

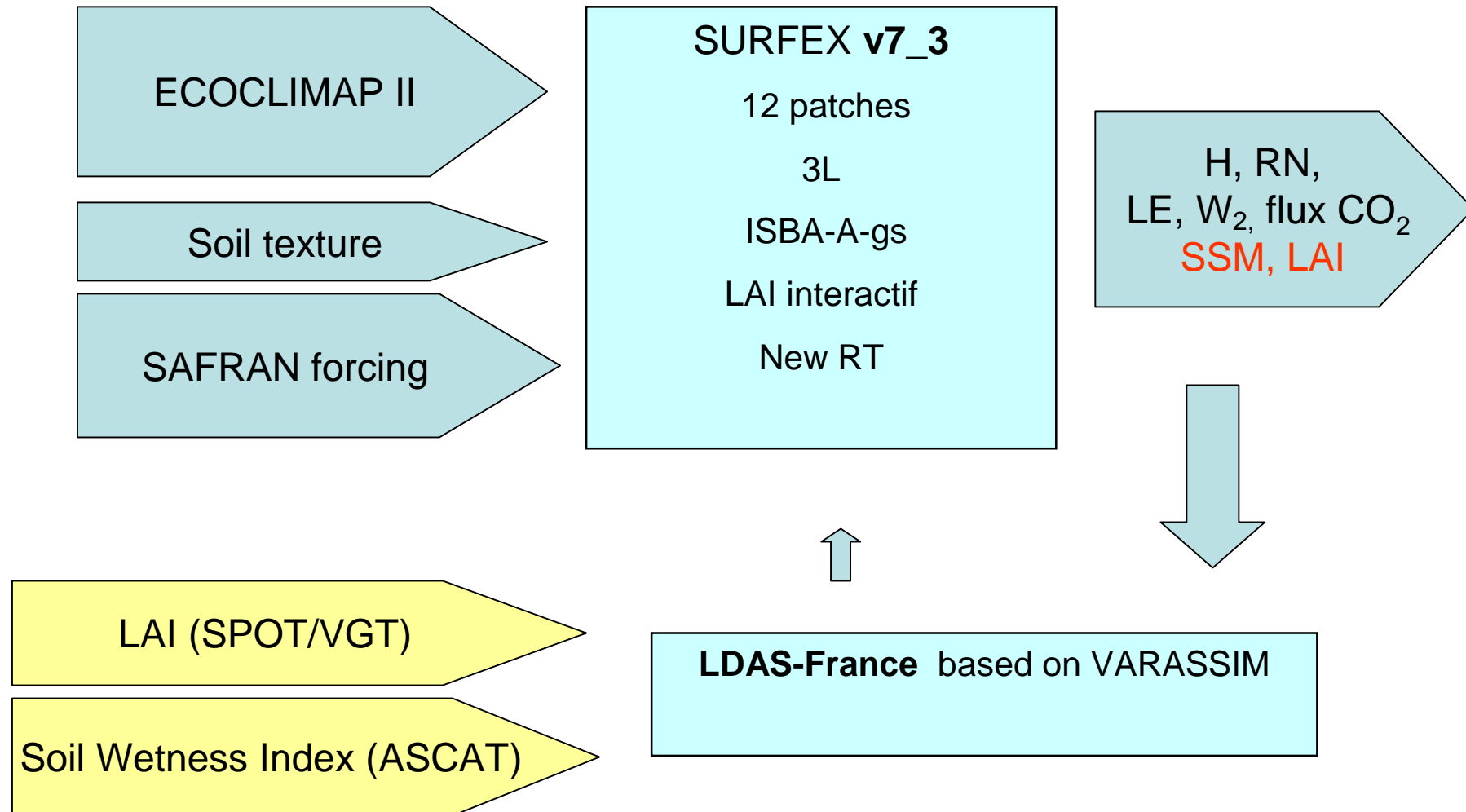
# Réunion SURFEX

**5 juillet 2013**

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VEGEO

# LDAS-France

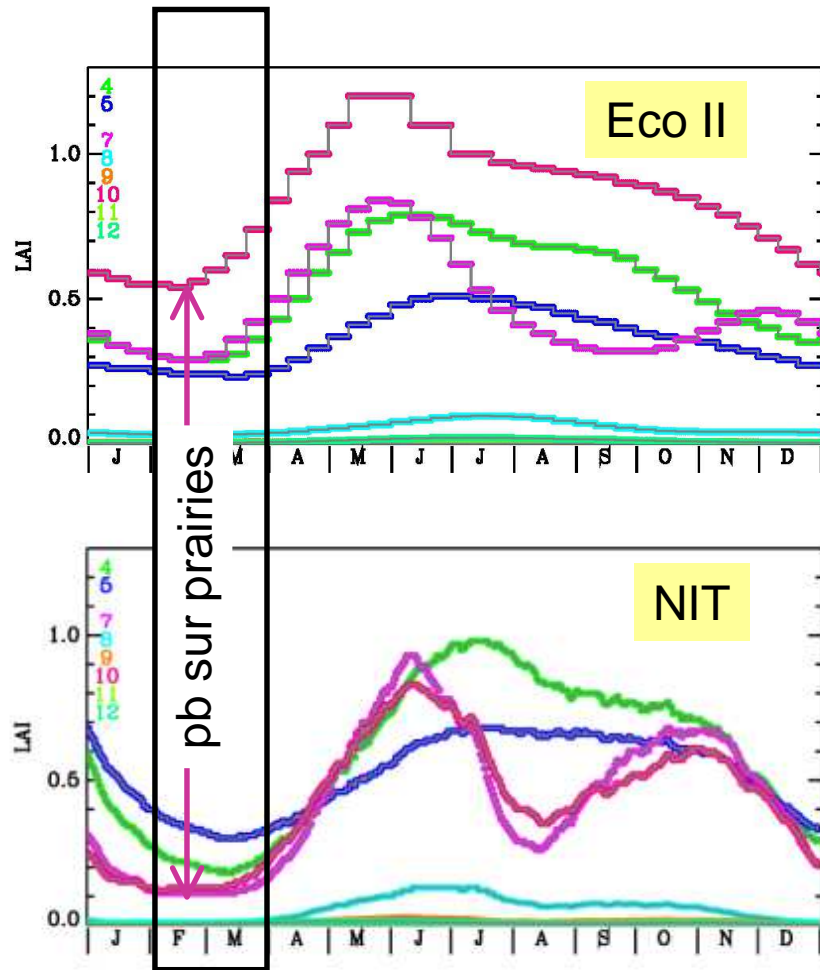


# Vers un LDAS-Monde

- **Modelling issues**
  - Upgraded ISBA hydrology (ISBA-DF): 1D so far, 2D ongoing.
- **Use of satellite data**
  - Maintain the GEOLAND2 chain for LAI and SSM.
  - Integrate other land satellite-derived products (fAPAR, ALBEDO).
- **Assimilation issues**
  - Extend the LDAS-France system to Europe and the Mediterranean basin (25N-75N, 11W-62E).
  - SODA is not used yet (plans to merge LDAS and a stable offline version of SODA).

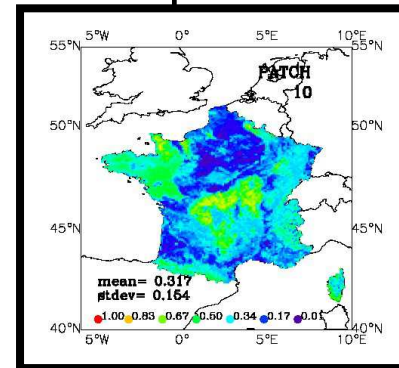
# Besoin d'une carto du LAImin (une valeur par cover)

Cycle annuel moyen sur la France du LAI de chacun des tiles

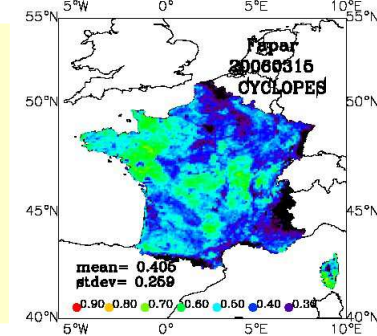


Le FAPAR simulé en mars par NIT est biaisé à cause d'un LAImin des prairies trop faible

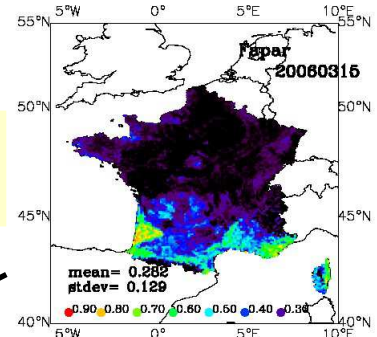
% de patch 10



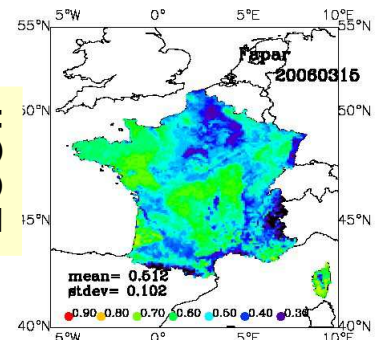
FAPAR mars



CYCLOPES



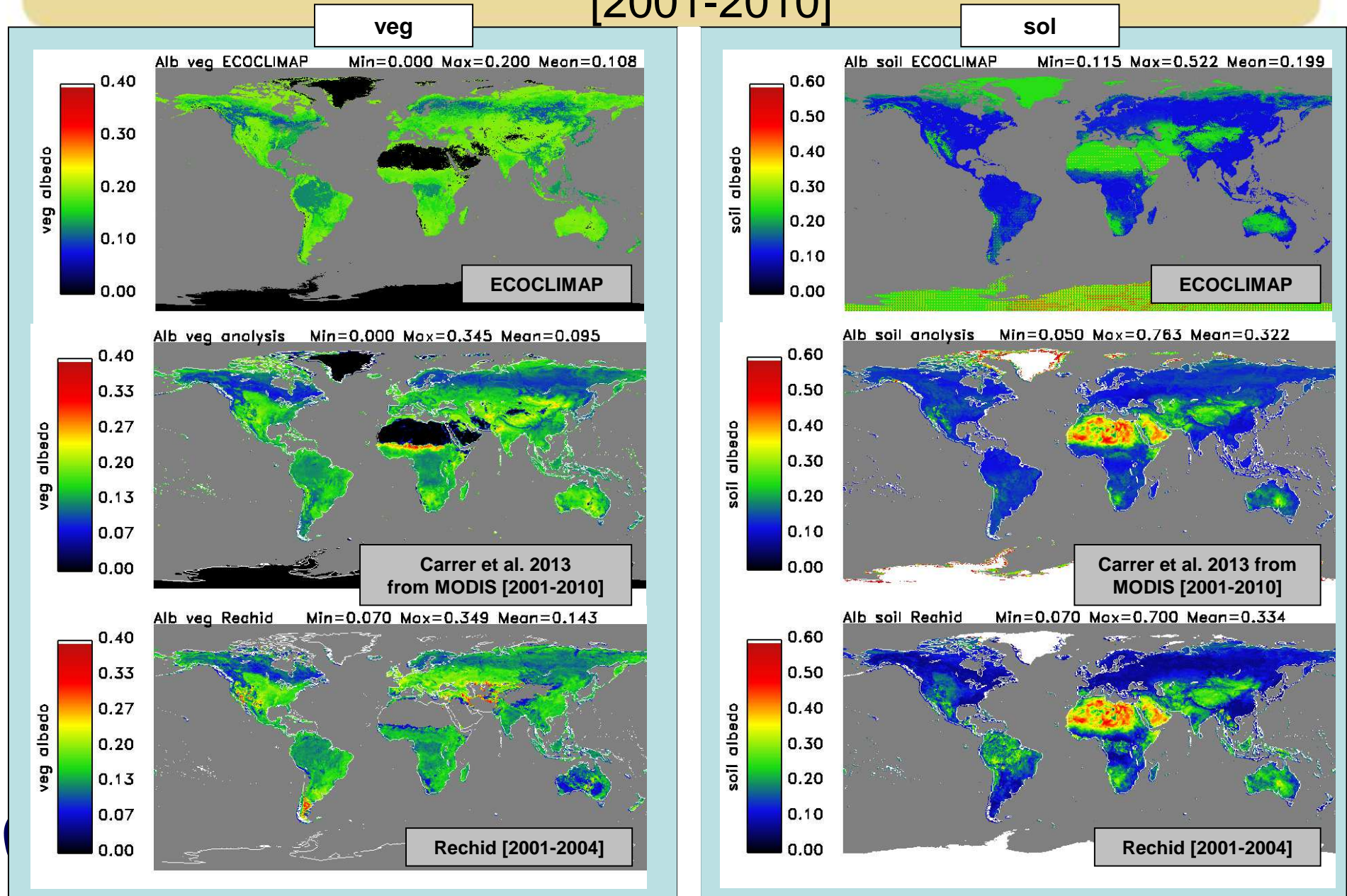
NIT



ECOII



# Actualisation albédo ECOCLIMAP à partir de MODIS [2001-2010]

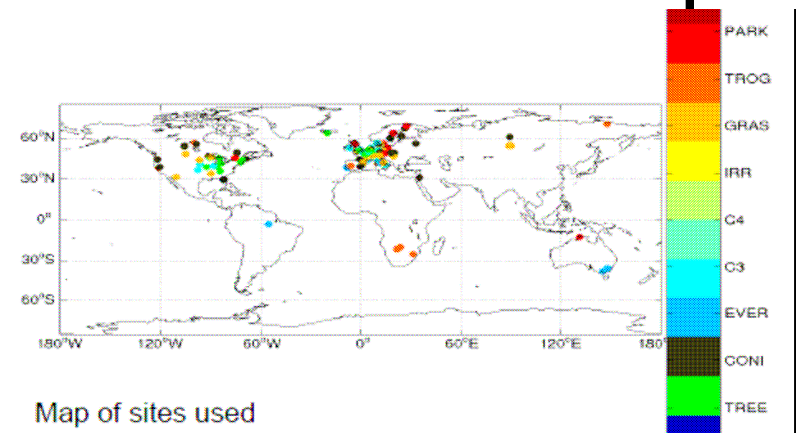


# Benchmark des nouvelles versions

- . Objective : compare quickly 2 versions of SURFEX globally against flux tower measurement.
- . WFEI forcing (ERA-I + correction)
- . FLUXNET open access database
- . Half hourly outputs
- . All default parameters (vegetation, soil,...)
- . Analysis of H,LE, RN and CO2 fluxes.
- . Generate graphs and statistics
- . 114 0.5° grid points / 150 FLUXNET sites.
- . Limitation : global forcing / local observation

Qui le met en œuvre ?

Chaîne supplémentaire n'employant que des sites avec forçage local continu ?



# Options carbone

- Options d'ISBA-A-gs trop nombreuses (6 actuellement)
  - La suppression des options AGS, LAI, LST est souhaitée (options obsolètes, qui ne sont plus maintenues)

Option	Drought response	Leaf Area Index and leaf biomass	Above-ground biomass (non-woody)
<del>AGS</del>	<i>Calvet et al.</i> [1998]	Not calculated (prescribed value is used)	Not calculated
<del>LAI</del>	<i>Calvet et al.</i> [1998]	Calculated (from photosynthesis)	Not calculated
AST	Avoiding or Tolerant <i>Calvet</i> [2000], <i>Calvet et al.</i> [2004]	Not calculated (prescribed value is used)	Not calculated
<del>LST</del>	Avoiding or Tolerant <i>Calvet</i> [2000], <i>Calvet et al.</i> [2004]	Calculated (from photosynthesis)	Not calculated
NIT	Avoiding or Tolerant <i>Calvet</i> [2000], <i>Calvet et al.</i> [2004]	Calculated (from photosynthesis)	Calculated (nitrogen dilution)

**NCB** ISBA-CC, Gibelin et al. (2008), basé sur NIT, avec la description de tous les termes de respiration autotrophe et hétérotrophe, des racines, du bois, et de la matière organique dans le sol

MERCI DE VOTRE ATTENTION



**METEO FRANCE**  
Toujours un temps d'avance

