

## Droughts and Floods

### Adaptation to Extreme events in a hotter climate

2019 IMPEL Water and Land Conference

Rome, Italy - 8<sup>th</sup> and 9<sup>th</sup> October, 2019



#### **Foreword**

Europe in the second half of the century may face significantly deepening drought, and more river floods if global temperatures continue to rise. Something it needs to begin preparing for now.

Droughts will become longer and drier and - in the worst-case scenario - will reach northern Europe. Much of southern Europe experienced lengthy droughts last 5 years, which caused widespread fires and decimated crops. Rome turned off its public fountains and only narrowly avoided rationing water supplies to homes.

Severe floodings have hit Britain and Germany and Serbian Republic in recent years, and Paris was forced to evacuate 1,500 people when the Seine flooded. Cities can build large infrastructure such as reservoirs or flood barriers, or can make smaller incremental changes repeatedly.

There is a lot of extreme weather events that will hit us, so we have to really start thinking long term in terms of preparing and adapting for any sort of climate event.

The drought and floods can also threat water supplies and states/regions/cities need to adapt long before a drought or flood hits. Once a drought or flood kicks in, it may be too late to build another reservoir or desalination plant.

The comprehensive EU Legislation is helpful for protecting water and water environments, but its full implementation is identified as one of the top challenges in both recent EU Commission evaluations and IMPEL studies. The objectives of several major EU Directives, including the Water Framework Directive (WFD), the Marine Strategy Framework Directive (MSFD), and Directives on Nitrates, Urban Waste Water Treatment, Ground Waters, and Flood Risk Management, as well as key EU Thematic Strategies, including the Marine and Soil Strategies, remain to be fully achieved in many Member States.

IMPEL provides for a specific approach to water-related issues through the Water and Land Expert Team (W&L ET), that will address implementation challenges in all such levels, with projects on investigate water reuse, water crimes and river management that will be presented during the conference..

### **Agenda of the Conference**

**8 October, 09:00 – 13:00**

#### **Session 1 - Droughts in Europe: challenges and perspectives**

Chairs: Alfredo Pini (ISPRA) and Kristina Rabe (BMU)

09:00 Registration

09:15 Welcome and adoption of the agenda  
*Alfredo Pini (ISPRA) and Kristina Rabe\* (BMU)*

09:30 ECA initiative and Environment Action Program  
*Liam Cashman (DG ENV)*

10:00 Trends in drought monitoring and risk analysis, keys to reduction of our exposure  
*Alfred de Jager (JRC)*

10:20 Integrated Drought Management Programme in Central and Eastern Europe

- Monitoring & Early Warning
- Vulnerability & Impact Assessment
- Mitigation, Preparedness & Response

*Sabina Bokal (Global Water Partnership Central Eastern Europe)*

10:40 Coping with water scarcity  
*Jippe Hoogeveen (FAO)*

11:00 Coffee break

11:20 Land degradation neutrality: The science-policy interface from the UNCCD to national implementation  
*Anna Luise (ISPRA)*

11:40 Dams reservoirs as a source to fight droughts

- Designing Dams to pass sediments
- Strategic dam planning

*Mathias Kondolf (Berkeley University), Simone Bizzi (Polimi)*

12:00 Mitigation of droughts in UK  
*Paul Hickey (Environment Agency)*

12:15 Drought monitoring in Italy: Focus on the network of River Basin District Observatories for water resource uses  
*Stefano Mariani (ISPRA, SNPA)*

12:30 Discussion Panel: Problems and proposals to counter Climate Change effects  
*To be determined (FFF - Fridays for Future\*), To be determined (Greenpeace\*), To be determined (WWF\*)*

13:00 Lunch

\* To be confirmed





**8 October, 14:15 – 18:00**

### **Session 2 - Floods in Europe: challenges and perspectives**

Chairs: Giuseppe Sgorbati (ARPA Lombardy) and Ioannis Kavvadas (DG ENV)

14:15 State of implementation of Floods Directive

Ioannis Kavvadas (DG ENV)

14:45 State of implementation of Water Framework Directive

*Jill Michielssen\* (DG ENV)*

15:15 Applying the Water Framework Directive and Floods Management Directive in the Rhine transnational basin

*Adrian Schmid-Breton\* (Internationale Kommission zum Schutz des Rheins)*

15:45 Exploitation of satellite-to-earth microwave links to estimate rainfall

*Daniele Caviglia, Luca Lanza (University of Genoa)*

16:00 Coffee break

### **Session 3 - Flooding in Italy: challenges and perspectives (SNPA session)**

Chairs: Giuseppe Sgorbati (ARPA Lombardy) and Ioannis Kavvadas (DG ENV)

16:30 Monitoring floods in Lombardy: real time and planning

*Matteo Cislighi (ARPA Lombardy, SNPA)*

16:50 Floods Directive: managing diversity

*Barbara Lastoria (ISPRA, SNPA)*

17:10 Weather alert system: floods and avalanches

*Secondo Barbero (ARPA Piedmont)*

17:30 Discussion Panel

18:00 End of Day 1

\* To be confirmed

**9 October, 09:00 – 13:00**

### Session 4 – IMPEL projects and future challenges

Chairs: *Marco Falconi (ISPRA) and Paul Hickey (Environment Agency)*

- 09:15 Welcome and adoption of the agenda  
*Marco Falconi (ISPRA) and Paul Hickey (Environment Agency)*
- 09:30 Integrated Water Approach and Urban Reuse  
*Geneve Farabegoli (ISPRA), Anabela Rebelo (Apambiente)*
- 09:50 Water Crimes II  
*Claudia Carpino (IMELS)*
- 10:10 Management of Mining waste  
*Monica Serra (ISPRA)*
- 10:30 Landspreading and capacity of soils to accept contaminants  
*Barry Sheppard (Environment Agency)*
- 10:50 Coffee break
- 11:20 Risk analysis based control of agriculture  
*Anette Pedersen (MST)*
- 11:40 River Development planning  
*Thomas Ormond (Regierungspräsidium Darmstadt)*
- 12:00 Future challenges and projects of Water and Land  
*Marco Falconi (ISPRA)*
- 12:20 Discussion
- 13:00 End of the conference



### **Dates and Venue:**

The conference will take place in Rome (Italy) on the 8<sup>th</sup> and 9<sup>th</sup> of October 2019.

ISPRA have put at our disposal the Sala Conferenze in Via Vitaliano Brancati 48, Rome.

### **From airport “Leonardo da Vinci” (Fiumicino)**

The airport is connected to Termini railway station by 30 minutes non stop trains, and to the Ostiense railway station by 45 minutes trains.

From both stations, take Metro Line B (blue line) direction Laurentina and get off at the “Eur Fermi” stop.

Then bus line 779 (get off at Pavese/Bontempelli stop) or about 20 minutes walk to arrive in ISPRA)

