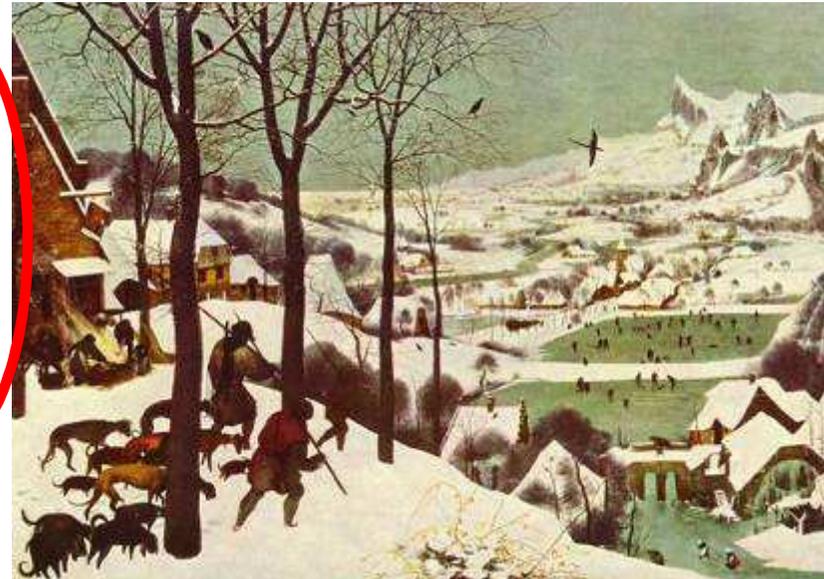
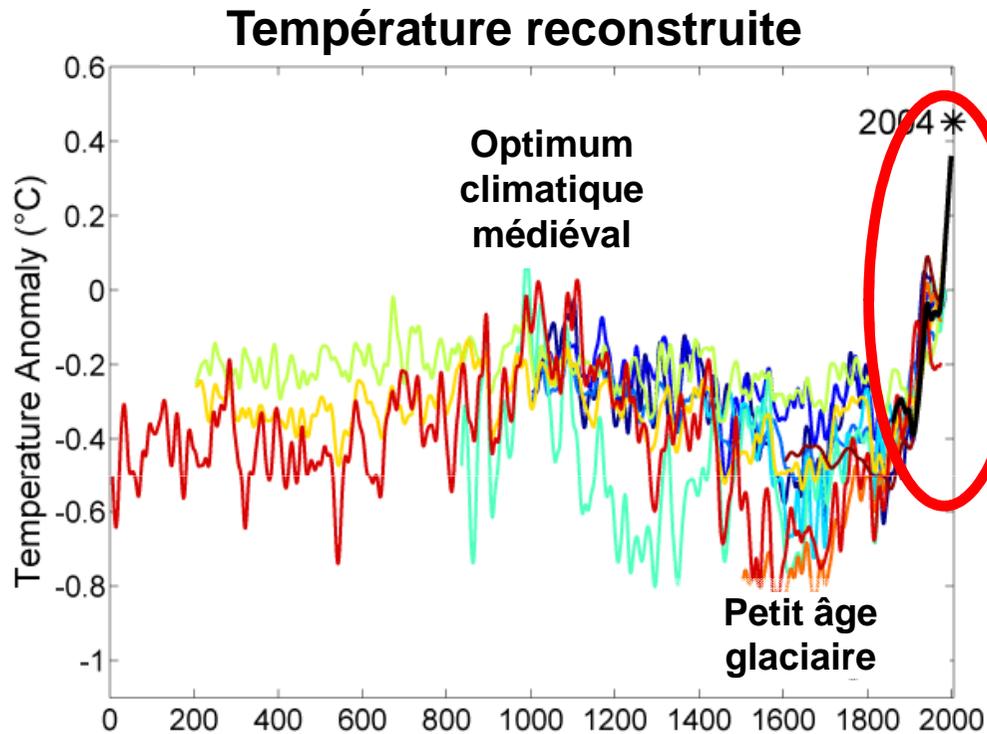


Changement climatique et ressource en eau



Débat Public Aqua Domitia – mardi 18 octobre 2011

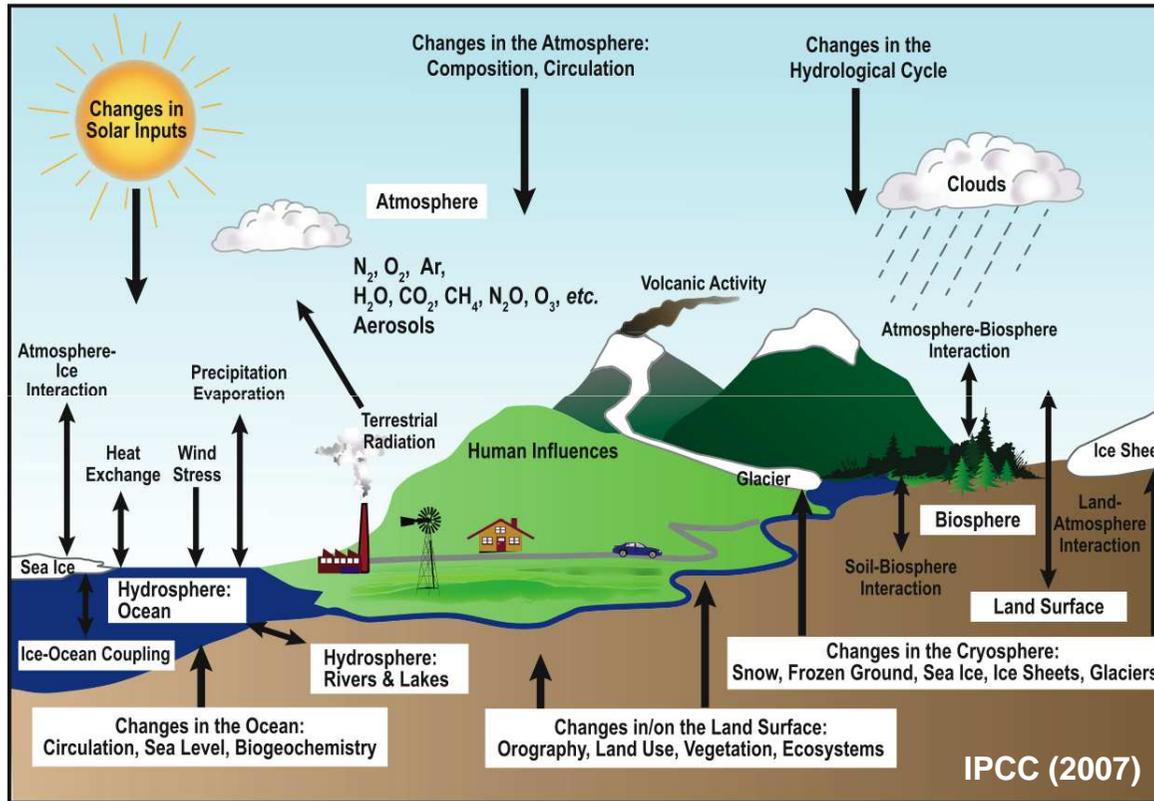
Le climat (T° , P, Hum, Ray, Vent) varie...



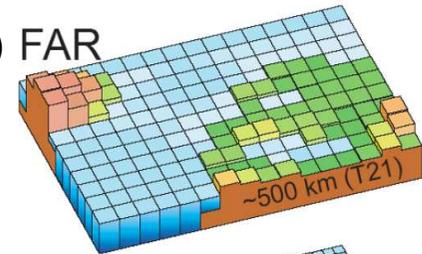
Le climat varie aux échelles géologique et historique

Ce qui est remarquable depuis 50 ans : la vitesse de variation

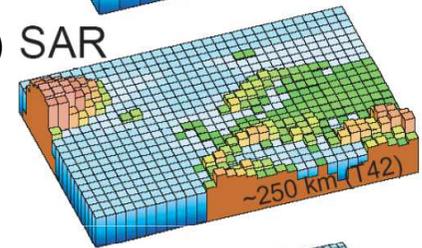
Le climat futur?: les modèles de climat



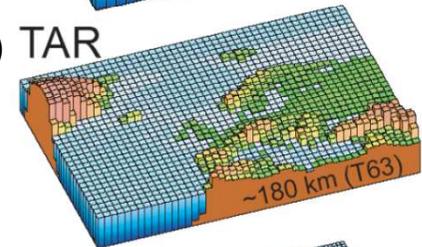
(1990) FAR



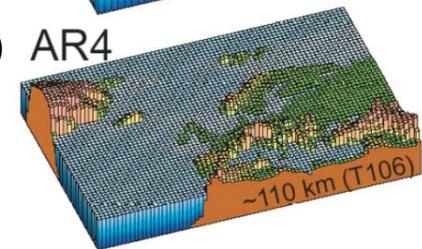
(1995) SAR



(2001) TAR

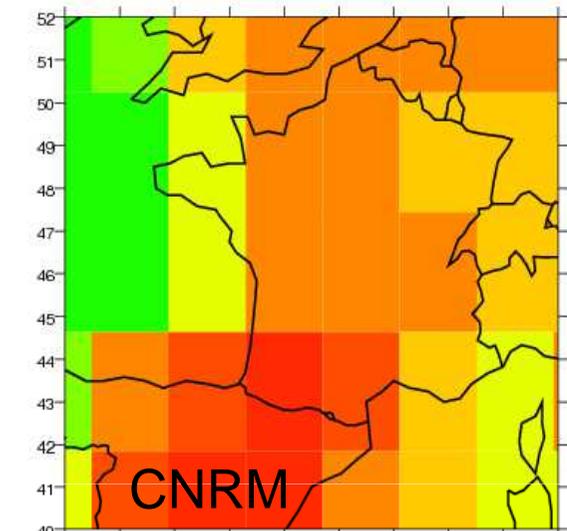


(2007) AR4

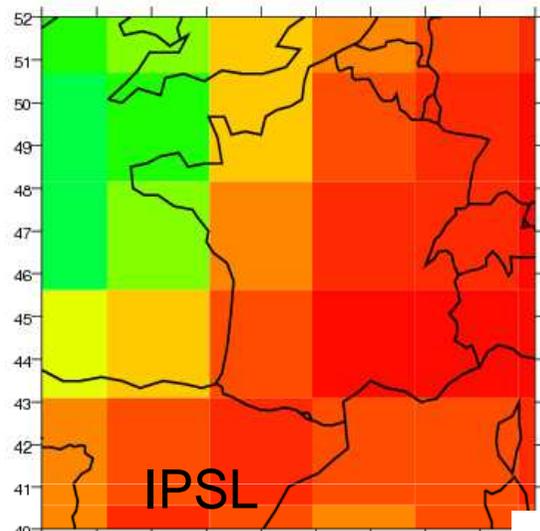


Source: H. Le Treut

Prévisions du climat futur en France

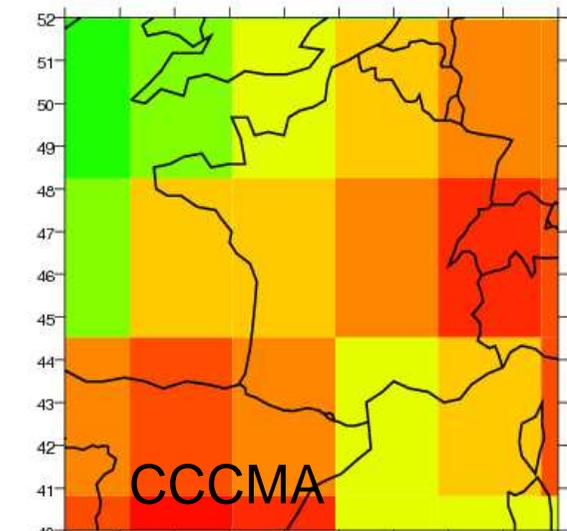
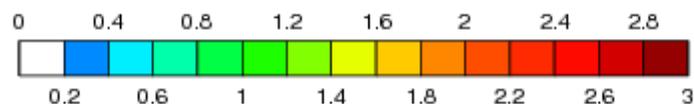


ccma_cgcm3_1: tas sresa2(2040-2060)-20c3m(1980-2000)
Max 2.41793 Min 1.04935

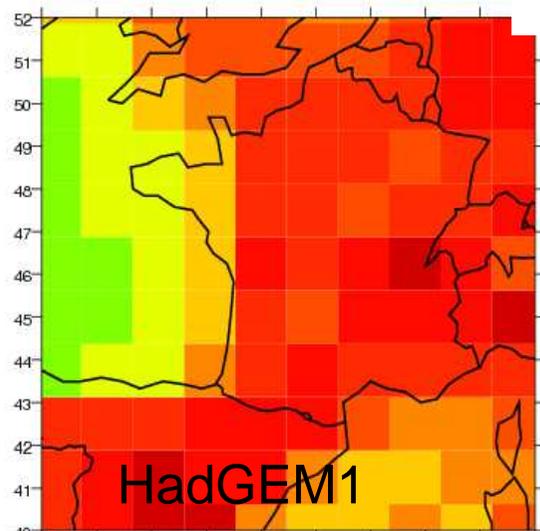


ukmo_hadgem1: tas sresa2(2040-2060)-20c3m(1980-2000)
Max 2.7657 Min 1.32792

Anomalie T°
Annuelle
(2050 - A2)



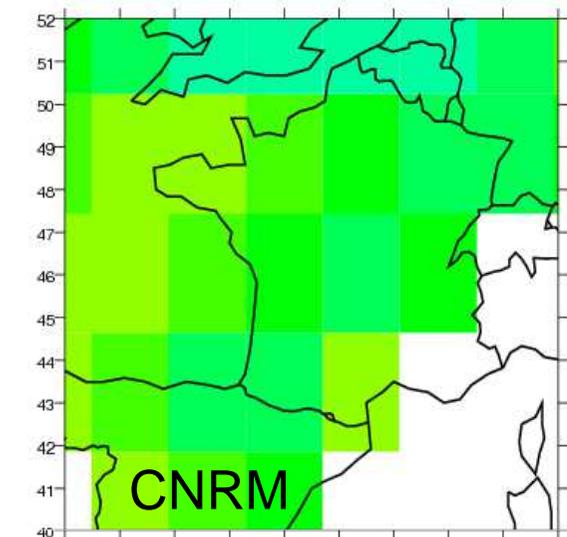
CCCMA



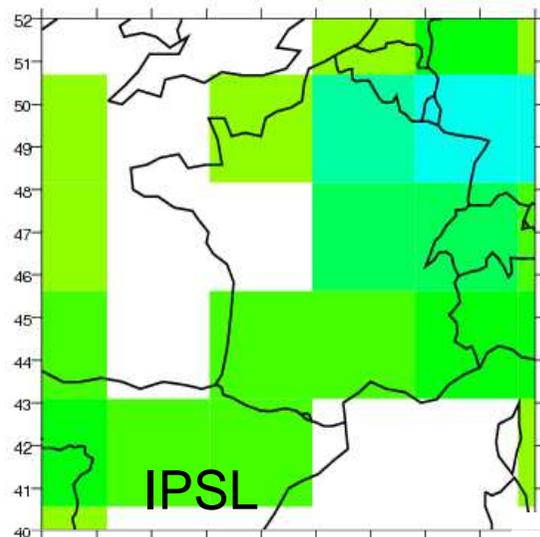
HadGEM1

**La température
devrait continuer
à augmenter**

Prévisions du climat futur en France

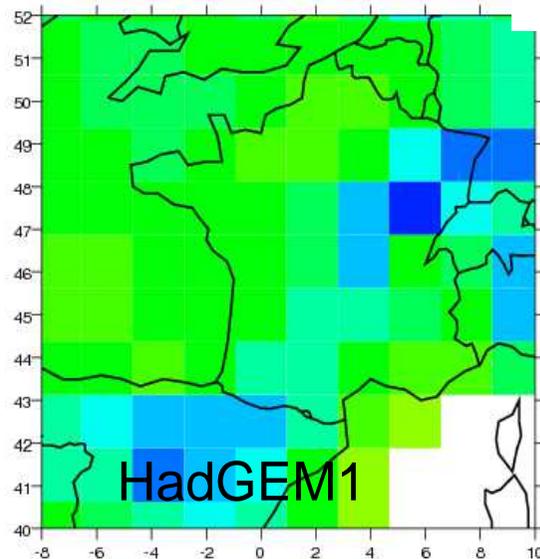
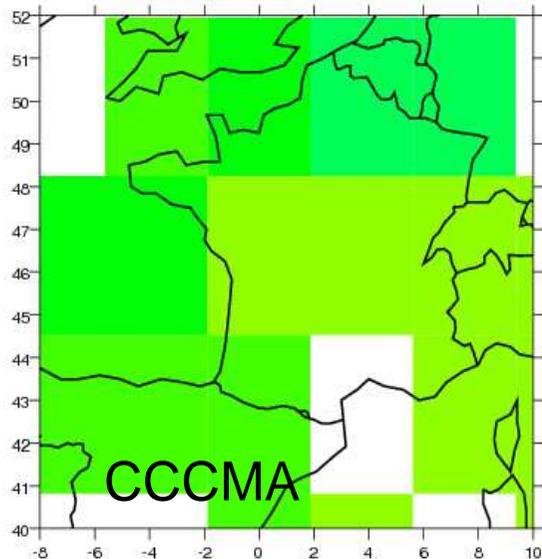
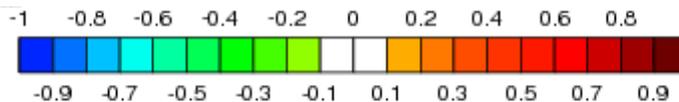


ccma_cgcm3_1: pr sresa2(2040-2060)-20c3m(1980-2000)
Max 0.0744707 Min -0.433762



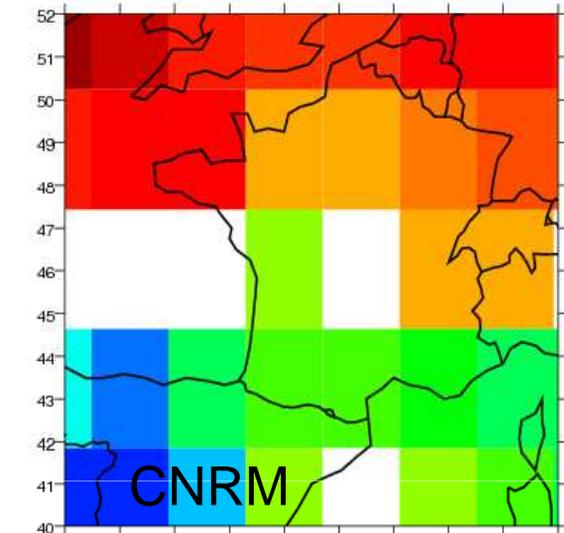
ukmo_hadgem1: pr sresa2(2040-2060)-20c3m(1980-2000)
Max 0.0403314 Min -0.945068

Anomalie P (mm/j)
Été
(2050 - A2)

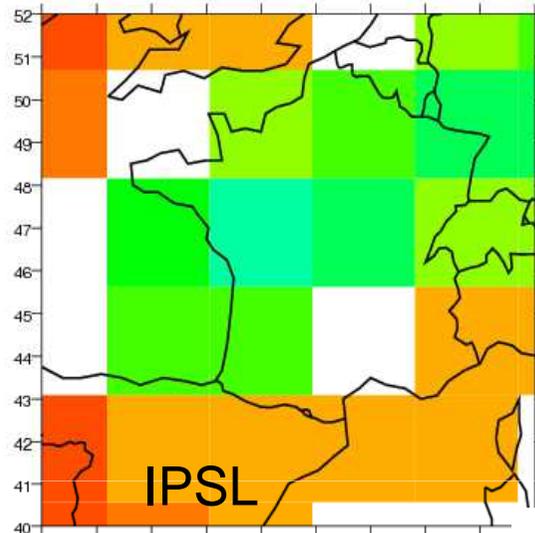


**Les pluies d'été
devraient diminuer**

Prévisions du climat futur en France

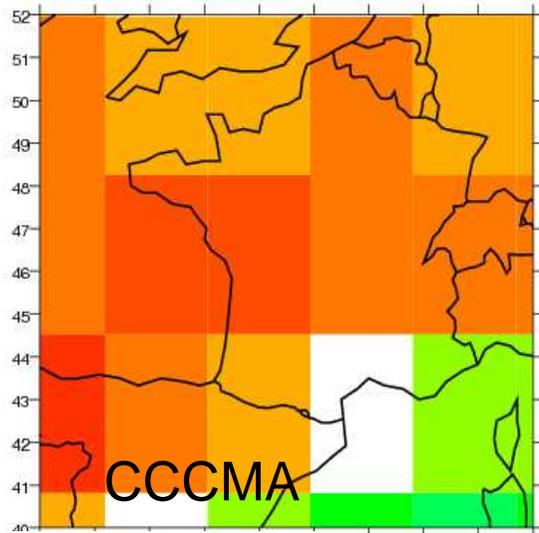


ccma_cgcm3_1: pr sresa2(2040-2060)-20c3m(1980-2000)
Max 0.422259 Min -0.446048

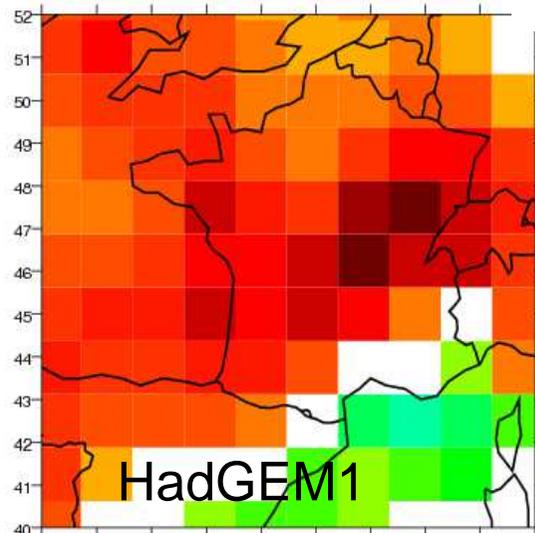


ukmo_hadgem1: pr sresa2(2040-2060)-20c3m(1980-2000)
Max 1.08993 Min -0.550056

Anomalie P (mm/j)
Hiver
(2050 - A2)



CCCMA

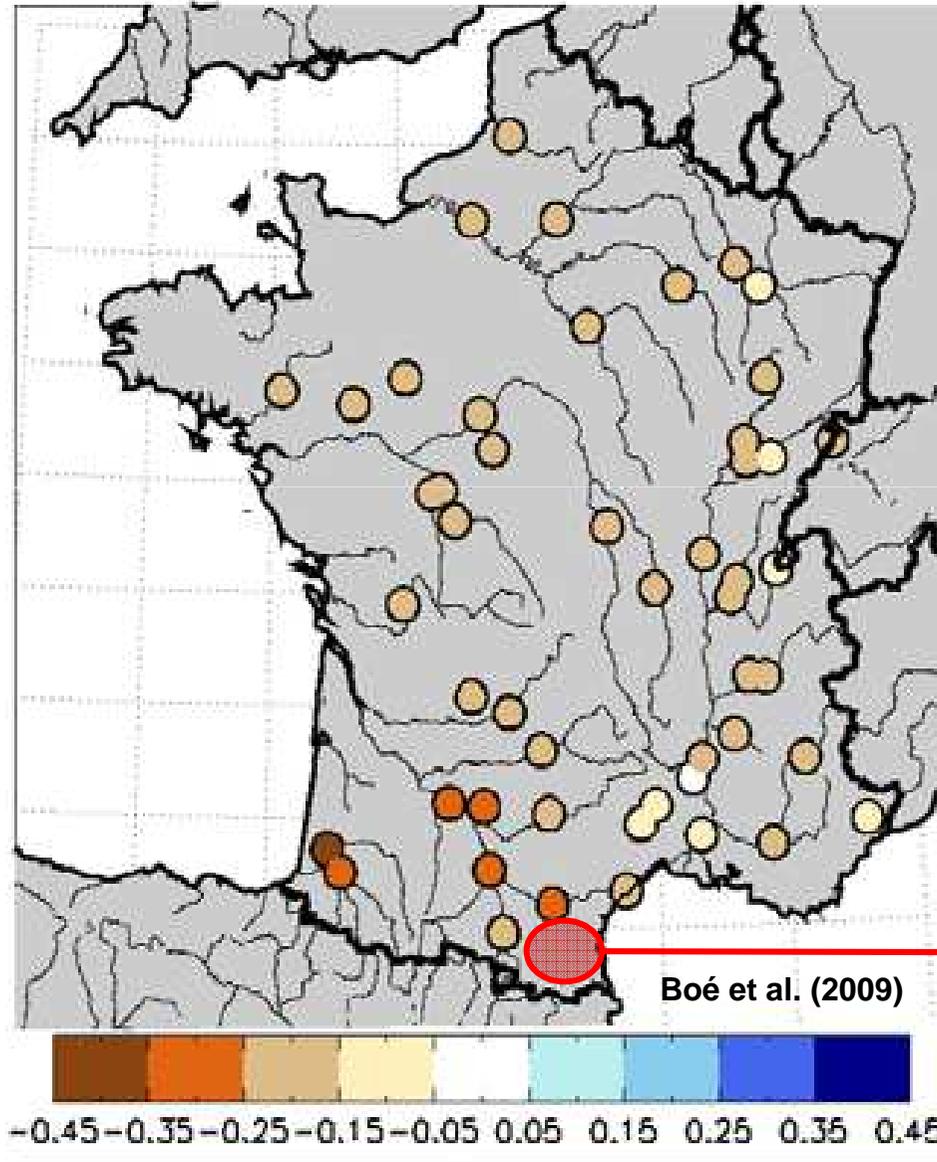


HadGEM1

Pluies en hiver?
INCERTITUDE



Impact du CC sur les eaux de surface

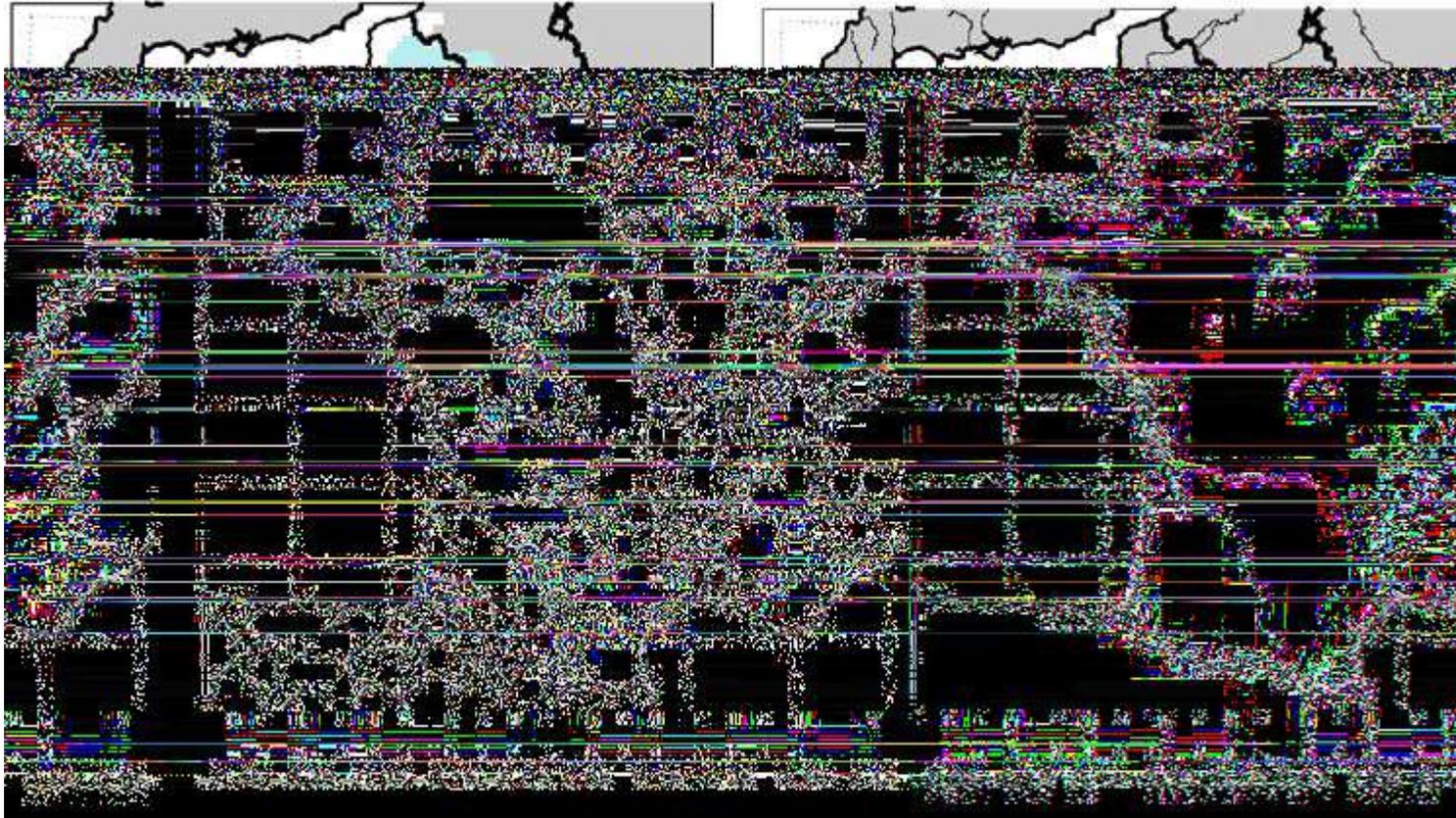


**2050: diminution
des écoulements
annuels**

PO (Vulcain) : - 20% à - 40%

Impact du CC sur les eaux de surface

Incertitudes sur les débits en hiver

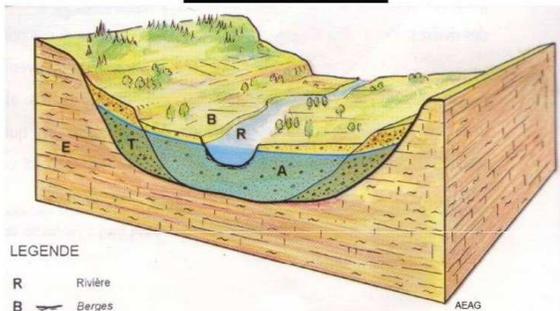


Boé et al. (2009)

Impact du CC sur les eaux de surface

dépend du type d'aquifère

Une nappe alluviale

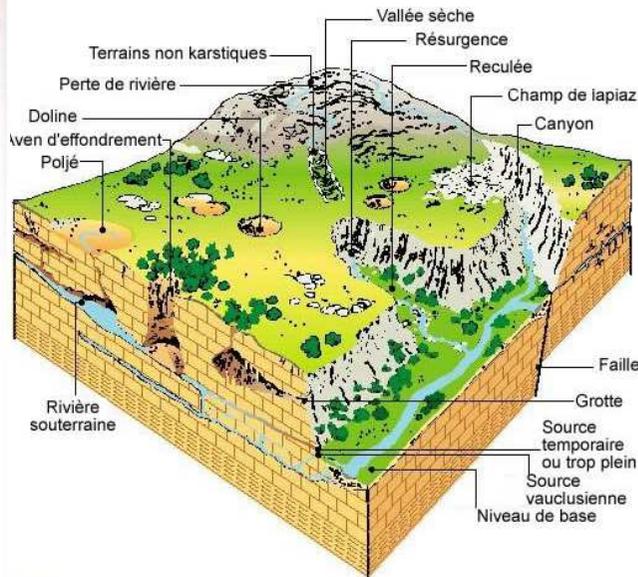


- LEGENDE
- R Rivière
 - B Berges
 - A Alluvions
 - T Terrasses
 - E Terrains encaissants

Source: AE-AG

Alluvial ~ rivières

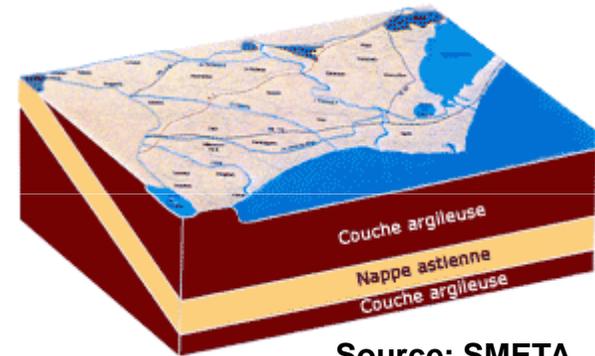
Karst ~ rivières
mais gestion possible (Lez)



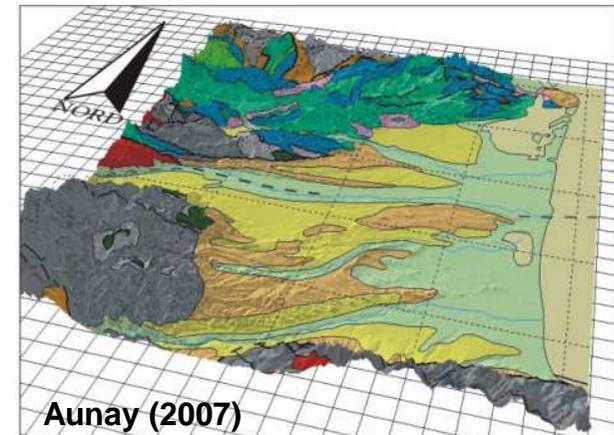
- Alluvions
- Calcaires
- Terrains imperméables

Source: AE-RM&C

Aquifères sédimentaires ?
incertitudes



Source: SMETA



Aunay (2007)

Conclusions

1. **Le changement climatique est une réalité, il convient de s'y préparer**
2. **Impact négatif sur la ressource en eau de surface**
3. **Impacts sur les eaux souterraines dépend des systèmes**
4. **Scénarios futurs évoluent avec les progrès scientifiques:**
beaucoup d'incertitudes, notamment sur les pluies