



SECOND
ANNUAL
CONFERENCE

Climate change: scenarios, impacts and policy

Venice
September 29-30, 2014



#sisclima2014

Program

in collaborazione con



partners



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Welcome Messages



Dear Friends and Colleagues,

It is a great pleasure to welcome you to the Second Annual Conference of the SISC – the Italian Society for Climate Sciences.

Twelve months have passed since our first annual event, and we meet again with renewed enthusiasm following in the wake of last year's lovely and fruitful experience. SISC aims to fill a void that was indeed begging to be filled: the attempt to build an interdisciplinary platform that is capable to devise methods, content and languages to allow intersectorial communication for all those interested, for different reasons and in different fields, in the topic of climate change.

The participation in this Second Annual Conference of people who have training and experience that traditionally are very distant from each other is showing that the SISC initiative has been welcomed positively by scientists, policy makers, entrepreneurs, and public opinion by the non-profit world and by the stakeholders who understand that knowledge of climate change is an issue that requires an integrated approach, a collaborative mix of skills, perspectives and knowledge.

The intense program for these two days is very demanding, but I am looking forward to spend two productive and satisfying days listening to recent achievements and scientific results. On behalf of SISC, I wish you all a pleasant experience at the Conference.

I would like to especially thank the Scientific Committee and the Organizing Committee who worked on the realization of this event, as well as Ca' Foscari University and the Ca' Foscari Foundation, which in addition to actively contributing to the realization of the Conference, are hosting us in this wonderful venue that has recently been restored.

A special thanks goes to the Ministry for the Environment, Land and Sea, the Veneto Region, the Province of Venice, the City of Venice, who have supported us, and to our partners Eni, IBM, Intel, Nvidia, DDN, and International Center on Climate Governance who have generously contributed and have collaborated to carry out this project.

Antonio Navarra

President of the Italian Society for Climate Sciences

A handwritten signature in black ink, appearing to read 'Antonio Navarra'.



Welcome to the SISC Second Annual Conference! We are getting ready for two days of work and meetings, which we are certain, will be challenging and productive for each of us. The multidisciplinary richness, the quality of research expressed in the works presented and this beautiful venue just opened after recent restoration, will contribute to making this conference a unique event for climate research.



The program presents opportunities to study various, concrete expressions of the principle that has inspired SISC since its establishment, and in other words, the goal to break down the traditional barriers that separate the scientific disciplines. The conference will be opened by Prof. Thomas Stocker, who will offer insights into the future of research starting from the publication of the Fifth Assessment Report of the IPCC, for which he is co-chair of the WGI. The parallel sessions are characterized by a wide range of topics. The presentations of papers and discussions will focus on advances in climate science, the strategies of mitigation and adaptation, and there will also be a focus on risk management, risk assessment, vulnerabilities and impacts. A special session will then be devoted to the latest generation of computer technology applied to research on climate change. At SISC Conference, the reflection on communication cannot be missed, an event which this year is dedicated to the dialogue between media experts and scientists in search of methods, tools and languages that help to convey the climatic data and the fruits of research in a comprehensible and appealing manner to a non-specialist audience. A space will also be dedicated to schools and to the divulgation of science.

The definition of the program and the organization of the conference have been realized thanks to the valuable contribution of many people we would like to thank: the members of the Scientific Committee, who worked to select the many proposals received, the Organizing Committee who oversaw all aspects of the program, and the authors of the works received who represent the scientific value of SISC.

Carlo Carraro // Simona Masina
Co-Chairs Scientific Committee SISC Annual Conference 2014



SISC at a glance

“From the integration of scientific disciplines,
research and innovation to face climate change”

The **Italian Society for Climate Sciences (SISC)** was created in 2013 to serve as a meeting point for scientists from different disciplines, who use climate information for their research: from climatologists to physicists and chemists, geographers to agronomists, economists to political scientists, and all scholars that deal with climate-related sciences and their applications.

SISC aims at contributing to scientific progress and innovation of climatic sciences in Italy by promoting the convergence of disciplines and multidisciplinary research.

The institutional purposes of SISC are:

To the world of research:

- to foster the exchange of ideas, the creativity and the development of new interdisciplinary research;
- to promote communication and cooperation between universities and research institutions in Italy, strengthening the presence of climatic sciences in both Italian universities as well as higher education systems;
- to attract young talents to build a new interdisciplinary scientific community and increase overall productivity;
- to stimulate and coordinate the Italian contributions to the International programs in the field of climate sciences;
- to become the reference point and the meeting place for Italian scientists living abroad.

To the society:

- to increase the impact of the studies and of the debate on climate issues, giving scientific rigor to the analysis of climate policies for mitigation and adaptation;
- to promote the dialogue among scientists, policy makers, businesses and citizens;
- to support actions in the interest of the society and the environment;
- to provide research results to institutions, businesses and citizens.

SISC's aims are pursued in particular through:

- the organization of conferences and debates addressed to the scientific and policy communities;
- the implementation of web-communications;
- the promotion of training courses for young graduates;
- collaboration with multidisciplinary doctoral courses on climate sciences.

The SISC association is non-profit and non-advocacy, acts according to ethical principles and promotes policies for equal opportunities.

GOVERNANCE

Antonio Navarra – President

Carlo Carraro - Vice-President

Donatella Spano – Elected President (in charge as President in 2015-16 period)

Simona Masina – Ordinary Member of the Executive Board

Riccardo Valentini – Ordinary Member of the Executive Board

Martina Marian – Secretary General / Ordinary Member of the Executive Board

Scientific Committee

Prof. Carlo Carraro (co-chair)

Ca' Foscari University of Venice / Fondazione Eni Enrico Mattei

Dr. Simona Masina (co-chair)

Istituto Nazionale di Geofisica e Vulcanologia / Euro-Mediterranean Center on Climate Change

Prof. Antonio Ballarin Denti

Fondazione Lombardia per l'Ambiente (FLA)

Prof. Francesco Bosello

Università Statale di Milano

Prof. Valentina Bosetti

Università Bocconi

Prof. Renato Casagrandi

Politecnico di Milano

Dr. Fabio Eboli

Fondazione Eni Enrico Mattei (FEEM)

Dr. Paola Faggian

RSE SpA – Ricerca sul Sistema Energetico

Dr. Riccardo Farneti

International Centre for Theoretical Physics (ICTP)

Prof. Marzio Galeotti

Università Statale di Milano

Prof. Alessandra Giannini

Columbia University

Dr. Silvio Gualdi

Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC)

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London School of Hygiene and Tropical Medicine

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Fondazione Lombardia per l'Ambiente

Dr. Emanuele Massetti

Georgia Institute of Technology

Dr. Renzo Mosetti

Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS)

Prof. Luciano Picarelli

Seconda Università degli Studi di Napoli

Dr. Guido Rianna

CIRA-Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC)

Dr. Guido Santini

Food and Agriculture Organization (FAO – NRL)

Dr.ssa Monia Santini

Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC)

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UKCIP, University of Oxford

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About the Conference

The **Second Annual Conference of the Italian Society for Climate Sciences**, entitled **Climate Change: Scenarios, Impacts and Policy**, aims to involve scientists, researchers and policy makers, whose activities are focused on different aspects of climate change, its impacts and related policies.

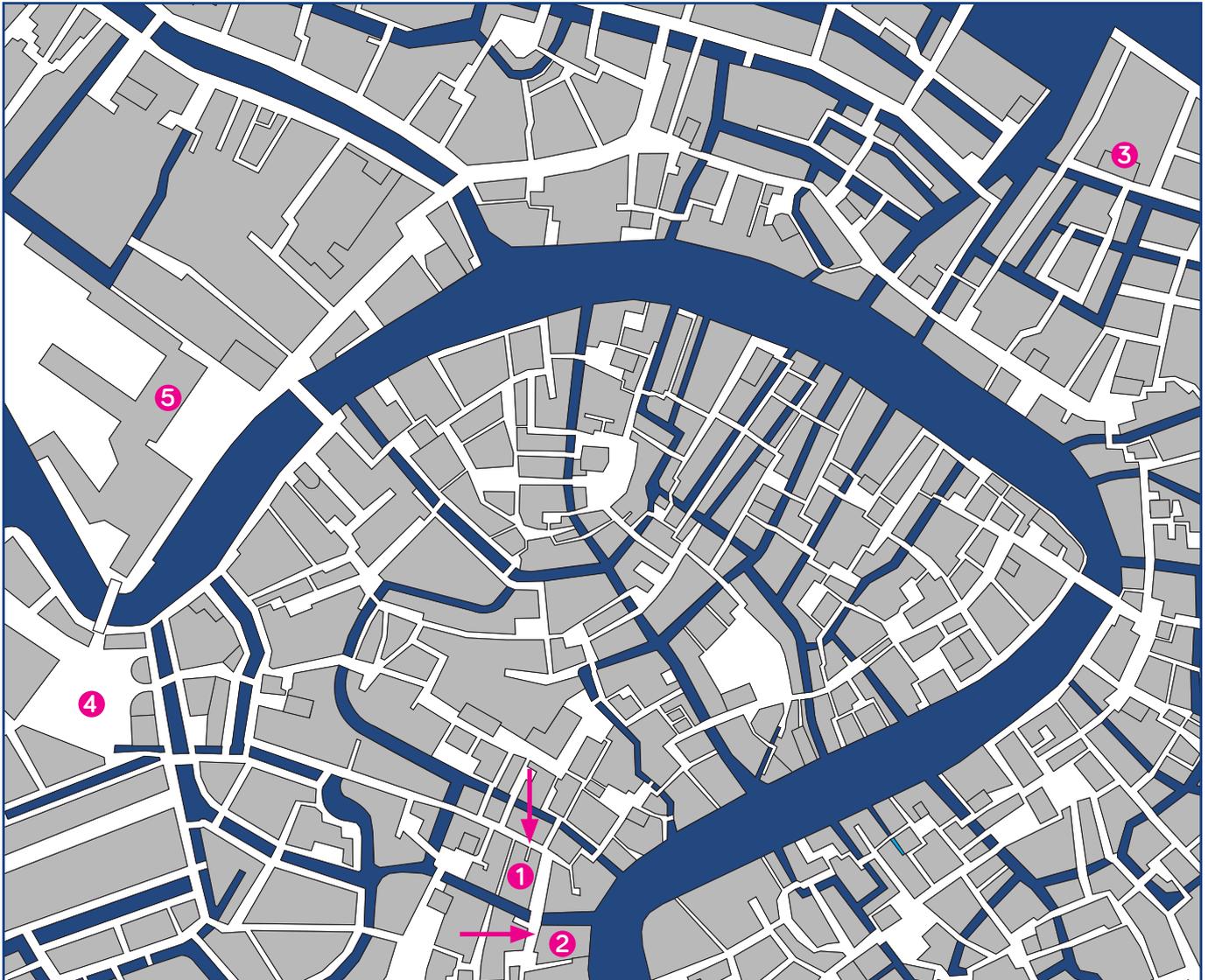
The Conference aims to:

- **Develop** a platform for sharing and discussing between the different disciplines that study climate dynamics and their interactions with the environment and society;
- **Promote** a constructive and transdisciplinary dialogue between scientists, policy makers, service providers and the general public;
- **Foster** scientific dialogue on mitigation policies and sustainable growth;
- **Deepen** the understanding of climate change impacts and the best adaptation strategies.

The program of the Conference includes plenaries, parallel sessions, a poster session and special events.

The scientific program of the Second Annual SISC Conference is enriched by events aimed at pointing out that the issues of climate research can be communicated to a more general and broader public and not only to the scientific community. Besides activities with schools, SISC will host a dialogue among climate scientists and media experts to understand how the vast and complex mine of scientific data can be translated into a language understandable and interesting to the public and policymakers.

Conference Venue and Points of Interest



- 1** Ca' Dolfin, Ca' Foscari University of Venice,
Dorsoduro, 3833, Venice
The venue of the Conference
- 2** Ca' Foscari University of Venice
Headquarters, Dorsoduro, 3246, Venice
Social Dinner, Monday, September 29, h. 20:30
- 3** Liceo Ginnasio Statale "Marco Foscarini"
Cannaregio 4942, Venice
Climate for Schools, Monday, September 29, h. 11:30
- 4** Piazzale Roma, Bus Terminal, Venice
- 5** Venice Train Station "S. Lucia"

Ca' Dolfin

A Venetian palace in the history of the Ca' Foscari University

With its white façade and peaceful gardens, Ca' Dolfin has finally been restored to its original beauty after the necessary restoration that has literally saved the building.

Ca' Dolfin was purchased by the Ca' Foscari University of Venice in 1955 and housed the University College of Ca' Foscari from 1961 to 1973. The main hall became the prestigious Assembly Hall of the University, hosting the ceremonial opening of the academic year, major conferences and important moments in the history of Ca' Foscari. The magnificent Assembly Hall was dedicated to the memory of Silvio Trentin, one of the most influential and important figures in the Venetian history of the twentieth century. He was a great academic from Ca' Foscari, the vanguard of regional policy and a brave opponent of the Fascist regime.

With its large and picturesque spaces, its ceilings and walls adorned with frescoes from the Tiepolo School, medallions with allegorical figures, Murano glass chandeliers and mirrors, the Assembly Hall is still the setting for events and official ceremonies of the university. On the ground floor, the three restored classrooms continue to host classes for the students, while the second and third floors contain various offices and services of the University.



Registration and Information

The Registration and Information Desk is located on the first floor of the Dolfin Palace. The Conference Secretariat will be pleased to provide the following services:

- General Conference information
- Your Conference registration
- Your personal username and password for Internet connection
- Transport and tourist information

The Registration and Information Desk will be open during the following times:

Monday, September 29: h. 08:00 – 19:30

Tuesday, September 30: h. 08:00 – 17:00

BADGES

The name badge issued to you upon registration is required for admission to the Conference.

Please make sure you wear it at all times.

INTERNET

All participants have access to wireless Internet connection within the entire Conference Venue.

Username, password and directions to activate Wi-Fi are included in your Conference bag.

COFFEE BREAKS AND LUNCHES

Coffee breaks and buffet lunches will be served in the garden at Ca' Dolfin. The portico on Calle Dolfin opens onto the long garden of Ca' Dolfin. The alternation of architectural elements with vegetation creates an orderly, pleasantly arranged space. The garden contains green plants and flowerbeds, marble benches, and a well dating to the seventeenth century.

Please see the Programme Overview for the daily coffee break and lunch schedule.

SOCIAL DINNER

The social dinner will take place in the elegant President's Reception Room on the piano nobile of the Giustinian de' Vescovi palace, which is on the south side of Ca' Foscari. One side of this large and well-lit hall, with a Venetian terrazzo floor and a Sansovino-style ceiling, overlooks the Gran Canal through a splendid multi-mullioned Gothic window with inverted arches. The room contains antique furnishings and window frames in solid walnut blend with modern style tables and armchairs. An elegant stone staircase supported by archways of successively decreasing height provides access to the Cortile Piccolo, distinguished by the presence of a perfectly preserved well.

Address: Ca' Foscari University of Venice, Dorsoduro, 3246, Venice

Dress Code: Business Casual

SISC would like to thank the Rector and the Ca' Foscari University of Venice for kindly hosting the social dinner in this magnificent location.

Presenters' guidelines

ORAL PRESENTATIONS

Oral presentations are organized by parallel sessions, as indicated in the program. The time available for each presentation in parallel sessions, including questions and general discussion, is 20 minutes. The working language of the Conference is English.

Since the oral presentations are not organized centrally, authors are kindly asked to upload their presentations directly in the respective lecture room at least 30 minutes before the start of the session time block. A lecture room assistant will be available to help with this.

Computer (MS Windows or Mac environment) and beamer will be available in each room for presentations. Please use either PowerPoint (.ppt or .pptx) or Portable Document Format (.pdf) for presentations. Presenters are requested to bring their presentation on a USB disk.

It is strictly prohibited to take photos and/or copies from notebooks of any scientific material without the expressed permission by the authors.

CHAIRS

Chairs are invited to come to the room 10 minutes prior to the start of the session. Their responsibilities are to introduce the session and the speakers, make sure that the time available is divided equally over the papers to be presented, and guide the discussion from the floor following the presentation.

POSTER SESSION

We recommend bringing a copy of the poster in the format cm. 70x100 – portrait (vertical orientation).

Poster should be set up upon presenters' arrival. The Conference Secretariat will provide all the necessary tools to hang the poster on the panel independently. A number will be assigned to each poster. The full list of posters and corresponding numbers will be available to all participants. Please, hang the poster on the board with the corresponding number.

Poster authors are required to stand next to their posters during the Poster Session (September 30, h. 12:00 – 14:00) in order to explain it to the interested public. The working language of the Conference is English.

Posters can be removed by the authors after the poster session.

Plenary Keynote Lecture



The Conference will open with the lecture

“Climate Change: Too late for 2°C?”

given by Prof. T. STOCKER, University of Bern, Switzerland – IPCC WGI co-chair

Monday, September 29, 2014 – h. 09.00

Anthropogenic climate change is “one of the greatest challenges of our time” as affirmed by the governments of the world. The latest comprehensive assessment “Climate Change 2013: The Physical Science Basis” by the Intergovernmental Panel on Climate Change (IPCC) documents a rapidly and profoundly changing Earth System and provides the latest understanding of changes ahead of us. The most important findings, approved by the governments are: (i) Warming of the climate system is unequivocal; (ii) Human influence on the climate system is clear; and (iii) Limiting climate change will require substantial and sustained reductions in greenhouse gas emissions. These scientific findings, in combination with the declared ambition to limit global mean warming to 2°C, create an urgency for decisions and actions.

Thomas Stocker

Thomas Stocker was born in Zürich and obtained a PhD in Natural Sciences of ETH Zürich in 1987. He held research positions at University College London, McGill University (Montreal), Columbia University (New York) and University of Hawai'i (Honolulu). Since 1993 he is Professor of Climate and Environmental Physics at the University of Bern. Thomas Stocker has authored or co-authored more than 180 peer-reviewed papers in the area of climate dynamics and paleoclimate modeling and reconstruction. Since 2008 he serves as Co-Chair of Working Group I of the UN Intergovernmental Panel on Climate Change (IPCC). Thomas Stocker was awarded a Dr. Honoris Causa of the University of Versailles (France) in 2006 and the Hans Oeschger Medal of the European Geosciences Union in 2009. In 2012 he was elected Fellow of the American Geophysical Union.

Parallel Sessions

Given the range and the vastness of the topics, the parallel sessions will offer the opportunity to provide space and attention to a significant number of presentations where participants can present their research and discuss it with those present. Parallel sessions at the Second Annual SISC Conference are grouped into four topics.

Under **Mitigation Policies & Strategies**, presenters will talk about climate change mitigation strategies, low carbon finance, energy technologies and policies, air quality and carbon reduction policies, and market mechanisms.

The **Advances in Climate Science** sessions will host presentations on climate variability & climate change, GHG & solar variability, management and analysis of climate data and data analysis & modelling in Italy.

Papers presented under the **Vulnerability, Risk Assessment and Adaptation to Climate Change** sessions will address the economic value of adaptation policies and strategies, as well as themes related to risk assessment and water management.

The **Impacts & Implications of Climate Change** sessions will host presentations on methods for assessment/quantification of climate change impacts, and will also address hydrological risk and impacts of climate change on energy, health, cultural heritage, ecosystems, food and agriculture.

Scientific program / Parallel sessions

Monday, September 29, 2014 / h. 10.00 – 11.30

	Parallel sessions MITIGATION POLICIES & STRATEGIES Climate change mitigation strategies Chair: G. Galluccio, CMCC ROOM Silvio Trentin - first floor	Parallel sessions ADVANCES IN CLIMATE SCIENCE Climate variability & climate change I Chair: A. Pasini, CNR ROOM A - ground floor	Parallel sessions VULNERABILITY, RISK ASSESSMENT and ADAPTATION TO CLIMATE CHANGE Economic value of adaptation strategies Chair: R. Cervigni, World Bank ROOM B - ground floor
10.00 10.20	Mitigating GHG emissions in subnational contexts: the case of the city of Rio de Janeiro E. La Rovere (Federal University of Rio de Janeiro)	A simple explanation for climate variations in the Sahel A. Giannini (IRI)	Climate change impacts and market driven adaptation. The costs of inaction including market rigidities F. Bosello (FEEM)
10.20 10.40	Sharing of climate risks across macro regions J. Emmerling (FEEM)	Projected daily precipitation characteristics change in the early 21 st century in Southern Africa I. Diallo (ICTP)	Adapting natural capital: cost-benefit challenges and indicative net present values D. Moran (SRUC)
10.40 11.00	Anthropic emissions of greenhouse gas (GHG) and reference for mitigation policy of emissions in Mato Grosso (Brazil) M.D. de Jesus Texeira (University of Brasilia)	Linking South Asian summer monsoon and Eastern Mediterranean climate in CMIP5 simulations: performance and 21 st century projections A. Cherchi (CMCC)	The value of protecting Venice from the acqua alta phenomenon under different local sea level rises F. Fontini (University of Padova)
11.00 11.20	CO ₂ emissions by a university campus: assessment, uncertainties and reduction strategies S. Scolieri (Politecnico Milano)	A zonal view of atmospheric heat transport variability G. Messori (Stockholm University)	A Choice Experiment application for valuing adaptation of river services to climate change D. Andreopoulos (Free University of Bolzano)
11.20 11.30	Discussion	Discussion	Discussion
11.30 12.00	Coffee Break		

Scientific program / Parallel sessions

Monday, September 29, 2014 / h. 12.00 – 13.30

	Parallel sessions MITIGATION POLICIES & STRATEGIES Low carbon finance Chair: B. Pozzo, University of Insubria ROOM Silvio Trentin - first floor	Parallel sessions ADVANCES IN CLIMATE SCIENCE Climate variability & climate change II Chair: S. Gualdi, CMCC ROOM A - ground floor	Parallel sessions VULNERABILITY, RISK ASSESSMENT and ADAPTATION TO CLIMATE CHANGE Risk assessment Chair: I. Portoghesi, IRSA -CNR ROOM B - ground floor
12.00 12.20	The role of Public-Private Partnerships (PPPs) in scaling up financial flows in the post-Kyoto regime G. Galluccio (CMCC)	Turbulence regimes deduced from the analysis of observed and modeled global ocean data V. Artale (ENEA)	Developing climate risk and adaptation services in coastal zones: an integrated bottom-up approach applied in the North Adriatic coast S. Torresan (CMCC)
12.20 12.40	The landscape of public climate finance in Indonesia A. Falconer (Ca' Foscari University, CPI)	Storm classification for Tyrrhenian Sea and wave conditions changes over last thirty years F. Paladini de Mendoza (University of Tuscia)	Changing meso level response to extreme climate events in Viet Nam I. Christoplos (Danish Institute for International Studies)
12.40 13.00	Public-private partnerships in green energy infrastructure investments I. Alloisio (FEEM)	Regional climate simulations with COSMO-CLM over the Mediterranean area P. Mercogliano (CMCC)	Assessing the impacts of climate change on marine water quality through a spatially resolved risk assessment approach: the North Adriatic sea (Italy) as case study A. Critto (Ca' Foscari University)
13.00 13.20	The role of public finance in CSP: lessons from the ups and downs of CSP policies in Spain G. Frisari (Ca' Foscari University)	Tropical cyclone rainfall changes in response to a warmer climate and increased CO ₂ E. Scoccimarro (CMCC)	Discussion
13.20 13.30	Discussion	Discussion	
13.30 14.30	Lunch		

Scientific program / Parallel sessions

Monday, September 29, 2014 / h. 14.30 – 16.00

	Parallel sessions MITIGATION POLICIES & STRATEGIES Energy technologies and policies Chair: S. Caserini, PoliMi ROOM Silvio Trentin - first floor	Parallel sessions ADVANCES IN CLIMATE SCIENCE GHG & solar variability: past and future Chair: V. Artale, ENEA ROOM A - ground floor	Parallel sessions IMPACTS & IMPLICATIONS OF CLIMATE CHANGE Methods for assessment/quantification of climate change impacts Chair: A. Critto, Ca' Foscari University ROOM B - ground floor
14.30 14.50	Climate change mitigation and energy technology costs: a multi-model sensitivity analysis G. Marangoni (FEEM)	Influence of forcings and variability on recent global temperature behavior. A neural network analysis A. Pasini (CNR)	Fire in ice and sediments: looking for early human impacts P. Zennaro (CNR - IDPA)
14.50 15.10	Distributional impact of reducing fossil fuel subsidies in Indonesia L. Campagnolo (FEEM)	Impact of greenhouse gases and insolation on the threshold of glacial inception F. Colleoni (CMCC)	Could temperature affect the geospeciation of trace elements in sediments? LATECC Project (Lagoon, TEmpperature and Chemical Contamination) in the Venice Lagoon F. Corami (Ca' Foscari University)
15.10 15.30	Banning non-conventional oil extraction: would a unilateral move of the EU really work? S. Carrara (FEEM)	Past and future solar radiation variability and change over Sicily V. Manara (University of Milan)	The impacts of a changing climate on the human environment G.C. Ruggeri (Lega Navale Italiana)
15.30 15.50	Oil market and long-term scenarios: a nash-cournot approach F. Sferra (CMCC)	Top down emission estimates of radiatively active F-gases vs bottom up inventories M. Maione (University of Urbino)	Assessing the economic general equilibrium effects of sea level rise in the Italian Regions G. Standardi (CMCC)
15.50 16.00	Discussion	Discussion	Discussion
16.00 16.30	Coffee Break		

Scientific program / Parallel sessions

Monday, September 29, 2014 / h. 16.30 – 18.00

	Parallel sessions VULNERABILITY, RISK ASSESSMENT and ADAPTATION TO CLIMATE CHANGE Adaptation policies and strategies Chair: M. Lapi, FLA ROOM Silvio Trentin - first floor	Parallel sessions ADVANCES IN CLIMATE SCIENCE Climate data: management & analysis Chair: A. Giannini, IRI ROOM A - ground floor	Parallel sessions IMPACTS & IMPLICATIONS OF CLIMATE CHANGE Hydrological Risk Chair: P. Faggian, RSE SpA ROOM B - ground floor
16.30 16.50	Do political systems matter? Differences and similarities in institutional settings that support national adaptation strategies across european states S. Venturini (Climalia)	The contribution of the homogenization in the extreme precipitation events F. Acquavota (University of Turin)	Assessing indirect expected annual loss of flooding in Italy under current and future climate L. Carrera (CMCC)
16.50 17.10	A national adaptation strategy to climate change in Italy: can the right stakeholders be engaged? M. Davide (FEEM/CMCC)	CLIME: analysing climate data in GIS environment L. Cattaneo (CMCC)	Climate change effects on seawall stability H. Mase (Kyoto University)
17.10 17.30	A methodological approach for stakeholder engagement at regional level in Climate Change Adaptation Policies J. Terradez Mas/A. Ballarin (Fondazione Lombardia Ambiente)	The Ophidia framework: toward big data analytics for climate change A. D'Anca (CMCC)	Delta change variations in extreme values of precipitation for the next century in Central Campania G. Rianna (CMCC)
17.30 17.50	Adapting to climate change: Bologna as resilient city P. Pelizzaro (Kyoto Club)	Levels and particle size distribution of water-soluble organic compounds in the Antarctic particulate matter R. Zangrando (CNR)	Climate change impacts on the flow regime of snow-dominated rivers: case study in Lebanon I. Portoghese (CNR)
17.50 18.00	Discussion	Discussion	Discussion
18.00 19.30	Treasure hunt in the mine of data Innovation, knowledge and climate communication ROOM Silvio Trentin - first floor - Plenary session, in Italian		
20.30	Social Dinner		

Scientific program / Parallel sessions

Tuesday, September 30, 2014 / h. 08.30 - 10.20

	Parallel sessions MITIGATION POLICIES AND STRATEGIES Air quality and carbon reduction policies Chair: E. La Rovere, University of Rio de Janeiro ROOM Silvio Trentin - first floor	Parallel sessions IMPACTS & IMPLICATIONS OF CLIMATE CHANGE Impacts on energy, health and cultural heritage Chair: F. Bosello, FEEM/CMCC/UNICATT ROOM A - ground floor	Parallel sessions ADVANCES IN CLIMATE SCIENCE Data analysis & modelling over Italy Chair: E. Scoccimarro, CMCC ROOM B - ground floor
08.30 08.50	Can Nigeria pursue low carbon development? R. Cervigni (World Bank)	Results of the EU Project Climate for Culture: future climate-induced risks to historic buildings and their interiors D. Camuffo (ISAC-CNR)	Extreme events in a warmer climate over Mediterranean basin with focus over Italy P. Faggian (RSE SpA)
08.50 09.10	Synergies and interactions between climate change policies and air pollution control strategies - Results of the WITCH integrated assessment mode L. Aleluia da Silva Reis (FEEM)	Nature-based urban planning: a framework to assess the impact of green infrastructure design on ecosystem services ameliorating climate change L. Zardo (University of Trento)	Evaluating the effects of changes in observational sites position and surrounding urbanisation on the historical temperature time series of the city of Trento in the Alps L. Giovannini (University of Trento)
09.10 09.30	Design, process, and performance criteria provide structure to climate policy A. Verbruggen (University of Antwerp)	Future impacts of climate change on sectoral electricity demand E. De Cian (FEEM)	High resolution hindcast simulations over Italy with COSMO-CLM model P. Mercogliano (CMCC)
09.30 09.50	Mirages in climate policy evaluation: how model assumptions may drive policy costs M. Michetti (CMCC)	A preliminary approach to estimate the impact of climate change on electricity demand in Italy M. Maugeri (University of Milan)	Carbon flux and climate change on Capo Caccia karst ecosystem (Sardinia, Italy) L. Sanna (CNR)
09.50 10.10	Selection of carbon budgets under current knowledge of uncertainties L. Drouet (CMCC)	Impact of climate change on historic architectural surfaces of the Venetian area E. Zendri (Ca' Foscari University)	Discussion
10.10 10.20	Discussion	Discussion	
10.20 10.50	Coffee Break		

Scientific program / Parallel sessions

Tuesday, September 30, 2014 / 10.50 - 12.20

	Parallel sessions MITIGATION POLICIES AND STRATEGIES Old and new market mechanisms Chair: S. Castellari, CMCC-INGV ROOM Silvio Trentin - first floor	Parallel sessions IMPACTS & IMPLICATIONS OF CLIMATE CHANGE Impacts on ecosystems, food and agriculture Chair: E. De Cian, FEEM ROOM A - ground floor	Parallel sessions VULNERABILITY, RISK ASSESSMENT and ADAPTATION TO CLIMATE CHANGE Water Management Chair: A. Marcomini, CMCC - Ca' Foscari University ROOM B - ground floor
10.50 11.10	Impacts of tradable emission allowances on investment and economic growth C-H. Huang (Taiwan Research Institute)	Fires in the perspective of future changes: the contribute of CMCC to FUME Project V. Bacciu (CMCC - University of Sassari)	Experience in water modelling in agriculture considering climate and policy change G. M. Bazzani (CNR)
11.10 11.30	Climate changes: liability and insurability of risks in various legislative and institutional settings in light of the latest scientific knowledge B. Pozzo (University of Insubria)	Vulnerability of the Northern Adriatic sea fishery to climate change A. Caccin (Ca' Foscari University)	Water security issue in the Caribbean Windward Islands M. Amadio (FEEM/CMCC)
11.30 11.50	Community managed forest groups and preferences for REDD+ contract attributes: a choice experiment survey of communities in Nepal P. Jha (Ca' Foscari University)	Assessing multiple climate change impacts in coastal zones: the North Adriatic case study (Italy) S. Torresan (CMCC)	The water abstraction licence regime in Italy: a case for reform? S. Santato (CMCC)
11.50 12.10	Loss & damage: a critical discourse analysis E. Calliari (FEEM)	Discussion	Discussion
12.10 12.20	Discussion		
12.00 14.00	Poster Session		
13.00 14.00	Lunch		
14.00 15.30	Special Session on HPC solutions for Climate Sciences Leading innovations and technologies in High Performance Computing presented to climate scientists ROOM A - ground floor		
15.30 15.45	Award Ceremony ROOM Silvio Trentin - first floor		
15.45 17.00	SISC General Assembly ROOM Silvio Trentin - first floor		

Scientific program / Poster Session

Tuesday, September 30, 2014 / 12.00 - 14.00

IMPACTS & IMPLICATIONS OF CLIMATE CHANGE	VULNERABILITY, RISK ASSESSMENT and ADAPTATION TO CLIMATE CHANGE	ADVANCES IN CLIMATE SCIENCE
<p>Forecasting bioclimatical trends from recent times until the end of the twenty-first century in Andalusia (South of Spain)</p> <p>J. Lopez-Tirado (University of Huelva)</p>	<p>Forest management in water protection areas under climate change</p> <p>H. Siegel (BMLFUW)</p>	<p>Global scale energy budget variations in the outputs of the ERA-20CM experiment</p> <p>P. Lionello (CMCC, University of Salento)</p>
<p>Projections of changes in livestock production in the Republic of Moldova according to an ensemble from 10 GCMs for SRES A2, A1B and B1 emission scenarios in the XXI century</p> <p>L. Taranu (Ministry of Environment, Republic of Moldova)</p>	<p>An online platform for supporting the analysis of water adaptation measures in the Alps</p> <p>C. Giupponi (CMCC)</p>	<p>Climate models performance optimization through min-apps</p> <p>S. Mocavero (CMCC)</p>
<p>Investigation on the reference evapotranspiration distribution at regional scale by alternative methods to compute the Fao Penman-Monteith equation</p> <p>S. Marras (CMCC, University of Sassari)</p>	<p>Statistical downscaling method applied for a future climate profile at local level. Bologna case study as resilient city</p> <p>R. Tomozeiu (ARPA)</p>	<p>The response of the mean meridional circulation to global warming and its relationship with precipitation</p> <p>P. Lionello (CMCC, University of Salento)</p>
<p>Spatiotemporal changes in wildfire patterns in Sardinia</p> <p>V. Bacciu (CMCC, University of Sassari)</p>	<p>Risk assessment on coastal environments under climate change: Southern Brazil</p> <p>S. Figueiredo (Universidade Federal do Rio Grande)</p>	<p>Downscaled temperature scenarios for 5 sites in the Basilicata region</p> <p>A. Pasini (CNR)</p>
<p>Using regional climate models for food-security scenarios in Africa</p> <p>S. Calmanti (ENEA)</p>		<p>An uncertainty monster: advances in addressing model uncertainty</p> <p>M. Mistry (Ca' Foscari University)</p>

Special Session

HPC solutions for Climate Sciences

Leading innovations and technologies in High Performance Computing presented to climate scientists

Tuesday, September 30, 2014 - h. 14.00 - 15.30
Room A - ground floor



Climatology and environmental science need a continuous improvement on computational capabilities and data analysis to simulate ever more accurately trends on climate change.

The session will give an overview on recent progresses and future trends on IT technology and the related impact on HPC solutions.

Four technology vendors DDN, IBM, Intel, NVIDIA, have been invited to report about their vision on HPC trends and the way the technology can support future developments on climatology science.

Award Ceremony

The Italian Society for Climate Sciences aims to encourage and promote the involvement of young researchers to contribute to the advancement of scientific research.

To this end, during the Annual SISC Conference, an author under 40 will be awarded for a paper that, among all the works presented, will be deemed particularly worthy in the opinion of the Scientific Committee.

The Award Ceremony will take place in the last plenary session of the Conference, September 30, 2014 -h. 15.30, Room Silvio Trentin, first floor

Media Session

TREASURE HUNT IN THE MINE OF DATA

Innovation, knowledge and climate communication

Monday, September 29, 2014, h. 18:00

Room Silvio Trentin, First Floor

*The event will be held in Italian

There is a mine of information; a rich reservoir of possibilities for science, society, and economic activities whose development has to do with the conditions of the present and future climate. These data and information can greatly enrich the work of administrators called to plan the management of the territory, as well as the knowledge of those working to deal with, prevent, and avoid the negative effects brought by the intensity and frequency of weather events which, until recently, we were not accustomed to.

It's a mine of information that affects all people who want to know the risks and opportunities related to climate change.

It's a living reservoir, which grows and is continually refined thanks to the collaboration between **the climate sciences** - whose research produces models, simulations, and scenarios to analyze the future climate - and the **supercomputer and technological innovation**, increasingly sophisticated, powerful and innovative scale computers, which are capable of processing vast amounts of data faster than ever before. The evolution of supercomputers brings to science the opportunity to carry out frontier research and to produce increasingly detailed information on climate change and its interactions with the environment, economic activities, and people's health.

But there is a problem concerning the language: how do we translate this information into a language that is understandable to a diverse group of recipients? How do we find a way to describe the main contents of this vast and complex mine of data in order to make them understandable and interesting to the public and to those who have an interest to learn more about the climate?

We look for the answer to these questions through a dialogue between scientists and the media: both are called to face this challenge from which they cannot back away. We'll talk about these issues and attempt to display the climate data in innovative ways (such as Lancelot, the web application designed to provide an interactive, dynamic and integrated visualization of climate data on maps for a vast and differentiated audience, and Climate Policy Observer, the new ICCG web portal on climate and energy policies) and we'll discuss how it is possible to identify new languages, inhabiting the media- from TV to web, from print media to videogames - which are potentially capable of opening the enormous door and invaluable reservoir of information on climate.

Speakers:

Stefano Caserini - Politecnico di Milano / Climalteranti

Silvio Gualdi - Euro-Mediterranean Center on Climate Change (CMCC)

Loris Mazzetti - Rai3, Che Tempo che fa

Luca Mercalli - Società Meteorologica Italiana / FIMA

Valerio Gualerzi - Repubblica

Fabio Viola - DigitalFun

Aurora D'Aprile - International Center for Climate Governance (ICCG)

Enrica De Cian - Fondazione Eni Enrico Mattei (FEEM)

Climate for schools

SISC has expanded its program by involving high school students in two activities developed to introduce them to the world of climate science. Both activities are addressed to senior class students of the selected schools in the organizational phase of the SISC Conference.

CLIMATE CHANGE: SCENARIOS, IMPACTS AND POLICIES

Introductory lecture at the Second Annual SISC Conference

Prof. Andrea Gambaro, Department of Environmental Sciences, Computer Science and Statistics

Monday, September 29, 2014, h. 09:00

Ca' Foscari University of Venice - Aula Baratto

A few years ago, when the longest paleoclimatic reconstruction ever carried out through the study of polar ice cores, the prestigious scientific journal, Nature, commented on the article by renaming it The Day Before Yesterday. In fact, the film The Day After Tomorrow had recently been released, which describes the effects of climate change in a rather catastrophic manner. However, if we want to put the ongoing climate change into perspective and properly develop forecasting models that help us understand what the possible future scenarios might be, it is essential to understand the natural mechanisms that govern climate processes. Unfortunately climatologists do not have access to direct information on the climate of the past, so they try to rebuild it indirectly through chemical and physical traces left in some climatic and environmental archives such as marine and lake sediments and polar ice. These reconstructions are very complex and it is difficult to interpret them. However, reconstructions of past climates are based on these archives that lead us to discover some interesting information on how the climate has changed over the past centuries. Regarding the studies on the current climate change, the international scientific community in recent years has devoted increasing attention to the study of atmospheric aerosol because of its importance on human health and its influence exerted on "global change". In fact, aerosol both directly and indirectly influences the climate. Therefore, recent studies on atmospheric aerosols as well as on the climate and environmental archives will be presented.

VISIT THE MUSEUM OF SCIENCE

Antonio Maria Traversi Museum of Physics

Monday, September 29, 2014, 11:30

Liceo Classico Marco Foscarini
Cannaregio, 4942 - 30131 Venezia

The measurement of physical characteristics is the basis of applied sciences. At the Traversi Museum collection, students will be able to see the historic equipment, which was used to study the Earth's atmosphere, and to measure the pressure, temperature and humidity of the air. Some of this equipment works in the same way as their modern equivalents.



SECOND ANNUAL CONFERENCE
Venice, September 29-30, 2014

Climate change: scenarios, impacts and policy
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