

## PRESS CONFERENCE

### Climate change and the deep half of the planet (deep oceans)

**Lisa A. Levin**, Distinguished Professor, Director, Center For Marine Biodiversity and Conservation, Scripps Institution of Oceanography, UC San Diego, La Jolla, CA, USA ([llevin@ucsd.edu](mailto:llevin@ucsd.edu)) **Expertise:** Deep-sea ecology; intersection of climate change impacts with human activities; deep-ocean observations and stewardship.

**Dr. Francoise Gaill**, PhD, Emeritus Research Director, National Center for Scientific Research (CNRS). **Scientific committee coordinator**, Scientific advisor of Institut Ecologie et Environment (INEE - CNRS), Scientific Committee coordinator – Oceans and Climate Platform ([Francoise.GAILL@cnrs-dir.fr](mailto:Francoise.GAILL@cnrs-dir.fr)). **Expertise:** Deep sea biology, chemosynthetic ecosystems and climate change; translating science to climate policy.

**Dimitri Kalenitchenko**, Postdoctoral Researcher, Québec Océan, Laval University" and collaborator of the chair 'Biodiversité environnements extrêmes et changement global' Université Pierre et Marie Curie, Paris 6. ([dimitri.kalenitchenko@gmail.com](mailto:dimitri.kalenitchenko@gmail.com)); **Expertise:** Submarine canyon ecosystem research with special interest in community dynamics in response to land-sea organic fall transfer (sunken wood) and extreme meteorological events by using experimental approaches in situ and in mesocosmes. Arctic ecosystems on the frontline of climate change.

**Natalya Gallo**, PhD Candidate, Center for Marine Biodiversity and Conservation, Scripps Institution of Oceanography; **Expertise:** Causes and consequences of ocean deoxygenation in a warming world.

**Kirk Sato**, PhD Candidate, Center for Marine Biodiversity and Conservation, Scripps Institution of Oceanography, La Jolla, CA USA ([knsato@ucsd.edu](mailto:knsato@ucsd.edu)); **Expertise:** Impacts of ocean acidification and deoxygenation on benthic invertebrates; echinoderms

#### Key messages:

\*The deep ocean covers half of the surface area and most of the habitable environment on this planet. In largely unseen ways, climate change is altering the character of the deep oceans (200 m), disrupting environmental conditions and threatening biodiversity to an extent that could require hundreds of years or more for natural systems to recover.

\*We rely on the deep ocean and its ecosystems to absorb heat and carbon dioxide from the atmosphere and to sequester and bury carbon. But this mitigation capacity is taking its toll on deep ecosystems, through warming, ocean acidification and ocean deoxygenation.

\*Deep-sea ecosystems face combined stress from climate change and direct human disturbances (extraction of living and non-living resources).

\*Although much deep ocean lies in international waters beyond the mandate of the UNFCCC, there is an urgent need for measures that support healthy oceans through increased observations, monitoring and protection of deep waters.