

# Impacts of Climate Change on Ecosystem Services

June 23, 2015

**Venue:** Politecnico di Milano, Aula De Donato, Piazza Leonardo da Vinci 32, Milano

**Organisers:** **Marino Gatto** (Politecnico di Milano, Istituto Lombardo Accademia di Scienze e Lettere), **Frank Raes** (Joint Research Centre, Ispra), and **Roberto Zoboli** (Università Cattolica, Milano) in collaboration with the European Commission.

**Participation is free. Registration is required:** [https://www.eventi.polimi.it/#climate\\_change](https://www.eventi.polimi.it/#climate_change)



Humanity is called to cope with unprecedented challenges. The scale of human impact on our planet has been increasing decade after decade. The world population has more than doubled in less than 50 years and will probably reach 9 billion in 2040. Economic indicators of wealth (such as income per capita or poverty gap ratio) have been improving, though not homogeneously over the world.

However, the targets of eradicating extreme poverty and hunger, reducing child mortality, achieving universal primary education, providing drinking water

and sanitation facilities are far from being reached and might become more difficult to achieve in the near future. Also, there is concern that the functioning of our earth may be imperilled by the increasing stress due to human activities. There has been an **enormous increase in the emission of greenhouse gases** (GHG, mainly carbon dioxide, methane and nitrous oxide) due to fossil fuel combustion, land-use change and agricultural practices.



This has translated into **GHG concentrations unprecedented in the past 800,000 years** and in the **global warming** of our planet, as unequivocally pointed out by the scientific community. Air and water pollution, land use change, and overexploitation of natural resources together with global climate change may decrease the biodiversity of our planet and impair the functioning of ecosystems. This may have important economic and social consequences because the **services freely provided by ecosystems** to humanity (such as water purification, crop pollination, protection from erosion etc.) are enormously valuable. A prudent estimate has set the monetary value of these services to twice the global GNP. Therefore devising paths towards the sustainability of our biosphere will be a mandatory task for humanity in the near future.



The one-day workshop aims at bringing together **world-known experts** who will illustrate the **impacts of climate change on ecosystem services**. Also, they will outline the possible policies and technical advancements that could shape

sustainability paths. The presentations will be scientifically up to date, but **the speakers will not indulge to technicalities in order to reach a diversified audience**.

**Co-ordination with other events:** From June 24 to 26, the **World Farmers' Organization** (WFO) will hold its general assembly in Milan at Politecnico's Bovisa Campus. On **June 24** WFO plans to organize a workshop that will be devoted to the specific impacts of climate change on agriculture and food provisioning. Therefore, the two events will constitute a **two-days event fully devoted to the crucial problem of climate change impacts on the future of mankind**.

## Speakers

- Carlo Carraro, University Ca' Foscari, Centro Euromediterraneo sui cambiamenti climatici, Venezia (Italy)
- Alessandro Cescatti, JRC, Ispra (Italy)
- Stefano Consonni, Politecnico di Milano, Milano (Italy)
- Andreas Fischlin, ETH, Zurich (Switzerland)
- Christian Körner, University of Basel, Basel (Switzerland)
- Franco Miglietta, IBIMET-CNR, Florence (Italy)
- Stephen Palumbi, Hopkins Marine Station, Stanford University, Pacific Grove (USA)
- Mercedes Pascual, University of Chicago, Chicago (USA)
- Renzo Rosso, Politecnico di Milano, Milano (Italy)

Each speaker will make a 30-35 minute presentation followed by a 10-15 minutes discussion with the public. At the end of the day there will be further room for **open discussion** orchestrated by **Stefano Caserini (Politecnico di Milano)**.

## Agenda:

9:30 – 9:45	<b>Welcome</b> The Rector, Giovanni Azzone, Politecnico di Milano Marino Gatto, Politecnico di Milano, and Giancarlo Caratti di Lanzacco, European committee for EXPO
	<b>Morning session</b> - Chairperson: Frank Raes
9:45 – 10:30	Andreas Fischlin: Climate change and ecosystem services in a changing climate
10:30 – 11:15	Christian Körner: Is the biosphere carbon limited?
11:15 – 11:30	Coffee break
11:30 -12:15	Renzo Rosso: Climate change and the water cycle
12:15 – 13:00	Stephen Palumbi: The human footprint on the oceans
13:00 – 14:15	Lunch
	<b>Afternoon session</b> - Chairperson: Roberto Zoboli
14:15 – 15:00	Mercedes Pascual: Infectious diseases and climate change
15:00 – 15:45	Carlo Carraro: The international climate governance
15:45 – 16:00	Coffee break
16:00 – 16:45	Stefano Consonni: The mitigation of greenhouse gas emissions
16:45 – 17:30	Franco Miglietta: Agricultural systems and climate change
17:30 – 17:45	Alessandro Cescatti: Final wrapup
17:45 – 18:30	<b>Open discussion</b> coordinated by S. Caserini

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