- 72. **Geospatial AI and geospatial big data analytics to decarbonise consumer level emissions**
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- 73. **Modeling Methane Emissions from Wetlands: projections and impacts for climate policy**
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