

Addressing climate change at regional level: the French IPCC-like science-policy interfaces

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June 15th 2021 – CET 11am



@AcclimaTerra
@grec_sud
@AuraOuranos

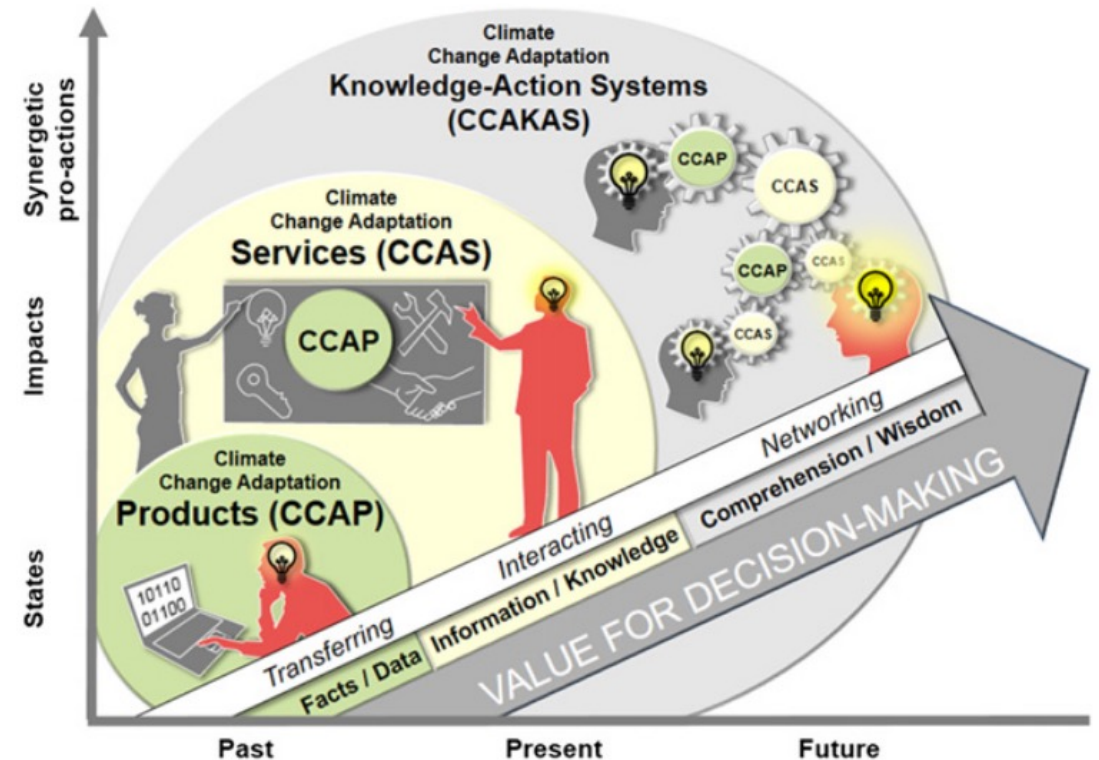


Main topics of the session

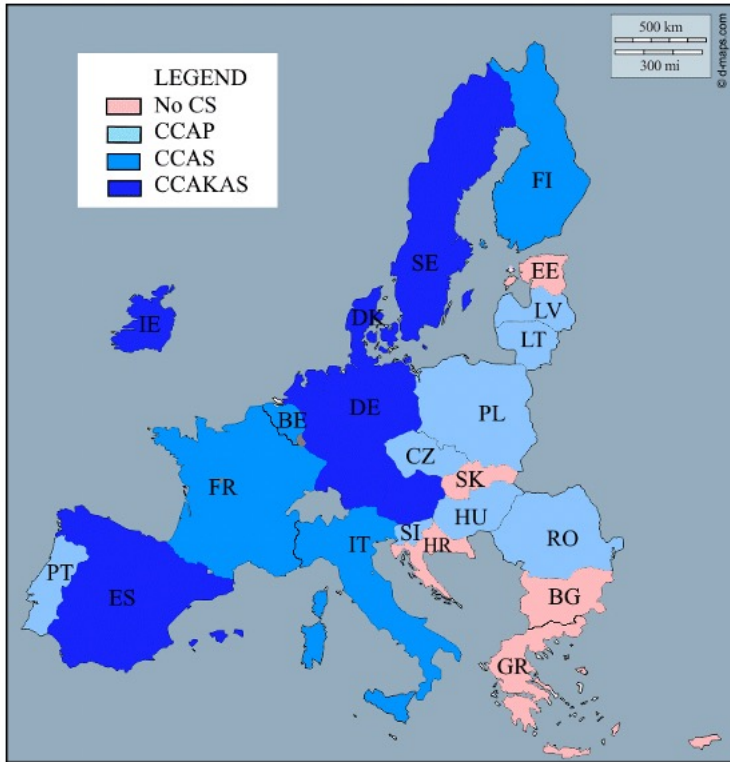
- 🌿 IPCC – not adapted to smaller scales
- 🌿 Different scientific groups worldwide
- 🌿 French examples : characteristics, actions, links between the groups, next steps ?

World scope

- Proliferation of climate services since 2010
- At different scales : from international to local
 - In 2018 : subnational scales represented $\frac{1}{4}$ of surveyed climate services (*Vaughan et al. 2018*)
 - Famous exemples :
 - At regional scale : Ouranos Quebec (Canada)
 - At local scale : New York City Panel on Climate Change (NPCC)
- Heterogeneity in structure models, partnerships, topics, goals, ...
- Proposal of classification : (*Weichselgartner and Arheimer, 2019*)



European scope



Panenko et al., 2021 (submitted)

- In European Union, many initiatives :
→ Survey for identifying and classifying them
- Findings :
 - Distribution of services levels
 - Knowledge-Action System : mostly in federal countries
 - Adaptation services : France, Italy, Finland, Belgium
 - Products : Eastern Europe + Portugal
 - No service : South Europe + Estonia
 - Political structure impacts adaptation implementation
 - Local scale still sparsely covered (regional or subregional scale)

GREC (Climate Experts Regional Group) network



Existant GREC:

- **AcclimaTerra** in the Nouvelle-Aquitaine region,
- **GREC-SUD** in the Sud region,
- **Ouranos-AuRA** in the Auvergne-Rhône-Alpes region,
- **RECO** in the Occitanie region,
- **GREC-Guadeloupe** in Guadeloupe island region

Developing groups:

- Bretagne
- Paris
- Normandie
- CERCLE/Climbio/cerdd - Hauts-de-France region.



AcclimaTerra project



© Vignobles et terroirs de France
Biggest agricultural region



© Couturezvous – Bordeaux Metropolis



© Laurence Fleury – vallée d'Aspe



© Jérôme Augereau – 720 km shorelines



© biscagrandslacs – Landes forest

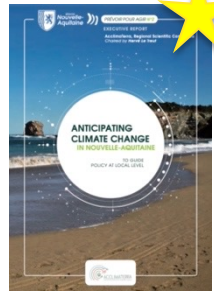
AcclimaTerra project



- Initiated and supported by the Nouvelle-Aquitaine region in France, but fully independent
- A council of 21 scientists from physical to social scientific disciplines, working as IPCC like
- Active participation of about 400 senior scientists

Actions

- Many cities visited around the region
- About 300 presentations
- More than 30 000 people reached
- New thematic reports are being produced



Assessment of existing science
<http://www.acclimaterra.fr/>



 Work with a young public

 Scientific mediation





<http://www.neo-terra.fr>

Participation in the Néo Terra roadmap

- 1 - Civic engagement
- 2 - Agro-ecological transition
- 3 - Business Transition
- 4 - Clean mobility
- 5 - Sustainable urban planning
- 6 - A new energy mix
- 7 - Zero waste goal
- 8 - Preserving biodiversity
- 9 - Preservation of water resources
- 10 - Preserving agricultural and forest land
- 11 - The Region, an exemplary administration

Ouranos-AuRA platform



UGA
Université
Grenoble Alpes

- 🌿 Built in 2012 in the framework of the Envirhonalp research federation involving all the Universities and national research organizations present in the region
- 🌿 Strong university anchorage (UGA)
- 🌿 Approach close to Ouranos-Quebec and its project-based logic.
- 🌿 Participation of more than 100 scientists

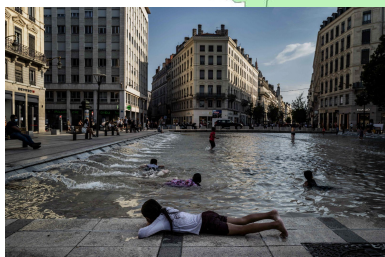
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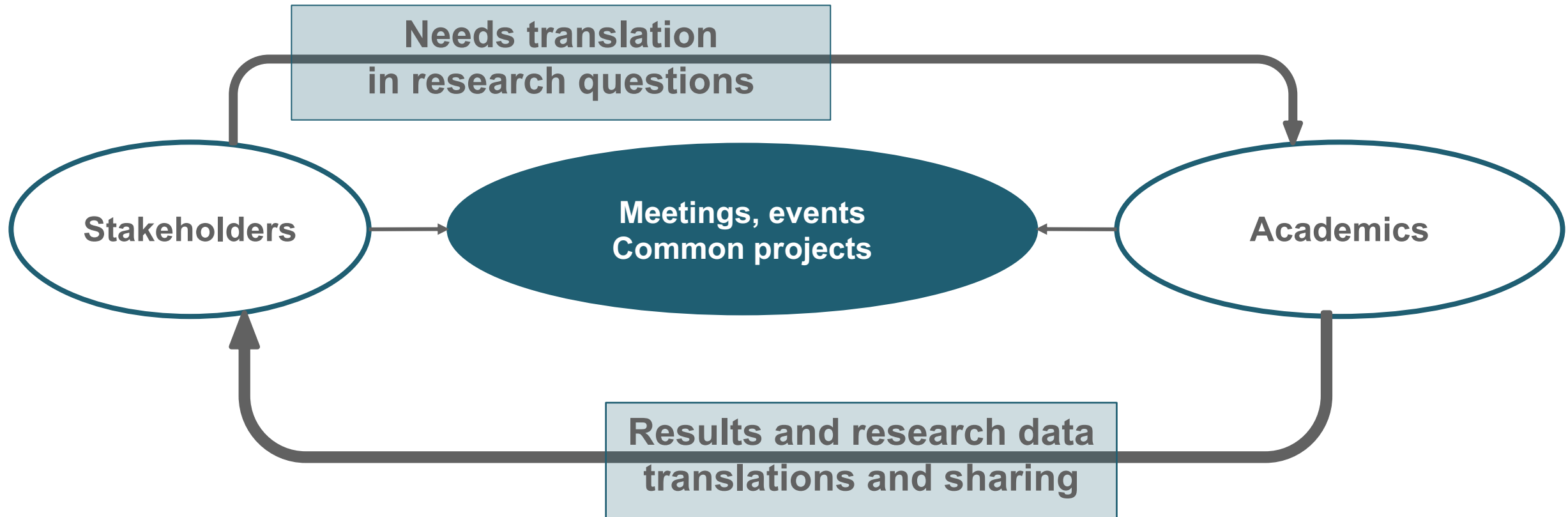
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How do we work ?

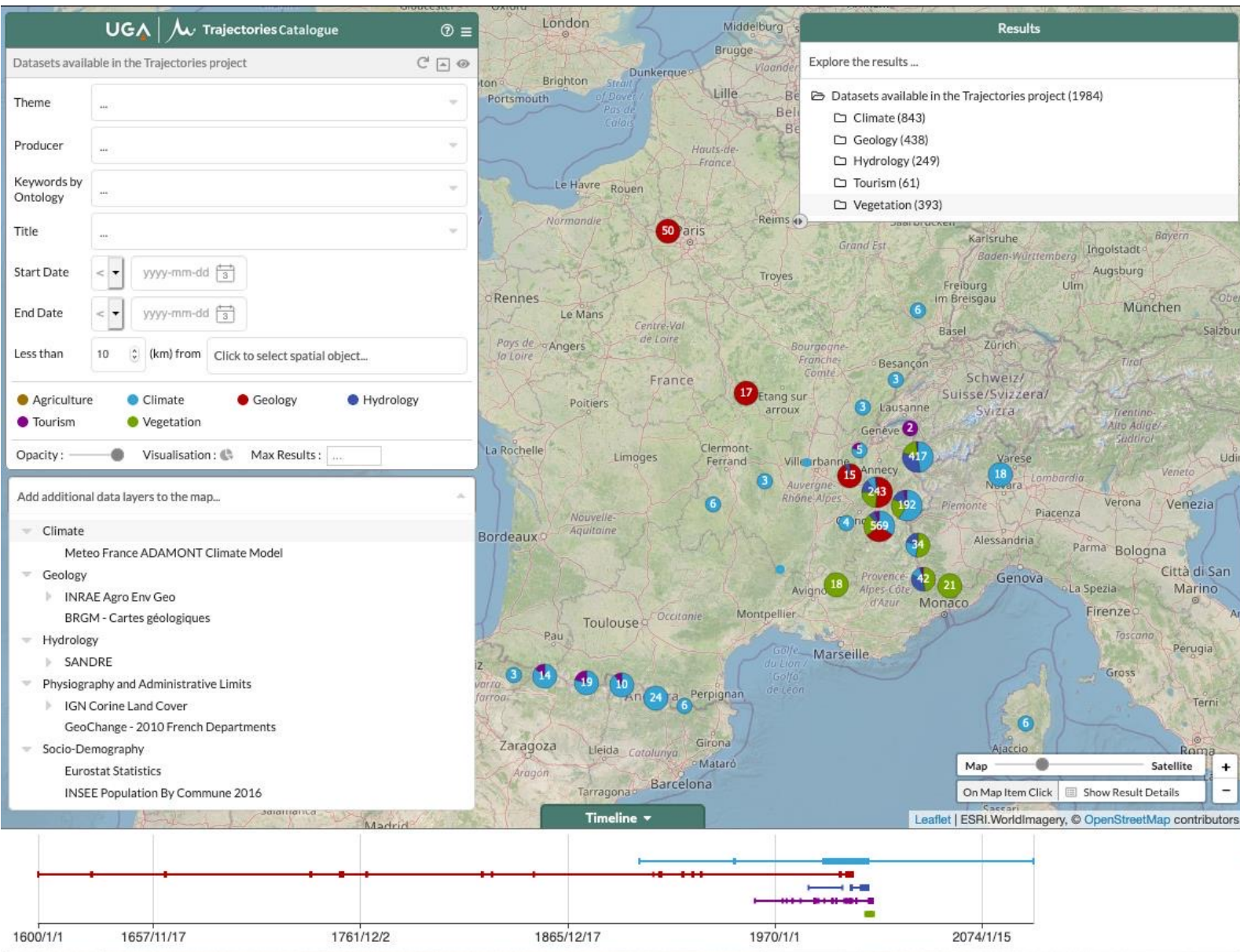


🌱 **Web interface** (where; who)

🌱 **Climate data Lab** (what is available, needs, how to use)

🌱 In situ observations

🌱 Remote sensing observation



Promote partnership research



Sciento-centered

- Academics do their own interdisciplinary research
- Stakeholders bring their logistic aid, terrain, own funds



Co-created

- Research based on co-production research questions

Climat-Métro



Stakeholders-centered

- Stakeholders provide their own questions
- Academics bring their methods, tools, data to provide answers

🌿 Climate data Labs

🌿 Workshops

- 🌿 How to better communicate on climate change
- 🌿 National symposium on adaptation and mitigation of territories

🌿 Art and Sciences

- 🌿 Serious game “Things are heating up in the Alps”
- 🌿 Artistic creations co-produced by scientist and artists



» Web site (in French)

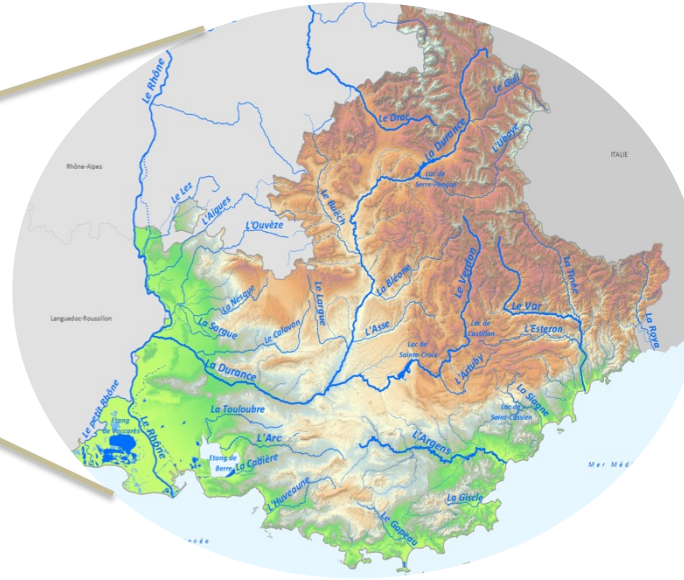
» <https://plateforme-ouranos.fr/>

» Publications (in French)

- » Lutoff *et al.*, 2019, Ouranos-AuRA la science au secours des territoires de montagnes, *Géosciences*, 23, 64-65.
- » Lutoff *et al.*, 2021, Ouranos-AuRA accompagner les territoires dans leur transition climatique, *La Météorologie*, 113, mai 2021

» Video Art and Sciences

» <https://action-climat-3.sciencesconf.org/resource/page/id/18>



Alps Mountains - up to 4100m of elevation



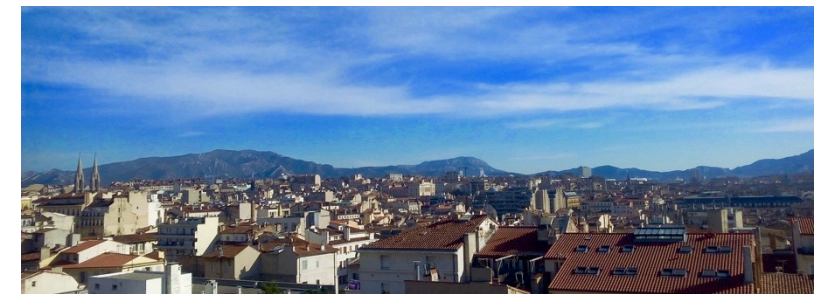
Sea and coast - more than 700 km of sea shore



Wetland – La camargue



Mediterranean forest and agriculture



80% of the PACA population live in large urban center

Centralisation and transmission of scientific knowledge about climate changes issues to stakeholders and decisions makers.



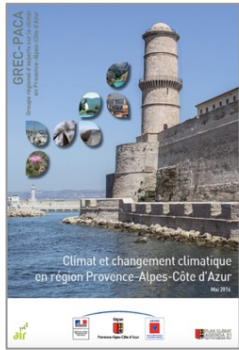
- ◆ Centralised scientific knowledge about climate and environmental change in the PACA region and render it accessible to policy-makers, key stakeholders and citizens.
- ◆ Bridging the gap between research and decision-making
- ◆ Supporting and helping territories to define adaptation and mitigation trajectories
- ◆ Contributing to the improvement of policies at a regional and local level by providing consolidated scientific assessments on particular issues and by responding to decision-makers requests

Leaded by AIR Climat a non profit organisation

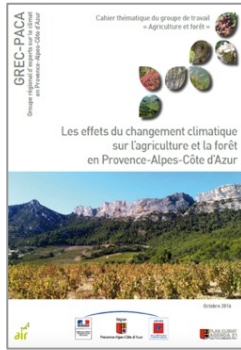
Founded mainly by PACA regional council and French energy and environmental agency (ADEME PACA)

GREC-SUD main activities

Edition of comprehensive thematic synthesis of available scientific knowledge on regional climate change issues



Local climate and climate change
2015



Forest and agriculture
2016



Coast and Sea
2017



Urban Cities
2017



Water resources
2017



Mountains
2018



Health
2019

Ongoing:
Perception,
Biodiversity,
Extreme events,
Good practices,
Food

Organisation of live events to improve knowledge transmission and interaction between stakeholders and researchers :

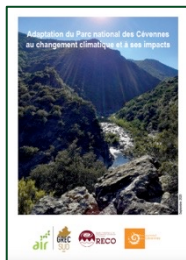
continuous formation, workshops, training session and awareness/exchanges days between stakeholders, policy makers and scientists



Local / territorial Booklets

Edition of synthesis on climate change issues (climate trajectories, impacts and solutions) at a local scale (towns, municipality communities, national /regional parks...)

These booklets are ordered by territorial councils - Policy and decision makers need a better understanding and want to know what to do in the territory that they manage



Cévennes

In partnership with RECO (<https://reco-occitanie.org/>)

Work involved more than 70 researchers



Support stakeholders and policy makers

PARCS NATURELS RÉGIONAUX de Provence-Alpes-Côte d'Azur



Une autre vie s'invente ici



Support the policy makers and managers integration of climate change problematics in local adaptation projects, mitigation projects, regional climate strategy aiming to reduce GHG (mitigation) and to take potential consequences into account (adaptation)



A three years convention have been signed recently between the regional government, the regional natural parks and the GREC-SUD with the GREC-SUD supporting the Parc actors to integrate global changes issues at every level. Through:

- Formation/Education
- Assisting in the production of their territorial charter
- Helping build scientific projects on adaptation



We need to multiply experiences and methods to find the best ways to proceed and improve the science to society interface

GREC-SUD animation team is involved in national or european research projects in order to facilitate stakeholders participation and disseminate research results



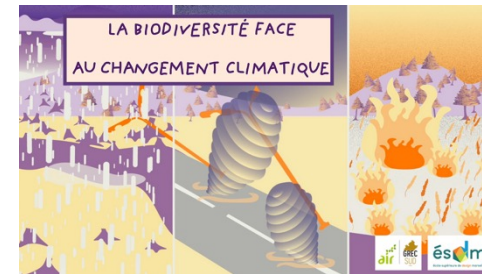
AIRFRESH

Urban forests for a better human well-being

COOL
AM METROPOLIS

developing virtuous CO2mitigation scenarios in link with local stakeholders and socio-economic actors.
(ANR French Research national Agency)

Students awareness in the framework of high school projects



<https://www.youtube.com/channel/UCZ0ORMZVVBnM9L0NOaGz0ug>

🌿 Links between the groups

- 🌿 Regular exchanges
- 🌿 Co-organising science-society national congress



Bordeaux 2017



Marseille 2018



Grenoble 2021



» Many opportunities for a better science-action interface on climate change

- » Lot to do at regional and local scales
- » Open new scientific questions on transdisciplinarity
 - How to improve researcher – stakeholders communication et understanding?
 - How climate change questions the role of science in the needed social transition?

» Some recurrent difficulties

- » How answering to the diversity of solicitations?
- » How to maintain interface structures?

» Creation of a network

- » At national scale : GRECs' network in France
- » At international scale?



Thank you very much !

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