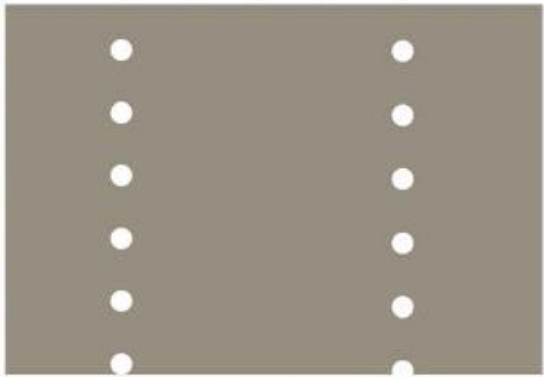


Symposium "Climate Change and Natural Hazards: coping with and managing hazards in the context of a changing climate"

University of Padua, Italy
25th-26th February 2019



PROGRAMME

Symposium on

"Climate Change and Natural Hazards: Coping with and managing hazards in the context of a changing climate"

Padova, Italy, 25th-26th February 2019

Location: the event will be held at the *Università degli Studi di Padova* - Palazzo Bo - Via 8 Febbraio 1848, 2 - 35122 - Padova. Oral presentations will be held in the following two halls: Archivio Antico and Ippolito Nievo. Posters will be displayed on Sala delle Colonne.

Monday 25th February 2019

Room: Archivio Antico

08:00- 09:20- Arrival and Registration

09:20-09:30- Welcome by Prof. Raffaele Cavalli, Dean of TESAF Department

09:30-09:40- Aims of the Symposium (Walter Leal, Marco Borga)

Plenary Presentations I

-Chairperson: Walter Leal, Germany

09:40-10:00 – **Storm VAIA 2018 in Veneto: impact on forests. Challenges and opportunities**

Emanuele Lingua, Stefano Grigolato, Francesco Pirotti, University of Padova, Italy

10:00-10:20- **Effects of climatic and environmental changes on landslides: progresses and perspectives**

Stefano Luigi Gariano and Fausto Guzzetti, Consiglio Nazionale delle Ricerche, Perugia, Italy

10:20-10:40- **Flash-Floods: More often, More severe, More damaging? An Analysis of Hydro-Geo-Environmental Conditions and Anthropogenic Impacts**

Axel Bronstert, Irene Crisologo, Maik Heistermann, Ugur Ozturk, Kristin Vogel, Dadiyorto Wendi, University of Potsdam, Germany

10:40-11:00 – Discussion

11:00-11:30- Break

11:30- 13:00- Parallel sessions

Session 1 - Hazard assessment and risks modeling (Room: Archivio Antico)

-Chairperson: Axel Bronstert, Germany

11:30-11:45- Hydro-meteorological analysis of an extreme flash flood: The 28 September 2012 event in Murcia, southeastern Spain

Arnau Amengual, Marco Borga and Stefano Crema, Universitat de les Illes Balears, Spain.

17:15-17:30- Lightning activity in the Central Mediterranean Sea in the 1998-2018 period: is there a trend?

Guido Paliaga, Carlo Donadio, Marina Bernardi, Francesco Faccini, CNR IRPI Research Institute for Geo-Hydrological Protection, Italy.

12:00-12:15- Frequency analysis of hydro-meteorological extremes emerging from multiple nonstationary underlying processes

Francesco Marra, Davide Zoccatelli, Moshe Armon, Efrat Morin, Hebrew University of Jerusalem, Israel

12:15-12:30- Increment of stony debris flow events on the Boite Valley (Venetian Dolomites, Northeastern Italian Alps) and characterization of the extreme rainfalls triggering them

Gregoretti C., M. Bernard, M. Berti, M. Boreggio, S. Lanzoni and A. Simoni, University of Padova, Italy

12:30-12:45- Occurrence and Characteristics of Flash Floods in Bavaria (Germany)

Maria Kaiser, Marco Borga, Markus Disse, Technical University of Munich, Germany

12:45-13:00- Exploring the extremal characteristics of flash flood regimes: envelope curves for peak floods, rainfall intensity and runoff volumes

William Amponsah, Lorenzo Marchi, Francesco Marra, H  l  ne Roux, Isabelle Braud, Kwame Nkrumah University of Science and Technology, Ghana

13:00-14:00- Lunch

Session 2- Impacts of hazards to biodiversity, terrestrial and inland ecosystems, and ecosystem services (Room: Ippolito Nievo)

-Chairperson: Marco Borga, Italy

11:30-11:45- Spatio-temporal assessment of vineyards affected by extreme weather events

Alessia Cogato, Massimiliano De Antoni Migliorati, Francesco Marinello, Vinay Pagay, Franco Meggio, Peter Grace, University of Padova, Italy

11:45-12:00- Impact of drought variability on remote sensing vegetation activity in Spain: a high spatial resolution analysis from 1981 to 2015

Sergio M. Vicente-Serrano, Cesar Azorin-Molina, Marina Pe  a-Gallardo, Miquel Tomas-Burguera, Fernando Dom  nguez-Castro, Natalia Mart  n-Hern  ndez, Santiago Beguer  a, Ahmed El Kenawy, Iv  n Noguera and M  nica Garc  a, Spanish National Research Council (IPE-CSIC), Spain

12:00-12:15- **Effects of Extreme Rainfall on Debris Transportation by Debris Flow in Taiwan**

Meei-Ling, Lin and Te-Wei, Chen, National Taiwan University, Taiwan

12:15- 12:30- **Effects of land cover and climate change on slope mass-wasting at different scales. Preliminary results from a multidisciplinary project in the Pyrenees (Spain)**

Raül Oorthuis , Marcel Hürlimann, Heping Shu, Carol Puig, Alessandro Fraccica, Jose Moya, Jean Vaunat, Antonio Lloret, Marta González, Jordi Pinyol, UPC BarcelonaTECH, Barcelona, Spain

12:30-12:45- **Time series analysis of wetlands by using multitemporal satellite data**

Nebiye Musaoglu, Adalet Dervisoglu, Baha Bilgilioglu, Nur Yagmur, Aylin Tuzcu and Aysegul Tanik, Istanbul Technical University, Turkey

12:45-13:00- **Mapping of water-related ecosystem services in river deltas: the case of the Po River Delta region (Northern Italy)**

Secco L., M. Masiero, D. Zoccatelli, G. Caramuta, L. Mosca, University of Padova, Italy

13:00-14:00- Lunch

Plenary Presentations II

-Chairperson: Marco Borga, Italy

14:00-14:20- **Distributional effects of EU Flood Risk Management and the Law. The Netherlands, Flanders and France as case studies**

W.J. van Doorn-Hoekveld, Utrecht University, The Netherlands

14:20-14:40- **Changes in risk perception over time: Longitudinal Evidence in the North-Eastern Italian Alps**

Elena Mondino, Frederike Albrecht, Johanna Mård, Anna Scolobig, Marco Borga, Giuliano Di Baldassarre, Uppsala University & Centre of Natural Hazards and Disaster Sciences, Sweden

14:40-15:00- **Tackling the dynamics of Global Change in vulnerability assessment – examples from buildings exposed to dynamic flooding**

Sven Fuchs, Margreth Keiler and Maria Papathoma-Köhle, University of Natural Resources and Life Sciences, Austria.

15:00-15:30 Discussion

15:30-16:00- Break

16:00-17:45- Parallel Sessions

17:45-19:00- Reception and informal talks

Session 3- Hazard prevention, control and hazard management measures (Room: Archivio Antico)

-Chairperson: Sven Fuchs, Switzerland

16:00-16:15- Beyond Extreme Value Theory: Lessons Learned for Changing Rainfall and Hurricane Extremes

Marco Marani, Enrico Zorzetto, Arianna Miniussi, Seyed Reza Hosseini, and Marco Scaioni, University of Padova, Italy

16:15-16:30- EOPEN Project: A new interoperable open platform for the analysis of earth observation data (EO data) to support flood risk management.

Daniele Norbiato, Martina Monego, Giovanni Tomei, Francesco Zaffanella, Francesca Lombardo, Michele Ferri, Autorità di bacino Distrettuale delle Alpi orientali, Italy

16:30-16:45- Landslide hazard induced by climate changes in North-Eastern Romania

Mihai Niculita, Alexandru Ioan Cuza University of Iasi, Romania

16:45-17:00- Coping with conflicts - new challenges and strategic solutions

Alexandra Jiricka-Pürerer, Thomas F. Wachter, University of Natural Resources and Life Sciences, Austria.

17:00-17:15- Adjustment of warning threshold for landslide with increasing rainfall intensity – a case study in central Taiwan

Kuo-Lung Wang, National Chi Nan University, Taiwan

17:15-17:30- Chennai city and coastal hazards: Addressing community-based adaptation through the lens of climate change and sea-level rise

A.Saleem Khan, Sabuj Kumar Mandal and Sudhir Chella Rajan, Indian Institute of Technology Madras (IITM), India

17:45-19:00- Reception and informal talks

Session 4- Information, communication, training on risk management

Room: Ippolito Nievo

-Chairperson: Mattia Zaramella, Italy

16:00-16:15- Enhancing flash flood risk perception and awareness of mitigation actions through risk communication: A pre-post survey design

J.M. Bodoque; A. Díez-Herrero; M. Amérigo, J.A. García; J. Olcina, University of Castilla-La Mancha, Spain

16:15-16:30- Risk perception of stakeholders regarding the natural hazards induced by climate change.

Mihai Niculita, Mihai Ciprian Margarint, Giulia Roder, Paolo Tarolli, Alexandru Ioan Cuza University of Iasi, Romania

16:30-16:45- Establishing Crises Decision and Early Warning System for Meteorological Hazard Management in Kuwait

Abdullah Alenezi, Kuwait Institute for Scientific Research, Kuwait

16:45-17:00- Art in the face of natural disaster: the role of creativity in times of radical environmental changes

Marco Cestarolli, OrtiKa - Design with and for biodiversity Collective, Italy

17:00-17:15- Adaptation capacities in developing countries: Taking Stock and the Way Forward

Sunil Tankha, Institute of Social Studies, Erasmus University Rotterdam, Netherlands

17:15-17:30- Needs and challenges for an operational hydro-meteorological forecasting system in a changing climate

Roberto Dinale, Stefan Ghetta, Luca Maraldo, Mattia Zaramella and Carlo Toffolon, Protezione Civile Provincia Autonoma Bolzano, Italy

17:30 - 17:45- Flash Flood Scenarios for Alpine Valleys: Consequences for Adaptation

Florian Ortner, Vincent Heß, Silke Lutzmann and Oliver Sass, University of Graz, Austria

17:45-19:00- Reception and informal talks

Tuesday 26th February 2019

Room: Archivio Antico

Plenary Presentations III

-Chairperson: Paolo Tarolli, Italy

09:00-09:30- Summary of the first day

09.30-09:50- **The Ethics of Resilience and Adaptation to Climate Change**

Keith Hyams, University of Warwick, UK

09:50-10:10- **Communication and anticipation of flood risk at community level: innovative aspects of the LIFE project FRANCA**

Rocco Scolozzi, Roberto Poli, Stefano Fait, Daniele Rossi, University of Trento, Italy

10:10-10:30- **Development of an evaluation method for the IRIP method, mapping susceptibility to surface runoff, using proxy data: application to an 80 km railway using a runoff impact data base**

Isabelle Braud, Lilly-Rose Lagadec, Loïc Moulin, Pascal Breil, Blandine Chazelle, Etienne Leblois, IRSTEA-Lyon, France

10:30-10:45 - Discussion

10:45-11:00- Break

11:00- 12:45- Parallel sessions

Session 5- Vulnerability assessment and risks modelling

Room: Archivio Antico

-Chairperson: Isabelle Braud, France

11:00-11:15- **Nomadic Herders in Mongolia: Climate Change Risk Perceptions and Behavioral Adaptation**

David N. Sattler, Boldsuren Bishkhorloo, James Graham and Brett Muskavage, Western Washington University, Bellingham, Washington, USA

11:15-11:30- **Climate Change-Induced Migration and Its Implication for Sustainable Development: Case of Lake Chad and Lagos Mega-city Sub-Regions, Nigeria**

Tai Oyekan, University of Ibadan, Nigeria

11:30-11:45- **Effects of different types of agricultural practices on the stability of slope vineyards**

C. Meisina, M. Bordoni, A. Vercesi, C. Ganimede, M. Maerker, M.C. Reguzzi, Mazzoni E., E. Capelli, S. Simoni, University of Pavia, Italy

11:45-12:00- **Climate change, extreme events and forests: multifaceted and multidisciplinary measures for coping with complex threats.**

M. Masiero, L. Secco, Univ. of Padova, Italy

12:00-12:15- **Anthropic fingerprints on Earth surface: abandoned lakes in Northeastern Romania.** *Mihai Ciprian Margarint, Mihai Niculita, Paolo Tarolli*, Alexandru Ioan Cuza University of Iasi, Romania.

12:15-12:30- **Effects of climate change on the morphological stability of the Mediterranean coasts: consequences to tourism**
Federica Rizzetto, Istituto di Scienze Marine (ISMAR), Italy

12:30-12:45- **Flood properties in arid areas: observations and modelling**
Davide Zocatelli, The Hebrew University of Jerusalem, Israel

12:45-14:00- Lunch

Session 6- Hazard prevention, control and hazard management measures

Room: Ippolito Nievo

-Chairperson: Elena Mondino, Sweden

11:00-11:15- **Protection forests to mitigate rockfall risk and impact in the Alps**
Emanuele Lingua, Mario Pividori, Raffaella Marzano, Matteo Garbarino, Marco Piras, Milan Kopal and Frédéric Berger, University of Padova, University of Torino, Italy; University of Ljubljana, Slovenja; IRSTEA, France

11:15-11:30- **Coping with floods in anthropogenic landscapes: the BEWARE LIFE project**
Francesco Bettella; Roberta Pastorello; Giulia Roder; Lucia Bortolini; Vincenzo D'Agostino, University of Padova, Italy

11:30-11:45- **The potential of agroforestry in adapting to climate change in South Africa Agriculture**
Victor O. Abegunde, Melusi Sibanda and Ajuruchukwu Obi, University of Zululand, South Africa

11:45- 12:00- **Is the return period concept appropriate for the management of debris flow hazard?**
Sebastiano Piccolroaz, Gabriele Bertoldi, Ruggero Valentinotti, Stefano Fait, Marco Borga, Service for Torrent Control, Autonomous Province of Trento, Italy

12:00-12:15- **Debris flows in northeastern Italy: data collection and approaches for a preliminary debris-flow characterization at the regional scale**
Marco Cavalli, Stefano Crema, Lorenzo Marchi, Research Institute for Geo-Hydrological Protection (IRPI), National Research Council (CNR), Italy

12:15-12:30- **Climate Change and Its Effects on the Occurrences of Debris Flow in Taiwan**
Meei-Ling Lin and Keng-Ping Cheng, National Taiwan University, Taiwan

12:30-12:45- **Treatment of natural hazards within planning documents in Serbia in relation to the climate change issues**
Tijana Crnčević, Jelena Živanović Miljković, Omiljena Dželebdžić, Institute of Architecture and Urban & Spatial Planning, Serbia

12:45-14:00- Lunch

14:00-14.30- Follow-up and hand-over of the Best Paper Awards

14:30-15:00- Farewell coffee

POSTERS

- 1. Assessing flooding hazards changes as a result of global change: the Sant Miquel river catchment (Mallorca, Spain)**
José Andrés López-Tarazón, Joan Estrany, Francisco José Vallés-Morán, Beatriz Nácher-Rodríguez, Josep Fortesa, Julián García-Comendador, University of the Balearic Islands, Spain
- 2. The Climate Change Information and Research Programme (ICIRP)**
Walter Leal, Hamburg University of Applied Sciences, Germany
- 3. Ozone layer holes, regional climate change and possible ways for their forecasting**
Aliaksandr Krasouski, Siarhei Zenchanka, Veronika Zhuchkevich, Timophey Shlender, Belarusian State University, Belarus
- 4. Early warning systems for stony debris flow based on mathematical models**
Gregoretta C., M. Bernard, M. Berti, M. Boreggio, M.L. Stancanelli, S. Lanzoni and A. Simoni, University of Padova, Italy
- 5. Flood forecasting for an alpine basin using ensemble precipitation forecasts and information on hydropower operations**
Mattia Zaramella and Roberto Dinale, University of Padova, Italy
- 6. The evaluation of water-related extremes in the framework of Ecosystem Services**
Davide Zoccatelli, The Hebrew University of Jerusalem, Israel