



**coop+**  
Promoting  
collaboration among RIs



A conference organized by the COOP+ project  
Promoting the Cooperation of Research Infrastructures to  
address global challenges in the environmental field

# Research Infrastructures and the Paris Agreement on Climate

**20-21 November 2018**

**German Marine Research Consortium  
Boulevard St. Michel 80**

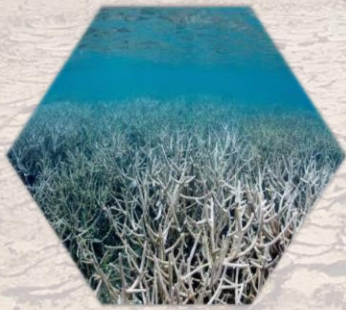
**Brussels, Belgium**

The role of **international cooperation** and the  
transformation of **research infrastructures**  
for climate change **adaptation** and **mitigation**

# Research infrastructures collect high precision data on **greenhouse budgets** and the **resilience of ecosystems** to climate change: how can they be harnessed to support the goals of the Paris Agreement ?

## The herculean challenge ...

To keep climate warming well below 2°C and to reach global peaking of greenhouse gas emissions as soon as possible ... and undertake rapid reductions thereafter in accordance with best available science...to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.



Coral bleach in response to warming and increased acidity



Deforestation GHG emissions & biodiversity losses



Ocean absorption of heat and carbon



Atmospheric monitoring to quantify GHG fluxes

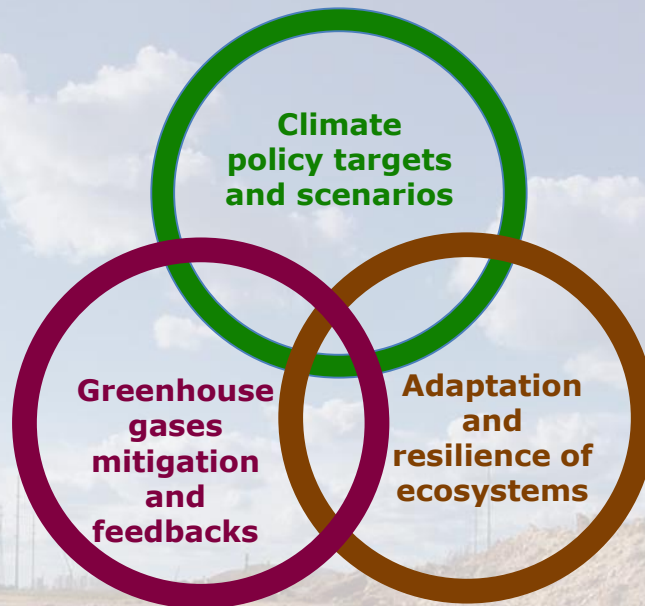
## ... Requires

Transformational changes and enhanced cooperation between Research Infrastructures and across disciplines

For the conference information:

[www.coop-plus.eu/research-infrastructures-and-the-paris-agreement](http://www.coop-plus.eu/research-infrastructures-and-the-paris-agreement)

# Building a cooperation framework among international Research Infrastructures, policy makers, and other actors



## To deliver :

- ✓ Accurate information on anthropogenic greenhouse gas emissions and natural fluxes using observations and models
- ✓ Robust observations of changes in carbon storage and greenhouse gas emissions over the oceans, and natural and managed lands
- ✓ Science-based evidence on the resilience of marine and terrestrial ecosystems to climate change,
- ✓ Account for impact of climate mitigation and adaptation on a range of ecosystem services, such as biodiversity and water conservation.



## Tuesday 20 November 2018

### Monitoring greenhouse gas emissions and climate (session conveners F. Bonet and N. Lo Bue)

14:00	Welcome and Introduction	Francisco BONET (Universidad de Córdoba)
14:15	Observations needs for the Paris Agreement on Climate	Philippe CIAIS (LSCE – CEA, Paris Saclay)
14:30	The Integrated Carbon Observation system (ICOS) Strategy for Global Cooperation	Werner KUTSCH (ICOS-ERIC, Helsinki)
14:50	The Copernicus Atmosphere Monitoring Service (CAMS) and the Copernicus Climate Change Service (C3S)	Richard ENGELEN (ECMWF, Reading)
15:10	<b>Coffee Break</b>	
15:40	European Commission and European Space Agency initiative to develop an anthropogenic CO2 emission monitoring and verification support capacity.	Yasjka MEIJER (ESA, Noordwijk)
16:00	The Global Atmosphere Watch Programme	Oksana TARASOVA (WMO, Geneva)
16:20	GEO-C The GEO Carbon and Greenhouse Gas Initiative	Antonio BOMBELLI (CMCC, Viterbo)
16:40	The IG3IS program to support the Paris Agreement on Climate	Phil DECOLA (University of Maryland)
17:00	<b>Discussion</b>	
18:00	<b>Cocktail and Posters</b>	

## Wednesday 21 November 2018

### The role of non-CO2 gases and aerosols (session conveners D. O'Conchubhair and W. Kutsch)

9:00	Methane and the Paris Agreement: key challenges and opportunities	Euan NISBET (Royal Holloway, Univ. of London)
9:20	ACTRIS long-term remote-sensing observations: Improving our knowledge on the relationship between aerosols, clouds, dynamics, and precipitation	Albert ANSMANN (Leibniz Institute for Tropospheric Research, Leipzig)
9:40	Climate change and air pollution in the Middle East and North Africa	Jean SCIARE (Cyprus Institute, Cyprus)
10:00	The integrated atmospheric-oceanographic climate observatory at Lampedusa	Alcide DI SARRA (ENEA, Rome)
10:20	<b>Coffee Break</b>	
10:40	Research Infrastructures in South Africa and the Paris Agreement	Robert SCHOLES (University of Witwatersrand)
11:00	Towards a feasible and representative pan-African research infrastructure network for GHG observations	Ana LOPEZ BALLESTEROS (Trinity College, Dublin)
11:20	ARGO A global in-situ observing system	Diarmuid O'CONCHUBHAIR (Marine Institute, Galway)
11:40	Monitoring the CO2 sink in the North Atlantic Drift Region (NADR)	Vlad MACOVEI (U Southampton, Southampton)
12:00	<b>Discussion</b>	
12:30	<b>Lunch</b>	

### Monitoring land and ocean responses and adaptation (session conveners R. Fisher and B. Gielen)

14:00	The Next-Generation Ecosystem Experiments–Tropics NGENE- Tropics	Rosie FISHER (NCAR, Boulder CO. and CERFACS, Toulouse)
14:20	Australia's primary environmental research infrastructure program (TERN)	Ben SPARROW (TERN The University of Adelaide)
14:40	FLUXNET: the global network to monitor ecosystem GHG exchanges	Bert GIELEN (University of Antwerp)
15:00	On the integration and collaboration between infrastructures	Tuukka PETÄJÄ (U. Helsinki, Helsinki)
15:20	The Extreme Earth Flagship proposal	Peter BAUER (ECMWF, Reading)
15:40	<b>Conclusions</b>	



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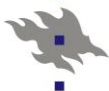
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